From: Helen Heiden [mailto:hheiden@azchamber.com]
Sent: Tuesday, May 21, 2013 12:53 PM
To: Projects
Cc: info@buildthe202.com; Glenn Hamer
Subject: Build the South Mountain Freeway

Attached please find a letter from the Arizona Chamber of Commerce and Industry supporting the South Mountain Freeway project.

May 21, 2013

Arizona Department of Transportation
205 South 17th Avenue, #371
Phoenix, Arizona 85007
Delivered via email

To Whom It May Concern:

The Arizona Chamber of Commerce and Industry strongly supports the construction of the South Mountain Freeway. We believe that this freeway addition will cut traffic congestion across the metro area, reduce air pollution, and have a positive impact on Arizona’s economy.

Arizona’s workers rely on our roads and freeways as an efficient way to get to and from their workplace. If we don’t build the South Mountain Freeway, traffic in the region will get much worse over the next two decades. According to a study conducted by the Arizona Department of Transportation, morning and evening commute times will increase 39% to 82% over the next twenty years and traffic congestion on city streets will increase by 46%. This means vehicles will spend longer periods of time idling in traffic, consequently increasing air pollution in the area.

The South Mountain Freeway project is also crucial to Arizona’s economic recovery. The project will create 30,000 jobs during the five to six year construction period and result in a $2 billion investment in the Phoenix economy.

Furthermore, The South Mountain Freeway is welcomed with broad support across Maricopa County by a near 2-1 margin according to a poll commissioned by We Build Arizona. The poll also revealed that voters in Ahwatukee and Laveen, who would be directly affected by the construction, view the freeway project with 59% support.
The Arizona Chamber of Commerce and Industry encourages you to move forward and build the South Mountain Freeway.

Sincerely,

Glenn Hamer
President and CEO

Helen Heiden
Government Relations
Arizona Chamber of Commerce and Industry
Arizona Manufacturers Council
3200 N. Central Avenue | Suite 1125 | Phoenix, AZ 85012
p: (602) 248-9172 x128 | e: hheiden@azchamber.com

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The Arizona Chamber of Commerce and Industry encourages you to move forward and build the South Mountain Freeway.

Sincerely,

Glenn Hamer
President and CEO
Comments from the Arizona PIRG Education Fund on the draft EIS for the South Mountain Freeway are attached.

Serena Unrein  
Public Interest Advocate  
Arizona PIRG Education Fund  
130 N. Central Avenue, Suite 202 | Phoenix, AZ 85004  
Office: (602) 252-1184 | Cell: (602) 908-0451  
www.arizonapirgedfund.org | sunrein@arizonapirg.org

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| From: | Serena Unrein |
| To: | Projects |
| Subject: | South Mountain Freeway comments |
| Date: | Wednesday, July 24, 2013 3:51:49 PM |
| Attachments: | Arizona PIRG Education Fund - South Mountain Freeway.pdf |
On behalf of the Arizona PIRG Education Fund, I am writing to respond to the Arizona Department of Transportation’s draft Environmental Impact Statement (EIS) for the South Mountain Freeway. In our opinion, there is a critical flaw in the draft EIS and its assumptions on recent driving data and driving trends.

South Mountain Freeway was originally proposed in 1985, so three decades later, Arizona’s policy makers should be evaluating if this project still makes sense given current transportation trends. Investing taxpayer money in the construction of a major highway that was sure to follow. For at least the past five years, though, those anticipated increases in driving have failed to materialize in Arizona. It does not appear that this draft EIS has taken these changes into account and instead assumes that Arizonans will continue to drive more and more. Our research indicates that a return to the previous patterns of driving ever more miles is unlikely.

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need analysis were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future. The traffic analysis used the Maricopa Association of Governments travel demand model (TransCAD software platform), as certified by the Federal Highway Administration and reviewed by the U.S. Environmental Protection Agency for air quality conformity (see Final Environmental Impact Statement page 3-27). The model projects demand for multiple modes of travel, including automobile, bus, and light rail. Driving patterns and alternative modes of transportation are among the key model inputs used to forecast travel demand in the Study Area.

For the first time in two generations, there has been a significant shift in how many miles Americans are driving each year. A report that the Arizona PIRG Education Fund released last year demonstrates that young people in particular are decreasing the amount they drive and increasing their use of transportation alternatives.

Since transportation infrastructure lasts for decades, the investments we make in transportation infrastructure should be based not only on what is required to meet our needs today, but also on anticipated future needs. For decades, it was assumed that we would drive more miles, necessitating new highways to alleviate the crippling congestion that was sure to follow. For at least the past five years, though, those anticipated increases in driving have failed to materialize in Arizona. It does not appear that this draft EIS has taken these changes into account and instead assumes that Arizonans will continue to drive more and more. Our research indicates that a return to the previous patterns of driving ever more miles is unlikely.

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<td>The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need analysis were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future. The traffic analysis used the Maricopa Association of Governments travel demand model (TransCAD software platform), as certified by the Federal Highway Administration and reviewed by the U.S. Environmental Protection Agency for air quality conformity (see Final Environmental Impact Statement page 3-27). The model projects demand for multiple modes of travel, including automobile, bus, and light rail. Driving patterns and alternative modes of transportation are among the key model inputs used to forecast travel demand in the Study Area.</td>
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<td>2 Purpose and Need</td>
<td>The proposed freeway is part of a multimodal transportation plan, the Regional Transportation Plan, that includes substantial investments in transit, nonmotorized travel, and system management and demand management strategies. The proposed freeway is part of the system needed in the region to address future travel needs for the movement of people, goods, and services. The comment relies on national trends for travel; however the local conditions and setting of the Phoenix metropolitan area are not consistent with areas of high-density cities in other parts of the country. In Maricopa County, daily vehicle miles traveled levels increased by almost 2 percent between 2011 and 2012 and the 2012 daily vehicle miles traveled is approaching the prerecession peak in 2007. (Source: Arizona Department of Transportation Multimodal Planning Division Highway Performance Monitoring System Data for the Calendar Year 2012 and 2011). Even if the trend of vehicle miles traveled “per capita” decreasing continues, the total vehicle miles traveled in the region would still increase along with increases in total population.</td>
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According to Federal Highway Administration data, total vehicle-miles travelled (VMT) for Arizona is last reported for 2011 at 59,574 million annually, which is a decline of more than 5 percent from the peak year of 2007 when Arizona topped out at 62,963 million miles. Furthermore, a graphic in the summary of the draft EIS places an unnecessarily large arrow covering what has happened to VMT since 2005, thus obscuring how post-2005 data actually assumes reversal of current trends.

The VMT projected in the draft EIS are, at best, out-of-date, and at worst, inaccurate and could greatly overstate future driving patterns.

Please do not hesitate to contact me if you have any questions. I can be reached at sunrein@arizonapirg.org or at 602-252-1184.

Sincerely,

Serena Unrein
Public Interest Advocate

---

From: Steve Trussell (mailto:steve@azrockproducts.org)  
Sent: Wednesday, May 22, 2013 6:59 AM  
To: Projects  
Subject: Revised Comments  

Please disregard our first submittal. Attached is an updated comment letter from our association.

Regards,

Steve Trussell  
Executive Director  

 Arizona  
Rock Products Association  
916 W. Adams  
Phoenix, AZ 85007  
Office (602)271-0346  
Cell (602)989-3854  
Fax (888)269-0430

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(Comment codes begin on next page)
May 17, 2013

Arizona Department of Transportation
Attn: South Mountain Study Team
1655 W. Jackson St. MD 126F
Phoenix, AZ 85007

RE: Support of the 202 South Mountain Freeway Project

Members of the ADOT South Mountain Study Team:

The Arizona Rock Products Association (ARPA) supports moving forward expeditiously with the 202 Freeway Project. The South Mountain 202 freeway project will significantly reduce traffic congestion across the Phoenix metro area, reduce air pollution, create jobs and save drivers' time and money.

ARPA has been providing representation for 38 member companies involved with the production of aggregates, asphaltic concrete, ready mix concrete, asphalt, lime products, and portland cement. ARPA members include over 51 associate members providing related transportation, contracting, and consulting services to vital state infrastructure projects like these.

The Traffic

The Valley's freeways, especially I-10, are congested throughout different times of the day. Traffic on Interstate 10 is projected to grow significantly between now and 2035. According to an ADOT study we may be facing a 28% increase in volumes. Specific locations within the Phoenix Metropolitan area could see increases of 103,000 cars every day. Travel times will increase without the South Mountain Freeway and commute times can be expected to take from 39% to 82% longer if nothing is done to relieve congestion. As a result, traffic on surface streets will grow 66% by 2035. Something cannot and must be done.

The Environment

The same report indicates the project also will positively impact air pollution by reducing the time vehicles spend stuck in traffic. Valley commuters spendordinate amounts of time in traffic jams throughout the valley which exacerbate our current air quality issues and businesses, industry and taxpayers pay dearly in the form of additional measures to reduce emissions. Likewise, we risk loss of further transportation funding if we fail to attain the air quality monitors. It is incumbent on us to pursue transportation options that reduce emissions.

Comment noted.
The Economy

There is no more important transportation project to the area’s commuters and workers than the South Mountain Freeway project. The 202 will create 30,000 jobs during the five to six year construction period and result in a $2 billion dollar investment in the Phoenix-area economy.

Let’s Go!

Based on recent polls, 64.3% of likely voters in Maricopa County support construction of the freeway. Further, in a separate survey, 59% of likely voters living in Ahwatukee and Laveen support the freeway. The support is there for the project, the money to build the freeway is in the budget and it was approved by voters twice, first in 1983 and again in 2004. It is clearly time to begin construction on the South Mountain 202!

Sincerely,

Steve Trussell
Executive Director
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Thank you for your diligent consideration
Thank you for your diligent consideration
Thank you for your diligent consideration
Thank you for your diligent consideration

THE FACILITATOR: Thank you,
THE FACILITATOR: Thank you,
THE FACILITATOR: Thank you,
THE FACILITATOR: Thank you,

Prem Goyal? Did I pronounce that
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Prem Goyal? Did I pronounce that

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If there’s anyone else in the auditorium
If there’s anyone else in the auditorium

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that would like to speak today, please make sure you
that would like to speak today, please make sure you

register first; that way we can get your name into
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register first; that way we can get your name into

the list. Yes, please, right here.
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the list. Yes, please, right here.
the list. Yes, please, right here.

And sir, your name is?
And sir, your name is?
And sir, your name is?
And sir, your name is?

MR. TRUSSELL: Steve Trussell.
MR. TRUSSELL: Steve Trussell.
MR. TRUSSELL: Steve Trussell.
MR. TRUSSELL: Steve Trussell.

THE FACILITATOR: Steve Trussell.
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THE FACILITATOR: Steve Trussell.

MR. TRUSSELL: I’m with the Arizona Rock
MR. TRUSSELL: I’m with the Arizona Rock
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Products Association, and we support moving forward
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First of all, I’d like to talk about the
traffic very quickly. The Valley’s freeways,
especially I-10, are congested throughout different
times of the day, as we all know, and traffic on
Interstate 10 is projected to grow significantly
between now and 2035. According to an ADOT study, we
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Specific locations within the Phoenix
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to take 39 to 82 percent longer if nothing is done to
relieve the congestion.

As a result, traffic on surface streets
will grow 46 percent by 2035. Something can and must

be done, given the fact that this is a project that’s already been voted on twice and the funding is available.

Now, regarding the environment, the same report indicates the project will also positively impact air pollution by reducing the time vehicles spend stuck in traffic. Valley commuters spend inordinate amounts of time in traffic jams throughout the Valley, which exacerbate our current air quality issues and business and industry taxpayers pay for this dearly in the form of additional measures to reduce emissions. Likewise, we risk loss of further transportation funding if we fail to attain at the air quality monitors.

It is incumbent upon us to pursue transportation options that reduce emissions. There is no more important transportation project to the area's commuters and workers than the South Mountain Freeway project. The 202 will create 30,000 jobs during the next five- to six-year construction period, and result in a $2 billion investment in the Phoenix area economy.

So let's move on. And based on the recent polls, 64 percent of likely voters in Maricopa County support construction of the freeway. Further,
in a separate survey, 59 percent of likely voters living in the Ahwatukee and Laveen area support the freeway as well.

The support is there for the project, and the money to build the freeway is in the budget, as it was approved by voters twice, in '85 and in 2004. It's clearly time to begin construction on the South Mountain. Thank you.

THE FACILITATOR: Thank you, Mr. Trussell.

Ariel LeBarron.

MS. LeBARRON: Hello, my name is Ariel LeBarron, and I am a student at the School of Feasibility. I grew up here, I was born and raised. And I oppose the South Mountain Freeway, just because it would increase air pollution, and I feel there are better alternatives that we could be putting our tax money into, such as public transportation. This would increase our air quality, so that our future generations wouldn't be as affected. And I think by putting a freeway and expanding it outward is going to make people use and buy cars more, instead of trying to switch to public transportation. I think for our future we should be focusing on better alternatives. Thank you.
I just got a call from the Director’s Office. Lila received a call from a Mr. Steve Brittle from Don’t Waste Arizona. He is very upset that a number he was given to make a comment on the South Mountain Project 602-712-7767 doesn’t work or won’t let him leave a comment. He is threatening to escalate his actions if this isn’t corrected. I’ve included the link to the website of the organization he represents. I have not spoken to the gentleman, but I was told he would like to have someone call him ASAP.

Please let me know who can contact Mr. Brittle.

http://dontwastearizona.org/about.html

Rusty Crerand
Constituent Services Officer
206 S. 17TH Ave
MD 118A Room 101
Phoenix, AZ 85007
602-712-7856
dcrerand@azdot.gov

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Mr. Brittle is calling the Director's office wondering where to pick up some documents. Apparently someone called him today around 1:00, but he doesn't know where to go and is worried because it's after 4:00. Could whoever called him let me know what's been arranged. The Director's office is confused and has no idea of what he is talking about.

Thanks,

Rusty Crerand
Constituent Services Officer
206 S. 17th Ave.
MD 118A Room 101
Phoenix, AZ 85007
602.712.7856
dcrerand@azdot.gov

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Please let me know who can contact Mr. Brittle.

http://dontwastearizona.org/about.html

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The first record of a call placed to the Arizona Department of Transportation Environmental Planning Group by the commenter was Saturday, June 8, 2013. The call was returned to the commenter on Monday, June 10, 2013, and a disc containing the technical reports was provided on the same day.

On June 17, 2013, the commenter contacted the Arizona Department of Transportation by e-mail to request a scoping technical report, if one existed. The scoping technical report was provided on June 18, 2013. Two of the technical reports requested [Cultural Resources and Section 4(f)] contained confidential information. After discussion with the Federal Highway Administration, release of the reports, in redacted form, was approved. Additional time was needed for the Arizona Department of Transportation's cultural resources staff to review the documents and to redact the information deemed confidential. However, the redacted technical reports were provided on June 28, 2013.

Because the comment period on the Draft Environmental Impact Statement was doubled for this project (90-day comment period instead of the 45-day comment period required by 40 Code of Federal Regulations 1506.10), the commenter had adequate time to prepare comments.
with the panel, they are here to listen to your comments, they are indeed comments.
So at this point I'd like to go ahead and get started, and we have one preregistered person who has arrived and that person is Maxine Lakin -- I'm sorry, Joanne McCarthy will go first.
And as you see your names in the queue, you're welcome to come up to each microphone so we can keep people moving.
We will now proceed to the non-preregistered procedure, so at this point, Steve Brittle, please.

MR. BRITTLE: My name is Steve Brittle, I'm the president of an organization named Don't Waste Arizona. We'll be filing substantive comments later, but I want to put something on the record immediately. Upon review of this wholly inadequate environmental impact statement draft, I have seen many in my life, I've never seen one so wrong and so devoid of real and current information.
The real shocker to me as an expert in Hazmat is the chapter in Hazmat does not talk about the risk of truck transportation of hazardous materials. And when I first looked at that I thought well, certainly HDR, who has done this kind of thing, should know about commodity flow studies done by the state emergency response commission, so I went there to get them and I got them.

Hazardous Materials
Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-166 of the Final Environmental Impact Statement).
The project team is aware of the Hazardous Materials Commodity Flow Studies that the Arizona State Emergency Response Commission maintains. These studies are used by emergency response planners (such as the Arizona State Emergency Response Commission statewide and the Maricopa County Local Emergency Planning Commission for Maricopa County) as one of the elements considered when developing emergency response plans. If the plan is amended, it is made available to the Arizona Department of Transportation.

In the event of an incident with a hazardous materials issue on a State or federal highway, the emergency responders contact the Arizona Department of Transportation's Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation's Safety and Risk Management group, which responds to the accident scene and assesses needs in concert with the Incident Commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation's Safety and Risk Management group's charge is primarily public health protection, with cleanup support being secondary. According to 46 Federal Register 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible.
And I also found out that HDR was under contract with ADOT to look at all of that information. Now, in the commodity flow study they talked about what kinds of chemicals are being transported on the highways and all the information is there; but, of course, this was deliberately excluded because it would lead only to the logical conclusion of a no-build.

You would breathe in chemicals that would have never been in that community of Ahwatukee or Laveen ever before; 77,000 people in Ahwatukee, 35,000 people in Laveen will be at imminent risk of death because the area that -- where people would be killed or harmed includes in the case of a worst-case scenario from chlorine release, which is on the highway documented, would kill most people in Ahwatukee within five minutes. There is no way out. This is a unique cul-de-sac-type community and you're even going to remove one of the routes out of there by taking away the 30th exit street alignment on Pecos Road, so it's a death trap. The people in Laveen, 35,000 of them, they don't have this kind of stuff in their community. They would never know and they would be over with.

Now, it's obvious that HDR and ADOT knew about all of this. The warnings are right there even in the executive summaries of these transportation commodity...
flow studies, which means in this case we go beyond the
pale of ignorant or a slant. I think we’re in the area
of felonious behavior, fraud, racketeering, and we’re
going to be urging the attorney general of this state to
do a probe of ADOT and HDR.
You spent $22 million and you didn’t do anything
with it other than lie, obfuscate, and eliminate anything
that might lead to the logical conclusion, which is the
no-build option. And we will be waiting for them in
court. I have to say, I have to thank them, such a
deficient and devoid argument should make it pretty much
easier than we had anticipated to litigate this, and
hopefully, with any luck, some of these people will
actually go to jail. Thank you.

THE FACILITATOR: Thank you, Mr. Brittle.

One more comment before we continue. For those
of you who see their name on the screen, if you’re in the
back part of the room if you want to make your way up so
we can get people closer to the microphone, that would
help us throughout the day, so feel free to move up.

Just one note for those of you who are -- and we
understand it’s very difficult sometimes in working with
prepared notes, to keep in mind the time here, so if you
would from time to time, if you’re working from notes
please take time out to double-check the time. You’re
Don’t Waste Arizona, Inc. (DWAZ) is a non-profit environmental organization dedicated to the protection and preservation of the environment in Arizona. DWAZ is especially concerned about dishonest government agencies that do not do their job, environmental justice, civil rights protections, risks from hazardous materials and toxics, and air pollution. DWAZ has an extensive, successful background in litigation enforcing federal environmental laws and some NEPA cases.

DWAZ is headquartered at 6205 South 12th Street, Phoenix, AZ 85042, and may be reached at (602) 268-6110. DWAZ has members in the affected areas. DWAZ is allied with PARC et al for the purposes of preparing comments in opposition to the freeway, and the use of these comments by these allies is allowed and unrestricted. Stephen Brittle, President of Don’t Waste Arizona, is also a member of PARC.

After reviewing the expert comments and submittals for PARC et al, DWAZ states its opinion in the following comments:

There is no way that the DEIS is valid in any way, and there is no accident that it is a deceitful, deficient, and fraudulent document. This has to be by design; the pattern of errors and miscalculation as presented in this DEIS cannot occur randomly. There is evidence of a pattern of deception and deceit, of what appears to be fraud, of a deliberate withholding of critical information that would put the proposed freeway in a negative light, and of negligence, perhaps criminal intent.

Some examples of what leads DWAZ to this conclusion:

1. The withholding of the public documents that NEPA requires to be openly available during the time 90-day comment period, and the long delays in responding to public records requests, including the production of some documents without communicating the request for records was incomplete.

2. The statements in the DEIS about the availability of documents and their being placed at certain public repositories when they were never placed there, and calling the numbers listed in the DEIS to get access or copies were not returned.

3. The willingness to represent that the South Mountain Freeway would reduce air pollution when it would instead worsen it and harm public health along the freeway route by exceedances of the particulate matter and carbon monoxide standards, which indicates a knowing and informed willingness to put public health and safety at risk.

4. The misrepresentation of the hazards and risks of Mobile Source Air Toxics along the freeway route, by not stating honestly that there is already a severe problems with high levels of Mobile Source Air Toxics along the freeway route, which indicates a knowing and informed willingness to put public health and safety at risk.

The complete omission of the risks caused by transportation of hazardous materials along the freeway route, by not stating honestly that there is already a severe problems with high levels of Mobile Source Air Toxics along the freeway route, which indicates a knowing and informed willingness to put public health and safety at risk.

The statements in the DEIS to get access or copies were not returned.

The withholding of the public documents that NEPA requires to be openly available during the time 90-day comment period, and the long delays in responding to public records requests, including the production of some documents without communicating the request for records was incomplete.

The statements in the DEIS about the availability of documents and their being placed at certain public repositories when they were never placed there, and calling the numbers listed in the DEIS to get access or copies were not returned.

The willingness to represent that the South Mountain Freeway would reduce air pollution when it would instead worsen it and harm public health along the freeway route by exceedances of the particulate matter and carbon monoxide standards, which indicates a knowing and informed willingness to put public health and safety at risk.

The misrepresentation of the hazards and risks of Mobile Source Air Toxics along the freeway route, by not stating honestly that there is already a severe problems with high levels of Mobile Source Air Toxics along the freeway route, which indicates a knowing and informed willingness to put public health and safety at risk.
South Mountain Freeway and the likelihood that there would be serious loss of life and severe public health impacts in the event of an incident involving the release of hazardous chemicals, especially when ADOT had its contractor for the DEIS review all of the Hazardous Materials Commodity Flow Studies at the Arizona Emergency Response Commission, therefore knowing quite well of the nature and frequency of the transport of these chemicals, which indicates a knowing and informed willingness to put public health and safety at risk.

The failure to utilize the most current data and scientific methods in preparing the DEIS, contrary to regulation, and mostly using data, reports, and studies that are eight years old, in violation of NEPA regulations.

The expenditure of over $22 million in the preparation of the DEIS as well as the $87 million+ in acquiring properties along the proposed route before the NEPA process was completed, indeed starting 14 years before the NEPA process even began, and purchasing $43 million of properties just along the 59th Avenue alignment, while pretending that there were three alternative routes being examined in the DEIS.

The strange concoctions of formulas represented to the public as legitimate modeling of data to show the desired outcomes of supporting the freeway, when no capable or competent environmental professional would ever use the data that was used, nor would these calculations ever be conducted in the manner they were, which indicates a knowing and informed willingness to put public health and safety at risk.

The omission of any information about the WQARF sites that the western alignment would cross, and the environmental contamination liability and cleanup costs that the public would assume as a result of the condemnation of the affected properties.

The many unsubstantiated statements and assertions in the DEIS that have no basis in fact or have accompanying documentation.

The lack of any discussion of the severe property devaluation that would occur along the freeway route, especially in Ahwatukee Foothills along the Pecos Toad alignment.

The arbitrary rejection of alternate routes for the freeway through the years, and the arbitrary rejection of SMCAT's choice, the 101 alignment.

The racist and discriminatory dismissal of native American tribal concerns about a mountain that is sacred to them.

Because of the aforementioned, DWAZ concludes that the proper action should be an audit of ADOT and the convening of a federal-level grand jury investigation of ADOT in these matters, as this DEIS is what appears to be a fraudulent scheme to get federal money for an ill-advised freeway that would solve no problems regarding traffic flow, congestion, and air pollution.

Stephen M. Brittle
President

The Preferred Alternative would also reduce in-vehicle mobile source air toxics exposure as opposed to the No-Action Alternative. The U.S. Environmental Protection Agency has found that in-vehicle benzene concentrations were between 2.5 and 40 times higher than nearby ambient concentrations, based on a review of studies discussed in the Regulatory Impact Analysis for the U.S. Environmental Protection Agency's 2007 mobile source air toxics rule-making (Final Regulatory Impact Analysis, Environmental Protection Agency 420-R-07-002, 3-17 [February 2007]). Construction of the South Mountain Freeway would result in a reduction in benzene exposure to drivers and passengers for two reasons: decreased travel times (motorists would spend less time in traffic to reach their destinations) and lower emissions rates (attributable to speed improvements). Reducing on-road exposure would provide a health benefit for motorists using the freeway under consideration. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-166 of the Final Environmental Impact Statement).

The project team is aware of the Hazardous Materials Commodity Flow Studies that the Arizona State Emergency Response Commission maintains. These studies are used by emergency response planners (such as the Arizona State Emergency Response Commission statewide and the Maricopa County Local Emergency Planning Commission for Maricopa County) as one of the elements considered when developing emergency response plans. Whenever a new road is introduced to an area, the jurisdiction with responsibility for maintaining that area's emergency response plan amends the plan to include the new facility. If the plan is amended, it is made available to the Arizona Department of Transportation.

In the event of an incident with a hazardous materials issue on a State or federal highway, the emergency responders contact the Arizona Department of Transportation's Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation's Safety and Risk Management group, which responds to the accident scene and assesses needs in concert with the Incident Commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation's Safety and Risk Management group's charge is primarily public health protection, with cleanup support being secondary. According to 46 Federal Register 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible.
5 Air Quality
Data and scientific methods used in the Draft Environmental Impact Statement were the most appropriate information available and considered state-of-the-practice respectfully throughout the environmental impact statement process. Beginning as early as 2004, methods, assumptions, and data sources were shared and confirmed with appropriate resource and regulatory agencies for the purposes of study. The dynamic aspect of the process led to modifications in alternatives’ design and locations which subsequently led to continuous validation pertinent to data, methods, and assumptions. This normal, accepted, and National Environmental Policy Act “allowed for” process has continued through the Final Environmental Impact Statement as represented in several sections with changed text. For example, Maricopa Association of Governments’ approved new population, employment, housing, and traffic projections (June 2013) was used to update information in chapters 1, 3 and 4. Other examples in the Final Environmental Impact Statement of updating methods, assumptions, and data include information associated with particulate matter (PM₁₀) modelling being added to the section, Air Quality, beginning on page 4-68, more information regarding special status species being added to the section, Biological Resources, beginning on page 4-125, and results from the Jurisdictional Delineation of Waters of the United States being added to the section, Waters of the United States, beginning on page 4-116.

6 Alternatives
The comment suggests the environmental impact statement process was biased by a history of property acquisitions within the Study Area. More specifically, properties falling within the limits of the Preferred Alternative, as identified in the Final Environmental Impact Statement, were targeted for acquisition. As noted in text on page 3-54 of the Final Environmental Impact Statement, the Arizona Department of Transportation began acquiring land for the original alignment in 1988. Between 1988 and 2001, the Arizona Department of Transportation acquired approximately 293 acres. Most of this land (258 acres) is located in the Eastern Section along Pecos Road. In 2006, the Arizona Department of Transportation began protective and hardship land acquisition in the alignment right-of-way footprint for the W59 and E1 Alternatives. Between 2006 and October 2013, the Arizona Department of Transportation purchased 326 acres (303 in the Western Section and 23 in the Eastern Section). The process for hardship and advanced acquisitions is explained in text on page 4-50.

The comment infers that by taking such action, the objective equal consideration of the alternatives studied in detail in the Draft and Final Environmental Impact Statements is tainted. Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process is not unprecedented and is common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the proposed action are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative were to be ultimately selected, the agency would likely have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the driving public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative.
The West Van Buren Water Quality Assurance Revolving Fund site was identified and considered during development of the Draft Environmental Impact Statement (see page 4-165 of the Final Environmental Impact Statement, and the Draft Initial Site Assessment prepared for the proposed project). These sites are primarily groundwater-impact sites, and groundwater is found at a depth of over 60 feet below the footprint of the Preferred Alternative. Given the separation distance between the adversely affected medium (groundwater) and the construction zone (near-surface in these locations), the project team determined that these sites would not pose a risk to construction or to the general public once the facility were completed. This assessment has been clarified in the Final Environmental Impact Statement on page 4-165.

A review of the literature reveals few detailed and comprehensive analyses of the relationship between transportation infrastructure and residential property values (Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pp. 138–47; “Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor”). A recent study by the California Department of Transportation concluded that freeway facilities did not substantially affect sales prices in residential areas adjacent to the facility. The study concluded that it is the visibility of the freeway that may influence selling price and not distance or noise. As a result, the researchers generally concluded that the more the visibility of a new freeway is reduced, the less it would determine the sales price of homes sold in the area.

In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the systematic alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statements. The Preferred Alternative was the outcome of this process.

The 59th Avenue connection (W59 Alternative) with Interstate 10 (Papago Freeway) was seen as the best option to balance fiscal responsibility, regional mobility needs, community sensitivity, and additional considerations such as consistency with long-range planning goals, economic and environmental impacts, and public and agency input. The W101 Alternative would connect with State Route 101L, but would also result in substantial impacts on the community of Tolleson. While the South Mountain Citizens Advisory Team recommended the W101 Alternative, all stakeholders' input was accounted for—including regional leaders, municipalities, members of the public, and members of the South Mountain Citizens Advisory Team—before identifying the W59 Alternative as the Preferred Alternative (see Final Environmental Impact Statement pages 3-62 and 3-68).
Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in ongoing, open consultation with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community's Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

The Draft Environmental Impact Statement, after consultation and coordination efforts, accommodates and preserves (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.
Okay, thank you.

THE FACILITATOR: Thank you.

If you'd like to speak and haven't registered out front, please do so.

(The proceeding was at recess from 1:21 p.m. to 2:04 p.m.)

THE FACILITATOR: Good afternoon. I'd like to introduce to you our 2:00 to 4:00 p.m. panel. With the Arizona Department of Transportation, Brock Barnhart; with the Federal Highway Administration, Roman Moreno, and with the Arizona Department of Transportation, Brent Cain.

We'd like to remind you that we discourage applause.

Our next speaker is Lori Riddle.

MS. RIDDLE: I guess they had some short people up here.

THE FACILITATOR: Welcome, Ms. Riddle. You have three minutes.

MS. RIDDLE: Thank you. I'll try to talk fast.

I am a member of the Gila River Indian Community. I am co-founder of Gila River Alliance for a Clean Environment. I'm the sponsor of Gila River Environmental Youth. I'm also a member of the PARC, Protecting Arizona Resources and Children, as well as a number of other
25 winding down.
24 used to be abundant on our reservation -- I see my time's
23 animals. There's plants that we don't see anymore that
22 the disappearance of some of our prominent plants and
21 another issue that we've been noticing in Gila River is
20 biocarbon study and the animal-plants study, that's
19 One of my friends had mentioned about the
18 incomplete study and I don't feel like we need to comment
17 on an incomplete study. It's biased. As I have always
told my community members, these studies usually go favor
16 on the side of where the money is.
15 I feel that the DEIS is not complete, it does
14 doesn't include those things, so I feel like it's an
13 in complete study and I don't feel like we need to comment
12 monitoring study that was done in Gila River. There's a
11 did a few decades ago. It doesn't include the air
10 not include the J-tap study that the U.S. EPA Region 9
9 members for vehicle transportation needs.
8 other out and they rely on other people, other family
7 community members don't have vehicles, they help each
6 without a proper transportation system. Many of our
5 people have been talking about the need to expand the
4 transportation, when my people have survived centuries
3 people have been talking about the need to expand the
2 The points I would like to make is, you know,
1 organizations that is not in support of the freeway.

Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration's mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining current conditions in the affected environment (to the extent that the monitoring data are current), they don't tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed. The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxic emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.

Several studies on the health effects of emissions and traffic are found in the Draft Environmental Impact Statement on page 4-75. The Draft Environmental Impact Statement does not disclose all studies on the subject nor does it disclose the studies in their entirety. As stated in the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, environmental impact statements should be analytic rather than encyclopedic [40 Code of Federal Regulations Part 1502.2(a)]. The discussion included in the Draft Environmental Impact Statement appropriately illustrates studies on the subject are ongoing and to date, specific subject matter and study findings have varied.

Within the context of overall vegetation, wildlife, and wildlife habitat, all action alternatives and options would decrease the amount of cover, nesting areas, and food resources for wildlife species caused by habitat loss, fragmentation, and traffic disturbance. See the section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-136 of the Final Environmental Impact Statement, for additional details on potential effects on vegetation, wildlife, and wildlife habitat.

The Arizona Department of Transportation and Federal Highway Administration completed a Biological Evaluation containing analysis of the project effects on listed and candidate species under the Endangered Species Act. The Biological Evaluation was completed in 2014 following identification of the Preferred Alternative in the Draft Environmental Impact Statement. The Biological Evaluation was sent to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality for technical assistance with assessing the level of project effects on listed and candidate species prior to completion of the Final Environmental Impact Statement. The Arizona Department of Transportation and Federal Highway Administration has committed to continue coordination with the Arizona Game and Fish Department, Gila River Indian Community Department of Environmental Quality, and U.S. Fish and Wildlife Service regarding wildlife concerns as a result of the freeway's potential implementation. The results of the Biological Evaluation may be found beginning on page 4-125 of the Final Environmental Impact Statement.

Text beginning on page 4-85 of the Final Environmental Impact Statement discusses the relationship and the contribution of the proposed action to Greenhouse Gas Emissions (Climate Change). In short, Federal Highway Administration has
Mr. Martin: Thank you.

Welcome, Mr. Martin.

Mr. Martin: Thank you. Members of the panel, for the record, my name is David Martin, I sort of have multiple hats here today. I am the president of the Associated General Contractors, I chair an organization called We Build Arizona, and I am an Ahwatukee resident, so I sort of wear three hats.

Do we not matter? The air that we breathe, is our air any less important than the people of Phoenix? When are we going to actually matter? When are those considerations going to happen?

And you’re blasting through sacred mountain that is religious and sacred to our people. I can’t elaborate on that because my time is out, but I just want to mention that that is significant to our people.

The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM10) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM10) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

Fugitive dust and mobile source emissions from construction of the proposed freeway would be controlled by requiring the contractor to comply with the dust-control methods in Arizona Department of Transportation’s Standard Specifications for Road and Bridge Construction (2008) and Maricopa County Rule 310, Fugitive Dust Ordinance. Disruption to traffic, especially during peak travel periods, would be minimized by a traffic control plan to help reduce impacts of traffic congestion and associated emissions during construction. These methods are discussed on page 4-85 of the Final Environmental Impact Statement.
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<td>4</td>
<td>Cultural Resources</td>
<td>Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resource studies and engaging in an ongoing, open dialogue with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the Gila River Indian Community that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28. Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Final Environmental Impact Statement). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.</td>
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Under the Clean Air Act, the U.S. Environmental Protection Agency is responsible for establishing National Ambient Air Quality Standards to protect public health and the environment from adverse effects of air pollutants. Health effects from air pollutants are based on the concentration of the pollutants and the duration of exposure. Concentrations vary with distance from a roadway based on many factors, including background (or ambient) levels of pollution from all sources; the number, speed, and type of vehicles on the roadway; wind speed and direction; topography; and other factors. For the proposed freeway, the Federal Highway Administration conducted modeling for carbon monoxide and particulate matter (PM) using worst-case (most congested or highest traffic) modeling locations at discrete receptor locations around each analysis location (primarily residences near the interchanges). The carbon monoxide and particulate matter (PM) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

Mobile source air toxics can also have adverse health impacts, but the U.S. Environmental Protection Agency has not established National Ambient Air Quality Standards for these pollutants. As a result, the Federal Highway Administration analyzes these pollutants using emissions analyses. The mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions.

Many studies have investigated the prevalence of adverse health effects in the near-road environment. Given concerns about the possibility of air pollution exposure in the near-road environment, the Health Effects Institute has dedicated a number of research efforts toward investigating this issue. In November 2007, the Health Effects Institute published Special Report #16: Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects. This report concluded that the cancer health effects attributable to mobile sources are difficult to discern because the majority of quantitative assessments are derived from occupational cohorts with high concentration exposures and because some cancer potency estimates are derived from animal models. In January 2010, the Health Effects Institute released Special Report #17, investigating the health effects of traffic-related air pollution. The goal of the research was to synthesize available information on the effects of traffic on health. Researchers looked at linkages between: 1) traffic emissions (at the tailpipe) with ambient air pollution in general, 2) concentrations of ambient pollutants with human exposure to pollutants from traffic, 3) exposure to pollutants from traffic with human-health effects and toxicological data, and 4) toxicological data with epidemiological associations. Overall, researchers felt that there was "sufficient" evidence for causality for the exacerbation of asthma. Evidence was "suggestive but not sufficient" for health outcomes such as cardiovascular mortality and others. Study authors also noted that past epidemiological studies may not provide an appropriate assessment of future health associations because vehicle emissions are decreasing over time. Finally, in 2011 three studies were published by the Health Effects Institute evaluating the potential for mobile source air toxics "hot spots." In general, the

(Respons 1 continues on next page)
25 listed for ADOT and I got -- I kept getting a message to bus -- free bus services for the transportation team meeting, we were told that there would be a list of meetings, but where was the public notification with that? We didn't see announcements in our tribal newsletter. We didn't see any announcements in our tribal newsletter.

So, you know, the other thing too is when we had TTT meetings a month or so ago, technical transportation team meeting, we were told that there was going to be bus -- free bus service for community members. I tried calling the number that's listed for ADOT and I got -- I kept getting a message

You know, things that are edible that we've eaten for years that not only will the waters wash to the animals, it will wash to plants and it would directly impact those things.

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Radiator fluid, oils, anything dripping from the vehicles that will be on the roadway. And once the rains hit that and washes it down into the area where the habitat is, I have a big problem with that. Not to mention that the desert tortoise is up for consideration for under the endangered species. The plant impact, we're talking about plants that we consider are medicinal plants both for our medicine and healing uses, as well as sustenance. You know, things that are edible that we've eaten for years that not only will the waters wash to the animals, it will wash to plants and it would directly impact those things.

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So, you know, the other thing too is when we had TTT meetings a month or so ago, technical transportation team meeting, we were told that there was going to be bus -- free bus service for community members. I tried calling the number that's listed for ADOT and I got -- I kept getting a message.

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saying the box is full and if I -- when I finally did leave a message, I left a message for someone to return my call and this was the week prior to the hearing in Phoenix at the convention center. No one returned my call. And when I approached a MAG member, Maricopa Association of Governments member, he shrugged his shoulders like it wasn't important and he said, "Oh, well, it's too late now." So I mean, the consultation and the communication has been a problem. I do have a problem with the design of the casino. The fact that there are no accessible routes to our community. This is because I sit on the CTERC commission for my community, it's Chemical Tribal Emergency Response Commission. And so the first responders would have a difficult time going into the freeway if there are less exits and entrances to the freeway. So, you know, it would be time-consuming in a life-saving event to try to find which -- which exit is the closest, you know, especially in an area that doesn't have access. The other thing is, there are no frontage roads provided, you know. No roads that we can utilize as the local community to -- to get from point A to point B without using a freeway itself.
1  So, the air impacts. I understand that
the air would be cleaner in the Phoenix metropolitan
area, but all it’s going to do is move the air
pollution into our community. It’s going to be
excessive pollution because of the terrain of the
area. Because we have two mountains as walls on the
north and south side. So these things, I mean,
they’re heavy-duty things.

2  We’re talking about dioxin furans which
is cancer-causing. It’s basically like Agent Orange.

3  We’re talking about particulate matter 2.5 microns
and 10 microns that causes heart attacks and strokes
because you breathe it into your lungs and it gets
deep into your lungs and it starts affecting your
heart. We’re talking about carbon monoxide, we’re
talking about a multitude of other things and so that
concerns me.

4  Also I mentioned earlier about water --
about the water impact, about the drainage off of the
freeway and how it will be accessible for animals and
plants to be utilizing that water. There’s no catch,
you know. And plus too we’re talking about having
the freeway next to Ahwatukee community. I mean,
it’s going to eventually get into some water sheds
and eventually get into a community drinking system.

6  Design

Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

The Arizona Department of Transportation Community Relations distributed electronic notices (e-newsletters) through the Government Delivery system to over 12,000 constituents who voluntarily signed up for project alerts along the Interstate 10 Papago, Maricopa, and Santan Freeways. These electronic notices included notice of availability of Draft Environmental Impact Statement (distributed on April 26, 2013); public hearing (distributed on May 10, 2013); the community forums (distributed on May 29, 2013) and one in June (close of the Draft Environmental Impact Statement public comment period). In addition, anyone who had attended a previous meeting on the proposed action and signed in received all of this information mailed individually. On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area.

The Arizona Department of Transportation provided vouchers for public hearing parking and for public transit to the hearing. For the first time in the State’s history, a shuttle bus to the hearing was provided from 6 locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All ads provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations.

7  Traffic interchanges (on- and off-ramps) would be located at Van Buren Street, Buckeye Road, Lower Buckeye Road, Broadway Road, Southern Avenue, Baseline Road, Dobson Road, Elliot Road, 51st Avenue, 17th Avenue, Desert Foothills Parkway, 24th Street, and 40th Street. Emergency responders would address the construction of the proposed freeway by amending the local emergency response plan to include the facility. Information related to this is presented on page 4-166 of the Final Environmental Impact Statement. Local traffic can continue to use existing roads to get from point A to point B.

Frontage roads would increase the footprint of the Preferred Alternative and would result in greater social, economic, and environmental impacts. Therefore, frontage roads are not a part of the Preferred Alternative.

8  Groundwater

Impacts on groundwater are addressed in the Final Environmental Impact Statement, Water Resources section. The Study Area is located within two Active Management Areas that are regulated by the State of Arizona. The Arizona Department of Water Resources administers groundwater use. Water level decline in one subbasin can be offset by recharging water in another subbasin of the Active Management Area. The Arizona Department of Water Resources regulates drilling, installation, and abandonment of groundwater wells. (See Final Environmental Impact Statement page 4-104). If a well were adversely affected by construction activities, the well might need to be abandoned or the well owner would be compensated by drilling a new well according to State regulation/standards. (See the text box on Final Environmental Impact Statement page 4-108.)
1. The studies regarding health impacts. I mean, there was a study in Utah, the state of Utah. Was done by the Sierra Club and impacts the people there living near freeways. There's also been studies in the L.A. area about the impacts to the people there and to the children. I believe there was even a study in the metropolitan Phoenix area. I believe it was in the north, northwest side of Phoenix, and I'll reference all these in more detail on my -- on my written comment. But just bringing up the fact that there's a multitude of health issues that we need to be looking at. And I think that's it right now.

(The proceedings concluded at 12:00 p.m.)
COMMENTS IN OPPOSITION TO THE PROPOSED SOUTH MOUNTAIN LOOP 202

The Gila River Alliance for a Clean Environment (GRACE), a grassroots organization of the Akimel O’odham, (River People) and Maricopa (Pee Posh) indigenous peoples of the Gila River Indian Community (GRIC), submits these comments to the Arizona Department of Transportation (ADOT) in opposition to the South Mountain Loop on behalf of our tribal members that would be negatively and disparately impacted by the proposed project.

“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” 42 The GRIC, as a protected class of people, was discriminated against by:

- ADOT knowingly and purposely designing the South Mountain Loop 202 through our sacred South Mountain, recognizing and acknowledging that the South Mountain Loop 202 would have a serious and major disparate impact on us as a nation both culturally and spiritually.
- ADOT’s reason a purpose and need for the DEIS with inaccurate estimates of population projections, alleged uses of the South Mountain Loop 202.
- ADOT’s failure to analyze the South Mountain Loop 202’s disparate environmental, economic, and health impacts on the GRIC.
- ADOT’s inadequate consultation and informed consent, notice, and meaningful participation in the DEIS scoping and planning.

We urge ADOT to abide by Title VI and comply with state and federal civil rights mandates, to follow applicable laws, and reject the South Mountain Loop 202.

4 42 U.S.C § 2000d

Gila River Alliance for a Clean Environment
P.O. Box 11217
Bapchule, AZ 85121
(520) 478-3409
contaminatedinaz@yahoo.com
Attached are our full comments that include an addendum of tribal member comments that have been incorporated into our comments, and our Title VI Civil Rights Complaint that will be filed with the Federal Transit Administration Office of Civil Rights.

Sincerely,

Lori Riddle,
GRACE Co-Founder
P.O. Box 11217
Bapchule Az 85121
contaminatedinaz@yahoo.com
1 Title VI
Since Gila River Alliance for a Clean Environment’s Title VI complaint was received during the public comment period for the Draft Environmental Impact Statement, it has been included as a part of the Comment and Response appendix. However, it should be noted that the National Environmental Policy Act process is separate from the U.S. Department of Transportation Title VI complaint process.

2 Title VI
Specific comments are addressed below.

3 Cultural Resources
Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resource studies and engaging in an ongoing, open dialogue with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the Gila River Indian Community that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

4 Air Quality
The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter (PM) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012.

(Response 4 continues on next page)
II. TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

To succeed in this Civil Rights complaint, the complainant does not have to show that there was a deliberate, intentional discrimination by ADOT, but rather, that there is a discriminatory effect / disparate impact that gives rise to a section 601 Title VI of the Civil Rights Act of 1964 violation. Section 601 of Title VI of the Civil Rights Act of 1964 states that “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

Section 602 prohibits recipients of federal funds to engage in any activities that result in discrimination or disparate impact against individuals, groups of people, or whole communities of a certain race, color, or national origin. The discriminatory effect / disparate impact can occur when a seemingly neutral decision or action results in an unjustifiable adverse effect. Or in other words, an invasion or action by a recipient of federal funds that may appear neutral on its face and is not accompanied with any intent to discriminate, but nevertheless negatively affects an individual, group of people, or a whole community of a certain race, color, or national origin, without any substantial legitimate justification, violates Title VI.

The actions of ADOT were clearly not neutral and were made with total awareness and acknowledgment that the proposed freeway route through the sacred mountain would have serious negative cultural, spiritual and health impacts on a protected class of people.

III. THE COMPLAINANTS

Complainant GRACE is a grassroot organization of the Akimel O’odham, (River People) and Maricopa (Pueblos) Indigenous peoples of the Gila River Indian Community (GRIC). The GRIC’s reservation abuts the proposed project site, the GRIC and its people including the complainant have strong cultural and spiritual ties to South Mountain and they use the project site for cultural and spiritual purposes. Under Title VI, Native Americans are a protected class and historically have been discriminated against by the US government.

GRACE advocates for the protection of the environment and the sacred and cultural sites of the Gila River Indian Community and its people. Its mission is "to inform Indigenous peoples on environmental issues affecting their communities." GRACE was formed in the early 1990s. 6

6 Title VI

The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several sections, notably pages 4-132 and 5-26. The proposed project would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices.

The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives. In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.

The Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. This information has also been added to the Environmental Justice and Title VI Section on pages 4-38 and 4-44 of the Final Environmental Impact Statement, respectively. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and fully considered input and comments that were received.

Chapter 2 of the Final Environmental Impact Statement is dedicated to the explanation of the Gila River Indian Community outreach undertaken for the project. Chapter 6 of the Final Environmental Impact Statement further describes Community outreach throughout the process. The Gila River Indian Community was provided equal opportunities to participate in the project as all other populations and agencies. This outreach was undertaken, in part, to ensure all populations had equal access to the process and, in part, to ensure disparate or disproportionate and highly adverse impacts would result from the construction and operation of the proposed action.

(Response 6 continues on next page)
(Response 8 continues on next page)
source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM_{10}) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

9 Title VI

Comment noted.

10 Cultural Resources

Comment noted.

11 Cultural Resources

Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation, in coordination with the Gila River Indian Community and the State Historic Preservation Office, have been carrying out cultural resource studies and engaging in an ongoing, open dialogue with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of cultural and historical importance to the Gila River Indian Community that may be adversely affected by the proposed freeway. Such places are referred to as cultural resources. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified cultural resources that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The cultural resources identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly

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10 Creation for Health & Environmental Justice, Gila River Indian Community Tribal Member & Environmental Justice Update to Student Study in Division Classes of Physical Science, Plant Science http://www.gilariver.org/arkive/120600_a_8/ (last visited July 6, 2013).

11 Creation for Health & Environmental Justice, Gila River Indian Community Tribal Member & Environmental Justice Update to Student Study in Division Classes of Physical Science, Plant Science http://www.gilariver.org/arkive/120600_a_8/ (last visited July 6, 2013).

12 Gila River Indian Community Resolution NO. CR-45-07, A Resolution Designating the South Mountain Range (Mojave, Avi-Kwai) an Sacred Place and Traditional Cultural Property of the Gila River Indian Community.


3000 when water was needed to stop a bicyclist, a medical waste incineration facility, located on the GRIC reservation from continuing to illegally burn medical and non-medical waste imported into the reservation and violate Environmental Air Emissions (NAFEA). GRACE also led the successful campaign to prevent Romics, another private hazardous waste facility operating on the GRIC reservation without the required federal permits, from continuing to violate hazardous waste laws and pollute the air and waterways.

GRACE tribal members and the tribe hold the South Mountain sacred and see it as central to its creation story. GRACE opposes the proposed South Mountain Loop 202 because the project would desecrate the South Mountain by going through it, resulting in a disparate impact—cultural and spiritually on the GRIC—and in disparate cumulative health effects on the GRIC tribal members.

Complaints against the proposed South Mountain Loop 202 have been investigated by the Arizona Department of Transportation and Federal Highway Administration. The project includes the tribes of the Akimel O’odham, (River People), and the Maricopa (Paw Post). The Akimel O’odham, who have inhabited the Sonoran Desert long before Europeans settled the Americas, are native to central and southern Arizona and are descendants of the Hohokam, whose artifacts have been dated as far back as 10,000 years ago. Known as the “desert farmers” by some, the Akimel O’odhams were sophisticated engineers and farmers, successfully growing a variety of crops in the Sonoran desert landscape. The Maricopa are a Yuma tribal people. As early as the mid-1700s, the Maricopa arrived from their lower Colorado River area homes.

The Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and considered fully the substantive input and comments that were received.

Chapter 2 of the Final Environmental Impact Statement is dedicated to explaining the Gila River Indian Community outreach undertaken for the project. The Gila River Indian Community was provided the same opportunities to participate in the project as all other populations and agencies. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Final Environmental Impact Statement). In addition, representatives from the Gila River Indian Community participated for years in the South Mountain Citizens Advisory Team. On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and the Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

No disparate health effects, either direct or cumulative, would result from the implementation of the Preferred Alternative. The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM10) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative).

With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM10) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.
In 1899, GRIC was established as the first reservation in part of what later became Arizona in 1912. In 1862, when water flowed freely, GRIC was growing more than one million pounds of wheat a year; however, between the 1870s and 1880s, water supplies drastically diminished due to upstream diversions by non-Native farmers. These diversions rendered farming almost nonexistent. Between approximately 1880 and 1920, GRIC faced mass famine and starvation. Due to the need for outside assistance, diet and way of life completely changed. Alcoholism became a major problem and the GRIC “experienced the loss of certain cultural and artistic traditions and rituals.” This time became one of...the darker moments in...their...long history. In the 1950s, circumstances began to improve when the U.S. government completed Coolidge Dam as the upper Gila River, which created the San Carlos Reservoir: this restored some farming practices. Eventually, small businesses, schools, health centers, and new housing began to appear on the reservation. However, GRIC faces one of the highest levels of diabetes in the United States, thought to be directly a result of the disappearance of the traditional lifestyle and diet.

The GRIC history also includes forced boarding school for children, which not only was psychologically and physically oppressive but was culturally and socially oppressive, as it was instituted to assimilate Native American children into non-native American Indian speaking and practicing children.

Today, encompassing 177,000 acres along the Gila River, GRIC is the seventh largest federally recognized reservation in Arizona. It is in both Pinal and Maricopa counties and is 17 miles south of downtown Phoenix. Approximately 14,000 of the 21,000 enrolled GRIC members live on the reservation. 4,274 or 36% of GRIC tribal members on the reservation are under 18 and 7,438 or 64% are over 18, 675 or 6% of GRIC tribal members are 65 and older. The Akimel O’odham (River People) comprise 90% of the GRIC reservation and the Pueblo Poco (Maricopa), who live at the west end of the South Mountain, comprise about 10% of the GRIC

13 Cultural Resources
Comment noted.

14 Comment noted.

15 Tribal Involvement
Comment noted.

Committee of the Maricopa Association of Governments, which oversees the development of the 20-year Regional Transportation Plan and guides transportation planning in the region.

The Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing, and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

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The Arizona Department of Transportation provided vouchers for public hearing parking and for public transit to the hearing. For the first time in the State’s history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All ads provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations. Response to Comment 11 immediately preceding this response addresses cultural, spiritual, health and environmental impacts referenced in the comment.
Since Gila River Alliance for a Clean Environment’s Title VI complaint was received during the public comment period for the Draft Environmental Impact Statement, it has been included as a part of the Comment and Response appendix. However, it should be noted that the National Environmental Policy Act process is separate from the U.S. Department of Transportation Title VI complaint process.

Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resource studies and engaging in an ongoing, open dialogue with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the Gila River Indian Community that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

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on the National Register of Historic Places (NRHP) of 1966. The purpose of the NRHP is to “preserve the historical and cultural foundations of the Nation as living parts of community life.” The NRHP established the National Register of Historic Places and the requirements under Section 106 of the Act that require Federal agencies to take into account the effects of their actions on historic properties listed or eligible for inclusion on the National Register. The South Mountain has been approved as a traditional cultural property “eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community.”

IV. THE ARIZONA DEPARTMENT OF TRANSPORTATION

ADOT, a state government agency created in 1974, is the sponsor of the proposed construction and operation of the South Mountain Loop 202. It is “responsible for collecting transportation revenues and for planning, constructing, and maintaining Arizona’s highway infrastructure,” as well as the state’s public transportation and municipal airports. Its mission is “to provide a safe, efficient, cost-effective transportation system.” On April 26, 2013, ADOT released a DEIS for the Loop 202 South Mountain Freeway Study. ADOT is a recipient of federal highway funds and is thus subject to and required to comply with the non-discriminatory requirements of Title VI of the U.S. Civil Rights Act.

V. RIPENESS

This complaint is timely filed because it is in response to the improper and discriminatory action taken by ADOT’s April 26, 2013, sponsorship and release of the DEIS for the Loop 202 South Mountain Freeway Study that was prepared by the Federal Highway Administration (FHWA), the federal lead agency for the proposed action, in cooperation with the U.S. Army Corps of Engineers (USACE), the U.S. Bureau of Indian Affairs (BIA), and the Western Area

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<th>Code</th>
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<tr>
<td>18</td>
<td>Title VI</td>
<td>Since Gila River Alliance for a Clean Environment’s Title VI complaint was received during the public comment period for the Draft Environmental Impact Statement, it has been included as a part of the Comment and Response appendix. However, it should be noted that the National Environmental Policy Act process is separate from the U.S. Department of Transportation Title VI complaint process.</td>
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The Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and considered fully the substantive input and comments that were received. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Final Environmental Impact Statement). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

Chapter 2 of the Final Environmental Impact Statement is dedicated to the explanation of the Gila River Indian Community outreach undertaken for the project. The Gila River Indian Community was provided the same opportunities to participate in the project as all other populations and agencies.

The Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing, and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

The Arizona Department of Transportation Community Relations distributed electronic notices (e-newsletters) through the Government Delivery system to over 12,000 constituents who voluntarily signed up for project alerts along Interstate 10 (Papago, Maricopa, and Santan Freeways). These electronic notices included notice of availability of Draft Environmental Impact Statement (distributed on April 26, 2013); date of the public hearing (distributed on May 10, 2013); dates of the community forums (distributed on May 29, 2013); and notification in June regarding the close of the Draft Environmental Impact Statement public comment period. In addition, anyone who had attended a previous meeting on the proposed action and signed in received all of this information mailed individually. On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area.
On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area. The Arizona Department of Transportation provided vouchers for public hearing parking and for public transit to the hearing. For the first time in the State’s history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All ads provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations.

Comment noted.

Comment noted.
Mountain to the people of the GRIC and its tribal government. This important tribal resolution is attached as Exhibit A and incorporated into this complaint. The resolution states the GRIC Community Council "strongly opposes any alteration of the South Mountain Range for any purpose...and any alteration...would be a violation of the cultural and religious beliefs of the Gila River Indian Community and would have a negative cumulative effect on the continuing lifeway of the people of the Gila River Indian Community." 22

Not only is South Mountain itself sacred, but there are also numerous sites with highly significant meaning and purpose to GRIC. 23 These are many ancestral burial and archeological sites, and ancient streams.24 Further, the Colorado River Indian Tribes25, Salt River Pima-Maricopa Indian Community26, the Ak-Chin Indian Community27, the Tohono O’odham Nation28, and the Pascua Yaqui Tribe29 also hold the South Mountain sacred. 30

Much of South Mountain is within the South Mountain Park Preserve,31 which is a 16,600 mile park preserve in the Sonoran desert32 in Phoenix, Arizona. First created in 1924 during the New Deal era, 13,000 acres of the land were bought from the federal government by the city of Phoenix for a "triumph of pleasure." 33 Then, in 1927, the Bureau of Land Management ("BLM") conveyed 5,200 acres of land to the City of Phoenix where some of that land was converted into the SPP. 34 Then, in April 2009, 247 acres of State Trust Land, were purchased from the Arizona Land Department. 35 SPP is a historic property and is eligible

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<td>22</td>
<td>Cultural Resources</td>
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<td>23</td>
<td>Cultural Resources, South Mountain Park / Preserve</td>
<td>Comment noted.</td>
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22 At
23 For example, Red Mountain, South Back Mountains, and South North Mountain.
24 YouTube, South Mountain Freeway Primer, https://www.youtube.com/watch?v=O3h0E3j2hE (last visited July 8, 2011).
30 The Yuma area "archeological sites and places combined culturally important for Native American groups would be affected by any of the held alterations. The Gila River Indian Community (GRIC) and the Salt River Pima-Maricopa Indian Community have both passed tribal resolutions designating the South Mountains as a TCP and the Colorado River Indian Tribes have filed to expand the South Mountains to a TCP" (South Mountain Transportation Corridor August 18, 2008 Draft Technical Report Summary Cultural Resources, p. 4 available at http://www.dotaz.gov/docs/transportation/stmp/SP2008_SMAC2_CultureResources_Summary_Final.pdf).
32 This desert is approximately 18,000 square miles spanning from New Mexico, California, and into Northern Arizona. The Sonoran desert is one of the most diverse deserts in the world. According to the University of Arizona, the Sonoran Desert is the second-most biologically diverse desert in the world. http://www.scienceblog.com/news/859/2013/02/skull-desert-ecosystem-dust.html (last visited July 8, 2013).
33 Further, the Sonoran Desert is providing ecosystem services to humanity, now already identified, but science needs. http://www.sonorandesert.org/ (last visited July 8, 2013).
34 AZC, City Commission signs new Film & Television Tax Incentive Bill into law. April 6, 1924, South Mountain History, Board at http://southmountainhistory.blogspot.com/2009/05/city-commission-approves-films-for-lease.html.
35 ADOT, South Mountain Study Team, chapter 5, Section C (6) Evaluation at 35.
36 In 1998, the planning of what became known as South Mountain Park began. Through years of negotiating with the City of Phoenix, and after many environmental reviews, the 247-acre park north of Chandler Boulevard was opened to the public on April 27, 1998, for $18 million. "The Development Agreement for the park provides for a preserve, the nation and park, and also shows the way for new and development of approximately 350 acres south of Chandler Boulevard when the market reemerges." This site was under the name of Arizona Open Space Trails (Arizona State Agency Publications, Arizona State Land Department Annual Report 2008-2009 p. 11 available at...
for listing in the National Register of Historic Places. As stated previously, some of the South Mountain is within the GRTC’s northern territorial edge, giving the GRTC a corridor to get to other areas of the South Mountain from the reservation. As the DES states, the portions of the South Mountain on Community land are at the western end: the Maia Ridge North and Maia Ridge South. These edges “serve as the Community’s main, direct physical link to the mountains.” The SMMP, which includes the South Mountain, one of its TCFs, preserves cultural, historical, geological, and ecological resources important to the GILA tribal members.

For the GRTC, the concept of creation is not something in the past but is an ongoing process, one that they are intrinsically a part of and are obligated to participate in. The GRTC fulfills this duty through ceremonies and rituals designed to preserve and stabilize the earth. Failure to fulfill these obligations is thought to result in great harm to the earth and the people who depend on it. Ceremonies are efforts undertaken for specific purposes in accordance with instructions handed down from generation to generation. Rituals are performed in prescribed locations that are unique and specific sites possess different spiritual properties and significance.

Some traditionalists and Elders of the GRTC see portions of the South Mountains for periodic ceremonies and rituals. These are special people who are keepers of the tribal people’s heritage and culture who possess an essential role believed to sustain the tribal people as a whole. These ceremonies and rituals have been passed on through the ages and have been performed for ages. Traditionalists also are people who follow the natural Native American ways of living from the earth, picking and harvesting traditional cultural foods like the fruit of the saguaro and medicines, and teaching and guiding the young in cultural and spiritual ways.

**B. SOUTH MOUNTAIN LOOP 282 PROPOSAL**

The South Mountain Loop 282 is a proposed eight-lane, 22-mile-long highway in southwestern Maricopa County, Arizona. If constructed, it would be the last section of the proposed master plan Regional Freeway and Highway System first proposed in 1985 by

![Image](https://example.com/image.png)

**References**

4. YouTube: For Mar’s Fans [https://www.youtube.com/watch?v=OIdFdFkscKx](https://www.youtube.com/watch?v=OIdFdFkscKx) (Last visited July 8, 2013)
5. The saguaro is a large, tree-sized cactus species which can grow to be over 70 ft. tall. It is native to the Sonoran Desert in Arizona. The saguaro cactus is the State Wildflower of Arizona. [https://www.maricopacounty.gov/rpdy](https://www.maricopacounty.gov/rpdy) is an important starting point for finding saguaros in any area of the state. For information on saguaros, visit [https://www.saguaros.org](https://www.saguaros.org)
6. ADOT: South Mountain Loop 282 proposal includes a 57-mile medical system in Phoenix, Tempe, Mesa, Glendale and Chandler, which includes Loop 202, I-10, SR51, SR510 and SR510 connector, state routes Light rail, bike-sharing, and a bike-sharing system. [http://www.phoenix.gov/Transportation/Transportation/](http://www.phoenix.gov/Transportation/Transportation/) (Last visited July 8, 2013)
Socioeconomic Projections

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11.

The purpose and need of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

The comment states in the Draft Environmental Impact Statement support of the freeway project through voter approval of Propositions 300 and 400. To clarify, the text on page 1-9 of the Draft Environmental Impact Statement states, “Voter approval of the one-half cent sales tax in 1985 (Proposition 300) and its continued endorsement in 2004 (Proposition 400) underscore continued public support for investment in regional transportation projects. Results from the Maricopa County Official Canvas (Maricopa County 2004a) indicate voters in 90 percent of the county’s 1,058 voting precincts voted in favor of Proposition 400 and the project would fund.” Voters in 81 percent of the 31 voting precincts in the Study Area favored Proposition 400 and the projects it would fund. The reference to the propositions only states continued voter approval for transportation infrastructure in the region.

Maricopa Association of Governments ("MAG"), that when connected to a surface transportation system would allegedly: "reduce increasing congestion on the Interstate Highway System in the urban core, facilitate more effective and more effectively distribute the regional movement of goods and delivery of services; more evenly distribute traffic on the major arterial street grid and reduce regional traffic using the grid; better serve already-existing regional traffic; provide an alternate route for bus through traffic; provide an integrated intermodal network of freeways strategically located to accommodate local and regional land use planning; enhance local mobility by removing regional traffic from the local road network; create infrastructure to support the regional transit system component of the integrated Long Range Transportation Plan (LRTP) (MAG 2001a); encourage and direct traffic.

Although the master plan Regional Freeway and Highway System has been done without this last section, the DEIS asserts that this section is necessary. The DEIS states that "over the past 40 years, Phoenix-area population, housing, and employment experienced some of the fastest growth in the nation... and from the early 1950s to the mid-1990s, population in the MAG region grew by over 150 percent." The DEIS assumes that population growth will continue at the same rate as it did between the 1960s to mid-1990s and that Maricopa County’s population will add an average of 1 million a decade from 2005-2035. The DEIS states that “almost 50 percent of projected increases in population, housing, and employment from 2005 to 2035 for the entire MAG region are expected to occur in the southwestern and southeastern portions of the Phoenix metropolitan area” and would benefit from the highway to get back and forth to central Phoenix. The DEIS cites public support of the South Mountain Loop by “Voters approval of the one-half cent sales tax in 1985 (Proposition 300) and its continued endorsement in 2004 (Proposition 400) for continued public support for investment in regional transportation projects; results from the Maricopa County Official Canvas (Maricopa County 2004a) that show voters in 90 percent of the county’s 1,058 voting precincts voted in favor of Proposition 400 and the project would fund.”

24 ADOT, South Mountain Study Team, chapter 4: Projected Environment, Environmental Consequences, and Mitigation on 4 (Updraft Regional Transportation Plan p. 7) http://www.marag.gov/environmental/ERT_2016-Annual-Report_Final_v7_417.pdf. The Maricopa Association of Governments ("MAG") is the metropolitan planning organization (MPO) for transportation planning in the Maricopa County region, the principal planning agency for the region in air quality and water quality, and the designated agency for determining population estimates and projections for the region. Maricopa Association of Governments. (http://www.marag.gov). The DEIS relies on MAG’s planning from 1985 and its population projections for the proposed South Mountain freeway. (Arizona Department of Transportation, Strategic Plan Fiscal Years 2013-2017 http://www.azdot.gov/about/adot/strategic/plan). ADOT, South Mountain Study Team, chapter 4: Purpose and Need p. 4 available at http://www.marag.gov/Revised/ProjectDocuments/0_2013/ADOT_South_Mountain_Final_Report/02517A24A192517A7ADOT-114797-Propositions-300-400-CAIR-New.pdf. ADOT’s Long Range Transportation Plan: 2010-2035 includes a list of roadway projects identified in importance, with the South Mountain Loop being third place. The first are for the Highways Program, which is part of the CANAMES Truck Corridor, then going through Arizona, Nevada, Utah, Idaho, Montana, and Montana, and linking to the Canadian province of Alberta and the Mexican states of Sonora, Sinaloa, and Jalisco. It is argued by PARC, and others, that the South Mountains is crucial, it will be used by truck drivers looking for a bypass to move more easily get through the mountains zone, something ADOT seems to not use the purpose of the loop. Even if it is not the purpose of the loop, it would be a vital of the South Mountain Loop. Since the CANAMES corridor has been done yet and there it is a route in that is better than the existing roadway.

25 ADOT, South Mountain Study Team, Summary at 5. Maricopa County is the most populated county in Arizona and in the state of the Phoenix metropolitan area in the United States, and Phoenix, the state capital, is the largest city. Maricopa’s population was 3,837,119 in 2010. (United States Census Bureau, 2010 Demographic Profile http://www.census.gov/). (last visited June 17, 2013).

26 ADOT, South Mountain Study Team, Summary at 5.

27 See id. at 3-4.
## Code Comment Document

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<td>Air Quality</td>
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### Code Issue Response

#### 25 Air Quality

The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency recently determined that Phoenix has attained the particulate matter (PM$_{2.5}$) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner-burning fuels, technological advances in automobile design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM$_{2.5}$) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter (PM$_{2.5}$) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM$_{2.5}$) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

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60 ADOT, South Mountain Study Teams, Chapter 1 Purpose and Need at 9.
61 ADOT, South Mountain Study Teams, January at 6.
62 ADOT, South Mountain Study Teams, July at 2.
63 ADOT, South Mountain Study Teams, Chapter 1 Purpose and Need at 11-13.
65 ADOT, South Mountain Study Teams, June at 56; Maricopa County is the most populated county in Arizona and is also one of the larger counties in the United States.
66 ADOT, South Mountain Study Teams, Chapter 3 Alternatives at 48.
67 ADOT, South Mountain Study Teams, January at 28.
The DEIS states: "based on the alternatives screening process, environmental impacts assessment, and stakeholder input, ADOT, with the concurrence from FHWA", identified the W59 Alternative as its Preferred Alternative in the Western Section and the E1 Alternative the Eastern Section.27 This "preferred" route would be down Pecos Road in the Alhambra Foothills, through the western portion of the South Mountain Preserve, including through the South Mountain itself, and up 59th Avenue through Lawerence.28 The DEIS approximates that 31.3 of the 16,000 acres of the SMMP would be taken for the proposed highway and 0.9 mile of Loop 202 would pass through the southwestern edge of South Mountain.29 Cuts to South Mountain would be a 228-foot cut through one ridge, a 198-foot cut at another, and a 76-foot cut at a third for an estimated cost of $30 million.30

C. ADOT AND THE DEIS ACKNOWLEDGE SACRED AND CULTURAL SIGNIFICANCE OF SOUTH MOUNTAIN

The DEIS acknowledges that the South Mountain is sacred to the GRCIC, is a TCP,31 and, farther, is National Register of Historic Places ("NRHP")-eligible. The DEIS indicates that ten locations have been identified by GRCIC as places of cultural importance: the South Mountains, two prehistoric village sites, an active shrine site, two prehistoric petroglyph sites, and five prehistoric trail sites, which qualify as NRHP-eligible TCPs.32 The NRHP eligibility of two of the properties was confirmed by FHWA through consultation with the GRCIC.33 Five TCPs have been identified within the project area of "potential effects". The DEIS specifically states that the South Mountains were determined eligible for NRHP listing as a TCP under Criteria A and B.34 The DEIS states: "the Community has expressed to ADOT and FHWA its concern about an alignment through the South Mountains and the irreversible impacts on the South Mountains from the proposed action. To the Community, the South Mountains are part of a continuum of life and not an individual entity that can be isolated and analyzed.35"

The DEIS further acknowledges that the GRCIC is opposed to any destruction of the South Mountain. It states "the mountains are considered sacred—playing a role in tribal cultures, identities, histories, and oral traditions—and appear in many creation stories. Many traditional

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27 ADOT, South Mountain Study Team, Chapter 3 Alternatives, at 65, 69.
28 ADOT, South Mountain Study Team, Appendix at 75.
29 Id. at 14.
31 ADOT, South Mountain Study Team, Appendix at 18.
32 ADOT, South Mountain Study Team, Chapter 4 Affected Environment, Environmental Consequence, and Mitigation at 140.
33 36 Under Criteria A, properties can be eligible for the National Register if they are associated with events that have made a significant contribution to the nation’s heritage. Under Criteria B, properties may be eligible if they are associated with the lives of persons significant in American past. (National Register Bulletin, How to Apply the National Register Criteria for Evaluation 1999, http://www.nps.gov/bul/education/howtoapplynrrbf3.pdf (last visited June 23, 2013).)
34 ADOT, South Mountain Study Team, Chapter 5 Section 8.3 Qualifications at 5-26.
religion and ceremonial activities continue on the mountains.\textsuperscript{99} Further, ADOT is aware that GRIC prefers the no-build alternative.\textsuperscript{100} The DEIS states that their preferred-action alternative would cut through the South Mountains resulting in removing two archaeological sites identified as contributing components of the South Mountains TCP, considered NRHP-eligible under Criteria A and D, modifying the spiritual landscape of Native peoples, altering access by Native American groups to culturally important places, interfering with ceremonial practices and religious activities of some Native American groups.\textsuperscript{101}

The DEIS also states: “two contributing components to the TCP are located within the Study Area, one of which is considered NRHP-eligible under Criteria A. The first site is...unique and possibly associated with traditional religious and ceremonial activities associated with the South Mountains. The second site is situated within the South Mountains TCP. These sites continue to function in the living Akimel O’odham and Pee Posh communities and often serve as spiritual places (Tribal Historic Preservation Officer [THPO] response [not concurrent] regarding NRHP-eligibility of the South Mountains as aTCP and its contributing components was received on August 17, 2011; consultation is ongoing).\textsuperscript{102}

Further, the DEIS acknowledges that the portions of the South Mountains on GRIC located on the western and serve as the “Community’s main, direct physical link to the mountains.”\textsuperscript{103} Further, it states, “the E1 Alternative would result in direct use of the TCP. Approximately 3 miles of freeway alignment would pass through the mountains and would affect the southern and southwestern portion of the TCP.\textsuperscript{104}

Further, the DEIS states “While the conversion and permanent loss of part of the mountain to a transportation use by the proposed action is a concern, related Community-expressed concerns focus on impacts on history, culture, traditions, and the ability to maintain and continue the cultural identity of the communities...Within the context of the TCP, the proposed action would be a physical barrier on the landscape, altering traditional access to sacred sites, disrupting traditional cultural practices, and degrading the overall integrity of the cultural tradition and identity. Even with mitigation, implementation of the proposed action would alter the direct physical connection Community members have between their homeland and the South Mountains and would restrict the ability to visit or use these locations in a traditional cultural manner.”\textsuperscript{105}

After stating all of the above, the DEIS states that “the E1 Alternative was designed in such a way as to avoid a site that is a contributing component to the South Mountain TCP, resulting in no direct use of this TCP element. A R/W fence would limit access to the site by freeway

\textsuperscript{99} ADOT, South Mountain Study Team, Inventory at 39.
\textsuperscript{100} In a letter to ADOT’s Director John Halvorsen in 2019, GRIC stated “despite our desire for a no-build system...the Community is willing to assist ADOT in studying potential UnReservation alignments” in an effort to “mitigate cultural impacts to Mooney (South Mountains).” (GRIC Transmittal Office of the Governor & Lieutenant Governor, January 27, 2019 letter to ADOT, John Halvorsen).
\textsuperscript{101} ADOT, South Mountain Study Team, Chapter 6 Affected Environment, Environmental C onsiderations, and Mitigation at 120-121.
\textsuperscript{102} ADOT, South Mountain Study Team, Chapter 6 Affected Environment, Environmental Considerations, and Mitigation at 120-121.
\textsuperscript{103} ADOT, South Mountain Study Team, Chapter 5 Section 43 Evaluation at 26.
\textsuperscript{104} Id, Id at 27.
The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26. The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives.

In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.

A representative impact is the Gila River Indian Community member-expressed concern that the E1 Alternative would interfere with ceremonial practices and religious activities of some Native American groups. While impacts on the South Mountains Traditional Cultural Property would be substantial and unique in context, the direct conversion of lands to a transportation use would be limited to less than 0.2 percent of Phoenix South Mountain Park/Preserve and would not prohibit ongoing access and the cultural and religious practices by Native American tribes. Mitigation measures and measures to minimize harm as the result of extensive consultation, avoidance alternatives analyses, and efforts in developing mitigation strategies would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious purposes. Text relating to this mitigation can be found on pages 4-38, 4-42, and 4-44 of the Final Environmental Impact Statement. Additionally, the section, Mitigation, beginning on page 4-158, presents several measures (e.g., multifunctional crossings, contributing element avoidance) to mitigate effects on cultural resources. The section, Measures to Minimize Harm, beginning on page 5-27, presents several measures to reduce effects on the South Mountains Traditional Cultural Property and other cultural resources. Even if one were to reach a contrary conclusion and determine that disproportionately high and adverse and/or disparate effects would occur as a result of the proposed freeway, there is substantial justification for the proposed freeway. It is needed to serve projected growth in population and accompanying transportation demand and to correct existing and projected transportation system deficiencies (see Chapter 1, Purpose and Need). There is no feasible and prudent alternative to the use of the South Mountains, as discussed in Chapter 5, Section 4(f) Evaluation.

The Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and fully considered input and comments that were received.
and hazards,\textsuperscript{14} would be highly unequal to the GRC and for the foregoing reasons, Title VI was violated by ADOT because:

- the proposed route through South Mountain would knowingly, improperly, and illegally degrade a site with profound sacred and spiritual significance resulting in an unjustifiable disproportionate impact on the GRC;
- construction and the effects of vehicle and truck traffic on the proposed South Mountain Loop 202 would result in pollution causing disproportionate cumulative health effects causing a disproportionate impact on the GRC and its tribal members, including members of GRACE; and
- insufficient consultation and inadequate process was given to the GRC.

A. SOUTH MOUNTAIN LOOP 202 DISPARATE CUMULATIVE SPIRITUAL AND CULTURAL EFFECTS ON THE GRC, INCLUDING GRACE COMPLAINANTS

GRC grievances about the proposed South Mountain Loop 202 have common themes like the following, they identify the great cultural and spiritual meaning the South Mountain signifies to the GRC: “our people feel that the mountain is a sacred place and we should respect it, and we need to protect it because that mountain is sacred to our people.”\textsuperscript{15} You don’t know what it means to us having the mountain there, it won’t be the same if it should be gone,”\textsuperscript{16} and “when I was younger I recall being taught about one people’s heritage... I remember being taught by my elders that we come from South Mountain.”\textsuperscript{17} See attachment. Another GRC tribal member stated “as we were growing up we were taught that our land was sacred and that we need to protect it at all cost. South Mountain... is one of our sacred mountains.”\textsuperscript{18} See attachment. Plainly put, construction of the South Mountain Loop 202 would degrade a natural landscape with profound sacred and spiritual significance to the GRC. One GRC tribal member stated that “my connection to South Mountains is that it is a very sacred place to me and my people.”\textsuperscript{19} See attachment. Another said “it is a sacred mountain to our people... and... it was made sacred to our ancestors... there are stories about that mountain. I was told by my elders, and there are plants that grow on this mountain that we use today for healing, eating, and bolstering.”\textsuperscript{20} See attachment.

Casting a shadow on the South Mountains to place a highway through it would result in a major disproportionate impact on the GRC. One tribal member stated “the mountain is central to the

\textsuperscript{14} This is not the first time that the GRC would have to carry the burden of a transportation project. Anyone
\textsuperscript{15} “I recall being taught about one people’s heritage... I remember being taught by
\textsuperscript{16} “when I was younger I recall being taught about one people’s heritage... I remember being taught by my elders that we come from South Mountain.”
\textsuperscript{17} Another GRC tribal member stated “as we were growing up we were taught that our land was sacred and that we need to protect it at all cost. South Mountain... is one of our sacred mountains.”
\textsuperscript{18} Plainly put, construction of the South Mountain Loop 202 would degrade a natural landscape with profound sacred and spiritual significance to the GRC.
\textsuperscript{19} One GRC tribal member stated that “my connection to South Mountains is that it is a very sacred place to me and my people.”
\textsuperscript{20} Another said “it is a sacred mountain to our people... and... it was made sacred to our ancestors... there are stories about that mountain. I was told by my elders, and there are plants that grow on this mountain that we use today for healing, eating, and bolstering.”

30 (cont.)

Chapter 2 of the Final Environmental Impact Statement is dedicated to the explanation of the Gila River Indian Community outreach undertaken for the project. Chapter 6 of the Final Environmental Impact Statement further describes Gila River Indian Community outreach throughout the process. The Gila River Indian Community was provided equal opportunities to participate in the project as all other populations and agencies. This outreach was undertaken, in part, to ensure all populations had equal access to the process and, in part, to ensure disparate nor disproportionate and highly adverse impacts would result from the construction and operation of the proposed action.

Air Quality

The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives.

In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.

With respect to air quality, the Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency recently determined that Phoenix has attained the particulate matter (PM) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner-burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM\textsubscript{10}) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter (PM\textsubscript{10}) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile (Response 31 continues on next page)
and hundreds would be highly unequal to the GRIC and for the foregoing reasons, Title VI was violated by ADOT because:

- the proposed route through South Mountain would knowingly, improperly, and illegally degrade a site with profound sacred and spiritual significance resulting in an unjustifiable disparate impact on the GRIC;
- construction and the effects of vehicle and truck traffic on the proposed South Mountain Loop 202 would result in pollution causing disproportionate cumulative health effects resulting in a disparate impact on the GRIC and its tribal members, including members of GRIC, and;
- insufficient consultation and inadequate process was given to the GRIC.

A. SOUTH MOUNTAIN LOOP 202 DISPARATE CUMULATIVE SPIRITUAL AND CULTURAL EFFECTS ON THE GRIC, INCLUDING GRACE COMPLAINANTS

GRIC relevances about the proposed South Mountain Loop 202 have common themes. Like the following, they identify the great cultural and spiritual meaning the South Mountain signifies to the GRIC; "our people feel that the mountain is sacred and we should respect it, we need to protect it because the mountain is sacred to our people," and "when I was younger I recall being taught about one people’s heritage... I remember being taught by my elders that we come from South Mountain." See attachment. Another GRIC tribal member stated "as we were growing up we were taught that our land was sacred and that we need to protect it at all cost. South Mountain... is one of our sacred mountains." See attachment. Finally, part of the construction of the South Mountain Loop 202 would desecrate a natural landscape with profound sacred and spiritual significance to the GRIC. One GRIC tribal member wrote that "my connection to South Mountain is that it is a very sacred place to me and my people." See attachment. Another said "it is a sacred mountain to our people... and... it was given to our ancestors... there are stories about that mountain I was told by my elders, and there are plants that grow on this mountain that we use today for bruising, eating, and boiling." See attachment.

Cutting and blasting the South Mountain to place a highway through it would result in a major disparate impact on the GRIC. One tribal member stated "the mountain is central to the

### Code: 31 (cont.)

**Response**

Source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM_{10}) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

Further, the Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and fully considered input and comments that were received.

Chapter 2 of the Final Environmental Impact Statement is dedicated to the explanation of the Gila River Indian Community outreach undertaken for the project. Chapter 6 of the Final Environmental Impact Statement further describes Community outreach throughout the process. The Gila River Indian Community was provided equal opportunities to participate in the project as all other populations and agencies. This outreach was undertaken, in part, to ensure all populations had equal access to the process and, in part, to ensure disparate nor disproportionately high adverse impacts would result from the construction and operation of the proposed action.

#### 32 Tribal Involvement

The Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and considered fully the substantive input and comments that were received.

Chapter 2 of the Final Environmental Impact Statement is dedicated to the explanation of the Gila River Indian Community outreach undertaken for the project. The Gila River Indian Community was provided the same opportunities to participate in the project as all other populations and agencies.

The Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing, and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the *Gila River Indian News*. 

(Response 32 continues on next page)
The Arizona Department of Transportation Community Relations distributed electronic notices (e-newsletters) through the Government Delivery system to over 12,000 constituents who voluntarily signed up for project alerts along Interstate 10 (Papago, Maricopa, and Santan Freeways). These electronic notices included notice of availability of Draft Environmental Impact Statement (distributed on April 26, 2013); date of the public hearing (distributed on May 10, 2013); dates of the community forums (distributed on May 29, 2013); and notification in June of the close of the Draft Environmental Impact Statement public comment period. In addition, anyone who had attended a previous meeting on the proposed action and signed in received all of this information mailed individually. On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area.

The Arizona Department of Transportation provided vouchers for public hearing parking and for public transit to the hearing. For the first time in the State's history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All ads provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations.

Title VI, Cultural Resources

The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives. In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.

The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26. The proposed project would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices.

Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resource studies and engaging in an ongoing, open dialogue with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the Gila River Indian Community that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation

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**Response 33 continues on next page**
Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28. Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

The mitigation measures were suggested in a letter from the Lieutenant Governor of the Gila River Indian Community to the Administrator, Arizona Division, Federal Highway Administration, dated June 23, 2010 (see page A372 of Appendix 2-1 of the Final Environmental Impact Statement). In this letter, the Gila River Indian Community submitted a proposal to address partial measures for the mitigation of adverse effect from the Pecos Road Alignment of the South Mountain Freeway. The Gila River Indian Community’s proposal found the engineering solutions acceptable, but stated that implementation and construction of the proposed freeway would require further consultation. In committing to the evaluation of the South Mountains Traditional Cultural Property, the Arizona Department of Transportation and Federal Highway Administration also committed to the Gila River Indian Community’s participation in ongoing engineering design refinements and acknowledged the importance of all plants and animals in the traditional culture of the Akimel O’odham and Pee Posh of the Gila River Indian Community.

O’odham creation story and continues to be a place to hold ceremonies by and for the O’odham people. The mountain is also sacred to us because of the plant life we use for medicinal and ceremonial purposes and also because of the wildlife we hunt to sustain ourselves. The construction of this freeway would greatly harm the wellbeing of the mountain and therefore will bring harm to the O’odham. See attachment.

South Mountain is a very major and significant part of the GRIC spiritual and cultural life. It is a place of importance with esteemed meaning; it is associated with integrity, strength, patience, and offers numerous cultural and spiritual benefits to the GRIC. It has been there on the landscape and has withstood time and the elements in good and bad times with generations of GRIC ancestors. Becoming a major historical and spiritual theme in the GRIC’s lives, stories, teachings, rituals, ceremonies, and medicines are derived from South Mountain. One tribal member stated “South Mountain is important to me because it’s part of our heritage. There are many teachings that go with that mountain. Stories and songs that our generations carry on.” See attachment. Another stated “according to our oral history South Mountain is a sacred mountain to our people. Akimel O’odham legend and stories talk about South Mountain being the home of the deity for our tribe. There are also stories about archeologists and petroglyphs from our ancestors the Mohikam located on South Mountain.” See attachment. Another GRIC tribal member stated “Oral history and legendary states that South Mountain is the home of ‘Elk Brother’ (Pima deity the Akimel O’odham Tribe (Gila River Indian Community) Tribe. South Mountain was also once inhabited by our ancestors the Hohokam. The Hohokam has been acknowledged by archeological, anthropological and historical to be one of the first settlers of this region. South Mountain is also a place of worship, sacred ceremonies are performed, prayer and blessings are given and stories are built to honor them and our ancestors.” See attachment.

Dwelling South Mountain would be devastating it and desecrating it would be harming the GRIC itself —to take the South Mountain away in a great impact to the Gila River Indian Community. It would be losing a part of us even more.” See attachment. “Fe loss of this mountain being destroyed has put a great hurt in my spiritual life...The mountains have given me much in my life. It has kept me strong, sure, peaceful, and healthy.” See attachment. Much harm would occur because this significant historical and cultural site that has been handed down through generations is rich with the past; its heritage reaches into the present and connects with the GRIC living today. One tribal member stated “I have a very strong connection to South Mountain. In my later years I left my hometown of Ajo, Arizona to attend Arizona State University. As a young woman far from home it was a difficult adjustment to live in the city, but going to South Mountain helped with this transition...as a young mother raising a child in the late sixties/early seventies, I often want to South Mountain to meditate when times became tough or if I was unable to return to Gila River for family emergencies...South Mountain has always made me feel closer to home and closer to my O’odham Himidag.” See attachment.

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Note 1: Ancestral O‘odham, GRIC tribal member. After 7 July 6
Note 2: Ancestral O‘odham, GRIC tribal member. After 7 July 5
Note 3: Peggy MacMonigle, GRIC tribal member. After 7 July 3
Note 4: Joseph Monigle, GRIC tribal member. After 7 July 3
Note 5: Jennifer Monigle, GRIC tribal member. After 7 July 3
Note 6: Gus Sandoval, GRIC tribal member. After 7 July 3
Note 7: Jennifer Monigle, GRIC tribal member. After 7 July 3
Note 8: Gus Sandoval, GRIC tribal member. After 7 July 3
The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26. The proposed project would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices.

The Arizona Department of Transportation and Federal Highway Administration acknowledge the expressed comments of Gila River Indian Community members as referenced in the GRACE comment. Several measures to avoid the use of a portion of the mountains, including tunneling, bridging, and rerouting were fully examined but, for reasons explained fully in Chapters 3 and 5 of the Draft and Final Environmental Impact Statements, were eliminated from detailed study in the environmental impact statement process.

Use of the mountains for the purposes of the proposed freeway represents two-tenths of one percent of the total mountain range. Since 1988, and as part of this environmental impact statement process, several measures have been undertaken and will be undertaken to further reduce effects on the mountains. These measures, including narrowing the design footprint, acquiring replacement land immediately adjacent to the mountains, and the provision of highway crossings, are outlined in text beginning on page 5-23 of the Draft Environmental Impact Statement.

In addition, Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.
In terms of the comment’s reference to pressures to locate a freeway on Gila River Indian Community land, as stated on page 3-24 of the Final Environmental Impact Statement, in January 2010, the Arizona Department of Transportation Director received a letter from the Gila River Indian Community Governor, who indicated that the Gila River Indian Community was willing to assist in conducting a study of the proposed South Mountain Freeway on Gila River Indian Community land. In response, the project team conducted preliminary analyses of projected engineering issues, cultural resources impacts, natural resources, multiuse crossings, air quality impacts, noise level impacts, socioeconomic impacts, and Section 4(f) issues. Following this effort, a coordinated referendum of Gila River Indian Community members to favor or oppose construction of the proposed South Mountain Freeway on Gila River Indian Community land or to support a no-build option occurred in February 2012. Gila River Indian Community members voted in favor of the no-build option. The Gila River Indian Community’s position regarding a “no-build” option was considered in the Draft and Final Environmental Impact Statements. That position is formally known as the No-Action Alternative and was evaluated in depth as assessments of the impacts of the proposed action on each resource. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based in the inherent authority of Native American tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their lands. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process.

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34 (cont.)

being prepared to permit a highway others through their limited reservation or through sacred ancestral land abuting their reservation—both of which have sacred and traditional values.198 Also in that meeting, GRC tribal members shared how their ancestors are a part of the “sacred territory” of South Mountain and how the tribal members of GRC continue to be defined by it.199 One tribal member expressed his concern that this declaration was “just another attempt to take more land” from indigenous people, whose historical legacy was one of living aware and once of their land by non-indigenous people.200 He furthered shared with the audience how South Mountain is where their “creator started” and realized that it is a “sacred area that cannot be touched.”201 Another speaker stated his elders taught him that South Mountain “cannot be disturbed and if disturbed, would cause problems” to the world.202 Another stated that “this (cultural land of his ancestors) is what binds us together,” and another stated that “disenfranchisement of the South Mountain would break and kill them.”203 Another pointed out to the audience the compromises the tribal members have already had to make like having to tolerate sacred places in the SMPP being desecrated with graffiti and trash.204 She said it was unfair and wrong that now they are expected to permit their sacred South Mountain to be built for a highway.

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GRACE co-founder, Lori Riddle, also spoke to the audience during the 2009 MAG public comment meeting. She stated that GRACE was opposed to the project because the proposed “imped[ed] on fundamental cultural sensibilities of indigenous peoples of the GRC.”205 Furthermore, she said, the GRLC “honor the land...honor the mountain.”206 This is in reference to their “prayer, dance, deepen, gather, strength.” This is a heritage that goes back hundreds and thousands of years.207 Frustrated with ADOT’s failure to respect tribal concerns about the proposed declaration of the sacred mountain, Riddle had to say once again “the community has already chosen(s) not to have a highway.”208

The November, 31, 2009, ArizonaForhtills News article, Questions remain on blasting two South Mountain, questioned the soundness of “blasting through major ridges of South Mountain in the park, which the Gila River Indian Community (GRC) considers sacred.” It went on to quote Shaamn Rivers, a member of GRCE, who said that the South Mountains “has burial sites, archeological sites and scenery.” The article also quoted Lori Riddle’s concerns with cutting into the ridges of the sacred South Mountain. Riddle stated, “when they talk about

198 Id. In 2008, a motoryer through the reservation was being pushed on the GRCE.
200 YouTube, South Mountain Freeway Proposal - Public Comments Part 1 found at
https://www.youtube.com/watch?v=2BMHPW000A0.
201 Id.
202 Id.
203 Id.
204 Id. Only certain tribal members are allowed even in the sacred places and only certain tribal members knowledgeable and skilled in ceremonies is the sacred places.
206 Id.
207 Id.
208 Id.

18
Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in ongoing, open consultation with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

The American Indian Religious Freedom Act, 42 United States Code Section 1996, provides a policy statement of the United States to “protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian . . . including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonies and traditional rites.” The Arizona Department of Transportation and Federal Highway Administration complied with the policy stated in the American Indian Religious Freedom Act throughout the environmental impact statement process, as evidenced by consultation efforts, mitigation measures, and a discussion of cultural resources issues in the Draft Environmental Impact Statement. The study would not violate the American Indian Religious Freedom Act because, as stated above, members of the Gila River Indian Community would not be prohibited from continuing to practice their beliefs even if the project goes forward because access to the mountain would be maintained, impacts would be mitigated based on input by the Gila River Indian Community and others, and only a small fraction of the mountain would be affected.
The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-66 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency recently determined that Phoenix has attained the particulate matter (PM<sub>10</sub>) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner-burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.

In May 2012, the Arizona Department of Environmental Quality submitted a revised Maricopa Association of Governments 2012 Five Percent Plan for the region. On July 20, 2012, the U.S. Environmental Protection Agency made an official finding that the Maricopa Association of Governments 2012 Five Percent Plan was administratively complete. This decision ended the sanctions clocks associated with Arizona’s decision to withdraw the Maricopa Association of Governments 2007 Five Percent Plan. On February 6, 2014, the U.S. Environmental Protection Agency published a notice in the Federal Register proposing to approve the Maricopa Association of Governments 2012 Five Percent Plan for attainment of the PM-10 Standard for the Maricopa County Nonattainment Area. In the same notice, the U.S. Environmental Protection Agency stated that it would concur with exceptional event (as a result of haboobs and dust storms) documentation prepared by the Arizona Department of Environmental Quality, which would give the region the 3 years of clean data needed for attainment of the particulate matter (PM<sub>10</sub>) 24-hour standard. Finally on May 30, 2014, the U.S. Environmental Protection Agency approved the 2012 Five Percent Plan and found the area in attainment of the 24-hour particulate matter (PM<sub>10</sub>) standard based on monitoring data for the years 2010 to 2012 (see page 4-72 of the Final Environmental Impact Statement for more information).
Detecting the fungus responsible for valley fever in soils is not practical at this time. However, to reduce the amount of construction dust generated that could carry the fungus, particulate control measures related to construction activities would be followed. The following mitigation measures would be followed, when applicable, in accordance with the most recently accepted version of the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction (2008). Prior to construction and in accordance with Maricopa County Rule 310, Fugitive Dust Ordinance, the contractor shall obtain an approved dust permit from the Maricopa County Air Quality Department for all phases of the proposed action. The permit describes measures to be taken to control and regulate air pollutant emissions during construction (see page 4-173 of the Final Environmental Impact Statement).

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM) and followed U.S. Environmental Protection Agency guidelines. No violations of either the carbon monoxide or particulate matter (PM) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate matter (PM) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration's mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining current conditions in the affected environment (to the extent that the monitoring data are current), they don’t tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed. The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxic emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.

36 Code Comment

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<td>Detecting the fungus responsible for valley fever in soils is not practical at this time. However, to reduce the amount of construction dust generated that could carry the fungus, particulate control measures related to construction activities would be followed. The following mitigation measures would be followed, when applicable, in accordance with the most recently accepted version of the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction (2008). Prior to construction and in accordance with Maricopa County Rule 310, Fugitive Dust Ordinance, the contractor shall obtain an approved dust permit from the Maricopa County Air Quality Department for all phases of the proposed action. The permit describes measures to be taken to control and regulate air pollutant emissions during construction (see page 4-173 of the Final Environmental Impact Statement). The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM) and followed U.S. Environmental Protection Agency guidelines. No violations of either the carbon monoxide or particulate matter (PM) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate matter (PM) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads. Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration’s mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining current conditions in the affected environment (to the extent that the monitoring data are current), they don’t tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed. The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxic emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.</td>
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Air Quality, Agriculture

As noted on page 4-68 of the Final Environmental Impact Statement, secondary standards are established for criteria pollutants to minimize environmental and property damage. Primary and secondary standards for particulate matter (PM\textsubscript{10}) are identical; no threshold is established by the U.S. Environmental Protection Agency for carbon monoxide (CO).

The air quality assessment for the proposed freeway revealed no violations of either the carbon monoxide or particulate matter (PM\textsubscript{10}) standards. Thus, the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

Because the secondary standards for particulate matter (PM\textsubscript{10}) are identical, the proposed project would also not cause a violation of the secondary particulate matter (PM\textsubscript{10}) standard. Further, the construction and operation of the proposed freeway would not alter agricultural operations on the Gila River Indian Community.

Air Quality

As noted on page 4-76 of the Final Environmental Impact Statement, since ozone is a regional pollutant, there is no requirement to analyze potential impacts and no possibility of localized violations of ozone to occur at the project level. The Maricopa Association of Governments is responsible for developing plans to reduce emissions of ozone precursors in the Maricopa area. The Preferred Alternative is included in the Regional Transportation Plan that has been determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.

Trucks

Creating a truck bypass is not a goal of the proposed action. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access segments of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60.

As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 of the Final Environmental Impact Statement). The air quality analyses included projected truck traffic. The carbon monoxide and particulate matter (PM\textsubscript{10}) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.
than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. Because Mexican trucks are currently restricted to the border region, they are not operating in the project Study Area and they were not included in the air quality analyses.

Air Quality

Air quality depends on several factors such as the area itself (size and topography), the prevailing weather patterns (meteorology and climate) and the pollutants released into the air. Cuts through the South Mountains would be expected to produce microclimate differences similar to those produced by a series of buildings in a large city which produce localized wind tunnel effects. The mountain cuts, however, would not affect regional air quality.

Hourly meteorological data used for the dispersion modeling with CAL3QHCR were downloaded from the U.S. Environmental Protection Agency’s Support Center for Regulatory Atmospheric Modeling for the Phoenix Sky Harbor International Airport (surface data) and the Tucson International Airport (upper air data) for the 5-year period from 1987 through 1991 (epa.gov/ttn/scram/metobsdata_databases.htm). The 5 years of surface and mixing height data were processed with PCRAMMET to develop meteorological input files compatible with CAL3QHCR and incorporated into the particulate matter (PM10) and carbon monoxide model runs at the site.
three analysis locations described above. The use of Phoenix Sky Harbor International
Airport meteorological data is consistent with the Maricopa Association of
Government’s regional conformity analysis, which was approved by the U.S.
Department of Transportation on February 12, 2014, and with the Arizona
Department of Environmental Quality’s air quality permitting efforts in the region.
In addition, the use of these data was agreed to during interagency consultation for the
proposed project. The selected 5-year data set is representative of the project area and
encompasses the wide variety of weather conditions that are likely to be experienced in
the project area.
With the Preferred Alternative in 2035, modeled mobile source air toxics emissions
would decrease by 57 percent to more than 90 percent, depending on the pollutant,
despite a 47 percent increase in vehicle miles traveled in the Study Area compared with
2012 conditions.

41 Title VI, Cumulative, Social
Conditions
The comment indicates that these impacts have been experienced by the Native
American and by the Gila River Indian Community in particular. This comment
indicates that these conditions currently exist; therefore, the current state of the
public health of the Gila River Indian Community is the baseline condition under
consideration. It is not the obligation of the proposed action to mitigate impacts
cased by other unrelated actions.

Text beginning on page 4-179 of the Final Environmental Impact Statement addresses
the proposed freeway’s contribution to cumulative impacts. The comment infers
the proposed freeway along with future actions would continue to contribute to the
struggles referenced in the comment. The suggested cause is a loss of a traditional way
of life and a marginalization of related traditions, inferred primarily by loss of natural
lands and loss of access to those lands.

The Draft and Final Environmental Impact Statements disclose recognition that some
populations with environmental justice characteristics have specific needs associated
with their identity being tied directly to geographic setting. Text on page 4-187 of
the Final Environmental Impact Statement disclose that for the Gila River Indian
Community, association with the South Mountains is important to identity and
is established through direct spiritual and visual access to the mountains. Land
developments in the area have encroached on the South Mountains, and the proposed
action would contribute to encroachment on the southern side of the mountains
but would be offset by mitigation measures highlighted in text in the section,
Cultural
Resources
beginning on page 4-140 and in Chapter 5 of the Final Environmental Impact
Statement. The contribution of the proposed action to this cumulative effect would be
negligible when considering land development patterns encroaching on the resource.
The Final Environmental Impact Statement, after consultation and coordination
efforts, accommodates and preserves (to the fullest extent possible from the
available alternatives) access to the South Mountains for religious practices. A very
small portion of the mountain would be affected by the proposed freeway (less than
0.03 percent of the total area). Although the Final Environmental Impact Statement
describes the impact on the South Mountains as adverse, Native Americans would not
be kept from practicing their beliefs, access to the mountain would be maintained, and
mitigation measures would be implemented based on input from members of the Gila
River Indian Community.

42 Title VI
The cultural and religious places of importance, like the South Mountains, are
acknowledged in the Draft Environmental Impact Statement in several locations,
noteably pages 4-132 and 5-26. The proposed project would accommodate and
preserve (to the fullest extent possible from the available alternatives) access to the
South Mountains for religious practices.

(Response 42 continues on next page)
The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives.

In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.
Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

The Draft Environmental Impact Statement, after consultation and coordination efforts, accommodates and preserves (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.

The Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and fully considered input and comments that were received.

Chapter 2 of the Final Environmental Impact Statement is dedicated to the explanation of the Gila River Indian Community outreach undertaken for the project. Chapter 6 of the Final Environmental Impact Statement further describes Gila River Indian Community outreach throughout the process. The Gila River Indian Community was provided equal opportunities to participate in the project as all other populations and agencies. This outreach was undertaken, in part, to ensure all populations had equal access to the process and, in part, to ensure disparate nor disproportionately high adverse impacts would result from the construction and operation of the proposed action.

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Project communication with Gila River Indian Community officials followed a protocol established for this study, from years of previous consultation and coordination recognizing the sovereign nation status of the Gila River Indian Community and with respect for the Gila River Indian Community’s cultural norms (see letter on page A152 of Appendix 1-1). Representatives from the Gila River Indian Community participated for years in the South Mountain Citizens Advisory Team. During the public comment period, Community members were provided the same opportunities to attend the public hearing and participate in a public forum as all other populations.

The Arizona Department of Transportation and Federal Highway Administration did comply with the National Environmental Policy Act’s provision to provide for “all Americans safe, healthful, productive, and esthetically pleasing surroundings,” or to take a “systematic, interdisciplinary approach” to aid in considering environmental and community factors in decision making. The alternatives development and screening process outlined in Chapter 3 of the Final Environmental Impact Statement is one example of the agencies’ arduous, exhaustive, and comprehensive systematic and interdisciplinary approach to the National Environmental Policy Act. Further, as shown in Figure 3-41 on page 3-67, the process of identifying a preferred alternative demonstrates the interdisciplinary accounting in decision making in the process.

The Transportation Policy Committee was established by the Maricopa Association of Governments Regional Council in 2002 to oversee the development of the 20-year Regional Transportation Plan and to guide transportation planning in the region. The Transportation Policy Committee is made up of 23 members. The membership includes 13 city representatives, a Maricopa County Supervisor, an Arizona Department of Transportation State Transportation Board member, and seven business representatives. The final member, representing Native American Indian Communities is the Gila River Indian Community Lieutenant Governor. So the Gila River Indian Community has a direct voice in the direction of transportation funding in the region.

The proposed project is part of the Regional Transportation Plan for the Maricopa Association of Governments region. In 2004, the voters of Maricopa County approved the Regional Transportation Plan and the extension of a half-cent sales tax to fund its projects. The role of the Arizona Department of Transportation is to implement the freeway program from the voter-approved plan.
ADOT has minimally consulted with the GRIC in the scoping and preparing of the DES both officially and unofficially. While ADOT indicates that it has conducted 178 meetings with GRIC on its South Mountain Loop 202 proposal between 2001 to 2012, only three, all in 2011, were identified as cultural resource consultation meetings and none were attended by the BIA. Further, these cultural resource consultation meetings were designated as “Meetings Focused on the Proposed On-Community Alignment,” 2010-2012 listing any efforts to satisfy the goals of a cultural resource consultation meeting. The National Park Services’ guidance for federal historic preservation programs states: “consultation means the process of seeking, discussing, and considering the views of others, and, where feasible, seeking agreement with them on how historic properties should be identified, considered, and managed. Consultation is built upon the exchange of ideas, not simply providing information.” Further, consultation should start early for a proposed project, not 9 years after conducting meetings. And those best equipped to communicate the tribes’ sensitivities to cultural places should be consulted with and not just met with so as to satisfy what it believes is its Title VI and EU requirements.

ADOT spent the first 9 years just acknowledging GRIC representatives what its plan was and trying to “coordinate” it agenda not contesting: ADOT worked mainly with the Natural Resources Standing Committee (NRSC) and the Transportation Technical Team (TTT). The NRSC is a special committee reporting to the Community Council that reviews all land use actions under its jurisdiction, acts as a key decision-making agent in actions pertaining to land use effects on Community land, and issues right-of-entry permits for non-Community members wishing to conduct a survey or other data collection tasks on Community land. And the TTT is a special committee established by the Community Council to facilitate informed decisions on transportation projects. These two committees do not participate in consultation, which is something very different from making land use decisions, issuing right-of-entry permits for non-Community members, and facilitating informed decisions on transportation projects.

Moreover, ADOT did not conduct the international scoping meetings itself. The DES states that in August 2010 while ADOT believed it still could assure an on-reservation alignment, it presented an environmental and engineering overview outlining the freeway and its

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<td>46</td>
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### Tribal Involvement

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed. As noted in Table 4-47 that begins on page 4-145 of the Final

Chapter 1, Purpose and Need, was developed based on Federal Highway Administration guidance in terms of complying with the National Environmental Policy Act with respect to the purpose and need for a proposed action. As noted on page 1-1 of the Draft Environmental Impact Statement, “…if the lead agency concludes … there is no need, an EIS would not be prepared...” The determination of purpose and need in terms of assessing if a transportation problem exists that warrants action was done objectively, defensibly and without pre-determination and in so doing, the Arizona Department of Transportation and Federal Highway Administration facilitated an environmental impact statement process without a determination that the proposed action is “…an absolute necessary component of the Maricopa Association of Governments master-plan...” as is incorrectly stated in the comment.

The purpose and need criteria used to define the transportation problem are described (see Figures 1-8, 1-9, 1-10, 1-11, 1-12, and 1-13). The summation of the need for the proposed action is described in the conclusions section, beginning on page 1-21 of the Draft Environmental Impact Statement.

In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. The preferred alternative was the outcome to this process. A thorough feasible and prudent avoidance analysis of the South Mountains was conducted as presented in Chapter 5 of the Draft and Final Environmental Impact Statements and concluded avoidance to the direct use of the resource was not feasible and prudent. In support of this response and given the concerns about the South Mountains, consider the following review from the U.S. Department of the Interior on the Draft Environmental Impact Statement: comment: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.

46 (cont.)

Chapter 46 - Code Comment Document Response

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This consultation has resulted in concurrence from the State Historic Preservation Office and Gila River Indian Community Tribal Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed. However, there is no requirement to consult with individual tribal members under Section 106.

Agency scoping comments from the project initiation in 2001 are presented beginning on page 6-3 of the Draft and Final Environmental Impact Statements. The Gila River Indian Community was part of the agency scoping process.

While specific topics are not identified in Table 2-1 of the Draft Environmental Impact Statement, cultural resource-related issues were a standard topic and the Bureau of Indian Affairs were regular attendees at these consultation and coordination meetings. Additionally, Gila River Indian Community concerns are summarized on page 2-10 of the Draft and Final Environmental Impact Statements. As noted in Table 4-47 beginning on page 4-145 of the Final Environmental Impact Statement, the Bureau of Indian Affairs has been consulted over the course of the project on cultural resources-related issues.

Also, the Bureau of Indian Affairs, as a cooperating agency, reviewed the Draft Environmental Impact Statement prior to the public release. The Bureau of Indian Affairs approved the document for release with only minor comment.

Since the beginning of the environmental impact statement process for the proposed freeway, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in an ongoing, open dialogue with the Gila River Indian Community, its Tribal Historic Preservation Officer, and its Cultural Resource Management Program regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. The Gila River Indian Community’s own Cultural Resource Management Program performed the cultural field investigations and developed recommendations for mitigation for project impacts. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. The Yavapai-Prescott Indian Tribe deferred to the Southern Tribes to take the lead in identifying the traditional cultural properties. A response from Salt River Pima-Maricopa Indian Community dated August 14, 2012 cited the existing consultation management agreement between the Four Southern Tribes (Ak-Chin Indian Community, Gila River Indian Community, (Response 46 continues on next page)
ADOT has minimally consulted with the GRC in the scoping and preparing of the DES both officially and unofficially. While ADOT indicates that it has conducted 178 meetings with GRC in its South Mountain Loop 202 proposal between 2001 and 2012, only three, all in 2011, were identified as cultural resource consultation meetings and none were attended by the BIA.878

Further, these cultural resource consultation meetings were designated as “Meetings Focused on the Proposed On-Community Alignment, 2010-2012 having any efforts to satisfy the goals of a cultural resource consultation meeting. The National Park Services’ guidance for federal historic preservation programs states: “consultation means the process of seeking, discussing, and considering the views of others, and, where feasible, seeking agreement with them on how historic properties should be identified, considered, and managed. Consultation is built upon the exchange of ideas, not simply providing information.”879 Further, consultation should start early for a proposed project, not 9 years after conducting meetings. And those best equipped to communicate the tribes’ sensitivities to cultural places should be consulted with and not just met with so as to satisfy what it believes is its Title VI and EU requirements.880

ADOT spent the first 9 years just informing GRIC representatives what its plan was and trying to “coordinate” its agenda—not consulting. ADOT worked mainly with the Natural Resources Standing Committee (NESC) and the Transportation Technical Team (TTT). The NESC is a special committee reporting to the Community Council that reviews all land use actions under its jurisdiction, acts as a key decision-making agent in actions pertaining to land use and Community land, and issues right-of-way permits for non-Community members wishing to conduct a survey or other data collection tasks on Community land.” And the TTT is a special committee established by the Community Council to facilitate informed decisions on transportation projects.881 These two committees do not participate in consultation, which is something very different from making land use decisions, issuing right-of-way permits for non-Community members and facilitating informed decisions on transportation projects.

Moreover, ADOT did not conduct the informational scoping meetings itself. The DES states that in August 2010 while ADOT believed it still could secure an on-reservation alignment, it presented as environmental and engineering overview outlining the freeway and its

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878 Note of these meetings was one that the Four Southern Tribes of Arizona attended. (ADOT, South Mountains Study Team, Chapter 2 Gila River Indian Community Coordination #47). The federal government is obliged by its “best responsibility” to express the best interests of tribes and their members. This specific responsibility is delegated to the U.S. Bureau of Indian Affairs (BIA).” (404 25, Under Secretary Order 11,153, 2004). Federal agencies must establish a process for consultation with tribal officials in the development and implementation of “policies that have tribal implications” based upon the “unique legal relationship” between the United States and Indian tribal governments as set forth in the Constitution of the United States, treaties, agreements, Executive Orders, and court decisions. (404 25, Under Secretary Order 11,153, 2004). The consultation process must include the tribal community’s involvement in the decision-making process. (404 25, Under Secretary Order 11,153, 2004). The process is administered by the Tribal Liaison Officer within the Bureau of Indian Affairs.


880 ADOT, South Mountains Study Team, Chapter 2 Gila River Indian Community Coordination #47.

881 Association of Civil Engineers Group was part with ADOT in 2010 and continued in 2011 by ADOT and Senate. Senate of the Senate that occurred did not influence the DEIS, the Senate and the Senate Group met in Spring 2013 to talk to the Federal Government Group in the South Mountain Freeway and the Senate Group continued in the Senate Group. See attachments.

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In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.
The Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and considered fully the substantive input and comments that were received. Efforts to involve the Gila River Indian Community in the environmental impact statement process are documented in Chapter 2 of the Final Environmental Impact Statement. Gila River Indian Community members were able to comment on the environmental impact statement process and its content at any time during the preparation of the Draft Environmental Impact Statement and through the comment period once the Draft Environmental Impact Statement was issued. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer. This is disclosed in Chapter 2 of the Final Environmental Impact Statement.

Project communication with Gila River Indian Community officials followed a protocol established for this study, from years of previous consultation and coordination recognizing the sovereign nation status of the Gila River Indian Community and with respect for the Gila River Indian Community’s cultural norms. Consultation and coordination occurred one-on-one with the appropriate Gila River Indian Community officials. Representatives from the Gila River Indian Community participated for years in the South Mountain Citizens Advisory Team until early 2006, when the Gila River Indian Community requested all project-related communications take place at the government-to-government level. During the public comment period, Gila River Indian Community members were provided the same opportunities to attend the public hearing and participate in a public forum as all other populations.

28 ADOT, South Mountain Study Team, Chapter 2: Gila River Indian Community Coordination at 11.
29 ADOT, South Mountain Study Team, Chapter 2: Gila River Indian Community Coordination at 3.
30 Id. at 1.
31 ADOT, South Mountain Study Team, Chapter 4: Affected Environment, Environmental Consequences, and Mitigation at 8.
32 ADOT, South Mountain Study Team, Chapter 3: Gila River Indian Community Coordination at 8.
50 Tribal Involvement

As discussed on page 2-4 of the Draft Environmental Impact Statement, in August 2000, the Gila River Indian Community Council passed Resolution GR-64-96. This resolution concluded that the Gila River Indian Community Council strongly opposed any future alignment of the South Mountain Freeway on Gila River Indian Community land. That resolution has never been rescinded by Gila River Indian Community Council and is still considered in force and to represent the will of the Gila River Indian Community by the Arizona Department of Transportation and Federal Highway Administration. The comments received from Gila River Indian Community Governor Gregory Mendoza (see letter dated July 11, 2013, on page B38 in Appendix 7, Volume III, of the Final Environmental Impact Statement) confirm the Gila River Indian Community’s position.

As stated on page 2-8 of the Draft Environmental Impact Statement, the meetings in 2010 between the Gila River Indian Community’s Transportation Technical Team, Arizona Department of Transportation, and the Federal Highway Administration were held in response to a request received from the Governor of the Gila River Indian Community and were not a part of the agency or public scoping process. The information provided to the Transportation Technical Team was used by the Team and the Public Information Office in the Gila River Indian Community’s outreach effort prior to the February 2012 coordinated referendum. The referendum and the outreach effort were tribal actions and, other than providing requested information to the Gila River Indian Community, Arizona Department of Transportation and Federal Highway Administration did not participate in these actions.

It is unclear to what timeframe the inadequate notification comment is referring. However, the Arizona Department of Transportation and Federal Highway Administration have attended meetings as requested by Gila River Indian Community groups, including the Gila Borderlands Advisory Committee and the Elderly Concerns Group. To keep Gila River Indian Community members engaged in the process and to ensure adequate access to project activities, three newsletters have been provided to the Gila River Indian Community for distribution and articles have been provided to the Gila River Indian News for inclusion in the weekly tribal newspaper. The Arizona Department of Transportation has participated in the Gila River Indian Community’s annual fair to answer questions regarding the proposed action. Times and locations of all public meetings (see Chapter 6, Comments and Coordination) relating to the project have been advertised to the Gila River Indian Community, inviting members to attend.

50 (Response 50 continues on next page)

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28 ADOT, South Mountain Study Team, Chapter 2 Gila River Indian Community Coordination at 11.
29 ADOT, South Mountain Study Team, Chapter 3 Gila River Indian Community Coordination at 5.
30 Id. at 1, 4.
31 ADOT, South Mountain Study Team, Chapter 1 Affected Environment, Environmental Considerations, and Mitigation at 26.
32 ADOT, South Mountain Study Team, Chapter 3 Gila River Indian Community Coordination at 8.
The Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

The Arizona Department of Transportation Community Relations distributed electronic notices (e-newsletters) through the Government Delivery system to over 12,000 constituents who voluntarily signed up for project alerts along the Interstate 10 Papago, Maricopa, and Santan Freeways. These electronic notices included notice of availability of Draft Environmental Impact Statement (distributed on April 26, 2013); public hearing (distributed on May 10, 2013); the community forums (distributed on May 29, 2013) and one in June (close of the Draft Environmental Impact Statement public comment period). In addition, anyone who had attended a previous meeting on the proposed action and signed in received all this information mailed individually. On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area.

As earlier comments recognize, the Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and considered fully the substantive input and comments that were received. While efforts to study project alternatives on Community land that did not directly impact South Mountain were attempted, as noted on page 2-8 of the Draft Environmental Impact Statement, a coordinated referendum occurred in February 2012, and Gila River Indian Community members voted in favor of the no-build option. Therefore, the on-Gila River Indian Community alignment was eliminated from further study. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based in the inherent authority of Native American tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their lands. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process.

However, mitigation measures developed through consultation and coordination with the Tribal Historic Preservation Office and other concerned parties would be considered for implementation in any final action.
In accordance with the National Environmental Policy Act, a range of reasonable action alternatives was carried forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. The preferred alternative was the outcome to this process. As noted in the previous comment response, the Draft Environmental Impact Statement on page 2-4 acknowledges that the Gila River Indian Community Council passed Resolution GR-64-96 that strongly opposed any future alignment of the South Mountain Freeway on Community land. In addition, the comments received from Gila River Indian Community Governor Gregory Mendoza (see letter dated July 11, 2013, on page B38 in Appendix 7, Volume III, of the Final Environmental Impact Statement) confirm the Gila River Indian Community’s position. To clarify, the comment concludes that because a distinct population conducts a vote, the outcome of said vote should be deemed as “final” when, such a vote is the reflection of a population subset of a much larger population. The environmental impact statement process accounts for such information from the voter outcome as a contributing factor to be taken into account as one of many factors to consider in terms of the National Environmental Policy Act decision making intent to promote a more informed decision in regards to the proposed action. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based in the inherent authority of Native American tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their lands. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process.

Tribal Involvement

The comment is correct that the opportunity for public testimony was offered only at the public hearing on May 21, 2013. The six community forums, including the one at the Komatke Boys & Girls Club offered the opportunity to view the same materials, present comments in writing or to a court reporter and were formatted in exactly the same manner. However, signs and banners were also prohibited at the public hearing on May 21.

Community forums were held after the public hearing to further invite public comment.

The public hearing for the proposed action was widely advertised. Newspaper ads in six newspapers of area-wide distribution ran advertisements at least twice each. Announcements occurred on five radio stations and six television stations. Mailers were sent on May 6, 2013 to 73,564 individuals (approximately 311 on the Gila River Indian Community) who had previously expressed an interest in the project. The Arizona Department of Transportation utilized the Government Delivery system to distribute to over 12,000 recipients. E-newsletters were distributed on three different occasions. All materials were also provided to the Gila River Indian Community Public Information Officer.
The Arizona Department of Transportation provided vouchers for public hearing parking and for public transit to the hearing. For the first time in the State’s history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatske Boys & Girls Club and the Governance Center in Sacaton). All ads provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations.

Although not everyone could possibly be accommodated under all circumstances, all parties were offered equal access to the public hearing. Equal opportunities were offered to all that wished to participate. The endeavor to engage all population segments exceeded National Environmental Policy Act requirements pertinent to public outreach and involvement. The outreach was full and fair; all members of the population including those in the Gila River Indian Community were provided opportunity to provide oral and written testimony in a manner appropriate to National Environmental Policy Act requirements with sufficient opportunity and time to participate in such engagement. The outreach also provided ample opportunity for those with special needs to inform Arizona Department of Transportation and Federal Highway Administration of special needs to allow Arizona Department of Transportation and Federal Highway Administration to be responsive to those special needs. Specifics of the outreach associated with the Draft Environmental Impact Statement comment period can be found in Chapter 6, Comments and Coordination, of the Final Environmental Impact Statement.

Community forums were held after the public hearing to further invite public comment. The public hearing for the proposed action was widely advertised. Newspaper ads in six newspapers of area-wide distribution ran advertisements at least twice each. Announcements occurred on five radio stations and six television stations. Mailers were sent on May 6, 2013 to 73,564 individuals (approximately 311 on the Gila River Indian Community) who had previously expressed an interest in the project. The Arizona Department of Transportation utilized the Government Delivery system to distribute to over 12,000 recipients. E-newsletters were distributed on three different occasions. All materials were also provided to the Gila River Indian Community Public Information Officer. Offers to the Gila River Indian Community Manager to host a public outreach event on the Gila River Indian Community began in summer 2012. The Gila River Indian Community first officially responded to this offer at the April 30, 2013 meeting of the Transportation Technical Team. During this meeting, the Gila River Indian Community Manager requested a community forum be conducted on the Gila River Indian Community following the public hearing. This was the only request the Arizona Department of Transportation received from the Gila River Indian Community regarding whether the Arizona Department of Transportation could hold a public outreach event during the public comment period. The Arizona Department of Transportation agreed to do so, and a community forum was held on June 22, 2013, at the Komatske Boys & Girls Club on the Gila River Indian Community.
"Many Community members voiced disappointment in the format of the Forum, which they said was completely from ADOT’s perspective...and...one-sided."298 One GRIC tribal member stated "I was unable to attend the ONE and only meeting that I would have been allowed to speak at publicly. As stated before, I don’t travel to the Phoenix metro area due to the distance, pollution and the heat. I am an elder that is in a wheelchair, which needs assistance to get around. Attending this meeting was impractical for me and the OOS meeting held in the Gila River Indian Community was held over fifty miles from my home. I feel that ADOT violated not civil right by not allowing anyone to speak at the meeting held in the Gila River Indian Community, as well as all other meetings held in other communities. I was raised by oral traditions, I was taught to speak out, and I have a right to be heard in a public forum." See attachment. Another GRIC tribal member said “I feel ADOT discriminated against us all at the last public forum held in Komatke, AZ. Gila River Indian Community members were not able to voice their public comments. No matter where the meetings are held. All parties whether you are against or for the freeway should be able to speak. No meeting should be one sided for any reason what so ever. That is very unfair. Again this is a fast fix to eliminate process that everyone should abide by.”299 See attachment.

Notice was also inadequate. The June 22 meeting was not publicized on GRIN until an ADOT advertisement appeared on GRIN the day before the actual event.300 This did not give tribal members enough notice to plan and prepare to attend the meeting, especially because many GRIC members lack transportation. To make matters worse, transportation was not provided to the GRIC as promised for the downtown Phoenix public hearing. Because of this, minimal GRIC participation at the Phoenix meeting was possible. In attempting to obtain community transportation for the Phoenix event, GRACE representative, Lori Riddle, called to speak with ADOT on numerous occasions to ask about transportation assistance. However, no one ever picked up. She had to bring messages and left several until ADOT’s answering machine became too full to allow her to leave any more messages. Then, when she then turned to MAG’s Senior Engineer Bob Hauser for assistance in resolving this issue, he only dragged his shoulders at her and said that it was just discovered that the ADOT message machine was designed to take up to 12 or 15 messages at a time. He said nothing else and did nothing to help. Not until the Phoenix meeting did ADOT then hand out instructions about transportation assistance. And, then when GRACE tried to secure transportation for GRIC tribal members for the re-convening public forum meeting on June 22, 2013, ADOT failed to provide even to pick up tribal members that many of the GRIC needed to attend the meeting. At the last moment, ADOT put the responsibility on the GRIC requesting that GRACE representatives, Lori Riddle, provided ADOT with a list of those who needed transportation with their contact information and addresses, because of the time constraints, this was not possible to provide.

One GRIC tribal member summed up ADOT’s performance with the GRIC: “the manner in which ADOT has pursued the Gila River community member’s voice and cooperation regarding the Draft Environmental Impact Study and the planning process has been poor to say The Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

Like the public hearing, the community forums were widely advertised. In addition to the efforts of the Gila River Indian Community Communication and Public Affairs Office, Arizona Department of Transportation ran newspaper ads in six newspapers of area-wide distribution four times each. In addition to these sources, The Gila River Indian Community’s Facebook page advertised the hearing and the community forum on the Gila River Indian Community. Likewise, the Gila River Against Loop 202 Facebook page advertised the hearing, public transportation to the hearing, and the community forum on the Gila River Indian Community.

As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community, a sovereign nation, in the environmental impact statement process are extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

The individuals who felt that they were not included in the comment process are doing so through this complaint.

Community forums were held after the public hearing to further invite public comment.

299 Peggy Mes Monago, GRIC tribal member, SF, 4 July 6, 2013.
300 Razah Mes Monago, GRIC tribal member, SF, 9.
The descriptions of cultural resources and potential effects to those resources as discussed in the Draft Environmental Impact Statement were correct and complete. The banners produced for the public meetings were necessarily abbreviated and simplified for quick summaries of information. The first banner related to Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, contained two important cautions to the public: “Chapter 4 of the Draft Environmental Impact Statement includes a substantial discussion of those elements of the environment most affected by the proposed freeway.” and “Viewers are urged to review the contents of Chapter 4 to obtain more information about the environmental elements presented in the banners.”

The banners accurately represented the number of National Register of Historic Place-eligible archaeological sites that would be adversely affected by alternative (2 to 7 sites, depending on alternative) and Traditional Cultural Properties - South Mountains (0 for Western Alternative, 1 for the E1 Alternative). The National Register of Historic Places-eligible archaeological sites that would be adversely affected presented in the banner included the trails and artifact remains referenced in the comment. The National Register of Historic Places-eligible petroglyph sites referenced in the comment would be avoided by the alternatives.

Potential adverse effects to Villa Buena and Pueblo del Alamo as archaeological sites would be addressed under Section 106 of the National Historic Preservation Act. Potential impacts to Villa Buena and Pueblo del Alamo as Traditional Cultural Properties would be addressed through the implementation of the enhancement and management plan developed in consultation with the Gila River Indian Community’s Cultural Resources Management Program and the Tribal Historic Preservation Officer (see page 4-142 of the Final Environmental Impact Statement). This plan outlines measures that would sufficiently reduce or eliminate the potential for adverse effect to the National Register of Historic Places-eligible Traditional Cultural Properties attributes of Villa Buena and Pueblo del Alamo.

Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in ongoing, open consultation with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resources Management Program and the Tribal Historic Preservation Officer (see page 4-142 of the Final Environmental Impact Statement). This plan outlines measures that would sufficiently reduce or eliminate the potential for adverse effect to the National Register of Historic Places-eligible Traditional Cultural Properties attributes of Villa Buena and Pueblo del Alamo.
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<th>Code</th>
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<td>57 (cont.)</td>
<td>Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.</td>
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<td>Title VI, Environmental Justice</td>
<td>The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives. In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement. The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26. The proposed project would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. The Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and fully considered input and comments that were received.</td>
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ADOT is responsible for ensuring its actions and non-actions do not violate Title VI. Building a freeway through and desecrating South Mountain disproportionally affects a protected class and may only be done if there is a substantial legitimate justification. Connecting Ahwatukee Foothills to Laveen so that businesses like malls and movie theaters can come in is not a substantial legitimate justification.\(^{66}\) Nor is alleviating traffic a substantial legitimate justification without first addressing the alleged problems of congestion\(^{67}\) and pollution when there are more prudent and flexible alternatives\(^{68}\), as well as, comparatively effective alternatives with less of a disparate impact to choose from. Substantial legitimate justification for creating a disparate impact is just not found in the DEIS. To prove a “substantial legitimate justification,” the recipient of federal funds must show that the challenged action or non-action was “necessary to meeting a goal that was legitimate, important, and integral to the [recipient’s] institutional mission.”\(^{69}\) The justification must bear a “manifest demonstrable relationship” to the challenged policy.\(^{70}\) And there must not be an alternative that is comparably effective with less of a disparate impact.\(^{71}\)

ADOT purposely crafted its purpose and used to strategically make a no-build alternative appear non-feasible. The DEIS gives reasons for why it appears the proposal is favored and where the projects alleged purposes and needs are. The DEIS states that population growth, housing demand, economic growth, and the deficiencies in alternative modes of transportation

61 Title VI, Environmental Justice

The obligation of the Arizona Department of Transportation and Federal Highway Administration, as the federal lead agency, in accordance with the National Environmental Policy Act is to assess if the proposed action and its alternatives would lead to substantial adverse environmental impacts, disclose those impacts and identify mitigation to reduce the impact below a level of significance (and if such mitigation is unavailable, disclose that such an impact would occur but not be mitigated). The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based on the content of the section, no such effects would result from the action alternatives. Even if one were to reach a contrary conclusion and determine that disproportionately high and adverse or disparate effects would occur as a result of the proposed freeway, there is substantial justification for the proposed freeway. It is needed to serve projected growth in population and accompanying transportation demand and to correct existing and projected transportation system deficiencies (see Chapter 1, Purpose and Need). There is no feasible and prudent alternative to the use of the South Mountains, as discussed in Chapter 5, Section 4(f) Evaluation.

In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.

Chapter 2 of the Final Environmental Impact Statement is dedicated to the explanation of the Gila River Indian Community outreach undertaken for the project. Chapter 6 of the Final Environmental Impact Statement further describes Community outreach throughout the project. The Gila River Indian Community was provided equal opportunities to participate in the project as all other populations and agencies. This outreach was undertaken, in part, to ensure all populations had equal access to the process and, in part, to ensure disparate nor disproportionately high adverse impacts would result from the construction and operation of the proposed action.

\(^{61}\) In a Loop 202 Meeting in Laveen on May 21, 2013, Phoenix City Councilman Michael Nowakowski stated that Laveen has “premature in a hospital, a mall; restaurants and shops, but ... alt, the great are dependent on the South Mountain Freeway being built... shops and businesses, what’s more certain there’s a possibility that existed from other parts of the Valley would be attracted to the area.” (Califonia Housing, Advocates Fear South Mountain Freeway, http://www.adobe.com/products/16320101/tr-16320101-waltar-060613b-a.png) (last visited July 14, 2013).

\(^{62}\) Irown ADOT’s 535 Urban Mobility Report ranks the Phoenix-Mesa metropolitan area 45th among U.S. cities for the average amount of time spent in traffic over 30 minutes each week, highest among other larger cities for comparable sizes.

61  Title VI

\(^{63}\) Title VI refers to the original section which the U.S. Department of Transportation Act of 1966 which established the requirements for the consideration of projects and facilities... and to other projects and facilities. Title VI is implemented by the Federal Highway Administration (FHWA) through the regular 23 CFR 774. Before approving a project that are Section 4(f) property (e.g., a public park for FHWA), Federal must ensure (i) that the impact is minimal, or (ii) undertake a Section 4(f) Evaluation. If the Section 4(f) Evaluation identifies a feasible and prudent alternative that meets the social, economic, or other public interest, or (iii) overcomes Section 4(f) property, it must be used. If there is no feasible and prudent alternative that avoids all Section 4(f) property, FHWA has discretion in selecting the alternative that causes the least overall harm (see discussion below). FHWA must also make an “all possible planning to avoid or minimize harm to the Section 4(f) property has occurred.” (FHWA, Section 4(f) or a Guide, http://environment.gov.ar/4f/4findex.html) (last visited July 15, 2013).

64 SCOTUS has provided parameters as to protective character of the interest in Overview Park v. Volpe, 430 U.S. 540 (1977), the Court defined “interest” as an alternative preserved or “hard engineering,” the Court highlighted a “prudent alternative in no wise would protect” “truly unusual” or “nonturbulent” or “disproportionate or extraneous significant impact” (543 U.S. 479 (2005)). The Overview Park decision stressed that preservation of 4(f) interest was of “paramount importance” with the interest. (543 U.S. 479 (2005)). Thus, the 4(f) was simply the stay of pertinent new importance, if robustly funded transportation projects, impacts that are of minimal, if not prudent, and feasible alternatives.


66  Superior v. Hagan, 7 F.3d 1224, 1227 (9th Cir. 1993).

67  Superior v. Hagan, 7 F.3d 1224, 1227 (9th Cir. 1993).

68  Superior v. Hagan, 7 F.3d 1224, 1227 (9th Cir. 1993).

69  Superior v. Hagan, 7 F.3d 1224, 1227 (9th Cir. 1993).

70  Superior v. Hagan, 7 F.3d 1224, 1227 (9th Cir. 1993).

71  Superior v. Hagan, 7 F.3d 1224, 1227 (9th Cir. 1993).
make the South Mountain Loop absolutely necessary. Further, it argues a no-build solution is not a feasible alternative. The DOCS states that the proposed project’s purpose and need is to get people off the southern part of Phoenix out of the existing roads onto another route. It goes on to assert that this cannot be satisfied without creating this specific Loop. The DOCS asserts that moreover, this proposal has been supported since 1983 and would complete the last part of the master plan. Therefore, it is claimed that a no-build could not fulfill this purpose and need. However, if the essential purpose is need to reduce congestion, a no-build alternative using various transportation modalities, including rail serving the southwest and southeast subhurbs of Phoenix, and that included changes in zoning, used the Census Bureau’s more realistic medium population prediction rather than the high prediction projection, acknowledged that the 2006 economic downturn has changed the future demographics of the area, and took a hard look on who actually would be using the South Mountain Loop 202; the proposal and need would still be fulfilled. One no-build alternative (PARE) has suggested in light rail along Peckos Road that would go through a small portion of the GORC (with permission) rather than cutting through South Mountain.

The DOCS notes that because voters voted for a one-half cent sales tax for transportation funding in 1983, then amended the life of the tax via propositions 400, 400, and subsequent revisions by MASO showed that even with a majority of voters supported proposition 400, there is overall public support for the South Mountain Loop. However, both propositions 300 and 400 (for general propositions for regional transportation purposes) and for the South Mountain Loop specifically. Further, the South Mountain Loop proposal has always been extremely controversial, and is opposed by many. Many felt the South Mountain Loopendid, but for the reason not given and so expensive. (Road Rings) “Phoenix View” Phoenix Magazine Feb. 1983, at pg. 10 (revised June 26, 2001). For example, many people of the Ahwatukee Foothills opposed the project. The Loop would already currently been built in the Ahwatukee community in the South of South Mountain more or less it was not important, why it was already built and why the claim in this discussion get so large. Preventing Arizona’s Resources and Children (PARE) also believes the project in unnecessary; financially inestimable, and contrary to the public Interest. (Arizona Humane, Ahwatukee Foothills News, PARE to keep public reading about Loop 2025. May 6, 2015, has updated May 16, 2015) http://www.ahwatukeecommunity_newsletter.com/weekly/0525/2015.05http://www.ahwatukeecommunity_newsletter.com/weekly/0525/2015.05
South Mountain Park Board of Trustees is also against the project because the SMMP is a park preserve, best designed for conservation land. They say that the Loop is critical habitat and further fragmentation of natural areas will only expedite the loss of species. In further degraded the existence of wild preserves and moreover destroy highly important significant areas that are held sacred by many Native American tribes. The Sierra Club also opposes the South Mountain Loop for a variety of reasons, one of which is the argument that the South Mountain Loop will not reduce pollution in the long run; most growth must be adaptable and resilient of highway system will not reduce traffic or pollution problems. Don’t Waste Arizona also opposes the South Mountain sex verschillende wegen, onder andere de opzet en omgradiersing van de administratie van de stad, waarbij de toepassing van het model van de stad niet geïncludeerd is. De analyse bevestigde de noodzaak van een nieuwe verkeersinfrastructuur voor de stad, waardoor de stad een betere infrastructuur wordt. Hiroshi Mita (a former Youth Coalition has been very active and vocal about the cultural and health effects that the South Mountain Loop would have on the community.)

58 This US census gives low, medium, and high population projections. The DOCS used the high estimates. Further, the DOCS states that after 1980, population growth stopped spiking at the level the DOCS predicts for 2025-2030. Tom R. Reh, New Population Projections For The United States, Arizona And Arizona Counties A Report from the Office of the University, Economic Inst. 2010, found at http://www.statucson.com/px/PopulationProjections.pdf.
The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

Alternatives

In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. The preferred alternative was the outcome to this process.

In support of this response and given the concerns about the South Mountains, consider the following review from the U.S. Department of the Interior on the Draft Environmental Impact Statement: comment: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.

Comments from other groups (e.g., South Mountain Park Board of Trustees) will be addressed in the Final Environmental Impact Statement in the same manner as the Gila River Alliance for a Clean Environment’s comments are addressed.

The information regarding the context and attributes of the South Mountains is disclosed in the Draft Environmental Impact Statement. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, Direct Use. It is reported that 31.3 acres or just less than 0.2 percent of the parkland would be converted (this is a reduction in the amount of use planned for in 1988). The text goes on to point out other concerns associated with the direct use reported, and text on page 5-14 in the sidebar, “The South Mountains in Phoenix’s Sonoran Preserve System”, describes the importance of Phoenix South Mountain Park/Preserve in the region. Beginning on page 5-23 in the section, Measures to Minimize Harm, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park. The section, Cultural Resources, beginning on page 4-140, also discloses the relation of the proposed action to the cultural resource attributes of the South Mountains. The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23). The first segment of the Central Phoenix/East Valley Light Rail Transit project has been completed through central Phoenix, northern Tempe, and northwestern Mesa. While expansion routes are being studied, none would link the western and eastern termini of the proposed freeway in the Study Area. Most light rail lines radiate from a central demand generator (e.g., a central business district or major airport). Light rail...
The DEIS analysis of the no-build scenario that more pollution would result with nothing built and that the U.S. Environmental Protection Agency’s air quality standards could be met if the project went through. However, building more highway miles will only increase more driving and more pollution. And it would only exacerbate more urban sprawl that supports further development into the Sonoran desert of cultural significance. Moreover, the Sonoran desert is being reduced at record speed across the loss of major ecosystem services. For example, the Sonoran desert regulates temperature. “As the Phoenix metropolitan area continues to sprawl, (replacing Sonoran desert with more development) the urban heat island will expand from the urban core further into suburban regions.” What Arizona’s unekranked urban sprawl is creating is unsustainability because one, it is not controlling it with sustainable transportation. The urban heat island actually affects people of lower socioeconomic status elderly, and minorities, like Native Americans.

Moreover, because of their inaccurate assumptions and relative insignificant, the build versus no-build differences in percentage of trips in the study area, travel time to downtown, and differences in miles of 1-10 with 1+ hours of congestion do not identify a substantial legitimate justification for the financial cost, pollution consequences, and disruptive impact to GCR, as well as the additional consequence of added congestion on existing roadways for example, to bypass the additional 10 miles the loop would put on the Ak-Chin Fathers on their route to Phoenix. According to the DEIS, the percent change in traffic on arterial streets would be 0% and the percent change in traffic on freeways would be 1%. Further, the DEIS estimates 10 additional minutes for travel time from downtown to downtown, and 6 additional minutes for Ak-Chin Fathers to downtown if the South Mountain Loop was constructed. And, the DEIS estimates that with the South Mountain Loop, there would be 7 less miles of 1-10 with 1+ hours of congestion in the morning and 12 less hours of congestion in the evening.

The substantial legitimate justification argument falls by the fact that EIS is the preferred alternative for the east side had no other alternative from which to compare or choose, as the DEIS states, GRC did not ADOT from using GRC reservation land for the South Mountain Loop.

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM10) and followed U.S. Environmental Protection Agency guidelines. No violations of either the carbon monoxide or particulate matter (PM10) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute along the proposed corridor would be inconsistent with a radial transit model and would not be able to connect to existing light rail or the planned extension. While light rail segments are planned in the Regional Transportation Plan near the western and eastern termini of the proposed freeway, no funds are available or anticipated to support a combined system through the Study Area. The light rail alternative alone

62 Purpose and Need

The Draft Environmental Impact Statement—particularly in Chapter 1, Purpose and Need, and Chapter 3, Alternatives—explains how the process of establishing a purpose and need for the proposed action followed nationally accepted guidance and policy. Examples of how the purpose and need analyses were applied include the:

- section, “Contest of Purpose and Need in the EIS Process,” on page 1-1
- sidebar, “A proposed action’s purpose and documentation should:,” on page 1-1
- sidebar, “How are MAG data used in the DEIS?”, on page 1-4
- sidebar, “What is the MAG regional demand model?”, on page 1-5
- sidebar, “How will the economic downturn affect growth rates?”, on page 1-11
- section, “Need Based on Regional Transportation Demand and Existing and Projected Transportation System Capacity Deficiencies,” beginning on page 1-21
- section, “Reconfirm the Purpose and Need for the Proposed Action,” on page 1-21
- section, “Responsiveness of the Proposed Freeway to Purpose and Need Criteria,” beginning on page 3-27
- The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM10) and followed U.S. Environmental Protection Agency guidelines. No violations of either the carbon monoxide or particulate matter (PM10) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute...
The DEIS analysis of the no-build scenario that more pollution would result with nothing built and that the U.S. Environmental Protection Agency’s air quality standards could not be met if the project went through. However, building more highway miles will only increase more driving and more pollution. And it would only evoke more urban sprawl that supports further development into the Sonoran desert of cultural significance. Moreover, the Sonoran desert is being attacked at record speed across the loss of major ecosystem services.172 For example, the Sonoran desert regulates temperature. “As the Phoenix metropolitan area continues to grow, replacing Sonoran desert with more development the urban heat island will expand from the urban core further into suburban region.”173 What Arizona’s uncontrolled urban sprawl is creating is unsustainability174 because for one, it is not controlling with sustainable transportation.175 The urban heat island actually affects people of lower socioeconomic status elderly and minorities, like Native Americans.176

Moreover, because of their inaccurate assumptions and relative inexperience, the build versus no-build differences in percentage of trips in the study area, travel time to downtown, and differences in miles of 1-19 with 3 + hours of congestion do not identify a substantial legitimate justification for the financial cost, pollutant consequences, and disruptive impact to GRIC, as well as the additional consequence of added congestion on existing roadways. For example, to bypass the additional 10 miles the loop would put on the Ahwatukee Foothills residents on their way to downtown Phoenix.177 According to the DEIS, the percent change in traffic on arterial streets would be 9% and the percent change in traffic on freeways would be 8%.178 Further, the DEIS estimates 10 saved minutes for travel time from downtown to long and 6 saved minutes for Ahwatukee to downtown if the South Mountain Loop was constructed.179 And, the DEIS estimates that with the South Mountain Loop, there would be 7 less miles of 1-19 with 3 + hours of congestion in the morning and 12 less hours of congestion in the evening.180

The substantial legitimate justification argument falls by the fact that EJ as the preferred alternative for the east side had no other alternatives from which to compare or choose because, as the DEIS states, GRIC forbid ADOT from using GRIC reservation land for the South Mountain Freeway.181

Induced Growth

As described in Chapter 1, Purpose and Need, of the Draft and Final Environmental Impact Statements the Phoenix metropolitan area was subject to a conversion from natural desert landscape to an agricultural landscape well before any roadway existed in the valley. As described in the section, Land Use, beginning on page 4-3, land use patterns are predominantly the result of local and regional land use planning activities; further, the subject of induced growth and travel is addressed in text beginning on pages 4-167 and 4-179 of the Draft and Final Environmental Impact Statements, respectively.

Heat Island

As buildings, parking lots, roads, and other infrastructure replace open land and vegetation, an urban heat island may result. The heat island effect is of a regional nature and, therefore, there is no requirement to analyze potential impacts and no possibility of determining the localized contribution at the project level to the regional heat island effect. It is likely, however, that a proposed project such as the South Mountain Freeway would be a minor contributor to the overall issue.

Purpose and Need

Chapter 1, Purpose and Need, of the Draft and Final Environmental Impact Statements examines the purpose and need for the proposed action in terms of defining a transportation problem. In doing so, assumptions associated with past need for the freeway were discounted as part of the environmental impact statement process. The results of the purpose and need analyses included the determination that a transportation problem (similar to the type of problem that has been represented in past Regional Transportation Plans) still exists in the area and that this problem is similar in characteristics to the transportation problem that existed in prior years. The alternatives analyses considered numerous modal alternatives, and it was concluded through the screening process that a road facility is the appropriate modal choice to address the transportation problem defined.

Alternatives

The comment notes “A substantial legitimate justification fails...” assumes a disparate impact would occur from the proposed freeway. As summarized in the first part of Response 63 above, no such disparate impact (and therefore, no violation of Title VI) would occur and as such, no such demonstration nor justification is required. Even if one were to reach a contrary conclusion and determine that disproportionately high and adverse and/or disparate effects would occur as a result of the proposed freeway, it is substantial justification for the proposed freeway. It is needed to serve projected growth in population and accompanying transportation demand and to correct existing and projected transportation system deficiencies (see Chapter 1, Purpose and Need). There is no feasible and prudent alternative to the use of the South Mountains, as discussed in Chapter 3, Alternatives. It is therefore not possible to employ a comprehensive set of alternatives in both sections of the Study Area were subjected to a robust, multidisciplinary screening process.

(Response 64 continues on next page)
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| 64 (cont.) | Ultimately, the other alternatives (besides the E1 Alternative) were eliminated from further study in the screening process and the Gila River Indian Community decided not to give permission to develop alternatives on its land (see Draft Environmental Impact Statement page 3-25). The E1 Alternative when combined with the W59, W71, and W101 (and its options) Alternatives in the Western Section represents three distinct action alternatives from project termini to project termini, and therefore, represents a full range of reasonable alternatives for detailed study in the Draft and Final Environmental Impact Statements.

Therefore, the Arizona Department of Transportation, with concurrence from the Federal Highway Administration, identified the E1 Alternative as the eastern section of the Preferred Alternative (which includes the W59 Alternative in the Western Section of the Study Area). In reaching its determination, the Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.

As noted in text on page 3-54 of the Final Environmental Impact Statement, the Arizona Department of Transportation began acquiring land for the original alignment in 1988. Between 1988 and 2001, the Arizona Department of Transportation acquired approximately 293 acres. Most of this land (258 acres) is located in the Eastern Section along Pecos Road. In 2006, the Arizona Department of Transportation began protective and hardship land acquisition in the alignment right-of-way footprint for the W59 and E1 Alternatives. Between 2006 and October 2013, the Arizona Department of Transportation purchased 326 acres (303 in the Western Section and 23 in the Eastern Section). The process for hardship and advanced acquisitions is explained in text on page 4-50 of the Final Environmental Impact Statement.

Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process is not unprecedented and is common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the proposed action are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative were to be ultimately selected, the agency would likely have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the driving public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative.

Tribal Involvement

As noted in the previous comment response, the Draft Environmental Impact Statement on page 2-4 acknowledges that the Gila River Indian Community Council passed Resolution GR-64-96 that strongly opposed any future alignment of the South Mountain Freeway on Gila River Indian Community land. In addition, the comments received from Gila River Indian Community Governor Gregory Mendoza (see letter dated July 11, 2013, on page B38 in Appendix 7, Volume III, of the Final Environmental Impact Statement) confirm the Gila River Indian Community’s position. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based in the inherent authority of Native American tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their lands. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process. |
Purpose and Need

Chapter 1, Purpose and Need, of the Draft and Final Environmental Impact Statements examines the purpose and need for the proposed action in terms of defining a transportation problem. The results of the purpose and need analyses included the determination that a transportation problem (similar to the type of problem that has been represented in past Regional Transportation Plans) still exists in the area and that this problem is similar in characteristics to the transportation problem that existed in prior years. The alternatives analyses considered numerous modal alternatives, and it was concluded through the screening process that a road facility would best address the transportation problem defined. As concluded on page 3-26 of the Draft and Final Environmental Impact Statements, the process of alternatives development and screening demonstrated confirmation of the purpose and need as described in Chapter 1 of the Draft and Final Environmental Impact Statements and that the purpose and need allowed for meaningful consideration of a comprehensive set of alternatives including all substantial modes of transportation.

Environmental Impact Statement Process

The mission of the Arizona Department of Transportation to provide a safe, efficient, cost-effective transportation system that links Arizona to the global economy, promotes economic prosperity, and demonstrates respect for Arizona’s environment and quality of life is highlighted on page 1-3 of the Final Environmental Impact Statement. While it is the construct, operate, and maintain the state’s transportation infrastructure, the agency is obligated to meet the requirements of the National Environmental Policy Act when federal funds are associated with its infrastructure. In complying with the law, the agency fully accounts for natural, cultural, and environmental resources; enhance safety and security; strengthen partnerships; and promote fiscal stewardship. ADOT’s Long Range Transportation Plan is seriously flawed by giving natural, cultural, and environmental resources only consideration; as

Alternatives

In terms of fiscal stewardship, the cost comparisons referenced in the comment are not necessarily adequate as economic conditions and material pricing was different dependent upon how long ago the referenced freeway segments were constructed. Regardless, the Arizona Department of Transportation seeks to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities. For example, cost was an important factor in the alternatives screening process described in Chapter 3 of the Draft and Final Environmental Impact Statements and in terms of the Preferred Alternative presented in the Final Environmental Impact Statement, the Arizona Department of Transportation has continuously sought to identify and incorporate cost-saving measures in preliminary design, in part, for fiscal responsibility purposes.

Hazardous Materials

The West Van Buren Water Quality Assurance Revolving Fund site was identified and considered during development of the Draft Environmental Impact Statement. (see pages 4-97 and 4-153 of the Draft Environmental Impact Statement, and the Draft Initial Site Assessment prepared for the proposed project). These sites are primarily groundwater-impact sites, and groundwater is found at a depth of over 60 feet below the footprint of the Preferred Alternative. Given the separation distance between the adversely affected medium (groundwater) and the construction zone (near-surface in these locations), the project team determined...
explained before, just considering significant cultural resources will limit federal funding. Further, in light of the goals and objectives, the South Mountain Loop 202 actually weakens partnerships, as the GRC is a partner in other projects: marginalizing partners weaker, not strengthens partnerships. The South Mountain Loop 202 is also contrary to the promotion of fiscal stewardship. The South Mountain Highway will cost twice as much as any other highway that ADOT has built in the past: the 180 and the 202 loops cost about 40 to 46 million per mile. South Mountain would cost about 80 million per mile.275 The DES also fails to even include and therefore estimate the cost of the highly contaminated areas in the path of the proposed South Mountain Loop 202 that would have to be cleaned up for the highway to be put in.276

The South Mountain Loop 202 is neither legitimate and integral to ADOT’s mission nor is it necessary. The South Mountain Loop 202 would not be efficient or cost-effective. It would be more efficient to design a transportation mode that will stragically complement the realistic population projections, socioeconomic needs and current transportation modes to reign in urban sprawl and promote smart growth. It is not cost effective because it is going to be twice as much as other highway projects. 30 million of which would just be used to cover going through South Mountain. Having the highway through the ridges will require lots of maintenance, which will require ongoing costs.277 Population growth, socioeconomic development and limits to current transportation modes do not bear a manifest demonstrable relationship to going through South Mountain. There are numerous ways to accommodate population growth, create smart growth and invest and improve in present transportation modes and public transportation without going through South Mountain. As PARC and others suggest, there are alternatives that are comparably effective with less of a dispersive impact. Therefore, there is legitimate justification for the dispersive impact on the GRC.

If ADOT wants to fulfill the purpose and need of relieving congestion and traffic and at the same time, follow the Arizona Transportation Plan, several alternatives offered by PARC are feasible: (1) Light rail along Peck Road but going through a small portion of the GRC (with permission) rather than cutting through South Mountain; (2) 8-10 lane Loop 202 following Baseline Road from 31st Ave to I-10; (3) 8-10 lane Loop 202 from I-10 near Avondale going along the west side of the Estrella Mountains and then cutting between the Estrella and Maricopa Mountains. Following the southern boundary of the GRC to the I-10 north of Casa Grande: (4) 8-10 lane freeway along State Route 85 from I-10 to Buckeye to 1-48 at Clla Blend as a “real” truck-bypass: (5) 8-10 lane freeway along State Route 85 from I-10 to Buckeye, cutting between the Estrella and Maricopa Mountains and across to I-10 north of Casa Grande as a “real” track

274 Juan Bementhal, Road Rage “Accompany Vice” Phoenix Magazine February 2007 quoting Erin Audrin, M.A. G
275 The proposed path of the freeway crosses preserved property near Rawson, 10 near 59th Avenue. Also, groundwater is contaminated with uranium/borates (PCB, radionuclides (U), 1,1-dichloroethylene (1,1-DCE), tetrachloroethene (1,1,1-DCE) and carbonic in the area around 39 and Van Buren 59th Avenue and Van Buren. The area is on the line of the site of Phoenix Water Quality Assurance Reaching Fund (WQARF), which is the state equivalent of a Superfund Site (AZSIT). Free Four Arroyo Water Quality Assurance Reaching Fund (PAGG2) Site, based at
276 that these sites would not pose a risk to construction or to the general public once the facility were completed. This assessment has been clarified in the Final Environmental Impact Statement on page 4-165.

Given the separation distance between the adversely affected media (groundwater) and the construction zone (near surface in this location), the project team determined that this site would not pose a risk to construction or to the general public once the facility were completed. This assessment has been clarified in the Final Environmental Impact Statement on page 4-165.

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The section, Context of the Proposed Action Relative to the ADOT Mission, beginning on page 1-3 of the Final Environmental Impact Statement describes the direct and appropriate application of the implementation of the proposed action to the agency mission.

In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for detailed study was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3, Alternatives, of the Draft and Final Environmental Impact Statements. The criteria, in general terms, considered operations, design, ability to meet purpose and need, environmental considerations, cost, and acceptability. The preferred alternative was the outcome to this process. As described therein, a comprehensive set of modal transportation (such as light rail) and non-transportation alternatives (such as a land use based alternative) were subjected to the evaluation process (these alternatives included many of the specific alternatives referenced in the comment).

Reasons for elimination of those alternatives are summarized in Table 3-2 of the Final Environmental Impact Statement. Results of the process are concluded on page 3-26 of the Final Environmental Impact Statement. According to 23 Code of Federal Regulations §771.111(f),” the action evaluated in the environmental impact statement must connect logical termini and be of sufficient length to address environmental matters on a broad scope...”. The proposed action should satisfy the project need and should be considered in the context of the local area socioeconomic and topography, the future travel demand, and other infrastructure improvements in the area. A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not feasible because it would not meet the proposed freeway’s identified purpose and need. When analyzing purpose and need and in consideration of alternatives, improvements to the operations of Interstate 10 through the Phoenix metropolitan area as considered in the Maricopa Association of Governments’ Long Range Transportation Plan were accounted for a part of the baseline conditions.

(Response 67 continues on next page)
Water Resources

As noted on page 4-102 of the Final Environmental Impact Statement, stormwater flows and related erosion from excavated areas would be addressed by implementation of a Stormwater Pollution Prevention Plan and related best practices. Stormwater Pollution Prevention Plans are required on Arizona Department of Transportation construction projects to control and mitigate erosion and loss of soil from the project and off-site movement of eroded sediments. During construction, off-site impacts to soil from erosion related to the freeway construction project are not expected. Implementation of the Stormwater Pollution Prevention Plan and related best practices would keep eroded sediments on-site for collection and replacement as appropriate. After construction, grading and drainage and landscape design components of the freeway system would act to control and mitigate erosion.

Truck Traffic

Creating a truck bypass is not a goal of the proposed action. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 of the Final Environmental Impact Statement).

Alternatives

According to 23 Code of Federal Regulations §771.111(f), the action evaluated in the environmental impact statement must connect logical termini and be of sufficient length to address environmental matters on a broad scope... The proposed action should satisfy the project need and should be considered in the context of the local area socioeconomics and topography, the future travel demand, and other infrastructure improvements in the area. A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not feasible because it would not meet the proposed freeway’s identified purpose and need. All of the alternatives reflected in the comment were accounted for in the logical, sequential, step-by-step systematic, interdisciplinary approach to developing and screening alternatives as presented in Chapter 3, Alternatives, of the Draft and Final Environmental Impact Statements. Each was subjected to equal consideration in the screening process and reasons for elimination can be found in that chapter.
### Code | Issue | Response
--- | --- | ---
68 | Alternatives | As discussed on page 3-3 of the Draft and Final Environmental Impact Statements, the project team considered a wide range of modal alternatives to improve transportation conditions in the Study Area such as transportation system management (maximizing the efficiency of existing transportation facilities) and transportation demand management (reducing demand on existing transportation facilities); however, these and other non freeway alternatives were eliminated from further study; chiefly, they did not support criteria related to transportation demand and capacity deficiencies. Transportation system management and transportation demand management strategies are included in the Regional Transportation Plan and these strategies will continue to be implemented throughout Maricopa County. These include the use of ramp metering; overhead, automated, advanced warning signs; freeway cameras for monitoring traffic flow; and other intelligent transportation system technology to enhance operational characteristics; ride share programs; Maricopa County Trip Reduction Program; and van pool programs. As noted in Table 3-2 on page 3-5 of the Draft and Final Environmental Impact Statements, elimination of technological alternatives (transportation system management and transportation demand management) as distinct alternatives would not preclude the use of elements of these in combination with the freeway mode. This is further described on page 3-58 of the Final Environmental Impact Statement.

69 | Title VI | Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in ongoing, open consultation with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

(Response 69 continues on next page)
Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

The Draft Environmental Impact Statement, after consultation and coordination efforts, accommodates and preserves (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.

Title VI

All comments made in the attached press release have been addressed in the complaint letter above.
Comment Response Appendix

Gila River Alliance for a Clean Environment (GRACE)

EMERGENCY LIVE 7 AM TUESDAY, JULY 30, 2013

GILA RIVER INDIAN COMMUNITY TRIBAL MEMBER TO SERVE ARIZONA DEPARTMENT OF TRANSPORTATION WITH FEDERAL TITLE VI CIVIL RIGHTS COMPLAINT

FOR ADOT’S PROPOSED BLASTING OF SACRED SOUTH MOUNTAIN AND DESECTATION OF SACRED SITES IF SOUTH MOUNTAIN LOOP 202 FREEWAY IS BUILT

PRESS CONFERENCE AND SERVING ADOT WITH CIVIL RIGHTS COMPLAINT:

TUESDAY, JULY 30, 2013 9 AM

IN FRONT OF ARIZONA DEPARTMENT OF TRANSPORTATION 206 S. 17TH AVE., PHOENIX, ARIZONA

Phoenix, AZ – Gila River Indian Community tribal members and their community group the Gila River Alliance for a Clean Environment will have a press conference on Tuesday, July 30, 2013 at 9 am to announce that they have filed a Federal civil rights complaint under Title VI of the United States Civil Rights Act against the Arizona Department of Transportation. The press conference will take place in front of ADOT, 206 S. 17th Ave., Phoenix, Arizona.

Following the press conference tribal members with the Gila River Alliance for a Clean Environment will serve ADOT with a copy of the civil rights complaint.

The civil rights complaint alleged that ADOT violated the civil rights of Natives peoples of the Gila River Indian Community by proposing and promoting the South Mountain Loop 202 Freeway that would negatively and disparately impact Gila River Indian Community tribal members by destroying their sacred South Mountain and causing disparate health impacts. The complaint is being filed with the United States Department of Transportation, as ADOT is a federal agency and subject to the non-discrimination provisions of Title VI.

The complaint states that “the provision in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” Tribal members, a protected class of people, were discriminated against because

- ADOT knowingly and purposely designed the South Mountain Loop 202 through the GRC’s sacred South Mountain, despite recognizing and acknowledging that the South Mountain Loop 202 would have a serious and major disparity impact on tribal members culturally, spiritually, and historically;
- ADOT purposefully designed a new purpose and need for the I-105 based on inaccurate and false estimates of population projections and even if the South Mountain Loop 202 Freeway, numerous examples of potential alternative transportation solutions, and ignored the environmental consequences to the communities of creating new freeways rather than moving towards smart growth, allowing any alternative that would not have a disparity and a negative consequential affect on the Gila River Indian Community and its people;
- ADOT failed to analyze the South Mountain Loop 202’s disparate health, economic and economic impacts on the tribes and tribal members who already experience higher rates of diabetes and illiteracy that would be exacerbated if the South Mountain Loop 202 were constructed;
- ADOT provided inadequate consultation and informed consent, access, notice, and meaningful participation in the South Environmental Impact Statement planning and planning to the Gila River Indian Community tribal members.

The civil rights complaint requests that the federal government cease all further funding to ADOT if the South Mountain Loop 202 project is built due to the disrespectful cultural, spiritual and health impacts on tribal members that would be unconstitutionally and illegally violate civil rights of tribal members.

In addition, the Gila River Alliance for a Clean Environment will file internal complaints with the U.S. Department of Justice regarding violations of religious freedom.
Gila River Alliance for a Clean Environment (GRACE)

EMBARGO ENTS IN 7 AM TUESDAY JU 30, 2013. CONTINUE ON FRIDAY 5:00-5:30 PM. MORE INFORMATION Z 1:00-1:30 PM.

GILA RIVER TRIBAL MEMBERS TO SERVE ARIZONA DEPARTMENT OF TRANSPORTATION WITH A CRADLE OF THE CIVIL RIGHTS COMMISSION

FOR ADOIT'S PROPOSED BLASTING OF SACRED SOUTH MOUNTAIN AND DISPLACEMENT OF SACRED SITES IF SOUTH MOUNTAIN LOOP 202 FREEWAY IS BUILT

PRESS CONFERENCE AND SERVING ADOIT WITH CIVIL RIGHTS COMPLAINT

TUESDAY, JULY 30, 2013 9 AM

IN FRONT OF ARIZONA DEPARTMENT OF TRANSPORTATION 200 S. 20TH AVE., PHOENIX, ARIZONA

Photo: AZ - Gila River Indian Community tribal members and their community group the Gila River Alliance for a Clean Environment will have a press conference on Tuesday, July 30, 2013 at 9 am to announce that they have filed a federal civil rights complaint under Title VI of the United States Civil Rights Act against the Arizona Department of Transportation. The press conference will take place in front of ADOT, 101 S. 17th Ave., Phoenix, Arizona.

Following the press conference, tribal members with the Gila River Alliance for a Clean Environment will serve ADOT with a copy of the civil rights complaint.

The civil rights complaint alleges that ADOT violated the civil rights of Native peoples of the Gila River Indian Community by proposing and promoting the South Mountain Loop 202 Freeway that would negatively and disparately impact Gila River Indian Community tribal members by destroying their sacred South Mountain and causing disparate health impacts. The complaint is being filed with the United States Department of Transportation, as ADOT is the resident of the Federal Highway Administration and is subject to the non-discrimination provisions of Title VI

Title VI states that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Tribal members, a protected class of people, were discriminated against because

- ADOT knowingly and purposely designed the South Mountain Loop 202 through the Gila River Indian Community, despite recognizing and acknowledging that the South Mountain Loop 202 would have a serious and major disparity impact on tribal members culturally, spiritually, and religiously.

- ADOT purposely designed a project with the intent to increase the number of people with property values and improve the economic status of the surrounding communities, sometimes at the expense of the cultural and spiritual well-being of the Gila River Indian Community.

- ADOT failed to analyze the environmental and social impacts of the South Mountain Loop 202 on Gila River Indian Community and its members.

- ADOT failed to analyze the South Mountain Loop 202’s disproportionate health, economic, social, and environmental impacts on the tribal and tribal members who already experience higher rates of diabetes and獭aticism that would be exacerbated if the South Mountain Loop 202 were constructed.

- ADOT provided inadequate consultation and informed consent, access, and participation in the South Mountain Loop 202 project.

The civil rights complaint asserts that the federal government has failed to further the goal of the ADOT of the South Mountain Loop 202 project and that the ADOT’s action is illegal and discriminatory under Title VI of the Civil Rights Act of 1964.

The Gila River Alliance for a Clean Environment will be filing an Internal Review with the US Secretary of Labor to ensure that the rights of Native peoples are protected under federal law.
**Comment noted. Gila River Indian Community Resolution Designating the South Mountain Range as a Sacred Place and Traditional Cultural Property**
RESOLUTION NO. GR-41-97

A RESOLUTION DESIGNATING THE SOUTH MOUNTAIN RANGE (Mohave, Apache) AS A SACRED PLACE AND TRADITIONAL CULTURAL PROPERTY OF THE GILA RIVER INDIAN COMMUNITY.

WHEREAS, the Gila River Indian Community Council (“the Community Council”) is the governing body of the Gila River Indian Community (“the Community”); and

WHEREAS, the Community Council on January 6, 1992, did adopt Ordinance No. GR-05-82 under Title XV of the Gila River Indian Community Law and Order Code in which “[T]his area is designated as a matter of Community policy and legislative determination, to the public interest of the Pima-Maricopa people and the interests of all other persons living within the jurisdiction of the Gila River Indian Community require that the Community adopt a measure whereby all sites, locations, structures, and objects of natural, historical or scientific interest or nature will be protected from desecration, destruction, theft, or other interference.”; and

WHEREAS, the Community Council through Resolution GR-15-89 did approve the Policy Statement of the Four Southern Tribes (Sakah, Pima-Maricopa Indian Community, Ak-Chin Indian Community, Tohono O’odham Nation, and the Gila River Indian Community) which outlines the Four Tribes intent to protect, promote, and preserve cultural identity to the Mohave; and

WHEREAS, the Community Council has always held the preservation of historical, archaeological, cultural, religious sites as a high priority and recognizes the need to protect the cultural heritage of the Akimel O’odham (Pima) and the Pueblo (Maricopa); and

WHEREAS, the identification and authentication of sacred places / traditional cultural properties is the sole responsibility of the federally recognized tribes according to their unique culture; and

WHEREAS, the Community does recognize certain locations to be sacred places / traditional cultural properties based on the unique cultural and spiritual beliefs of the Akimel O’odham (Pima) and the Pueblo (Maricopa); and

Comment noted. Gila River Indian Community Resolution Designating the South Mountain Range as a Sacred Place and Traditional Cultural Property
QILA RIVER INDIAN COMMUNITY
SACATON, AZ 85247

RESOLUTION NO. GR-81-87

A RESOLUTION DESIGNATING THE SOUTHE MOUNTAIN RANGE (Mohave, Apache) AS A SACRED PLACE AND TRADITIONAL CULTURAL PROPERTY OF THE QILA RIVER INDIAN COMMUNITY.

WHEREAS, the Qila River Indian Community Council ("the Community Council") is the governing body of the Qila River Indian Community ("the Community"); and

WHEREAS, the Community Council on January 5, 1982, did adopt Ordinance No. GR-01-82 under Title XV of the Qila River Indian Community Law and Other Code in which "[t]his law is declared as a matter of Community policy and legislative determination, that the public interest of the Papago-Mexican people and the interest of all other persons living within the jurisdiction of the Qila River Indian Community require that the Community adopt a measure whereby all sites, locations, structures, and objects of natural, historical or scientific interest or value will be protected from destruction, desecration, theft, or other interference;" and

WHEREAS, the Community Council through Resolution GR-15-89 did approve the Policy Statement of the Four Southern Tribes (Salt River Pima-Maricopa Indian Community, Ak Chin Indian Community, Tohono O’odham Nation, and the Gila River Indian Community) which outlines the Four Tribal intent to protect, preserve, and preserve cultural identity to the North/South; and

WHEREAS, the Community Council has always held the preservation of historical, archaeological, cultural, religious sites as a high priority and recognizes the need to protect the cultural heritage of the Arikara O’Odham (Pima) and the Padalko (Maricopa); and

WHEREAS, the identification and authentication of sacred places / traditional cultural properties is the sole responsibility of the federally recognized tribes according to its unique culture; and

WHEREAS, the Community does recognize certain locations to be sacred places / traditional cultural properties based on the unique cultural and spiritual beliefs of the Arikara O’Odham (Pima) and the Padalko (Maricopa), and
GILA RIVER INDIAN COMMUNITY
RESOLUTION GS-07-87
PAGE 3 OF 1

WHEREAS, all, but not limited to, of the places enumerated in the oral traditions of the Ahtna O’D’Hrees (Pima) and the Pima Pue (Maricopa) are culturally and spiritually significant to the continuing life ways of the Ahtna O’D’Hrees (Pima) and the Pima Pue (Maricopa), and

WHEREAS, the Monahaut (Pima language), also known as (a.k.a.) Aksakowut (Maricopa language), a.k.a. Greeny Mountain (English language), and geographically known as the South Mountain, South Mountain Range, or Salt River Mountains (Range) figures prominently in oral traditions of both the Ahtna O’D’Hrees (Pima) and the Pima Pue (Maricopa).

NOW THEREFORE BE IT RESOLVED, that the Community Council hereby does acknowledge and recognizes that the South Mountain Range in its entirety is a sacred place / traditional cultural property and must be kept inviolate.

BE IT FURTHER RESOLVED, that the Community Council hereby strongly opposes any diminution of the South Mountain Range for any purpose would be a violation of the cultural and religious beliefs of the Gila River Indian Community and would have a negative cumulative effect on the remaining homelands of the people of the Gila River Indian Community.

BE IT FINALLY RESOLVED, that the Governor, or in his absence, the Lieutenant Governor, is hereby authorized to sign and execute such documents as are necessary to effectuate this resolution.

CERTIFICATION

Pursuant to authority contained in Article XV, Section 1, (a) (3), (9), (18), and Section 4 of the amended Constitution and Bylaws of the Gila River Indian Community, ratified by the Tribe January 22, 1998, and approved by the Secretary of the Interior on March 17, 1999, the foregoing Resolution was adopted on the 4th of April, 2007, at a Regular Community Council Meeting held in Phoenix, Arizona, at which a quorum of 11 Members was present by a vote of: 2 FOR, 0 AGAINST, 0 ABSTAIN, 2 ABSENT; 5 VACANCIES.

GILA RIVER INDIAN COMMUNITY

[Signature]
GOVERNOR

ATTEST:

[Signature]
COMMUNITY COUNCIL SECRETARY
GILA RIVER INDIAN COMMUNITY
RESOLUTION GRI-20-87
PAGE 1 OF 1

WHEREAS, all, but not limited to, of the people referenced in the oral traditions of the Ahmert O’D’Hearn (Fiona) and the Pia Post (Muriqape) are culturally and spiritually significant to the remaining ways of the Ahmert O’D’Hearn (Fiona) and the Pia Post (Muriqape), and

WHEREAS, the Muriqape (Whtzha) language also known as (a.k.a.) Athabascan (Muriqape language), a.k.a. Gentry Mountain (English language), and geographically known as the South Mountain, South Mountain Range, or Salt River Mountains (Range) figure prominently in oral traditions of both the Ahmert O’D’Hearn (Fiona) and the Pia Post (Muriqape)

NOW THEREFORE BE IT RESOLVED, that the Community Council hereby does acknowledge and recognize that the South Mountain Range in its entirety is a sacred place of traditional cultural property and must be kept inviolate.

BE IT FURTHER RESOLVED, that the Community Council hereby strongly opposes any diminution of the South Mountain Range for any purpose whether it be a violation of the cultural and religious beliefs of the Gila River Indian Community and would have a negative correlation affect on the remaining knowledge of the people of the Gila River Indian Community.

BE IT FINALLY RESOLVED, that the Governor, or in his absence, the Lieutenant Governor, be hereby authorized to sign and execute such documents as are necessary to effectuate this resolution.

CERTIFICATION

Pursuant to authority contained in Article XV, Section 1, (a) (7), (9), (11), and Section 4 of the amended Constitution and Bylaws of the Gila River Indian Community, ratified by the Title January 30, 1989, and approved by the Secretary of the Interior on March 17, 1990, the foregoing Resolution was adopted on the 5th of April, 2007, at a Regular Community Council Meeting held in House 3, Session, Arizona at which a quorum of 14 Members were present by a vote of 7 FOR; 0 AGAINST; 1 ABSTAIN; 6 ABSENT; 0 VACANCIES.

GILA RIVER INDIAN COMMUNITY

[Signature]

GOVERNOR

[Signature]

COMMUNITY CHAIR SECRETARY

ATTEST:
RESOLUTION CR-126-00

RESOLUTION OPPOSING THE USE OF 51ST AVENUE FOR THE PROPOSED TRUCK BYPASS ROUTE AND ANY FUTURE BYPASS PLANS FOR THE PROPOSED SOUTH MOUNTAIN PARKWAY THROUGH THE DISTRICT SIX COMMUNITY OF THE GILA RIVER INDIAN COMMUNITY

WHEREAS, the Maricopa County Department of Transportation (the “MDOT”) completed a 51st Avenue Corridor Truck Route Analysis Study that projected traffic volumes of 7,000 vehicles per day on 51st Avenue in 1997 with volumes projected to increase to 23,000 vehicles per day by the year 2020;

WHEREAS, MDOT has proposed a truck bypass route that would reduce traffic and reduce current and future congestion on 51st Avenue in Laveen;

WHEREAS, the City of Phoenix completed a South Mountain Parkway Specific Plan in 1997 to address the limited access to the west valley from Interstate 10 west;

WHEREAS, the Mapusa Association of Governments (the “MAG”) has formed a South Mountain Agency Stakeholders group for the purpose of developing a recommendation for the alignment for the proposed South Mountain Parkway;

WHEREAS, the Arizona Department of Transportation (the “ADOT”), MDOT, City of Phoenix, and MAG plan on extending Peoria Road westward the South Mountain with an option of crossing across lands of the Gila River Indian Community (the “Community”);

WHEREAS, the District Six community has experienced the negative impact of increasing traffic through their residential areas along 51st Avenue south of the Community’s boundary;

WHEREAS, 51st Avenue is essential to the Community because it serves as the principal arterial from Riggs Road-Bakfiled road and is a significant east-west travel route to the western portion of the Community;

WHEREAS, the District Six Community is concerned with the safety and security of its members, as well as other members of the Community who utilize this roadway, due to recently speeding vehicles on 51st Avenue, which has residential area, clinics, a health center, a school, a Boys and Girls club, and a convenience store within its area;

Comment noted. Gila River Indian Community Resolution Opposing the South Mountain Freeway through District Six and on 51st Avenue.
WHEREAS, the District Six Community has concerns of increasing traffic, excess speeding vehicles, the safety and welfare of its members, the area’s significant cultural and religious importance to the entire Community, the destruction of the pristine natural environment, and the increase negative visual and visual impact;

WHEREAS, because of its concerns, the District Six Community strongly opposed the proposed bypass project, truck bypass roads, or any future bypass plans through portions of the South Mountain and across Community land;

WHEREAS, on June 12, 2000, the District Six Community voted to strongly oppose future transportation of hazardous waste and materials through its community; and

WHEREAS, the District Six Community strongly supports that the Community Council oppose any future development of roadways from ADOT and MCDOT through the District Six Community.

NOW THEREFORE BE IT RESOLVED, that the Community Council strongly opposes the developments plans by ADOT, MCDOT, and MAL for a truck bypass route or any future bypass plans for the proposed South Mountain Parkway across Community lands.

BE IT FINALLY RESOLVED, that the Governor, or in the Governor’s absence the Lieutenant Governor, is hereby authorized to take necessary action to effectuate the intent of this Resolution.

CERTIFICATION

Pursuant to authority contained in Article IV, Section 1, (4), (5), (8), and (9) and Section 4 of the amended Constitution and Bylaws of the Gila River Indian Community, enacted by the 39th General Assembly on May 12, 2000 and approved by Secretary of the Senate on May 17, 2000, the foregoing Resolution was approved by the 22nd Day of January, 2001, by the Governing Council, consisting of 13 Members, all of whom a quorum of 12 Members was present by vote of 12 FOR; 0 OPPOSE; 0 ABSTAIN; 0 ABSENT; 0 VACANT.

ATTEST

GILA RIVER INDIAN COMMUNITY

GOVERNOR

COMMUNITY COUNCIL SECRETARY
Elderly Concerns Group
Motion Sheet

Date: June 12, 2013

Mr. Shonew Commercial, District Seven Elder, made a motion that we as elders oppose the Four Way project and to keep them from destroying South Mountain.

The motion was seconded by Mr. Fred Ross, District Three Elder.

Motion approved on this 12th day of June 2013 by a majority show of hands from the group.

[Signatures and dates]

[Signatures and dates]
75 Tribal Involvement

As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community in the environmental impact statement process have been extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

As noted in Table 4-47 that begins on page 4-145, the Gila River Indian Community was initially consulted in 2003 with subsequent contact in 2005, 2006, 2007, 2008, 2010, 2011, 2012, and 2013. This supports an early and continued consultation with the Gila River Indian Community related to resources of importance. This consultation has resulted in concurrence from the State Historic Preservation Office and Gila River Indian Community Tribal Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

The Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

The Arizona Department of Transportation Community Relations distributed electronic notices (e-newsletters) through the Government Delivery system to over 12,000 constituents who voluntarily signed up for project alerts along the Interstate 10 Papago, Maricopa, and Santan Freeways. These electronic notices included notice of availability of Draft Environmental Impact Statement (distributed on April 26, 2013); public hearing (distributed on May 10, 2013); the community forums (distributed on May 29, 2013) and one in June (close of the Draft Environmental Impact Statement public comment period). In addition, anyone who had attended a previous meeting on the proposed action and signed in received all of this information mailed individually. On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area.

July 2, 2013

Winston Celia
PO Box 1021
Sacaton, AZ 85147
(520) 563-1330
wcv3@email.com

(Response 75 continues on next page)
The Arizona Department of Transportation provided vouchers for public hearing parking and for public transit to the hearing. For the first time in the State’s history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All ads provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations.

Air Quality

The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency recently determined that Phoenix has attained the particulate matter (PM_{10}) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner-burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM_{10}) and followed U.S. Environmental Protection Agency guidelines. No violations of either the carbon monoxide or particulate matter (PM_{10}) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM_{10}) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.
The importance of the South Mountains Traditional Cultural Property is acknowledged on pages 4-130 and 4-141 of the Draft and Final Environmental Impact Statements, respectively. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. This consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community in the environmental impact statement process have been extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

As noted in Table 4-47 that begins on page 4-145, the Gila River Indian Community was initially consulted in 2003 with subsequent contact in 2005, 2006, 2007, 2008, 2010, 2011, 2012, and 2013. This supports an early and continued consultation with the Gila River Indian Community related to resources of importance.

The Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

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Draft Environmental Impact Statement public comment period). In addition, anyone who had attended a previous meeting on the proposed action and signed in received all of this information mailed individually. On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area. The Arizona Department of Transportation provided vouchers for public hearing parking and for public transit to the hearing. For the first time in the State’s history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All ads provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations.

Community forums were held after the public hearing to further invite public comment.

Title VI

Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in ongoing, open consultation with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

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Title VI

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The Draft Environmental Impact Statement, after consultation and coordination efforts, accommodates and preserves (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.
The importance of the South Mountains Traditional Cultural Property is acknowledged on pages 4-130 and 4-141 of the Draft and Final Environmental Impact Statements, respectively. Consultation has occurred with Gila River Indian Community officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. This consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency recently determined that Phoenix has attained the particulate matter (PM 10) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner-burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM 10) and followed U.S. Environmental Protection Agency guidelines. No violations of either the carbon monoxide or particulate matter (PM 10) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate matter (PM 10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, and a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM 10) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.
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As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community, a sovereign nation, in the environmental impact statement process are extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

As noted in Table 4-47 that begins on page 4-145, the Gila River Indian Community was initially consulted in 2003 with subsequent contact in 2005, 2006, 2007, 2008, 2010, 2011, 2012, and 2013. This supports an early and continued consultation with the Gila River Indian Community related to resources of importance. This consultation has resulted in concurrence from the State Historic Preservation Office and Gila River Indian Community Tribal Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

The Draft Environmental Impact Statement on page 2-4 acknowledges that the Gila River Indian Community Council passed Resolution GR-64-96 that strongly opposed any future alignment of the South Mountain Freeway on Gila River Indian Community land. In addition, the comments received from Gila River Indian Community Governor Gregory Mendoza (see letter dated July 11, 2013, on page B38 in Appendix 7, Volume III, of the Final Environmental Impact Statement) confirm the Gila River Indian Community’s position. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based in the inherent authority of Native American tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their lands. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process. In addition to Chapter 2 of the Final Environmental Impact Statement which explains the Gila River Indian Community outreach undertaken for the project, Chapter 6 of the Final Environmental Impact Statement further describes Community and general outreach throughout the process. The Gila River Indian Community was provided equal opportunities to participate in the project as all other populations and agencies. This outreach was undertaken, in part, to ensure disparate or disproportionately high adverse impacts would result from the construction and operation of the proposed action.
Cultural Resources

The importance of the South Mountains Traditional Cultural Property is acknowledged on pages 4-130 and 4-141 of the Draft and Final Environmental Impact Statements, respectively. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. This consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

Health Effects

Under the Clean Air Act, the U.S. Environmental Protection Agency is responsible for establishing National Ambient Air Quality Standards to protect public health and the environment from adverse effects of air pollutants. Health effects from air pollutants are based on the concentration of the pollutants and the duration of exposure. Concentrations vary with distance from a roadway based on many factors, including background (or ambient) levels of pollution from all sources; the number, speed, and type of vehicles on the roadway; wind speed and direction; topography; and other factors. For the proposed freeway, the Federal Highway Administration conducted modeling for carbon monoxide and particulate matter (PM10) using worst-case (most congested or highest traffic) modeling locations at discrete receptor locations around each analysis location (primarily residences near the interchanges). The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

Mobile source air toxics can also have adverse health impacts, but the U.S. Environmental Protection Agency has not established National Ambient Air Quality Standards for these pollutants. As a result, the Federal Highway Administration analyzes these pollutants using emissions analyses. The mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. Many studies have investigated the prevalence of adverse health effects in the near-road environment. Given concerns about the possibility of air pollution exposure in the near-road environment, the Health Effects Institute has dedicated a number of research efforts toward investigating this issue. In November 2007, the Health Effects Institute published Special Report #16: Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects. This report concluded that the cancer health effects attributable to mobile sources are difficult to discern because the majority of quantitative assessments are derived from occupational cohorts with high concentration exposures and because some cancer potency estimates are derived from animal models. In January 2010, the Health Effects Institute released Special Report #17, investigating the health effects of traffic-related air pollution. The goal of the research was to synthesize available information on the effects of traffic on health. Researchers looked at linkages between: 1) traffic emissions (at the tailpipe)
with ambient air pollution in general, 2) concentrations of ambient pollutants with human exposure to pollutants from traffic, 3) exposure to pollutants from traffic with human-health effects and toxicological data, and 4) toxicological data with epidemiological associations. Overall, researchers felt that there was “sufficient” evidence for causality for the exacerbation of asthma. Evidence was “suggestive but not sufficient” for health outcomes such as cardiovascular mortality and others.

Study authors also noted that past epidemiological studies may not provide an appropriate assessment of future health associations because vehicle emissions are decreasing over time. Finally, in 2011 three studies were published by the Health Effects Institute evaluating the potential for mobile source air toxics “hot spots.” In general, the authors confirmed that while highways are a source of air toxics, they were unable to find that highways were the only source of these pollutants. They determined that near-road exposures were often no different or no higher than background (or ambient) levels of exposure and, hence, no true hot spots were identified. These reports are available from the Health Effects Institute’s Web site at <healtheffects.org>. The Federal Highway Administration and U.S. Environmental Protection Agency provide financial support to the Health Effects Institute’s research work.

Another source of information is the U.S. Environmental Protection Agency’s recently released report on Children’s Health and the Environment:

The level of knowledge regarding the relationship between environmental exposures and health outcomes varies widely among the topics [presented in this report], and the inclusion of an indicator in the report does not necessarily imply a known relationship between environmental exposure and children’s health effects. The report provides data for selected children’s health conditions that warrant further research because the causes, including possible contributing environmental factors, are complex and not well understood at this point.

In the case of asthma, researchers do not fully understand why children develop the condition. However, substantial evidence shows exposure to certain air pollutants, including particulate matter and ozone, can trigger symptoms in children who already have asthma. Although the report found the percentage of children reported to currently have asthma increased from 8.7 percent in 2001 to 9.4 percent in 2010 and that minority populations are particularly affected by asthma, the severity of children’s asthma and respiratory symptoms has declined. The rate of emergency room visits for asthma decreased from 114 visits per 10,000 children in 1996 to 103 visits per 10,000 children in 2008. Between 1996 and 2008, hospitalizations for asthma and for all other respiratory causes decreased from 90 hospitalizations per 10,000 children to 56 hospitalizations per 10,000 children.

The report also looks at trends in other health conditions, such as Attention-Deficit/Hyperactivity Disorder (ADHD) and preterm births, for which rates have increased. There is no conclusive information on the role of environmental contaminants in ADHD or preterm births, and additional research is ongoing.

Finally, the Federal Highway Administration notes that while the incidence of some health effects (such as asthma, autism, and attention deficit/hyperactivity disorder) in the U.S. population appear to have been increasing, motor vehicle emissions have declined. This decline in mobile source air toxics emissions is documented in Figure 4-24 of the Final Environmental Impact Statement and for other pollutants at <epa.gov/ttn/chief/trends/>. This negative correlation between emissions trends and health effects trends illustrates the complexity of the issues.
Hazardous Materials

Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-166 of the Final Environmental Impact Statement).

The Arizona Department of Public Safety (which includes the State Highway Patrol) has primary responsibility for enforcing traffic laws. The Department of Public Safety also has primacy when calling in support for traffic accidents, including hazardous materials accidents (see text box on page 4-166 of the Final Environmental Impact Statement). The Arizona Department of Transportation maintains a list of contractors who provide emergency response services, as well as local municipalities whose fire and police departments operate in cooperation with the Department of Public Safety on incidents within their jurisdiction. Requirements for shippers are maintained by the Arizona Department of Transportation’s Enforcement Compliance Division.

The project team is aware of the Hazardous Materials Commodity Flow Studies that the Arizona State Emergency Response Commission maintains. These studies are used by emergency response planners (such as the Arizona State Emergency Response Commission statewide and the Maricopa County Local Emergency Planning Commission for Maricopa County) as one of the elements considered when developing Emergency Response Plans. If the plan is amended, it is made available to the Arizona Department of Transportation.

In the event of an incident with a hazardous materials issue on a State or federal highway, the emergency responders contact the Arizona Department of Transportation’s Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation’s Safety and Risk Management group, who responds to the accident scene and assesses needs in concert with the Incident Commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation’s Safety and Risk Management group’s charge is primarily public health protection, with cleanup support being secondary.

Tribal Involvement

As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community in the environmental impact statement process have been extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final

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The Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

The Arizona Department of Transportation Community Relations distributed electronic notices (e-newsletters) through the Government Delivery system to over 12,000 constituents who voluntarily signed up for project alerts along the Interstate 10 Papago, Maricopa, and Santan Freeways. These electronic notices included notice of availability of Draft Environmental Impact Statement (distributed on April 26, 2013); public hearing (distributed on May 10, 2013); the community forums (distributed on May 29, 2013) and one in June (close of the Draft Environmental Impact Statement public comment period). In addition, anyone who had attended a previous meeting on the proposed action and signed in received all of this information mailed individually. On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area. Community forums were held after the public hearing to further invite public comment.

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Title VI

The Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and considered fully the substantive input and comments that were received.
79 Cultural Resources

The importance of the South Mountains Traditional Cultural Property is acknowledged on pages 4-130 and 4-141 of the Draft and Final Environmental Impact Statements, respectively. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. This consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

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Alternatives

In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. The preferred alternative was the outcome to this process. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft and Final Environmental Impact Statement. The preferred alternative was the outcome to this process.

Tribal Involvement

As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community, a sovereign nation, in the environmental impact statement process are extensive.

Health Effects

Under the Clean Air Act, the U.S. Environmental Protection Agency is responsible for establishing National Ambient Air Quality Standards to protect public health and the environment from adverse effects of air pollutants. Health effects from air pollutants are based on the concentration of the pollutants and the duration of exposure. Concentrations vary with distance from a roadway based on many factors, including background (or ambient) levels of pollution from all sources; the number, speed, and type of vehicles on the roadway; wind speed and direction; topography; and other factors. For the proposed freeway, the Federal Highway Administration conducted modeling for carbon monoxide and particulate matter

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Many studies have investigated the prevalence of adverse health effects in the near-road environment. Given concerns about the possibility of air pollution exposure in the near-road environment, the Health Effects Institute has dedicated a number of research efforts toward investigating this issue. In November 2007, the Health Effects Institute published Special Report #16: Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects. This report concluded that the cancer health effects attributable to mobile sources are difficult to discern because the majority of quantitative assessments are derived from occupational cohorts with high concentration exposures and because some cancer potency estimates are derived from animal models. In January 2010, the Health Effects Institute released Special Report #17, investigating the health effects of traffic-related air pollution. The goal of the research was to synthesize available information on the effects of traffic on health. Researchers looked at linkages between: 1) traffic emissions (at the tailpipe) with ambient air pollution in general, 2) concentrations of ambient pollutants with human exposure to pollutants from traffic, 3) exposure to pollutants from traffic with human-health effects and toxicological data, and 4) toxicological data with epidemiological associations. Overall, researchers felt that there was “sufficient” evidence for causality for the exacerbation of asthma. Evidence was “suggestive but not sufficient” for health outcomes such as cardiovascular mortality and others. Study authors also noted that past epidemiological studies may not provide an appropriate assessment of future health associations because vehicle emissions are decreasing over time. Finally, in 2011 three studies were published by the Health Effects Institute evaluating the potential for mobile source air toxics “hot spots.” In general, the authors confirmed that while highways are a source of air toxics, they were unable to find that highways were the only source of these pollutants. They determined that near-road exposures were often no different or no higher than background (or ambient) levels of exposure and, hence, no true hot spots were identified.

(Response 79 continues on next page)
These reports are available from the Health Effects Institute’s Web site at <healtheffects.org>. The Federal Highway Administration and U.S. Environmental Protection Agency provide financial support to the Health Effects Institute’s research work.

Another source of information is the U.S. Environmental Protection Agency’s recently released report on Children’s Health and the Environment:

The level of knowledge regarding the relationship between environmental exposures and health outcomes varies widely among the topics [presented in this report], and the inclusion of an indicator in the report does not necessarily imply a known relationship between environmental exposure and children’s health effects. The report provides data for selected children’s health conditions that warrant further research because the causes, including possible contributing environmental factors, are complex and not well understood at this point.

In the case of asthma, researchers do not fully understand why children develop the condition. However, substantial evidence shows exposure to certain air pollutants, including particulate matter and ozone, can trigger symptoms in children who already have asthma. Although the report found the percentage of children reported to currently have asthma increased from 8.7 percent in 2001 to 9.4 percent in 2010 and that minority populations are particularly affected by asthma, the severity of children’s asthma and respiratory symptoms has declined. The rate of emergency room visits for asthma decreased from 114 visits per 10,000 children in 1996 to 70 visits per 10,000 children in 2008. Between 1996 and 2008, hospitalizations for asthma and for all other respiratory causes decreased from 90 hospitalizations per 10,000 children to 56 hospitalizations per 10,000 children.

The report also looks at trends in other health conditions, such as Attention-Deficit/Hyperactivity Disorder (ADHD) and preterm births, for which rates have increased. There is no conclusive information on the role of environmental contaminants in ADHD or preterm births, and additional research is ongoing.

Finally, the Federal Highway Administration notes that while the incidence of some health effects (such as asthma, autism, and attention deficit/hyperactivity disorder) in the U.S. population appears to have been increasing, motor vehicle emissions have declined. This decline in mobile source air toxics emissions is documented in Figure 4-24 of the Final Environmental Impact Statement and for other pollutants at <epa.gov/ttn/chief/trends/>. This negative correlation between emissions trends and health effects trends illustrates the complexity of the issues.
The importance of the South Mountains Traditional Cultural Property is acknowledged on pages 4-130 and 4-141 of the Draft and Final Environmental Impact Statements, respectively. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. This consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

**Purpose and Need**

In the Draft and Final Environmental Impact Statements, Chapter 1, *Purpose and Need*, examines the purpose and need for the proposed action in terms of defining a transportation problem. The results of the purpose and need analyses included the determination that a transportation problem (similar to the type of problem that has been represented in past Regional Transportation Plans) still exists in the area and that this problem is similar in characteristics to the transportation problem that existed in prior years.

**Tribal Involvement**

The section entitled *Title VI and Environmental Justice*, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives.

In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, *Affected Environment, Environmental Consequences, and Mitigation*, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.

Chapter 2 of the Final Environmental Impact Statement is dedicated to the explanation of the Gila River Indian Community outreach undertaken for the project. Chapter 6 of the Final Environmental Impact Statement further describes Community outreach throughout the process. The Gila River Indian Community was provided equal opportunities to participate in the project as all other populations and agencies. This outreach was undertaken, in part, to ensure all populations had equal access to the process and, in part, to ensure disparate or disproportionately high adverse impacts would result from the construction and operation of the proposed action.
As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community, a sovereign nation, in the environmental impact statement process are extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

In addition to Chapter 2 of the Final Environmental Impact Statement which explains the Gila River Indian Community outreach undertaken for the project, Chapter 6 of the Final Environmental Impact Statement further describes Gila River Indian Community and general outreach throughout the process. The Gila River Indian Community was provided equal opportunities to participate in the project as all other populations and agencies. This outreach was undertaken, in part, to ensure all populations had equal access to the process and, in part, to ensure disparate or disproportionately high adverse impacts would result from the construction and operation of the proposed action.

Air Quality

The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency recently determined that Phoenix has attained the particulate matter (PM10) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner-burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM10) and followed U.S. Environmental Protection Agency guidelines. No violations of either the carbon monoxide or particulate matter (PM10) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the
between two natural barriers, the South Mountain and the Estrella Mountain ranges. These barriers would most definitely keep those toxic substances in my community.

Currently, we have an amazing resource that is full of the natural beauty that most Americans and people from all around the world picture when thinking of the well-known Sonoran desert. As a privileged individual, I’ve lived at the western tip of the South Mountain and seen many beautiful vistas and given many blessings to the sky and the people based on these generous resources. In addition, while working for my community I have gained knowledge of aquifers, water sheds and resources that would be directly impacted.

My people would be cut off from interactions with the mountains, as a third party recipient of this information I had found that the engineers and designers have mentioned animal crossings that would be put in place but no mention of human crossings that would be needed to go grey and have ceremonies and such. Not to mention the dislocation of noise from the vehicles. During project, it’s important to be in a peaceful area. I asked my daughter to complete research; she found that it takes multiple generations for animals to learn their "new" crossings. During that learning time we lose numerous animals because of destruction of current natural barriers, crossings. I have to mention about the dust in the air, on the reservation the dust grows more abundantly second and on mountain areas, not so much in the flat lands anymore. So naturally as we have not institutional harvesting activities, there is a greater need to gather the final in mountain areas. Lastly, we Alidade O’odham as many other people acknowledge the spiritual properties associated with mountains. It is in my O’odham’s story where in many of my O’odham’s stories that I recall her making jellies and other delicious dishes for both personal and financial sustainability, you another reason to have direct access to the mountains.

There is no other concern about Hazardous Mineral coming through our community. If this were to become “the” truck route, it most surely will be the hazardous mineral route. Since I sit on the CTIEC (Chiricahua Tribal Interagency Response Committee), I have not seen issues for this freeway. I also have not seen proposed policy to address what will happen in case a hazardous incident were to occur on this proposed freeway. Currently, we as a community do not see any hazardous incidents/splits on the reservation by way of I-10 (Interstate 10) freeway. Even though, when we look at potential incidents on either freeway, it will be applied and implemented as we have distances in the already established freeway (I-10) and the proposed freeway (I-202).

There were very few meetings, very little public participation. The very first invite extended was days after the EIS was released which was April 25th, 2013. The meeting was on April 30th, 2013 at Yuma in GTRC at the Government Center.

Present were the TTT, Governor and 1 Governor (who is Chair of the TTT), various tribal department, a rep from ADOT (who I can't recall), a rep from MAG, Senior Engineer Chris Hardest as well as a few of the grassroots organizers. Represented were at least organizers from

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**Preferred Alternative and No-Action Alternative.** With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM₁₀) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

**Biological Resources, Tribal Access.** Connectivity is planned to allow wildlife movement beneath the freeway in multiuse crossings (see page 4-137 of the Final Environmental Impact Statement). The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see Mitigation, beginning on page 4-138 of the Final Environmental Impact Statement). The Arizona Department of Transportation and Federal Highway Administration would continue to work with partners, including the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and the Gila River Indian Community’s Department of Environmental Quality, during the design phase regarding the design of multifunctional crossings that would allow wildlife passage across the proposed freeway alignment at natural drainages and that would allow Gila River Indian Community members to gain access to important traditional locations within the South Mountains.

The Arizona Department of Transportation and Federal Highway Administration have been fully attentive to concerns expressed by the Gila River Indian Community and reiterate that position in this comment; the agencies have taken these concerns into account in describing potential impacts in the Draft Environmental Impact Statement, in ensuring that access to South Mountain would be preserved, and in developing and recommending the implementation of numerous mitigation measures.

(Response 82 continues on next page)
Hazardous Material

Creating a truck bypass is not a goal of the proposed action. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see...
Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-164 of the Final Environmental Impact Statement).

The Arizona Department of Public Safety (which includes the State Highway Patrol) has primary responsibility for enforcing traffic laws. The Department of Public Safety also has primacy when calling in support for traffic accidents, including hazardous materials accidents (see text box on page 4-164 of the Final Environmental Impact Statement). The Arizona Department of Transportation maintains a list of contractors who provide emergency response services, as well as local municipalities whose fire and police departments operate in cooperation with the Department of Public Safety on incidents within their jurisdiction. Requirements for shippers are maintained by the Arizona Department of Transportation's Enforcement Compliance Division.

Tribal Involvement
Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

The Arizona Department of Transportation Community Relations distributed electronic notices (e-newsletters) through the Government Delivery system to over 12,000 constituents who voluntarily signed up for project alerts along the Interstate 10 Papago, Maricopa, and Santan Freeways. These electronic notices included notice of availability of Draft Environmental Impact Statement (distributed on April 26, 2013); public hearing (distributed on May 10, 2013); the community forums (distributed on May 29, 2013) and one in June (close of the Draft Environmental Impact Statement public comment period). In addition, anyone who had attended a previous meeting on the proposed action and signed in received all of this information mailed individually. On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area.
Community forums were held after the public hearing to further invite public comment. The public hearing for the proposed action was widely advertised. Newspaper ads in six newspapers of area-wide distribution ran advertisements at least twice each. Announcements occurred on five radio stations and six television stations. Mailers were sent on May 6, 2013 to 73,564 individuals (approximately 311 on the Gila River Indian Community) who had previously expressed an interest in the project. E-newsletters were distributed on three different occasions. All materials were also provided to the Gila River Indian Community Public Information Officer.

Offers to the Gila River Indian Community Manager to host a public outreach event on the Gila River Indian Community began in summer 2012. The Gila River Indian Community first officially responded to this offer at the April 30, 2013 meeting of the Transportation Technical Team. During this meeting, the Gila River Indian Community Manager requested a community forum be conducted on the Gila River Indian Community following the public hearing. This was the only request the Arizona Department of Transportation received from the Gila River Indian Community regarding whether the Arizona Department of Transportation could hold a public outreach event during the public comment period. The Arizona Department of Transportation agreed to do so, and a community forum was held on June 22, 2013 at the Komatke Boys & Girls Club on the Gila River Indian Community. Like the public hearing, the community forums were widely advertised. In addition to the efforts of the Gila River Indian Community Communication and Public Affairs Office, the Arizona Department of Transportation ran newspaper ads in six newspapers of area-wide distribution four times each.

The initial hotline capacity was 20 messages; it was expanded to 80 on May 17, 2013. Any questions that came in regarding how to participate, including any shuttle bus or transportation questions, were forwarded to one individual to address. Conversation record log sheets were kept for these efforts.

For the first time in the State’s history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All ads provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations. Transportation to the community forums was not provided.

As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community in the environmental impact statement process are extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.
Visual impacts to and from South Mountain are presented in the Final Environmental Impact Statement on page 4-167.

Cultural Resources

The importance of the South Mountains Traditional Cultural Property is acknowledged on pages 4-130 and 4-141 of the Draft and Final Environmental Impact Statements, respectively. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. This consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

The South Mountains would not be destroyed by the proposed freeway. Use of the mountains for the purposes of the proposed freeway represents two-tenths of one percent of the total mountain range. Since 1988, and as part of this environmental impact statement process, several measures have been undertaken and will be undertaken to further reduce effects on the mountains. These measures, including narrowing the design footprint, acquiring replacement land immediately adjacent to the mountains, and the provision of highway crossings, are outlined in text beginning on page 5-23 of the Final Environmental Impact Statement.
The importance of the South Mountains Traditional Cultural Property is acknowledged on pages 4-130 and 4-141 of the Draft and Final Environmental Impact Statements, respectively. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. This consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

Biological Resources
Multiuse crossings would be provided for wildlife and to accommodate those members of the Gila River Indian Community who wish to gain access to areas of the South Mountains for ceremonies important for their culture (see Final Environmental Impact Statement page 4-160). In addition, as stated on page 5-27 of the Final Environmental Impact Statement, a right-of-way fence would limit access to these areas by freeway users, but allow Gila River Indian Community members to gain access to the area.

Health Effects
Under the Clean Air Act, the U.S. Environmental Protection Agency is responsible for establishing National Ambient Air Quality Standards to protect public health and the environment from adverse effects of air pollutants. Health effects from air pollutants are based on the concentration of the pollutants and the duration of exposure. Concentrations vary with distance from a roadway based on many factors, including background (or ambient) levels of pollution from all sources; the number, speed, and type of vehicles on the roadway; wind speed and direction; topography; and other factors. For the proposed freeway, the Federal Highway Administration conducted modeling for carbon monoxide and particulate matter (PM10) using worst-case (most congested or highest traffic) modeling locations at discrete receptor locations around each analysis location (primarily residences near the interchanges). The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

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(Response 84 continues on next page)
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Cultural Resources

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(Comment code 86 is on next page)
Comment Response Appendix

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The Arizona Department of Transportation provided vouchers for public hearing parking and for public transit to the hearing. For the first time in the State’s history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All ads provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations.

As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community in the environmental impact statement process are extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

86 (cont.)

Hello,

My name is Nicole Johns and I am a Gila River Indian Community member. I am stating that my connection to South Mountain is that it is a very sacred place to me and my people.

I would also like to say that ADOT did not properly notify everyone in our community about the meeting they have had about South Mountain.

I myself have not heard anything about these meetings until they have already passed. They don’t make it easy for me to get to these meetings that they have. I don’t have transportation to go in to the city or to the freeway end of our reservation. I would like to add that it would be more convenient if they would have went to each district and asked each of us how we felt about this.

The health concerns I have about this project are that the exhaust would kill plant life that has been there for hundreds of years, and can it will be a health hazard for the people that live near South Mountain.
Biology, Plants, and Wildlife

Within the context of overall vegetation, wildlife, and wildlife habitat, all action alternatives and options would decrease the amount of cover, nesting areas, and food resources for wildlife species caused by habitat loss, fragmentation, and traffic disturbance. See the section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-136 of the Final Environmental Impact Statement, for additional details on potential effects on vegetation, wildlife, and wildlife habitat.

Health Effects

Under the Clean Air Act, the U.S. Environmental Protection Agency is responsible for establishing National Ambient Air Quality Standards to protect public health and the environment from adverse effects of air pollutants. Health effects from air pollutants are based on the concentration of the pollutants and the duration of exposure. Concentrations vary with distance from a roadway based on many factors, including background (or ambient) levels of pollution from all sources; the number, speed, and type of vehicles on the roadway; wind speed and direction; topography; and other factors. For the proposed freeway, the Federal Highway Administration conducted modeling for carbon monoxide and particulate matter (PM) using worst-case (most congested or highest traffic) modeling locations at discrete receptor locations around each analysis location (primarily residences near the intersections). The carbon monoxide and particulate matter (PM) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

Mobile source air toxics can also have adverse health impacts, but the U.S. Environmental Protection Agency has not established National Ambient Air Quality Standards for these pollutants. As a result, the Federal Highway Administration analyzes these pollutants using emissions analyses. The mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions.

Many studies have investigated the prevalence of adverse health effects in the near-road environment. Given concerns about the possibility of air pollution exposure in the near-road environment, the Health Effects Institute has dedicated a number of research efforts toward investigating this issue. In November 2007, the Health Effects Institute published Special Report #16: Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects. This report concluded that the cancer health effects attributable to mobile sources are difficult to discern because the majority of quantitative assessments are derived from occupational cohorts with high concentration exposures and because some cancer potency estimates are derived from animal models. In January 2010, the Health Effects Institute released Special Report #17, investigating the health effects of traffic-related air pollution. The goal of the research was to synthesize available information on the effects of traffic on health. Researchers looked at linkages between: 1) traffic emissions (at the tailpipe) with ambient air pollution in general, 2) concentrations of ambient pollutants with human exposure to pollutants from traffic, 3) exposure to pollutants from traffic with human-health effects and toxicological data, and 4) toxicological data with epidemiological associations.

(Response 86 continues on next page)
Overall, researchers felt that there was “sufficient” evidence for causality for the exacerbation of asthma. Evidence was “suggestive but not sufficient” for health outcomes such as cardiovascular mortality and others. Study authors also noted that past epidemiological studies may not provide an appropriate assessment of future health associations because vehicle emissions are decreasing over time. Finally, in 2011 three studies were published by the Health Effects Institute evaluating the potential for mobile source air toxics “hot spots.” In general, the authors confirmed that while highways are a source of air toxics, they were unable to find that highways were the only source of these pollutants. They determined that near-road exposures were often no different or no higher than background (or ambient) levels of exposure and, hence, no true hot spots were identified. These reports are available from the Health Effects Institute’s Web site at <healtheffects.org>. The Federal Highway Administration and U.S. Environmental Protection Agency provide financial support to the Health Effects Institute’s research work.

Another source of information is the U.S. Environmental Protection Agency’s recently released report on Children’s Health and the Environment:

The level of knowledge regarding the relationship between environmental exposures and health outcomes varies widely among the topics [presented in this report], and the inclusion of an indicator in the report does not necessarily imply a known relationship between environmental exposure and children’s health effects. The report provides data for selected children’s health conditions that warrant further research because the causes, including possible contributing environmental factors, are complex and not well understood at this point.

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The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

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The public hearing for the proposed action was widely advertised. Newspaper advertisements in six newspapers of area-wide distribution ran at least twice each. Announcements occurred on five radio stations and six television stations. Mailers were sent on May 6, 2013, to 73,564 individuals (approximately 311 on the Gila River Indian Community) who had previously expressed an interest in the project. E-newsletters were distributed on three different occasions. All materials were also provided to the Gila River Indian Community Public Information Officer. Offers to the Gila River Indian Community Manager to host a public outreach events on the Gila River Indian Community began in summer 2012. The Gila River Indian Community first officially responded to this offer at the April 30, 2013, meeting of the Transportation Technical Team. During this meeting, the Gila River Indian Community Manager requested that a community forum be conducted on the Gila River Indian Community following the public hearing. This was the only request the Arizona Department of Transportation received from the Gila River Indian Community regarding whether the Arizona Department of Transportation could hold a public outreach event during the public comment period. The Arizona Department of Transportation agreed to do so, and a community forum was held on June 22, 2013, at the Komatke Boys & Girls Club on the Gila River Indian Community.

87 Tribal Involvement

Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

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<td>Cultural Resources</td>
<td>The importance of the South Mountains Traditional Cultural Property is acknowledged on pages 4-130 and 4-141 of the Draft and Final Environmental Impact Statements, respectively. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. This consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.</td>
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<td>88</td>
<td>Air Quality, Health Effects</td>
<td>As noted on page 4-69 of the Final Environmental Impact Statement, secondary air quality standards are promulgated to minimize environmental and property damage. Primary and secondary standards for particulate matter (PM&lt;sub&gt;10&lt;/sub&gt;) are identical; no threshold is established by the U.S. Environmental Protection Agency for carbon monoxide (CO). Under the Clean Air Act, the U.S. Environmental Protection Agency is responsible for establishing National Ambient Air Quality Standards to protect public health and the environment from adverse effects of air pollutants. Health effects from air pollutants are based on the concentration of the pollutants and the duration of exposure. Concentrations vary with distance from a roadway based on many factors, including background (or ambient) levels of pollution from all sources; the number, speed, and type of vehicles on the roadway; wind speed and direction; topography; and other factors. For the proposed freeway, the Federal Highway Administration conducted modeling for carbon monoxide and particulate matter (PM&lt;sub&gt;10&lt;/sub&gt;) using worst-case (most congested or highest traffic) modeling locations at discrete receptor locations around each analysis location (primarily residences near the interchanges). The carbon monoxide and particulate matter (PM&lt;sub&gt;10&lt;/sub&gt;) analyses...</td>
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For the 17 meetings you should know that some of the community members would like to attend the meetings but have no ride to attend. So please listen to us and hear what we have to say.

Frances Stevens
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**Code Comment Document**

**Code Issue Response**

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<td>In the Draft and Final Environmental Impact Statements, Chapter 1, Purpose and Need, examines the purpose and need for the proposed action in terms of defining a transportation problem. The results of the purpose and need analyses included the determination that a transportation problem (similar to the type of problem that has been represented in past Regional Transportation Plans) still exists in the area and that this problem is similar in characteristics to the transportation problem that existed in prior years. The alternatives analyses considered numerous modal alternatives, and a robust screening process led to the conclusion that a road facility would best address the transportation problem defined.</td>
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**Health Effects**

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Mobile source air toxics can also have adverse health impacts, but the U.S. Environmental Protection Agency has not established National Ambient Air Quality Standards for these pollutants. As a result, the Federal Highway Administration analyzes these pollutants using emissions analyses. The mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions.

Many studies have investigated the prevalence of adverse health effects in the near-road environment. Given concerns about the possibility of air pollution exposure in the near-road environment, the Health Effects Institute has dedicated a number of research efforts toward investigating this issue. In November 2007, the Health Effects Institute published Special Report #16: Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects. This report concluded that the cancer health effects attributable to mobile sources are difficult to discern because the majority of quantitative assessments are derived from occupational...
cohorts with high concentration exposures and because some cancer potency estimates are derived from animal models. In January 2010, the Health Effects Institute released Special Report #17, investigating the health effects of traffic-related air pollution. The goal of the research was to synthesize available information on the effects of traffic on health. Researchers looked at linkages between: 1) traffic emissions (at the tailpipe) with ambient air pollution in general, 2) concentrations of ambient pollutants with human exposure to pollutants from traffic, 3) exposure to pollutants from traffic with human-health effects and toxicological data, and 4) toxicological data with epidemiological associations. Overall, researchers felt that there was “sufficient” evidence for causality for the exacerbation of asthma. Evidence was “suggestive but not sufficient” for health outcomes such as cardiovascular mortality and others. Study authors also noted that past epidemiological studies may not provide an appropriate assessment of future health associations because vehicle emissions are decreasing over time. Finally, in 2011 three studies were published by the Health Effects Institute evaluating the potential for mobile source air toxics “hot spots.” In general, the authors confirmed that while highways are a source of air toxics, they were unable to find that highways were the only source of these pollutants. They determined that near-road exposures were often no different or no higher than background (or ambient) levels of exposure and, hence, no true hot spots were identified. These reports are available from the Health Effects Institute’s Web site at <healtheffects.org>. The Federal Highway Administration and U.S. Environmental Protection Agency provide financial support to the Health Effects Institute’s research work.

Another source of information is the U.S. Environmental Protection Agency’s recently released report on Children’s Health and the Environment: The level of knowledge regarding the relationship between environmental exposures and health outcomes varies widely among the topics [presented in this report], and the inclusion of an indicator in the report does not necessarily imply a known relationship between environmental exposure and children’s health effects. The report provides data for selected children’s health conditions that warrant further research because the causes, including possible contributing environmental factors, are complex and not well understood at this point.

In the case of asthma, researchers do not fully understand why children develop this condition. However, substantial evidence shows exposure to certain air pollutants, including particulate matter and ozone, can trigger symptoms in children who already have asthma. Although the report found the percentage of children reported to currently have asthma increased from 8.7 percent in 2001 to 9.4 percent in 2010 and that minority populations are particularly affected by asthma, the severity of children’s asthma and respiratory symptoms has declined. The rate of emergency room visits for asthma decreased from 114 visits per 10,000 children in 1996 to 103 visits per 10,000 children in 2008. Between 1996 and 2008, hospitalizations for asthma and for all other respiratory causes decreased from 90 hospitalizations per 10,000 children to 56 hospitalizations per 10,000 children.

The report also looks at trends in other health conditions, such as Attention-Deficit/Hyperactivity Disorder (ADHD) and preterm births, for which rates have increased. There is no conclusive information on the role of environmental contaminants in ADHD or preterm births, and additional research is ongoing.

(Continued on next page)
Finally, the Federal Highway Administration notes that while the incidence of some health effects (such as asthma, autism, and attention deficit/hyperactivity disorder) in the U.S. population appear to have been increasing, motor vehicle emissions have declined. This decline in mobile source air toxics emissions is documented in Figure 4-24 of the Final Environmental Impact Statement and for other pollutants at <epa.gov/ttn/chief/trends/>. This negative correlation between emissions trends and health effects trends illustrates the complexity of the issues.

Cultural Resources
The importance of the South Mountains Traditional Cultural Property is acknowledged on pages 4-130 and 4-141 of the Draft and Final Environmental Impact Statements, respectively. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. This consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Historic Preservation Act eligibility recommendations, project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

Tribal Involvement
Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.
The public hearing for the proposed action was widely advertised. Newspaper advertisements in six newspapers of area-wide distribution ran at least twice each. Announcements occurred on five radio stations and six television stations. Mailers were sent on May 6, 2013, to 73,364 individuals (approximately 311 on the Gila River Indian Community) who had previously expressed an interest in the project. E-newsletters were distributed on three different occasions. All materials were also provided to the Gila River Indian Community Public Information Officer. Offers to the Gila River Indian Community Manager to host a public outreach events on the Gila River Indian Community began in summer 2012. The Gila River Indian Community first officially responded to this offer at the April 30, 2013, meeting of the Transportation Technical Team. During this meeting, the Gila River Indian Community Manager requested that a community forum be conducted on the Gila River Indian Community following the public hearing. This was the only request the Arizona Department of Transportation received from the Gila River Indian Community regarding whether the Arizona Department of Transportation could hold a public outreach event during the public comment period. The Arizona Department of Transportation agreed to do so, and a community forum was held on June 22, 2013, at the Komatke Boys & Girls Club on the Gila River Indian Community.

As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community, a sovereign nation, in the environmental impact statement process are extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

Water Resources

Table 4-41 on page 4-106 of the Final Environmental Impact Statement discloses the number of wells that may be acquired by each action alternative and, as noted on page 4-108 of the Final Environmental Impact Statement, some of these wells are abandoned wells. Impacts to wells on the Gila River Indian Community are not anticipated.

Acquisitions and Relocations

No homes on Gila River Indian Community land would be acquired for the proposed freeway.
my people who live out there going to have to thank paying for their water from the city. I know there are several better wells out there, but with the power to be covered because of the freeway, the water gets in that area is not as well. But in order to have better water, the wells would have to be dug deeper so to take things away from this area is not a good way to do it. The mountain has given me much in my life. It has kept me strong, safe, peaceful, and healthy as well as other people. So to see it being destroyed is too, because I'm sure if we want our kids to stay active and exercise we need to all need to take a stand. I one needs to be really touch about all aspects of this freeway. Especially to the community of the reservation.

David A. Avery
300-520-1330
On January 19, 2011, the Environmental Protection Agency Regional Administrator signed the Gila River Indian Community’s (GRIC) Tribal Implementation Program (TIP) into effect. The effect of this action was to make the TIP federally enforceable. The TIP regulates air quality within the boundaries of Gila River, and its purpose is to enforce air quality standards within the GRIC boundaries. The TIP contains ordinances that require GRICDEQ staff, tribal attorneys, and if needed, the GRIC tribal police, to assume civil and criminal enforcement actions against persons who violate clean air standards outlined in the TIP. If the E1 alignment is built, and air quality monitors in Gila River exceed PM10 and ozone standards, what will be the procedure for GRIC to prosecute federal agencies or persons whose actions violate clean air standards within the TIP?

On January 25, 2011 the State of Arizona withdrew plans for a State Implementation Plan (SIP) to meet particulate matter-10 standards in the Maricopa County PM-10 nonattainment area, thus falling to comply with provisions of the Clean Air Act. By withdrawing the SIP, the State of Arizona triggered a January 31, 2011 decision by the Environmental Protection Agency to begin a sanctions clock on Maricopa County, because the county’s air quality plan does not adequately protect human health. What air quality permits will the Arizona Department of Transportation have to secure in order to begin construction on the E1 alignment in Maricopa County, especially in light of being under the sanctions clock by the

Was the Section 106 process for South Mountain ever begun between the Tribal Historic Preservation Office and the Arizona Department of Transportation? If no, when can GRIC expect that process to start, in order to comply with the Religious Freedom and Restoration Act, as well as the National Historic Preservation Act? What outreach and scoping has ADOT done to the sister tribes of O’odham who also hold the South Mountain range as sacred, namely the Salt River Pima-Maricopa Indian Community, the Ak-Chin Indian Community, and the Tohono O’odham Nation? What outreach and scoping has ADOT done to the other tribes who have cultural affiliation to South Mountain, such as the Colorado River Indian Tribes and the Hopi Nation?

If the freeway were to be built, what type of assurances are there that air quality assessments for Gila River and Maricopa County will be kept separate? Gila River has been awarded a Clean Air Excellence award by the Environmental Protection Agency, and our community does not want any of our air quality measurements to fall under the Phoenix region, which has had sanctions from the EPA for withdrawing their clean air programs.

Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resources Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. In 2003, the Federal Highway Administration and Arizona Department of Transportation initiated Section 106 consultations with all Native American tribes that claimed cultural affiliation to the Study Area. Consultations were initiated with the Ak-Chin Indian Community, Gila River Indian Community, the Hopi Tribe, the Salt River Pima-Maricopa Indian Community, the Tohono O’odham Nation, the Yavapai-Apache Tribe, and the Yavapai-Prescott Indian Tribe. As noted in Table 4-47 that begins on page 4-145 of the Final Environmental Impact Statement, the Gila River Indian Community was consulted in 2003 with subsequent contract in 2005, 2006, 2007, 2008, 2010, 2011, 2012, and 2013. This supports an early and continued consultation with the Gila River Indian Community related to resources of importance.

In 2005, the Federal Highway Administration and Arizona Department of Transportation consulted with all Native American tribes in Arizona to ensure all interested Native Americans were included in the process and had the opportunity to communicate their concerns. These tribes were the Ak-Chin Indian Community, the Chemehuevi Tribe, the Cocopah Tribe, the Colorado River Indian Tribe, the Fort McDowell Yavapai Nation, the Fort Mojave Tribe, the Fort Yuma-Quechan Tribe, the Gila River Indian Community, the Havasupai Tribe, the Hopi Tribe, the Hualapai Tribe, the Kaibab Paiute Tribe, the Navajo Nation, the Pascua Yaqui Tribe, the Pueblo of Zuni, the Salt River Pima-Maricopa Indian Community, the...
Because of South Mountain's religious and cultural significance to the Gila River Indian Community, the Salt River Pima-Maricopa Indian Community, and the Colorado River Indian Tribes, building the E1 alignment will have an adverse impact on the exercise of Native American religious beliefs. If MAG, ADOT, and the State of Arizona continue with plans to build the proposed E1 alignment, these agencies and the state will be violating parts of the Religious Freedom and Restoration Act (RFRA), specifically as defined in 42 U.S.C. Amendment 2000cc-5. The proposed E1 alignment would introduce visual, atmospheric, and audible elements that would diminish South Mountain's cultural and religious significance. Many O'odham feel that South Mountain is in eminent danger from construction plans that will impact their sacred site for all time. There has been a lack of good faith consultation with O'odham traditional religious leaders, and almost a complete lack of diligence in the Section 106 process with GRIC. When will ADOT begin to consult closely with O'odham religious leaders, and to also inform them that the proposed 202 extension is also part of the Maricopa Association of Governments' plan to build the Sun Corridor between Phoenix and Tucson?

What type of government-to-government talks will ADOT disclose that they have done with Gila River tribal leadership to uphold the United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP), namely Article 7 of Convention No. 169 which states that Indigenous and tribal peoples have the right to “decide their own priorities for the process of development as it affects their lives, beliefs, institutions and spiritual well-being and the lands, territories and other resources which they occupy or otherwise use, and to exercise control over their economic, social and cultural development.”? Maricopa County is within the territorial boundaries of the U.S. and is subject to the laws, both international and domestic of the United States of America, and since the U.S. is a supporter of the UNDRIP, Maricopa County officials also are obligated to the UNDRIP's articles and recommendations. Finally they U.S. Ratified the ILO Convention 169 (which is legally binding) and signed onto the ILO, which means they are legally obligated to its principles and conventions.

The cornerstone of Convention No. 169, on which all its provisions are based, is consultation and participation of Indigenous and tribal peoples. The Convention requires that Indigenous and tribal peoples are consulted on issues that affect them. It requires that these peoples are able to engage in free, prior and informed participation in policy and development processes that affect them. This means not just the Gila River Indian Community, but also Salt River Pima-Maricopa Indian Community, Ak-Chin Indian Community, Tohono O'odham Nation, Colorado River Indian Tribes and Hopi Nation, which are all tribes that have cultural affiliations to South Mountain. To ensure that the rights of these Indigenous and tribal peoples are protected and taken into account when any measures are being undertaken that are likely to have an impact on these peoples, scoping must be done by ADOT in those communities.

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<td>2</td>
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<td>San Carlos Apache Tribe, the San Juan Southern Paiute, the Tohono O’odham Nation, the Tonto Apache Tribe, the White Mountain Apache Tribe, the Yavapai-Apache Tribe, and the Yavapai-Prescott Indian Tribe. Most of these tribes did not express an interest in the proposed project. The Ak-Chin Indian Community, the Salt River Pima-Maricopa Indian Community, and the Tohono O’odham deferred to the Gila River Indian Community to take the lead with Section 106 consultations on this proposed action project. Consultation with Native American tribes has been extensive and demonstrates a reasonable and good faith effort to include all interested Native American tribes in the process to take their concerns seriously in the planning effort. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.</td>
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<td>3</td>
<td>Air Quality</td>
<td>The Clean Air Excellence Award was awarded to the Gila River Indian Community Department of Environmental Quality Air Quality Program Team based on the development of a multi-program Air Quality Management Plan to regulate air quality, the first of its kind for an Indian Community. The award was not in any way an indication of the quality of the air within Gila River Indian Community land. The Gila River Indian Community is not included in the Maricopa County Carbon Monoxide Maintenance Area or the Maricopa 8-hour Ozone Nonattainment Area. The northern part of the Gila River Indian Community is within the Maricopa County Particulate Matter Nonattainment Area (see Figure 4-20 on page 4-71 of the Final Environmental Impact Statement). The Gila River Indian Community is part of the Maricopa Association of Governments and as such is included in air quality conformity demonstrations for the Maricopa Association of Governments region. The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM₁₀) and followed U.S. Environmental Protection Agency guidelines. No violations of either the carbon monoxide or particulate matter (PM₁₀) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM₁₀) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.</td>
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The proposed freeway is meant to be an I-10 commercial truck bypass to decrease traffic congestion on I-10 in Maricopa County. In the DEIS, the impacts of air pollution do not include vehicle emissions from commercial trucks originating from Mexico, which are fueled with diesel that does not meet the environmental standards adopted by Arizona. The air pollution models in the DEIS need to study the number of Mexican commercial trucks with destinations that pass through metro Phoenix, or whose destinations are in this geographic region. Those tons of air pollution need to be identified (what type of particulate matter it would be and the associated health impacts), quantified, and factored in to the analysis of air quality.

If living near a major highway adversely affects air quality, does it shorten the human lifespan? ADOT or HDR has a legal and civil responsibility to bring in outside research and air toxicology experts to explain how poor air quality affects the body, as well as pregnancy outcomes and fertility rates. The 2005 JATAP study must be included in the FEIS, as well.

Aerial photography must be added to the DEIS to show how many homes in Gila River would be destroyed by the path of the proposed project, as well as the acreage of Indigenous TCPs that would be destroyed.

South Mountain is a sacred area not just to the Gila River Indian Community, but to the Ak-Chin Indian Community, Salt River Pima-Maricopa Indian Community, the Tohono O'odham Nation, the Hopi, and to the Colorado River Indian Tribes. What type of scoping, community outreach, and hearings did ADOT perform in those communities?

What consultants from those communities were brought in to stress the protection of traditional cultural properties?

What types of protections are in place for NRHP-eligible resources in the South Mountain Park Preserves (SMPP)? Under Criterion A (association with an important event) and Criterion B (association with an important person) of Section 106 of the NRHP, the entire 16,600 acres of the SMPP is NRHP-eligible as a traditional cultural property. This means the No Build alternative is the only action ADOT can take to protect the South Mountains.

The DEIS describes a fence to be built around an O'odham cultural resource, as a mitigation measure. Culture cannot be fenced, and the freeway's direct and indirect impacts to this site must be brought back to the Gila River Indian Community, Ak-Chin Indian Community, Salt River Pima-Maricopa Indian Community, Tohono O'odham Nation, Hopi Tribe, and the Colorado River Indian Tribes (CRIT) before this resource is further impaired. Article 8 of the 2007 United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP) prohibits the "forced assimilation or destruction of Indigenous culture." Further analysis of direct and indirect impacts to Site AZ T:12:112 is a basic human and civil right for the affected tribal stakeholders.

In May 2012, the Arizona Department of Environmental Quality submitted a revised Maricopa Association of Governments 2012 Five Percent Plan for the region. On July 20, 2012, the U.S. Environmental Protection Agency made an official finding that the Maricopa Association of Governments 2012 Five Percent Plan was administratively complete. This decision ended the sanctions clocks associated with Arizona's decision to withdraw the Maricopa Association of Governments 2007 Five Percent Plan. On February 6, 2014, the U.S. Environmental Protection Agency published a notice in the Federal Register proposing to approve the Maricopa Association of Governments 2012 Five Percent Plan for Attainment of the PM-10 Standard for the Maricopa County Nonattainment Area. In the same notice, the U.S. Environmental Protection Agency stated that it would concur with exceptional event (as a result of haboobs and dust storms) documentation prepared by the Arizona Department of Environmental Quality, which would give the region the 3 years of clean data needed for attainment of the particulate matter (PM10) 24-hour standard. Finally on May 30, 2014, the U.S. Environmental Protection Agency approved the 2012 Five Percent Plan and found the area in attainment of the 24-hour particulate matter (PM10) standard based on monitoring data for the years 2010 to 2012 (see page 4-72 of the Final Environmental Impact Statement for more information).

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM10) and followed U.S. Environmental Protection Agency guidelines. No violations of either the carbon monoxide or particulate matter (PM10) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

The Arizona Department of Transportation will need to obtain dust control permits from Maricopa County Air Quality Department. These requirements are typical for this type of project.
If the E1 alignment were built, there are eight O'odham TCPs that would be indirectly affected, including petroglyphs, artifact scatter, and prehistoric trails. The E1 alignment completely destroys another TCP element, as it is in the path of the proposed freeway. The City of Phoenix is currently undertaking an NRHP-eligibility determination study of the archaeological sites within SMPP. Civil rights and human rights within the UNDRIP mandate that an evaluation of the traditional cultural properties be performed with direct consultation of traditional O'odham leaders BEFORE any route of the proposed project can be selected. Article 7 of the UNDRIP states that Indigenous and tribal peoples have the right to “decide their own priorities for the process of development as it affects their lives, beliefs, institutions and spiritual well-being and the lands they occupy or otherwise use, and to exercise control over their economic, social and cultural development”.

The City of Phoenix, under the provisions of the Phoenix Mountain Preserve Act, is not able to sell South Mountain Park Preserves land to ADOT. ADOT would have to condemn 31.3 acres of SMPP land before it could be used for the proposed freeway extension. Under the 1964 Civil Rights Act, Native Americans are a protected class, and intrusions on Native American religious practices are illegal. How does ADOT plan to condemn 31 acres of an O'odham cultural resource without consulting with traditional leaders of O'odham tribes, as well as Hopi and CRIT? Article 25, Section 3 of the UNDRIP says that “states shall give legal recognition and protection to these lands, territories and resources. Such recognition shall be conducted with due respect to the customs, traditions and land tenure systems of the Indigenous peoples concerned.”

No action can be taken on the proposed freeway extension until the Tribal Historic Preservation Office responds to an August 17, 2011 document regarding NRHP eligibility of the South Mountains. Request that ADOT withdraw consideration of the South Mountain extension of the Loop 202 Freeway until all tribal stakeholders are directly consulted by the Tribal Historic Preservation Office about NRHP eligibility.

Because of the egregious lack of information in the DEIS, a revised DEIS must first be written by ADOT/HR Engineering that adequately informs the public so that members of the public can make an informed decision about the proposed project.
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<td>As detailed in Chapter 1, Purpose and Need, in the Draft and Final Environmental Impact Statements, the proposed action is needed to address local capacity deficiencies, not to address the Sun Corridor between Tucson and Phoenix, and has been developed in response to local growth in population, housing, employment, and travel levels. As further discussed, on page 1-5 of the Draft and Final Environmental Impact Statements, the proposed action is based on logical termini, sufficient length, independent utility, projected travel needs, and construction priorities. The proposed action is not needed in response to national freight movement, nor is it intended to provide service primarily for freight movement.</td>
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The United States has confirmed that the United Nations Declaration on the Rights of Indigenous Peoples is “not legally binding or a statement of current international law” and is limited to “moral and political force.” Announcement of U.S. Support for the United Nations Declaration on the Rights of Indigenous Peoples, U.S. State Department (Dec. 17, 2010) (available at: state.gov/documents/organization/154782.pdf). The government’s Announcement further clarified that the United States “understands [that the Declaration] calls for a process of meaningful consultation with tribal leaders, but not necessarily the agreement of those leaders, before the actions addressed in those consultations are taken.” In this case, as described in the Draft and Final Environmental Impact Statements, through consultation, the Tribal Historic Preservation Office of the Gila River Indian Community concurred with the mitigation measures recommended for implementation in connection with the E1 Alternative. To the extent there is disagreement by individual tribal members, their comments have been considered and taken into account. However, the Declaration does not create an enforceable legal standard amending the National Environmental Policy Act process. As described in the Draft and Final Environmental Impact Statements, the consultation process with Native American tribes, and in particular with the Gila River Indian Community, was lengthy, repeated, and extensive. Traditional cultural properties were evaluated with input from affected tribes and are described in the Draft and Final Environmental Impact Statements. Although the consent of tribal leaders is not required, as the United States made clear in its Announcement quoted above, the Tribal Historic Preservation Officer agrees with the mitigation measures to be imposed in connection with the E1 Alternative affecting a small portion of South Mountain.

The quoted language in the comment attributed to Article 7 of the Declaration does not appear there. The language appears to derive from the International Labor Organization’s 1989 Indigenous and Tribal Peoples Convention (Convention No. 169). Convention 169 has never been ratified by the United States, which has not agreed to align legislation, policies, and programs with the Convention as a legal requirement.

Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

In 2003, the Federal Highway Administration and Arizona Department of Transportation initiated National Historic Preservation Act Section 106 consultations with all Native American tribes that claimed cultural affiliation to the Study Area. Consultations were initiated with the Ak-Chin Indian Community, Gila River Indian Community, the Hopi Tribe, the Salt River Pima-Maricopa Indian Community, the Tohono O’odham Nation, the Yavapai-Apache Tribe, and the Yavapai-Prescott Indian Tribe.
As noted in Table 4-47 that begins on page 4-145 of the Final Environmental Impact Statement, the Gila River Indian Community was consulted in 2003 with subsequent contact in 2005, 2006, 2007, 2008, 2010, 2011, 2012, and 2013. This supports an early and continued consultation with the Gila River Indian Community related to resources of importance.

In 2005, the Federal Highway Administration and Arizona Department of Transportation consulted with all Native American tribes in Arizona to ensure all interested Native American were included in the process and had the opportunity to communicate their concerns. These tribes were the Ak-Chin Indian Community, the Chemehuevi Tribe, the Cocopah Tribe, the Colorado River Indian Tribe, the Fort McDowell Yavapai Nation, the Fort Mojave Tribe, the Fort Yuma-Quechan Tribe, the Gila River Indian Community, the Havasupai Tribe, the Hopi Tribe, the Hualapai Tribe, the Kaibab-Paunsa Tribe, the Navajo Nation, the Pascua Yaqui Tribe, the Pueblo of Zuni, the Salt River Pima-Maricopa Indian Community, the San Carlos Apache Tribe, the San Juan Southern Paiute, the Tohono O’odham Nation, the Tonto Apache Tribe, the White Mountain Apache Tribe, and the Yavapai-Prescott Indian Tribe. Most of these tribes did not express an interest in the proposed project.

Consultation with Native America tribes has been extensive and demonstrates a reasonable and good faith effort to include all interested Native American tribes in the process to take their concerns seriously in the planning effort.

Creating a truck bypass is not a goal of the proposed action. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 of the Final Environmental Impact Statement).

(Response 9 continues on next page)
Trucks crossing from Mexico to Arizona are restricted to the commercial zones within 25 miles of the border. The Federal Motor Carrier Safety Administration is administering a United States-Mexico cross-border, long-haul trucking pilot program. The program tests and demonstrates the ability of Mexico-based motor carriers to operate safely in the United States beyond the municipalities and commercial zones along the United States-Mexico border (see <fmcsa.dot.gov/intl-programs/trucking/trucking-program.aspx>).

Petróleos Mexicanos (better known as Pemex), the Mexican state-owned petroleum company that serves all of Mexico, provides 15 parts per million in its sulfur diesel fuel in the border region, which is consistent with the U.S. Environmental Protection Agency requirements for American diesel fuel (see <http://transportpolicy.net/index.php?title=Mexico:_Fuels:_Diesel_and_Gasoline>).

Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The South Mountain Freeway would operate under the same rules as other similar facilities in the state; truck traffic would be permissible (see text box on Final Environmental Impact Statement page 4-157).

The CANAMEX and Phoenix truck bypass (Interstate 8/State Route 85) routes are not mandatory for truck traffic; they are recommended. The Arizona Department of Transportation does not enforce these routes. It is not anticipated that these routes would be enforced as mandatory in the future.

The air quality analyses included projected truck traffic. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. Because Mexican trucks are currently restricted to the border region, they are not operating in the project Study Area and they were not included in the air quality analyses.
Under the Clean Air Act, the U.S. Environmental Protection Agency is responsible for establishing National Ambient Air Quality Standards to protect public health and the environment from adverse effects of air pollutants. Health effects from air pollutants are based on the concentration of the pollutants and the duration of exposure. Concentrations vary with distance from a roadway based on many factors, including background (or ambient) levels of pollution from all sources; the number, speed, and type of vehicles on the roadway; wind speed and direction; topography; and other factors. For the proposed freeway, the Federal Highway Administration conducted modeling for carbon monoxide and particulate matter (PM10) using worst-case (most congested or highest traffic) modeling locations at discrete receptor locations around each analysis location (primarily residences near the interchanges). The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

Mobile source air toxics can also have adverse health impacts, but the U.S. Environmental Protection Agency has not established National Ambient Air Quality Standards for these pollutants. As a result, the Federal Highway Administration analyzes these pollutants using emissions analyses. The mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions.

Many studies have investigated the prevalence of adverse health effects in the near-road environment. Given concerns about the possibility of air pollution exposure in the near-road environment, the Health Effects Institute has dedicated a number of research efforts toward investigating this issue. In November 2007, the Health Effects Institute published Special Report #16: Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects. This report concluded that the cancer health effects attributable to mobile sources are difficult to discern because the majority of quantitative assessments are derived from occupational cohorts with high concentration exposures and because some cancer potency estimates are derived from animal models. In January 2010, the Health Effects Institute released Special Report #17, investigating the health effects of traffic-related air pollution. The goal of the research was to synthesize available information on the effects of traffic on health. Researchers looked at linkages between: 1) traffic emissions (at the tailpipe) with ambient air pollution in general, 2) concentrations of ambient pollutants with human exposure to pollutants from traffic, 3) exposure to pollutants from traffic with human-health effects and toxicological data, and 4) toxicological data with epidemiological associations. Overall, researchers felt that there was “sufficient” evidence for causality for the exacerbation of asthma. Evidence was “suggestive but not sufficient” for health outcomes such as cardiovascular mortality and others. Study authors also noted that past epidemiological studies may not provide an appropriate assessment.
of future health associations because vehicle emissions are decreasing over time. Finally, in 2011 three studies were published by the Health Effects Institute evaluating the potential for mobile source air toxics “hot spots.” In general, the authors confirmed that while highways are a source of air toxics, they were unable to find that highways were the only source of these pollutants. They determined that near-road exposures were often no different or no higher than background (or ambient) levels of exposure and, hence, no true hot spots were identified. These reports are available from the Health Effects Institute’s Web site at <healtheffects.org>. The Federal Highway Administration and U.S. Environmental Protection Agency provide financial support to the Health Effects Institute’s research work.

Another source of information is the U.S. Environmental Protection Agency’s recently released report on Children’s Health and the Environment:

The level of knowledge regarding the relationship between environmental exposures and health outcomes varies widely among the topics [presented in this report], and the inclusion of an indicator in the report does not necessarily imply a known relationship between environmental exposure and children’s health effects. The report provides data for selected children’s health conditions that warrant further research because the causes, including possible contributing environmental factors, are complex and not well understood at this point.

In the case of asthma, researchers do not fully understand why children develop the condition. However, substantial evidence shows exposure to certain air pollutants, including particulate matter and ozone, can trigger symptoms in children who already have asthma. Although the report found the percentage of children reported to currently have asthma increased from 8.7 percent in 2001 to 9.4 percent in 2010 and that minority populations are particularly affected by asthma, the severity of children’s asthma and respiratory symptoms has declined. The rate of emergency room visits for asthma decreased from 114 visits per 10,000 children in 1996 to 103 visits per 10,000 children in 2008. Between 1996 and 2008, hospitalizations for asthma and for all other respiratory causes decreased from 90 hospitalizations per 10,000 children to 56 hospitalizations per 10,000 children.

The report also looks at trends in other health conditions, such as Attention-Deficit/Hyperactivity Disorder (ADHD) and preterm births, for which rates have increased. There is no conclusive information on the role of environmental contaminants in ADHD or preterm births, and additional research is ongoing.

Finally, the Federal Highway Administration notes that while the incidence of some health effects (such as asthma, autism, and attention deficit/hyperactivity disorder) in the U.S. population appear to have been increasing, motor vehicle emissions have declined. This decline in mobile source air toxics emissions is documented in Figure 4-24 of the Final Environmental Impact Statement and for other pollutants at <epa.gov/ttn/chief/trends/>. This negative correlation between emissions trends and health effects trends illustrates the complexity of the issues.

Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration’s mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining current conditions in the affected environment (to the extent that the monitoring...
data are current), they don’t tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed. The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxic emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.

Maps of the W59 and E1 (Preferred) Alternatives were provided at the public hearing and community forums and are available for viewing and downloading through the project Web site (see azdot.gov/southmountainfreeway).

None of the action alternatives would be located on Gila River Indian Community land so there would be 0 homes destroyed by the path of the proposed project. The impacts on traditional cultural properties are described in the Cultural Resources section beginning on pages 4-131 and 4-142 of the Draft and Final Environmental Impact Statements, respectively, and in Chapter 5, Section 4(f) Evaluation, beginning on page 5-26 of the Draft and Final Environmental Impact Statements. The locations of sites of cultural importance are not shown in public documents to protect the sites from potential pilfering.

Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in ongoing, open consultation with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

(Continued on next page)
Agency scoping comments from the project initiation in 2001 are presented beginning on page 6-3 of the Draft and Final Environmental Impact Statements. The Gila River Indian Community was part of the agency scoping process. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer. In addition to Chapter 2 of the Final Environmental Impact Statement which explains the Gila River Indian Community outreach undertaken for the project, Chapter 6 of the Final Environmental Impact Statement further describes Gila River Indian Community and general outreach throughout the process. The Gila River Indian Community was provided equal opportunities to participate in the project as all other populations and agencies. This outreach was undertaken, in part, to ensure all populations had equal access to the process and, in part, to ensure disparate nor disproportionately high adverse impacts would result from the construction and operation of the proposed action.

13 Cultural Resources

The Gila River Indian Community has been involved in many aspects of this proposed project. The Gila River Indian Community’s Cultural Resource Management Program was contracted to provide cultural resources surveys, to determine the eligibility of cultural resources sites (including traditional cultural properties) for listing in the National Register of Historic Places, and to assist in the development of measures to minimize harm to traditional cultural properties. The Gila River Indian Community’s Tribal Historic Preservation Office has also been involved in determining the eligibility of cultural resources sites (including traditional cultural properties) for listing in the National Register of Historic Places, and in assisting in the development of measures to minimize harm to traditional cultural properties.

After determining that no prudent and feasible alternatives existed to avoid the South Mountains Traditional Cultural Property, efforts were undertaken to minimize harm. These measures are documented, beginning on page 5-27 of the Draft and Final Environmental Impact Statements. Some of these measures included avoidance of specific sites and providing multiuse crossings and fencing that would limit access by freeway users, but allow Gila River Indian Community members to continue to gain access to the site.

In addition, the Federal Highway Administration and Arizona Department of Transportation committed to provide funds for the Gila River Indian Community to conduct a full evaluation of the South Mountains Traditional Cultural Property (see page 4-159 of the Final Environmental Impact Statement). Documentation of these efforts are in a letter from the Lieutenant Governor of the Gila River Indian Community to the Administrator, Arizona Division, Federal Highway Administration, dated June 23, 2010 (see page A372 of Appendix 2-1 of the Final Environmental Impact Statement). In this letter, the Gila River Indian Community submitted a proposal for the “Evaluation of Traditional Cultural Property and
In committing to the evaluation of the South Mountains Traditional Cultural Property, the Federal Highway Administration and Arizona Department of Transportation also committed to the Gila River Indian Community’s participation in ongoing engineering design refinements and acknowledged the significance of all plants and animals in the traditional culture of the Akimel O’odham and Pee Posh of the Gila River Indian Community.

The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and considered fully the substantive input and comments that were received. While efforts to study project alternatives on Gila River Indian Community land that did not directly impact South Mountain were attempted, as noted on page 2-8 of the Draft and Final Environmental Impact Statements, a coordinated referendum occurred in February 2012, and Gila River Indian Community members voted in favor of the no-build option. Therefore, the on-Gila River Indian Community alignment was eliminated from further study. Any alternative on Gila River Indian Community land must consider tribal sovereignty.

Tribal sovereignty is based in the inherent authority of Native American tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their lands. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process.

However, mitigation measures developed through consultation and coordination with the Tribal Historic Preservation Office and other concerned parties would be considered for implementation in any final action.

### Cultural Resources

The eligibility recommendations to the National Register of Historic Places for cultural resources within the Study Area begin on page 4-141 of the Final Environmental Impact Statement. According to page 5-26 of the Final Environmental Impact Statement, the South Mountains Traditional Cultural Property boundary is currently undefined; however, as noted on page 5-27, the Arizona Department of Transportation and Federal Highway Administration would provide funds for the Gila River Indian Community to conduct an evaluation of the South Mountains Traditional Cultural Properties to determine those boundaries as a measure to minimize harm to the South Mountains Traditional Cultural Properties.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Thus disclosure of effects and consultation are the outcomes of the Act. Protection of these resources is provided by Section 4(f) of the Department of Transportation Act of 1966 (as amended). The Final Environmental Impact Statement, beginning on page 5-1, describes the protections provided by Section 4(f).

Section 4(f) states that the use of resources afforded protection under Section 4(f).
### Code Issue Response

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<td>14</td>
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<td>requires a determination that there is no prudent and feasible alternative to using that land, and that the project includes all possible planning to minimize harm to the resource resulting from the use. The outcome of this process was the determination that there was no prudent and feasible alternative to the E1 Alternative. This conclusion was supported by the U.S. Department of the Interior in their comment on the Draft Environmental Impact Statement: comment: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement. Measures to minimize harm to the South Mountains Traditional Cultural Property (and traditional cultural properties that contribute to the South Mountains Traditional Cultural Property) were developed in consultation with the Gila River Indian Community (and other tribes with interest). During the design phase, the Arizona Department of Transportation would consult directly with the Gila River Indian Community to identify and implement other design measures, when feasible, to further reduce land requirements needed for the proposed action. (See Final Environmental Impact Statement page 5-27 for the discussion on measures to minimize harm.)</td>
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<td>15</td>
<td>Cultural Resources</td>
<td>The complete statement on page 5-26 of the Draft Environmental Impact Statement, states, “A right-of-way fence would limit access to the site by freeway users, but Community members would continue to gain access to the site as they currently do.” As described in the Draft and Final Environmental Impact Statements, the Tribal Historic Preservation Office of the Gila River Indian Community concurred with the mitigation measures recommended for implementation in connection with the E1 Alternative. To the extent there is disagreement by individual tribal members, their comments have been considered and taken into account. However, the United Nations Declaration on the Rights of Indigenous Peoples Declaration does not create an enforceable legal standard amending the National Environmental Policy Act process.</td>
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<td>16</td>
<td>Cultural Resources</td>
<td>The comment that eight traditional cultural properties would be indirectly affected is incorrect. Adverse effects to the South Mountains Traditional Cultural Property and one site that is contributing to the South Mountains Traditional Cultural Property (AZ T:12:197) would occur with the construction of the E1 Alternative. No extant petroglyph sites would be adversely affected. The trail sites were determined eligible for listing in the National Register of Historic Places listing under Criterion D as archaeological sites; therefore, as noted on page 5-2 of the Final Environmental Impact Statement, generally, cultural resources eligible for listing in the National Register of Historic Places under Criterion D are not eligible for protection under Section 4(f). Through consultation and coordination, the Gila River Indian Community Tribal Historic Preservation Office, the Arizona State Historic Preservation Office, and many other tribal authorities concurred with these recommendations (see Table 4-47 on page 4-145 of the Final Environmental Impact Statement for more details on tribal concurrences). To the extent there is disagreement by individual tribal members, their comments have been considered and taken into account. However, the United Nations Declaration on the Rights of Indigenous Peoples Declaration does not create an enforceable legal standard amending the National Environmental Policy Act process.</td>
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<td>17</td>
<td>Cultural Resources</td>
<td>As documented in Table 4-47 on page 4-145 of the Final Environmental Impact Statement, the Gila River Indian Community concurred with the National Register of Historic Places eligibility of traditional cultural places and the adequacy of the draft traditional cultural places mitigation plans on July 3, 2012. Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed. As noted in Table 4-47 that begins on page 4-145 of the Final Environmental Impact Statement, the Gila River Indian Community was initially consulted in 2003 with subsequent contact in 2005, 2006, 2007, 2008, 2010, 2011, 2012, and 2013. This supports an early and continued consultation with the Gila River Indian Community related to resources of importance.</td>
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<td>18</td>
<td>Cultural Resources</td>
<td>The Arizona Department of Transportation and Federal Highway Administration, in cooperation with the U.S. Army Corps of Engineers, the U.S. Bureau of Indian Affairs, and the Western Area Power Administration, prepared the Draft Environmental Impact Statement and Section 4(f) Evaluation in accordance with the National Environmental Policy Act of 1969 (42 United States Code § 4332(2) (c)), Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 United States Code § 303, as amended), and Section 404 of the Clean Water Act of 1977 (33 United States Code § 1251). The Draft Environmental Impact Statement and Section 4(f) Evaluation 1) satisfies Federal Highway Administration and Arizona Department of Transportation’s environmental analysis requirements; 2) provides a comparison of the social, economic, and environmental impacts that may result from implementation of the proposed action—construction and operation of a major transportation facility; and 3) identifies measures to avoid, reduce, or otherwise mitigate adverse impacts.</td>
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over, Ana Morago, if you're here we'll take you at
that time.

(Recessed from 12:00 p.m. until
12:28 p.m.)

THE FACILITATOR: Thank you.
Ana Morago.
If you'd like to speak and have not yet
registered, please go out to the front desk
registration.

Thank you. Amy Bratt.

MS. BRATT: Good afternoon. My name is
Amy Bratt, and I'm with the Greater Phoenix Chamber
of Commerce. The Chamber support of this freeway
goes back over 25 years to the first time the voters
approved the transportation funds to build it. For
us, this is a no-brainer. The project is an
opportunity to bolster this low economic recovery
efforts that have occurred to date in our region.
The 35,000 jobs created during the five- to six-year
construction period, and the $2 billion investment in
land, professional services, materials, and equipment
will be a significant boost to our economy. Putting
people to work and moving goods and services are the
key elements of commerce.

To the end -- or to that end, on behalf

Comment noted.
of our 2,600 members, the greater Phoenix Chamber of Commerce agrees it is time to build the South Mountain Freeway. We support investments in transportation projects that will improve mobility and contribute to economic development, environmental quality and jobs. We need the jobs, and we want the investment.

It’s time to relieve the congestion in the southern portion of our metropolitan region, and allow for free movement of people and commerce. As we supported it 25 years ago, we support it again today. Thank you so much for the opportunity to provide comment.

THE FACILITATOR: Thank you, Kate Gallego.

MS. GALLEGO: Hello, I’m Kate Gallego, South Mountain resident. Former chair of the Environmental Quality Commission in Phoenix, and I’m here in support of the freeway. I think it will relieve congestion and stop some of the cut-through traffic. It will bring important economic development to Laveen and job creation, creating over 30,000 jobs.

It’s an important part of our transportation network. It needs to be part of a...
1 respectfully to each other.

THE FACILITATOR: Thank you.


MR. PEREZ: I'm Joseph Perez. Thank you for allowing me the opportunity to make a comment to you about your Draft Environmental Impact Statement. I am a Gila River Indian Community member. I'm also a partner with Pangia [phonetic] and I lead a little bit over 1,200 landowners who exist in the Pecos Road Land Area that have put forward the initiative with the Gila River Indian Community for a revote to try to bring the alignment down on the reservation, which hopefully will be resolved tomorrow in a special council meeting.

I'm here today to comment on the draft EIS in the sense that the work that has been done pertaining to the Gila River Indian Community, and the cultural aspects was done through the community's cultural department. And they've worked closely and for a long time, I believe over 12 years, doing that aspect of the EIS. Unfortunately, where it stands right now, there is no other alternative for the freeway, because the only other alternative would be on the Gila River Indian Community. I believe that will have to be resolved with the people of the
community or in tribal council. My main focus today is that the impact that the freeway would have is across the board. I believe your statement covers that. I believe your study covers that. What I would like to comment about is that we believe there will be other opportunities -- another opportunity for another alignment. We hope that that is taken into consideration when that opportunity comes.

In terms of my culture, that is across the board. You're talking about Native Americans, Pimas, O'odhams, Pee Posh, Maricopas that live within the community. They all call themselves community members. We've all been raised differently. We all see the world through the way that our grandparents should have raised us. I'm considered an O'odham. I consider what we have doesn't end at our border. The no-build that many people will talk about, hamda [phonetic], and say that that is what they're trying to protect. What I want you to understand in terms of the cultural aspects of your Draft Environmental Impact Statement is that hamda [phonetic] doesn't stop at the border; it doesn't stop at the border of the Gila River Indian Community; it doesn't stop with us community members, it transcends everything that...
our world encompasses; it transcends everything that
we do.

And so with that in mind, I, as a
community member, apologize for the disrespect that
you get, for the disrespect that ADOT gets in
everything. We should not be that way. We should
practice a better way to be with you.

And that’s what I want to thank you about
for today. Thank you.

THF FACILITATOR: Thank you, Terry
Morris.

MR. MORRIS: Hello, I’m Terry Morris.

I’m a fourth-generation Arizonan, and listening to
Mr. Perez just now changed my train of thought a
little bit. I had -- my main concern about this
project is the -- I believe the lack of attention to
the Indian communities in the Maricopa County, as
evidenced by the lack of posters in the other room.
There’s a lot of information over there in the other
room, but not very much that I can see that pertain
to the impact on the Native American communities.

I’m also very concerned about the
threatened and endangered wildlife that can be
affected. I am an avid hiker, and there are not very
many preserve hikes left, where you’re not in the
Since 2004 Pangea a development company has been organizing over 1,200 individual land owners on the Gila River Indian Community (GRIC), this land is owned by these individual Native Americans and not under the regulatory control of the GRIC government.

Pangea is in the final stages of leasing approximately 5,500 acres of this land just south of Pecos road. This land is scheduled to be developed as a fully master planned community, which will include residential, commercial, retail, manufacturing, sports facilities, amusement park and entertainment venues.

The Loop 202 is a catalyst for this development and the current alignment on Pecos road is acceptable for Pangea and the over 1,200 individual land owners but an alignment that is on the GRIC and on the allotted land would benefit all parties and would save South Mountain from any destruction as well as substantially reduce the overall cost of building the Loop 202 (not have to cut through South Mountain).

Our review of the Draft Environmental Impact Statement (DEIS) has determined that the research conducted and current recommendation is satisfactory from a development perspective for Pangea and the landowners. Pangea and the landowners encourage and support ADOT and the Maricopa Association of Governments (MAG) to build the South Mountain Loop 202 freeway as quickly as possible for the many reasons identified with the DEIS.

In addition to supporting the building of the South Mountain Loop 202, the landowners and Pangea request that ADOT and MAG investigate and further study a schedule for construction which would start at the junction of the San Tan Freeway and Interstate-10 or the east end of the E-1 Alternative alignment as opposed to the W59 Alternative or west side of Phoenix at Interstate-10.

This schedule of construction would directly benefit the landowners, Pangea, the citizens of Ahwatukee, Maricopa County and the State of Arizona in the following ways:

1. Immediate and much needed economic development to the GRIC and directly to the landowners.
2. Directly reduce the over 60% unemployment rate of GRIC members.
3. Directly reduce the over 65% of GRIC members that live under the poverty level of the State of Arizona by providing jobs and revenue from their land leases with Pangea.
4. Provide residential opportunity for over 8,000 GRIC members that currently live within the greater Phoenix Metro area and can not obtain housing on the GRIC.
5. Provide direct business development opportunity for GRIC members within the Pangea development.
6. Provide immediate short-term (6 months) and long-term (20 years) construction business

As noted in the Draft and Final Environmental Impact Statements, construction sequencing and duration could change based on several factors, including funding availability, traffic volumes, coordination with other major freeway projects, earthwork balancing, utility relocation schedules, and regional priorities. The project team will take the request under advisement.
and job opportunity for non-Native companies within the greater Phoenix Metro area.

7. Provide a new business and job opportunity base that would directly support the Ahwatukee area and provide much needed positive benefits of the Loop 202 directly to Ahwatukee.

8. Provide an new, immediate and long term tax based for the State of Arizona and Maricopa County that is estimated to provide $21,000,000 of retail transaction and privilege tax over the next 10 years due to the Pangea development.

9. As there are no master planned communities greater than 500 acres scheduled for the Laveen area or along W59 Alternative alignment, the Pangea development has already started and construction of the Loop 202 on the east side would immediately and directly benefit the GRIC, Maricopa County and the State.

10. The positive public relations benefits of starting construction on the east end far outweigh any positive benefits of starting on the west end.

Pangea and the landowners once again ask that a revision of the DEIS be conducted to study the direct impacts of construction starting on the east of the E-1 Alternative and the benefits for all parties involved.

Pangea will continue to support the landowners in their on-going public voter Initiative on the GRIC, as the current status of the Initiative is not ended. The current actions of the GRIC Tribal Elections Office is not supported by evidence gathered by the police department, as the investigation provided evidence of only 21 signatures that could be invalidated, not the 174 the Tribal Elections Office removed from the Initiative.

Pangea and the landowners also request that the DEIS be revised to include the study data for an alignment on the GRIC for the following reasons:

1. GRIC Resolution GR-80-98, adopted on June 17, 1998 by Tribal Council resolved that the Gila River Borderlands area (Regional Planning Study for the Gila River Borderlands Planning area/ Gila River Borderlands Study) be considered the land use plan for the Gila Borderlands area.

2. This Resolution stands to this day and has never been rescinded by any action from the GRIC Tribal Council and is not rescinded or affected by the referendum vote of February 2012 for "No Build".

3. The Resolution approved the GRIC Loop 202 alignment identified within the study document as the land use plan for transportation for the freeway system on the GRIC.

4. The Resolution identifies over 60 meetings were held within the seven Districts, with Elderly, Community Council Standing Committees, Corporations, Departments and other Community Entities and the Community's Planning and Zoning Commission publicized and conducted public hearings on the Gila Borderlands Study.

5. The Resolution identifies that the Economic Development and Natural Resources Standing Committees reviewed the Gila Borderland Study and approved if for action by Tribal Council.

6. The Resolution identifies that the Community Council also reviewed the Gila Borderlands

2 Alternatives

In accordance with 40 Code of Federal Regulations § 1502.14, the Arizona Department of Transportation and Federal Highway Administration explored and evaluated all reasonable alternatives. Page 2-10 of the Final Environmental Impact Statement discusses the path forward should alternatives on Gila River Indian Community land become available for study. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based in the inherent authority of Native American tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their lands. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefits through an eminent domain process.
Study and approved it as the land use plan for the Community.

7. The referendum conducted in February 2012 and approved by voters did not eliminate the land use plan and Loop 202 on Reservation alignment.

It is only prudent and within the best interest of the GRIC, Community members, Pecos road landowners, the residences of Ahwatukee, Maricopa County and the State of Arizona to include this data as the information should be available for the public to view and tax dollars of the public was used to gather this data. More importantly, this data would greatly assist members of the GRIC in understanding more about the freeway and the impact it would have on the Community.

Pangea hopes that the above request be implemented in the final draft of the EIS as this project is vital for all parties involved.

Thank you.

Joseph M. Perez, Partner

Pangea
I want to go hike in a park where there's a huge eight-lane freeway cut through the southwest region. So Save Our Mountains Foundation would like to encourage you, and whoever in the state needs to make this happen, to negotiate better with the Gila River Indian community and the Indian community at large, and we hope that they will also come to the table to talk, and that we can make a freeway happen where it doesn't chop into the preserve and part of what forms a crown and glory for the City of Phoenix. We don't have oceans, we don't have beaches, but we do have a beautiful preserve system.

Thank you very, very much.

THE FACILITATOR: Thank you, Ms. Rothwell.

Michael Goodman.

MR. GOODMAN: Thank you. I'm Michael Goodman. I'm also with the Phoenix Mountains Preservation Council, and I am a member of the ADOT Citizens Advisory Team. Pretty much I agree with what has already been said, so I'll be pretty brief. I did finish reading the EIS, and with regards to the E-1 section, I was highly disappointed. I know during the so-called 12 years we've been studying this, we had a number of reports, I guess the E-1 was...
1 probably about, what, four or five years of that time
2 period. And I found that with almost every report,
3 somebody who understood what was going on had a
4 question for the consultants to explain something or
5 other that they seemed to have left out or just
6 didn't want to talk about.
7 And it was -- it got to be very
8 frustrating, we never were quite able to get all the
9 answers we wanted. And the saying from the
10 consultants kept being, well, wait until the draft.
11 Well, the draft's out and I've read it and still many
12 of the questions that people ask simply weren't
13 answered or we were -- or I notice that there's
14 things that had been mentioned that there's outdated
15 information. There was just a lack of information or
16 it just seemed that anything that didn't support what
17 ADOT and MAG wanted, which is to blow up South
18 Mountain, somehow got left out of the draft.
19 And for that reason, I am opposed to the
20 freeway if it has to go through South Mountain
21 Preserve.
22 Thank you.
23 THE FACILITATOR: Thank you, Mr. Goodman.
24 John Mockus. Did I pronounce that right,
25 sir?
The comment suggests that the environmental impact statement process was biased by a history of property acquisitions within the Study Area. More specifically, properties falling within the limits of the Preferred Alternative, as identified in the Final Environmental Impact Statement, were targeted for acquisition. As noted in text on page 3-54 of the Final Environmental Impact Statement, the Arizona Department of Transportation began acquiring land for the original alignment in 1988. Between 1988 and 2001, the Arizona Department of Transportation acquired approximately 293 acres. Most of this land (258 acres) is located in the Eastern Section along Pecos Road. In 2006, the Arizona Department of Transportation began protective and hardship land acquisition in the alignment right-of-way footprint for the W59 and E1 Alternatives. Between 2006 and October 2013, the Arizona Department of Transportation purchased 326 acres (303 in the Western Section and 23 in the Eastern Section). The process for hardship and advanced acquisitions is explained in text on page 4-50 of the Final Environmental Impact Statement. The comment infers that by taking such action, the objective equal consideration of the alternatives studied in detail in the Draft and Final Environmental Impact Statements is tainted. Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process is not unprecedented and is common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the proposed action are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative were to be ultimately selected, the agency would likely have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the driving public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative.

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My name is Maxine Lakin, past Parks and Recreation Chairman as well as past Chairman of the Phoenix Mountains Preservation Council.

The Phoenix Mountains Preservation Council is an organization put into place by Arizona visionaries, and for the last 40 years has continued to monitor and anticipate the impact that rapid population growth would have on our precious Mountain Preserve system.

PMPC is steadfastly opposed to any alignment of the Loop 202 South Mountain Freeway that allows for trespass onto the Mountain Preserve or for any excavation into the South Mountain what so ever. The Mountain preserves are unique and are for people and wildlife, not for vehicle trespass. PMPC does not agree with many of the DEIS assumptions, finding them objectionable and deficient in the following areas.

Unacceptable Pre-Decisional Actions: ADOT has made some pre-decisional actions with the purchase of property before the Draft Environmental Impact Statement (DEIS) was released. PMPC questions the legality of this action and the entire DEIS when it appears ADOT has already made considerable financial investment to establish the alignment for the South Mountain Freeway rather than follow the prescribed process.

Dismal Wildlife Connectivity: The DEIS does not meet the minimal requirements for coordination and analysis of wildlife resources. The consultation with the Arizona Game and Fish Department confirmed in 2009 that the current connection to the Estrella mountains allows for passage of mule deer, javelina, bobcat and mountain lion. The mountain ridge area slated for demolition meets the definition of the...
Sonoran desert tortoise habitat. There is no evidence of further efforts to ascertain wildlife connectivity or habitat needs. Unreasonable Taking of Mountain Preservation Lands: The DEIS states in Figure 5-7 of Public Parkland that the avoidance of taking over 30 acres of the Preserve is not “prudent and feasible”. The taking of this mountainside will destroy important archeological, spiritual, cultural and recreational sites with no realistic or reasonable mitigation possible in the study. The study also failed to recognize and address new two trails on the southwest end of the Preserve.

Outdated Data Projections Used: The DEIS is based on outdated data projections that are now six to eight years old. In all their studies, the DEIS provides NO alternative analysis to the demolition of the southwest ridges of South Mountain.

Over 3 million visitors come to South Mountain Park/Preserve annually, according to the City of Phoenix statistics. Destroying any part of the mountain to align a high-capacity freeway will only have a negative impact on tourism and the many unique resources the park offers.

We urge ADOT to stop providing studies that do not accurately or thoroughly address the impact this freeway has on South Mountain. It’s time to stop the 20 million dollar and more in wasted taxpayer’s money to study the environmental impact and design for an alignment that no longer makes sense.

**Connectivity for smaller species:** Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the Freeway (see Mitigation, beginning on page 4-138 of the Final Environmental Impact Statement).

**Section 4(f) and Section 6(f)** Chapter 5 of the Draft and Final Environmental Impact Statements presents the Section 4(f) Evaluation for the South Mountains in terms of the resource’s protection as a Section 4(f) resource in terms of a regional park, historic property and traditional cultural property. The evaluation included examination of feasible and prudent avoidance alternatives which concluded no such alternatives were available to the direct use of the resource.

A review from the U.S. Department of the Interior on the Draft Environmental Impact Statement concluded “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.

South Mountain’s newest trails are the Bursera and Pyramid Trails (see Final Environmental Impact Statement page 5-8). The E1 Alternative is approximately 1 mile south of the Pyramid Trail and even farther from the Bursera Trail; thus, it would not affect either trail. The trails have walk-in access from Chandler Boulevard and 19th Avenue, with on-street parking. This walk-in access would be north of and adjacent to the planned extension of Chandler Boulevard and, thus, would not be directly affected. The walk-in access point and the part of the Pyramid Trail at the access point are located adjacent to a residential neighborhood and the City of Phoenix’s planned Chandler Boulevard Extension. These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise- or viewshed-sensitive activities. All proposed action alternatives would span existing and proposed trails to avoid impacts. However, during construction for the freeway alternative were selected, trails that would be spanned or would be near potential freeway construction would be closed for limited times for safety reasons. Closures would necessitate that trail users detour around construction sites to rejoin the trails farther along their length. According to Phoenix South Mountain Park/Preserve rangers, the Gila Trail—although well-defined—is not a designated trail within the park. That said, the Gila Trail would not be affected by the proposed freeway or by the Chandler Boulevard Extension. The Final Environmental Impact Statement Appendix page A665 contains information directly from the Phoenix General Plan and early coordination with the City of Phoenix Parks Department. The trails in the preserve are exceptions to this statement and were always meant as such. The trails within 1/4 mile of the proposed alternatives were treated separately, as in the case of the Maricopa County Regional Trails System. Should an alternative be selected, the Arizona Department of Transportation and Federal Highway Administration would work closely with the City of Phoenix during final design to ensure the connectivity of the trails is maintained, whether they are eligible as Section 4(f) resources or not.
The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

Several action alternatives were subject to the alternatives development and screening process; not just the E1 Alternative and alternatives located on the Gila River Indian Community (Figure 3-6 on page 3-10 of the Draft Environmental Impact Statement illustrates a representation of such alternatives). Ultimately the other alternatives were eliminated from further study in the screening process and the Gila River Indian Community decided not to give permission to study alternatives on their land (see Final Environmental Impact Statement page 3-25). Therefore, the Arizona Department of Transportation, with concurrence from Federal Highway Administration, identified the E1 Alternative as the eastern section of the Preferred Alternative (which includes the W59 Alternative in the Western Section of the Study Area). In reaching its determination, the Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.

City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the South Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see Final Environmental Impact Statement page 5-14). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The portion of the park that would be used for the proposed freeway would be 31.3 acres, or approximately 0.2 percent of the park’s approximately 16,600 acres (see Final Environmental Impact Statement pages 5-39 and 5-31). The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23).
MS. LAKIN: Thank you.

THE FACILITATOR: Begin, please.

MS. LAKIN: Wait until I -- I'm not used to these, you know.

My name is Maxine Lakin; I'm past president of the Parks and Recreation, also of the Phoenix Mountain Preservation Council. The Phoenix Mountain Preservation Council is an organization put into place by Arizona visionaries and for the last 40 years has continued to monitor and anticipate the impact that the rapid population growth would have on our precious mountain preserve system.

PMPC is steadfastly opposed to any alignment of the Loop 202 South Mountain Freeway that allows for trespassing onto the mountain preserve or for any excavation into the South Mountain whatsoever. The mountain preserves are unique, and are for people in wildlife, not for vehicle trespass. PMPC does not agree with many of the DEIS assumptions, finding them objectionable and deficient in the following areas: unacceptable, pre-decision action. ADOT has made some pre-decisional actions with the purchase of property before the Draft Environmental Impact Statement was released. PMPC questions the legality of this action.

The comment suggests the environmental impact statement process was biased by a history of property acquisitions within the Study Area. More specifically, properties falling within the limits of the Preferred Alternative, as identified in the Final Environmental Impact Statement, were targeted for acquisition.

As noted in text on page 3-54 of the Final Environmental Impact Statement, the Arizona Department of Transportation began acquiring land for the original alignment in 1988. Between 1988 and 2001, the Arizona Department of Transportation acquired approximately 293 acres. Most of this land (258 acres) is located in the Eastern Section along Pecos Road. In 2006, the Arizona Department of Transportation began protective and hardship land acquisition in the alignment right-of-way footprint for the W59 and E1 Alternatives. Between 2006 and October 2013, the Arizona Department of Transportation purchased 326 acres (303 in the Western Section and 33 in the Eastern Section).

The process for hardship and advanced acquisitions is explained in text on page 4-50 of the Final Environmental Impact Statement.

The comment infers that by taking such action, the objective equal consideration of the alternatives studied in detail in the Draft and Final Environmental Impact Statements is tainted. Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process is not unprecedented and is common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the proposed action are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative were to be ultimately selected, the agency would likely have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the driving public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative.
The section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-136 of the Final Environmental Impact Statement, discloses by what means the proposed action and its alternatives would affect vegetation, wildlife, and wildlife habitat. A Biological Evaluation was submitted to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality that addressed threatened, endangered, and candidate species, including the Sonoran desert tortoise. The information used to prepare the analysis in the Draft Environmental Impact Statement (page 4-122) was based on 2011 information retrieved from the Arizona Game and Fish Department (Geopherus agassizi, draft unpublished abstract compiled and edited by the Heritage Data Management System, Phoenix). Current information on threats and connectivity strategies was included in the Biological Evaluation. The U.S. Fish and Wildlife Service concurred with the species determinations in the Biological Evaluation (see Appendix 1-1 of the Final Environmental Impact Statement).

Connectivity is planned to allow wildlife movement beneath the freeway in multiuse crossings (see page 4-137 of the Final Environmental Impact Statement). The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see Mitigation, beginning on page 4-138 of the Final Environmental Impact Statement).

South Mountain’s newest trails are the Bursera and Pyramid Trails (see Final Environmental Impact Statement page 5-8). The E1 Alternative is approximately 1 mile south of the Pyramid Trail and even farther from the Bursera Trail; thus, it would not affect either trail. The trails have walk-in access from Chandler Boulevard and 19th Avenue, with on-street parking. This walk-in access would be north of and adjacent to the planned extension of Chandler Boulevard and, thus, would not be directly affected. The walk-in access point and the part of the Pyramid Trail at the access point are located adjacent to a residential neighborhood and the City of Phoenix’s planned Chandler Boulevard Extension. These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise- or viewshed-sensitive activities. All proposed action alternatives would span
outdated data projections, used, based on 3 years old. In all the studies, the DEIS provides no alternative analysis to the demolition of the southwest ridge. Over 3 million visitors come to South Mountain Park Preserve annually.

MS. LAKIN: Destroying any part of the mountain to allaying a high-capacity freeway will only have a negative impact on tourism, and the many unique resources. We are not against this freeway, we are against going through South Mountain Preserve. Thank you.

THE FACILITATOR: Thank you, Ms. Lakin.

We’ll now proceed with the non-pre-registered folks.

One more comment before we continue. For those of you who see your name on the screen, if you’re in the back parts of the room, if you want to make your way up to get people to either microphone, that will help us through the day. Feel free to move up. At this point Suzanne Rothwell.

Thank you.

MS. ROTHWELL: Good morning. Thank you for the opportunity to speak. Is this working? No.

THE FACILITATOR: Good morning. Thank you.

Thank you.

At this point Suzanne Rothwell.

Thank you.

MS. ROTHWELL: Good morning. Thank you for the opportunity to speak. Is this working? No.
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5 Purpose and Need
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6 Alternatives
Several action alternatives were subject to the alternatives development and screening process; not just the E1 Alternative and alternatives located on the Gila River Indian Community (Figure 3-6 on page 3-10 of the Final Environmental Impact Statement illustrates a representation of such alternatives). Ultimately the other alternatives were eliminated from further study in the screening process and the Gila River Indian Community decided not to give permission to study alternatives on its land (see Final Environmental Impact Statement page 3-25). Therefore, the Arizona Department of Transportation, with concurrence from Federal Highway Administration, identified the E1 Alternative as the eastern section of the Preferred Alternative (which includes the W59 Alternative in the Western Section of the Study Area). In reaching its determination, the Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.
Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-157 of the Final Environmental Impact Statement).

The Arizona Department of Public Safety (which includes the State Highway Patrol) has primary responsibility for enforcing traffic laws. The Department of Public Safety also has primacy when calling in support for traffic accidents, including hazardous materials accidents (see text box on page 4-157 of the Final Environmental Impact Statement). The Arizona Department of Transportation maintains a list of contractors who provide emergency response services, as well as local municipalities whose fire and police departments operate in cooperation with the Department of Public Safety on incidents within their jurisdiction. Requirements for shippers are maintained by the Arizona Department of Transportation’s Enforcement Compliance Division.

In the event of an incident with a hazardous materials issue on a State or federal highway, the emergency responders contact the Arizona Department of Transportation’s Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation’s Safety and Risk Management group, who responds to the accident scene and assesses needs in concert with the Incident Commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation’s Safety and Risk Management group’s charge is primarily public health protection, with cleanup support being secondary.
The comment suggests the environmental impact statement process was biased by a history of property acquisitions within the Study Area. More specifically, properties falling within the limits of the Preferred Alternative, as identified in the Final Environmental Impact Statement, were targeted for acquisition. As noted in text on page 3-54 of the Final Environmental Impact Statement, the Arizona Department of Transportation began acquiring land for the original alignment in 1988. Between 1988 and 2001, the Arizona Department of Transportation acquired approximately 293 acres. Most of this land (258 acres) is located in the Eastern Section along Pecos Road. In 2006, the Arizona Department of Transportation began protective and hardship land acquisition in the alignment right-of-way footprint for the WS9 and E1 Alternatives. Between 2006 and October 2013, the Arizona Department of Transportation purchased 326 acres (303 in the Western Section and 23 in the Eastern Section).

The process for hardship and advanced acquisitions is explained in text on page 4-50 of the Final Environmental Impact Statement. The comment infers that by taking such action, the objective equal consideration of the alternatives studied in detail in the Draft and Final Environmental Impact Statements is tainted. Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process is not unprecedented and is common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the proposed action are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative were to be ultimately selected, the agency would likely have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the driving public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative.

The section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-136 of the Final Environmental Impact Statement, discusses why the proposed action and its alternatives would affect vegetation, wildlife, and wildlife habitat. A Biological Evaluation was submitted to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality that addressed threatened, endangered, and candidate species, including the Sonoran desert tortoise. The information used to prepare the analysis in the Draft Environmental Impact Statement (page 4-122) was based on 2011 information retrieved from the Arizona Game and Fish Department (Gopherus agassizii, draft unpublished abstract compiled and edited by the Heritage Data Management System, Phoenix). Current information on threats and connectivity strategies was included in the Biological Evaluation. The U.S. Fish and Wildlife Service concurred with the species determinations in the Biological Evaluation (see Appendix 1-1 of the Final Environmental Impact Statement).

Connectivity is planned to allow wildlife movement beneath the freeway in multisite crossings (see page 4-137 of the Final Environmental Impact Statement). The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see Mötzer, beginning on page 4-138 of the Final Environmental Impact Statement).
economic downturn had and it brings into question the validity of projected growth levels put forth in the DEIS. In all the alternative studies, the DEIS does not provide one alternative analysis to the demolition of the southwest ridges of South Mountain. Furthermore, nowhere in this study is there an assessment of hazardous material truck traffic nor any mention of managing this truck traffic and the consequences of a serious hazardous waste incident.

Over 3 million visitors come to South Mountain Park/Preserve annually, according to City of Phoenix statistics. Destroying any part of the mountain to align a high-capacity freeway will only have a negative impact on tourism and the many unique resources the park offers.

We urge ADOT to stop providing studies that do not accurately or thoroughly address the impact this freeway has on South Mountain. It’s time to stop the $20 million and more in wasted tax payer’s money to study the environmental impact and design for an alignment that no longer makes sense.

Barbara Bingham Deutscher
3704 East Ahwatukee Drive
Phoenix, AZ. 85044-3807
480-893-1033
Deut3704@aol.com

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Responses continue on next page
5 Purpose and Need
The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

6 Alternatives
Several action alternatives were subject to the alternatives development and screening process; not just the E1 Alternative and alternatives located on the Gila River Indian Community (Figure 3-6 on page 3-10 of the Final Environmental Impact Statement illustrates a representation of such alternatives). Ultimately the other alternatives were eliminated from further study in the screening process and the Gila River Indian Community decided not to give permission to study alternatives on its land (see Final Environmental Impact Statement page 3-25). Therefore, the Arizona Department of Transportation, with concurrence from Federal Highway Administration, identified the E1 Alternative as the eastern section of the Preferred Alternative (which includes the W39 Alternative in the Western Section of the Study Area). In reaching its determination, the Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.
Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on paged 4-166 of the Final Environmental Impact Statement).

The Arizona Department of Public Safety (which includes the State Highway Patrol) has primary responsibility for enforcing traffic laws. The Department of Public Safety also has primacy when calling in support for traffic accidents, including hazardous materials accidents (see text box on page 4-166 of the Final Environmental Impact Statement). The Arizona Department of Transportation maintains a list of contractors who provide emergency response services, as well as local municipalities whose fire and police departments operate in cooperation with the Department of Public Safety on incidents within their jurisdiction. Requirements for shippers are maintained by the Arizona Department of Transportation’s Enforcement Compliance Division.

In the event of an incident with a hazardous materials issue on a State or federal highway, the emergency responders contact the Arizona Department of Transportation’s Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation’s Safety and Risk Management group, who responds to the accident scene and assesses needs in concert with the Incident Commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation’s Safety and Risk Management group’s charge is primarily public health protection, with cleanup support being secondary.
Thank you,
Matthew Eberhart
Community Relations Officer
1655 W Jackson St. MD 126F
Phoenix, AZ 85007
602-712-2060
azdot.gov

From: Howard Shanker [mailto:howard@shankerlaw.net]
Sent: Friday, July 19, 2013 10:28 AM
To: [Projects]
Cc: Steve Brittle
Subject: Question Regarding: Filing written comments Re: Loop 202 S Mountain Freeway DEIS
Importance: High

We would like to file our comments on the Draft EIS for the SMF via hand delivery (on or before July 24). Can you please let me know where (and/or to whom) the comments should be delivered.

Thank you. I look forward to your prompt response.

Howard M. Shanker
The Shanker Law Firm, PLC
www.ShankerLaw.net

Offices
700 E. Baseline Rd., Bldg. B
Tempe, Arizona 85283
Phone: (480) 838-9300
Fax: (480) 838-9433

*Indian Law* *Environmental & Natural Resources* *Personal Injury* *Civil Litigation* *Adoption*

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(Comment codes begin on next page)
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Initial comments summarize the comments to follow. Responses to specific comments appear below.

VIA HAND-DELIVERY

Arizona Dept of Transportation
Environmental Planning Group
161 W. Jackson Street
Phoenix, Arizona 85007
Attn: Yvonne M. Gusca

Re: Comments on the Loop 202 South Mountain Freeway Draft Environmental Impact Statement ("DEIS")

Dear Ms. Gusca:

These comments on the DEIS, including this letter of transmittal and all of the reports/attachments hereto, are submitted by and on behalf of:

- Protecting Arizona Resources and Children, Inc. (PARC)
- The Foothills Community Association
- The Foothills Club West Community Association
- The Lakewood Community Association
- The Catalina Community Association
- Don't Waste Arizona, Inc. (DWAZ)
- Gila River Alliance for a Clean Environment (GRACE)
- Gila River Environmental Youth (GREY)
- Patricia Lawin; Timothy Lack; Chad Blinstone;
- Michael Hinz; Chris Boettcher
- Phoenix Mountains Preservation Council (PMPC)

Commenters can be reached through counsel:

Howard M. Shanker
The Shanker Law Firm, PLC
700 E.Baseline Rd., Bldg. B
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(480) 838-9300

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Howard M. Shanker
Arizona A. Committee in Law
201 East Birch Avenue, Suite 10
Flagstaff, Arizona 86001-5254

TENDER OFFICE | 700 East Baseline Road, Bldg. B | Tempe, Arizona 85283-1296 | (480) 838-9300
FLAGSTAFF | 201 East Birch Avenue, Suite 10 | Flagstaff, Arizona 86001-5254
Comment Response Appendix - B313

2 Environmental Impact Statement Process

The Arizona Department of Transportation, the project sponsor, working in close consultation with the Federal Highway Administration, the lead federal agency for the proposed action, and in cooperation with the U.S. Army Corps of Engineers, the U.S. Bureau of Indian Affairs, and the Western Area Power Administration, prepared the Draft and Final Environmental Impact Statements and Section 4(f) Evaluations for the South Mountain Freeway in accordance with: the National Environmental Policy Act of 1969 [42 United States Code § 4332(2)(c)], Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 United States Code § 303, as amended), and Section 404 of the Clean Water Act of 1977 (33 United States Code § 1251). The Draft and Final Environmental Impact Statements and Section 4(f) Evaluations: 1) satisfy the Federal Highway Administration’s and Arizona Department of Transportation’s environmental analysis requirements; 2) provide a comparison of the social, economic, and environmental impacts that may result from implementation of the proposed action—construction and operation of a major transportation facility; and 3) identify measures to avoid, reduce, or otherwise mitigate adverse impacts. The Draft and Final Environmental Impact Statements includes sufficient preliminary design information to compare alternatives. Responses to specific comments appear below.

3 Responses to specific comments appear below.

4 Responses to specific comments appear below.

Based on a review of the data, it appears that the DEIS is no more than a thinly veiled, very expensive attempt to manipulate the public into believing that construction of the preferred alternative(s) for the Loop 202 South Mountain Freeway is a good thing. This DEIS, and the actions that created it, represent, in one word, a gross abuse of the public trust, a violation of the processes required by the National Environmental Policy Act (“NEPA”) and Section 4(f) of the Transportation Act, and an approximately $3 billion waste of tax payers’ money. Modern history is replete with examples of fraud, waste, and/or abuse on a large scale. Unlike many of these schemes, however, the South Mountain Freeway project does not just involve the misuse and/or misappropriation of large sums of money. The South Mountain Freeway will have a significant negative impact on the health of thousands of people, including children, who live and/or go to school near the proposed right-of-way. It will require the relocation of hundreds of homes, and dry up lakes and golf courses in the Ahwatukee area. The project will pollute the air, bombard residents with noise, negatively impact recreational opportunities, devalue homes, re-route large numbers of commercial trucks through an historic bedroom community, and destroy a large segment of the South Mountain Park – a valuable natural resource that is sacred to the Gila River Indian Community and other tribes in the area.

Notwithstanding the negative impacts and cost, construction and utilization of the proposed South Mountain Freeway will result in capacity deficiencies at levels comparable to the No Action Alternative on freeways and arterials throughout the Metropolitan Area. That is, even if we assume, arguendo, that all of the data presented in the DEIS is accurate, according to ADOT’s own estimation, the Loop 202 South Mountain Freeway, if built, will not improve traffic flow in areas of congestion on freeways and surface streets in the metropolitan Phoenix area. Regrettably, this is not just hyperbole. Indeed, the consultants/experts who helped to provide the included reports address each of these issues (and more) with specificity. As discussed herein, these issues were either ignored in the DEIS or were presented in the DEIS in a false and/or misleading light.

The DEIS utilizes bad data, inappropriate modeling techniques, and presents misguided and misleading conclusions throughout in a poor-faute effort to support selection of the “preferred alternative.” Even the population projections used to demonstrate need for the project are based on bad data. The DEIS takes an exceptionally high growth period – using 2005 census data – and assumes such growth will continue unabated for the next 30 years. Census data from 2010, which was readily available to ADOT, however, objectively confirms that ADOT’s projections were fatally flawed and grossly exaggerated from the outset. The DEIS expressly puts off analyses of whole categories of impacts until the “design phase” of construction, even though such analysis is an essential aspect of the decision-making process that preparation of a DEIS is supposed to promote. Moreover, ADOT identifies only one action alternative for the
eastern alignment in the DEIS. NEPA requires a detailed analysis of all viable alternatives. Section 4(f) of the Transportation Act mandates, in pertinent part, that the Secretary of Transportation reject any project that requires the use of park land (South Mountain) unless: (1) there is no feasible and prudent alternative to the use of such land; and (2) such program includes all possible planning to minimize harm to such park. In the instant case, the only action alternative considered by ADOT requires blasting through South Mountain. As discussed in the attached reports, there are many other feasible and prudent alternatives that do not impact park land that ADOT refused/failed to consider/select – including but not limited to the no action alternative. As a practical matter, ADOT simply rejected a number of otherwise viable alternatives because they were outside the “study area” – a restrictive geographic boundary with no apparent factual or scientific basis or justification.

The only conclusion to be drawn is that the NEPA process for the South Mountain Loop 202 Freeway is not intended or designed to promote informed decision making and public participation. Indeed, it appears that the selection of both the eastern and western alignments was a foregone conclusion, with ADOT attempting to only facially comply with its statutory obligations. This conclusion is further supported by the fact that ADOT began acquiring property along the Pecos Road alignment in 1988. To date, ADOT has spent at least $43 million on purchasing properties along the Pecos Road alignment. ADOT has been purchasing properties along the 59th Avenue alignment since 1987. To date, ADOT has spent, at least, $45.5 million on properties along the 59th Avenue alignment – and nothing along the other western alignment alternatives.

The following people/organizations, *inter alia*, have provided reports on behalf of the commenters that are attached hereto:

1. George Thurston, Sc.D.; Dr. Thurston is a full Professor at the New York University Medical School. Dr. Thurston identifies, in part: Kyrene de la Estrella; Kyrene de los Lagos; Kyrene del Milenio; Kyrene Akimel A-ah; Desert Vista High School; Keystone Montessori; Summit School of Phoenix; Horizon Community Learning Center; St. John Bosco Interparish Catholic School; Betty Fairfax High School; Cholla Elementary School; Country Gardens Charter School; Sunridge Elementary

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School, and Western Valley Middle School as all being within the area of greatest negative health impacts from the proposed Freeway.²

Dr. Thurston concludes that, "...the increased exposure to residents living or going to school near to the proposed South Mountain Freeway will be at substantially increased risk of adverse health effects if the Freeway is built as proposed, and I further note that these serious health impacts are ignored or not sufficiently addressed in the DEIS. In particular, if the Freeway is built as planned, children with asthma will be at much greater risk of experiencing asthma exacerbations (e.g., asthma attacks, wheezing, cough, etc.). Healthy children will be at significantly higher risk of getting new-onset asthma, and all children living near the proposed Freeway will likely have their lung growth and development inhibited from what it would have been without the Freeway. In adults, the primary health threat from the proposed Freeway air pollution will be increased risks of chronic cardiovascular illness (e.g., PAD) acute myocardial infarctions (MIs), and premature mortality.”

2. Kevin Kane: Mr. Kane is a Ph.D. candidate and instructor at Arizona State University’s School of Geographical Sciences and Urban Planning. Mr. Kane addresses the agency’s utilization of faulty population projections to support the very purpose and need for the Freeway. The DEIS relies on aggressive growth rates based on 2005 census data, even though 2010 census data was readily available. ADOT also projects that vehicle miles traveled (VMT) per person would grow. Not only were ADOT’s VMT projections based on exaggerated population figures, but contrary to ADOT’s findings, both national and state studies have shown that VMTs are actually declining on a per capita basis. Mr. Kane concludes, in part, that “MAG’s modeling, which is relied upon in the DEIS to establish the purpose and need for the Freeway expansion, fails to accurately identify short-range growth and uses outdated data to estimate long-range growth. It reports its projections in a manner that indicates that they are certain to happen, which is not supported by the data and modeling techniques used. Using accurate data to objectively evaluate purpose and need based on socioeconomic factors supports the no build option.”

3. Herman Basmaciyan, P.E.: Mr. Basmaciyan is a Registered Civil and Traffic Engineer in the State of California and a Registered Engineer (in retired status) in the states of Washington, Arizona and Florida. He has over 50 years of experience in traffic and transportation engineering, traffic modeling and forecasting, and the preparation of traffic impact studies. Mr. Basmaciyan identifies myriad deficiencies in the DEIS, including the faulty population projections used to justify the project. He identifies

² Although not listed in Dr. Thurston’s report, it appears that Kyrene de la Sierra, Kings Ridge Preparatory Academy, and Western Valley Elementary schools are also within this “hot zone” for negative health effects from the proposed freeway.
Responses to specific comments appear below.

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various alternatives that should have been considered in the DEIS but were not. Indeed, only one route is considered for the eastern alignment. Mr. Basnakian further finds, in part, that “[g]iven assuming arguendo that the demographics used to demonstrate the need for the project are accurate (they are not), none of the Action Alternatives considered will alleviate the anticipated capacity deficiencies identified in the Purpose and Need. Despite the expenditure of about $2 billion to $3 billion to build the South Mountain Freeway and despite the displacement of many residences and business establishments, there will be capacity deficiencies at levels comparable to the No Action Alternative on freeways and arterials throughout the Metropolitan Area and on the South Mountain Freeway itself.”

Further, according to Mr. Basnakian, “[b]ased on these traffic and circulation considerations, none of the Action Alternatives should have been selected as the preferred Alternative. Indeed, when correct socio-economic data is used, the No Action Alternative largely achieves the desired outcomes without exorbitant costs and/or negative impacts.”

4. SWCA Environmental Consultants: The SWCA team reviewed the DEIS for its discussion on water, air, noise and socio-economic impacts and provided a comment “matrix”. The conclusions included in the matrix are too voluminous to outline here. SWCA did, however, confirm, in part, that: (1) there is no technical or scientific rationale or justification for why the “Study Area” is defined the way it is; (2) otherwise viable alternatives were eliminated simply because they did not fit into the arbitrarily defined “Study Area”; (3) ADOT used the wrong modeling program and faulty data in presenting its analysis of impacts of air pollution; and (4) there is essentially no discussion of the impact construction would have on the wells that currently serve the Lakewood and Foothills communities – this project will likely dry up the lakes and golf courses in Ahwatukee.

5. Richard Haddow: Mr. Haddow is a former District Environmental Coordinator with the Arizona Department of Transportation (ADOT). According to Mr. Haddow, in part, “[t]he use of data, the methodology employed, and the conclusions presented in the DEIS are absolutely without technical merit and do not comply with the fundamental concepts and purpose of an environmental impact statement. The DEIS does not protect or properly inform the citizens of the level of risk to public health by building the freeway.” Further, according to Mr. Haddow, the DEIS completely fails to consider the terrain that will be impacted by the project. According to Mr. Haddow, in part, “[n]otwithstanding that this NEPA process has taken over 12 years, ADOT has not conducted any studies on atmospheric and/or ambient quality conditions in the Ahwatukee area. As a result, there is no valid baseline data to input into air quality models that predict how bad the pollution in the area will be. Sites listed for reference to determine air quality for the citizens are nowhere near the impacted area and should not be used to determine air quality north of the Pecos Road alignment. Similarly, there are no temperature soundings for accurate air shed profiling. There are no air toxics...
measurements taken to understand the current components of the ambient air quality, and there are no wind speed and direction instruments installed as necessary to apply good science for modeling...

6. Stephen Brittle: Mr. Brittle is the President and Co-Founder of Don't Waste Arizona, Inc. (DWAZ), a statewide non-profit environmental organization that was formed in 1990. Mr. Brittle was a member of Maricopa County Local Emergency Planning Committee for ten years. He is also a private sector consultant who has worked on various environmental and hazardous materials issues. Mr. Brittle provides comments on, in part, the CANAMEX route (one reason why the proposed Freeway will simply act as a truck bypass for high pollutants commercial trucks originating in Mexico), Environmental Justice issues, Air Toxics, and hazardous materials transportation. He, again, finds the DEIS lacking on all fronts. According to Mr. Brittle, in part, "the DEIS fails to mention and analyze the risks from a catastrophic release of hazardous chemicals due to a transportation incident... In the matter of evacuation of Ahwatukee, the GRIC community near the freeway, and Laveen, a detailed traffic flow analysis and evacuation plan... must be prepared... If the analysis shows that the community... cannot be evacuated within 5-10 minutes, then the No Build option is the only logical and humane result... Since Ahwatukee is not six miles wide from the Pecos Road to South Mountain, it is easy to conclude that, in the event of a catastrophic release of chlorine from a 17-ton tanker of chlorine gas, all of Ahwatukee would have to either evacuate or shelter in place. Further, an ALOHA modeling indicates that buildings within two miles of the point where the chlorine release occurred would have high enough levels of chlorine gas infiltrate into them to become lethal, which means that shelter in place strategies would not work..." Mr. Brittle also questions why HDR, the consultants who prepared the DEIS for ADOT, did not include any analysis of the risks associated with hazardous materials transport - HDR was the same contractor who prepared the November 26, 2008, SPR 624 Hazardous Materials Transportation in Arizona Literature Review with Findings Report for ADOT.

Thank you for your consideration. As outlined herein and supported through the attached reports/considerations, there is no valid justification for the construction of the South Mountain Loop 202 Freeway.

NEPA requires a fully informed decisional process through, in part, the preparation of a DEIS. The DEIS, however, treats the crucial decision to proceed with a $3 billion tax payers’ funded project, not as an impending choice to be pondered, but as a foregone conclusion to be rationalized. The DEIS provides flawed analyses, generalities, and heavy-handed self-justifications. This is a direct violation of applicable law and a gross abuse of the public trust. No reasoned decision could be made on the basis of the DEIS that, for example, improvements to existing highways and arterials would not better serve regional transportation needs; that public transportation alternatives are not viable;
or that abandonment of the project is impractical.

If you have any questions or concerns, please feel free to contact me directly.

Sincerely,

THE SHANKER LAW FIRM, PLC

Howard M. Shanker
For the Firm
# Table of Contents

**July 23, 2013**

## Reports:
4. Review and Critique of DEIS for Loop 202 (South Mountain Freeway) by Herman Barnacki, P.E. dated July 17, 2013.
5. SWCA Comments on ADOT South Mountain DEIS (April 2013).
7. Comments on the SMP DEIS For Cultural Resources Impact by Samantha Skendzie, Of Counsel, The Shuler Law Firm, PLC.

## Additional Comments:
2. Comment 1-10.
3. Comments on DEIR Discussion of Section 4(F) of the Transportation Act.
4. Reevaluate Purpose and Need Statement.
5. Lakewood Community Association’s Concerns & Response to DEIS for Loop 202 (South Mountain Freeway) dated July 26, 2013.
7. Comments by Hugh S. Mason dated July 21, 2013, resident of Phoenix and the Ahwatukee area and Associate Professor at Arizona State University, School of Life Sciences.
8. Comment by Phoenix Mountains Preservation Council

Attachments:

1. Brown and Caldwell Study dated August 24, 1995
2. Correspondence Foothills Golf Re: Water
3. Hydrologist Statement
5. South Mountain Land Acquisitions - The spreadsheet was created by ADOT on June 1, 2003. It has W in the right side if it is a parcel in the western alignment; it has an E in the right side if it is a parcel in the eastern alignment. Parcels 7-11316 and 7-10612 are two parcels in the eastern alignment that were not included in the spreadsheet. The parcel transmittal sheet for each is also attached.
REPORTS

One

The Adverse Human Health Effects of Air Pollution that Result from Traffic-Related Air Pollution by George D. Thurston, Sc.D. dated July 18, 2013.
The Adverse Human Health Effects of Air Pollution That Result from Traffic-Related Air Pollution

SUBMITTED ON BEHALF OF PARC ET AL. IN RESPONSE TO ADOT DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) REGARDING THE SOUTH MOUNTAIN FREEWAY

July 18, 2013

George E. Thurston, Sc. D.
3 Catherine Court
Chester, NY 10918
Background & Qualifications

I am a full Professor at the New York University (NYU) School of Medicine in the Department of Environmental Medicine. I have also served as the Deputy Director of the NYU Particulate Matter Health Research Center, and am presently the Director of the Program in Exposure Assessment and Health Effects in my department at the School of Medicine.

I received my undergraduate degree in Environmental Engineering from Brown University in 1974, and my Doctorate of Science (Sc.D.) in Environmental Health Sciences from the Harvard University School of Public Health in 1983. I served on the New York State Department of Environmental Conservation’s Air Management Advisory Committee from 1991 to 1996, and was Chairman of the Health and Environment Panel of the Canadian Joint Industry/Government Study of Sulfur in Gasoline and Diesel Fuels in 1997.

I have published extensively regarding the human health effects of inhaled air pollutants, particularly in relation to asthma attacks, hospital admissions, and human mortality. I have been called upon by both the U.S. House of Representatives and the U.S. Senate multiple times in recent years to provide testimony before them regarding the human health effects of air pollution.

I have served as an advisor to the U.S. EPA regarding the human health effects of air pollution as a member of the Clean Air Scientific Advisory Committee (CASAC) panel on Sulfur Oxides and Nitrogen Oxides, and as a contributing author of various EPA Integrated Science Assessments (ISAs), which are relied upon by the EPA to set air pollution air quality standards in the US. A copy of my professional curriculum vitae is attached to this letter, and it accurately represents my relevant education, training, and experience.

Introduction

Traffic is an increasingly dominant contributor to air pollution in Phoenix, and elsewhere in the United States. Cars, buses, trucks and other motorized vehicles are amongst the largest sources of air pollution that have been clearly linked to adverse health effects (e.g., see HEI, 2010). These adverse effects of traffic related air pollution have been documented in cities around the world, across the nation, and in Phoenix, AZ. Most people are exposed to air pollution from road traffic on a daily basis, whether as a result of residing at homes located near highways, or driving, walking, or standing along busy streets. Vehicle engines are known to produce a number of air pollutants that pose risks to public health. When engine burn fuel (gasoline or diesel), chemicals such as fine particulate matter, ultrafine particles (UFP), nitrogen oxides, carbon monoxide, volatile organic
compounds (VOCs), and elemental carbon (EC) black carbon soot are all omitted. As summarized by the U.S. EPA (2009), especially steep gradients in black carbon ice mass have been observed along roadways with high diesel traffic (e.g., Zhu et al., 2002). These primary emissions, such as UFP number concentrations and EC, are highest near roadways (Levy et al., 2003; Repace et al., 2003; Zhu et al., 2005). For example, a personal monitoring study that I conducted in Bronx County, New York determined that personal EC concentrations, and especially the fraction of PM2.5 mass that is as EC (which is an urban tracer for diesel particulate matter, DPM), decreases linearly as a function of the distance of primary residence to busy roadways as shown below in Figure 1 (Spira-Cohen et al., 2010).

![Graph 1](image1)

**Figure 1.** Living closer to a major roadway is significantly associated with larger mean personal elemental carbon (EC) soot concentrations (distances in feet) (Spira-Cohen et al., 2010).

In addition to near roadway effects, some of the fuel used by engines evaporates without having been burned, and this also creates secondary pollution downstream, such as ozone, which has also been associated with increased risk of adverse health effects, including increased risk of death. Overall, traffic related emissions are a key contributor to the formation of smog and other adverse health effects they can cause.
The health effects of air pollution from road traffic

The epidemiological literature on the health effects of traffic-related air pollution is growing rapidly. The findings of recent scientific studies indicate that traffic is a significant contributor to the adverse effects of air pollution on public health, but this evidence is not sufficiently acknowledged or considered by the DEIS. Studies of air pollution near roadways, including my own in New York City, have provided insights into the spatially and temporally dynamic nature of traffic-related pollution. The epidemiological studies on traffic and health have largely focused on the consequences of exposures incurred by living near large roadways, such as freeways in Southern California. Air pollution from road traffic has been linked to a variety of negative health effects. To date, the findings indicate associations of traffic indicators with increased risk for multiple adverse health effects that may include asthma and allergic diseases, cardiac effects, respiratory symptoms, reduced lung function, inhibited lung function growth and development, preterm mortality, adverse reproductive outcomes, and lung cancer, as elaborated below.

- Asthma and allergic disease

Nutritional studies have documented the role of traffic-related pollution in respiratory health. Scientific studies in North America and Europe show that children living in areas with high road traffic volumes have more respiratory-related illness symptoms than other children. More specifically, a significant number of studies conclude that exposure to traffic pollution can aggravate asthma in children (HEI, 2010). Braunet et al. (2002, 2007) found associations by elevated concentrations of NO2 and diesel soot at children’s homes with increased risk of wheezing in children in the Dutch PiAMA cohort. Symptoms associations were also reported in two separate analyses of the GINI and LISA cohort study in Munich (Gleixner et al. 2012; Morgenstern et al. 2007), in which heavy traffic exposure had an association with traffic-related pollution in boys aged 1 and 2 years. In a subsequent study (Morgenstern et al., 2008), children aged 4 and 6 years exhibited associations by distance form a busy street (50 m, 250 m, 1000 m, or > 1000 m) in Munich with symptoms of asthma, hay fever, and eczema. At the nearest (50 m) distance category, the roadway proximity association reached statistical significance for asthma symptoms (OR = 1.24; 95% CI, 1.01–1.52), indicating a 24% increase in asthma symptoms in these children vs. children living more than 1 km away from the roadway.

The Role of Health Risk Assessment in a National Environmental Policy Act Context

The Federal Highway Administration’s National Environmental Policy Act documents are developed under two guiding regulations: the Council on Environmental Quality’s National Environmental Policy Act regulations applicable to all federal agencies (40 Code of Federal Regulations Parts 1500–1508) and the Federal Highway Administration’s implementing regulations governing Federal Highway Administration National Environmental Policy Act documents (23 Code of Federal Regulations Part 777). In its mobile source air toxics guidance, the Federal Highway Administration discusses 40 Code of Federal Regulations Part 1502.22 and acknowledges that while much work has been done to assess the overall health risk of mobile source air toxics, analytical tools and techniques for assessing project-specific health outcomes as a result of lifetime exposures to mobile source air toxics remain limited. These limitations impede the ability to evaluate the potential health risks attributable to exposure to mobile source air toxics as part of the decision-making process in the National Environmental Policy Act context. However, as with any analysis that the Federal Highway Administration conducts for National Environmental Policy Act purposes, the Federal Highway Administration’s approach for mobile source air toxic analysis in National Environmental Policy Act documents is informed not just by 40 Code of Federal Regulations Part 1502.22, but by all applicable Council on Environmental Quality requirements.

The appropriateness of air toxics health risk assessment as an analysis method for National Environmental Policy Act documents is discussed below, in the context of Council on Environmental Quality requirements for these documents. In addition to the 40 Code of Federal Regulations Part 1502.22 provisions regarding uncertainty and limitations discussed in the Federal Highway Administration’s MSAT Interim Guidance Appendix C, three other provisions of the Council on Environmental Quality regulations are particularly relevant to the topic of health risk assessment:

- 40 Code of Federal Regulations § 1500.1(b): NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.
- 40 Code of Federal Regulations § 1502.1: An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions.
- 40 Code of Federal Regulations § 1502.2: (a) Environmental impact statements shall be analytic rather than encyclopedic. (b) Impacts shall be discussed in proportion to their significance. (c) Environmental impact statements shall be kept concise and shall be no longer than absolutely necessary to comply with NEPA and with these regulations.

(Response 13 continues on next page)
Section 1500.1(b) states that information for decision making must be of high quality and based on accurate scientific analysis. Air toxics health risk assessments can involve large uncertainties. The mobile source air toxic health risk assessment uncertainty builds on itself—each step of the analysis involves uncertainties, including modeling traffic and then modeling emissions, and using this estimated output to model dispersion/concentrations, which provide information for estimating or assuming exposures to these concentrations, and finally predicting health outcomes. Major uncertainties are associated with traffic and emissions projections over a 70-year period, and dispersion models are typically held to a “factor of 2” performance standard. Health impacts of mobile source air toxics in the U.S. Environmental Protection Agency Integrated Risk Information System are based on a 70-year lifetime exposure, which introduces significant uncertainty (e.g., on average, people in the United States change residence approximately once every 8 years and change jobs once every 3). Finally, as noted above, the U.S. Environmental Protection Agency’s Integrated Risk Information System provides toxicity (risk) values for various pollutants and routes of exposure; in a health risk assessment, the Federal Highway Administration would compare calculated concentrations of mobile source air toxic pollutants to the Integrated Risk Information System values to estimate health risk. In the Integrated Risk Information System, the U.S. Environmental Protection Agency states the toxicity values are believed to be accurate to within an order of magnitude (a factor of 10). The total cumulative uncertainty involved in highway project health risk assessment is much larger than the change in emissions attributable to projects (typically a few percentage points). In this context, the information would not necessarily have a strong nexus to the requirements for high-quality information and accurate scientific analysis.
Section 1500.1(b) also directs agencies to focus their National Environmental Policy Act analysis and documentation on issues that are truly significant to the action in question. In the context of mobile source air toxics, the Federal Highway Administration must consider whether changes in mobile source air toxic emissions attributable to a project have the potential for significant health risk. Using cancer risk as an example, the U.S. Environmental Protection Agency estimates that the overall risk of cancer in the United States is approximately 330,000 in a million, and that air toxics (from all sources) are responsible for a risk of approximately 50 in a million. In its most recent mobile source air toxics rule-making, the U.S. Environmental Protection Agency estimated mobile source air toxic cancer risk, after implementation of emissions controls, at approximately 5 in a million (or 0.0015 percent of overall cancer risk from any cause). For the Preferred Alternative, the mobile source air toxic emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxic emissions between the Preferred and No Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxic emissions would decrease by more than 80 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see the discussion beginning on page 4-77 of the Final Environmental Impact Statement).

In summary, available information from the U.S. Environmental Protection Agency indicates that mobile source air toxics are a small component of overall cancer risk, and the analysis for the Final Environmental Impact Statement indicates both that the Preferred Alternative would result in a small change in the emissions contributing to this risk and that emissions will decline by a large amount regardless of alternative.

As described above and in the air quality technical report, results from the health risk assessment would be influenced more by the uncertainty introduced into the process through assumptions and speculations rather than by genuine insight into the actual health impacts directly attributable to mobile source air toxic exposure associated with a project. Therefore, outcomes of such a health risk assessment do not provide useful information for decision makers, as required by Section 1502.1. The Federal Highway Administration emissions analysis meets the requirement to produce information that is useful for both disclosure and decision making because it allows the public and decision makers to see which alternative has less mobile source air toxic emissions, with much less uncertainty than a health risk assessment.

Figure 3. Days with higher traffic air pollution (i.e., higher elemental carbon (EC) counts) is associated with increased asthma symptoms (adapted from Spitaels-Cohen et al., 2012).

Overall, the 2010 Health Effects Institute (HEI) Publication 17 found (on page xxv) that: "the Panel concluded that the evidence is sufficient to support a causal relationship between exposure to traffic-related air pollution and exacerbation of asthma." This conclusion from the HEI Publication 17 is also acknowledged in the South Mountain Freeway DEIS (on pg. 4-75), but not sufficiently considered or applied to the proposed project impact assessment.

I agree with the above HEI Publication 17 conclusion, and I point out that this conclusion is of direct relevance to the proposed South Mountain Freeway, as there are a host of schools that have children with asthma in them every school day, that would be adversely affected by a worsening of their asthma problems because they are located within a very short distance of the proposed freeway, including the following (distance from center of freeway):

- Kyoto de la Estrella, 2620 E. Liberty Lane (0.2 mi.)
- Kyrene de los Lagos, 17001 S. 34th Way (0.1 mi.)
- Kyrene del Milenio, 4650 E. Frye Road (0.5 mi.)
- Kyrene Akimel A-ki, 2720 E. Liberty Lane (0.2 mi.)
- Desert Vista High School, 16640 S. 32nd St. (0.4 mi.)

(Continued on next page)
Given the uncertainty of a mobile source air toxic health risk assessment, the Federal Highway Administration instead addresses the potential impacts of mobile source air toxics through an emissions assessment in its National Environmental Policy Act documents. For smaller projects with a lower likelihood of a meaningful impact, this discussion is qualitative. For larger projects, emissions analysis is conducted. The Federal Highway Administration approach is consistent with the Council on Environmental Quality’s direction in Section 1502.2(b) to discuss impacts in proportion to their significance. The results of an emissions analysis can be summarized concisely in a National Environmental Policy Act document and provide useful information for decision makers (e.g., an alternative that has lower emissions is likely to be “better” from a mobile source air toxics health risk standpoint than one that has higher emissions).

While the U.S. Environmental Protection Agency and the Federal Highway Administration both agree on the usefulness of addressing mobile source air toxics in National Environmental Policy Act documents for highway projects, the agencies disagree about the value of health risk assessment as a method for doing so.
Another consideration with respect to health impacts is that the Preferred Alternative would also reduce in-vehicle mobile source air toxics exposure as opposed to the No Action Alternative. The U.S. Environmental Protection Agency has found that in-vehicle benzene concentrations were between 2.5 and 40 times higher than nearby ambient concentrations, based on a review of studies discussed in the Regulatory Impact Analysis for the U.S. Environmental Protection Agency’s 2007 mobile source air toxics rule-making (Final Regulatory Impact Analysis, Environmental Protection Agency 420-R-07-002, 3-17 [February 2007]). Construction of the Preferred Alternative would result in a reduction in benzene exposure to drivers and passengers for two reasons: decreased travel times (motorists would spend less time in traffic to reach their destinations) and lower emissions rates (attributable to speed improvements). Reducing on-road exposure would provide a health benefit for motorists using the roadway network. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads. The Federal Highway Administration determined that a supplemental environmental impact statement is not required at this time because there were no changes to the proposed action that will result in significant environmental impacts not evaluated in the Draft Environmental Impact Statement nor is there new information relevant to environmental concerns and bearings on the proposed action or its impacts that will result in significant environmental impacts not evaluated in the Draft Environmental Impact Statement.
• Keystone Montessori, 1625 S. Liberty Lane (0.2 mi.)
• Summit School of Altoona, 4515 East Mainwood Drive (0.6 mi.)
• Horizon Community Learning Center, 16223 South 48th Street (0.4 mi.)
• St. John Bosco Interparish Catholic School, 16035 S 48th St. (0.5 mi.)
• Betty Fairfax High School, 8255 S. 59th Ave. (0.1 mi.)
• Chatham Elementary School, 4725 W. South Mountain Avenue (0.4 mi.)
• Country Gardens Charter School, 6313 West Southern Ave. (0.5 mi.)
• Sunridge Elementary School, 6264 West Roosevelt St. (0.4 mi.)
• Western Valley Middle School, 6250 West Durango St. (0.4 mi.)

Clearly, the proposed highway will cause new and additional noise and air pollution impacts to many school-age children during the school week, exacerbating their respiratory symptoms, especially for children with asthma, as discussed above, and putting children who do not have asthma at greater risk of getting the disease. Moreover, as shown in Figure 4 below, there are many homes located near these schools, in which many of the students will reside. Thus, these children’s exposure will be even greater, as they will be exposed to much higher traffic air pollution and noise throughout the entire day. Not only will this increase their risk of asthma symptoms, there is now evidence indicating that it can also increase the risk of healthy children contracting asthma.

While the HEI Publication 17 Review of the health effects of traffic air pollution concluded that the evidence showing associations between exposure to traffic air pollution and the onset of new asthma in healthy children was only suggestive at that time (i.e. not enough to conclude causality), that report was published in January 2010, before more definitive evidence of this relationship was published. Notably, McConnell et al. (2010) later published a study of the relationship of new-onset asthma with traffic-related pollution near homes and schools of children participating in the highly regarded California Children’s Health Study. Physician diagnosis of new-onset asthma (n = 120) was identified during 3 years of follow-up of a cohort of 2,497 kindergartners and first-grade children who were asthma- and wheezing-free at study entry into the Southern California Children’s Health Study. The researchers analyzed traffic-related pollution exposure based on a fine source dispersion model of traffic volume, distance from home and school, and local meteorology. They found that asthma risk increased with modeled traffic-related pollution exposure from roadways near homes (HR 1.51; 95% confidence interval (CI), 1.25–1.82) and near schools (HR 1.45; 95% CI, 1.06–1.98). Thus, these findings more definitively indicate that the risk of new asthma was increased by...
The Final Environmental Impact Statement evaluates Clean Air Act criteria air pollutant concentrations in Maricopa County and the Phoenix area (see pages 4-75 to 4-77 of the Final Environmental Impact Statement). With regard to air quality impacts, the Final Environmental Impact Statement addresses children’s health impacts within the broader discussion regarding health impacts under the National Ambient Air Quality Standards. Clean Air Act Section 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety and are requisite to protect the public health. As noted by the U.S. Environmental Protection Agency in its 2013 rulemaking for particulate matter, Clean Air Act Section 109’s legislative history demonstrates that the primary standards are “to be set at the maximum permissible ambient air level... which will protect the health of any [sensitive] group of the population” (78 Federal Register 3086 and 3090) (quoting S. Rep. No. 91-1196, 91st Cong., 2nd Sess. 10 [1970]) (alterations in original). Accordingly, the Final Environmental Impact Statement National Ambient Air Quality Standards-based evaluation of criteria air pollutants includes a health-based review of sensitive populations, including children, given the National Ambient Air Quality Standards inherent consideration of those factors. Furthermore, the National Ambient Air Quality Standards-based assessment ensures adequate consideration of health-based issues as “[t]he requirement that primary standards provide an adequate margin of safety was intended to address uncertainties associated with inconclusive scientific and technical information... and to protect against hazards that research has not yet identified” (78 Federal Register 3090).

Sensitive receivers for air and noise are already included in the air quality and noise analyses in accordance with State and federal guidance. Both sections, Air Quality and Noise, beginning on Final Environmental Impact Statement pages 4-68 and 4-88, respectively, have addressed requirements under the National Environmental Policy Act. As stated on page 4-89 of the Final Environmental Impact Statement, over 220 sensitive receivers were evaluated at exterior locations from a traffic noise perspective. All of the receivers represent noise-sensitive land uses in proximity to the proposed project, including homes, schools, and parks, and these receivers would have higher noise levels than similar facilities more distant from the proposed action.

Each modeled school was reexamined to determine whether noise impacts would result from the proposed freeway and whether appropriate mitigation of these impacts was provided. Of the nine schools modeled in the analysis for the Final Environmental Impact Statement, all were predicted to exceed the Federal Highway Administration noise abatement criteria (see Table 4-40, beginning on page 4-93). Mitigation, in the form of noise walls, was proposed for all schools. After applying this mitigation, all schools except one were mitigated according to the Arizona Department of Transportation noise policy. According to Arizona Department of Transportation policy, noise mitigation should achieve a reduction of 5 to 7 A-weighted decibels and result in a noise level of less than 64 A-weighted decibels for residential and similar areas. These criteria were not reached for one school (receiver 67, Santa Maria Elementary School) because the policy limits wall heights to 20 feet. A wall taller than 20 feet would be required to bring levels at this receiver down to 64 A-weighted decibels. However, a 5-A-weighted decibels reduction would be provided by the 20-foot wall proposed in this area. It is important to note that this receiver would be affected only by the W71 Alternative, which is not the Preferred Alternative.
The Arizona Department of Transportation noise policy also states that noise abatement shall be considered if "substantial increases" (defined as a 15 A-weighted decibels or greater increase) are predicted. Of the nine schools modeled, substantial increases were predicted at six schools. As discussed above, however, noise walls would reduce noise levels at all schools according to the Arizona Department of Transportation noise policy, with the exception of Santa Maria Elementary School, which would be affected only by the W71 Alternative, which is not the Preferred Alternative. According to the Federal Highway Administration’s 1995 Highway Traffic Noise Analysis and Abatement Policy and Guidance, in most cases, if the exterior area can be protected, the interior will also be protected.

Receptor placement met the criteria for selecting modeling locations as specified in 40 Code of Federal Regulations § 93.123(a). The carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter (PM$_{10}$) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter (PM$_{10}$) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM$_{10}$) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Through analysis, the Federal Highway Administration has determined that the proposed project would not produce disproportionate impacts on children.

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**Reduced lung function**

Research by Svendsen et al. (2012) has found both long-term and short-term reductions in lung function (i.e., ability to inhale and exhale air) as a result of traffic-related air pollution exposure. For example, investigations examined 5,614 children enrolled in the EL Paso, Texas, public school district by questionnaire in 2001. School-level and residence-level exposures to traffic-related air pollutants were estimated using a land use regression model. For 1,524 children with spirometry, residential levels of traffic-related ambient air pollution were associated with a 2.4% decrement in forced vital capacity (95% confidence interval [CI]: -0.6, -0.7) after adjustment for demographic, anthropomorphic, and socioeconomic factors and spirometer/technician effects.

In my own work in the South Bronx, NY, I have found reduced lung function among elementary school children occurs on days of elevated traffic-related EC concentrations (Epstein-Cohen et al., 2011). As shown in the plots below, the impact of diesel traffic related EC was larger and more significant than particles in general (PM$_{10}$).
Figure 6. Lung Function in Children Decreases with Increasing Exposure to Traffic Related EC.

- Reduced Lung Development and Growth

Traffic-related air pollution has also been indicated to inhibit the growth of young lungs among children over the long-term of exposure. Schultz et al. (2012) followed more than 1,900 children in the Swedish birth cohort BAMSE with repeated questionnaires, dynamic spirometry, and 24h measurements until 8 years of age. Outdoor concentrations of particulate matter with an aerodynamic diameter less than 10 μm (PM10) from road traffic were estimated for residential, day care, and school addresses from birth and onward using dispersion modeling. The relationship between time-weighted average exposure during different time windows and FEV1 at 8 years was analyzed by linear regression, adjusting for potential confounding factors, including short-term exposure to air pollution. The authors found that a 5th to 95th percentile difference in traffic-related average PM10 exposure during the first year of life was associated with a reduced FEV1 of 259.3 ml (95% confidence interval, 211.3 to 25.6) at 8 years of age. Clearly, exposure to traffic-related air pollution reduces the ability for children to properly grow and develop their full lung capacity.

- Cardiac effects

Exposure to air pollution from road traffic has also been linked to a number of other health issues including heart attack, coronary artery disease and increased risk of death from cardiac conditions in adults. For example, Peters et al. (2009) compared patient implanted defibrillator discharge interventions among 100 patients with such devices in eastern Massachusetts, according to variations in concentrations of particulate matter, black carbon, and gaseous air pollutants that were measured daily for the years 1995 through 1997. Patients with two or more interventions experienced increased arrhythmias in association with nitrogen dioxide, carbon monoxide, black carbon, and fine particle mass. A stronger association was found for NO2 and black carbon than for PM2.5.

Consistent positive associations were observed with black carbon, CO, and NO2 (noted markers for...
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<td>local traffic-related polllutants, with the strongest associations observed for NO₂. A 26-per increase in nitrogen dioxide was associated with nearly a doubling of defibrillator interventions (odds ratio = 1.8, 95% confidence interval = 1.1–2.9). These results indicate that exposure to elevated levels of these traffic-related air pollutants are associated with potentially life-threatening arrhythmias.</td>
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In January 2016, the HEI Publication 17 Report (HEI, 2016) concluded that the evidence supporting the effects of traffic-related air pollution on cardiac morbidity and mortality were suggestive, but that was also concluded before newer, more definitive evidence was published. In my own work (Lall et al, 2010) in New York City, daily PM₂.₅ concentration measurements collected in Midtown Manhattan were analyzed via Positive Matrix Factorization source apportionment to determine the original source of different components of air pollution. Daily and distributed Air Generalized Linear Models of Medicare respiratory and cardiovascular hospital admissions during 2001-2002 considered PM₂.₅ mass and PM₂.₅ from five sources: transported sulfate, residual oil, traffic, steel/construction, and soil. Traffic-related PM₂.₅ was significantly associated with an increase in the risk of cardiovascular hospital admissions. Investigative have also found biological markers of cardiac effects by traffic-related air pollution. Hoffmann et al. (2007) conducted a cross-sectional analysis of data collected at baseline for 4,194 residents of Germany followed from 2000 to 2003. The age of participants ranged from 45-74 yrs of age. The authors estimated 1-yr avg. exposure to PM₂.₅ in 2002 (the midpoint of the baseline exam). They found a 45% (95% CI: -1 to 115) increase in coronary artery calcification (CAC) per 10 μg/m³ increase in PM₂.₅. The strength of association was similar across demographic and clinical characteristics subgroups. The authors reported a more consistent association of CAC with traffic exposure (i.e., distance from a major roadway) than with PM₂.₅ mass in general, indicating a stronger role by traffic particles. In a subsequent analysis of these data, Hoffmann et al. (2009) examined the association between Ankle-Brachial Index (ABI, an index of Peripheral Arterial Disease, PAD) and PM₂.₅ in this population. In both studies, residing near a major roadway was the strongest predictor of atherosclerotic disease progression.

* Premature mortality

Premature mortality, especially for cardiac causes, has been widely found to be associated with traffic-related air pollution. In my own research in New York City, we analyzed daily deaths and emergency hospitalizations for CVD among persons ≥ 40 years of age for associations with PM₂.₅, its chemical components, nitrogen dioxide (NO₂), carbon monoxide (CO), and sulfate dioxide for the
years 2000-2006 using a Poisson time-series model adjusting for temporal and seasonal trends, temperature effects, and day of the week (Ito et al., 2011). We estimated excess risks per interquartile-range increases at lags 0 through 3 days for warm (April through September) and cold (October through March) seasons. We found that increased CVD mortality and increased CVD hospitalizations were both associated with increased exposure to traffic-related elemental carbon and NOx throughout the year in New York City, NY.

Similarly, Beckerman et al. (2012) assessed the association between the occurrence of Ischemic Heart Disease (IHD) and air pollutants in Toronto, Ontario, Canada. Confounding was controlled with individual and neighborhood-level covariates. After adjusting for multiple covariates, nitrogen dioxide (NOx) as a pollutant derived from traffic, as per Figure 5 above, was significantly associated with increased IHD risk, relative risk (RR) = 1.33 (95% confidence interval [CI]: 1.2, 1.47). Subjects living near major roads and highways had a trend toward an elevated risk of IHD, RR = 1.08 (95% CI: 0.99, 1.18).

In Phoenix, research by Mar et al. (2000) evaluated the association between mortality outcomes in elderly individuals and particular matter (PM) of varying aerodynamic diameters (in micrometers) [PM10, PM2.5, and PM1.0 (PM10 minus PM2.5)] and selected particulate and gaseous phase pollutants in Phoenix, Arizona, using 3 years of daily data (1995–1997). Although source apportionment and epidemiologic methods have been previously combined to investigate the effects of air pollution on mortality, this was the first study to use detailed PM composition data in a time-series analysis of mortality. These authors found that total and cardiovascular disease mortality was significantly associated with air pollution factors associated with motor vehicle emissions. Total mortality was significantly associated with CO and NOx (p < 0.05). Increase cardiovascular mortality was significantly associated with CO, NOx, SOx, PM2.5, PM10, PMCF (p < 0.05), and EC (related to diesel truck emissions).

Thus, the evidence indicating that the risk of cardiac illness and mortality from exposure to traffic-related air pollution has expanded since the HEI Publication 17 report in 2010, and I conclude that adults are at increased risk of cardiac illness and mortality from increased exposure to traffic-related air pollution exposure.

Other Potential Health Effects

There are a host of other adverse health effects that could result from human exposure to the air pollution created by the proposed Freeway (that, while less well proven, are also not sufficiently
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<td>Acknowledged by the DEIS. These other potential adverse effects of air pollution exposure from traffic-related air pollution exposure may include increased risk of lung cancer (especially from increased exposure to diesel particulate matter) and adverse birth outcomes (e.g., low birth weight, small for gestational age, and perinatal mortality). In my own research in the largest cohort studied to date, we have found an increased risk of lung cancer to be associated with increased exposure to PM2.5 air pollution (Pope et al., 2002). For these outcomes, as noted by the HEI Publication 17, there is presently only “limited evidence of associations, but the data were either inadequate or insufficient to draw firmer conclusions.” While not as well proven as the above effects of exposure to traffic-related air pollution, the risk of lung cancer from traffic air pollution is considered too lightly in the DEIS, and possible adverse birth outcomes are not even discussed in Chapter 4’s “Air Quality” section of the draft DEIS.</td>
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<td>Conclusions</td>
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<td>Based upon my review of the published scientific and medical literature, including my own relevant research, I conclude that the increased exposure to residents living or going to school near to the proposed South Mountain Freeway will be at substantially increased risk of adverse health effects if the freeway is built as proposed, and I further note that these various health impacts are ignored or not sufficiently addressed in the draft DEIS. In particular, if the freeway is built as planned, children with asthma will be at much greater risk of experiencing asthma exacerbations (e.g., asthma attacks, wheezing, cough, etc.). Healthy children will be at significantly higher risk of getting new-onset asthma, and all children living near the proposed Freeway will likely have their lung growth and development inhibited from what it would have been without the Freeway. In adults, the primary health threat from the proposed Freeway air pollution will be increased risks of chronic cardiovascular illness (e.g., PAD), acute myocardial infarctions (MIs), and premature mortality.</td>
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REFERENCES


McComittt et al. (2006) Prevalence of asthma in 1,339 children ages 5-7 yr by distance of residence to a major road in longterm residents, no family history of asthma. Environ Health Perspect 2006;114:766-772.


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Licenses and Certification N/A

Academic Appointments
1987-1993 Assistant Professor, Dept. of Environmental Medicine, New York University School of Medicine, New York City, N.Y.
1993-2006 Associate Professor (Tenured), Dept. of Environmental Medicine, New York University School of Medicine, New York City, N.Y.
2007-present Professor (Tenured), Dept. of Environmental Medicine, New York University School of Medicine, New York City, N.Y.
2007-present Affiliated Faculty, Environmental Studies Program, College of Arts and Sciences, New York University, New York City, NY.
2012 present Affiliated Faculty, Marine Institute for Cities and the Urban Environment, New York University, New York City, NY.
2012-present Faculty Mentoring Champion, Dept. of Environmental Medicine, New York University School of Medicine, New York City, NY.

Hospital Appointments: N/A
Other Professional Positions and Visiting Appointments:
Oak Ridge Institute for Science and Education Fellow (2008-2010)
Major Administrative Responsibilities

Year                          Title, Place of Responsibility
1995-2004                     Director, Community Outreach and Environmental Education Program, NYU-NIEHS Center of Excellence, Nelson Inst. of Environ. Med., NYU School of Medicine, Tarrytown, NY
2002-2012                     Deputy Director, NYU Particulate Matter Research Center, Nelson Inst. of Environmental Medicine, NYU School of Medicine, Tarrytown, NY
2007-2008                     Director, Environmental Epidemiology Core, NYU-NIEHS Center of Excellence, Department of Environmental Medicine, Tarrytown, NY
2010-present                  Co-Leader, Metals Research Focus Group, NYU-NIEHS Center of Excellence, Department of Environmental Medicine, NYU School of Medicine.
2012-present                  Director, Program in Exposure Assessment and Human Health Effects, Department of Environmental Medicine, NYU School of Medicine.
2012-present                  Chair, Appointments and Promotions Committee, Department of Environmental Medicine, NYU School of Medicine.

Teaching Experience

Year                          Name of course Type of Teaching/Contact Hrs.
1984-1994                     Air Poll. Transport Modeling (G48.204) Course Director
1996-present                  Atmospheric Science (G48.203) Course Director
1984-2010                     Environmental Contamination (G48.230) Lecturer
1994-present                  Environmental Health Measurements (G48.205) Lecturer/Lab
1990-1998                     Environmental Toxicology (G48.106) Lecturer
1993-1995                     Environmental Epidemiology I (G48.209) Lecturer
2001-2003                     NYU Summer Institute, Wagner School Lecturer
2006-present                  Environmental Epidemiology I (G48.209) Lecturer
2006-present                  Science, Health & Environ. Journalism (G48.105) Lecturer
2009-2011                     Global Environmental Health (G48.105) Course Director
2009-2012                     Global Issues in Environ. Health (G48.101) Course Director
2009-present                  Earth Systems Science (undergrad) (V36.0200) Lecture
2011-present                  Principles of Environmental Health (G48.104) Course Director

Awards and Honors

November 1999                Orange Environment Citizens Action Group, Oil Award for Excellence in Translating Science to the Public
December 2000                 NYU School of Medicine Dean’s Research Incentive Award
October 2012                  Recipient of the “Haugen Smith Prize” for Best Paper, Atmospheric Environment.
                               http://geo.arc.nasa.gov/cgg/singh/smitenv12.html
March 2013                    Recipient of the “Top Science Paper of the Year – Science” Award from ES&T
                               http://epaps.es.co.org/epaps/10.1021/es400924

Major Committee Assignments
New York University Committees
1997-present                  University Sustainability Task Force
2010-2012                     University Faculty Senate Alternate
2012-present                  University Faculty Senator
NYU School of Medicine Departmental Committees
1992-1998                     Sterling Forest Library Committee, Member, NYU SOM Dept of Environ. Medicine
1991-1994                     Health & Safety Committee, Member, NYU SOM Dept of Environ. Medicine
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<tr>
<td>2015-present</td>
<td>Dept. Academic Steering Committee, Member, NYU SOM Dept. of Environ. Medicine</td>
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<td>2007-2012</td>
<td>Dept. Appointments &amp; Promotions Comm., Member, NYUSOM, Dept. of Environ. Medicine</td>
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<tr>
<td>2012-present</td>
<td>Dept. Appointments &amp; Promotions Comm., Chair, NYUSOM, Dept. of Environ. Medicine</td>
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**Advisory Committees**

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<tr>
<td>Regional</td>
<td>Massachusetts Air Rhode Advisory Board, Member, Mass. Dept. of Env. Protection</td>
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<td>Regional</td>
<td>Committee on Environment, &amp; Occup. Health, NY State American Lung Association</td>
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<td>Regional</td>
<td>Air Management Advisory Council, Member, Health Effects Institute, NY State DEC</td>
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<td>Regional</td>
<td>Engineering Advisory Board, Member, Ryerson, NY</td>
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<td>Regional</td>
<td>Activity Committee to the Mayor on the Port of Newbury, Member, Newbury, NY</td>
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<tr>
<td>Regional</td>
<td>CUBS Asthma Working Group, Member, New York Academy of Medicine</td>
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<td>Regional</td>
<td>New York City Community Air Study (NYCCAS) Advisory Panel</td>
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**Notes**

- 1995-1999 Comm. on Health Effects of Waste Incineration, Member, National Academy of Sciences
- 1995-1999 National Air Conservation Committee, Member, American Lung Association
- 2000-2004 National Action Plan on Environment, Member, American Lung Association
- 2005-present National Clean Air Committee, Member, American Lung Association
- 2007-2010 U.S. EPA Clean Air Science Advisory Committee (CASA) for SO2 and NOx

Mar 2012: EPA Panelist for “Roadmap Workshop to Inform EPA Review of the Primary NO2 NAAQS” International

- 2008-2012 Global Burden of Disease (GBD), Committee on the Human Health Effects of Ozone and Air Pollutants, World Health Organization (WHO)

**Grant Review Committees (National)**

- March 1989 EPA Air Chemistry and Physics Extramural Grants Review Panel (ad hoc member)
- Oct 1989: NIH ES01 Center Special Review Panel (ad hoc member)
- July 1992: NIH ES01 Epidemiology & Disease Control Study Section (ad hoc member)
- Nov 1992: NIH ES01 Center Development Grant Special Study Section (ad hoc member)
- June 1996: EPA Special Review Panel of the Health Effects Institute (HEI) (ad hoc member)
- March 1997: EPA Office of Res. and Development External Grant Review Panel (ad hoc member)
- April 1997: NIH ES01 Community-Based Participatory Res. R01 Special Study Sect. (ad hoc member)
- July 1997: EPA National Environmental Research Institute Research Review Panel (ad hoc member)
- June 1998: EPA Office of Res. and Development External Grant Review Panel (ad hoc member)
- July 1998: EPA Climate Policy and Programs Division Grant Application Review (ad hoc member)
- Oct. 1998: Mickey Leland Center for Air Toxics Grant Review Panel (ad hoc member)
- April 2000: NIH ES01 Center Special Review Panel (ad hoc member)
- July 2001: NIH ES01 Community-Based Participatory Res. R01 Special Study Sect. (ad hoc member)
- Dec. 2001: NIH ES01 Program Project Reu Review Request Panel (ad hoc member)
- April 2003: NIH ES01 Foggy Health, Env. and Economic Development Study Sect. (ad hoc member)
- Nov. 2003: U.S. EPA STAR Grant Panel (Epidemiologic Research on Health Effects of Long-Term Exposure to Ambient Particulate Matter and Other Air Pollutants) (member)
- October 2004: NIH ES01 Program Project R01 Review Panel (ad hoc member)
- June 2005: NIH Special Emphasis Panel (CRGS, HPV Q M $) (ad hoc member)
- Nov. 2005: NIH Infectious Disease, Reproductive Health, Asthma/Allergy, and Pulmonary (IRAP) Conditions Study Section Review Panel (ad hoc member)
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<td>NIH Infectious Disease, Reproductive Health, Asthma/Allergy, and Pulmonary (ERAP) Conditions Study Section Review Panel (ad hoc member)</td>
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<tr>
<td>June 2006</td>
<td>NIH Infectious Disease, Reproductive Health, Asthma/Allergy, and Pulmonary (ERAP) Conditions Study Section Review Panel (ad hoc member)</td>
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<td>Dec. 2006</td>
<td>NHIER Special Emphasis Panel on Genetics, Air Pollution, and Respiratory Effects (ZEIS: TNE FG I) (member)</td>
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<td>Nov. 2007</td>
<td>NIH Special Emphasis Panel on Community Participation in Research (ZEG1 HOP-5) (member)</td>
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<td>June 2009</td>
<td>NIH Study Section Review Panel on Challenge Grants in Health &amp; Science Research</td>
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<td>March 2011</td>
<td>U.S. EPA Science to Achieve Results (STAR) Graduate Fellowship Review Panel — Clean Air Panel (chair)</td>
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<td>Sept. 2011</td>
<td>NIH Special Epidemiology Study Section (ZERG: PSE K 02 M) (member)</td>
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<td>Oct. 2012</td>
<td>NIH Cardiac and Sleep Epidemiology (CASE) Study Section (ad hoc member)</td>
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<tr>
<td>June 2013</td>
<td>NIH Special NHLBI Dataset Study Section (ZERG1 PSEQ 56) (member)</td>
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<td>July 2013</td>
<td>NIH “Career Awards” Study Section (ZERI LWJ D, K9) (member)</td>
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### Memberships, Offices, and Committee Assignments in Professional Societies

**Year**

- 1988-1996: Air and Waste Management Association (Germ. on Health Effects and Exposure)

### Editorial Positions

**Year**


### Ad Hoc Manuscript Reviewer

- 1994: Archives of Environmental Health
- 1995-present: Atmospheric Environment
- 1995-present: Environmental Health Perspectives
- 1994-present: Environmental Research
- 2004-present: Environmental Science and Technology
- 2011-present: Epidemiology
- 1993-present: Journal of Exposure Analysis and Environmental Epidemiology
- 1994-present: Journal of the Air and Waste Management Association
- 1996-present: Journal of the American Medical Association
1997-present  Journal of Occupational and Environmental Medicine
1997-present  Journal of Respiratory and Critical Care Medicine
2006-present  Thorax

Scientific Report Reviewer
August, 1986  Reviewer for the National Academy of Sciences, Board on Environmental Studies and Toxicology report “The Airliner Cabin Environment: Air Quality and Safety”
October, 2002  Reviewer for the National Academy of Sciences, Board on Environmental Studies and Toxicology report “Estimating the Public Health Benefits of Proposed Air Pollution Regulations”

Monitoring of Graduate Students, Residents, Post-Doctoral Fellows in Research

<table>
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<th>Under direct supervision:</th>
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<table>
<thead>
<tr>
<th>Student Name</th>
<th>Type of Position</th>
<th>Time Period</th>
<th>Present Position</th>
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</thead>
<tbody>
<tr>
<td>Kazuhiko Ito</td>
<td>Masters/Doctoral</td>
<td>1984-1990</td>
<td>Scientist, NBA Dept. of Health, NYC, NY</td>
</tr>
<tr>
<td>Peter Aquas</td>
<td>Masters/Doctoral</td>
<td>1988-1990</td>
<td>Assoc. Prof., Clarkson Univ., Potsdam, NY</td>
</tr>
<tr>
<td>Kevin Croner</td>
<td>Masters/Doctoral</td>
<td>2008-2012</td>
<td>Assistant Professor, NBA School of Medicine</td>
</tr>
<tr>
<td>Liand Yin</td>
<td>Doctoral</td>
<td>2011-present</td>
<td>Doctoral Counselor, NBA School of Medicine</td>
</tr>
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In advisory function (thesis committee):

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Advisory Role</th>
<th>Time Period</th>
<th>Student's Supervisor</th>
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<tbody>
<tr>
<td>Shao-Kang Liang</td>
<td>Doctoral Committee member</td>
<td>1999-2003</td>
<td>Dr. J. Waldman, UMDNJ, Rutgers</td>
</tr>
<tr>
<td>Jerry Fawcett</td>
<td>Doctoral Committee member</td>
<td>1997-2000</td>
<td>Dr. M. Lipperman, NBA SOM</td>
</tr>
<tr>
<td>Yir Jia</td>
<td>Doctoral Committee member</td>
<td>1997-2003</td>
<td>Dr. K. Ho, NBA SOM</td>
</tr>
<tr>
<td>Shun-Ming Chen</td>
<td>Doctoral Committee member</td>
<td>2000-2004</td>
<td>Dr. L.C. Chen, NBA SOM</td>
</tr>
<tr>
<td>Chien-Ran Wang</td>
<td>Doctoral Committee member</td>
<td>2002-2004</td>
<td>Dr. R. Zinn, NBA WM, WNY</td>
</tr>
<tr>
<td>Shu-Yi Hsu</td>
<td>Doctoral Committee member</td>
<td>2000-2009</td>
<td>Dr. M. Lipperman, NBA SOM</td>
</tr>
<tr>
<td>Steven Schaefer</td>
<td>Doctoral Committee chair</td>
<td>2007-2009</td>
<td>Dr. B. Cohen, NBA SOM</td>
</tr>
<tr>
<td>Christine Banga</td>
<td>Doctoral Committee Chair</td>
<td>2009-2011</td>
<td>Dr. G. Friedman, NYC Trachtenberg, NBA SOM</td>
</tr>
<tr>
<td>Rebecca Gudin</td>
<td>Doctoral Committee Chair</td>
<td>2009-2012</td>
<td>Dr. Kazuhiko Ito, NBA SOM</td>
</tr>
<tr>
<td>Xiang-Jie Zhou</td>
<td>Doctoral Committee Chair</td>
<td>2009-2012</td>
<td>Dr. Kazuhiko Ito, NBA SOM</td>
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Teaching Awards Received

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Major Research Interests

1) Air Pollution Epidemiology: The study of real-world air pollution exposures and human health effects in the general population and in study cohorts of exposed susceptible individuals (e.g., children, older adults, and those with chronic lung disease).

2) Aerosol Science: The study of ambient particulate matter levels, including designing and implementing air monitoring equipment to collect human exposure to air pollution.

3) Environmental Exposure Assessment: The study of methods to assess human exposures and health effects from air pollution, especially the development of source apportionment models to separate human effects on the basis of pollution source, as well as the design of epidemiological

5
models and methods that better incorporate potential confounders/effect modifiers in the air pollution-health link, such as weather and genetic influences on health.
### Grants Received

<table>
<thead>
<tr>
<th>Agency</th>
<th>Title</th>
<th>Grant #</th>
<th>Period</th>
<th>Total Direct Cost</th>
<th>Role</th>
<th>% Effort</th>
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<tr>
<td>USEPA</td>
<td>Effects of Acid Exposure to Snowflake Farm Epoca on the Health of Ecosystems</td>
<td>R831583</td>
<td>05/01/11-04/30/12</td>
<td>$358,380</td>
<td>Co-i</td>
<td>30%</td>
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<tr>
<td>NIH</td>
<td>Acidic Arsenic Exposure: Effect on Respiratory Merthodity</td>
<td>1R33ES04461-01</td>
<td>06/01/11-05/31/12</td>
<td>$844,996</td>
<td>PI</td>
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<tr>
<td>USEPA</td>
<td>Acidic Ammonium Experiments</td>
<td>OO523A43X</td>
<td>06/01/11-05/31/12</td>
<td>$5,010</td>
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<td>USEPA</td>
<td>Analysis of Acidic Ammonium Exposure</td>
<td>0R222244AAXX</td>
<td>07/01/11-05/31/12</td>
<td>$3,964</td>
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<td>USEPA</td>
<td>Air Pollution and Human Health</td>
<td>R814022</td>
<td>07/01/11-05/31/12</td>
<td>$498,921</td>
<td>Co-i</td>
<td>50%</td>
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<tr>
<td>USEPA</td>
<td>Development and Applicat of an Acrylamid Sequential Weekly Average M-1 System</td>
<td>Substance 2 EPA Grant CER-1537462</td>
<td>06/02/11-05/31/12</td>
<td>$51,156</td>
<td>PI</td>
<td>15%</td>
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<td>NIH</td>
<td>Acidic Arsenic Exposure: Effect on Respiratory Merthodity</td>
<td>1R33ES04461-01</td>
<td>06/01/11-05/31/12</td>
<td>$377,296</td>
<td>PI</td>
<td>50%</td>
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<td>NEI</td>
<td>Retrospective Characterization of Ozone Exposure</td>
<td>Health Effects Institute Grant</td>
<td>11/01/11-10/31/11</td>
<td>$99,238</td>
<td>Co-i</td>
<td>10%</td>
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<td>NIH</td>
<td>Compartments and Air Pollution Effects on Human Merthodity</td>
<td>1R33ES01794</td>
<td>06/01/11-11/30/12</td>
<td>$371,993</td>
<td>PI</td>
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<td>NYU/SOM</td>
<td>Environmental Effects on Human Merthodity and Mortality</td>
<td>Bridge Grant</td>
<td>06/01/11-11/30/12</td>
<td>$45,400</td>
<td>PI</td>
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<td>USEPA</td>
<td>Effects of Exposure to Ambient Air Pollution on Human Health</td>
<td>R838325</td>
<td>06/01/11-11/30/11</td>
<td>$475,315</td>
<td>Co-i</td>
<td>50%</td>
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<td>USEPA</td>
<td>Investigation of Acidic Arsenic Exposure in Metropolitan Settings</td>
<td>Substance 3 EPA Grant CER-1537462</td>
<td>11/01/11-06/30/12</td>
<td>$200,499</td>
<td>PI</td>
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<td>USEPA</td>
<td>An Evaluation of Potential Contaminants in PM10 Mortality Associations</td>
<td>R822373</td>
<td>11/01/11-10/31/12</td>
<td>$121,618</td>
<td>Co-i</td>
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<td>USEPA</td>
<td>Acute PM and Daily Human Mortality in Three U.S. Cities</td>
<td>R825204</td>
<td>11/01/11-11/30/11</td>
<td>$332,671</td>
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<td>NYSHOG</td>
<td>Environmental Monitoring, Prediction, and Prevention Program</td>
<td>R8444/ERTP-E 300</td>
<td>12/01/11-11/30/12</td>
<td>$341,826</td>
<td>PI</td>
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<td>NEI</td>
<td>Children's Asthma Incidence and Mortality Exposures to Diesel Particulate and Traffic in NYC</td>
<td>R831593</td>
<td>11/01/11-10/31/12</td>
<td>$154,068</td>
<td>PI</td>
<td>10%</td>
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<td>USEPA</td>
<td>Influence of Ambient Indicators of Exposure to PM and APM Components in Statistical Association with Mortality and Hospital Admissions</td>
<td>R833738</td>
<td>02/01/11-01/31/12</td>
<td>$132,068</td>
<td>PI</td>
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<td>NIH</td>
<td>NEISS Center Supplement: Health Issues Related to the World Trade Center Disaster, Outbreak Project 1550614-51 04/01/02-03/31/03 Total/P $346,407 Outreach/P $172,035 PI 40% Co-PI 10%</td>
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<td>Effects of Ambient Air Pollution on Annual Mortality R01 ES09999 04/15/00-09/30/03 $47,169 PI 30%</td>
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<td>USEPA</td>
<td>Particle Emissions of High-Rise Building\n Air深深 BOX 1565-74 09/01-06/30/03 $1,127,230 Co-I 10%</td>
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<td>USEPA</td>
<td>A Source-Oriented Evaluation of the Combined Effects of Fine Particles and CO in Air 1327397 04/01-06/30/04 $289,407 Co-I 10%</td>
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<td>NIH</td>
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<td>USEPA</td>
<td>EPA PM Health Effects Center Project 6: A Prospective Study of Airborne Susceptibility to PM Epidemiologic Investigations of Key PM Components and Biomarkers of Effects &amp; Community Outreach Project R01 227331 06/01/00-05/31/05 Total/P $1,349,922 Outreach/P $177,792 PI 10% Co-I 10%</td>
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<td>NIH</td>
<td>General/Episodic Susceptibility to Spirochetal Chlamydia Outbreak Project R0100244 06/01-05/31/06 $118,812 Co-I 5%</td>
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<td>USEPA</td>
<td>Exposures to the South Bronx Thoracic Project: S. Bronx Backyard Study R01492152 08/01/00-08/30/01 Total/P $491,023 Co-I 5% PI 10%</td>
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<td>NEISS Center Supplement: Health Issues Related to the World Trade Center Disaster, Source Attribution Project 6: Community Outreach 1550618-52 08/01/02-08/31/04 Total/P $600,000 Outreach/P $172,035 Co-PI 10% PI 10%</td>
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<td>USEPA</td>
<td>The Role of Traffic-Related Pollution in PM Health Effects: Associations Among Immunity Children with asthma R211 04/01-08/30/01 Total/P $51,516 PI 5%</td>
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<td>California Air Resources Board (CARB)</td>
<td>Respiratory Analysis of Air Pollutants and Mortality in California: Rapid On-line the ACS Center (Thoracic Consulting Project) R01 38912 06/01-05/31/08 Project/P $33,792 Co-I 4%</td>
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<td>USEPA</td>
<td>Real time modeling of weather, air pollution, health, and other toxicology in the U.S. 1550619-52 12/01-11/30 Total/P $176,664 Co-I 5%</td>
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<td>NIH</td>
<td>Fine Particles and Hospital-Related Outcomes in New York City 1550613-52 08/01-12/31 Total/P $398,800 Co-I 10%</td>
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<td>Health Effects Institute (HEI)</td>
<td>Characteristics of PM Associated with Health Effects: Thoracic Project: Study of 9744 Coparticipants in the ACS Center 1550610-52 04/15-07/30 Total/P $335,828 Co-I 5% PI 20%</td>
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<td>New York State DOT</td>
<td>Mobile Source Air Toxics (MSAT) Mitigation Measures</td>
<td>09/01/10-09/30/13</td>
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<td>Robert Wood Johnson Foundation</td>
<td>The Effect of Peak-Driving Regulations on the Activity, Tissue Deformation, and Health Impacts in Local Power Plants</td>
<td>07/01-</td>
<td>$151,000</td>
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<td>NIAH</td>
<td>Long-term Effects of Pollution Exposure and Mortality in the NIH-AARP Cohort</td>
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<td>The Public Health Research Institute of New York State</td>
<td>“Air Pollution in Abu Dhabi: Development of a Public Health Research Institute in Abu Dhabi. There is Project — Air Pollution in Abu Dhabi”</td>
<td>07/01-06/30/17</td>
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Parents
None

Boards and Community Organizations
1990-1995 St. Mary’s Episcopal Church, Tuxedo, NY, Vestry member
1993-present Monroe-Woodbury Soccer Club, Coach (Board Member: 1999-2006)
1994-present Orange County Citizens’ Foundation, Member
2005-present St. Mary’s Episcopal Church, Tuxedo, NY, Community Outreach Committee, Member
2006-present EPSCOBUILD-Newburgh, NY Habitat for Humanity Advisory Board, Member
2012-present St. Mary’s Episcopal Church, Tuxedo, NY, Vestry member

Military Service
None

International Scientific Meetings Organized

Scientific Forums for the Public Organized
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<td></td>
<td>“Forum on Environmental Health Issues Related to the World Trade Center Disaster.” Held at NYU Law School, Washington Square, New York City, NY.</td>
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<td>“3rd Annual Forum on the Environmental Health Issues Related to the World Trade Center Disaster.” Held at Manhattan Borough Community College, New York City, NY.</td>
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<td>“3rd Annual Forum on the Environmental Health Issues Related to the World Trade Center Disaster.” Held at NYU Lower Manhattan Campus, New York City, NY.</td>
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<td><strong>Invited U.S. House and Senate Congressional Testimony</strong></td>
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July 19, 2006  
http://www.epa.gov/si/medial/epc040104.htm  

May 7, 2006  
http://www.epa.gov/otaq/co2/summary.htm  

October 4, 2001  
http://www.epa.gov/otao/air/casac/casac/statement.htm  

Other Invited Presentations
Regional Presentations
April 21, 1993  
“Smog and Hospital Admissions for Respiratory Illness”, Environmental and Occupational Health Sciences Institute Seminar Series Lecture, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ.

Dec. 14, 1995  

Jan. 18, 1996  
“Outdoor Air Pollution and Asthma in Children” American Lung Association Press Briefing, New York, NY.

June 1, 1996  
“Asthma and Urban Air Pollution”, WHEAC, Harlem Hospital, New York, NY.

July 17, 1996  
“Asthma and Outdoor Air Pollution”, Making the Connection: Urban Air Toxics & Public Health, Northeast States for Coordinated Air Use Management (NESCAMS), Rindge, MA.

Feb. 11, 1997  
“Outdoor Air Pollution and Asthma”, Bellevue Hospital Asthma Clinic Grand Rounds. New York City, NY.

Feb. 26, 1998  
“Scientific Research on Ozone and Fine Particulate Standards”, Pace University School of Law, White Plains, NY.

Nov. 30, 1998  
“Outdoor Air Pollution and Asthma”, Center for Urban and Environmental Studies (CUES), NY Academy of Medicine, New York, NY.

Feb. 22, 1999  
“Asthma and Air Pollution”, Cornell University, Ithaca, NY.

April 28, 2001  
“Asthma and Air Pollution in New York City”, NYC Council Environmental Candidate School, NY League of Conservation Voters, New York, NY.

Nov. 1, 2001  
“Air Quality and Environmental Impacts Due to the World Trade Center Disaster”, Testimony before the Comm. on Environ. Protection, NYC Council, New York, NY.

Nov. 15, 2001  

Feb. 28, 2002  
“Long-Term Effects of Long-Term Exposure to Ambient Fine Particulate Matter”, Mailman School of Public Health, Columbia University, New York, NY.
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April 5, 2002
"Air Pollution Impact of the WTC Disaster", 23rd Annual Scientific Conference of the NY/NJ Education and Research Center: "Worker Health and Safety: Lessons Learned in the Aftermath of Sept. 11, 2001", Mt. Sinai School of Medicine, NYC, NY.

April 21, 2002
"Adverse Health Effects of Power Plant Air Pollution on Children", Earth Day 2002, 14th Street Y, New York City, NY.

May 23, 2002
"Human Health Effects of Power Plant Pollution", Rockland County Conservation Association, Suffern, NY.

May 31, 2002
"Environmental Health Impacts of the World Trade Center Disaster", University of Rochester Medical School, Rochester, NY.

Sept. 19, 2002

Oct. 3, 2002
"Community Exposure to Particulate Matter Air Pollution from the World Trade Center Disaster", Mount Sinai School of Medicine Ground Rounds, New York City, NY.

April 11, 2003
"Environmental Impacts of the World Trade Center Disaster", NIEHS Public Interest Liaison Group, New York City, NY.

April 21, 2003
"Asthma and Air Pollution", Asthma Threats to Human Health, NIEHS Town Hall Meeting, Syracuse, NY.

May 7, 2003
"Asthma and Air Pollution in NYC City" Environmental Candidate School for New York City Council Candidates, Wagner School, NYU, New York City, NY.

July 21, 2003
"Health Effects of Particulate Matter Air Pollution", Oncore Transport Commission, Philadelphia, PA.

Nov. 18, 2004
"Ambient Air Pollution Particulate Matter (PM): Sources and Health Impacts", U.S. Environmental Protection Agency, Region 2, New York City, NY.

Feb. 17, 2005
"Community Air Pollution Aspects Of The Demolition Of 9-11 Contaminated Buildings", Testimony before the Committee On Lower Manhattan Redevelopment, New York City Council, New York City, NY.

Oct. 19, 2005
"Air Pollution Health Effects: Consideration of Mixtures", Fall Meeting of the Mid-Atlantic Chapter of the Society of Toxicology (MASOT), East Brunswick, NJ.

Dec. 7, 2006
"Asthma and Air Pollution Effects in the South Bronx", New York City Child Health Forum, The Children's Health Fund, Harlem, NYC, NY.

Jan. 18, 2007
"Air Pollution in New York City", NYU Environmental Science Seminar Lecture, Washington Square, NYC, NY.

Jan. 23, 2007

Oct. 2, 2009

June 19, 2012

National Presentations
Oct. 20, 1987
"NIH Symposium on the Health Effects of Acid Aerosols: "Re-examination of London, England: Mortality in Relation to Exposure to Acidic Aerosols During 1952-1972 Winter" RTP, NC.

Aug. 13, 1991
"Kuwaiti Mortality Rates from SO2 and Particles: Insights from the London Fog?", "The Kuwait Oil Fires Cont., American Academy of Arts and Sciences, Cambridge, MA."
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<tr>
<td>Jan. 24, 1994</td>
<td>“Air Pollution Epidemiology: Is the Model the Message?” The First Colloquium on Particulate Air Pollution and Human Mortality and Morbidity. Beckman Center of the NAS, Irvine, CA.</td>
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<tr>
<td>May 25, 1994</td>
<td>“Epidemiological Evidence Linking Outdoor Air Pollution and Increased Hospital ADMISSIONS for Respiratory Ailments” American Thoracic Society Annual Meeting, Boston, MA.</td>
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<tr>
<td>May 6, 1996</td>
<td>“Associations Between PM &amp; Mortality in Multiple US Cities.” Second Colloquium on Particulate Air Pollution and Health, Park City, UT.</td>
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<td>April 3, 1997</td>
<td>“Health Effects of Ambient Ozone &amp; Particulate Matter” Air and Waste Assoc. Regional Conference On Impacts of EPA’s Proposed Changes to Ozone and PM Standards, Oak Brook, IL.</td>
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<tr>
<td>April 22, 1998</td>
<td>“The New EPA Standards for Ambient PM and Ozone” American Lung Association Annual Meeting, Chicago, IL.</td>
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<td>Dec. 21, 1999</td>
<td>“Global Overview of Human Health and Illness due to Air Pollution.” California Air Resources, Sacramento, CA.</td>
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<td>June 24, 2002</td>
<td>“Investigations into the Environmental Health Impacts Related to the WTC Disaster.” Air and Waste Management Annual Meeting, Baltimore, MD.</td>
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<td>July 15, 2002</td>
<td>“Air Pollution and Human Health” NIEHS Built Environment Conference, RTP, NC.</td>
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<td>October 7, 2002</td>
<td>“Community Exposures to Particulate Matter Air Pollution from the World Trade Center Disaster” Plenary Speaker at the American Association of Aerosol Research, Charlotteville, North Carolina.</td>
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<td>Nov. 11, 2002</td>
<td>“Characterization of Community Exposures to World Trade Center Disaster Aerosols and Settled Dust Particulate Matter Air Pollution.” American Public Health Association Annual Meeting, Philadelphia, PA.</td>
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<td>Dec. 5, 2002</td>
<td>“Susceptibility of Older Adults to Air Pollution,” EPA Workshop on Differential Susceptibility of Older People to Environmental Hazards. National Academy of Sciences, Washington, DC.</td>
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<td>Sept. 10, 2003</td>
<td>“Nature and impact of World Trade Center Disaster fine particulate matter air pollution at a site in Lower Manhattan after September 11.” Annual Meeting of the American Chemical Society, New York, NY.</td>
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<tr>
<td>October 20, 2003</td>
<td>“Snagging Air Pollution Links to the Community” Annual Meeting of the NIEHS Crime Directors, Baltimore, MD.</td>
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<tr>
<td>May 18, 2004</td>
<td>“The Health Impacts for Implementation of the Clean Air Act” State and Territorial Air Pollution Program Administrators Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) National Conference, Point Clear, Alabama.</td>
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<td>Feb. 26, 2010</td>
<td>&quot;What studies are appropriate to use to estimate health impacts from specific sources such as diesel PM?,&quot; CARR Symposium: &quot;Estimating Premature Deaths from Long-term Exposure to PM2.5,&quot; Sacramento, CA.</td>
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<td>May 16, 2012</td>
<td>&quot;The Human Health Effects of Air Pollution&quot; The Air We Breathe Regional Summit on Asthma and Environment at Allegheny General Hospital, Pittsburgh, PA.</td>
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**International Presentations**

| July 2, 1997 | "Health Effects of Air Pollution in the US," University of Sao Paulo, Sao Paulo, Brazil. |
| Feb. 5, 1991 | "Results from the Analysis of Toronto Summer Sulfate and Aerosol and Acidicity Data", Workshop on Current Use and Future Directions of Hospital-Based Data in the Assessment of the Effects of Ambient Air Pollution on Human Health. Health and Welfare Canada, Ottawa, Canada. |
| Nov. 1, 1999 | "Climate Change and the Health Impacts of Air Pollution", The Public Health Opportunities and Hazards of Global Warming Workshop at the U.N. Framework Convention on Climate Change, Conference of Parties (COP5), Bonn, Germany. |
| August 31, 2000 | "Particulate Matter Air Pollution and Health in Three Northeastern Cities," World Congress on Lung Health, Florence, Italy. |
| Feb. 4-5, 2002 | "Air Pollution Exposure Assessment Approaches in U.S. Long-Term Health Studies: Workshop on Exposure Assessment in Studies on the Chronic Effects of Long-term Exposure to Air Pollution, World Health Organization, Bern, Germany. |
| May 2, 2002 | "Health Effects of Sulfate Air Pollution" Air Pollution as a Climate Forcing Workshop, East-West Center, Honolulu, Hawaii. |
| Sept. 24, 2003 | "Identification and Characterization of World Trade Center Disaster Fine Particulate Matter Air Pollution at a Site in Lower Manhattan Following September 11," Annual Meeting of the International Society for Environmental Epidemiology (ISEE), Perth, Australia. |
Sept 14, 2005  "Results And Implications of The Workshop on the Source Apportionment of PM Health Effects", Annual Meeting of the International Society for Environmental Epidemiology (ISEE), Johannesburg, South Africa.
Sept. 4, 2007  "Appraising Attributable Risk Methods to Identify Susceptible Subpopulations", Annual Meeting of the International Society for Environmental Epidemiology (ISEE), Mexico City, Mexico.
Aug. 27, 2009  "Ischemic Heart Disease Mortality Associations with Long-Term Exposure to PM$_2.5$ Component", Annual Meeting of the International Society for Environmental Epidemiology (ISEE), Dublin, Ireland.
Dec. 1, 2010  "The Hidden Air Quality Health Benefits of Climate Change Mitigation", The Energy and Resources Institute (TERI), Lodhi Road, New Delhi, India.
Aug. 29, 2012  "Health Effects of PM Components: NYU NPACT Epidemiology Results and their Integration with Toxicology Results", Annual Meeting of the International Society for Environmental Epidemiology (ISEE), Columbia, SC.

Scientific Meeting Sessions Chaired
May 1, 1996  "Epidemiological Findings", 2nd Colloquium on Particulate Air Pollution & Health, Park City, UT.
August 18, 1998  "Community and Airways: How to Co-Exist", Annual Meeting of the International Society for Environmental Epidemiology (ISEE), Boston, MA.
April 26, 1999  "Pulmonary Smoking and Air Pollution Epidemiology", American Thoracic Society Annual Meeting, San Diego, CA.
Sept. 6, 1999  "Personal exposure to Ozone and Particles", Annual Conference of the International Society for Environmental Epidemiology (ISEE), Athens, Greece.
Sept. 5, 2001  "Mortality Epidemiology Studies", Annual Meeting of the International Society for Environmental Epidemiology (ISEE), Garmisch, Germany.
April 1, 2003  "Epidemiology: Short-Term and Long-Term Health Effects", Conference on Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA.
May 19, 2003 “Particulate Air Pollution and Diseases in Adults”, American Thoracic Society Annual Meeting, Seattle, WA.

May 21, 2003 “Air Pollution as a Cause of Childhood Asthma and Chronic Airways Disease”, American Thoracic Society Annual Meeting, Seattle, WA.


June 22, 2006 “Characteristics of PM and Related Constituents”, Annual Meeting of the Air and Waste Management Association, New Orleans, LA.


Sept. 20, 2006 “Linkage and Analysis of Air Quality and Health Data”, EPA & CDC Symposium on Air Pollution Exposure and Health, RTP, NC.


March 23, 2010 “Exposure to and Health Effects of Traffic Pollution”, 2010 American Association for Aerosol Research Conference on Air Pollution and Health, San Diego, CA.


Bibliography

Invited Journal Editorials


Book Chapters

Code Issue Response

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**Peer Reviewed Journal Articles/Letters**


REPORTS

Two

Response to ADOT Draft Environmental Impact Statement (DEIS) 1. Purpose and Need A. Need Based on Socioeconomic Factors by Kevin Kane dated July 24, 2013.
**RESPONSE TO ADOT DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)**

**1. PURPOSE AND NEED**

**A. NEED BASED ON SOCIOECONOMIC FACTORS**

Comments prepared by Kevin Kean1 on behalf of PARC, et al.

*July 24, 2013*

**Introduction**

The Arizona Department of Transportation (ADOT) justifies the purpose and need for the construction of the South Mountain Freeway in Chapter 1 of the DEIS. Most of the conclusions rely on socioeconomic projections for the year 2013 conducted by the Maricopa Association of Governments (MAG) and the Arizona Department of Economic Security (DES).

The DEIS justification of the purpose and need for the Loop 202/South Mountain Freeway ("Freeway") is fatally flawed. This report demonstrates how the use of outdated input data, the extension of short-term trends to long-term growth, and the failure to account for uncertainty in future projections all contribute to the DEIS’ flawed conclusions. If appropriate data, inputs, and interpretation of model results are used, it becomes evident that there is no purpose or need for the freeway based on socioeconomic factors.

**Background: Establishing Need Based on Socioeconomic Factors**

The DEIS relies on projections of future population, land use, employment, and housing produced with MAG, with additional input from the DES. MAG projections are detailed in three reports: an original 2007 report1, the documentation to support the projections in this report2, and a 2009 update of the same model extending the projections an additional five years to 20353.

The MAG land use model allocates households and employment to locations in Maricopa County as of 2035 using a proprietary model called DREAMTEMPAL. Starting with current population, employment, land use, and an estimated growth rate, the model assigns people and jobs to available locations based on the location’s attractiveness and the expected travel costs. The output is in the form of maps of projected land use at five-year intervals until 2035. The

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1 Kevin Kean is a PhD student and researcher at Arizona State University’s School of Geographical Sciences and Urban Planning. His specialties include geographic analysis of city growth and Phoenix’s residential development patterns during the recession. A Curriculum Vitae listing his qualifications can be found in Exhibit 1.


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The models, methods, and assumptions used throughout the Draft Environmental Impact Statement account for reasonably foreseeable future conditions and dismiss speculative considerations. As an example, the Maricopa Association of Governments, as the federally designated regional transportation planning agency, is nationally recognized as a leader in air quality modeling and traffic modeling and forecasting. The models used account for the assumptions made in the comment.

The Maricopa Association of Governments model and its application are “state of the practice” exceeding National Environmental Policy Act thresholds relative to sound science.

The National Environmental Policy Act recognizes that:

- data and projections can change throughout the process
- it is important for the process to account for those changes as they become available
- if a reasonable person could conclude that the updated information would lead to substantively different results, the decision-making attributes of the National Environmental Policy Act could be affected

**20 Purpose and Need**

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available.
The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11.

The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

The Maricopa Association of Governments’ control total for Maricopa County is consistent with the “ADOA—Medium Series” reported in Table 3 of the comment.

TransCAD traffic modeling software then uses these maps to estimate travel patterns and traffic volumes based on the predicted location of households and businesses in 2035.

Socioeconomic modeling is common practice among planning organizations, and it is often statistically rigorous. In fact, the MAG model adds several elements that are not present in earlier DREAM/EMPA models such as integrating zoning restrictions and municipalities’ land use plans to estimate how to allocate households and employment. However, several major flaws can exist in modeling techniques that often result in inaccurate or misleading projections of future travel needs:

- Models are extremely sensitive to input data
- Models rely on extending short-term economic trends over long time periods
- Models lack confidence intervals— they report only a single projected value, implying a much greater amount of certainty than is actually available

In the case of the MAG model and the proposed Freeway extension, these flaws are so significant that they call the purpose and need for the project as established in the DEIS into question.

Use of Outdated Input Data

The first page of Chapter 1 of the DEIS states: “At the beginning of the EIS process, the need for a major transportation facility was recognized to determine whether such a facility is still needed.” However, the DEIS fails to re-evaluate the purpose and need as of its effective date of April 2013, instead relying on projections that were released to the public when the Freeway was proposed in 2004–2005. By ignoring the effects of the real estate collapse and global recession, which had profound effects on Phoenix’s growth, ADOT fails to effectively analyze purpose and need.

The original report relied principally on base year 2000 data to project land use at five year increments until 2030. The updated report extended these projections to 2035, but used the same data sources. The conclusions in the DEIS are based principally on:

i. 2005 Special Census for population
ii. 2009 Census housing unit count, updated to 2005 using estimated residential completions
iii. 2005 employment
iv. 2003 existing land use coverage

The documentation of MAG’s projections also states that, “the model takes into account short-term economic conditions, but not long-range employment trends.” In other words, MAG admits that a shortcoming of the model is to use the extension of short-range trends to long-range growth. Notwithstanding, MAG not only uses short-range trends to predict long-range growth, it fails to accurately identify short-range trends. 2010 Census data is currently available and should have been included in the DEIS. In Table 1, actual 2010 figures are used to check the accuracy of the projections found in the DEIS.

See Ref. 3, pg. 20
Table 1

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<td>4,080,222</td>
<td>4,138,897</td>
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<td>Study Area</td>
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<td>617,119</td>
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<td>Southwest Valley</td>
<td>125,382</td>
<td>203,618</td>
<td>22.5%</td>
<td>169,830</td>
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As indicated in Table 1, MAG estimates of 2005-2010 annual population growth in the County and the Study Area are more than double the actual population growth experienced. Table 2 uses 2010 Census data to compare projected with actual growth in the number of housing units:

Table 2

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<td>Maricopa County</td>
<td>1,479,767</td>
<td>1,693,134</td>
<td>12.5%</td>
<td>1,639,272</td>
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<td>Study Area</td>
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<td>520,497</td>
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<tr>
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<td>South Central</td>
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<td>Southwest Valley</td>
<td>42,905</td>
<td>77,795</td>
<td>81.3%</td>
<td>77,795</td>
<td>81.3%</td>
</tr>
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</table>

While the MAG estimates of housing growth in Maricopa County are less overstated than population growth, the Study Area experienced virtually no housing growth over this period.

Indeed, independent analysis of Phoenix from 2006-2012 indicates that three Phoenix neighborhoods within the Study Area – Ahwatukee Foothills, Etiwanda, and Laveen – are in the top five for decrease in residential completions over this period. MAG estimates dramatically overstate growth in the study area and fail to accurately predict short-term growth.

Extension of Short-Term Economic Trends to Long-Range Growth

MAG admits that a shortcoming of the model it uses is the extension of short-term trends to long-range growth. Notwithstanding, MAG not only uses short-term trends to predict long-range growth, it fails to accurately identify short-term trends (as shown in Tables 1 and 2 above). The DES includes a lengthy discussion of the historical indicators of growth in Phoenix and a sidebar on page 3-11 that states, “the critical factors underlying these indicators remain unchanged” and further provides that short-term economic conditions are not relevant to long-term planning horizons. This conclusion conveniently omits structural economic changes resulting from the recent real estate collapse and global recession and is internally inconsistent.

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Although not acknowledged in the DEIS, the Arizona Department of Administration (ADOA) produced population estimates in 2011. ADOA bases its projections on fertility, mortality, and net migration. ADOA projects population by county for each year until 2050. Unlike the MAG model used in the DEIS, ADOA relies on the most recent available population count (2010 U.S. Census). Furthermore, by considering the fact that future fertility, mortality, and net migration in Maricopa County may vary, ADOA provides a range of possible future population counts by considering multiple possible input values. Thus, their population projections are reported as a Medium Series (the baseline estimate), alongside Low Series and High Series in order to reflect this variation.

Table 3 provides a comparison of various methods of projecting population in 2055. The DEIS figures (1) are compared with the various ADOA projections (3-5). In addition, we update the MAG/DEIS projections using actual 2010 census data, but using MAG’s growth rate (2).

Table 3: Maricopa County Population Projections for 2055

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*2010 U.S Census Total Population: 3,171,177

Table 3 indicates that there is a substantial range in possible outcomes when attempting to use short-range trends to predict long-range population growth. The original MAG projections (1) are far in excess of the updated figure using the same growth rate (2), indicating that using outdated input data inflates estimates. Furthermore, the original MAG projections are above all three ADOA estimates, indicating that the DEIS uses a more aggressive growth rate than even the highest growth population scenario predicted by the ADOA.

ADOA figures of county-wide population growth represent an improvement given their use of newer data and providing a range of values, though they do not provide data for population in the Freeway Study Area or include projections of housing units or Vehicle Miles Traveled (VMT). Using Geographic Information System (GIS) software, we are able to demonstrate the impact of using outdated input data on population projections for the Freeway Study Area and its component regions. We again update MAG/DEIS projections using 2010 U.S. Census data in combination with their predicted growth rates. This is done for population (Table 4) and housing units (Table 5).

---

The study used state-of-the-practice, scientific community methods and similarly accepted methods, including the use of a standard input-output economic model and of assumptions based on traffic data and projections. The analysis is not required to project ranges, and the results are reasonably foreseeable based on what data are provided from the U.S. Environmental Protection Agency-approved Maricopa Association of Governments model as well as local plans. Further, methods, assumptions, and data were developed early in the environmental impact statement process and peer-reviewed by the Federal Highway Administration, the Arizona Department of Transportation, and other federal, state, and local agencies. Peer reviewers concluded that the methods, assumptions, and data are appropriate. Potential factors that could influence changes in the analysis and study findings are listed on page 4-1 of the Final Environmental Impact Statement.
The Draft Environmental Impact Statement does not consider toll roads as an alternative warranting detailed study in the Draft Environmental Impact Statement and as such, a comparison of performance between toll roads and the proposed action is inappropriate. The study used state-of-the-practice, scientific community methods and similarly accepted methods, including the use of a standard input-output economic model and of assumptions based on traffic data and projections. The analysis is not required to project ranges, and the results are reasonably foreseeable based on what data are provided from the U.S. Environmental Protection Agency-approved Maricopa Association of Governments model as well as local plans. Further, methods, assumptions, and data were developed early in the environmental impact statement process and peer-reviewed by the Federal Highway Administration, the Arizona Department of Transportation, and other federal, state, and local agencies. Peer reviewers concluded that the methods, assumptions, and data are appropriate. Potential factors that could influence changes in the analysis and study findings are listed on page 4-1 of the Final Environmental Impact Statement.

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The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.
EXHIBIT 1

KEVIN KANE
Curriculum Vitae

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RESEARCH INTERESTS
Economic development analysis, urban land use change, local government finance, applications of geographical statistics and spatial econometrics

EDUCATION
Doctor of Philosophy  Expected 2015
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Adviser: Brendan O’Reilly

Master of Arts  May 2013
Geography
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Adviser: Brendan O’Reilly

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Adviser: John C. Hudson

PROFESSIONAL EXPERIENCE
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- GCU 241: Global Economy in Transition
- GCU 361: Urban Geography
- GPH 381: Geography of Natural Resources
- GPH 210: Society and Environment
- GCU 493: Quantitative Methods in Geography

Current as of May 2013

Kevin Kane
**Comment Response Appendix**

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### Publications – In Press


### Publications – Under Review


Ó Muiliacháin, B. and Kevin Kane. Do Inventors in Less Inventive Regions Substitute Networks for this Agglomerative Economies of Scale?

Kane, Kevin, Abigail M. York, Joseph Tuccillo, Lauren Gentile, and Yun Ouyang. A Spatio-Temporal View of Historical Growth in Downtown Phoenix, Arizona.

### Conference Presentations


### SCHOLARSHIPS AND AWARDS
- Central Arizona-Phoenix Long-Term Ecological Research (CAP-LTER) Graduate Research Funding Grant Spring 2013
- CAP-LTER Poster Symposium – Honorable Mention Spring 2013
- Arizona State University, Full Teaching and Research Assistantship 2011-2016
- Arizona State University, University Graduate Fellowship 2011-2012
- Arizona State University, John F. Lauphuby Travel Fellowship 2011-2012
- Northwestern University, Environmental Sciences Departmental Honors 2008-2009
- Northwestern University, College of Arts and Science Dean’s List 2007-2008
- Boy Scouts of America, Eagle Scout 1998-2005

### THESIS

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- **Languages:** English, Conversational French, Basic Polish
- **Statistical Computing:** SAS, SPSS, R, Stata, Python, LaTeX, Excel
- **Geospatial Computing:** ArcGIS, GeoDa, pyGDL, QGIS

### PROFESSIONAL AFFILIATIONS
- Association of American Geographers 2011 – Present
EXHIBIT 2

RESIDENTIAL DEVELOPMENT REVISITED: ZONING, LOCAL EFFECTS, AND THE RECESSION IN PHOENIX, ARIZONA

Kevin Kane
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Arizona State University

Abigal M. York
School of Human Evolution and Social Change
Arizona State University

Joseph Tuccillo
Department of Geography
University of Colorado at Boulder

Lauren Garell
School of Human Evolution and Social Change
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Yun OuYang
School of Sustainability
Arizona State University

Abstract: Where people choose to live and the type of city their decisions create has formed the basis of decades of scholarly endeavor. While the typical notion of a tradeoff between access and space remains important, gentrification, polycentricity, land use institutions (zoning), and the composition of the immediately surrounding area (local effects) can all impact residential choice. We propose a logistic regression model to investigate determinants of single-family residential development at the parcel-level in Phoenix, Arizona during the 2002-2006 real estate boom and the 2006-2012 global recession. Results show a preference for cheaper land and agricultural conversion further from urban centers during the boom, while removing, though relatively inconsistent with actual land use, is an indicator of future development. Development trajectories change dramatically during the bust, disproportionately impacting agricultural conversions and previously fast-growing areas while highlighting the depth of impact that the financial environment has on land use change. [Key words: residential location, land use policy, urban sprawl, recession].

25 Abstract reviewed.
Comment Response Appendix

**How (In)accurate Are Demand Forecasts in Public Works Projects?**

The Case of Transportation

Bent Flyvbjerg, Meron K. Bussel, Halvorsen, and Sivas I. Balb
d

Despite the immense costs of uncertainty being spent on transportation infrastructure, surprisingly little empirical knowledge exists about the costs, benefits, and risks involved. The literature lacks systematic validation on the central and self-evident question of whether transportation infrastructure projects perform as forecasted. When a project underperforms, this is often explained away as an isolated instance of underperformance; it is typically not seen as part of a general pattern of underperformance in transportation infrastructure projects. Because knowledge is wanting in this area of research, and it has been impossible to validate or verify whether underperformance is the exception or the rule.

In three previous articles (Flyvbjerg, Halvorsen, et al., 2011, 2015, 2019), we examined the question of project performance in terms of costs almost 30% of projects fall significantly above average. We have also identified the causes of the deviations in project costs and sought to answer the question of whether projects perform as forecasted in terms of costs and revenue risks. We expect forecasted demand with actual demand is a significant factor in the success or failure of transportation projects. Knowledge about cost risk and revenue risks is crucial to making informed decisions about projects. This is not to say that costs and benefits are easy to predict, but the best way is to prepare for deviations that might occur. Without knowledge of such risks, deviations are likely to be far more severe.

To explain why, we use the models of transportation infrastructure projects. According to the empirical evidence, transportation projects underperform in the transportation sector, covering traffic volumes, spatial traffic distribution, and distribution between transportation modes. There is evidence that demand forecasting—like cost forecasting and demand projec
d

**EXHIBIT 3**

How (In)accurate Are Demand Forecasts in Public Works Projects? The Case of Transportation

Bent Flyvbjerg, Meron K. Bussel, Halvorsen, and Sivas I. Balb

Despite the immense costs of uncertainty being spent on transportation infrastructure, surprisingly little empirical knowledge exists about the costs, benefits, and risks involved. The literature lacks systematic validation on the central and self-evident question of whether transportation infrastructure projects perform as forecasted. When a project underperforms, this is often explained away as an isolated instance of underperformance; it is typically not seen as part of a general pattern of underperformance in transportation infrastructure projects. Because knowledge is wanting in this area of research, and it has been impossible to validate or verify whether underperformance is the exception or the rule.

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To explain why, we use the models of transportation infrastructure projects. According to the empirical evidence, transportation projects underperform in the transportation sector, covering traffic volumes, spatial traffic distribution, and distribution between transportation modes. There is evidence that demand forecasting—like cost forecasting and demand projec
d

**Article excerpt reviewed.**
EXHIBIT 4

Error and optimism bias in toll road traffic forecasts

Robert Bain

Published online: 26 February 2009
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Abstract Traffic forecasts are employed in the toll road sector, inter alia, by private sector investors to gauge the bankability of candidate investment projects. Although much is written in the literature about the theory and practice of traffic forecasting, surprisingly little attention has been paid to the predictive accuracy of traffic forecasting models. This paper addresses that shortcoming by reporting the results from the largest study of toll road forecasting performance ever conducted. The author had access to commercial-in-confidence documentation released to project financiers and, over a 4-year period, compiled a database of predicted and actual traffic usage for over 100 international, privately financed toll road projects. The findings suggest that toll road traffic forecasts are characterised by large errors and considerable optimism bias. As a result, financial engineers need to ensure that transaction structuring remains flexible and retains liquidity such that material departures from traffic expectations can be accommodated.

Keywords Toll road · Traffic forecast · Optimism bias · Forecasting error

Introduction

The global trend for investor-financed toll road concessions brings traffic forecasts—and their predictive accuracy—into sharp relief. All too often, aggressive financial structuring leaves little room for traffic usage to deviate from expectations before project experience distress and debt repayment obligations become threatened. Thus the accuracy of traffic forecasts is of considerable interest to practitioners in the toll road sector yet, until recently, very little was published in the literature about the predictive performance of traffic and revenue forecasting models. This literature is reviewed here.

The review starts by examining an early, small-scale study of toll road traffic forecasting accuracy from the USA. Building on and extending this analysis, the majority of the paper is devoted to recent toll road traffic forecasting research conducted by the

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EXHIBIT 5

Propagation of Uncertainty in Transportation Land Use Models: An Investigation of DRAM-EMPAL and UTPP Predictions in Austin, Texas

by

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FAX: 512-471-0744

The following paper is a pre-print and the final publication can be found in Transportation Research Record No. 1835: 219-229, December 2003.
Presented at the 88th Annual Meeting of the Transportation Research Board,
January 2003

ABSTRACT

This work examines the propagation of uncertainty in outputs of a standard integrated model of transportation and land use. Austin-calibrated DRAM-EMPAL, predictions of residence and work locations are used as inputs to a UTPP-type four-step travel demand model (TDM), and the resulting travel times are fed forward into the future period’s land use models. Covariance in inputs (including median parameter and demographic variables) was accommodated through multivariate Monte Carlo sampling of 200 scenarios. Variances in land use and travel predictions were then analyzed, over time, and as a function of input values. Results indicate that output variations were most sensitive to the exponent of the link performance function, the split of trips between peak and off-peak and several trip generation and attraction rates. 20 years in the future, final uncertainty levels (as measured by coefficients of variation) due solely to input and parameter estimation errors are on the order of 38% for total regional peak-period VMT, 45% for peak-period flows, and 50% and 37% for residential and employment densities, respectively.

This means that central point estimates of key model outputs are very likely (more than 30%) to fall within 38% to 50% below or above the mean value. In the Austin example, 15% of the 200 region’s simulated peak-period VMT estimates fell below 2.7 million miles (per day) and 15%...
exceeded 8.4 million miles. Such substantial variation is due solely to standard model parameter
and input uncertainties. Other uncertainty about the future and human behavior also exists and
will add further variation.

Keywords
Uncertainty propagation, integrated transportation-land use model, travel demand model
EXHIBIT 6

A New Direction
Our Changing Relationship with Driving
and the Implications for America’s Future

U.S. PIRG Education Fund
Frontier Group

Tony Dutzik,
Frontier Group
Phineas Baxandall,
U.S. PIRG Education Fund

Spring 2013
Acknowledgments

U.S. PIRG Education Fund and Frontier Group sincerely thank Nick Diacono and David Goldburg of Transportation for America, Daniel Cadey of the American Public Transportation Association, Todd Litman of the Victoria Transport Policy Institute, Deepak Kudekar of CitiForce Foundation, Kristie Parton of MADD/PIRG Education Fund, Alde Tacey of the Roadside Institution, Glenn M. Yawitz of Amtrak FEDU, Education Fund, Clark Williams-Derry of the Sightlines Institute, and others for their review of drafts of this document, as well as for their insights and suggestions. Thanks also to Clark Williams-Derry and Joe Bruno of WUPRI Foundation for their comments on this paper. The authors sincerely thank Jason Van Halle for his research assistance and Elizabeth Riddle of Frontier Group for her editorial assistance.

U.S. PIRG Education Fund and Frontier Group thank the Rockefeller Foundation for making this report possible.

The authors have improved this report by any formal errors. The recommendations are those of U.S. PIRG Education Fund. The views expressed in this report are those of the authors and do not necessarily reflect the views of our funders or those who provided review.

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Frontiers Group promotes independent research and policy analysis to support a strong, healthy, and more democratic society. Our mission is to inject reasoned information and compelling ideas into public policy debates at the local, state, and national levels. For more information about Frontier Group, please visit www.frontiergroup.org.

Graphic Design: Harriet Schindler Graphic Design

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Executive Summary

The Driving Boom—a six-decade-long period of steady increases in per-capita driving in the United States—is over.

Americans drive fewer total miles today than we did eight years ago, and fewer per person than we did at the end of Bill Clinton’s first term. The unique combination of conditions that fueled the Driving Boom—from cheap gas prices to the rapid expansion of the workforce during the Baby Boom generation—took longer than expected.

Meanwhile, a new generation—the Millennials—is demanding a new American Dream less dependent on driving.

Transportation policy in the United States, however, remains stuck in the past. Official forecasts of future vehicle travel continue to assume steady increases in driving, despite the experience of the past decade. These forecasts are used to justify spending vast sums on new and expanded highways, even as existing roads and bridges are neglected. Elements of a more balanced transportation system—from transit systems to bike lanes—that crucial investment in powerful new tools to maintain that piece of a shrinking transportation funding pie.

The time has come for America to hit the “reset” button on transportation policy—replacing the policy infrastructure of the Driving Boom years with a more efficient, flexible and scalable system that is better able to meet the transportation needs of the 21st century.

The Driving Boom is over:

• Americans drive more miles nearly every year between the end of World War II and 2004. (See Figure K-5-1, next page.) By the end of this period of rapid increases in per-capita driving—which we call the “Driving Boom”—the average American was driving 8% percent more miles each year than in 1970.

• Americans drive no more miles today than we did in 2004 and no more per person than we did in 1998.

• On the other hand, Americans took nearly 10 percent more trips via public transportation in 2011 than we did in 2005. The nation also saw increases in commuting by bike and on foot.
A return to the steady growth in per-capita driving that characterized the Baby Boomer years is unlikely given the aging of the Baby Boomer generation, the projected continuation of high gas prices, anticipated reductions in the percentage of Americans in the labor force, and the pending demand for vehicles and drivers’ licenses and the number of times Americans are willing to spend to travel.

The Millennial generation has led the recent change in transportation trends—driving significantly less than previous generations of young Americans. Millennials are already the largest generation in the United States and their choices will play a crucial role in determining future transportation infrastructure needs.

The Millennials (people born between 1981 and 2000) are now the largest generation in the United States. By 2019, Millennials will be far and away the largest group in the peak driving age 35-to-44-year-old demographic, and will continue as such through 2040.
* Young people aged 16 to 34 drove 21 percent fewer miles on average in 2009 than they did in 2006—a greater decline in driving than any other age group. The severe economic recession was likely responsible for some of the decline, but not all.

* Millennials are more likely to want to live in urban and walkable neighborhoods and are more open to non-driving forms of transportation than older Americans. They are also the first generation to fully embrace mobile Internet-connected technologies, which are rapidly spawning new transportation options and shifting the way young Americans relate to one another, creating new venues for living connected, abhorant forms of urban life.

* If the Millennials' decline in per capita driving continues for another decade, even at half the annual rate of the 2006–2009 period (illustrated by the Pumpkin Farmer scenario in Figure ES-2 above), total vehicle travel in the United States could remain well below its 2007 peak through at least 2040 despite a 21 percent increase in population.
Millennials retain their current propensity to drive less as they age and future generations follow (Enduring Shifts, driving would increase by only 7 percent by 2040. If, unexpectedly, Millennials were to revert to the driving patterns of previous generations (Road in the Future), and Driving would grow by as much as 14 percent by 2040.

* All three of these scenarios yield far less driving than if the Driving Base had remained just 2001. Driving declines more dramatic than any of these scenarios would result if future per-capita driving were to fall at a rate near that of recent years or if annual per-capita reductions continue through 2040.

* Regardless of which scenario proves true, the amount of driving in the United States in 2040 is likely to be lower than is assumed in recent government forecasts. This raises the question of whether changing trends in driving are being adequately factored into public policy. (See Figure ES-3.)

The recent reduction in driving has already delivered important benefits for...
the notion, while raising new challenges. Future driving trends will have major implications for transportation policy and other aspects of American life.

- Traffic congestion has fallen. According to data from the Texas Transportation Institute, Americans spent 4.2 billion fewer hours stuck in traffic in 2011 than they did in 2000. Further reductions in driving could lead to additional easing of congestion without major investments in new highway capacity, as long as roads are maintained in a state of good repair.

- America is less dependent on oil. In 2011, gasoline consumption for transportation hit a 10-year low. Further reductions in driving continue with the Ongoing Diesel efforts—coupled with expected vehicle fuel economy improvements—could result in the motors using half as much gasoline or other fuels in cars and trucks by 2040 as we use today.

- Our roads are getting less use ... but the gas tax is being in less income. Reduced vehicle travel (particularly in large trucks) reduces the wear and tear on our nation’s roads, reducing maintenance needs. Reduced driving, however, also reduces the amount of revenue brought in by the already-strained gasoline tax.

The recent reduction in driving and embrace of less auto-dependent ways of living by Millennials and others creates a golden opportunity for America to adopt transportation policies that use resources more efficiently, preserve our existing infrastructure, and provide support for Americans seeking alternatives to car travel.

A new vision for transportation policy should:

- Plan for uncertainty. With future driving patterns uncertain, federal, state and local transportation officials should evaluate the costs and benefits of all transportation projects based on several scenarios of future demand for driving. Decision-makers should also prioritize those projects that are most likely to deliver benefits under a range of future circumstances.

- Support the Millennials and other Americans in their desire to drive less. Federal, state and local policies should help create the conditions under which Americans can fulfill their desire to drive less. Increasing investments in public transportation, bicycling and pedestrian infrastructure and safety are especially important when coupled with regulatory changes to enable the development of walkable neighborhoods—can help provide more Americans with a broader range of transportation options.

- Revisit plans for new or expanded highways. Many highway projects currently awaiting funding were initially conceived of decades ago and proposed based on traffic projections made before the recent decline in driving. Local, state and federal governments should revisit the need for these “ legacy projects” and ensure that proposals for new or expanded highways are still a priority in light of recent travel trends.

- Refocus the federal role. The federal government should adopt a more strategic role in transportation policy, focusing resources on key priorities (such as repair and maintenance of existing infrastructure and the expansion of transportation options) and evaluating projects comparatively on the basis of their benefits to society.
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December 7, 2012
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1. BACKGROUND

Arizona State and County Population Projections (2012 edition) are prepared in accordance with Sections 1, 4 and 5 of Executive Order 2011-04 signed by Governor Janice Brewer:

Section 1: The Arizona Department of Administration (ADOA) shall be the agency designated to produce the official population estimates and projections for the State of Arizona.

Section 4: ADOA shall produce the official population projections for each year for a minimum of the next 25-year period. The projections shall be dated as of July 1 and shall include projections for the State, its counties, its incorporated jurisdictions, and the unincorporated balance of each county.

Section 5: ADOA shall release the State and county projections as soon as possible following the release of detailed decennial census data by the U.S. Department of Commerce, Bureau of the Census, but no later than December 31 in years ending in 2. These projections shall be updated twice at three year intervals, prior to the release of the next decennial census data and no later than December 31 in the years ending in 5 and 8.

Executive Order 2011-04 also directs the use of these projections:

Section 10: Population estimates and projections produced by ADOA in accordance with this Executive Order shall be used by all State agencies for all purposes, including those required by federal law, which necessitates the development of population estimates or population projections.

2. METHODOLOGY

The Arizona Population Projections Model is a Cohort-Component model. This model is used to project population for 10 race/ethnic groups in 16 geographical areas (Arizona state and its 15 counties) over a projection period of 40 years. The 10 race/ethnic groups are the combinations of five race groups by Hispanic origin. The five race groups are: White, Black, Native American, Asian (including Native Hawaiian and Pacific Islander), and Other (including two or more races). Each of these races is delineated into Hispanic origin and non-Hispanic origin to make a total of 20 race/ethnic groups.

A component methodology accounts for each aspect of demographic change (fertility, mortality, and migration). These components, each projected separately, are combined to produce population projections by age, sex, race, and ethnic group.
REPORTS

Three

Comments by Don’t Waste Arizona, Inc. President,
Stephen Brittle
31. Section 4(f) and Section 6(f)

The Arizona Department of Transportation and Federal Highway Administration followed all requirements of Section 4(f) of the Department of Transportation Act that are found in 49 United States Code § 303. The methodology employed follows 23 Code of Federal Regulations § 774 and standard industry practice. Under the National Environmental Policy Act, it is common for new data to avail itself and to therefore update the environmental impact statement as new data does become available.

Reviewers have noted that newer trails in the South Mountains (Bursera and Pyramid Trails) were not discussed in the Draft Environmental Impact Statement. This information has been considered, investigated, and the effects of the proposed freeway on these facilities has been addressed (see Final Environmental Impact Statement, page 5-9). This new information has not changed the findings of the Section 4(f) analysis in the Draft Environmental Impact Statement.

A thorough feasible and prudent avoidance analysis of the South Mountains was conducted as presented in Chapter 5 of the Final Environmental Impact Statement and concluded avoidance to the direct use of the resource was not feasible and prudent. In support of this response, consider the following review from the U.S. Department of the Interior on the Draft Environmental Impact Statement comment: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement. The Section 4(f) analysis for the proposed action was properly performed.

32. Purpose and Need

The establishment of the purpose and need for the proposed action must follow 40 Code of Federal Regulations 1502.13. The comment reflects a concern about need related to west valley travel. Chapter 1, Purpose and Need, describes a regional transportation problem warranting a transportation solution. The alternatives considered and evaluated in Chapter 3, Alternatives, consider a comprehensive set of alternatives and take into account the need as presented in Chapter 1.

During the modal screening process (see text beginning on page 3-3 of the Final Environmental Impact Statement), expansion of the arterial street system was considered. The reasons this alternative was eliminated are presented in Table 3-2 on page 3-5 of the Final Environmental Impact Statement.

According to 23 Code of Federal Regulations § 771.11(f), “the action evaluated in the environmental impact statement must connect logical termini and be of sufficient length to address environmental matters on a broad scope.” The proposed action should satisfy the project need and should be considered in the context of the local area’s socioeconomics and topography, the future travel demand, and other infrastructure improvements in the area. A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not feasible because it would not meet the proposed freeway’s identified purpose and need.

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Don’t Waste Arizona, Inc. (DWAZ) is a non-profit environmental organization dedicated to the protection and preservation of the environment in Arizona. DWAZ is especially concerned about environmental justice, civil rights protections, risks from hazardous materials and toxics, and air pollution. DWAZ is headquartered at 6126 South 12th Street, Phoenix, AZ 85042, and may be reached at (602) 268-6110. DWAZ has members in the affected area. DWAZ is allied with PARC, et al for the purposes of preparing comments in opposition to the freeway, and the use of these comments by these allies is allowed and unrestrictive. DWAZ joins with PARC et al in these comments, and any and all co-signers are allowed to use these in litigation. Stephen Erith, President of Don’t Waste Arizona, is also a member of PARC.

The following comments on the DEIS for the South Mountain Freeway were prepared for DWAZ, PARC, et al. . . .

General Comments:
The 4f analysis is done wrong, and uses old and outdated information and data.

There is no analysis of having alternative to the freeway in the form of a road connecting Laveen to the I-10 west for the purposes of giving Laveen area residents a better access to the I-10. This would actually serve Laveen area residents’ needs better because it would eliminate most of the traffic from trucks.

Too many of the details are left to the “design phase” when they should be examined at this stage of the process.

The intersection with I-10 west near 99th Avenue fails in many ways. What about the severe traffic congestion that already occurs there during rush hour, as well as pollution impacts? Where is the current data showing traffic patterns?

Why haven’t there been any new concurrences since 2008?

Have there been any new agreements since 2005-2007?

The following are comments related to impacts to air pollution and air quality:

Truck Traffic from Mexico and High-Sulfur Diesel: Truck Bypass Negated

The modeling of air pollution impacts in the DEIS do not include the additional air pollution from truck traffic, and also from truck traffic originating in Mexico that would be using high sulfur diesel fuel that has been banned in the US. The DEIS briefly mentions the issue, but it claims it has no way to know what impact the change in the bypass route would be. That is patently absurd and unacceptable. The number of trucks coming over the border from Mexico is on record, and even if those trucks have hazardous materials in their cargoes is on record. EDR and ADOT simply have to get the

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| 33   | Design | Federal Highway Administration Order 6640.1A FHWA Policy on Permissible Project Related Activities During the National Environmental Protection Agency Process clarifies the Federal Highway Administration’s policy regarding the permissible project-related activities that may be advanced prior to the conclusion of the National Environmental Policy Act process. Preliminary design may occur to define the general project location and design concepts. It includes, but is not limited to, preliminary engineering and other activities and analyses, such as environmental assessments, topographic surveys,metes and bounds surveys,geotechnical investigations,hydrolgic analysis,hydraulic analysis,utility engineering,traffic studies,financial plans, revenue estimates,hazardous materials assessments,general estimates of the types and quantities of materials, and other work needed to establish parameters for the final design. Prior to completion of the National Environmental Policy Act review process,any such preliminary engineering and other activities and analyses must not materially affect the objective consideration of alternatives in the National Environmental Policy Act review process.
| 34   | Traffic | An assessment of existing traffic operational characteristics and future traffic operational characteristics without the proposed freeway is presented in the Final Environmental Impact Statement, beginning on page 1-13. This includes current and future traffic volumes and durations of level of service E or F conditions (congestion) along Interstate 10 between State Route 101L and Interstate 17. An assessment of future traffic conditions with and without the proposed freeway is presented in the Final Environmental Impact Statement, beginning on page 3-27. Observations from Figures 3-15 and 3-16 indicate that conditions would be similar or slightly better with the proposed freeway in place.
| 35   | Cultural Resources | National Historic Preservation Act Section 106 consultation is summarized in Table 4-46 beginning on page 4-136 of the Draft Environmental Impact Statement. There have been a number of concurrences since 2008.
| 36   |                  | The comment is not specific enough in its reference to "agreements" to allow an accurate response. |
Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; truck traffic would be expected to be permissible (see test box on page 4-157 of the Final Environmental Impact Statement).

Trucks crossing from Mexico to Arizona are restricted to the commercial zones within 25 miles of the border. The Federal Motor Carrier Safety Administration is administering a United States-Mexico cross-border, long-haul trucking pilot program. The program tests and demonstrates the ability of Mexico-based motor carriers to operate safely in the United States beyond the municipalities and commercial zones along the United States-Mexico border (see <fmcsa.dot.gov/intl-programs/trucking/trucking-program.aspx>).

Petróleos Mexicanos (better known as Pemex), the Mexican state-owned petroleum company, has guaranteed 15 parts per million in its sulfur diesel fuel in the border region (see <http://transportpolicy.net/index.php/title=Mexico-_Fuels:_Diesel_and_Diesel_>).

As explained on page 4-77 of the Final Environmental Impact Statement, the emissions analysis conducted for the project shows that future mobile source air toxics emissions will be lower than current levels. This analysis included projected truck traffic.
It is agreed that the truck bypass for the Phoenix metropolitan area would not include the proposed freeway. As with all other freeways in the Maricopa Association of Governments region, trucks would use the proposed freeway for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce (see page 3-64 of the Final Environmental Impact Statement). The trucking industry depends on the efficient and fast movement of freight and on travel-time savings. Therefore, it is expected that "true" through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85. The comment offers no source or evidence.

In April 2001, the Maricopa Association of Governments Regional Council formally adopted the route depicted in the map on page 3-64 as the CANAMEX Corridor within Maricopa County. As noted on page 3-64 of the Final Environmental Impact Statement, in the Maricopa County area the CANAMEX Corridor is to follow Interstate 10 from Tucson to Interstate 8 near Casa Grande, Interstate 8 west to State Route 85 near Gila Bend, State Route 85 north to Interstate 10 northwest of Buckeye, Interstate 10 west to Wickenburg Road, Wickenburg Road to Vulture Mine Road west of Wickenburg, and then connect with the planned U.S. Route 93/U.S. Route 60 Wickenburg Bypass.

In May 2012, the Arizona Department of Environmental Quality submitted a revised Maricopa Association of Governments 2012 Five Percent Plan for the region. On July 20, 2012, the U.S. Environmental Protection Agency made an official finding that the Maricopa Association of Governments 2012 Five Percent Plan was administratively complete. This decision ended the sanctions clocks associated with Arizona’s decision to withdraw the Maricopa Association of Governments 2007 Five Percent Plan. On February 6, 2014, the U.S. Environmental Protection Agency published a notice in the Federal Register proposing to approve the Maricopa Association of Governments 2012 Five Percent Plan for Attainment of the PM-10 Standard for the Maricopa County Nonattainment Area. In the same notice, the U.S. Environmental Protection Agency stated that it would concur with exceptional event (as a result of haboobs and dust storms) documentation prepared by the Arizona Department of Environmental Quality, which would give the region the 3 years of clean data needed for attainment of the particulate matter (PM10) 24-hour standard. Finally on May 30, 2014, the U.S. Environmental Protection Agency approved the 2012 Five Percent Plan and found the area in attainment of the 24-hour particulate matter (PM10) standard. Finally on May 30, 2014, the U.S. Environmental Protection Agency approved the 2012 Five Percent Plan and found the area in attainment of the 24-hour particulate matter (PM10) standard.

Maricopa County was reclassified as a serious PM2.5 nonattainment area on June 10, 1996. On July 9, 1999, the Maricopa Association of Governments (MAG) submitted to EPA the MAG 1999 Serious Area Particulate Plan for PM2.5 (Executive Summary), addressing both the 24-hour and annual standards.

A revised state implementation plan (SIP) was submitted in February 2000. (A state implementation plan is a plan that shows how the state will implement the Clean Air Act and meet the requirements of the National Ambient Air Quality Standards (NAAQS), i.e. comply with the standards for levels of air pollution allowed in the area.) The Plan, based on new and stringent measures, included an extension request for attainment no later than December 31, 2006. On January 10, 2002, EPA announced approval of Arizona’s
The use of the proposed action by truck traffic is disclosed in the Draft Environmental Impact Statement (see page 3-64). Creating a truck bypass is not a goal of the proposed action and not established as part of the purpose and need as disclosed in full in Chapter 1, Purpose and Need, of the Draft Environmental Impact Statement. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the "loop" system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to make local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicle using the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that trucks will represent approximately 10 percent of the total traffic on the proposed action, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. Further, it is not expected that the entire 21 percent of through-truck traffic (by tonnage) using Interstate 10 would divert from Interstate 10 to use the proposed freeway (see Final Environmental Impact Statement page 3-64). Trucking destinations in the Phoenix metropolitan area would still prompt trucks to enter congested areas. Drivers choosing to travel on the proposed freeway versus Interstate 10 would not receive substantial travel-time benefits. Therefore, it is expected that "true" through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85.

Trucks crossing from Mexico to Arizona are restricted to the commercial zones within 25 miles of the border. The Federal Motor Carrier Safety Administration is administering a United States-Mexico cross-border, long-haul trucking pilot program. The program tests and demonstrates the ability of Mexico-based motor carriers to operate safely in the United States beyond the municipalities and commercial zones along the United States-Mexico border (see <fmcsa.dot.gov/intl-programs/trucking/trucking-program.aspx>).

Petróleos Mexicanos (better known as Pemex), the Mexican state-owned petroleum company, has guaranteed 15 parts per million in its sulfur diesel fuel in the border region (see <http://transportpolicy.net/index.php?title=Mexico:_Fuels:_Diesel_and_Gasoline>).

As explained on page 4-77 of the Final Environmental Impact Statement, the emissions analysis conducted for the project shows that future mobile source air toxics emissions will be lower than current levels. This analysis included projected truck traffic.
"August 4, 2008: Final rule regarding BACM and MSM demonstrations.

Final rule to again approve the best available control measures (BACM) and most stringent measures (MSM) demonstrations in the Phoenix Area's PM-10 plan in response to a 9th Circuit Court of Appeals remand to re-evaluate the feasibility of implementing California Air Resources Board (CARB) diesel fuel as a BACM. The correct docket number (as stated at the top of the document) is EPA 809-CAR-2006-0571." 

http://www.epa.gov/region9/air/phoenixpm/

Also, we know exactly the number of trucks arriving from Mexico and their destinations in the US, so this is data that is available for the DEIS.

Once this additional pollution is honestly quantified and factored in, there would be a huge net increase in air pollution from the South Mountain Freeway and Truck Bypass, and associated increases in asthma, heart disease, premature death, and other adverse health impacts. This would lead to the No Build option being chosen as the only option.

The DEIS does mention, in Chapter 4, part 1, page 68:
*Heavy-duty Diesel Emissions Standards*

In December 2006, EPA issued its final rule in a two-part strategy to reduce diesel emissions from heavy-duty trucks and buses. The standards pertain to diesel engines found in such vehicles (weighing over 8,500 pounds), beginning in model year 2009. Additional standards and procedures were implemented in 2007.

EPA required diesel fuel refiners to produce diesel fuels (for highway vehicle use) that have a sulfur content of no more than 15ppm, effective October 2006, a 97 percent reduction from the previous 500ppm level.

So ADOT and HDR have to aware of the issue regarding high sulfur diesel, but the impacts of truck traffic from Mexico using high sulfur diesel fuel and the additional pollution is not addressed.

**Air Toxics Already a Crisis but Not Mentioned**

In the DEIS, Chapter 4 part 1 page 64, it is stated,
*Local Emissions of Priority MSATs (mobile sources of air toxics)*
It is possible to estimate the relative contributions (by weight of emissions) of the different local sources of priority MSATs using EPA-complied information. In June 2009, EPA released the results of its National-Scale Air Toxics Assessment for 2002.*

In the DEIS, Chapter 4 part 1 page 68-69, it is stated,
*Mobile Source Air Toxics*
Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments of 1990, whereby Congress mandated that EPA regulate 188 air toxics, also known as HAPs. EPA has assessed this expensive list in its latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register 72(37): 8430, February 26, 2007), and identified a group of 99 compounds emitted from mobile sources that are listed in its Integrated Risk Information System (IRIS: <www.epa.gov/iris/>). In addition, EPA identified seven compounds with significant contributions from mobile sources that are among the national- and regional-scale cancer risk drivers from its 1999 National Air Toxics Assessment (NATA; <www.epa.gov/nata/nata1999>). These are acrylonitrile, benzene, 1,3-butadiene, DPM plus diesel exhaust organic gases, formaldehyde, naphthalene, and POM. While F H WA considers these the priority MSATs, the list is subject to change and may be adjusted in consideration of future EPA rules.

“Information Availability Constraints in Analyzing Project-Specific MSATs Impacts”

This section includes a basic analysis of the likely MSATs emissions impacts of the proposed action and the No-Action Alternative. Available technical tools do not, however, enable the prediction of project-specific health impacts of the emissions change associated with the action alternatives. Because of these limitations, the following discussion is included in accordance with Council on Environmental Quality (CEQ) regulations (40 C.F.R. § 1502.22(b) regarding incomplete or unavailable information. 40 C.F.R. § 1502.22(b) addresses situations where analysis of an impact in a NIPoA document is restricted by missing or incomplete information, and requires the NIPoA Document to: 1) state that there is missing or incomplete information, 2) discuss the relevance of this information, 3) summarize what is known about the impact in question, and 4) in the face of what is known and not known, present the federal agency’s evaluation of the likely impact.

In F H WA’s view, information is incomplete or unavailable to credibly predict the project-specific health impacts attributable to changes in MSATs emissions associated with a proposed set of freeway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.”

But there is already very complete and specific data related to all of this that was excluded and is not properly reviewed or analyzed, and it is much more recent.

In 2005, there was an extensive air monitoring of certain toxic chemicals (air toxics) conducted by EPA and ADHS in a joint effort named the Joint Air Toxics Assessment Program (JATAP). This was conducted at specific sites in Maricopa County that monitoring showed would likely be hot spots for air toxics, including a site on the Gila River Indian Community (GRIC), that would be adjacent to the South Mountain Freeway and Truck Bypass.

[These JATAP study results are posted at: ]
The emission modeling developed for the proposed action showed that for the mobile source air toxics study area, constructing the freeway would have a marginal effect on total mobile source air toxics emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative) (see discussion beginning on page 4-72 of the Final Environmental Impact Statement). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The Preferred Alternative would also reduce in-vehicle mobile source air toxics exposure as opposed to the No-Action Alternative. The U.S. Environmental Protection Agency has found that in-vehicle benzene concentrations were between 2.5 and 40 times higher than nearby ambient concentrations, based on a review of studies discussed in the Regulatory Impact Analysis for the U.S. Environmental Protection Agency’s 2007 mobile source air toxics rule-making (Final Regulatory Impact Analysis, Environmental Protection Agency 420-R-07-002, 3-17 [February 2007]).

Construction of the South Mountain Freeway would result in a reduction in benzene exposure to drivers and passengers for two reasons: decreased travel times (motorists would spend less time in traffic to reach their destinations) and lower emissions rates (attributable to speed improvements). Reducing on-road exposure would provide a health benefit for motorists using the freeway under consideration. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.
The Draft and Final Environmental Impact Statements present information and analysis about the proposed action and the enhanced conditions when compared against the No-Action Alternative and would not cause substantial adverse effects. The results of the analysis are summarized in the prologue to the Final Environmental Impact Statement (page xii) and are more fully discussed and explained beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

The Draft Environmental Impact Statement provided the results of modeling for each of the seven priority mobile source air toxics, in both the Eastern and Western Subareas, and compared relative mobile source air toxics emissions that would result from three different potential alternatives (W59, W71, W101) as compared with the No-Action Alternative. It also included modeling of mobile source air toxics emissions in the overall mobile source air toxics study area assuming the W59 Alternative (see pages 4-70 to 4-74 of the Draft Environmental Impact Statement) along with implementation of recent U.S. Environmental Protection Agency mobile source air toxics rules.

During the period when the project has been under review, the U.S. Environmental Protection Agency has issued two rules on controlling mobile source air toxics emissions from motor vehicles (66 Federal Register 17229 [March 29, 2001] and 72 Federal Register 8427 [February 26, 2007]). In those rules, the U.S. Environmental Protection Agency examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline program, its national low emission vehicle standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. As a result, the U.S. Environmental Protection Agency adopted controls on gasoline and passenger vehicles that significantly reduce emissions of benzene and other mobile source air toxics such as 1,3-butadiene; formaldehyde; acetaldehyde; acrolein; and naphthalene; as well as significant reductions in emissions of particulate matter from passenger vehicles. On March 3, 2014, the U.S. Environmental Protection Agency also promulgated new “Tier 3” vehicle and fuel regulations, which will produce additional reductions of mobile source air toxics pollutants. Since these reductions have not yet been incorporated into the U.S. Environmental Protection Agency’s emission model, they are not accounted for in the South Mountain Freeway analysis.

The emission modeling developed for the proposed action showed that for the mobile source air toxics study area, there would be little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-77 of the Final Environmental Impact Statement).
where the potential for health risks are highest. Assessments include estimates of cancer and non-cancer health effects based on chronic exposure from outdoor sources, including assessments of non-cancer health effects for Diesel Particulate Matter (PM). Assessments provide a snapshot of the outdoor air quality and the risks to human health that would result if air toxic emissions levels remained unchanged. [http://www.epa.gov/nata/]

As for the JATAP itself, the modeling conducted before the monitoring indicated certain issues that might be clarified:

*Objectives for Monitoring NATA results indicate that, overall, VOCs and carbonyls are the biggest risk drivers
* Particulate metals significant in some areas
* Additional monitoring needed to compare with model results
* Annual average concentrations of key HAPs
* Spatial gradients
* Potential hot spots (near freeway environments) (Emphasis added.)
* Diurnal variability
* Source identification through fingerprinting
* Which HAPs contribute most to the risk?

In the DEIS, Chapter 4 part 1, page 79, it states, “Mobile Source Air Toxic Hot Spots Given concerns about the possibility of MSAT exposure in the near-road environment, the HDP required a number of research efforts at trying to find an MSAT “hotspot.” In 2011, three studies were published that tested this hypothesis. In general, the authors confirm that while highways are a source of air toxics, they were unable to find that highways were the only source of these pollutants. They determined that near road exposure were often no different or no higher than background or ambient levels of exposure and, hence, no true hot spots were identified. Additional information may be found at [pubs.bnl.gov/techrep/p14659] page 137; [pubs.bnl.gov/techrep/p1656] page 143, and [pubs.bnl.gov/techrep/p2617] page 87, where monitored on-road emissions were higher than emission levels monitored at near-road residences, but the issue of hot spots was not ultimately discussed.” (Emphasis added).

Yes, the JATAP, its purpose, its results, its recommendations, all would be a reason to not build the freeway, to determine No Build as the only acceptable alternative. So the JATAP is barely mentioned and misinterpreted, and the EPA’s Air Toxics program is downplayed and obscured, and an inconclusive study that admittedly does not discuss the issue of hot spots gets the focus. In NEPA, if a project causes a negative, a problem, ways to eliminate or mitigate the damage have to be examined and assessed. In this case, not building a freeway near a site that has already been identified as being at a higher risk due to the same sorts of toxic air pollution could easily be the only logical conclusion. So no wonder ADOT and HDR excluded the JATAP results and included a propagandamissive against the EPA’s Air Toxics Program.

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<td>The Federal Highway Administration’s National Environmental Policy Act documents are developed under two guiding regulations: the Council on Environmental Quality’s National Environmental Policy Act regulations applicable to all federal agencies (40 Code of Federal Regulations Parts 1500–1508) and the Federal Highway Administration’s implementing regulations governing Federal Highway Administration National Environmental Policy Act documents (23 Code of Federal Regulations Part 771). In its mobile source air toxics guidance, the Federal Highway Administration discusses 40 Code of Federal Regulations Part 1502.22 and acknowledges that while much work has been done to assess the overall health risk of mobile source air toxics, analytical tools and techniques for assessing project-specific health outcomes as a result of lifetime exposures to mobile source air toxics remain limited. These limitations impede the ability to evaluate the potential health risks attributable to exposure to mobile source air toxics as part of the decision-making process in the National Environmental Policy Act context. However, as with any analysis that the Federal Highway Administration conducts for National Environmental Policy Act purposes, the Federal Highway Administration’s approach for mobile source air toxic analysis in National Environmental Policy Act documents is informed not just by 40 Code of Federal Regulations Part 1502.22 and acknowledges that while much work has been done to assess the overall health risk of mobile source air toxics, analytical tools and techniques for assessing project-specific health outcomes as a result of lifetime exposures to mobile source air toxics remain limited. These limitations impede the ability to evaluate the potential health risks attributable to exposure to mobile source air toxics as part of the decision-making process in the National Environmental Policy Act context. However, as with any analysis that the Federal Highway Administration conducts for National Environmental Policy Act purposes, the Federal Highway Administration’s approach for mobile source air toxic analysis in National Environmental Policy Act documents is informed not just by 40 Code of Federal Regulations Part 1502.22, but by all applicable Council on Environmental Quality requirements. The appropriateness of air toxics health risk assessment as an analysis method for National Environmental Policy Act documents is discussed below, in the context of Council on Environmental Quality requirements for these documents. In addition to the 40 Code of Federal Regulations Part 1502.22 provisions regarding uncertainty and limitations discussed in the Federal Highway Administration’s MSAT Interim Guidance Appendix C, three other provisions of the Council on Environmental Quality regulations are particularly relevant to the topic of health risk assessment:</td>
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<td>40 Code of Federal Regulations § 1500.1(b): NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.</td>
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40 Code of Federal Regulations § 1502.1: An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions.  

40 Code of Federal Regulations § 1502.2: (a) Environmental impact statements shall be analytic rather than encyclopedic. (b) Impacts shall be discussed in proportion to their significance. (c) Environmental impact statements shall be kept concise and shall be no longer than absolutely necessary to comply with NEPA and with these regulations.  

Section 1500.1(b) states that information for decision making must be of high quality and based on accurate scientific analysis. Air toxics health risk assessments can involve large uncertainties. The mobile source air toxic health risk assessment uncertainty builds on itself—each step of the analysis involves uncertainties, including modeling traffic and then modeling emissions, and using this estimated output to model dispersion/concentrations, which provide information for estimating or assuming exposures to those concentrations, and finally predicting health outcomes. Major uncertainties are associated with traffic and emissions projections over a 70-year period, and dispersion models are typically held to a “factor of 2” performance standard. Health impacts of mobile source air toxics in the U.S. Environmental Protection Agency Integrated Risk Information System are based on a 70-year lifetime exposure, which introduces significant uncertainty (e.g., on average, people in the United States change residence approximately once every 8 years and change jobs once every 3). Finally, as noted above, the U.S. Environmental Protection Agency’s Integrated Risk Information System provides toxicity (risk) values for various pollutants and routes of exposure; in a health risk assessment, the Federal Highway Administration would compare calculated concentrations of mobile source air toxic pollutants to the Integrated Risk Information System values to estimate health risk. In the Integrated Risk Information System, the U.S. Environmental Protection Agency states the toxicity values are believed to be accurate to within an order of magnitude (a factor of 10). The total cumulative uncertainty involved in highway project health risk assessment is much larger than the change in emissions attributable to projects (typically a few percentage points). In this context, the information would not necessarily have a strong nexus to the requirements for high-quality information and accurate scientific analysis.  

Section 1500.1(b) also directs agencies to focus their National Environmental Policy Act analysis and documentation on issues that are truly significant to the action in question. In the context of mobile source air toxics, the Federal Highway Administration must consider whether changes in mobile source air toxic emissions attributable to a project have the potential for significant health risk. Using cancer risk as an example, the U.S. Environmental Protection Agency estimates that the overall risk of cancer in the United States is approximately 330,000 in a million, and that air toxics (from all sources) are responsible for a risk of approximately 50 in a million. In its most recent mobile source air toxics rule-making, the U.S. Environmental Protection Agency estimated mobile source air toxic cancer risk,
after implementation of emissions controls, at approximately 5 in a million (or 0.0015 percent of overall cancer risk from any cause). For the Preferred Alternative, the mobile source air toxic emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxic emissions between the Preferred and No Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxic emissions would decrease by more than 80 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see the discussion beginning on page 4-77 of the Final Environmental Impact Statement).

In summary, available information from the U.S. Environmental Protection Agency indicates that mobile source air toxics are a small component of overall cancer risk, and the analysis for the Final Environmental Impact Statement indicates both that the Preferred Alternative would result in a small change in the emissions contributing to this risk and that emissions will decline by a large amount regardless of alternative.

As discussed above and in the air quality technical report, results from the health risk assessment would be influenced more by the uncertainty introduced into the process through assumptions and speculations rather than by genuine insight into the actual health impacts directly attributable to mobile source air toxic exposure associated with a project. Therefore, outcomes of such a health risk assessment do not provide useful information for decision makers, as required by Section 1502.1.

The Federal Highway Administration emissions analysis meets the requirement to produce information that is useful for both disclosure and decision making because it allows the public and decision makers to see which alternative has less mobile source air toxic emissions, with much less uncertainty than a health risk assessment.

Given the uncertainty of a mobile source air toxic health risk assessment, the Federal Highway Administration instead addresses the potential impacts of mobile source air toxics through an emissions assessment in its National Environmental Policy Act documents. For smaller projects with a lower likelihood of a meaningful impact, this discussion is qualitative. For larger projects, emissions analysis is conducted. The Federal Highway Administration approach is consistent with the Council on Environmental Quality’s direction in Section 1502.2(b) to discuss impacts in proportion to their significance. The results of an emissions analysis can be summarized concisely in a National Environmental Policy Act document and provide useful information for decision makers (e.g., an alternative that has lower emissions is likely to be “better” from a mobile source air toxics health risk standpoint than one that has higher emissions).
While the U.S. Environmental Protection Agency and the Federal Highway Administration both agree on the usefulness of addressing mobile source air toxics in National Environmental Policy Act documents for highway projects, the agencies disagree about the value of health risk assessment as a method for doing so. Another consideration with respect to health impacts is that the Preferred Alternative would also reduce in-vehicle mobile source air toxics exposure as opposed to the No Action Alternative. The U.S. Environmental Protection Agency has found that in-vehicle benzene concentrations were between 2.5 and 40 times higher than nearby ambient concentrations, based on a review of studies discussed in the Regulatory Impact Analysis for the U.S. Environmental Protection Agency’s 2007 mobile source air toxics rule-making [Final Regulatory Impact Analysis, Environmental Protection Agency 420-R-07-002, 3-17 (February 2007)]. Construction of the Preferred Alternative would result in a reduction in benzene exposure to drivers and passengers for two reasons: decreased travel times (motorists would spend less time in traffic to reach their destinations) and lower emissions rates (attributable to speed improvements). Reducing on-road exposure would provide a health benefit for motorists using the roadway network. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

The Federal Highway Administration determined that a supplemental environmental impact statement is not required at this time because there were no changes to the proposed action that will result in significant environmental impacts not evaluated in the Draft Environmental Impact Statement nor is there new information relevant to environmental concerns and bearings on the proposed action or its impacts that will result in significant environmental impacts not evaluated in the Draft Environmental Impact Statement.
The Joint Air Toxics Assessment Project was funded by the U.S. Environmental Protection Agency; it would be the U.S. Environmental Protection Agency’s decision whether to collect further data or studies related to the Joint Air Toxics Assessment Project.

See: Phoenix, Arizona Air Toxics Assessment-Final Comprehensive Report (September 30, 2011)
Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration’s mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining current conditions in the affected environment (to the extent that the monitoring data are current), they don’t tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed. The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxic emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM$_{10}$) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter (PM$_{10}$) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violations, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM$_{10}$) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads. The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations." [http://azdot.gov/SouthMountainFreeway/PDF/south-mountain-loop-202-docs/EIS/chapter4Chapter4part1.pdf]
As explained on pages 4-69 and 4-77 of the Draft and Final Environmental Impact Statements, respectively, the emissions analysis conducted for the project shows that future mobile source air toxics emissions will be lower than current levels. This analysis included projected truck traffic.

Information on the attainment status of Maricopa County with the National Ambient Air Quality Standards begins on pages 4-59 and 4-68 of the Draft and Final Environmental Impact Statements, respectively. In May 2012, the Arizona Department of Environmental Quality submitted a revised Maricopa Association of Governments 2012 Five Percent Plan for the region. On July 20, 2012, the U.S. Environmental Protection Agency made an official finding that the Maricopa Association of Governments 2012 Five Percent Plan was administratively complete. This decision ended the sanctions clocks associated with Arizona’s decision to withdraw the Maricopa Association of Governments 2007 Five Percent Plan. On February 6, 2014, the U.S. Environmental Protection Agency published a notice in the Federal Register proposing to approve the Maricopa Association of Governments 2012 Five Percent Plan for Attainment of the PM-10 Standard for the Maricopa County Nonattainment Area. In the same notice, the U.S. Environmental Protection Agency stated that it would concur with exceptional event (as a result of haboobs and dust storms) documentation prepared by the Arizona Department of Environmental Quality, which would give the region the 3 years of clean data needed for attainment of the particulate matter (PM$_{10}$) 24-hour standard. Finally on May 30, 2014, the U.S. Environmental Protection Agency approved the 2012 Five Percent Plan and found the area in attainment of the 24-hour particulate matter (PM$_{10}$) standard based on monitoring data for the years 2010 to 2012 (see page 4-72 of the Final Environmental Impact Statement for more information).

According to the air quality analyses conducted for the proposed freeway, no violations of either the carbon monoxide or particulate matter (PM$_{10}$) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Therefore, no loss of federal funds would occur.

40 Code of Federal Regulations § 93.111(c) was followed to conduct a qualitative analysis for particulate matter (PM$_{10}$) for the proposed action. This analysis complied with National Environmental Policy Act requirements for the development of the Draft Environmental Impact Statement. In December 2010, the U.S. Environmental Protection Agency established transportation conformity guidance for performing quantitative particulate matter (PM$_{2.5}$ and PM$_{10}$) hot-spot analyses for transportation projects and established a 2-year grace period. U.S. Environmental Protection Agency conformity guidance continues to allow qualitative particulate matter (PM$_{10}$) hot-spot conformity analyses for analyses that were started before or during the grace period and if the final environmental document for the project is issued no more than 3 years after issuance of the draft environmental document. A particulate matter (PM$_{10}$) qualitative analysis was performed for this project because the initial air quality analyses conducted for the proposed freeway, no violations of either the carbon monoxide or particulate matter (PM$_{10}$) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Therefore, no loss of federal funds would occur.
excavating, moving massive amounts of dirt, etc. Enough of the dust could disperse and drift along the Salt River bed for the mile or so to the 43rd Avenue and Broadway air monitor, which is the monitoring site where the vast majority of the particulate matter exceedances have been recorded. That could trigger an exceedance of the particulate matter standards, which could cost literally, the billion dollars in highway funds. This should be examined as a cumulative impact, an indirect impact, and a direct impact.

And the sand and gravel industry (including cement and asphalt operations) in Maricopa County is poised to take sand and gravel from the Salt River bed in the path of the freeway and use it for the freeway's construction. This would be an economic bonanza for the sand and gravel industry, as the distance from excavation to its construction use would be very insignificant. The production of all the asphalt and cement for the freeway would contribute enormous amounts of PM. Several of these sand, gravel, cement, and asphalt plants are located in the same vicinity of the monitor at 43rd Avenue and Broadway. The cumulative effect could certainly trigger PM exceedances at the monitor at 43rd Avenue and Broadway. The DEIS never mentions this, but it should be analyzed and modeled. This should further be examined as a cumulative impact, an indirect impact, and a direct impact.

And after the freeway is built, there would likely still be ongoing exceedances.

Almost every one of these PM exceedances have been detected at the air quality monitor at 43rd Avenue and Broadway, and others have occurred along the Salt River bed in previous years. There were even higher levels recorded at the air monitor at 22nd Avenue and Lower Buckeye Road, but this was moved to 43rd Avenue and Broadway years ago. It was moved from the 22nd Avenue and Lower Buckeye Road because there was going to be significant amounts of dust and PM put into the air when the Rio Salado Habitat Restoration was being built, so much so that more exceedances would have occurred at the 22nd Avenue and Lower Buckeye Road monitor. Also, there was a sand and gravel operation at 19th Avenue and the Salt River bed that had exceed emissions of PM that triggered a penalty for it from EPA, so the monitor location was moved to protect the pollutant.

These exceedances resulted in EPA requiring a special Salt River SIP for the Salt River bed to address the exceed PM. In preparing the Salt River SIP, there was extensive air monitoring and modeling. These models do not include any freeway emissions, but as noted on pages 9 and 10, Roads & Track as accounted for in this Salt River SIP do not include any new air pollution from the South Mountain Freeway and Truck Bypass. Roads & Track, as well, could be as much as 63.7% of the PM in the air on a calm day. The addition of particulate matter pollution from this freeway would be considerable, that should be modeled at a minimum, and quantified, and the entire calculations for the Salt River SIP would have to be re-done including this new data to determine if the models show exceedances of the PM standard could occur. That would support the No-Build Option.

The placement of a freeway about a mile to a mile and a half upwind from a monitor that has had all three high levels scores failed and short sighted. And of course, the impacts and risks of this are not even mentioned in the DEIS. This should be examined as a cumulative impact, an indirect impact, and a direct impact.

The DEIS does not examine the dust that would be kicked up during the construction phase, when thousands of tons of dirt would be moved around upwind of the monitor. The proposed path of the South Mountain Freeway would take it over the Salt River bed. To construct the bridges would involve extensive earthmoving. Also, blasting South Mountain would also release enormous amounts of dust (PM10), and the natural wind currents and prevailing wind patterns would push this PM toward the air monitor at 43rd Avenue and Broadway.

The South Mountain Freeway could therefore be the most expensive freeway ever built. Not only the construction costs, and the $20 million already spent on the begun DEIS, but then there would be the loss of the billion dollars in highway funds. This is a gift that keeps on giving, or taking, as there would be subsequent billions lost through the years due to potential PM exceedances.

**Increases in Particulate Matter Levels Correlate to Increased Mortality**

*In Fine Particulate Air Pollution and Mortality in 20 U.S. Cities, 1987–1994, Jonathan M. Samet, M.D., Francesco Dominici, Ph.D., Frank C. Caesar, Ph.D., Ivan Coura, M.S., and Scott L. Zeger, Ph.D., published in the New England Journal of Medicine in December 2000, [http://www.nejm.org/cgi/hil/1056/19/2000/1/2143412401] a direct correlation was found in particular matter in ambient air and death was determined. Phoenix and 19 other cities were studied, all with the same types of results. After taking into account potential confounding by other pollutants, the study found consistent evidence that the level of PM2.5 is associated with the rate of death from all causes and from cardiovascular and respiratory illnesses. The estimated increase in the relative rate of death from all causes was 0.51 percent (95 percent posterior interval, 0.07 to 0.93 percent) for each increase in the PM2.5 level of 10 μg per cubic meter. The estimated increase in the relative rate of death from cardiovascular and respiratory causes was 0.68 percent (95 percent posterior interval, 0.20 to 1.16 percent) for each increase in the PM2.5 level of 10 μg per cubic meter.

Yet the DEIS never mentions this well-known data. The increases in particulate matter pollution that will be caused by the South Mountain Freeway should be modeled and included in the environmental impact analysis.

**Traffic Congestion Issues at West I-10 Junction Adds to PM Issues**

The junction of the South Mountain Freeway on its west end with Interstate 10 may have been an idea conceived many years ago, but the traffic congestion that exists at the area between 39th and 51st Avenue on that freeway during morning and evening rush hours is already more than extreme. It is like a parking lot. Yet there is no mention in the DEIS.
of the cumulative impacts and effects of traffic congestion at that proposed junction, the
effects on traffic flow in the vicinity of the interchange of the SMF and I-10 west.
Without modeling that information, it cannot be determined if the freeway will cause
more congestion or relieve it, but that step cannot wait until the design phase for that
analysis because this step might well show that the effects on traffic flow in the vicinity
of the interchange of the SMF and I-10 west would be negative and traffic congestion
worrisome. This should be examined as a cumulative impact, an indirect impact, and a
direct impact.

The overarching and consistent problem with the DEIS is that it utilizes such old
and out-dated data from 2004-2007 for its analyses and conclusions that it is not
viable or reliable. More recent data about traffic patterns, growth patterns, economic
development patterns, etc. must be utilized to get correct projections to
establish the need, if there even is one, for the freeway. There was an economic crisis in
2007 that caused major changes in the growth and economy of the Phoenix
metropolitan area, and there has been some recovery, but many factors have
changed substantially enough that the most up-to-date information has to be
gathered and analyzed for the EIS.

A long line of vehicles sitting with engines idling while waiting to get on Interstate 10 at
the junction with the SMF would also likely impact the air quality at 43rd Avenue and
Broadway. That could cost a billion dollars in sanctions more than once. What ADOT is
doing is playing Russian Roulette with the highway money, with every day a potentially
loaded with an air quality violation at the hot spot or 43rd Avenue and
Broadway. This should be examined as a cumulative impact, an indirect impact, and a
direct impact.

There is much talk about the problems at the Broadway Curve, which is near the
entrance to Highway 60, the 143, and Interstate 10. Let us be reminded that the
Maricopa Association of Governments (MAG) and ADOT caused this problem through
city short-sightings and design problems. The planning of these agencies caused these
traffic congestion nightmares. So now these same agencies, failed agencies, want to do
this South Mountain Freeway. Will we be talking about the new junction in west Phoenix
in the same way as the Broadway Curve? 100,000 each hour and auto traffic trying to
merge onto I-10 west during rush hour?

ADOT already completely ignored the recommendations of the original SMCAT, the
group ADOT formed to sort the proper NEPA scoping, in choosing the proposed
alignment. The SMCAT, after months of study, had recommended that the SMF connect
to the 101 on the west. So ADOT ignored even the recommendations of its own group and
planned the SMF to connect with the I-10 at the currently proposed alignment.

This leaves a large question: If ADOT did that at that time long ago, what is to stop it
from completely ignoring the current SMCAT should SMCAT vote for a "NO BUILD"
option?

54 Traffic

The analyses in the Draft Environmental Impact Statement used socioeconomic
and traffic projections at the regional analysis zone and traffic analysis zone levels.
At the time of publication of the Draft Environmental Impact Statement, Census
2010-based socioeconomic data at the regional analysis zone and traffic analysis zone
levels had not been adopted by the Maricopa Association of Governments
and were not available to the project team. Therefore, the data used in the Draft
Environmental Impact Statement were the most appropriate information available.
The Maricopa Association of Governments approved new population, employment,
housing, and traffic projections in June 2013. The new data are presented in the Final
Environmental Impact Statement beginning on page 1-11. The purpose and need and
analysis of alternatives were updated and reevaluated using these new socioeconomic
projections and corresponding projections related to regional traffic. While new
projections based on the 2010 Census showed a lower anticipated population
and vehicle miles traveled in 2035 than the previous projections, the conclusions
reached in the Draft Environmental Impact Statement were validated in the Final
Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis
demonstrated that the proposed project is needed today and will continue to be
needed into the future.

55 Air Quality

The Arizona Department of Transportation conducted a quantitative particulate
matter (PM10) hot-spot analysis that is discussed on page 4-76 of the Final
Environmental Impact Statement. The carbon monoxide and particulate matter
(PM10) analyses demonstrated that the proposed freeway would not contribute to any
new localized violations, increase the frequency or severity of any existing violation,
or delay timely attainment of the National Ambient Air Quality Standards or any
required interim emissions reductions or other milestones.

Secondary impacts to air quality are addressed in Table 4-54 on page 4-172 of the
Final Environmental Impact Statement. Cumulative impacts to air quality are on
page 4-179 of the Final Environmental Impact Statement.

56 Traffic

Construction of the proposed freeway would include widening along Interstate 10
to facilitate entrance and egress of vehicles between the two freeways. Additional
information related to the Interstate 10 modifications can be found in Figure 3-26
on page 3-49 and Figure 3-29 on page 3-53 of the Final Environmental Impact
Statement. The design of the connection to Interstate 10 and the widening
along Interstate 10 were developed in accordance with the Federal Highway
Administration’s Interstate System Access Informational Guide and have received an
initial determination of operational and engineering acceptability from the Federal
Highway Administration.

57 Public Involvement

The Arizona Department of Transportation conducted agency and public scoping
process and has included agency and public input in the project development
process. See Chapter 6 of the Final Environmental Impact Statement; agency scoping
is presented beginning on page 6-2 and public involvement on page 6-6.

The South Mountain Citizens Advisory Team and its engagement in the process was a
part of the overall outreach program. The South Mountain Citizens Advisory Team’s
own bylaws are clear in its advisory and partial role in the outreach process. While
the South Mountain Citizens Advisory Team recommended the W101 Alternative,
all stakeholders’ input was accounted for—including regional leaders, municipalities,
members of the public, and members of the South Mountain Citizens Advisory
Team—before identifying the W59 Alternative as the Preferred Alternative (see Final
Environmental Impact Statement pages 3-65 and 3-68). The Final Environmental
Impact Statement has detailed discussion regarding the relative merits and problems
with the four action alternatives evaluated in the Western Section.
The following are comments related to impacts to hazardous materials:

### DEIS Ignores Risks from Hazardous Materials Transportation Incidents Due to the South Mountain Freeway and Truck Bypass; WQARF Site

The DEIS, starting on page 152, states, **"AFFECTED ENVIRONMENT"**

- contaminant soils would be present near potential hazardous materials sites
- underground storage tanks would need removal or relocation because of freeway construction
- wells and dry wells would be present, providing unintended conduits for preexisting or accidental releases from the construction process to groundwater supplies
- during construction activities, workers could encounter soil contaminated with hazardous materials that had not previously been identified

It doesn’t mention all the transportation of hazardous materials on the new freeway and their associated risks, or the fact that the area where the freeway would connect with I-10 West crosses a site that was identified in the 1960s as contaminated and added to the list of the state of Arizona’s Water Quality Assurance Revolving Fund (WQARF), which is the state’s equivalent of a Superfund Site. The site has known groundwater contamination and soil contamination.

### Risks from Hazardous Materials Transportation Incidents Due to the South Mountain Freeway and Truck Bypass

But the introduction of hazardous materials and their associated risks into Alabawtkee Foothills by the proposed South Mountain Freeway and Truck Bypass and its truck traffic would be significant. There are no industries using and emitting toxic chemicals in Alabawtkee Foothills that have reporting requirements under either the Toxic Release Inventories of the Emergency Planning and Community Right to Know Act (EPCRA) or the reporting of fixed facility hazardous materials (chemical) inventories required under the emergency planning provisions of EPCA. The latter, Tier Two chemical inventory reports, are annually required, and are reported to the fire department of jurisdiction (Phoenix Fire Department), the local emergency planning committee (Maricopa County LEPC), and the state emergency response commission (AZSERC). (The requirement for retail gas stations to file Tier Two reports was removed many years ago as long as these stations are in compliance with their reporting under the regulations for underground storage tanks.)

### Code | Issue | Response
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58 | Hazardous Materials | Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-157 of the Final Environmental Impact Statement).

The Arizona Department of Public Safety (which includes the State Highway Patrol) has primary responsibility for enforcing traffic laws. The Department of Public Safety also has primacy when calling in support for traffic accidents, including hazardous materials accidents (see text box on page 4-157 of the Final Environmental Impact Statement). The Arizona Department of Transportation maintains a list of contractors who provide emergency response services, as well as local municipalities whose fire and police departments operate in cooperation with the Department of Public Safety on incidents within their jurisdiction.

Requirements for shippers are maintained by the Arizona Department of Transportation’s Enforcement Compliance Division.

The project team is aware of the Hazardous Materials Commodity Flow Studies that the Arizona State Emergency Response Commission performs. These studies are used by emergency response planners (such as the Arizona State Emergency Response Commission statewide and the Maricopa County Local Emergency Planning Commission for Maricopa County) as one of the elements considered when developing Emergency Response Plans. If the plan is amended, it is made available to the Arizona Department of Transportation.

In the event of an incident with a hazardous materials issue on a state or federal highway, the emergency responders contact the Arizona Department of Transportation’s Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation’s Safety and Risk Management group, who responds to the incident scene and assesses needs in concert with the Incident Commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support.

The Arizona Department of Transportation’s Safety and Risk Management group’s charge is primarily public health protection, with cleanup support being secondary.
The Maricopa County LEFC and the AZSEER are the two emergency planning agencies tasked with developing and updating a comprehensive emergency response plan for Maricopa County and the state of Arizona, respectively. The plan, by statute, requires:

"Each emergency plan shall include (but is not limited to) each of the following:

(1) Identification of facilities subject to the requirements of this subchapter that are within the emergency planning district, identification of routes likely to be used for the transportation of substances on the list of extremely hazardous substances referred to in section 11092(a) of this title, and identification of additional facilities contributing or subjected to additional risk due to their proximity to facilities subject to the requirements of this subchapter, such as hospitals or natural gas facilities.

(2) Methods and procedures to be followed by facility owners and operators and local emergency and medical personnel to respond to any release of such substances.

(3) Designation of a community emergency coordinator and facility emergency coordinators, who shall make determinations necessary to implement the plan.

(4) Procedures providing reliable, effective, and timely notification by the facility emergency coordinators and the community emergency coordinator to persons designated in the emergency plan, and to the public, that a release has occurred (consistent with the emergency notification requirements of section 11094 of this title).

(5) Methods for determining the occurrence of a release, and the area or population likely to be affected by such release.

(6) A description of emergency equipment and facilities in the community and at such facility in the community subject to the requirements of this subchapter, and an identification of the persons responsible for such equipment and facilities.

(7) Evacuation plans, including provisions for a precautionary evacuation and alternative traffic routes.

(8) Training programs, including schedules for training of local emergency response and medical personnel.

(9) Methods and schedules for exercising the emergency plan.

Due to the unique nature of Abwatukee Foothills, which is a residential area, and not zoned for heavy industrial uses, few hazardous materials transportation issues and risks exist there because none of these chemicals, other than gasoline and diesel, are being transported into the area, other than incidentally adjacent to Interstate 10, which is east of the area. A catastrophic release of hazardous chemicals along the I-10 corridor would have only an indirect effect on Abwatukee Foothills.

58

The West Van Buren Water Quality Assurance Revolving Fund site was identified and considered during development of the Draft Environmental Impact Statement (see page 4-165 of the Final Environmental Impact Statement, and the Draft Initial Site Assessment prepared for the proposed project). These sites are primarily groundwater-impact sites, and groundwater is found at a depth of over 60 feet below the footprint of the Preferred Alternative. Given the separation distance between the adversely affected medium (groundwater) and the construction zone (near-surface in these locations), the project team determined that these sites would not pose a risk to construction or to the general public once the facility were completed. This assessment has been clarified in the Final Environmental Impact Statement on page 4-165.

The efforts to address security concerns at the petroleum tank farm are discussed on page 3-24 of the Draft Environmental Impact Statement. These included numerous meetings with the Arizona Department of Homeland Security and others and included discussions of barriers to screen the facility from the traveling public and prevent attacks or crashes involving the facility. As noted in the Draft Environmental Impact Statement, these precautions were not necessary after the alignment was shifted from the W55 to the W59 Alternative.

The road network in the Maricopa Association of Governments travel demand model includes the Interstate 8 and State Route 85 corridor. So, while the roads are not in the Study Area for the proposed action, traffic and trip distributions along the corridor are included in the traffic analysis for the proposed action. Any traffic that would shift from the Interstate 8 and State Route 85 corridor to the proposed action would be included in the vehicle mix considered in the analysis. A truck driver traveling from Tucson to Los Angeles and choosing to use Interstate 10 and the proposed freeway would travel 15 miles less than one choosing to use the designated truck bypass along Interstate 8 and State Route 85. Choosing to travel on the proposed action versus Interstate 8 and State Route 85 would not translate to any substantial travel-time benefits because the trip would require entering the Phoenix metropolitan area and be subject to potential delays and congestion. Therefore, it is expected that "true" through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85.

The 2008 hazardous material report referenced in the comment was prepared to assist the Arizona Department of Transportation in refining its policies and process for determining hazardous materials routing in the state. It was a preliminary document and intended to provide the Arizona Department of Transportation with information to consider in making possible adjustments to its planning process. The recommendations of the report have been taken under advisement by the Arizona Department of Transportation.

58 (cont.)
To determine the additional risks of hazardous materials transportation, the Maricopa County LEPC and the AZSRSC would also need and utilize hazardous materials commodity flow studies to determine the types and amounts of hazardous materials being transported through or within the county and/or state to meet their respective planning requirements. Of course, the AZSRSC does exactly that periodically, and the data and emergency planning is updated. But that data and the relevant analysis is absent in the DEIS.

The planning for response to an incident involving the release into the environment of a hazardous material involves using Areal Locations of Hazardous Atmosphere (ALOHA), RMPComp, and Computer Aided Management of Emergency Operations (CAMEO). All are USEPA approved and provided emergency planning screening tools. RMPComp is used to predict the effects of a release that would exceed the ALOHA model limit of six miles. The worst-case scenario release for chlorine was the only hazardous material being transported on the highways that, in the event of a catastrophic release, would exceed the six-mile ALOHA modeling limit, so RMPComp is used to assess the radius of impact for the worst-case chlorine release. ALOHA, RMPComp, and CAMEO are all distributed by the USEPA and are software programs provided and periodically updated by USEPA to determine the distance from a release point where there would be a danger to human health and safety. ALOHA can also calculate the levels of a released chemical that could infiltrate nearby buildings, the levels of those chemicals that will likely be in these buildings, and the time it would take for the released chemical(s) to reach their maximum concentration.

As stated in the reports of the various hazardous materials commodity flow studies conducted in Arizona, ALOHA modeling already indicates, “a catastrophic release of gasoline from a tanker truck could cause areas up to 3.0 mile away to be affected at LOC 3 (a concentration where the general population could experience severe health effects and death) and areas as far as 5.1 miles away to be affected at LOC 1 (enough to cause discomfort in the general population). Credible and catastrophic releases of sulfuric acid would create an evacuation radius of 0.5 miles from the highway and rail line.” (LOC means level of concern; LOCs range from 3 down to 1.)

The petroleum tank farm complex at 51st Avenue and Van Buren to about 57th Avenue and Van Buren receives transmiss from California through a pipeline. There, the transmiss is "refined" into diesel fuel and gasoline at this Phoenix location. The new South Mountain Freeway would be an immediately adjacent truck bypass route towards Casa Grande and the new train complex near Red Rock/Pendhro Pass. The DEIS never mentions this, but the extra potential truck traffic from the petroleum tank farm complex in Phoenix using the South Mountain Freeway heading north should be investigated, examined, and quantified, and the additional risks of a hazardous materials transportation incident involving diesel or gasoline should be also investigated, examined, and quantified. This should be examined as a cumulative impact, an indirect impact, and a direct impact.
Abwatukee Foothills already has some emergency planning needs due to the transportation of gasoline into and within the area. There should already be planning for an incident involving gasoline within a mile of current arterial traffic, including Pecos Road. Schools within a mile of Pecos should have an evacuation plan.

The proposed South Mountain Freeway and Truck Bypass would only add exponentially to emergency planning needs and risks as more truck traffic of this chemical and others that are potentially more dangerous in the event of a catastrophic release would be transported immediately adjacent to schools, parks, shopping areas, and other vulnerable facilities in Abwatukee Foothills. The freeway would be the sole source of these new risks from a hazardous materials incident, thus this would be a very significant impact directly caused by the freeway, and a full analysis of the risks and effects must be examined in the NEPA process.

The data and calculations of risk and distance from certain chemicals carried on the highways are documented in the July 9, 2009, report, The Hazardous Materials Commodity Flow Study Report I-10 Corridor from I-10 to Mexico Border, Arterial Highways and Railways, Pima and Santa Cruz Counties, Arizona; the October 20, 2006 report, Hazardous Materials Commodity Flow Study Report I-8 and I-10 Corridors, Arterial Highways and Railways, Yuma, Maricopa, Pinal, Pima and Cochise Counties, Arizona; and the December 5, 2006 Hazardous Material Commodity Flow Study I-10 Corridor from SR 85 to California prepared for the AZBERC. Previous commodity flow study reports would show the same sort of information.

One piece of data that is missing is the Hazardous Materials Commodity Flow Study Report for the I-8 to SR 85 to I-10 route that was selected as a truck bypass around 2006. (Part of the idea of this particular truck bypass was to route truck traffic away from the Phoenix metro area as a measure to reduce particulate matter air pollution.) This also is part of the CANAMEX highway system that has been approved via treaties with Mexico and Canada, and this truck bypass has now been officially designated as the route of the CANAMEX.

“SR 85 is the official truck bypass route around metropolitan Phoenix and has also been designated as part of the official CANAMEX corridor through the North American Free Trade Agreement (NAFTA). In addition to the importance of this route to the trucking industry, this corridor also provides access from the western portion of metropolitan Phoenix to the cities of Yuma and San Diego.” [http://www.azdot.gov/highways/valley_freeways/SR85Access.aspx]

“SR 85 and B-8 form a corridor that provides a major north-south connection between Interstate 10 west of the metropolitan area of Phoenix and I-8. The project limits of this access management study stretch approximately 36 miles and include the entire length of SR 85 from Gila Bend to I-10 and a portion of B-8 that connects SR 85 with I-8 on the east side of the town of Gila Bend. The route traverses through lands owned by the Bureau of Land Management, trust lands that are administered by the Arizona State Land Department, Arizona Game and Fish land (Robbins Butte State Wildlife Area), Maricopa
The situation described in the comment, would be an indirect effect of the construction of a new freeway such as the proposed action. According to 40 Code of Federal Regulations 1508.8, indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible.

As of 2010, the 35.8 square-mile community of Ahwatukee Foothills has a population of 77,249. So if there is a catastrophic release from a 33-ton chlorine tanker along the Pecos Road alignment, almost all of these 77,249 would be at risk of death or severe injury. In Laveen, there are 35,502 residents who would be at a similar risk. There would also be risks to the residents of the Gila River Indian Community along the Pecos alignment. All of these mentioned communities would be forever at risk of a very terrible, certain, and quick death from a chlorine release if this freeway were built. All of these communities would have to be forever on hair trigger alert. They, as communities, would need periodic training and drills to protect them, as well as infrastructure in the form of sirens systems and other alert systems, telephone ring down systems, and much more.

Ahwatukee Foothills has its own unique layout and design, sometimes characterized as a large cul-de-sac, and in the event of a hazardous materials incident requiring shelter in place, or especially involving evacuation, there would be particular problems and risks. Due to the proximity of schools, parks, and other public facilities, as well as densely populated residential areas within areas of risk in the event of an incident involving the release into the environment of hazardous materials, there would have to be extensive

(Response 61 continues on next page)
planning for shelter in place and evacuation, assessment of the types and amounts of hazardous materials traffic and the chemicals involved, and much more. Strenuous systems and appropriate training and drills would have to be instituted to mitigate the additional risks.

In addition to this, the fact that the proposed freeway would eliminate the exits from the community at 32nd Street and Pecos would only exacerbate an already difficult position that this community would be in if there were an evacuation or the need for a response to a catastrophic hazardous materials incident. Regular traffic is already voluminous at that intersection:

- **Pecos (west approach)** - Total 22,313 vehicles (2012 count) including 11,727 westbound and 10,586 eastbound volumes.
- **Pecos (east approach)** - Total 28,179 vehicles (2012 count) including 14,331 westbound and 13,847 eastbound volumes.
- **32nd Street (north approach)** - Total 7,807 vehicles (2011 count) including 3,761 northbound and 4,046 southbound volumes.

With that access to Pecos Road being removed by the freeway, all of that traffic would have to find another way out and further clog and congest other exit routes. Yet there is no mention or analysis of these issues in the DEIS.

What the DEIS fails to mention and analyze about the risks from a catastrophic release of hazardous chemicals due to a transportation incident MUST be fully reviewed and analyzed in the EIR. In the matter of evacuation of Ahwatukee Foothills, the GRIC community near the freeway, and Laveen, a detailed traffic flow analysis and evacuation plan utilizing street maps of Ahwatukee Foothills must be prepared to determine if it is feasible at all, especially in the case of Ahwatukee Foothills. If the analysis shows that the community of Ahwatukee cannot be evacuated within 5-10 minutes, then the No Build option is the only logical and humane result. The caveat of evacuation within 5-10 minutes is due to the very real threat to the community due to a catastrophic release of chlorine gas from a 174-ton tanker truck during a transportation incident.

The October 30, 2006 report, Hazardous Materials Commodity Flow Study Report 1-8 and J-10 Corridors, Arterial Highways and Railways, Yuma, Maricopa, Pinal, and Cochise Counties, Arizona, also mentions the risk from a release of chlorine gas and the risks of a catastrophic release during a transportation incident. As stated, RMPComp is an EPA approved emergency planning screening tool used when ALOHA predicts the effects of a release would exceed the ALOHA model limit of six miles. The worst-case scenario release for chlorine was the only material to exceed the six-mile ALOHA limit.

Since Ahwatukee Foothills is not six miles wide from Pecos Road to South Mountain, it is easy to conclude that, in the event of a catastrophic release of chlorine from a 174-ton tanker of chlorine gas, an AHWF would have to either evacuate or shelter in place. Further, an ALOHA modeling indicates that buildings within two miles of the point where the chlorine release occurred would have high enough levels of chlorine gas to render them into become lethal, which means that shelter in place strategies would not work. The only option would be evacuation, not as chlorine gas

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In the event of an incident with a hazardous materials issue on a state or federal highway, the emergency responders contact the Arizona Department of Transportation’s Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation’s Safety and Risk Management group, who responds to the accident scene and assesses needs in concert with the Incident Commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation’s Safety and Risk Management group’s charge is primarily public health protection, with cleanup support being secondary.

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<td>62</td>
<td>Traffic</td>
<td>The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Draft Environmental Impact Statement). The interchange was eliminated based on undesirable residential displacements and cost. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabria from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement). In the event of an incident with a hazardous materials issue on a state or federal highway, the emergency responders contact the Arizona Department of Transportation’s Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation’s Safety and Risk Management group, who responds to the accident scene and assesses needs in concert with the Incident Commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation’s Safety and Risk Management group’s charge is primarily public health protection, with cleanup support being secondary.</td>
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<td>63</td>
<td>Hazardous Materials</td>
<td>There are no requirements in 23 Code of Federal Regulations 771 Environmental Impact and Related Procedures or in the Federal Highway Administration Technical Advisory T 6640.8A Guidance for Preparing and Processing Environmental and Section 4(f) Documents to address releases of hazardous chemicals due to a transportation incident in National Environmental Policy Act documents for transportation projects like the proposed action. As discussed above, reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible. If the proposed action is the Selected Alternative in a record of decision, planning for emergency situations would be initiated. If the plan is amended, it is made available to the Arizona Department of Transportation.</td>
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flows rapidly at ground level because it is heavier than air, it is unlikely that people would survive long enough to evacuate. Depending on the size of the hole or the rupture of the tanker of chlorine, the tanker could completely empty in a minute or so. And these chlorine truck tankers are quite vulnerable to bullets and other physical trauma.

For an objective examination of issues related to a catastrophic release from a chlorine tanker truck, see Mathematical Modeling and Decision Analysis for Terrorism Defense: Assessing Chlorine Truck Attack Consequence and Countermeasure Cost Effectiveness. Anthony Michael Barrett.

It notes:

*Adapting our modeling system to rupture emptying a tank via flashing two-phase flow through an orifice [80], forming horizontal jets, indicates that such releases could result in approximately the same number of fatalities as an instantaneous release, if such a release takes 10 minutes or less. " page 42

*People in vehicles may be as well off staying where they are, turning off the air-supply fan and sealing the vents, as heading into a nearby building. It may also be dangerous for them to try to drive away, since they may unintentionally drive into higher-concentration areas.*

*Without fast and effective defense response, release of 17 tons of chlorine from a tank truck in a generic urban area with 2.5 m/s wind and Pasquill stability class F, could result in approximately 4000 (half within ~10 minutes) to 30,000 fatalities (half within ~20 minutes), depending on dose-response model.*

*Rapid release of the entire cargo of 17 tons of chlorine from one tank truck could result in the formation of a toxic cloud stretching over tens of city blocks within a few minutes. Predicted fatalities are strongly sensitive to wind speed, atmospheric stability class, amount of chlorine released, and dose-response model parameters. Without defensive response, under highest-fatality weather conditions, using the Withers and Lees dose-response model, we estimate approximately 8000 fatal exposures, with 50% occurring within 15 minutes. With other dose-response models, under the same weather conditions, no-defense-response fatality estimates range from approximately 4000 to approximately 30,000 fatalities. Total fatalities under medium-fatality weather conditions are approximately 10-20% of total fatalities under highest-fatality weather conditions, depending on dose-response model.*

*If chlorine is released outdoors, exposure risk is much higher for people outdoors than indoors. We assumed that people in the area were 7% outdoors and 93% indoors, but the fraction of estimated fatalities that are people outdoors in the no-defense case, under highest-fatality weather conditions, ranges from 60-90%. Most fatalities indoors are people in the first few floors, so it greatly can reduce hazard for those indoors if air intake are at roof level instead of on each floor. Changes in mass of chlorine released result in roughly proportional increases in outdoor fatalities, though disproportionally high increases in indoor fatalities, probably because larger-mass releases lead to larger
and longer-lasting clouds. Changes in some parameters, such as indoor and outdoor population densities, would produce proportional changes in fatality estimates in the no-defense-response case. If implemented quickly and widely enough, rapid public response such as sheltering-in-place and evacuation could significantly reduce fatalities from a chlorine attack. However, practical response times may be significantly longer, with the result that the reduction in mortality would be small.

Under highest-fatality weather conditions, with the Withers and Less dose-response model, to achieve a 50% reduction in fatalities for people outdoors at the time of attack by taking shelter in nearby buildings, people would need to move indoors approximately ten minutes after a chlorine release. However, estimated delays from chlorine exposure effectively add four to seven minutes to ingress time, increasing fatalities by ~1000. To achieve a 50% reduction in fatalities for people indoors at the time of the attack, building air intakes would need to be shut approximately two to six minutes after the attack depending on building air exchange rates before and after shutdowns, though later 45s shutdowns can increase fatalities by trapping poison inside. To achieve a 50% reduction in estimated outdoor fatalities, evacuations crosswind at 50 m/min would need to begin after approximately 32 minutes of chlorine exposure does not cause movement delays.

Achieving a 50% reduction in estimated outdoor fatalities with only a security perimeter would require a distance between the chlorine release and people outdoors of approximately 1200 m. For mitigation measure cases, trends in sensitivities to weather conditions and dose-response model are generally similar to those for no-defense-response cases.

Fatality estimates for the models and scenario we consider in this chapter are much higher than the numbers of fatalities in the 2006-2007 chlorine attacks in Iraq. When our estimates are adjusted to correspond to the conditions in those attacks, as estimated from publicly available information, we obtain fatality predictions roughly similar to, but often higher than, the numbers actually seen in Iraq. We expect that our models and assumptions are biased towards overestimating fatalities. We suggest readers use caution in applying our results, and place less importance on specific values of our model predictions than on trends in those predictions (pages 44-46).


Chlorine gas in even small concentrations is harmful. A person encountering chlorine gas will have a hard time seeing as the chlorine reacts with the moisture in the eye to create hydrochloric acid. The eyes will tear up and make seeing very difficult. At high enough levels, severe scarring and blindness will result.

The same formation of hydrochloric acid will occur in the throat and lungs. People won't be able to take a deep breath or breathe without choking, as mucous membranes in the respiratory system will be quite irritated and will start to weep. Lungs will blister, and the ability to pass oxygen to the blood through the lung membranes will be compromised.
immediately. Walking, much less running, will be very difficult. A half blinded, gasping person who cannot take a deep breath is not going to be a match for a cloud of chlorine, and any evacuation, or rescue on any scale, after the arrival of the chlorine gas will be virtually impossible. Handicapped and elderly people, as well as children, would be at a particular disadvantage. People outside would have no place to go to for sheltering in place. Shelter in place strategies, i.e. having people shelter in a building, stop ventilation systems, and block up and seal all air flow, will have to be successful before the chlorine gas arrives. Otherwise, those sheltering will bottle themselves up with a harmful gas.

ALOHA modeling indicates that certainly all buildings within a mile of the chlorine release from a 17-ton tanker truck would have such high levels of chlorine gas infiltrate into from that most people there would die, or be very severely injured. Some models put that circle of assured death at closer to two miles away. There are schools and residential areas on the north side of the Pecos Road alignment within a mile of the proposed South Mountain Freeway and Truck Bypass, and many more within two miles of the freeway alignment. There would be thousands of people at an extreme risk.

The prevailing winds push across GRIC land toward the north, toward South Mountain, and also to the west through the 51st Avenue pass. Chlorine fumes from an incident on the Pecos Road alignment will certainly be most likely to blow the cloud into all of Ahwatukee Foothills, then on to the GRIC at 51st Avenue, then into Laveen.

ALOHA modeling has a six mile limit to its calculation, but in this case, that limit is more than Ahwatukee Foothills is wide, north to south. All 77,000 people there would be at a severe risk with no way out.

There is a pass at 51st Avenue where the proposed truck bypass/freeway is planned. The prevailing winds do push through this from the south, mostly, and there is a westerly breeze that eventually pushes the air from Ahwatukee Foothills to and through that pass. After the chlorine cloud takes out Ahwatukee Foothills, it will drift through the pass, killing and harming any people on the GRIC in its path who have not evacuated or sheltered already. Then it would sweep towards Laveen, where it would also wreak havoc. Laveen residents have many options to evacuate, roads east and west, but there is still lack of easy travel there. The time before the chlorine cloud got there might give Laveen area residents and visitors more time, and the dissipation of the chlorine by the time it reached that distance from the source, several miles, could better enable shelter in place strategies.

However, if the chlorine incident happened at the 51st Avenue pass and/or Laveen, the one to two mile kill zone and six to eight miles of harm would apply there with just a few minutes to take appropriate action to evacuate or shelter in place.

All these communities would be forever just minutes from annihilation. All these communities would need extensive education and drills, special planning, and additional resources, such as telephone ring down systems, sirens and flashing light warning systems, and other notification strategies.
According to the Arizona Department of Transportation’s 2012 Roadway Design Guide, “Within the highway design philosophy and the Arizona Department of Transportation project team approach to project development, the roadway designer has the responsibility to contribute the most desirable design parameters consistent with safety, service, environment, and cost effectiveness and to apply these parameters with sound engineering judgment.” In general, to limit costs but still protect public safety, roads are not designed for the worst possible incident, but they are designed to accommodate most foreseeable incidents with moderate damage. This is similar to the National Environmental Policy Act’s direction that an environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible.

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<td>Hazardous</td>
<td>Materials</td>
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There is the additional problem of handling the people outdoors at parks, bicycling, hiking, shopping, and other activities if such an incident occurred. Strategies would have to be determined well in advance. Law enforcement personnel and emergency responders would need to be trained, drilled, equipped properly, and otherwise prepared for this scenario. If the 17-ton tanker of chlorine empties in minutes, there won’t be much the emergency responders can do to stop the leak, but patch kits are available for that purpose. A rupture or hole may be too large to patch, and that size of opening would vent all the chlorine anyway by the time any responders arrived. With such limited freeway access and egress, that becomes a response hindrance also.

One responder strategy would be to try to “knock down” the cloud of chlorine with water. To prepare for that, the freeway would have to have a hydrant system with enormous amounts of water and water pressure, so no fire truck would have enough water to last very long. All that water and chlorine would make plenty of hydrochloric acid. The hydrochloric acid would eat away and decay the responding vehicles and equipment, the concrete on the freeway, its culverts, degrade the asphalt pavement, and rust any metal cables and metal where the acid solution washed to. The freeway would have to be designed so that such an incident would not also destroy it.

There would also be residual effects. The January 2005 chlorine disaster in Graniteville, South Carolina illustrates some of these. Following the chlorine disaster, Avondale Mills (textile company) officials had spent more than $149 million on clearing, repairs and damage mitigation from the textile mills machinery that was corroded so severely by the chlorine gas that it had to be replaced, only to find that new equipment brought to the plant quickly corroded because chlorine was still present and reacting with other agents.

That the corrosive effects of the chlorine from such a large release would last so long needs to be taken into account in assessing the costs associated with such an incident. The chlorine reacted with moisture to form hydrochloric acid, but even after time, one would expect that this would diminish. In assessing the damages from a large-scale chlorine release, emergency responders and emergency planning agencies should look for this lasting effect. The corrosive effects could harm pavement, concrete, industrial infrastructure, and even residential structures and the electrical wiring. A much more detailed decontamination, including pH samplings, should be undertaken in the recovery phase of operations to prevent such devastation.

Chlorine gas also has other effects on the infrastructure and electronics. The dryness of the Phoenix area might somewhat mitigate the tendency of airborne chlorine gas to form hydrochloric acid with moisture, but the chlorine and the moisture in the air form weak acids that can affect cell phones, car ignitions, and a host of other devices. Arizona has a monsoon season, in the summer, and it has normal rainfall events, and if there is sufficient moisture in the air, hydrochloric acid will form. Dry acid deposition from a chlorine disaster would also be a lingering source of problems.
Comment Response Appendix

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<td>66</td>
<td>Hazardous Materials</td>
<td>According to 46 Federal Register 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions that are likely to occur or probable, rather than those that are merely possible. Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-157 of the Final Environmental Impact Statement).</td>
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<td>67</td>
<td>Hazardous Materials</td>
<td>If the proposed action is the Selected Alternative in the record of decision, planning for emergency situations would be initiated. If the plan is amended, it is made available to the Arizona Department of Transportation. Hazardous materials transport is described on page 4-157 of the Final Environmental Impact Statement. Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-157 of the Final Environmental Impact Statement).</td>
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<td>Public Involvement</td>
<td>The effort represents the Arizona Department of Transportation’s most extensive public involvement program undertaken in the Phoenix area leading up to publication of the Draft Environmental Impact Statement in April 2013. Examples, such as holding over 200 presentations were made to neighborhood groups, homeowners’ associations, chambers of commerce, village planning committees, trade associations, and other interested parties, can be found in text beginning on page 6-6 of the Final Environmental Impact Statement. The purposes of the outreach were in accordance with requirements established under the National Environmental Policy Act and include: obtain public input to assist in developing a well planned, researched, and defensible environmental impact statement for the proposed action; provide ongoing information on the study and obtain input from the primary stakeholders and broader public; identify key issues and concerns of the public and ensure that these are appropriately considered during the process; develop and implement a process that maintains open and continuing communications among the public, Arizona Department of Transportation, Federal Highway Administration, and the project team; and use multiple communication tools to effectively engage all population segments, thereby ensuring equal access to the environmental impact statement process.</td>
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NEPA requires examination of cultural, social, and economic impacts, and the new hazardous materials transportation and risks caused by the South Mountain Freeway and Truck Bypass would certainly affect all of these topic areas.

Despite all of this, there is nothing in the DEIS that even mentions the hazardous materials transportation and risks issue! This raises many issues, from the $20+ million spent on this deficient study, to the spoofing for the DEIS that was designed to restrict citizen input rather than allowing and encouraging it, to the blatant ignoring of actual, well documented statements of these concerns about the risks from hazardous materials transportation incidents by citizens participating in this particular NEPA process.

But it is evident that ADOT knew that there would be hazardous materials being transported on this proposed highway. A tunnel through South Mountain was rejected as an option by ADOT because that would prevent placarded traffic (traffic with hazardous materials) from traveling on the freeway. [Chapter Five, page 20. “The inclusion of a tunnel could result in hazardous materials restrictions along the entire proposed action. Therefore, hazardous cargo carriers would have to continue to use existing routes.”]

DEIS Ignores WQARF Site

Hazardous Materials has been mostly limited in the DEIS to a discussion of hazardous materials that might be encountered in the soils during construction. Yet, despite this alleged concern, the fact that the proposed path of the freeway crosses contaminated property near Interstate 10 near 55th Avenue is neither mentioned nor examined, much less the financial liability the taxpayers might be assuming by purchasing the contaminated property. That would certainly be an enormous economic impact. Since the 1980s, there has been well-documented groundwater contamination in the area around 51st Avenue and Van Buren to 59th Avenue and Van Buren, enough so that it was added to the list of the state of Arizona's Water Quality Assurance Officials Fund (WQARF), which is the state’s equivalent of a Superfund Site.


"Site History: 1987: The November 13 Decision Record created the Van Buren Tank Farm WQARF area. The amended decision record dated December 11 changed the name to the West Van Buren Area."  
"The West Van Buren WQARF site is located in the western portion of Phoenix, Arizona. The site is bounded approximately by Interstate 10 to the north, 7th Avenue to the east, Buckeray Road to the south, and 5th Avenue to the west. In addition, a finger shaped plume exists between 7th Avenue and 37th Avenue between Buckeray Road and Lower Buckeray Road."  
"Contaminants:  

26
As disclosed on page 4-157 of the Final Environmental Impact Statement, the Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The comment infers the only reason for elimination of tunnels as a reasonable option was due to the potential to restrict hazardous materials transport. On the referenced page of the Draft Environmental Impact Statement, there are seven other reasons associated with design, operational, maintenance, costs and impacts cited for the elimination of the tunnels as a reasonable option.

Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible.

Analysis of hazardous materials followed state-of-the-practice methods as reviewed by the U.S. Environmental Protection Agency and as used in a multitude of environmental studies for transportation projects across the country. Methods and results are presented on page 4-152 of the Draft Environmental Impact Statement. In summary, during the environmental impact statement process, properties potentially having hazardous waste on site are identified. These sites are considered during the corridor selection process and are ranked according to the likelihood of further assessment or potential cleanup activities being needed. The risk ranking method is used to inform the design team about which properties would likely need further assessment during the property acquisition phase of the project if an action alternative were to become the Selected Alternative. No sites were identified as "high priority." High-priority sites are those with high potential for releasing hazardous materials to the soil or groundwater, or those that have a recorded release issue. Examples of high-priority sites include current service stations, bulk fueling terminals, sites listed in the environmental database, or a known release that has not been remediated.

(See page 4-152 of the Draft Environmental Impact Statement.)

The corridor analysis revealed sites that would need further assessment during the property acquisition phase of the project, if an action alternative were to become the Selected Alternative. The Arizona Department of Transportation employs a phased approach to site assessment that allows time for cleanup of any sites found to have hazardous waste issues. The project team concluded from the level of analysis conducted during the environmental impact statement process that the types of sites likely to be acquired contain common hazardous waste issues like underground storage tanks, asbestos and lead paint in buildings, and other commonly found issues (see page 4-153 of the Draft Environmental Impact Statement). The Arizona Department of Transportation maintains a process for addressing these issues in accordance with all applicable environmental laws and regulations. 
The construction contractor would be required to comply with a host of regulations that protect the environment from undue impacts, including those from hazardous materials. Examples are the support yards or staging areas that are temporarily used for construction equipment. To control any releases of hazardous waste, fueling and maintenance areas for trucks would be required to have spill protection measures and stormwater management plans in place (see pages 4-111, 4-112, 4-153, and 4-154 of the Draft Environmental Impact Statement).

The West Van Buren Water Quality Assurance Revolving Fund site was identified and considered during development of the Draft Environmental Impact Statement (see page 4-165 of the Final Environmental Impact Statement, and the Draft Initial Site Assessment prepared for the proposed project). These sites are primarily groundwater-impact sites, and groundwater is found at a depth of over 60 feet below the footprint of the Preferred Alternative. Given the separation distance between the adversely affected medium (groundwater) and the construction zone (near-surface in these locations), the project team determined that these sites would not pose a risk to construction or to the general public once the facility were completed. This assessment has been clarified in the Final Environmental Impact Statement on page 4-165.

The Arizona Department of Public Safety (which includes the State Highway Patrol) has primary responsibility for enforcing traffic laws. The Department of Public Safety also has primacy when calling in support for traffic accidents, including hazardous materials accidents (see text box on page 4-157 of the Final Environmental Impact Statement). The Department of Public Safety would determine, based on the incident, whether a partial or full closure of the facility would be required in the event of a hazardous materials spill. The Arizona Department of Transportation maintains a list of contractors who provide emergency response services, as well as local municipalities whose fire and police departments operate in cooperation with the Department of Public Safety on incidents within their jurisdiction. Requirements for shippers are maintained by the Arizona Department of Transportation's Enforcement Compliance Division.

The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives. In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.
The Draft and Final Environmental Impact Statements present information and analysis about the proposed action and the enhanced conditions when compared against the No-Action Alternative and would not cause substantial adverse effects. The results of the analysis are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM$_{10}$) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

The Draft Environmental Impact Statement provided the results of modeling for each of the seven priority mobile source air toxics, in both the Eastern and Western Subareas, and compared relative mobile source air toxics emissions that would result from three different potential alternatives (W59, W71, W101) as compared with the No-Action Alternative. It also included modeling of mobile source air toxics emissions in the overall mobile source air toxics study area assuming the W59 Alternative (see pages 4-70 to 4-74 of the Draft Environmental Impact Statement) along with implementation of recent U.S. Environmental Protection Agency mobile source air toxics rules.

The updated emission modeling developed for the proposed action showed that for the mobile source air toxics study area, there would be little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-77 of the Final Environmental Impact Statement). For mobile source air toxics, the project would have a negligible effect on emissions in the mobile source air toxics study area.

The Preferred Alternative would also reduce in-vehicle mobile source air toxics exposure as opposed to the No-Action Alternative. The U.S. Environmental Protection Agency has found that in-vehicle benzene concentrations were between 2.5 and 40 times higher than nearby ambient concentrations, based on a review of studies discussed in the Regulatory Impact Analysis for the U.S. Environmental Protection Agency’s 2007 mobile source air toxics rule-making (Final Regulatory Impact Analysis, Environmental Protection Agency 420-R-07-002, 3-17 [February 2007]). Construction of the South Mountain Freeway would result in a reduction in benzene exposure to drivers and passengers for two reasons: decreased travel times (motorists would spend less time in traffic to reach their destinations) and lower emissions rates (attributable to speed improvements). Reducing on-road exposure would provide a health benefit for motorists using the freeway under consideration. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets at interchanges, benefiting users of area highways and those living near congested roads.

(Respone 72 continues on next page)
Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration’s mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining current conditions in the affected environment (to the extent that the monitoring data are current), they don’t tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed.

The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxic emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics. The West Phoenix monitoring site is not the same as the West 43rd Avenue monitoring site.

The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives. In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.
Hazardous Materials Incidents

The GORC areas along the proposed freeway have extremely limited access and egress. A hazardous materials transportation incident such as a spill of gasoline, sulfuric acid, or chlorine and the potential consequences that are detailed in the comments regarding the DEIS' complete failure to even mention the risks from a hazardous materials incident, much less mitigating the risks. Such an incident would certainly harm and/or doom the residents of the GORC around the 51st Avenue pass, as well as the low-income, minority residents in portions of South and West Phoenix. This is another severe example of environmental injustice, as no consideration is made for the Native Americans on the GORC, their lifestyle, and no plans or means for preparing for response to such a disaster is even mentioned in the DEIS. This is beyond the pale; it is akin to casually planning to set up small scale genocide. That is certainly an environmental injustice.

No Real Outreach to Environmental Justice Organizations

There is mention in the DEIS of a myriad of organizations and tribes that were approached about the DEIS, but not one environmental justice group in South or West Phoenix, or on the GORC, were even contacted. That has to be a deliberate step, as some of these groups even tried to approach ADOT and were rebuffed. All of this pattern of environmental racism is consistent with the theme of keeping out of the DEIS any mention of a negative against the construction of the freeway, even if it means, lying, obfuscating, ignoring data and organizations, and pretending problems don’t exist, even when they are identified as some of the worst in the United States.

The following are comments related to impacts related to the CANAMEN highway:

The DEIS uses figures pertaining to overstate population and job growth based on the 2005 numbers. As discussed at the meeting, ADOT was aware of the discrepancies, but chose not to update with the 2010 census figures. Doesn’t this discrepancy require correction before the final EIS?

There are some issues with the traffic studies in chapter three, so they are quite convoluted.

FOR THE E-1 Alignment
1) ADOT and MAG cite the organic population growth (postulated in 2005) in the East valley as creating traffic flows along the 60 west bound to the I-10, and along the south mountain 202’ (Pecos Road) also west bound and flowing to the I-10. There is no indication of growth or traffic volumes originating along I-10 between Riggs Road and Pecos Road because they are outside the study area. However these flows also cross along I-10 into

Public Involvement

As noted in the section Conclusions on page 6-29 of the Final Environmental Impact Statement, the Arizona Department of Transportation and Federal Highway Administration exceeded National Environmental Policy Act requirements pertaining to public outreach. The measures are described in Chapter 6, Comments and Coordination, as well as throughout the Final Environmental Impact Statement. The Arizona Department of Transportation made effort to make all population sectors and representatives aware of the proposed action. Organizations, by default, are invited to participate in the environmental impact statement process. The public hearing for the proposed action was widely advertised. Newspaper ads in six newspapers of area-wide distribution ran advertisements at least twice each. Announcements occurred on five radio stations and six television stations. Mailers were sent on May 6, 2013 to 73,564 individuals (approximately 311 on the Gila River Indian Community) who had previously expressed an interest in the project. The Arizona Department of Transportation utilized the Government Delivery system to distribute to over 12,000 recipients. E-newsletters were distributed on three different occasions. All materials were also provided to the Gila River Indian Community Public Information Officer.
Hazardous Materials Incidents

The GRIC area along the proposed freeway have extremely limited access and egress. A hazardous materials transportation incident such as a spill of gasoline, sulfuric acid, or chlorine and the potential consequences of that are detailed in the comments regarding the DEIS' complete failure to even mention the risks from a hazardous materials incident, much less mitigating the risks. Such an incident would certainly harm and/or doom the residents of the GRIC around the 51st Avenue pass, as well as the low-income, minority residents in portions of South and west Phoenix. This is another severe example of environmental injustice, as no consideration is made for the Native Americans on the GRIC, their lifestyle, and no plans or means for preparing for response to such a disaster is even mentioned in the DEIS. This is beyond the pale; it is akin to casually planning to set up small scale genocide. That is certainly an environmental injustice.

No Real Outreach to Environmental Justice Organizations

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All of this pattern of environmental racism is consistent with the theme of keeping out of the DEIS any mention of a negative against the construction of the freeway, even if it means, lying, obfuscating, ignoring data and organizations, and pretending problems don't exist, even when they are identified as some of the worst in the United States.

The following are comments related to impacts related to the CANAMEX highway:

The DEIS uses figures purposefully to overstate population and job growth based on the 2005 numbers. As disclosed at the meeting ADOT was aware of the discrepancies, but chose not to update with the 2010 census figures. Doesn't this discrepancy require correction before the final EIS?

There are some issues with the traffic studies in chapter three, they are quite convoluted:

FOR THE B-1 ALIGNMENT

1) ADOT and MAG cite the organic population growth (postulated in 2005 ) in the East valley as creating traffic flows along the 60 west bound to the i-10, and along the south mountain 202 (Pecos Road) also west bound and flowing to the i-10. There is no indication of growth or traffic volumes originating along 1-10 between Riggs Road and Pecos road because they are outside the study area. However those flows also course along 1-10 into

76 Impacts

The environmental impact statement process and the Draft Environmental Impact Statement documenting the process represent a transparent, disclosed examination of the potential for the proposed action to cause significant, adverse environmental impact and to propose mitigation where necessary. Throughout the Draft Environmental Impact Statement, adverse impacts are disclosed. Compliance with the environmental impact statement process is described throughout the entire Draft Environmental Impact Statement and is summarized in Figure S-3, Environmental Impact Statement Process, on page S-3.

77 Purpose and Need

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

78 Traffic

The road network for the Maricopa Association of Governments regional travel demand model includes all of Maricopa County and a substantial portion of Pinal County. While a road may not be within the Study Area for the proposed action, because it is included in the Maricopa Association of Governments travel demand model road network, its influence is considered in the traffic analysis for the proposed action. Location #7, Pecos Road to Wild Horse Pass Boulevard, shown on Figure 1-8 on page 1-15 of the Final Environmental Impact Statement, illustrates the anticipated growth along Interstate 10 from locations south of Pecos Road (including the Riggs Road to Pecos Road section identified in the comment). Between 2012 and 2035, the Interstate 10 traffic volume is projected to increase from around 96,000 to 134,000 vehicles per day (a 40 percent increase).
Maricopa county. This increased traffic growth created the gridlock at the Broadway curve, and will be even more constrained by 2015.

This congestion according to ADOT is to be relieved by the SM202 alignment and is a pillar to support the E-1 Alignment.

The traffic flows exhibited in chapter 3 of the DEIS only describe how traffic originates on the 60 and SM202 and flows into or along the I-10. They merely describe how this creates congestion at the Broadway curve. There is no analysis of the traffic flows along I-10 and where they end. This missing element creates a critical miss (in my opinion) to the purpose and need.

The majority of Traffic Westbound on I-10 flows onto 143 N to the airport and the 202 (red mountain) or to SR 51 North. These flows demonstrate a Northern flow of traffic North East Phoenix or even Western Scottsdale and Tempe, they do not flow through to downtown or 1-17. Arrivial Street traffic in downtown Phoenix in the AM does not support the argument that the traffic flows into or even past downtown into the West Valley.

This is demonstrated by a statistically insignificant (7.5%) reduction in traffic at the Broadway curve using the current flawed assumptions. Adjusting for actual through flows to the 143 and SR 51 I believe the reduction in congestion at the curve to be less than 2 or 3%.

The majority of traffic analysis is within the Western alignment where the West valley traffic needs relief to access I-10 along the northern route of the alignment...but this local commuter savings is not effected by the E-1 alignment. The E-5 alignment will not be utilized by this commuter traffic and will be utilized primarily as a truck bypass as acknowledged by ADOT on 6-11-13.

As for the CANAMEX

2) Chapter three cities statistics that “more than one third”, or 34% of the nations freight flows through Phoenix, today. There is no data cited to support that number. If correct it is understood for 2005 projections

Further the study is lacking because there is no analysis of the current or enhanced increase in freight volume resulting from the port activity in Guaymas and Puerto Coehort and the Union Pacific rail efforts moving that freight form those ports into Tucson and then north to Phoenix.

Tucson is now recognized internationally as a “Virtual Port”. As of 2013 Union Pacific has agreed to move and receive 50,000 additional containers to be dispersed via truck and train north and East (correction from west). The ports of Long Beach and LA that being avoided by the Ports and Rail lines in Mexico (Arizona Daily Star and SALEO Southern Arizona Logistis

Chapter 1 of the Draft Environmental Impact Statement discloses the purpose and need for the proposed action. The analyses results disclose existing and future capacity deficiencies throughout the regional system including as noted in the comment at the Broadway Curve. The transportation problem identified specific to the purpose and need relates to east-west regional mobility in the southwest valley unique from the Broadway Curve. While the Draft Environmental Impact Statement further discloses the proposed freeway would help reduce congestion at the Broadway Curve, improvements to Interstate 10 through the curve are a part of another planned project adopted in the regions Long Range Transportation Plan.

While a portion of the traffic through the Broadway Curve is airport-related, an equal portion extends west to Interstate 17 and even to Interstate 10 west of downtown Phoenix.

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An analysis of the origins and destinations of projected freeway users is presented in Figure 3-18, on page 3-36 of the Final Environmental Impact Statement. Freeway users are defined as those motorists who pass through the bend of the freeway (around the South Mountains). Therefore, this would not count motorists in Laveen Village who go to Interstate 10 (Papago Freeway) and motorists in Ahwatukee Foothills Village who go to Interstate 10 (Maricopa Freeway). The results of the origin-destination analysis show that 73% of the traffic going around the South Mountains has origins or destinations in the area within or around the Study Area and supports the conclusion that the proposed action would serve east–west mobility consistent with commuting movements.

In reference to the comment regarding trucks using the proposed freeway to avoid Interstate 10 through downtown Phoenix, the vehicle mix and specifically the percentages of trucks using the facility is similar in vehicle mix ratios found throughout the region’s existing freeway system.

The citation “MAG 2010c” is provided at the end of the first sentence of the third paragraph of the first column on page 3-64 of the Draft Environmental Impact Statement.

As detailed in Chapter 1, Purpose and Need, in the Draft Environmental Impact Statement, the proposed action is not needed in response to national freight movement, nor is it intended to provide service primarily for freight movement. The proposed action is needed to address local capacity deficiencies and has been developed in response to local growth in population, housing, employment, and travel levels.
The road network for the Maricopa Association of Governments regional travel demand model includes all of Maricopa County and a substantial portion of Pinal County. While a road may not be within the Study Area for the proposed action, because it is included in the Maricopa Association of Governments travel demand model road network, its influence is considered in the traffic analysis for the proposed action.

The statements made on June 11, 2013, as paraphrased in the comment as trucks would use the proposed freeway to avoid Interstate 10 through downtown Phoenix is misleading. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Recognition of the trucking contribution to traffic in the region is disclosed on page 3-64 of the Final Environmental Impact Statement.

As supported by the traffic analysis presented in the Final Environmental Impact Statement, the primary user vehicles of the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed action, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, trucking destinations in the Phoenix metropolitan area would still prompt truck drivers to enter congested areas. Choosing to travel on the proposed freeway versus Interstate 10 would not produce substantial travel-time benefits. Therefore, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85.

ADOT admitted the 202 is a truck bypass while attempting to minimize the utilization of the loop as a potenial of the CANAMEX. In the 6-11 SMAC meeting, it was freely discussed how Congress has not declared the exact route, and how the CANAMEX’ own web site itself identifies the I-10 corridor, not any other. Additionally there is the current lack of suitability along the I-8/85 future I-11 route, which is obviated by the completion of the 202 highway anyway. In addition all Phoenix bazed shipping hubs are located “within” the new 202 loop and would be more efficiently accessed by ALL traffic types by using the 202.

ADOT surveyed truck drivers about routes in the early days of traffic review. Their surveys indicated that most traffic never passed through Phoenix. However the system of intermodal transport is hub and spoke, so freight comes in to a terminal and the driver drops the load and picks a new one, never passing through. So the Driver survey was

86 Purpose and Need

The statements made on June 11, 2013, as paraphrased in the comment as trucks would use the proposed freeway to avoid Interstate 10 through downtown Phoenix is misleading. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Recognition of the trucking contribution to traffic in the region is disclosed on page 3-64 of the Final Environmental Impact Statement.

As supported by the traffic analysis presented in the Final Environmental Impact Statement, the primary user vehicles of the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed action, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, trucking destinations in the Phoenix metropolitan area would still prompt truck drivers to enter congested areas. Choosing to travel on the proposed freeway versus Interstate 10 would not produce substantial travel-time benefits. Therefore, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85.

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87 Purpose and Need

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correct. What is not accurate is the notion that the freight stays behind. As indicated in Chapter three of the Study Nearly 15 % of US freight passed through Phoenix. Phoenix is not a train hub so all of these containers are by truck. The DEIS is inadequate in its description of this container traffic and its effect

Understand that the two ports in Mexico mentioned below are developed in partnership with Union Pacific to obviate the need to expand Long Beach and Los Angeles Harbors. This is stated frequently by supporters of the CASANEX.

See also the description by PAG, Phoenix Association of Governments
[http://intermodal.engagehub.aspx](http://intermodal.engagehub.aspx)

The following are comments related to impacts related to the Deficiencies in Description of Proposed Action:

A. The description of the proposed action is deficient. The action is described generally as building a freeway in compliance with the RTP. Lacking from the description are the following:

1. The typical cross-section of the freeway should be included, listing major deviations, if any, from the typical cross-section for each of the three West Alternatives and the Single East Alternative.

While at the outset the cross-section was not known, the 10-lane alternative was eliminated in the Fourth-Ever Screening. A freeway with three general purpose (GP) and one High Occupancy Vehicle (HOV) lane in each direction, plus auxiliary lanes where necessary, was established for all alternatives.

2. The profile for the freeway should be described in general terms for each Alternative.

3. The location of proposed interchanges for each alternative should be shown.

4. The fact that park-and-ride lots would be provided at interchanges should be stated. The term park-and-ride appears only once in the Summary (Page 5-19) in the context of a mitigation measure for Displacements and Relocations. The term park-and-ride does not appear at all in Chapter 1 (Purpose and Need); it appears three times in Chapter 3 (Alternatives) first on Page 3-6 as part of the discussion of Modal Screening Results, the second time on Page 3-13, Figure 3-8 (indicating that the park-and-ride lot at the 40th Street Interchange potentially would be expanded, and for the third time on Page 3-40 in the context of the No-Action Alternative. Thus unless a reader studied Figure 3-8 very carefully, he or she would not be aware of the potential expansion of the park-and-ride lot at the 40th Street Interchange.

87 Proposed Action
As supported by the traffic analysis presented in the Draft and Final Environmental Impact Statements, the primary user vehicles of the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed action, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, trucking destinations in the Phoenix metropolitan area would still prompt truck drivers to enter congested areas. Choosing to travel on the proposed freeway versus Interstate 10 would not produce substantial travel-time benefits. Therefore, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85.

88 Proposed Action
While the proposed action is summarily defined on page 1-1 of the Draft Environmental Impact Statement as the “construction and operation of a major transportation facility,” design specifics for each action alternative are found in text beginning on page 3-40 of the Final Environmental Impact Statement. Sufficient detail is provided to: ensure meaningful comparison and analyses of the alternatives in reference to operational characteristics, cost, and impacts; and to convey sufficient information to reviewers of the characteristics of each alternative in accordance with 23 Code of Federal Regulations 771 Environmental Impact and Related Procedures or in the Federal Highway Administration Technical Advisory T 6640.8A Guidance for Preparing and Processing Environmental and Section 4(f) Documents.

89 Alternatives
Key elements of the alternatives studied in detail are presented in the Draft Environmental Impact Statement, beginning on page 3-40. A typical section of the proposed freeway is depicted in Figure 3-34, on page 3-58 of the Draft Environmental Impact Statement.

90 Alternatives
The vertical alignment of each action alternative is described beginning on page 3-40 of the Draft Environmental Impact Statement. The profiles are shown graphically in Figures 3-20 to 3-25.

91 Alternatives
The proposed interchange locations for each action alternative are shown in Figure 3-28, on page 3-51 of the Draft Environmental Impact Statement.

92 Alternatives
Inclusion of park-and-ride lots is not part of the scope of the proposed action. No new park-and-ride lots are proposed as part of the proposed action. Locations of future park-and-ride lots would be determined by the City of Phoenix and Valley Metro (see discussion of potential enhancements on page 3-60 of the Draft Environmental Impact Statement).

93 Transit
Inclusion of park-and-ride lots is not part of the scope of the proposed action. No new park-and-ride lots are proposed as part of the proposed action. Locations of future park-and-ride lots would be determined by the City of Phoenix and Valley Metro (see discussion of potential enhancements on page 3-60 of the Draft Environmental Impact Statement).
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<th>Code</th>
<th>Issue</th>
<th>Response</th>
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<tbody>
<tr>
<td>94</td>
<td>Alternatives</td>
<td>As described in the responses above, the elements of the proposed freeway and the potential action alternatives were described in the Draft Environmental Impact Statement.</td>
</tr>
<tr>
<td>95</td>
<td>Alternatives</td>
<td>See responses to specific comments below. The alternatives analysis process of developing and screening documents was a disclosed, robust, comprehensive, objective and consistent with the National Environmental Policy Act’s objective of using a logical, sequential interdisciplinary approach to establish a range of reasonable alternatives (as concluded in text beginning on page 3-26 of the Draft Environmental Impact Statement).</td>
</tr>
<tr>
<td>96</td>
<td>Alternatives</td>
<td>The third bullet in the third column on page 3-51 of the Draft Environmental Impact Statement states that “The diamond interchange configuration (see sidebar on page 3-14) was used to evaluate service traffic interchange needs.” The comment is incorrect in assuming that there would be no access to the Gila River Indian Community to the south. At 40th Street, there is an existing road to the south, and the planned interchange at that location would provide access onto Gila River Indian Community land. Similarly, the interchanges at 24th Street, Desert Foothills Parkway, and 17th Avenue would be constructed to allow for future connections from Gila River Indian Community land. The initial layout would be similar to the interchanges at State Route 202L (Red Mountain Freeway) and Dobson Road. Figure 3-28 indicated whether the interchanges would include full access or half access. In some locations, a single-point urban interchange or other interchange type may be used to address higher traffic volumes. The determination of the interchange type would be made during final design in coordination with the local jurisdiction.</td>
</tr>
<tr>
<td>97</td>
<td>Traffic</td>
<td>Text beginning on page 3-60 of the Final Environmental Impact Statement presents the traffic analyses for the action and no action alternatives for existing and future conditions. The analyses used state-of-the-practice methods and analytical tools to demonstrate the traffic operational performance of each alternative. Ancillary to the effort, in 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the freeway on the local street system, including the shift of access to Foothills Reserve and Calabrea from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the proposed freeway.</td>
</tr>
<tr>
<td>98</td>
<td>Traffic</td>
<td>Emergency responders would address the construction of the proposed freeway by amending the local emergency response plan to include the facility. As concluded in the section, Social Conditions, in Chapter 4 of the Draft and Final Environmental Impact Statements, response times for police, fire, and medical emergency services would be faster when compared with response times under the No-Action Alternative. Circulation on major arterial streets would be improved through better distribution of traffic onto the overall transportation network, the provision of alternative routes, and through localized operational improvements such as grade separations and planned interchanges.</td>
</tr>
</tbody>
</table>

There is no mention of park-and-ride in the Traffic Overview Report. For the public in general, the Regional Transportation Plan (RTP) and complying with the RTP are abstract and perhaps foreign concepts. The Description of the Proposed Action should have sufficient information to help the public visualize what is being proposed on the ground.

**Deficiencies in Evaluation of Alternatives**

5. The evaluation of alternatives is deficient because there is no analysis of traffic impacts on local streets and local access. A specific example would be how Pecos Road would be impacted by the Proposed Action. With the Proposed Action, the South Mountain Freeway (SMF) would obliterate and replace existing Pecos Road (as described as Alternative E), access to the street system in the area would be provided via interchanges at 40th Street, 24th Street, Desert Foothills Parkway, and 17th Avenue.

1. The DEIS does not indicate what type of interchange would be constructed at these locations. Because there would be no access to the Gila River Indian Community (GRIC) on the south side, neither of the two typical interchanges depicted on Page 3-14, “Diamond Interchange” and “Single Point Urban Interchange,” would be applicable. The DEIS should indicate the type of interchange to be provided, at least conceptually and with a simple graphic.

2. The DEIS should present recent traffic volume counts for Pecos Road and turning movement counts at the existing signalized intersections at 40th Street, 32nd Street, 24th Street, Desert Foothills Parkway, and 17th Avenue. Then it should discuss the impacts on existing traffic due to the loss of access at 32nd Street and how existing traffic patterns will change. Then, 2035 peak hourly traffic volumes at the interchanges should be presented so that the public can be informed of how present routings will be affected and what the impacts will be in 2035. The impacts on the cross streets are not dependent on the specific design details and can be evaluated based on the traffic volume projections.

3. The DEIS should discuss how the Proposed Action would affect emergency vehicle access times for the communities now served by the signalized intersection at Pecos Road 32nd Street.

4. With the Proposed Action, the eastbound left-turn and westbound right-turn direct access to the park-and-ride facility at 60th Street will be lost, shifting the ride-sharer traffic to the two park-and-ride access points via 40th Street. The southern access driveway is less than 300 ft (center-to-center) north of Pecos Road. The construction of the freeway ramps will shorten the spacing between the junction of the westbound ramp terminal and the southern access driveway for the park-and-ride lot. The impact to traffic operations along 40th Street, impacts to park-and-ride...
The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-18 on page 3-15 of the Draft Environmental Impact Statement). The interchange would have displaced more than 100 homes and would have been located near an existing high school. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabrea from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement). The storage facility is located on Gila River Indian Community land and would not be displaced. Reasonable access to the facility would remain available from 32nd Street, Chandler Boulevard, and other east-west local streets. A grade-separated bridge would be constructed for the freeway to go over 32nd Street.

The quotation noted in the comment has been changed to be consistent with a similar statement made in the caption to Figure 3-18: “Seventy-three percent of travelers anticipated to use the proposed action would be involved in trips beginning or ending in the Study Area itself or in the areas immediately surrounding it.” The figure does portray the locations of the cities included in the different areas. The proposed action would serve regional travel from the southwestern to southeastern portions of the region (not just internal Study Area travel). The analysis does consider traffic that passes through the Phoenix metropolitan area. It should also be noted that, by definition, these freeway users would not include traffic from Laveen Village to Interstate 10 (Papago Freeway) or from Ahwatukee Foothills Village to Interstate 10 (Marcopolo Freeway). Therefore, the 15 percent of trips identified in the comment as Study Area-originated are by motorists traveling to the other side of the South Mountains.

The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26. The proposed project would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices.

The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives. In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.

Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resource studies and engaging in an ongoing, open dialogue with the Gila River Indian Community Tribal Historic Preservation Office regarding...
the identification and evaluation of places of religious and cultural importance to the Gila River Indian Community that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

The Draft Environmental Impact Statement, after consultation and coordination efforts, accommodates and preserves (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.
There is plenty of correspondence in the DEIS and its Appendices in which the GRIC repeatedly asserts and reminds ADOT of this, to no avail. ADOT plans to blast Mulhada Dooq.

If we were to take a look at the same issue and frame it as a danger to a sacred site that plays a role in cultures, identities, histories, and oral traditions of a white, Eurocentric-based religion, such as the Vatican, a sacred site for the Roman Catholic Church, we can illuminate how this is clearly religious discrimination, and likely racial discrimination. If Rome, Italy decided there needed to be a freeway that needed to go out of the Vatican, well, that would just be unthinkble to the people there of the Roman Catholic faith. Think of the outrage and outcry such a proposal would muster, even worldwide!

So what is the difference between the Vatican and Roman Catholic beliefs, and Mulhada Dooq and the "Native American entities?"

This attitude and planned action deliberately and intentionally violates the civil rights of the "Native American entities." In a 1978 constitution on the issue, the United States commission on civil rights defined religious discrimination in relation to the civil rights guaranteed by the Fourteenth Amendment to the United States Constitution. [Section 1. All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.]

As for racial discrimination, the equal protection clause was originally added to deal with the lack of equal protection provided by law to all in the course of administering justice in the states that had Black codes.

The United States commission on civil rights noted, "Whereas religious civil liberties, such as the right to hold or not to hold a religious belief, are essential for Freedom of Religion (in the United States sector by the First Amendment), religious discrimination occurs when someone is denied "the equal protection of the laws, equality of status under the law, equal treatment in the administration of justice, and equality of opportunity and access to employment, education, housing, public services and facilities, and public accommodation because of their exercise of their right to religious freedom." (Emphasis added.)

Also, the American Indian Religious Freedom Act (commonly abbreviated to AIRFA) is a US federal law and a joint resolution of Congress that was passed in 1978. It was created to protect and preserve the traditional religious and cultural practices of American Indians, Eskimos, Aleuts and Native Hawaiians. These rights include, but are not limited to, access of sacred sites, repatriation of sacred objects held in museums, freedom to worship through ceremonial and traditional rites, including within prisons, and use and possession of objects considered sacred. (Emphasis added.) The

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<td>102</td>
<td>(cont.)</td>
<td>Several alternative actions were subject to the alternatives development and screening process; not just the E1 Alternative and alternatives located on the Gila River Indian Community (Figure 3-6 on page 3-10 of the Final Environmental Impact Statement illustrates a representation of such alternatives). Ultimately the other alternatives were eliminated from further study in the screening process and the Gila River Indian Community decided not to give permission to study alternatives on its land (see Final Environmental Impact Statement page 3-25). Therefore, the Arizona Department of Transportation, with concurrence from Federal Highway Administration, identified the E1 Alternative as the eastern section of the preferred Alternative (which includes the W59 Alternative in the Western Section of the Study Area). In reaching its determination, the Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.</td>
</tr>
<tr>
<td>103</td>
<td>Title VI, 14th Amendment</td>
<td>Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in ongoing, open consultation with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community's Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28. Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.</td>
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(Response 103 continues on next page)
The American Indian Religious Freedom Act, 42 United States Code Section 1996, provides a policy statement of the United States "to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian . . . including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites."

The Arizona Department of Transportation and Federal Highway Administration complied with the policy stated in the American Indian Religious Freedom Act throughout the environmental impact statement process, as evidenced by consultation efforts, mitigation measures, and a discussion of cultural resource issues in the Draft Environmental Impact Statement. The study would not violate the American Indian Religious Freedom Act because, as stated above, the Gila River Indian Community would not be prohibited from continuing to practice their beliefs even if the project goes forward, since access to the mountain will be maintained, impacts will be mitigated based on input by the Gila River Indian Community and others, and only a small fraction of the mountain would be affected.

Act required policies of all governmental agencies to eliminate interference with the free exercise of Native religion (Emphasis added), based on the First Amendment, and to accommodate access to and use of religious sites to the extent that the use is practicable and is not inconsistent with an agency’s essential functions. It also acknowledged the prior violation of that right.

Clearly, the No Build Alternative is the only viable option that does not constitute a violation of the 14th Amendment to the Constitution and a violation of the American Indian Religious Freedom Act as any freeway alternative proposed in the DEIS of the South Mountain Freeway requires blasting away part of Mahaladaj Dooq.
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<th>Code</th>
<th>Comment Document</th>
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<tr>
<td>104</td>
<td><strong>Public Involvement</strong>&lt;br&gt;Failure to Provide Timely Access to NEPA Documents and Public Records; Obstruction&lt;br&gt;ADOT made it extremely difficult for the public to actually review the DEIS, Appendices, and Technical Reports. ADOT was evasive and not at all forthcoming with these, even when proper processes to gain access to these were employed. This is in violation of NEPA regulations.</td>
</tr>
<tr>
<td>105</td>
<td><strong>Public Involvement</strong>&lt;br&gt;Hard copies of the Draft Environmental Impact Statement and Section 4(f) Evaluation were made available at the repositories. All copies placed for public viewing contained the appendices as a compact disc in pockets in the back of the document. The comment is correct that the technical reports supporting the Draft Environmental Impact Statement were only available by request.</td>
</tr>
<tr>
<td>106</td>
<td><strong>Public Involvement</strong>&lt;br&gt;The first record of a call placed to the Arizona Department of Transportation Environmental Planning Group by the commenter, was Saturday, June 8, 2013. The call was returned to the commenter on Monday, June 10, 2013 and a disc containing the technical reports was provided on the same day.</td>
</tr>
<tr>
<td>107</td>
<td><strong>Public Involvement</strong>&lt;br&gt;The technical reports were provided to the commenter, as requested, on June 10, 2013, the same day they were requested.</td>
</tr>
<tr>
<td>108</td>
<td><strong>Public Involvement</strong>&lt;br&gt;On June 17, 2013, the commenter contacted the Arizona Department of Transportation by e-mail to request a scoping technical report, if one existed. The scoping technical report was provided on June 18, 2013. Two of the technical reports requested (Cultural Resources and Section 4[f]) contained confidential information. After discussion with the Federal Highway Administration, release of the reports, in redacted form, was approved. Additional time was required for the Arizona Department of Transportation's cultural staff to review the documents and to redact the information deemed confidential. However, the redacted technical reports were provided on June 28, 2013.</td>
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<td>Code</td>
<td>Comment Document</td>
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<td></td>
<td>[16 U.S.C. 470w-3(a) — Confidentiality of the location of sensitive historic resources] (a) The head of a Federal agency or other public official receiving grant assistance pursuant to this Act, after consultation with the Secretary, shall withhold from disclosure to the public, information about the location, character, or ownership of a historic resource if the Secretary and the agency determine that disclosure may — (1) cause a significant invasion of privacy; (2) risk harm to the historic resources; or (3) impede the use of a traditional religious site by practitioners.</td>
</tr>
<tr>
<td>108</td>
<td>Of course, this statute refers to information, not whole reports. When I pointed that out in an email, he agreed to produce the report, but that took another eight days.</td>
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<td></td>
<td>I gained access to the last of these Technical Reports on June 26, 2013, with portions redacted. That was less than 30 days before the close of comment.</td>
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</table>
REPORTS

Four

Review and Critique of DEIS for Loop 202 (South Mountain Freeway) by Herman Basmaciyan, P.E. dated July 17, 2013.
HERMAN BASMACIYAN, P.E.
Traffic, Transportation, Parking
Expert Witness and Consulting Services
701 Marguerite Avenue
Corona del Mar, CA 92625
Tel: 949-993-5738
herman.b@roadrunner.com

July 17, 2013

Ms. Pat Lawlis
President, Protecting Arizona’s Resources and Children (PARC)
P.O.Box 50455
Phoenix, Arizona 85076-0455

Proj. No. 130601

Subject: DEIS for Loop 202, South Mountain Freeway

Dear Ms. Lawlis:

Per your request, I have reviewed the Draft Environmental Impact Statement (DEIS) for Loop 202, South Mountain Freeway (SMF) and related documents pertaining to travel modeling, traffic, circulation, and transportation and traffic engineering/planning.

I am a Registered Civil and Traffic Engineer in the State of California (Registration Numbers 20137 and 525, respectively) and a Registered Engineer (in retired status) in the States of Washington, Arizona, and Florida. I have over 50 years of experience in traffic and transportation engineering, traffic modeling and forecasting, parking studies, and the preparation of traffic impact studies. I have personally prepared or had a key role in the preparation of over 400 reports, including environmental documents, in various jurisdictions in California, Arizona, Washington, Oregon, Nevada, Colorado, Montana, Louisiana, and Ohio, as well as several multi-State projects sponsored by the U.S. Department of Transportation. My curriculum vitae (cv) is attached.
Ms. Pat Lawlin
July 17, 2013 Page 2

Based on my review of the documents cited above and my education, professional knowledge and many years of experience, I have identified deficiencies and/or omissions in the environmental documentation for the Loop 202 South Mountain Freeway project. These deficiencies and/or omissions are discussed in my report, attached. In view of these deficiencies and/or omissions, I have concluded that the DEIS leads to the selection of a Preliminarily Preferred Action Alternative, improperly.

In my opinion, based on the information presented, the No Action Alternative should have been selected as the preferred course of action.

Please contact me if I can provide further details or clarification about any matters covered in this letter and the attached report.

Sincerely,

Herman Basmacyan, P.E.

Attached:
Curriculum Vitae
Review and Critique of DEIS for Loop 202 (South Mountain Freeway)
Herman Basmaciyan, P.E.

Profile
- Over 50 years of transportation planning and traffic engineering experience, including services to legal professionals
- Expert witness services in San Diego, Orange, Los Angeles, Riverside, and San Mateo Counties in eminent domain, traffic engineering, transportation engineering/planning, and parking matters
- Experience in numerous traffic impact studies, transportation planning projects, parking studies, analysis of land use/transportation system interrelationships and traffic/transportation engineering
- Management of, or key role in, a wide variety of transportation/traffic engineering projects in California, Oregon, Washington, Arizona, Nevada, Colorado, Montana, New Mexico, Ohio, and Louisiana

Education
- Master of Science in Civil Engineering, University of Virginia, 1962
- Bachelor of Science in Civil Engineering, Robert College, 1960
- Numerous Short Courses in Transportation and Traffic Engineering

Registration
Professional Engineer:
- California, Civil
- California, Traffic
- Arizona (retired status)
- Florida (retired status)
- Washington (retired status)

Professional Organizations
- Institute of Transportation Engineers
- American Society of Civil Engineers

Employment History
- Individual Providing Expert Witness and Consultant Services, Corona del Mar, CA, since January 2005
- Transportation Consultant, County of Riverside, Riverside, CA, 2005-2011
- Vice President, Kinley-Horn and Associates, Inc, Orange, CA 1992-2004
- Principal, Basmaciyan-Darnell, Inc., Irvine, CA 1978-1992
- Principal, Basmaciyan and Associates, Newport Beach, CA 1976-1978

HERMAN BASMACIYAN, P.E.
• Senior Associate, VTN Corporation, Irvine, CA, and Bellevue, WA 1971-1976
• Senior Transportation Planning Engineer, DeLeuw, Cather and Company, San Francisco, CA 1970-1971
• Advisory Analyst, Service Bureau Corporation (then a subsidiary of IBM), Palo Alto, CA 1967-1970
• Director, Puget Sound Regional Transportation Study, Seattle, WA 1962-1967
• Research Assistant, Virginia Council of Highway Research, Charlottesville, VA 1960-1962

Representative Projects in Arizona

• Business 8 Corridor Study, Yuma, AZ
• Development of Traffic Circulation Models, Flagstaff, AZ
• Downtown Transportation Study, Tempe, AZ
• FMPO Travel Demand Model Update and Data Collection, Flagstaff, AZ
• Arizona Passenger Rail Feasibility Study, Arizona Department of Transportation, AZ
• Business 8 Corridor Study, Yuma, AZ
• Phoenix Urban Area Public Transportation Study, Phoenix, AZ
• Statewide Rail Passenger Feasibility Study, Statewide, AZ
• Traffic Circulation Study, San Luis, AZ
• Yuma Area Service Highway Major Investment Study, Design Concept Report, and Environmental Assessment, Yuma, AZ
• Yuma Regional Transportation Study, Yuma, AZ
• Yuma Regional Transportation Study, Yuma, AZ

Other Major Representative Projects

• Analysis of Transit Services and Transit System Improvement Options, Boulder, CO
• MAGLEV in Southern California, Los Angeles, CA
• Major Investment Study for rail and bus transit improvements in Cincinnati, Ohio and vicinity
• Southeast Los Angeles/Western Orange County Transportation Study, Southern California Association of Governments, CA
• Public Transportation Alternatives Feasibility Study, including High-Speed Trains, Western WA
• Alternatives Analysis for Transitway Program, Orange County, CA
• Cross-Sound Transportation Study, Puget Sound Region, WA
• Downtown Transit Terminal Location Study, Mountain Line, Missoula, MT

Herman Basmaci An, P.E.
- Alternatives Analysis and Environmental Assessment for the Improvement of Facilities for High Occupancy Vehicles at and near the Interchange of I-405 and SR-55, Orange County Transportation Authority, CA
- Bridge and Major Thoroughfare Feasibility Study, County of San Diego, CA
- Central County Corridor Study, Orange County Transportation Authority, Orange, CA
- Circulation Element of El Segundo General Plan, El Segundo, CA
- Circulation Element of Westminster General Plan, Westminster, CA
- Circulation system planning analysts for the Rancho Santa Fe Association, Rancho Santa Fe, CA
- Circulation System Planning, East Otay Mesa Specific Plan, San Diego County, CA
- Environmental Documentation for California State Route 57 Improvements, Orange County, CA
- Front Avenue Corridor Study, Portland, OR
- Harbor Boulevard Smart Street Feasibility Study and Environmental Documentation, Garden Grove, Anaheim, Santa Ana, Fountain Valley, Orange County, CA
- Moulton Parkway Feasibility Study, Orange County, CA
- North-South/Central Orange County Corridor Study, Orange County, CA
- On-Call Transportation Planning and Traffic Engineering Services for Caltrans District 11, CA
- People-Mover/PRT Feasibility Study, Seattle, WA
- Regional Transit Plan, San Diego County, CA
- Santa Ana River Crossing Cooperative Study, Orange County, CA
- Santa Ana Transportation Corridor Alternatives Analysis and Environmental Documentation, Orange County, CA
- Station Area Traffic Analysis, Commuter Rail Service between Oceanside and San Diego, North San Diego County Transit Development Board, Oceanside, CA
- Stations Area Traffic Analysis, Commuter Rail Service between Oceanside and Escondido, North San Diego County Transit Development Board, Oceanside, CA
- Tri-Met Transit Development Program, Portland, OR

HERMAN BASMAI AN, P.E.
REVIEW AND CRITIQUE

of

DEIS FOR LOOP 202 (SOUTH MOUNTAIN FREEWAY)

Prepared for

Protect Arizona’s Resources and Children (PARC), et al.
Phoenix, Arizona

by

Herman Basmaeiyan, P.E.
July 17, 2013
SECTION I - SUMMARY OF FINDINGS AND CONCLUSIONS

Following is a summary of the findings and conclusions of the review of the DEIS for Loop 202 (South Mountain Freeway) focused on traffic, travel forecasting, circulation, and related matters:

1. The socio-economic data projections presented in the Purpose and Need and elsewhere in the DEIS are faulty.

2. Since socio-economic data are the starting point for the MAG Travel Model, the travel-related forecasts presented in the Purpose and Need and elsewhere in the DEIS are faulty.

3. The forecast of vehicle miles of travel (VMT) lacks credibility. The DEIS states that VMT will grow at a higher rate compared to population and employment growth. This premise is contrary to actual national trends which uniformly show decreases in VMT. Moreover, in the DEIS the methodology used for computation of VMT is not adequately explained.

4. As presented in the DEIS, the Purpose and Need defines the need as “completing the Regional Freeway System,” “adding capacity to the regional freeway and arterial system,” and “serving travel needs in the Southwest area.” No compelling need specifically for the South Mountain Freeway (SMF) is presented in the Purpose and Need.

5. The Description of the Proposed Action in the Summary Chapter of the DEIS fails to provide details essential for informed decision-making.

6. Some reasonable and feasible alternatives were not considered in the DEIS or were improperly eliminated early in the screening process.

7. Since the evaluation and selection of alternatives is based largely on the travel forecasts (among other considerations), the evaluations and selection are finally flawed. As stated in Item 2 above, the travel forecasts were prepared based on faulty socio-economic forecasts.

8. Some impacts, including impacts on the arterial street system adjoining proposed interchanges, construction impacts, and the impacts of truck traffic are not addressed at all or are not adequately addressed in the DEIS.

Review and Critique of DEIS for Loop 202 (SMF)  Page 1

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<th>Code</th>
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<tr>
<td>111</td>
<td>Purpose and Need</td>
<td>The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to traffic. Full new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed in the future.</td>
</tr>
<tr>
<td>112</td>
<td>Traffic</td>
<td>The local conditions and setting of the Phoenix metropolitan area are not consistent with areas of high-density cities in other parts of the country. In Maricopa County, daily vehicle miles traveled levels increased by almost 2 percent between 2011 and 2012, and the 2012 daily vehicle miles traveled are approaching the prerecession peak in 2007. (Source: the Arizona Department of Transportation’s Multimodal Planning Division’s Highway Performance Monitoring System Data for calendar years 2012 and 2011).</td>
</tr>
<tr>
<td>113</td>
<td>Purpose and Need</td>
<td>The actual need defined in Chapter 1 of the Draft Environmental Impact Statement is based on socioeconomic factors (see page 1-11) and on regional transportation demand and existing and projected transportation system deficiencies (see page 1-13). The proposed action is the construction and operation of a major transportation facility. Chapter 1, Purpose and Need, defines the need or the problem the proposed action would solve. Chapter 3 evaluates alternatives for addressing this need. The responsiveness of the proposed freeway to the purpose and need criteria is presented in the Draft Environmental Impact Statement, beginning on page 3-27.</td>
</tr>
</tbody>
</table>
## SECTION 1 - SUMMARY OF FINDINGS AND CONCLUSIONS

Following is a summary of the findings and conclusions of the review of the DEIS for Loop 202 (South Mountain Freeway) focused on traffic, travel forecasting, circulation, and related matters:

1. The socio-economic data projections presented in the Purpose and Need and elsewhere in the DEIS are faulty.

2. Since socio-economic data are the starting point for the MAQ Travel Model, the travel-related forecasts presented in the Purpose and Need and elsewhere in the DEIS are faulty.

3. The forecast of vehicle miles of travel (VMT) lacks credibility. The DEIS states that VMT will grow at a higher rate compared to population and employment growth. This premise is contrary to actual national trends which uniformly show decreases in VMT. Moreover, in the DEIS the methodology used for computation of VMT is not adequately explained.

4. As presented in the DEIS, the Purpose and Need defines the need as “completing the Regional Freeway System,” “adding capacity to the regional freeway and arterial system,” and “serving travel needs in the Southwest area.” No compelling need specifically for the South Mountain Freeway (SMF) is presented in the Purpose and Need.

5. The Description of the Proposed Action in the Summary Chapter of the DEIS fails to provide details essential for informed decision-making.

6. Some reasonable and feasible alternatives were not considered in the DEIS or were improperly eliminated early in the screening process.

7. Since the evaluation and selection of alternatives is based largely on the travel forecasts (among other considerations), the evaluations and selection are fatally flawed. As stated in Item 2 above, the travel forecasts were prepared based on faulty socio-economic forecasts.

8. Some impacts, including impacts on the arterial street system adjoining proposed interchanges, construction impacts, and the impacts of truck traffic are not addressed at all or are not adequately addressed in the DEIS.

Review and Critique of DEIS for Loop 202 (SMF)  
Page 1

### Code Response Appendix

<table>
<thead>
<tr>
<th>Code</th>
<th>Issue</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>Purpose and Need</td>
<td>As pointed out on page 5-1, in the sidebar, “What you will find in the Summary chapter,” the text in the Summary is not the “final word,” and readers are urged to turn to the main text when questions about Summary content arise.</td>
</tr>
<tr>
<td>115</td>
<td>Alternatives</td>
<td>In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. The preferred alternative was the outcome to this process. Text beginning on page 3-26 of the Draft Environmental Impact Statement establishes conclusions associated with the process.</td>
</tr>
<tr>
<td>116</td>
<td>Traffic</td>
<td>The Federal Highway Administration and the U.S. Environmental Protection Agency approved the air quality conformity determination that includes the Maricopa Association of Governments regional travel demand model that produced the traffic projections used in the traffic analysis for the project (see page 3-27 of the Draft Environmental Impact Statement). Traffic projections are regularly updated by the Maricopa Association of Governments. The traffic projections in the Draft Environmental Impact Statement are from a model adopted in 2011. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11.</td>
</tr>
<tr>
<td>117</td>
<td>See responses to specific comments following.</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 1 shows that there is a need for a major transportation facility (an action alternative) within the Study Area today and that without a major transportation facility in the Study Area in the future (the No-Action Alternative), the region would continue to suffer even greater congestion, traffic delays, and impacts on the movement of people and goods and the delivery of services. Capacity deficiencies would be substantially greater in the foreseeable future under No-Action when compared against the action alternatives.

The comment provides no specifics. The Arizona Department of Transportation and Federal Highway Administration have included mitigation measures based on the level of impact associated with the proposed action. These mitigation measures have been coordinated and reviewed by local, regional, State, and federal agencies. Specific responses are made to specific comments later in this document.

The Arizona Department of Transportation, with concurrence from the Federal Highway Administration, has determined that the proposed freeway (as made up by the W59 and E1 Alternatives) is the appropriate solution to the transportation problem identified in the Draft Environmental Impact Statement. All of the alternatives were subject to a thorough evaluation using a multidisciplinary set of criteria in accordance with National Environmental Policy Act and Federal Highway Administration guidance.
SECTION II SUPPORTING INFORMATION FOR THE SUMMARY OF FINDINGS AND CONCLUSIONS

In this Section of the report, information is presented to support each of the numbered items 1 through 11 in Section I.

1. The socio-economic data projections presented in the Purpose and Need and elsewhere in the DEIS are faulty. The socio-economic data used in the DEIS was developed by MAG, relying primarily on information from the 2005 special census and not considering the 2010 U.S. Census. As a result, MAG’s 2013 forecasts of population, households, and employment are overstated. The procedure MAG used to prepare the forecasts is explained below in a direct quote from the Traffic Overview Report.

A special census was conducted for Maricopa County in 2005 to capture the boom in population, housing, and employment that much of the region experienced during the first half of the decade. In 2007, MAG released socioeconomic projections for Maricopa County based on the results of the 2005 census through 2030. In 2009, MAG subsequently extended those projections through 2035. Table 3 presents the projections for Maricopa County.

Table 3. Projected Growth in Population, Housing, and Employment in Maricopa County, 2005–2035

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Housing</th>
<th>Employment</th>
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<tbody>
<tr>
<td>2005</td>
<td>4,861,000</td>
<td>2,400,000</td>
<td>2,455,000</td>
</tr>
<tr>
<td>2010</td>
<td>5,165,000</td>
<td>2,855,000</td>
<td>3,135,000</td>
</tr>
<tr>
<td>2020</td>
<td>5,724,000</td>
<td>3,815,000</td>
<td>3,798,000</td>
</tr>
<tr>
<td>2030</td>
<td>6,196,000</td>
<td>3,552,000</td>
<td>4,176,000</td>
</tr>
<tr>
<td>2035</td>
<td>6,865,000</td>
<td>3,676,000</td>
<td>4,890,000</td>
</tr>
</tbody>
</table>

Source: Maricopa Association of Governments, 2007 and 2009

Based on the 2010 U.S. Census data, which should have been reflected in the DEIS, it is obvious that MAG’s forecast of socio-economic data based on the 2005 special Census were too high by a large margin. The following table, presents a comparison of MAG’s 2010 forecast to actual data from the 2010 U.S. Census.

Code | Issue | Response
--- | --- | ---
121 | Purpose and Need | The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

Chapter 1 shows that there is a need for a major transportation facility (an action alternative) within the Study Area today and that without a major transportation facility in the Study Area in the future (the No-Action Alternative), the region would continue to suffer even greater congestion, traffic delays, and impacts on the movement of people and goods and the delivery of services. The Arizona Department of Transportation, with concurrence from the Federal Highway Administration, has determined that the proposed freeway (as made up by the W59 and E1 Alternatives) is the appropriate solution to the transportation problem identified in the Draft Environmental Impact Statement.
122 Purpose and Need

The historical growth in the Maricopa Association of Governments region is discussed in the Draft Environmental Impact Statement, beginning on page 1-5. Critical factors such as available land, mild climate, affordable cost of living, and employment opportunities that led to the historical growth rates in the region remain unchanged.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

123 Purpose and Need

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

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Under the National Environmental Policy Act, it is common for new data to avail itself and to, therefore, update the environmental impact statement as new data become available. It is not a requirement, however, to stop the environmental impact statement process in its entirety to wait for new information to become available. Completing an environmental impact statement under those terms would be quite difficult and, arguably, the public would not receive benefits associated with a proposed public infrastructure action. In this case, the project team experts were aware that socioeconomic projections were to be made available but it was likely (based on the Draft Environmental Impact Statement content and processes and a qualitative understanding of what the updated information would show and reveal) that conclusions affected by such data would not substantially change. The team undertook a quite acceptable, common, and understood practice of publishing the Draft Environmental Impact Statement while new data was developing and then present the new information in the Final Environmental Impact Statement. The new information would not automatically assume the need for a supplemental document.

"Historical and Projected Travel in the MAG Region"

Historical population growth in the region (see Table 2) greatly measured the region’s transportation system. As shown in Table 7, the growth in travel, as measured in vehicle miles traveled (VMT), has mirrored the growth in population in Maricopa County (an annual compound growth rate of approximately 5.4 percent). In 2010, travel demand reached 101 million VMT per day (MVT 2010b) and is projected to reach 188 million VMT per day in 2035 (MVT 2010a).*

The growth in VMT from 101 million in 2010 to 185 million in 2035 would represent an annual compound growth rate of about 2.5%. On the other hand, Table 20.4 on Page 20.8 (Exhibit 1) of the RTP states that in 2030 VMT will be approximately 130,748,000 if the RTP improvements are implemented. Accordingly, the 2035 VMT (per the DEIS) of 185,600,000 would represent a compound growth rate of about 7% per year for the 5 years between MAG’s 2010 VMT forecast and the 2035 VMT forecast in the DEIS. Those apparent discrepancies amongst the various sources cited cast serious doubt on the credibility of the VMT estimate presented in the DEIS. Notwithstanding the foregoing, if correct socio-economic data forecasts were used in the DEIS, the 2035 VMT would have been even lower.

ADOT’s over-statement of VMT in the DEIS is further compounded when viewed in the context of recent travel trends and forecasts. Travel surveys nationally and in the MAG region indicate that travel statistics such as trip length, VMT per person, and VMT per household have actually decreased in recent years or have been steady. According to the National Household Travel Survey (NHTS), which is a periodic travel survey sponsored by the US DOT, the average vehicle trip length was 9.9 miles in 2001 and 9.7 miles in 2009 (Table 2, Page 10) (see Exhibit 2). Since the 95% confidence interval stated by the survey is 0.2, statistically there was no change in the average trip length. Also, the number of daily vehicle trips per household dropped from 5.95 in 2001 to 5.66 in 2009. Since the confidence interval in this case is 0.6, the decrease is statistically significant. Figure 6, Page 32 (Exhibit 3) indicates that average time spent in vehicles and miles traveled were lower in metropolitan areas in all population ranges and in rural areas.

MAG was a participant in the 2009 NHTS Survey (surveys were conducted between April 2008 and April 2009) and augmented the national data base by added household surveys within the MAG Region. MAG documented the results of the survey in its publication “MAG 2008 NHTS Dataset: for the MAG Region.” Table 7 on Page 167 (Exhibit 4) of this publication daily trip rates in the MAG Region are presented. The daily trip rates range from a low of 3.72 on Sunday to

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<table>
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<th>Code</th>
<th>Comment Document</th>
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<tr>
<td>123</td>
<td>a high of 7.26 on a Tuesday. The 7-day weekly numerical average is 4.99 vehicle trips per household, and the numerical average of the five weekdays is 5.45 vehicle trips per household. The trip rates in the MAG data set are comparable to the NHTS national rates. The DEIS does not reference the 2009 NHTS results which do not support the projections of VMT levels relied on to support the South Mountain Freeway (SMF).</td>
</tr>
</tbody>
</table>

In 2001 MAG conducted the Maricopa Regional Household Travel Survey. A Final Report was prepared making it possible to compare several trip-making characteristics and trends across the years. Trip rates per household for all modes increased between 2001 and 2008/2009 from 7.38 to 10.50, as reported on Page 120 of “MAE 2008 NHTS Dataset for the MXO Region” (Exhibit 5). The duration of trips in 2001 and 2008 (trip length in minutes) appears to be comparable, since the tabulated data for the 2001 survey (Page 76 through 78 of the Final Report) follows the same curve pattern illustrated in Figure 7-10 in the report “MAE 2008 NHTS Dataset for the MAG Region” (Exhibit 7). Again, comparing MAG data for 2001 and 2009, the drastic increase in VMT presented in the DEIS cannot be supported.

Several sources, including the U.S. PIRG Education Fund, the Economist, and the New York Times, have published reports and articles about declining trends in VMT. Some of the downturns or flattening in VMT trends may be attributable to major events such as the recession in the early 1990s, bursting of the high tech bubble, the bursting of the housing bubble, and rise in fuel costs. On the other hand, changes in travel habits and the “travel time budget,” or the concept that the time a driver will devote to driving on any given day is limited, could also have contributed to the flattening or reductions in vehicle miles of travel. In addition, factors to be considered include increased use of co-line shopping, a larger proportion of elderly persons who tend to make fewer, and/or shorter, driving trips, and other factors.

The VMT numbers presented in the DEIS are at odds with this generally recognized downward trend in VMT. The reason for this apparent divergence from documented trends is not clear. Was the estimate of VMT for 2033 a direct unadjusted output generated by the MAG Regional Travel model or was it computed by another methodology? If not generated by the model, why not? What was the methodology used? A reliable forecast of VMT is important for the Air Quality impact analysis in addition to the analysis of traffic and circulation impacts.

4. As presented in the DEIS, the Purpose and Need defines the need as “completing the Regional Freeway System,” “adding capacity to the regional freeway and arterial system,” and “serving travel needs in the Southwest area.” No compelling need specifically for the South Mountain Freeway (SMF) is presented in the Purpose and Need. The Purpose and Need statement in the DEIS is very general and is focused on the need to add freeway capacity but |

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Chapter 1, Purpose and Need, follows Federal Highway Administration guidance with respect to complying with the National Environmental Policy Act, which is to define the transportation problem. This Draft Environmental Impact Statement chapter analyzing the purpose and need for the proposed action does not identify a specific facility as the solution. That is addressed in Chapter 3. The comment notes that it is unlikely that growth will occur at a steady pace. First, there is no basis upon which this statement is made. Regardless, as illustrated in Chapter 1 of the Draft and Final Environmental Impact Statement, historical growth rates and trends are described that support the idea that growth has not occurred at a steady pace but is subject to external factors such as new technology, changes in market conditions, cost of living. However, the growth model for future planning purposes does take historical growth trends and “level” them out; a common practice in growth models used by metropolitan planning organizations such as the Maricopa Association of Governments.

The stated needs point to Regional level problems and not to a specific facility such as the proposed South Mountain Freeway, Loop 202 (SMF). Following is a discussion of each of the stated problems and why they do not define the need for a specific facility:

- Accommodating population and employment growth in the Phoenix Metropolitan Area.
- Completing the Regional Freeway and Highway System, that was delineated about 30 years ago.
- Providing additional freeway capacity to reduce congestion in the Urban Core.
- Serve travel needs in the Southwest portion of the Metropolitan Area.

There is no question that historically, the Phoenix Metropolitan Area has grown very rapidly. Going forward, however, growth will likely not occur at a steady pace. Undoubtedly, there will be cyclical ups and downs. In the long-range future, the trend will likely be upwards, although it appears that the actual amount and rate of growth reached by the planning horizon year 2035 will be significantly less than forecasted in the DEIS.

Nevertheless, in view of the anticipated growth, the case is made in the Purpose and Need (P&N) chapter of the DEIS that the transportation infrastructure needs to be improved. The P&N, however, does not support construction of the SMF (Loop 202), as would be appropriate for a DEIS that may lead to an action, in this case the construction of the freeway.

The justification in the P&N that Loop 202 is in the RTP and has been on the books for 30 years is a self-fulfilling objective. The presentation of historical data in the P&N is beneficial because it gives the public a sense of what has transpired in the last 25 to 30 years. The Purpose and Need for the South Mountain Freeway, however, should have been supported, in addition, by specific problems that Loop 202 would reasonably be expected to alleviate or address, since this DEIS is for a proposed implementation action and not for a programmatic action such as the adoption of the RTP.

The P&N emphasizes that additional freeway capacity would be needed in the Phoenix Metropolitan Area. But, the capacity deficiencies are concentrated in the Urban Core and along I-10, 1-17, S1, US 60 and other freeways to the east and north. The P&N does not identify the travel components (origin and destination combinations) that Loop 202 would divert away from the freeways that are congested now or are expected to be congested in 2035. The question arises whether all reasonable alternatives were considered.

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

Information related to the origin and destination, including pass-thru, of vehicles that would use the proposed freeway is presented in Figure 3-18 on page 3-36 of the Draft Environmental Impact Statement.

(Response 126 continues on next page)
In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. The preferred alternative was the outcome to this process. Text beginning on page 3-26 of the Draft Environmental Impact Statement establishes conclusions associated with the process.

Purpose and Need

The comment states that “Clearly travel from the southwest is oriented to the north and east, rather than to the west.” First, there is no basis upon which this statement is made. The purpose of a major transportation facility in the Study Area is to help address increased travel from the southwest to the east. The major transportation facility would provide an alternate route to congested portions of Interstate 10. The purpose and need analysis as described in Chapter 1 of the Draft and Final Environmental Impact Statements confirmed the Study Area as the appropriate area in which to define the transportation problem. While other transportation problems may existing in the region’s transportation network, this environmental impact statement process focused appropriately on the identified problem in the southwest region of the Phoenix metropolitan area.

Alternatives

The purpose and need analysis as described in Chapter 1 of the Draft and Final Environmental Impact Statements confirmed the Study Area as the appropriate area in which to define the transportation problem. While other transportation problems may existing in the region’s transportation network, this environmental impact statement process focused appropriately on the identified problem in the southwest region of the Phoenix metropolitan area.

As stated in text in the Draft Environmental Impact Statement, beginning on page 3-27, the proposed freeway would appropriately shift traffic from some other freeway segments and the arterial network. Figure 3-12, in this section, illustrates positive effects on arterial roads such as the referenced Baseline Road.

Purpose and Need

In response to the comment, the reader is referred to both Chapters 1 and 3 of the Draft and Final Environmental Impact Statements. Text in each of these chapters speaks specifically to the context of purpose and need in terms of the four bulleted points in the comment. The proposed freeway would alleviate identified capacity deficiencies, would enhance the circulation needs with the Study Area, would serve commuter travel, and would accommodate truck traffic at vehicle mix percentages similar to those percentages found throughout the region’s freeway network.
problems and needs in the Study Area that the SMF would be intended to alleviate. Specific evaluation criteria could then be developed to assess the effectiveness of each alternative to alleviate, wholly or partially, each of the problems in the Study Area. This lack of specificity in the Purpose and Need affects the identification of alternatives and the evaluation of alternatives.

5 Some reasonable and feasible alternatives were eliminated early in the screening process, possibly due to the faulty Purpose and Need. With a revised and appropriately framed Purpose and Need, additional alternatives may emerge. On Page 3-3 of the DEIS, the alternatives screening criteria are presented as quoted below.

The following general categories reflect the criteria established for the screening process (Alternatives Screening Report [2003]):

- ability to satisfy purpose and need
- ability to minimize impacts on the human and natural environments
- ability to improve operational characteristics of the region’s transportation system
- degree of public and political acceptability
- consideration of overall conceptual cost estimates

Since one of the criteria is satisfying the Purpose and Need, a faulty Purpose and Need would result in a faulty screening process. In addition, the third bullet item in the criteria is one of the needs identified in the Purpose and Need; it is duplicative and is not a separate and distinct criterion.

Alternatives that should have been but were not included in the evaluations or those that should have been evaluated in greater detail include:

a) As discussed previously, the No Action Alternative should have been identified as the preferred alternative in the DEIS. The No Action Alternative is dismissed in the DEIS simply because it does not meet the Purpose and Need. Since the Purpose and Need is faulty, this reason for dismissing the No Action Alternative is not defensible. The No Action Alternative would have no physical impacts, including no impact on South Mountain. It may also have beneficial air quality and noise impacts because the No Action Alternative would result in less VMT, compared to the Preferred Action Alternative as indicated by the comparison of VMT for the “RTP 2030” and “No Build” Alternatives presented in the MAG RTIP, Table 20-4 on Page 20-8 (Exhibit 1). Notwithstanding, three were other Action alternatives that would have met the Purpose and Need but were not considered in the DEIS or were not adequately addressed.

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According to 23 Code of Federal Regulations §771.111(f), "the action evaluated in the environmental impact statement must connect logical termini and be of sufficient length to address environmental matters on a broad scope...". The proposed action should satisfy the project need and should be considered in the context of the local area socioeconomics and topography, the future travel demand, and other infrastructure improvements in the area. A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not feasible because it would not meet the proposed freeway's identified purpose and need.

Construction of Carver Road between 59th and 51st avenues is included in the City of Phoenix General Plan transportation element.

Improving 51st Avenue between Carver Road and Pecos Road would require permission of the Gila River Indian Community. Any alternative on Gila River Indian Community land must consider tribal sovereignty. Tribal sovereignty is based in the inherent authority of Native American tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their lands. States have very limited authority over activities within tribal land (see page 2-1 of the Final Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process. Based on previous comments from the Gila River Indian Community related to pass-through traffic using 51st Avenue, the Gila River Indian Community would not support any activities that would increase unwanted traffic through its communities.

Extending Pecos Road to 51st Avenue would not be feasible because a portion would be located on Gila River Indian Community land, and the Gila River Indian Community has not provided permission to construct a facility on its land. Based on previous comments from the Gila River Indian Community related to pass-through traffic using 51st Avenue, the Gila River Indian Community would not support any activities that would increase unwanted traffic through its communities.

Improvements to the arterial street system in the southwestern area (Laveen and Estrella Villages) are planned in the City of Phoenix General Plan.

For these reasons, alternatives similar to the hybrid alternative proposed in the comment were eliminated from detailed study.

Dismissal of all alternatives affecting Gila River Indian Community land is appropriate. The act by the Gila River Indian Community of not allowing alternatives on its land is sufficient evaluation. The Gila River Indian Community has consistently stated (beginning in 2000, with a Community Council resolution) that it is not interested in an alternative on its land. See Draft Environmental Impact Statement Chapter 2, Gila River Indian Community Coordination.
Tribal sovereignty is based in the inherent authority of Native American tribes to govern themselves. While this notion of sovereignty is manifested in many areas, generally Native American land is held in trust by the United States. Native American communities have the authority to regulate land uses and activities on their lands. States have very limited authority over activities within tribal land (see page 2-1 of the Draft Environmental Impact Statement). From a practical standpoint, this means that the Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make land use (including transportation) determinations directly affecting tribal land, or condemn tribal land for public benefit through an eminent domain process.

Alternatives

All of the design options and refinements (such as tunnel and bridge options and depressed freeway options) considered in the Third-Tier screening were revisited after the determination to change the proposed freeway from ten to eight lanes. The comparisons presented in the Draft Environmental Impact Statement section, Depressed Freeway Options, reflect an eight-lane freeway concept for the at-grade/elevated profile and the depressed profile.

Drainage

As noted on page 3-18 of the Draft Environmental Impact Statement, drainage served as the primary design constraint for the Pecos Road segment of the E1 Alternative. Assessments were performed to determine constructibility and effectiveness in avoiding or reducing impacts and to evaluate whether a depressed profile would generate other desired or undesired outcomes. Based on the results of these assessments, further design options were developed and refined in attempts to reduce impacts on the adjacent community. The modifications incorporated alternative drainage designs, use of retaining walls, and other features to reduce right-of-way requirements.
In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. As noted in Table 3-5 on page 3-12 of the Draft Environmental Impact Statement, the Ray Road and Chandler Boulevard alternatives would result in hundreds of residential and business displacements and would split the Ahwatukee Foothills Village. For these reasons, the two alternatives were eliminated from detailed study.

In the Eastern Section, the initial screening identified clear, undesirable aspects of the alternatives, with only the E1 Alternative being prudent and feasible. In the Western Section, the three action alternatives studied in detail each had positive and negative aspects, however none were substantial enough to eliminate the alternative (or other alternatives). The Draft Environmental Impact Statement is a summary of technical analyses providing the necessary details associated with the decision-making process. Additional details and quantities are documented in technical reports and memos. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process.

The Draft Environmental Impact Statement is a summary of technical analyses providing the necessary details associated with the decision-making process. Additional details and quantities are documented in technical reports and memos. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process.

Improvements to other freeway corridors such as Interstate 10, other new freeways such as State Route 303 Loop, arterial street improvements, and expansion of the existing bus and light rail systems are included in the Regional Transportation Plan. See discussion beginning on page 1-9 of the Draft Environmental Impact Statement. The analysis of future conditions includes the assumption that all of the planned improvements identified in the Regional Transportation Plan would be in place by 2035. Draft Environmental Impact Statement Chapter 1, Purpose and Need, concludes that, even with these improvement in place, there is a clear need for a major transportation facility in the Study Area.
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<tr>
<th>Code</th>
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<th>Response</th>
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<tbody>
<tr>
<td>143</td>
<td>Alternatives</td>
<td>The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the need for the freeway has not changed. The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future. Past determinations surrounding the alternatives development and screening process, including the reasons for the elimination of alternatives, as outlined in Chapter 3 of the Final Environmental Impact Statement, were reviewed for appropriateness based on the new data and were determined to remain appropriate screening determinations. The Interstate 8/State Route 85 Alternative is in place today and will be in place in the future as an alternative route for motorists to use to bypass the entire Phoenix metropolitan area. The alternative serves that purpose, but provides no benefits to support regional travel within the Phoenix metropolitan area. For this reason, it was eliminated from further study.</td>
</tr>
<tr>
<td>144</td>
<td>Alternatives</td>
<td>The Regional Transportation Plan is not the primary source of funding for expansion of the arterial street system. Funding for the arterial street system generally comes from the local jurisdiction or through impact fees for development. It is anticipated that the arterial street network in the Study Area will be expanded in this same manner. The Maricopa Association of Governments regional travel demand model includes assumptions related to arterial street expansion based on local jurisdiction general planning. In the case of the Study Area, it is assumed that most of the arterial street network would be built out by 2035. Draft Environmental Impact Statement Chapter 1, Purpose and Need, concludes that, even with these improvements in place, there is a clear need for a major transportation facility in the Study Area. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.</td>
</tr>
</tbody>
</table>
In summary, several reasonable and viable alternatives were not considered in the DEIS or were dismissed from further consideration without an appropriate level of analysis, even though many of them would not have any impacts on South Mountain. This is a major deficiency, since a major requirement of the DEIS is that all reasonable alternatives be evaluated with appropriate level of detail.

6. The Description of the Proposed Action in the Summary Chapter fails to provide details essential for informed decision-making. The action is described generally as building a freeway in compliance with the RFP. Lacking from the description are the following:

- The typical cross-section of the freeway, preferably with dimensions that ADOT commonly uses, should have been included. Major deviations, if any, from the typical cross-section for each of the three West Alternatives and the single East Alternative should have been identified.
- While at the outset the cross-section was not known, the 10-lane alternative was eliminated in the fourth-tier screening. A freeway with three general purpose (GP) and one High Occupancy Vehicle (HOV) lane in each direction, plus auxiliary lanes where necessary, was established for all alternatives.
- The profile for the freeway should have been described in general terms for each Alternative.
- The location of proposed interchanges for each alternative should have been shown.
- The fact that park-and-ride lots would be provided at/ near some or all interchanges, if any, should have been stated. The term park-and-ride appears only once in the Summary (Page 5-19) in the context of a mitigation measure for Displacements and Relocations. The term park-and-ride does not appear at all in Chapter 1 (Purpose and Need); it appears three times in Chapter 3 (Alternatives) first on Page 3-6 as part of the discussion of Modal Screening Results, the second time on Page 3-15, Figure 3-4 indicating that the park-and-ride lot at the 40th Street Interchange potentially would be expanded, and for the third time on Page 3-40 in the context of the No-Action Alternative. Thus unless a reader studied Figure 3-8 very carefully, he or she would not be aware of the potential expansion of the park-and-ride lot at the 40th Street Interchange. There is no mention of park-and-ride in the Traffic Overview Report.

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<table>
<thead>
<tr>
<th>Code</th>
<th>Issue</th>
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<tbody>
<tr>
<td>145</td>
<td>Alternatives</td>
<td>Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process. A thorough feasible and prudent avoidance analysis of the South Mountains was conducted as presented in Chapter 5 of the Draft Final Environmental Impact Statements and concluded avoidance to the direct use of the resource was not feasible and prudent. In support of this response and given the concerns about the South Mountains, consider the following review from the U.S. Department of the Interior on the Draft Environmental Impact Statement: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4.</td>
</tr>
<tr>
<td>146</td>
<td>Purpose and Need</td>
<td>As pointed out in the Draft Environmental Impact Statement on page S-1, in the sidebar, &quot;What you will find in the Summary chapter,&quot; the text in the Summary is not the “final word,” and readers are urged to turn to the main text when questions about Summary content arise. It is clear, as pointed out in Chapter 3, Alternatives, that a beneficial outcome of the alternatives screening process—a “… logical, sequential, step-by-step process using data and expertise from multiple disciplines …” (page 3-27)—was that the mode determined to be appropriate for addressing the identified transportation problem was a highway that, in turn, was consistent with local and regional plans (as supported by stakeholder jurisdictions). Nowhere in the Draft Environmental Impact Statement is reference made that the proposed action is needed to comply with the Regional Transportation Plan. The analysis of the proposed action’s purpose and need would have ended the environmental impact statement process at that point if a need in the form of a transportation problem had not been identified, and this is disclosed in the Draft Environmental Impact Statement.</td>
</tr>
<tr>
<td>147</td>
<td>Design</td>
<td>A typical section is provided in Figure S-9 on page S-10 of the Draft Environmental Impact Statement. As noted on page S-8 at the end of the section, Action Alternatives, “Chapter 3, Alternatives, has detailed descriptions of features of the alternatives.” This information begins on page 3-40 of the Draft Environmental Impact Statement.</td>
</tr>
<tr>
<td>148</td>
<td>Design</td>
<td>Agree.</td>
</tr>
<tr>
<td>149</td>
<td>Design</td>
<td>This information is presented in Chapter 3 of the Draft Environmental Impact Statement. Descriptions of the horizontal and vertical alignments of the action alternatives are provided, beginning on page 3-40. Graphical depictions are shown in Figures 3-20 to 3-25.</td>
</tr>
<tr>
<td>150</td>
<td>Design</td>
<td>This information is presented in the Summary Chapter of the Draft Environmental Impact Statement; see Figure S-8. It is also presented in Chapter 3; see Figure 3-28.</td>
</tr>
<tr>
<td>151</td>
<td>Design</td>
<td>The inclusion of park-and-ride lots is not part of the scope of the proposed action. No new park-and-ride lots are proposed as part of the proposed action. Locations of future park-and-ride lots would be determined by the City of Phoenix and Valley Metro. As described in the responses above, the elements of the proposed freeway and the potential action alternatives were described in the Draft Environmental Impact Statement.</td>
</tr>
</tbody>
</table>
152 Purpose and Need

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

All impact analyses affected by the updated socioeconomic data, including air quality and noise, were updated accordingly and those updates are reflected in the Final Environmental Impact Statement. Determinations relating to the identification of the Preferred Alternative were also confirmed in accounting for the new population, employment, housing, and traffic projections.

153 See responses to specific comments below.

154 Traffic

The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Draft Environmental Impact Statement). The interchange would have displaced over 100 homes and would have been located near an existing high school.

In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabrea from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).
The Chandler Boulevard extension was developed in close coordination with the City of Phoenix and supports the ultimate lane configuration and planned development in the area.

Additional local roads would be constructed along with the development of this land (as identified in the City’s General Plan).

Reasonable access would remain to the noted developments. The travel time savings as a product of using the South Mountain Freeway in comparison to use of Pecos Road would likely offset any additional travel time attributable to the change in access. Emergency responders would address the construction of the proposed freeway by amending the local emergency response plan to include the facility.
The SMF will cause similar alterations in local traffic patterns elsewhere along the route, primarily in the Western portion of the SMF. The DEIS should have discussed traffic impacts in the vicinity of all interchanges along the proposed action, with appropriate analysis, similar to that described in item c), below.

b) The DEIS does not indicate what type of interchange would be constructed at the interchanges along W. Pecos Road. Because there would be no access to the Gila River Indian Community (GRIC) on the south side, neither of the two typical interchanges depicted on Page 3-14 of the DEIS, “Diamond Interchange” and “Single Point Urban Interchange,” would be applicable. The DEIS should have indicated the type of interchange to be provided, at least conceptually and with a simple graphic.

c) The DEIS should have presented recent traffic volume counts for W. Pecos Road (between 1-10 and 27th Avenue) and turning movement counts at the existing signalized intersections at 40th Street, 32nd Street, 24th Street, Desert Foothills Parkway, and 17th Avenue. Traffic counts should also have been made at major intersections along the path motorists would use to access Foote Hill Reserve and Calabria when the construction of the SMF would cut off the present access via W. Pecos Road 27th Avenue. Then it should have discussed the impacts on existing traffic due to the loss of access at 32nd Street and 27th Avenue and how existing traffic patterns would change. Then, 2035 peak hourly traffic volumes at the interchanges should have been presented so that the public could be informed of how present routings would be affected and what the impacts would be in 2035. The impacts on the cross streets are not dependent on the specific design details and can be evaluated based on the traffic volume forecasts from the MAG travel model. Analyses with similar methodology should have been performed at interchanges along the entire route of the SMF.

d) The DEIS should have discussed how the Proposed Action would affect emergency vehicle access times for the communities now served by the signalized intersection at Pecos Road 32nd Street and via W. Pecos Road 27th Avenue (Chandler Boulevard). Extending this example, the DEIS should have discussed how emergency vehicle access would be affected at all locations along the proposed action where the arterial street pattern would be altered.

e) With the Proposed Action, the eastbound left-turn and westbound right turn-direct access to the park-and-ride facility north of W. Pecos Road at 40th Street will be lost, shifting the park-and-ride traffic to the two access points via 40th Street. The southern access driveway is less than 390 ft (center-to-center) north of Pecos Road. The construction of the freeway

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<tbody>
<tr>
<td>158</td>
<td>Traffic</td>
<td>The proposed freeway would include improvements along arterial streets at interchange locations to facilitate the movement of traffic on, off, and across the freeway. The arterial street improvements are included within the right-of-way footprint used for the analysis of impacts.</td>
</tr>
<tr>
<td>159</td>
<td>Traffic</td>
<td>The third bullet in the third column on page 3-51 of the Draft Environmental Impact Statement states that “The diamond interchange configuration (see sidebar on page 3-14) was used to evaluate service traffic interchange needs.” The assumption that there would be no access to the Gila River Indian Community to the south is incorrect. At 40th Street, there is an existing road to the south, and the planned interchange at that location would provide access onto Gila River Indian Community land. Similarly, the interchanges at 24th Street, Desert Foothills Parkway, and 17th Avenue would be constructed to allow for future connections from Gila River Indian Community land. The initial layout would be similar to the interchanges at State Route 202L (Red Mountain Freeway) and Dobson Road. Figure 3-28 indicated whether the interchanges would include full access or half access. In some locations, a single-point urban interchange or other interchange type may be used to address higher traffic volumes. The determination of the interchange type would be made during final design in coordination with the local jurisdiction.</td>
</tr>
<tr>
<td>160</td>
<td>Traffic</td>
<td>Existing traffic volumes on the City of Phoenix’s streets is available at the City’s Web site, &lt;phoenix.gov/streets/traffic/volumemap&gt;. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).</td>
</tr>
<tr>
<td>161</td>
<td>Traffic</td>
<td>Emergency responders would address the construction of the proposed freeway by amending the local emergency response plan to include the facility. This would include emergency response on the freeway and alternative routes for diversion of traffic in the event that an incident occurred along the freeway. As concluded in the section, Social Conditions, in Chapter 4 of the Draft Environmental Impact Statement, response times for police, fire, and medical emergency services would be faster when compared with response times under the No-Action Alternative. Circulation on major arterial streets would be improved through better distribution of traffic onto the overall transportation network, the provision of alternative routes, and through localized operational improvements such as grade separations and planned interchanges.</td>
</tr>
<tr>
<td>162</td>
<td>Traffic</td>
<td>In addition to access from 40th Street, access to the park-and-ride lot would be provided off of the westbound on-ramp. This is similar to the park-and-ride operations at Happy Valley Road and Interstate 17. Bus operations and circulation would continue to operate as-is today. Traffic operational characteristics along 40th Street and at the Cottonwood Lane intersection would not be adversely affected by the freeway. The park-and-ride lot has been expanded to its ultimate configuration.</td>
</tr>
</tbody>
</table>
The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Draft Environmental Impact Statement). The interchange would displace more than 100 homes and would have been located near an existing high school. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabria from Pecos Road to Chandler Boulevard. The study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement). The storage facility is located on Gila River Indian Community land and would not be displaced. Reasonable access to the facility would remain available from 32nd Street, Chandler Boulevard, and other east–west local streets. A grade-separated bridge would be constructed for the freeway to go over 32nd Street.

Information related to haul routes, number of trucks, traffic routing, and detouring is discussed in general terms because more detailed information is not available. These details depend highly on the construction sequencing and construction methods, which have not been determined at this stage in the process. As noted on page 6-23 of the Draft Environmental Impact Statement, during construction, the Arizona Department of Transportation typically holds information meetings at the beginning of construction activities regarding the upcoming improvements and work schedules. The public can be informed through construction updates/newsletters or many other means.

The Arizona Department of Transportation is evaluating construction delivery methods for the proposed freeway. One concept is to deliver it as a single design-build project. This method would accelerate the construction duration for the entire project to around 3 to 3.5 years. Another concept would be to deliver the project in a more traditional method, breaking the 22-mile corridor into nine segments (each 1 to 3 miles long) and constructing them in phases. Each segment would be under construction for 1 to 3 years, and the total construction duration for the entire corridor would be 5 to 6 years. A discussion of construction implementation is provided beginning on page 3-59 of the Final Environmental Impact Statement. Any particular area of the Preferred Alternative would not be expected to see construction activities beyond an approximate 2-year period.

As noted in the Draft Environmental Impact Statement on page 3-59, "Construction sequencing and duration could change based on several factors, including funding availability, traffic volumes, coordination with other major freeway projects, earthwork balancing, utility relocation schedules, and regional priorities."

### Code Comment Document

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<td>163</td>
<td>Traffic</td>
<td>The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Draft Environmental Impact Statement). The interchange would displace more than 100 homes and would have been located near an existing high school. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabria from Pecos Road to Chandler Boulevard. The study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement). The storage facility is located on Gila River Indian Community land and would not be displaced. Reasonable access to the facility would remain available from 32nd Street, Chandler Boulevard, and other east–west local streets. A grade-separated bridge would be constructed for the freeway to go over 32nd Street.</td>
</tr>
<tr>
<td>164</td>
<td>Construction</td>
<td>Information related to haul routes, number of trucks, traffic routing, and detouring is discussed in general terms because more detailed information is not available. These details depend highly on the construction sequencing and construction methods, which have not been determined at this stage in the process. As noted on page 6-23 of the Draft Environmental Impact Statement, during construction, the Arizona Department of Transportation typically holds information meetings at the beginning of construction activities regarding the upcoming improvements and work schedules. The public can be informed through construction updates/newsletters or many other means. The Arizona Department of Transportation is evaluating construction delivery methods for the proposed freeway. One concept is to deliver it as a single design-build project. This method would accelerate the construction duration for the entire project to around 3 to 3.5 years. Another concept would be to deliver the project in a more traditional method, breaking the 22-mile corridor into nine segments (each 1 to 3 miles long) and constructing them in phases. Each segment would be under construction for 1 to 3 years, and the total construction duration for the entire corridor would be 5 to 6 years. A discussion of construction implementation is provided beginning on page 3-59 of the Final Environmental Impact Statement. Any particular area of the Preferred Alternative would not be expected to see construction activities beyond an approximate 2-year period.</td>
</tr>
<tr>
<td>165</td>
<td>Implementation</td>
<td>The Arizona Department of Transportation is evaluating construction delivery methods for the proposed freeway. One concept is to deliver it as a single design-build project. This method would accelerate the construction duration for the entire project to around 3 to 3.5 years. Another concept would be to deliver the project in a more traditional method, breaking the 22-mile corridor into nine segments (each 1 to 3 miles long) and constructing them in phases. Each segment would be under construction for 1 to 3 years, and the total construction duration for the entire corridor would be 5 to 6 years. A discussion of construction implementation is provided beginning on page 3-59 of the Final Environmental Impact Statement. Any particular area of the Preferred Alternative would not be expected to see construction activities beyond an approximate 2-year period. As noted in the Draft Environmental Impact Statement on page 3-59, &quot;Construction sequencing and duration could change based on several factors, including funding availability, traffic volumes, coordination with other major freeway projects, earthwork balancing, utility relocation schedules, and regional priorities.&quot;</td>
</tr>
</tbody>
</table>
In Fiscal Year (FY) 2011-2015: Segment between I-10 (Papago) and Baseline Road also Segment between 51st Avenue and 10th Avenue.

In FY 2016-2020: Segment between I-10 (Marcopco) and 10th Avenue.

In FY 2021-2025: Segment between Baseline Road and 51st Avenue.

The phasing sequence in the DEIS, presented without an explanation of the rationale for the change from the RTP, is:

- I-10 (Papago) to Baseline Road and concurrently, I-10 (Marcopco) to approximately 51st Avenue (along Pecos Road and through the South Mountains)
- Baseline Road to 51st Avenue

Despite repeated assertions throughout the DEIS that the Proposed Action is consistent with the RTP, this divergence in phasing between the RTP and the proposed action is not mentioned in the DEIS.

i) The evaluation of alternatives is deficient because the presentation of the results of the "select link" analysis is misleading. On Page 3-36 of the DEIS, Figure 3-18 presents the contribution of traffic to the select link by geographical areas, none of which are very large. The select link is at a point between the 51st Avenue and 10th Avenue interchanges on the South Mountain Freeway. The text accompanying Figure 3-18 states that:

"A projected 73 percent of the travelers who might use the proposed action would have origins and/or destinations near the proposed action."

This statement is misleading, since it implies that 73% of the traffic using the South Mountain Freeway would have origins in close proximity to the proposed freeway.

A review of a larger scale map in the Traffic Overview Report, which is the source of the information presented in Figures 3-18, indicates that only about 15% of the selected link traffic would have origins or destinations within the Study Area as defined in Figure 8-2 of the DEIS. If the definition of "proximity" were to be extended to the area within a 20-mile radius of the select link, the contribution of this entire 20-mile radius area would be about 40 to 50%. To reach the 73% level of contribution, a radius of about 30 miles would be needed.

j) The evaluation of alternatives is deficient because the cut line analysis presented in the Purpose and Need and in the Evaluation Chapters of the DEIS as well as in the Traffic Overview Report is faulty. The following points support this assertion.

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166 Implementation

The Arizona Department of Transportation is evaluating construction delivery methods for the proposed freeway. One concept is to deliver it as a single design-build project. This method would accelerate the construction duration for the entire project to around 3 to 3.5 years. Another concept would be to deliver the project in a more traditional method, breaking the 22-mile corridor into nine segments (each 1 to 3 miles long) and constructing them in phases. Each segment would be under construction for 1 to 3 years, and the total construction duration for the entire corridor would be 5 to 6 years. A discussion of construction implementation is provided beginning on page 3-59 of the Final Environmental Impact Statement. Any particular area of the Preferred Alternative would not be expected to see construction activities beyond an approximate 2-year period.

As noted in the Draft Environmental Impact Statement on page 3-59, "Construction sequencing and duration could change based on several factors, including funding availability, traffic volumes, coordination with other major freeway projects, earthwork balancing, utility relocation schedules, and regional priorities."

167 Traffic

The quote noted in the comment was changed in the Final Environmental Impact Statement to be consistent with a similar statement made in the caption to Figure 3-18: "Seventy-three percent of travelers anticipated to use the proposed action would be involved in trips beginning or ending in the Study Area itself or in the areas immediately surrounding it."

The figure does accurately portray the locations of the cities included in the different areas. The observations in the comment further support that the proposed action would serve regional travel from the southwestern to southeastern portions of the region (not just internal Study Area travel). It should also be noted that by definition, these freeway users would not include traffic from Laveen Village to Interstate 10 (Papago Freeway) or from Ahwatukee Foothills Village to Interstate 10 (Marcopco Freeway). So, the 15 percent of trips identified in the comment as Study Area-originated are by motorists making trips to the other side of the South Mountains.

168

See responses to specific comments below.
169 Purpose and Need
The purpose and need criteria for the proposed action address regional problems, not just problems localized in the Study Area. For this reason, it is appropriate to include cut lines within and in proximity to the Study Area to better understand the distribution of trips in the region.

170 Traffic
The itemized list of traffic volumes by facility has been added to the Traffic Overview Report as an appendix.

171 Traffic
As indicated in the responses below, the identified cut lines were selected to present specific travel patterns and are appropriate for the analysis of the proposed action.

172 Traffic
Cut line 2 is included to evaluate demand across the Salt River. The proposed changes, eliminating the proposed State Route 30 crossing and the Interstate 10 crossing, would discount two major crossings of the Salt River.

173 Traffic
The cut lines as presented represent industry standard practice and were developed in conjunction with leaders of traffic analysis practice in Arizona. The proposed changes would not provide any benefits to the analysis or results. Subdividing the cut lines would eliminate their usefulness in evaluating regional traffic, which is their purpose.

174 Traffic
The project development process includes detailed analyses of the freeway operational characteristics, including weaving areas along the entire freeway. Basic level of service information is presented in Figure 3-39 on page 3-63 of the Draft Environmental Impact Statement. In the figure, the noted section is shown to experience less than 2 hours of level of service E or F conditions during the morning and evening commuting periods.
The System Interchange at I-10 (Maricopa) and the signalized intersection at Pecos Road and 40th Street is approximately 3,500 ft. (measured between the signal and the merge point where the Loop 202 mainline and the ramps to and from I-10 come together). When the 40th Street Interchange is constructed, the distance between the ramp merge points will be approximately 2,500 ft. and possibly less. A distance of 2,500 ft. between ramp merge and diverge points has the potential of creating a weaving problem on the freeway.

This potential problem should have been analyzed and appropriate mitigation proposed, if necessary, and should not have been deferred to the design phase, since the peak hourly traffic volumes are available from MAG, although not reported in the DEIS. Please note that Figure 3.39 in the DEIS indicates congestion at this location, even without a weaving analysis and without specifically considering the effect of bus traffic on the 40th Street park-and-ride facility and the effect of potentially high truck traffic volumes on freeway operations.

Similar weaving problems may be encountered elsewhere along the freeway.

1) The evaluation of alternatives is deficient because no substantive analysis of truck traffic is presented. As a sidebar on Page 3-64, the DEIS presents a good description of the nature of the trucking industry, goods movement in general, and the location of employment areas with heavy truck traffic, along with an illustration of the designated CanAmex route. Also in the sidebar, some general statistics about typical percentages of trucks as a percent of total traffic are provided. It is stated that the truck percentage on I-10 "near" the Proposed Action is 8%. Other than the information in the sidebar, no other truck-related statistics are provided. The sidebar also states that providing a truck bypass is not a Purpose and Need for the SMF. This statement is contradicted by the statement on Page 3-24 of the DEIS, that presents as one of the criteria in the 3rd tier screening for selecting a route for the freeway:

- reduction of truck and commuter traffic on 51st Avenue and Beltline Highway

Thus the SMF, if constructed would act, at least, as a by-pass for trucks that now use 51st Avenue.

Figure 4.10 in the "MAG Internal Truck Travel Survey and Truck Model Development Study" is attached as Exhibit 10. The figure indicates that more than 1,000 heavy trucks a day use the route via Riggs Road and Beltline Road to access 51st Avenue.
The ADOT traffic counts indicate that about 2,000 to 2,500 heavy trucks use SR 85 daily between I-8 and I-10. If the SMF is constructed, some through truck traffic would likely prefer to use the SMF for personal reasons and/or because the SMF route would be slightly shorter in miles than the route via I-8 and SR 85. Also, the SMF route would avoid the congestion along I-10 through the urban core of the Phoenix Metropolitan Area.

The ADOT traffic counts indicate that about 2,400 heavy trucks are on I-10 (Maricopa) just south of SR 202 (Loop 202 Santan) and also north of SR 202. These trucks presumably have origins and destinations within the Phoenix Metropolitan Area. Depending on the location of the origins and destinations within the Metro Area, some of these heavy trucks would use the SMF to avoid traveling on the congested portions of I-10 in the urban core.

The Final Report of the “MAG External Truck Travel Model Development” presents in Table 4-8 estimates of external-to-external (E-E) truck trips. Those would be truck trips that travel through the area with no need to stop. No categorization of the size of trucks is provided. All trucks, except for small delivery vehicles, pickups, and vans, are included in the numbers. The table indicates that daily truck traffic on I-10 (between a point south of the junction of I-8 and a point west of SR 85) is approximately 6,200 in both directions combined. Since these are long-distance trucks, the majority of these trucks would be heavy trucks. Since there are about 2,000 to 2,500 heavy trucks on SR 85, it appears that 3,500 to 4,000 heavy trucks use I-10 to go through the Metropolitan Area and have an origin or destination within the Metro Area. Table 4-9 in the same report indicates that E-E trips between a point south of the junction of I-8 and a point west of SR 85 would grow at an annual rate of 3.7%. Unbeknownst to some of this E-E heavy truck traffic would also use the SMF.

In addition, the “MAG and PAG External Travel Study” and other MAG reports present information about truck movements, truck origins and destinations, both internally and outside the Metropolitan Area. Despite the availability of a substantial amount of data and a state-of-the-art modeling tool (TransCad) the DEIS does not address the impacts of heavy trucks using the SMF.

Also not addressed in the DEIS is the potential of the SMF to become an unintended by-pass route, for all vehicles including heavy trucks, via Loop 202 (Santan) and Loop 202 (SMF) between US 60 and I-10 (Papago).

In summary, the SMF would become an attractive route for heavy trucks for travel to/from the Phoenix Metropolitan Area as well as for heavy trucks.

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179 Trucks
It is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85. That the proposed freeway would avoid congestion along Interstate 10 would not seem material to trucks currently using the Interstate 8/State Route 85 bypass.

180 Purpose and Need
The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 of the Final Environmental Impact Statement).

181 Trucks
Among the factors considered in this study were 1) the amount of truck traffic that would be generated if an action alternative were to become the Selected Alternative and 2) that traffic’s potential impact on the surrounding community.

182 Traffic
Location #2 in Figure 3-12, on page 3-29 of the Draft Environmental Impact Statement, indicates that traffic along Interstate 202L (Santan Freeway) just east of Interstate 10 would experience substantially higher traffic volumes with the proposed freeway when compared with conditions without the proposed freeway. This is an intended outcome for the region’s freeway system. The project team does not anticipate that “all vehicles” would use State Route 202L; a large volume of traffic would continue to use U.S. Route 60 and Interstate 10 (see Figure 3-12).

183 Trucks
Among the factors considered in this study were 1) the amount of truck traffic that would be generated if an action alternative were to become the Selected Alternative and 2) that traffic’s potential impact on the surrounding community.

(Response 183 continues on next page)
The Maricopa Association of Governments regional travel demand model forecasts approximately 10 percent truck traffic on the South Mountain Freeway in 2035 (see Final Environmental Impact Statement page 3-64). This percentage is similar to current conditions on Interstate 10 between Loop 101 and Interstate 17 and on U.S. Route 60. Air quality and noise modeling for the Draft and Final Environmental Impact Statements used this forecast truck traffic (see Final Environmental Impact Statement pages 4-68 and 4-100, respectively). Commercial trucks would use the proposed action. As with all other freeways in the Maricopa Association of Governments region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. And as with travel on all other freeways in the Maricopa Association of Governments region, the primary users of the proposed action would be automobiles.

The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 of the Final Environmental Impact Statement).

The sidebar, “How are MAG data used in the DEIS?”, on page 1-4 of the Draft Environmental Impact Statement explains the citation notations. In general, the source of the traffic data is the Maricopa Association of Governments regional travel demand model, and analyses were performed using Maricopa Association of Governments data as inputs. The desired information is available in Figure 3-12, on page 3-29 of the Draft Environmental Impact Statement. This figure presents traffic volumes with and without the proposed freeway at locations similar to those noted in the comment.

The section, Identification of a Preferred Alternative, beginning on page 3-65 of the Draft Environmental Impact Statement, provides the logical process that was used by decision makers to identify the Preferred Alternatives. A summary of key elements of each action alternative is provided in Figure 3-41.

Review and Critique of DEIS for Loop 202 (SMF) Page 22
As stated on page 3-40 of the Final Environmental Impact Statement, the No-Action Alternative would not satisfy the purpose and need of the proposed action because it would result in further difficulty in gaining access to adjacent land uses, increased difficulty in gaining access to Interstate and regional freeway systems from the local arterial street network, increased levels of congestion-related impacts, continued degradation in performance of regional freeway-dependent transit services, increased trip times, and higher user costs. Further, the No-Action Alternative would be inconsistent with Maricopa Association of Governments’ and local jurisdictions’ long-range planning and policies. The No-Action Alternative was included in the Draft and Final Environmental Impact Statements for detailed study to compare impacts of the action alternatives with the consequences of doing nothing (impacts can result from choosing to do nothing).

The information on page 3-41 of the Draft Environmental Impact Statement provides the elements that were used by decision makers to determine that the W71 Alternative would not be the Preferred Alternative. The Arizona Department of Transportation, in coordination with the Federal Highway Administration, determined that the W59 and W101 Alternatives would provide more benefits than would the W71 Alternative. The W71 Alternative was not “eliminated” because it is still a viable action alternative; it was just not the Preferred Alternative. The No-Action Alternative is included for detailed study in accordance with National Environmental Policy Act requirements to compare beneficial and adverse impacts of the action alternatives with those benefits and consequences (adverse impacts) of not proceeding with one of the action alternatives.
The comparative analysis was not confined to evaluating purpose and need criteria for the proposed action. It had already been determined that the W59 and W101 Alternatives met those purpose and need criteria. Otherwise, they would not have advanced to this stage of the alternatives development and screening process. The primary observation is that the W59 Alternative would provide a more direct route to the central metropolitan area as compared with the W101 Alternative. This is an accurate observation and a point favoring the W59 Alternative.

Comment noted.

Neither provides a substantial improvement over the other with respect to improvements associated with the connections at Interstate 10 (Papago Freeway).

Further explanation has been provided on page 3-69 of the Final Environmental Impact Statement.

The breakdown by type of displacement is presented in the section, Displacements and Relocations, on page 4-39 in the Draft Environmental Impact Statement. See Table 4-12. The 733 residential displacements for the W59 Alternative include 680 multifamily units.

Review and Critique of DEIS for Loop 202 (SMF) Page 24
<table>
<thead>
<tr>
<th>Code</th>
<th>Comment Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>194</td>
<td>Family residential properties, and the W59 Alternative would displace 753 residential properties. For the W59 Alternative, the mix of multi-family and single-family residential properties is not stated, making it impossible to compare the number of housing units that would be displaced. Following is a direct quote from the “Title VI and Environmental Justice Report”, Page 4-3.</td>
</tr>
<tr>
<td>195</td>
<td>The 680 multifamily units have already been counted in the total for the W59 Alternative. See Table 4-12, on page 4-39.</td>
</tr>
<tr>
<td>196</td>
<td>Traffic</td>
</tr>
<tr>
<td>197</td>
<td>Alternative</td>
</tr>
<tr>
<td>198</td>
<td>Alternative</td>
</tr>
<tr>
<td>199</td>
<td>Code Issue Response</td>
</tr>
<tr>
<td>200</td>
<td>Alternatives</td>
</tr>
</tbody>
</table>

In addition to the single-family displacements, the W59 Alternative would result in the potential displacement of two apartment complexes having a total of 680 units. These apartments fall within a census block where greater than 50 percent of the population is minority. The majority of the apartment units are “market-rate” rents; however, one of the apartment complexes currently accepts Section 8 housing vouchers. (Of the 284 units in the complex, 16 currently use Section 8 vouchers.)

Taking into consideration the 680 multi-family units, the W59 Alternative would result in the displacement 1411 housing units, which would be more than any of the W101 Alternative options.

Under the heading “Operational Differences” on Page 3-66:

In reference to the first bullet item – Based on the information in Figure 3-40 on Page 3-66 of the DEIS, the statement in this bullet item is true. The DEIS fails to point out that Figure 3-40 also indicates, however, that operating conditions would be virtually identical for the two alternatives east of 59th Avenue, close to the central metropolitan area.

In reference to the second bullet item - The statement is true and would be a point favoring the W101 Alternative.

In reference to the third bullet item – It is unclear what travel movements and how many motorists would benefit from this “direct access to downtown Phoenix.” Regardless of which and how many motorists would benefit from this “direct access,” travel would continue to be under congested conditions on I-10 east of 59th Avenue.

In reference to the fourth bullet item - The statement is true and would be a point favoring the W101 Alternative, although the number of motorists that would benefit from this “better access” is not presented.

In reference to the fifth bullet item – Since the location of SR 50 (called SR 801 in the RTP) and the timetable for its construction are unknown, this bullet item is speculative.

Review and Critique of DEIS for Loop 202 (GMP) Page 25
The cost estimates for all of the action alternatives include contingencies for construction and right-of-way. The same assumptions were made for each alternative. The estimates are identified as planning-level cost estimates and consideration of such estimates is appropriated in the environmental impact statement process.

The Draft Environmental Impact Statement presents the information that was used by the Arizona Department of Transportation, with concurrence from the Federal Highway Administration, to identify the W59 and E1 Alternatives as the Preferred Alternatives.

The No-Action Alternative is included for detailed study in accordance with National Environmental Policy Act requirements to compare beneficial and adverse impacts of the action alternatives with those benefits and consequences (adverse impacts) of not proceeding with one of the action alternatives. (Impacts can occur through choosing to do nothing.) The No-Action Alternative would not satisfy the purpose and need of the proposed action (see Draft Environmental Impact Statement page 3-40) and was, therefore, not identified as the Preferred Alternative.

The W71 Alternative was not eliminated; it was determined to be the least desirable of the three action alternatives in the Western Section (reasons are noted previously).

The alternatives development and screening process was sound, and the information used was disclosed in the Draft Environmental Impact Statement. None of the other Eastern Section alternatives identified in the Draft Environmental Impact Statement or new alternatives proposed in the comment would change the alternatives development and screening process; they were all eliminated from detailed study.

The comparison of traffic operational characteristics between the action alternatives and the No-Action Alternative is presented in the Draft Environmental Impact Statement, beginning on page 3-27 of the Draft Environmental Impact Statement. The analysis shows that the action alternatives would:

- reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13)
- optimize travel on the region’s freeway system (see Figure 3-12)
- reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14)
- reduce the duration of level of service E or F conditions in key areas of the region’s freeway system (see Figure 3-15)
- improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8)
- provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18)

When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-26).
represents variable traffic flow with traffic volume approaching capacity or at capacity. LOS F, on the other hand, represents congested and stop-and-go conditions, with traffic volumes over capacity. Yet in the Traffic Overview LOS E is defined as a condition where the volume to capacity ratio (V/C ratio) is greater than 0.80 (Table 10, Page 2-8) (Exhibit 11). In other words, the DEIS asserts that congestion prevails when the traffic volume reaches 80% of capacity, contrary to the statement on Page 1-14 of the DEIS. Most jurisdictions, including the California Department of Transportation, Caltrans define the upper limit of LOS D to be a V/C ratio of 0.85. V/C ratio in the range of 0.91 to 1.00 represents LOS E, and 1.01 and above represents LOS F.

Furthermore, as indicated in Exhibit 11, the DEIS uses a freeway capacity value of 2,000 vehicles per hour per lane (vph/pl), whereas the Highway Capacity Manual (a publication by the Transportation Research Board that is widely used by many jurisdictions for capacity calculations, including ADOT) cites a service volume of 2,259 passenger cars per hour per lane (pcph/lpl) at LOS E. The reason for this difference is not explained.

Also no explanation is provided as to how the duration of congestion is determined. The DEIS should have provided a good explanation of how duration of congestion is determined for planning purposes on the basis of the V/C ratio, especially in the analysis in this DEIS, where no distinction is made between LOS E and LOS F.

Figure 3-14 on Page 3-33 of the DEIS states that the Proposed Freeway will accommodate 6% of the regional travel demand, but that 5% of the travel demand will remain unmet. The same illustration indicates that arterial system enhancements would accommodate 3% of the regional travel demand. Figure 3-3 of the DEIS reports (Table 12) presents the planned arterial improvements. Only one arterial improvement, an easery extension of SR 801, is shown within the Study Area even though the Survey and Purpose and Need Chapters stress that there will be large amounts of growth in the southwestern portion of the Metropolitan Area. Additional arterial improvements in the study area along with arterial system enhancements throughout the modeling area may be able to accommodate the remaining unmet travel demand. The addition of the freeway segment included in the hybrid alternative illustrated in Exhibit 8 would also help reduce the unmet travel demand. As a side note, it is not explained in Figure 3-14 why it was necessary to use “data extrapolated from the 41st Street cut line.”

MAN’s TransCAD model is capable of summarizing travel time, vehicle hours of travel, vehicle miles of travel by any geographic area, by facility type, by Level of service, and other selected filters. The use of “extrapolated data” appears to be unwarranted.

Figures 3-15 and 3-16 (Pages 3-32 and 3-33 in the DEIS) present changes in congestion with the No Action compared to the Proposed Action conditions. The differences are very subtle. Without the distinction between segments operating

Review and Critique of DEIS for Loop 202 (SMFD) Page 27
at LOS E and LOS F and without an explanation of how the duration of congestion is determined, the information presented is not very useful for a thorough evaluation by the public and for decision-making.

10. Appropriate mitigation measures are not proposed to mitigate the impacts of the Action Alternatives. Assuming for discussion purposes only, that the Preliminary Preferred Action Alternative is implemented, appropriate mitigation measures should have been addressed in the DEIS. Some appropriate mitigation measures would include:

- Placement of truck weight limits on the SMF
- Upgrading the Route via I-10/I-105/60SR 851-10 to full freeway standards and obtaining Congressional approval for the designation of this route as the CamIner Route
- Development of an east-west truck route to by-pass the Phoenix Metropolitan Area
- Formulation and inclusion in the RTP of a plan for arterials in the Southwest area to help guide development patterns so that desirable options are not precluded
- Restricting the transporting of hazardous materials on the SMF
- Others

11. Based on these traffic and circulation considerations, none of the Action Alternatives should have been selected as the Preferred Alternative for the following reasons.

a. It is understood that the Preliminary Preferred Alternative would add capacity to the Regional Freeway System. On the other hand, the added capacity would have nominal effect on alleviating congestion in the central metropolitan area, where the need is greatest. This raises the question if the proposed SMF is the correct tool to deal with congestion in the central metropolitan area.

b. The Preferred Alternative is not consistent with the RTP because the phasing of construction presented in the DEIS differs from the phasing plan in the RTP.

c. There are many deficiencies in the DEIS, including:

- Use of faulty socio-economic data;
- Faulty forecasts of vehicular travel resulting from the use of faulty socio-economic data as input to the travel model;

211 See responses to specific comments below.

212 Alternatives

The comment infers the transportation problem is congestion in the central metropolitan area. As presented in Chapter 1 of the Draft and Final Environmental Impact Statements, the purpose and need analysis demonstrated a transportation problem associated with east-west regional mobility in the southwestern region of the Phoenix metropolitan area. The Arizona Department of Transportation, with concurrence from the Federal Highway Administration, has determined that the South Mountain Freeway (as made up by the W59 and E1 Alternatives) is the appropriate solution to the described transportation problem. A contribution of the Preferred Alternative to alleviate congestion in the central metropolitan area would be an incidental benefit of the project and would support a goal of better distribution of regional traffic across the network.

213 Implementation

Construction phasing of a project is not an indicator of “consistency.” The location and facility type are indicators of consistency. Nowhere in the Draft Environmental Impact Statement is it referenced that the proposed action is needed to comply with the Regional Transportation Plan.

214 Comment noted.
The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

The new projections were also used to update the air and noise analyses for the Final Environmental Impact Statement (see sections beginning on pages 4-68 and 4-88, respectively).

All of the alternatives were subject to a thorough evaluation using a multidisciplinary set of criteria in accordance with National Environmental Policy Act and Federal Highway Administration guidance.

Among the factors considered in this study were 1) the amount of truck traffic that would be generated if an action alternative were to become the Selected Alternative and 2) that traffic’s potential impact on the surrounding community. The right-of-way footprints for the action alternatives include the necessary widening of arterial streets connecting to the proposed freeway. Additional traffic-related impacts have been coordinated with the appropriate local jurisdictions.
The No-Action Alternative would not avoid all physical impacts on the environment. In contrast, the No-Action Alternative would result in:

- further difficulty in gaining access to adjacent land uses
- increased difficulty in gaining access to Interstate and regional freeway systems from the local arterial street network
- increased levels of congestion-related impacts such as deterioration of air quality
- continued degradation in performance of regional freeway-dependent transit services
- increased trip times and higher user costs

For these reasons, the Arizona Department of Transportation, with concurrence from the Federal Highway Administration, did not select the No-Action Alternative, instead identifying the W59 and E1 Alternatives as the Preferred Alternatives.
Exhibits reviewed.
Summary of Travel Trends

The trends data indicate that the per capita growth in travel that the U.S. experienced over the last four decades may be slowing. Statistically, of the ten major trend indicators shown in Table 3, in 2001 seven estimates were lower than the same estimate in 2001 estimates and the remainder are statistically the same (within the confidence interval).

Importantly, all of the travel estimates related to households are slightly lower in 2009 than 2001--including person and vehicle trips and the average daily person and vehicle miles generated by U.S. households. The longstanding decline in household are continues between 2001 and 2009. In addition, the average number of vehicle trips and vehicle miles of travel per person are significantly lower than the 2001 estimates. The data show both average person trip length and average vehicle trip length to be about the same as in 2001 (that is, within the confidence interval).

<table>
<thead>
<tr>
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<td>Daily Person Trips</td>
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<td>2.00</td>
<td>2.00</td>
<td>3.74</td>
<td>4.06</td>
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<tr>
<td>Daily PAT</td>
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<td>10.0</td>
<td>10.0</td>
<td>28.91</td>
<td>36.57</td>
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<tr>
<td>Daily Vehicle Trips</td>
<td>3.92</td>
<td>3.94</td>
<td>3.96</td>
<td>5.00</td>
<td>3.85</td>
</tr>
<tr>
<td>Daily VMT</td>
<td>26.44</td>
<td>26.69</td>
<td>26.80</td>
<td>31.14</td>
<td>37.77</td>
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<td>Weekly Person Trips</td>
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<td>14.00</td>
<td>14.00</td>
<td>25.34</td>
<td>25.34</td>
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<tr>
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<td>70.00</td>
<td>70.00</td>
<td>70.00</td>
<td>70.34</td>
<td>70.34</td>
</tr>
<tr>
<td>Weekly Vehicle Trips</td>
<td>28.00</td>
<td>28.00</td>
<td>28.00</td>
<td>35.34</td>
<td>35.34</td>
</tr>
<tr>
<td>Weekly VMT</td>
<td>184.00</td>
<td>184.00</td>
<td>184.00</td>
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</tr>
</tbody>
</table>

- Average trip length is calculated using only those records with trip mileage information per person.
- 1999 person and vehicle trips were adjusted to account for survey methodological changes since 1999.
- PAT is Person Miles of Travel. VMT is Vehicle Miles of Travel. CI is Confidence Interval. NHTS is National Household Transportation Survey.

EXHIBIT 2
EXHIBIT 3
### Exhibit 4

#### Table 7: Variation in Trip Rate—Weekday Versus Weekend

<table>
<thead>
<tr>
<th>Vehicle Trip Rate by Day of Week</th>
<th>Average Household Trip Rate</th>
<th>Average Occupancy by Day of Week</th>
<th>Average Vehicle Trip Rate by Day of Week</th>
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<tbody>
<tr>
<td>Daily</td>
<td>7.76</td>
<td>2.01</td>
<td>3.96</td>
</tr>
<tr>
<td>Monday</td>
<td>8.05</td>
<td>1.86</td>
<td>4.07</td>
</tr>
<tr>
<td>Tuesday</td>
<td>11.94</td>
<td>1.61</td>
<td>7.36</td>
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<tr>
<td>Wednesday</td>
<td>12.09</td>
<td>1.98</td>
<td>6.08</td>
</tr>
<tr>
<td>Thursday</td>
<td>0.83</td>
<td>3.11</td>
<td>4.04</td>
</tr>
<tr>
<td>Friday</td>
<td>0.89</td>
<td>2.04</td>
<td>5.24</td>
</tr>
<tr>
<td>Saturday</td>
<td>12.07</td>
<td>2.14</td>
<td>3.57</td>
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*Title 7-V Variation in Vehicle Trip Rate by Day of Week*
### Table

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<td>71</td>
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<td>107</td>
<td>Code Issue Response</td>
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### 4.2 Conclusions

Data from the NPTS and NHTS surveys have been analyzed with models to synthesize the findings from each survey. These findings support a strong correlation between travel behavior and demographic factors, and emphasize the importance of understanding these patterns to effectively plan and design transportation systems.

The NPTS surveys have been an invaluable tool in understanding travel behavior in the United States. These surveys provide detailed data on travel patterns, which can be used to inform transportation planning and policy decisions. The data from these surveys have been used to develop models that can predict future trends in travel behavior.

The NHTS surveys have been used to study travel behavior on a national scale. These surveys have been used to identify trends in travel behavior and to develop models that can predict future trends in travel behavior. The data from these surveys have been used to inform transportation planning and policy decisions.

### EXHIBIT 5

Municipal Association of Governments—January 2012
The average reported trip duration was 20 minutes. As shown in Table T-17, 70% of all trips were 20 minutes or shorter. Trips by transit tended to be the longest, while those by walk and bike were the shortest. Tables T-16 through T-22 show the reported trip durations by mode for the standard trip purposes.

### Table T-17

<table>
<thead>
<tr>
<th>Trip Duration</th>
<th>N</th>
<th>All Trips</th>
<th>Auto</th>
<th>Auto</th>
<th>Bike</th>
<th>Walk</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>0 min or less</td>
<td>1268</td>
<td>21.9%</td>
<td>18.8%</td>
<td>25.2%</td>
<td>4.0%</td>
<td>18.4%</td>
<td>25.3%</td>
</tr>
<tr>
<td>1 to 15 min</td>
<td>1193</td>
<td>20.4%</td>
<td>23.5%</td>
<td>23.0%</td>
<td>6.7%</td>
<td>21.3%</td>
<td>21.9%</td>
</tr>
<tr>
<td>16 to 40 min</td>
<td>1140</td>
<td>18.7%</td>
<td>12.9%</td>
<td>20.9%</td>
<td>10.1%</td>
<td>19.5%</td>
<td>21.3%</td>
</tr>
<tr>
<td>41 to 60 min</td>
<td>1408</td>
<td>23.5%</td>
<td>20.8%</td>
<td>17.7%</td>
<td>7.6%</td>
<td>11.5%</td>
<td>10.2%</td>
</tr>
<tr>
<td>61 to 90 min</td>
<td>1500</td>
<td>23.8%</td>
<td>23.9%</td>
<td>7.2%</td>
<td>3.3%</td>
<td>10.1%</td>
<td>10.0%</td>
</tr>
<tr>
<td>91 to 120 min</td>
<td>1190</td>
<td>20.4%</td>
<td>19.1%</td>
<td>6.6%</td>
<td>2.6%</td>
<td>11.5%</td>
<td>11.5%</td>
</tr>
<tr>
<td>121 to 150 min</td>
<td>1060</td>
<td>17.9%</td>
<td>12.3%</td>
<td>7.2%</td>
<td>1.2%</td>
<td>12.3%</td>
<td>12.3%</td>
</tr>
<tr>
<td>151 to 180 min</td>
<td>792</td>
<td>13.3%</td>
<td>9.4%</td>
<td>4.0%</td>
<td>0.0%</td>
<td>10.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>181+ min</td>
<td>127</td>
<td>2.2%</td>
<td>1.6%</td>
<td>0.0%</td>
<td>0.0%</td>
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</tr>
<tr>
<td>Avg</td>
<td>20.4</td>
<td>20.4%</td>
<td>20.4%</td>
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### Table T-18

<table>
<thead>
<tr>
<th>Trip Duration</th>
<th>N</th>
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<td>0 min or less</td>
<td>1268</td>
<td>21.9%</td>
<td>18.8%</td>
<td>25.2%</td>
<td>4.0%</td>
<td>18.4%</td>
<td>25.3%</td>
</tr>
<tr>
<td>1 to 15 min</td>
<td>1193</td>
<td>20.4%</td>
<td>23.5%</td>
<td>23.0%</td>
<td>6.7%</td>
<td>21.3%</td>
<td>21.9%</td>
</tr>
<tr>
<td>16 to 40 min</td>
<td>1140</td>
<td>18.7%</td>
<td>12.9%</td>
<td>20.9%</td>
<td>10.1%</td>
<td>19.5%</td>
<td>21.3%</td>
</tr>
<tr>
<td>41 to 60 min</td>
<td>1408</td>
<td>23.5%</td>
<td>20.8%</td>
<td>17.7%</td>
<td>7.6%</td>
<td>11.5%</td>
<td>10.2%</td>
</tr>
<tr>
<td>61 to 90 min</td>
<td>1500</td>
<td>23.8%</td>
<td>23.9%</td>
<td>7.2%</td>
<td>3.3%</td>
<td>10.1%</td>
<td>10.0%</td>
</tr>
<tr>
<td>91 to 120 min</td>
<td>1190</td>
<td>20.4%</td>
<td>19.1%</td>
<td>6.6%</td>
<td>2.6%</td>
<td>11.5%</td>
<td>11.5%</td>
</tr>
<tr>
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<td>1060</td>
<td>17.9%</td>
<td>12.3%</td>
<td>7.2%</td>
<td>1.2%</td>
<td>12.3%</td>
<td>12.3%</td>
</tr>
<tr>
<td>151 to 180 min</td>
<td>792</td>
<td>13.3%</td>
<td>9.4%</td>
<td>4.0%</td>
<td>0.0%</td>
<td>10.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>181+ min</td>
<td>127</td>
<td>2.2%</td>
<td>1.6%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.6%</td>
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</tr>
<tr>
<td>Avg</td>
<td>20.4</td>
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<td>20.4%</td>
<td>20.4%</td>
<td>20.4%</td>
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### Table T-19

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<th>Walk</th>
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<td>18.8%</td>
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<td>4.0%</td>
</tr>
<tr>
<td>1 to 15 min</td>
<td>1193</td>
<td>20.4%</td>
<td>23.5%</td>
<td>23.0%</td>
<td>6.7%</td>
</tr>
<tr>
<td>16 to 40 min</td>
<td>1140</td>
<td>18.7%</td>
<td>12.9%</td>
<td>20.9%</td>
<td>10.1%</td>
</tr>
<tr>
<td>41 to 60 min</td>
<td>1408</td>
<td>23.5%</td>
<td>20.8%</td>
<td>17.7%</td>
<td>7.6%</td>
</tr>
<tr>
<td>61 to 90 min</td>
<td>1500</td>
<td>23.8%</td>
<td>23.9%</td>
<td>7.2%</td>
<td>3.3%</td>
</tr>
<tr>
<td>91 to 120 min</td>
<td>1190</td>
<td>20.4%</td>
<td>19.1%</td>
<td>6.6%</td>
<td>2.6%</td>
</tr>
<tr>
<td>121 to 150 min</td>
<td>1060</td>
<td>17.9%</td>
<td>12.3%</td>
<td>7.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>151 to 180 min</td>
<td>792</td>
<td>13.3%</td>
<td>9.4%</td>
<td>4.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>181+ min</td>
<td>127</td>
<td>2.2%</td>
<td>1.6%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Avg</td>
<td>20.4</td>
<td>20.4%</td>
<td>20.4%</td>
<td>20.4%</td>
<td>20.4%</td>
</tr>
</tbody>
</table>

Figure 7.1: Frequency Distribution of Trip Length by Purpose

Figure 7.2: Frequency Distribution of Trip Duration by Purpose

Figure 7.3: Frequency Distribution of all Trips by Trip Length

Figure 7.4: Frequency Distribution of all Trips by Trip Duration

EXHIBIT 7
EXHIBIT 10
Table 6: Average Daily Traffic Volumes on Arterial Streets (without the Proposed Action), 2010 and 2030

<table>
<thead>
<tr>
<th>Segments</th>
<th>Vehicles Per Day</th>
<th>2010</th>
<th>2030</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boddy Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15th Avenue to 7th Avenue</td>
<td>14,942</td>
<td>14,034</td>
<td></td>
<td>-6.8</td>
</tr>
<tr>
<td>15th Avenue to 43rd Avenue</td>
<td>14,141</td>
<td>14,387</td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td>PM Avenue to 75th Avenue</td>
<td>12,803</td>
<td>13,625</td>
<td></td>
<td>6.4</td>
</tr>
<tr>
<td>Nettles Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10th Avenue to 7th Avenue</td>
<td>14,141</td>
<td>14,387</td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td>44th Avenue to 2nd Street</td>
<td>14,141</td>
<td>14,387</td>
<td></td>
<td>1.7</td>
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<tr>
<td>PM Avenue to 41st Street</td>
<td>14,141</td>
<td>14,387</td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td>Clayton Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1Sth Avenue to 10th Street</td>
<td>14,131</td>
<td>14,387</td>
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<td>1.8</td>
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<tr>
<td>25th Avenue to 13th Street</td>
<td>14,141</td>
<td>14,387</td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td>35th Avenue to 13th Street</td>
<td>14,141</td>
<td>14,387</td>
<td></td>
<td>1.7</td>
</tr>
<tr>
<td>Franke Road</td>
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<td></td>
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<td>15th Avenue to 42nd Street</td>
<td>14,141</td>
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<tr>
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<tr>
<td>PM Avenue to 43rd Street</td>
<td>14,141</td>
<td>14,387</td>
<td></td>
<td>1.7</td>
</tr>
</tbody>
</table>
| Source: Maricopa Association of Governments, 2010, unapplied analysis

Operational Performance of Freeways in the MAG Region

The paper's section concluded that traffic volumes would increase between 2010 and 2030 because of increases in capacity (additional lanes) and demand (additional VMT). The section presents the analytical results addressing how these changes in traffic volumes would affect system efficiency in terms of level of service (LOS). The analysis factors in the region’s dynamic system and presents the duration of LOS E or F (congested conditions) as predicted by the MAG regional travel demand model. The duration of LOS E or F conditions is determined by comparing the ratio of the projected traffic volume to the capacity (1,900 vehicles per lane per hour) of the freeway segments presented in Table 10. Figures 3 and 4 present the summaries (BAD) peak travel period results for 2010 and 2030, respectively, Figures 5 and 6 present the morning (BAD) peak travel period results for 2010 and 2030, respectively.

Table 7: Duration LOS E or F as Volume-to-Capacity Ratio

<table>
<thead>
<tr>
<th>Volume-to-Capacity Ratio</th>
<th>Duration LOS E or F</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 0.8</td>
<td>0.0</td>
</tr>
<tr>
<td>&gt; 0.8 to 1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>&gt; 1.0 to 1.5</td>
<td>1.0</td>
</tr>
<tr>
<td>&gt; 1.5</td>
<td>2.0</td>
</tr>
</tbody>
</table>

REPORTS

Five

SWCA Comments on ADOT
South Mountain DEIS (April 2013)
As discussed beginning on page 1-11 of the Draft Environmental Impact Statement, the proposed action is needed to serve projected growth in population and accompanying transportation demand and to correct existing and projected transportation system deficiencies. The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. As presented in text beginning on page 3-1 of the Draft Environmental Impact Statement, a comprehensive alternatives development and screening process was undertaken that represented an objective, defensible, and fully disclosed logical, sequential, step-by-step process using data and expertise from multiple disciplines applied to a comprehensive set of alternatives to establish the appropriate range of reasonable alternatives for detailed study in the Draft Environmental Impact Statement.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The Federal Highway Administration and the U.S. Environmental Protection Agency approved the air quality conformity determination that includes the Maricopa Association of Governments regional travel demand model that produced the traffic projections used in the traffic analysis for the project (see Final Environmental Impact Statement page 3-27). The model projects demand for multiple modes of travel, including automobile, bus, and light rail. Driving patterns and alternative modes of transportation are among the key model inputs used to forecast travel demand in the Study Area.

The parameters for delineation of the Study Area are described in Chapter 1, Purpose and Need, of the Draft and Final Environmental Impact Statements as the area defining the transportation problem. As presented in the chapter, transportation models were used to determine where the characteristics of the transportation problem would diminish, and, generally, it is at these locations where the definition of the Study Area took shape. This effort was coordinated with stakeholder agencies, including the U.S. Environmental Protection Agency. The statement that the project team excluded alternatives outside of the Study Area is not supported by the facts presented in the Draft Environmental Impact Statement. Alternatives considered in the Draft Environmental Impact Statement included many that were located outside of the Study Area. Examples include the Riggs Road Alternative (see page 3-9), the State Route 85/Interstate 8 Alternative (see page 3-9), the U.S. Route 60 Extension (see page 3-12), the Interstate 10 Spur (see page 3-12), and the Central Avenue Tunnel (see page 3-12).

Comment noted. Specific comments are addressed below.
The data presented in Figure 4-18 of the Draft Environmental Impact Statement are included to demonstrate that emissions of criteria pollutants have decreased and continue to decrease. More recent data merely make a stronger case that these emissions have declined and do not change the conclusion.

The monitoring data presented beginning on page 4-60 of the Draft Environmental Impact Statement demonstrate pollutant trends in the Study Area. More recent data merely make a stronger case that these emissions have declined and do not change the conclusion. Where information was deemed important to decision-making—for example, more recent trends in attainment status for various criteria pollutants—that information has been included. See for example the discussion on particulate matter that begins on page 4-61.

Pinal County is not included in the Study Area and is, therefore, not discussed.

All nonattainment areas presented in Figure 4-20 on page 4-61 of the Draft Environmental Impact Statement are current. As clarification, the title of Figure 4-20 was changed in the Final Environmental Impact Statement from “Nonattainment Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County” to “Nonattainment and Maintenance Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County.”

40 Code of Federal Regulations § 93.111(c) was followed to conduct a qualitative analysis for particulate matter (PM10) for the proposed action. This analysis complied with National Environmental Policy Act requirements for the development of the Draft Environmental Impact Statement. In December 2010, the U.S. Environmental Protection Agency established transportation conformity guidance for performing quantitative particulate matter (PM2.5 and PM10) hot-spot analyses for transportation projects and established a 2-year grace period. U.S. Environmental Protection Agency conformity guidance continues to allow qualitative particulate matter (PM10) hot-spot conformity analyses for analyses that were started before or during the grace period and if the final environmental document for the project is issued no more than 3 years after issuance of the draft environmental document. A particulate matter (PM10) qualitative analysis was performed for this project because the initial air quality technical analysis report for the proposed action was produced in October 2005. The Arizona Department of Transportation and Federal Highway Administration have updated the qualitative analysis to a quantitative analysis for the Final Environmental Impact Statement to ensure that a state-of-the-art analysis is completed for the proposed project. The results of the analysis are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

The mobile source air toxics discussion was also updated to reflect the Federal Highway Administration’s 2012 guidance. This discussion begins on page 4-77 of the Final Environmental Impact Statement.

There are no federal requirements directed specifically to highway traffic induced vibration. All studies the highway agencies have done to assess the impact of operational traffic induced vibrations have shown that both measured and predicted vibration levels are less than any known criteria for structural damage to buildings. The noise analysis was updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and Arizona Department of...
Transportation policy and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted.

As stated in the Council on Environmental Quality’s Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, environmental impact statements should be analytic rather than encyclopedic (40 Code of Federal Regulations Part 1502.2(a)). Those noise regulations of direct consequence to the proposed action were discussed.

Groundwater

As noted on page 4-97 of the Draft Environmental Impact Statement, although groundwater level data in Ahwatukee Foothills Village were shown from 1972 to 1992, this information was gathered from the U.S. Geological Survey in 2009. Groundwater data in other areas may indeed be more current. This information would not alter the conclusions of this section of the Draft Environmental Impact Statement.

The comment is correct that wastewater effluent is not available as a replacement source and is not being used. The City of Phoenix did operate a wastewater reclamation facility in this area, but it was removed from service and demolished. The City of Phoenix still owns the property, but all facilities have been removed from the site. Thus, only two water sources are available for irrigation and lake supply for the Foothills Community Association: the well that would be acquired and potable water from the City of Phoenix. The discussion on page 4-100 of the Draft Environmental Impact Statement has been modified in the Final Environmental Impact Statement to reflect that reclaimed wastewater would not be available; however, the conclusion on page 4-100 is still appropriate. As stated on page 4-100 of the Draft Environmental Impact Statement, “In the event that well replacement were to be impossible, Arizona Department of Transportation would still replace the water that would be lost through the acquisition.”

Purpose and Need

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statements were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11.

The purpose and need analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

The new projections were also used to update the air and noise analyses for the Final Environmental Impact Statement (see sections beginning on pages 4-68 and 4-88, respectively).
226 Air Quality

Mobile sources are not regulated for impacts on visibility in Class 1 areas (40 Code of Federal Regulations § 51.307).

Quantification of short-term impacts associated with construction or maintenance activities is not required; qualitative discussion may be found under Mitigation on page 4-85 of the Final Environmental Impact Statement.

The proposed high-occupancy vehicle lane is discussed on page 3-19 of the Draft Environmental Impact Statement.

Cumulative impacts are discussed on page 4-167 of the Draft Environmental Impact Statement.

Vehicle traffic mix projections were provided by Maricopa Association of Governments and are consistent with the regional conformity analyses; they are discussed in greater detail in the air quality technical report prepared for the project. The results of the analyses are summarized in the Draft Environmental Impact Statement and have been updated in the Final Environmental Impact Statement. The air quality analysis has been updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and U.S. Environmental Protection Agency guidance and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-68 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted.

Trucks

The Maricopa Association of Governments regional travel demand model forecasts approximately 10 percent truck traffic on the South Mountain Freeway in 2035 (see Final Environmental Impact Statement page 3-64). This percentage is similar to current conditions on Interstate 10 between Loop 101 and Interstate 17 and on U.S. Route 60. Air quality and noise modeling for the Draft and Final Environmental Impact Statements used this forecast truck traffic (see Final Environmental Impact Statement pages 4-68 and 4-100, respectively).

227 Air Quality

According to the U.S. Environmental Protection Agency, the official level of the annual nitrogen dioxide standard is 0.053 parts per million. See footnote #2 (epa.gov/air/criteria.html).
229 Air Quality
The carbon monoxide analysis presented on page 4-65 of the Draft Environmental Impact Statement was updated on page 4-75 of the Final Environmental Impact Statement to represent current conditions. The Arizona Department of Transportation also conducted a quantitative particulate matter (PM$_{2.5}$) hot-spot analysis that is discussed on page 4-76 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM$_{2.5}$) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

As noted on page 4-76 of the Final Environmental Impact Statement, since ozone is a regional pollutant, there is no requirement to analyze potential impacts and no possibility of localized violations of ozone to occur at the project level. The Maricopa Association of Governments is responsible for developing plans to reduce emissions of ozone precursors in the Maricopa area. The Preferred Alternative is included in the Regional Transportation Plan that has been determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.

230 Air Quality
Pinal County is not included in the Study Area and is, therefore, not discussed. All nonattainment areas presented in Figure 4-20 on page 4-61 of the Draft Environmental Impact Statement are current. As clarification, the title of Figure 4-20 was changed in the Final Environmental Impact Statement from "Nonattainment Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County" to "Nonattainment and Maintenance Areas for Particulate Matter, Carbon Monoxide, and Ozone, Maricopa County."

231 Air Quality
As noted in the footnote reference to Figure 4-23, the information was based on the Federal Highway Administration publication, Transportation Air Quality Facts and Figures, January 2006. This figure was removed from the Final Environmental Impact Statement.

232 Air Quality
As noted in the footnote reference to Figure 4-23, the information was based on the Federal Highway Administration publication, Transportation Air Quality Facts and Figures, January 2006. This figure was removed from the Final Environmental Impact Statement.

233 Air Quality
Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration's mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining current conditions in the affected environment (to the extent that the monitoring data are current), they don't tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed. The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxic emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.
<table>
<thead>
<tr>
<th>Code</th>
<th>Issue</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>234</td>
<td>Air Quality</td>
<td>The footnote to Figure 4-30 on page 4-65 of the Draft Environmental Impact Statement references data from the 2004 Joint Air Toxics Assessment Project. These data are from 2003–2004.</td>
</tr>
<tr>
<td>235</td>
<td>Air Quality</td>
<td>40 Code of Federal Regulations § 93.111(c) was followed to conduct a qualitative analysis for particulate matter (PM(<em>{10})) for the proposed action. This analysis compiled with National Environmental Policy Act requirements for the development of the Draft Environmental Impact Statement. In December 2010, the U.S. Environmental Protection Agency established transportation conformity guidance for performing quantitative particulate matter (PM(</em>{10}) and PM(<em>{2.5})) hot-spot analyses for transportation projects and established a 2-year grace period. U.S. Environmental Protection Agency conformity guidance continues to allow qualitative particulate matter (PM(</em>{10})) hot-spot conformity analyses for analyses that were started before or during the grace period and if the final environmental document for the project is issued no more than 3 years after issuance of the draft environmental document. A particulate matter (PM(<em>{10})) qualitative analysis was performed for this project because the initial air quality technical analysis report for the proposed action was produced in October 2005. The Arizona Department of Transportation and Federal Highway Administration have updated the qualitative analysis to a quantitative analysis for the Final Environmental Impact Statement to ensure that a state-of-the-art analysis is completed for the proposed project. The results of the analysis are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM(</em>{10})) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.</td>
</tr>
<tr>
<td>236</td>
<td>Air Quality</td>
<td>The modeling protocols area is discussed in greater detail in the air quality technical report prepared for the project. The results of the analyses are summarized in the Draft Environmental Impact Statement. The carbon monoxide analyses used a background value of 2 parts per million. This has been updated in the Final Environmental Impact Statement (see page 4-75).</td>
</tr>
<tr>
<td>237</td>
<td>Air Quality</td>
<td>As noted on page 4-76 of the Final Environmental Impact Statement, since ozone is a regional pollutant, there is no requirement to analyze potential impacts and no possibility of localized violations of ozone to occur at the project level. The Maricopa Association of Governments is responsible for developing plans to reduce emissions of ozone precursors in the Maricopa area. The Preferred Alternative is included in the Regional Transportation Plan that has been determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.</td>
</tr>
</tbody>
</table>
Comment Response Appendix - B497

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238 Air Quality

As noted on page 4-70 of the Draft Environmental Impact Statement, MOBILE6.2 was used to project emissions at a regional level consistent with 40 Code of Federal Regulations Part 93.111(c), since the mobile source air toxics analysis for the proposed action started before or during the grace period for using the MOVES2010 emissions model. However, the mobile source air toxics analysis presented on page 4-70 of the Draft Environmental Impact Statement was updated on page 4-77 of the Final Environmental Impact Statement using the MOVES2010 model.

239 Air Quality

The air quality analysis parameters were determined through the process established by the Arizona Department of Transportation interagency consultation procedures [40 Code of Federal Regulations § 93.105(c)(1) (i)].

240 Air Quality

Maricopa County is in attainment for the particulate matter (PM 2.5) National Ambient Air Quality Standard; the Pinal County particulate matter (PM 2.5) nonattainment area is not included in the Study Area.

241 Air Quality

The Arizona Department of Transportation is evaluating construction delivery methods for the proposed freeway. One concept is to deliver it as a single design-build project. This method would accelerate the construction duration for the entire project to around 3 to 3.5 years. Another concept would be to deliver the project in a more traditional method, breaking the 22-mile corridor into nine segments (each 1 to 3 miles long) and constructing them in phases. Each segment would be under construction for 1 to 3 years, and the total construction duration for the entire corridor would be 5 to 6 years. A discussion of construction implementation is provided beginning on page 3-59 of the Final Environmental Impact Statement. Any particular area of the Preferred Alternative would not be expected to see construction activities beyond an approximate 2-year period.

The mobile source air toxics analyses as presented in the Draft Environmental Impact Statement were based on average daily traffic volumes over a 1-year period. However, a quantitative project-level particulate matter (PM10) hot-spot analysis has been prepared for the proposed project. The results of the analysis are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. For this analysis, emission factors were generated for the morning peak, midday hours, afternoon peak, and overnight. Particulate matter (PM10) emissions were modeled incorporating operating conditions included in the U.S. Environmental Protection Agency’s Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas, publication number EPA-420-B-13-053, dated November 2013. The development of the particulate matter (PM10) hot-spot modeling protocol for this analysis used a formal interagency consultation process.

242 Air Quality

The data presented were based on the U.S. Environmental Protection Agency’s MOBILE6.2 national defaults, including the national default vehicle fleet mix.

243 Air Quality

Vehicle traffic mix projections were provided by the Maricopa Association of Governments.
The Mexico to Canada route (commonly referred to as the CANAMEX route) is described in detail on page 3-64 of the Draft Environmental Impact Statement. The locally preferred route includes Interstate 8 and State Route 85 to bypass the Phoenix metropolitan area. State Route 85 is currently being reconstructed as a four-lane, divided highway with limited-access control, and Interstate 8 is a four-lane, divided Interstate freeway with full access control. Existing signs at each terminus designate the route as a truck bypass of metropolitan Phoenix. This route would continue to be available for interstate and interregional travel.

Trucks crossing from Mexico to Arizona are restricted to the commercial zones within 25 miles of the border. The Federal Motor Carrier Safety Administration is administering a United States-Mexico cross-border, long-haul trucking pilot program. The program tests and demonstrates the ability of Mexico-based motor carriers to operate safely in the United States beyond the municipalities and commercial zones along the United States-Mexico border (see <fmcsa.dot.gov/intl-programs/trucking/trucking-program.aspx>).

Petróleos Mexicanos (better known as Pemex), the Mexican state-owned petroleum company, has guaranteed 15 parts per million in its sulfur diesel fuel in the border region (see <http://transportpolicy.net/index.php?title=Mexico:_Fuels:_Diesel_and_Gasoline>).

All air quality analyses included projected truck traffic provided by the Maricopa Association of Governments.

Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration's mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining current conditions in the affected environment (to the extent that the monitoring data are current), they don’t tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed.

The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxics emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.

The National Near Roadway Mobile Source Air Toxic Study is discussed on page 4-74 of the Draft Environmental Impact Statement, but not in great detail. As stated in the Council on Environmental Quality’s Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, environmental impact statements should be analytic rather than encyclopedic [40 Code of Federal Regulations Part 1502.2(a)].

The mobile source air toxics emissions information presented in the Draft and Final Environmental Impact Statements demonstrates mobile source air toxics emissions at the study area level would be much lower in the future. The U.S. Environmental Protection Agency’s MOVES model also predicts lower mobile source air toxics emissions in the future. Therefore, there is no basis for the assumption that mitigation would be needed.
247 Trucks
Vehicle traffic mix projections were provided by the Maricopa Association of Governments and are consistent with the regional conformity analyses; they are discussed in greater detail in the air quality technical report prepared for the project.

As noted on page 4-70 of the Draft Environmental Impact Statement, MOBILE6.2 was used to project emissions at a regional level consistent with 40 Code of Federal Regulations Part 93.111(c), since the mobile source air toxics analysis for the proposed action started before or during the grace period for using the MOVES2010 emissions model. However, the mobile source air toxics analysis presented on page 4-70 of the Draft Environmental Impact Statement was updated on page 4-77 of the Final Environmental Impact Statement using the MOVES2010 model.

248 Air Quality
As stated on page 4-76 of the Draft Environmental Impact Statement, the proposed action is contained within the currently approved Regional Transportation Plan and the Maricopa Association of Government’s Fiscal Year 2011–2015 TIP contains several references to the South Mountain Freeway project. Therefore, the proposed action would conform to the approved transportation plan and transportation improvement program. The carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

249 Noise
Analysis of noise impacts associated with maintenance activities are not required by Arizona Department of Transportation and Federal Highway Administration policy.

Cumulative noise impacts are addressed on page 4-176 of the Draft Environmental Impact Statement.

Vehicle traffic mix projections were provided by the Maricopa Association of Governments and are consistent with the regional conformity analyses; they are discussed in greater detail in the noise technical report prepared for the project.
250 Noise
The noise analysis has been updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted.

251 Noise
As stated in the Council on Environmental Quality’s Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, environmental impact statements should be analytic rather than encyclopedic [40 Code of Federal Regulations Part 1502.2(a)]. Those noise regulations of direct consequence to the proposed action were discussed.

252 Noise
As stated on page 4-82 of the Draft Environmental Impact Statement, over 220 sensitive receivers were evaluated from a traffic noise perspective. All of the receivers represent noise sensitive land uses in proximity to the proposed project. These receivers were closer to the proposed action than the schools listed; therefore, these receivers would have higher noise levels than the schools more distant from the proposed action. Analysis of noise impacts is conducted in accordance with Arizona Department of Transportation and Federal Highway Administration policy.

253 Noise
The measurements were collected during the construction of State Route 202L (Red Mountain Freeway) near Mesa Drive. This information has been added to the text box on page 4-98 of the Final Environmental Impact Statement.

254 Noise
There are no federal requirements directed specifically to highway traffic induced vibration. All studies the highway agencies have done to assess the impact of operational traffic induced vibrations have shown that both measured and predicted vibration levels are less than any known criteria for structural damage to buildings.

255 Water Resources
The specific water quality constituents that cause the impairment change from year to year as the Arizona Department of Environmental Quality and U.S. Environmental Protection Agency assess and evaluate the water quality standards; therefore, the specific contaminants from the Section 303(d) list are not noted in the Draft Environmental Impact Statement. The primary constituent that causes impairment (total dissolved solids) is discussed on page 4-93 of the Draft Environmental Impact Statement. Specific best management practices would not be known until final design when the stormwater pollution prevention plan would be developed. The Flood Control District of Maricopa County has shared drainage systems with the municipalities and stormwater discharges that have the potential to reach the Salt and Gila rivers; therefore, the Flood Control District of Maricopa County has established and implemented monitoring requirements to comply with Arizona Pollutant Discharge Elimination System regulations, as discussed beginning on page 4-93 of the Draft Environmental Impact Statement. Discussion of Arizona Pollutant Discharge Elimination System requirements and the Arizona Department of Transportation’s permit requirements through individual permits begins on page 4-94 of the Draft Environmental Impact Statement.
### Comment Response Appendix - B501

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#### 256 Waters of the US
A reference to the figure on which the impaired waters are shown has been added to the discussion on page 4-101 of the Final Environmental Impact Statement. The sentence, "Several reaches of the Salt and Gila rivers are on the Section 303(d) list, including that portion of the Salt River in the Study Area" has been modified to read: "Several reaches of the Salt and Gila rivers are on the Section 303(d) list, including that portion of the Salt River in the Study Area (see Figure 4-36 on page 4-116)."

#### 257 Secondary and Cumulative Impacts
As noted on page 4-171 of the Draft Environmental Impact Statement, the type of activities that could contribute to cumulative impacts included general development patterns. Development on the Gila River Indian Community is a tribal function and requires no approval from other jurisdictions or notice to other jurisdictions regarding pending development. As a result, development along the Gila River Indian Community boundary is speculative. It is, however, difficult to conceive of a development project on the Gila River Indian Community that would cause upstream impacts to the level described in the comment. As noted in the comment, according to 46 Federal Register 18026 (March 23, 1981), an environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible.

The Federal Highway Administration and Arizona Department of Transportation have committed to continue coordination with the Arizona Game and Fish Department, Gila River Indian Community Department of Environmental Quality, and U.S. Fish and Wildlife Service regarding wildlife concerns as a result of the freeway (see Mitigation, beginning on page 4-126 of the Draft Environmental Impact Statement and on page 4-138 of the Final Environmental Impact Statement).
The Draft Environmental Impact Statement states on page 4-100 of the Draft Environmental Impact Statement that finding a suitable location for a new well in this area may be difficult. Productivity of the well in bedrock formations is primarily based on intercepting fractures, and that can be very difficult to do. The Arizona Department of Transportation is aware of the difficult conditions that exist in replacing wells in this area. The Arizona Department of Transportation is also aware of the productivity of the well in question.

The comment is correct that wastewater effluent is not available as a replacement source and is not being used. The City of Phoenix did operate a wastewater reclamation facility in this area, but it was removed from service and demolished. The City of Phoenix still owns the property, but all facilities have been removed from the site. Thus, only two water sources are available for irrigation and lake supply for the Foothills Community Association: the well that would be acquired and potable water from the City of Phoenix. In this Final Environmental Impact Statement, the discussion on page 4-100 of the Draft Environmental Impact Statement has been modified in the Final Environmental Impact Statement to reflect that reclaimed wastewater would not be available; however, the conclusion on page 4-100 is still appropriate. As stated on pages 4-100 of the Draft Environmental Impact Statement, "In the event that well replacement were to be impossible, the Arizona Department of Transportation would still replace the water that would be lost through the acquisition."

Depending on whether an action alternative were to become the Selected Alternative, it may be possible to keep certain wells in their current location, but if well were adversely affected by construction activities, the well might need to be abandoned. In this event, the Arizona Department of Transportation would provide a new potable water well in accordance with its Regional Standards (less than 10 feet from the existing well). If, for example, a well were abandoned as a result of construction activities, the well owner would be compensated by drilling a new well in accordance with the Regional Standards. If it were determined that the new well would be able to supply the required water, the well owner would be compensated according to the new Regional Standards. If it were determined that the new well would not be able to supply the required water, the well owner would be compensated according to the new Regional Standards.
Comment Response Appendix

The analysis of water availability is provided as an auxiliary element and is not complete.

In addition to being technically flawed by the use of outdated information and by not fully accessing available information, the analysis presented by ADOT has been elaborated in an arbitrary manner. The detailed analysis regarding water availability (page 4-09) focused solely on the Lake Level Community Association and the potential loss of two wells. The ADOT analysis correctly identifies that shallow groundwater levels are a significant concern for two wells, but ignores the possibility of additional wells being impacted by the Arizona Department of Water Resources.

Because of the public concern expressed during the Environmental Impact Statement process, page 4-100 of the Draft Environmental Impact Statement focuses on the Foothills Community Association to provide more details on the well acquisition, condition assessment, and replacement process used by the Arizona Department of Transportation. The Arizona Department of Transportation understands, and states on page 4-100 of the Draft Environmental Impact Statement, that finding a suitable location for a new well in this area may be difficult.

Depending on whether an action alternative were to become the Selected Alternative, it may be possible to keep certain wells in their current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.

Table 4-41, on page 4-98 of the Draft Environmental Impact Statement, discloses the number of wells that may be acquired by each action alternative and, as noted on page 4-98 of the Draft Environmental Impact Statement, some of these wells are abandoned wells. This information was updated in the Final Environmental Impact Statement on page 4-106. The comment suggests that the wells that would be adversely affected should be further classified as domestic, supply, or monitoring, and well ownership should be noted. This additional level of detail would not assist the environmental impact statement decision-making process.
The comment is correct that wastewater effluent is not available as a replacement source and is not being used. The City of Phoenix did operate a wastewater reclamation facility in this area, but it was removed from service and demolished. The City of Phoenix still owns the property, but all facilities have been removed from the site. Thus, only two water sources are available for irrigation and lake supply for the Foothills Community Association: the well that would be acquired and potable water from the City of Phoenix. In the Final Environmental Impact Statement, the discussion on page 4-100 of the Draft Environmental Impact Statement has been modified to reflect that reclaimed wastewater would not be available (see page 4-108 of the Final Environmental Impact Statement); however, the conclusion on page 4-100 is still appropriate. As stated on page 4-100 of the Draft Environmental Impact Statement, “In the event that well replacement were to be impossible, Arizona Department of Transportation would still replace the water that would be lost through the acquisition.”

Page 4-100 of the Draft Environmental Impact Statement states that finding a suitable location for a new well in this area may be difficult. Productivity of the well in bedrock formations is primarily based on intercepting fractures, and that can be very difficult to do. The Arizona Department of Transportation is aware of the difficult conditions that exist in replacing wells in this area.

The procedure identified on page 4-100 of the Draft Environmental Impact Statement defines the procedure that the Arizona Department of Transportation would use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation would incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source. Depending on whether an action alternative were the Selected Alternative, it may be possible to keep certain wells in their current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.

As noted on page 4-97 of the Draft Environmental Impact Statement, although groundwater level data in Ahwatukee Foothills Village were shown from 1972 to 1992, this information was gathered from the U.S. Geological Survey in 2009. Groundwater data in other areas may indeed be more current; however, this additional level of detail would not assist the environmental impact statement decision-making process.

Both the Van Buren Tank Farm and the West Van Buren Water Quality Assurance Revolving Fund site were identified and considered during development of the Draft Environmental Impact Statement (see pages 4-97 and 4-153 of the Draft Environmental Impact Statement and the Draft Initial Site Assessment prepared for the proposed project). These sites are primarily groundwater-impact sites, and groundwater is found at a depth of over 60 feet below the footprint of the Preferred Alternative. Given the separation distance between the adversely affected medium (groundwater) and the construction zone (near-surface in these locations), the project team determined that these sites would not pose a risk to construction or to the general public once the facility were completed. This assessment has been clarified in the Final Environmental Impact Statement on page 4-165.
According to 33 Code of Federal Regulations 323.3, a permit is required for discharges of dredged or fill material into waters of the United States. As noted on page 4-110 of the Draft Environmental Impact Statement, as design proceeds, the Arizona Department of Transportation would prepare and submit an application to the U.S. Army Corps of Engineers for a permit under Section 404 of the Clean Water Act. Steps are outlined beginning on page 4-110 of the Draft Environmental Impact Statement. Minimization of impacts would be achieved and unavoidable impacts would be mitigated to the extent reasonable and practicable. These steps are outlined beginning on page 4-110 of the Draft Environmental Impact Statement.

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

The Draft Environmental Impact Statement does not state that there would be 6.5 million in population growth. In 2005, there were already 3.7 million people in Maricopa County, so the increase between 2005 and 2035 would be 2.8 million people, and 44 percent of that growth would occur in the area served by the proposed freeway. This information supports the definition of the Study Area and the need for a major transportation system in the southwestern portion of the Phoenix metropolitan area.
Study Area

The parameters for reference to the Study Area are defined in Chapter 1, Purpose and Need, of the Draft and Final Environmental Impact Statements as the area defining the transportation problem. As presented in the chapter, transportation models were used to determine where the characteristics of the transportation problem would diminish and generally, it is at these locations where the definition of the Study Area took shape. This effort was coordinated with stakeholder agencies, including the U.S. Environmental Protection Agency. The comment references the term, Study Area, in terms of the analytical requirements associated with impact analyses. Each element of the environment has independent, unique (while sometimes overlapping) geographic limits for impact analyses. These limits are established by technical expertise, knowledge, the application of recognized and accepted analytical methods and assumptions, and characteristics unique to the proposed action. Methodology reports were prepared for all elements and shared with agency peers and internal team members to validate methods and limits of study prior to conducting analyses, and results were validated by peers. During impact analyses, limits were adjusted, as appropriate, based on changes in project design as well as in-field observations. Impact analyses results were the subject of the application of scientific-community–recognized techniques with the appropriate amount of presentation in accordance with the efficiency and decision-making provisions of the National Environmental Policy Act.

Purpose and Need

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a

(Response 269 continues on next page)
lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future. The Maricopa Association of Governments' control total for Maricopa County is consistent with the “ADOA—Medium Series.”

270 Purpose and Need
The reference in the Draft Environmental Impact Statement was to the Study Area, not to Maricopa County or to the state of Arizona. Therefore, the Arizona Department of Administration numbers do not apply.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

271 Design
The main line of the E1 Alternative would not have a bicycle route as part of the design. Continuous east–west riding would be possible in the neighborhoods adjoining the alternative and along Chandler Boulevard.

272 Section 4(f) and Section 6(f)
The proposed action would not have impacts on recreational opportunities or cause any changes to recreational experiences.

With the exception of the Maricopa Trail, the affected trails are planned (future) facilities. Impacts on proposed trails are discussed in the Draft Environmental Impact Statement Section 4(f) section. Because the proposed action would be constructed as an elevated span that would clear the existing Maricopa Trail segment, no impact from a social perspective was determined to be likely.

The social conditions section of the Draft Environmental Impact Statement addresses issues regarding community character and access; specific parkland impacts are addressed in the Draft Environmental Impact Statement Chapter 5, Section 4(f) Evaluation.

273 Traffic
The impacts noted in the comment are primarily temporary construction impacts. These are covered in the section, Temporary Construction Impacts, beginning on page 4-161 of the Draft Environmental Impact Statement.

The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Draft Environmental Impact Statement). The interchange was eliminated based on undesirable residential displacements, proximity to nearby schools, and cost. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabrea from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).
274 Environmental Justice and Title VI

Impacts related to air quality, noise, visual resources, and hazardous materials are considered in the Draft Environmental Impact Statement for all populations, including environmental justice populations (see Draft Environmental Impact Statement page 4-58 [air quality], page 4-79 [noise], page 4-155 [visual resources], and page 4-152 [hazardous materials], respectively). The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives.

In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.

Land acquisition and relocation assistance services for the project shall be available to all individuals without discrimination in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act). The Uniform Act provides uniform, fair, and equitable treatment of people whose property is impacted or who are displaced as a result of the project, including those with special needs. Advisory assistance services and compensation practices are described in detail in the Arizona Department of Transportation's Right-of-way Procedures Manual, located at <azdot.gov/business/RightofWay/Properties/booklets-and-manuals>. For further discussion, see page 4-51 of the Final Environmental Impact Statement and Appendix 4-1. There would be no direct impacts on Gila River Indian Community land, nor would there be any adverse impacts that would require relocations from the Gila River Indian Community or allotment land.

275 Neighborhoods/Communities

A review of the literature reveals few detailed and comprehensive analyses of the relationship between the transportation infrastructure and residential property values (Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pages 138–47; “Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor”). A recent study by the California Department of Transportation concluded that freeway facilities did not substantially affect sales prices in residential areas adjacent to the facility. The study concluded that it is the visibility of the freeway that may influence selling price and not distance or noise. As a result, the researchers generally concluded that the more the visibility of a new freeway is reduced, the less it would determine the sales price of homes sold in the area.

276 Neighborhoods/Communities

The availability and valuation assessment of residential properties has been updated in the Final Environmental Impact Statement (see page 4-47).
A review of the literature reveals few detailed and comprehensive analyses of the relationship between the transportation infrastructure and residential property values. Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pages 138–47; “Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor.” A recent study by the California Department of Transportation concluded that freeway facilities did not have a significant impact on property values. As a result, the researchers generally concluded that the more the visibility of a new freeway is reduced, the less it would determine the sale price of homes sold in the area.

### Table 277: Neighborhoods/Communities

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Six
South Mountain Freeway 202 DEIS Comments
by Rick Haddow
From approximately 2006 through 2012, I worked for the Arizona Department of Transportation ("ADOT") as a District Environmental Coordinator. As a District Environmental Coordinator for ADOT, I was responsible for, in part, overseeing environmental planning and compliance with regard to ADOT construction projects and related public outreach. Prior to working with ADOT, I was with the Maricopa County Health Department, Division of Environmental Services for approximately 18 years. While with the County, I, in part, designed and implemented the ambient air monitoring system network to determine attainment status for criteria pollutants throughout the County — including the area impacted by the proposed South Mountain/Loop 202 Freeway. I have also worked, and continue to work, as an environmental consultant. As set forth in my CV, which is attached herein, I have significant experience in assessing environmental impacts and the mitigation thereof, as well as in air and water monitoring, modeling, and permitting.

I recently reviewed the ADOT Draft Environmental Impact Statement for the South Mountain/Loop 202 Freeway ("DEIS") and was shocked at what was presented. The DEIS is mostly standard boiler plate information as copied from regulatory documents. The use of data, the methodology employed, and the conclusions presented in the DEIS are absolutely without technical merit and do not comply with the fundamental concepts and purpose of an environmental impact statement. The DEIS does not protect or properly inform the citizens of the level of risk to public health by building the freeway. Following are some of my comments based on my thirty years of experience in the environmental field.

The DEIS utilizes faulty wind speed data and methodology in doing its modeling. Wind speed is an essential part of the air shed modeling that ADOT used to determine, in part, regional stability — which relates to inversion layers and local weather patterns via the projected freeway pollution. For example, the DEIS inputs are based on times that are not concurrent with pollution building hours. The DEIS also fails to correlate the morning traffic hours 0600 to 1100 during the build up of tail pipe emissions during an air shed inversion. The ability to determine CO and Particulate concentrations needs accurate wind data measurements during periods expected to have high pollutant concentrations.

The South Mountain Transportation Corridor Study ("SMTS") — a scoring document component of the DEIS — confirms that South Mountain greatly influences the local air shed movement. According to the SMTS, down slopes bring cooler air to the evenings. The SMTS and the DEIS, however, fail to indicate that this process intensifies the morning-desert inversion, exacerbating pollutant concentrations. Air quality will worsen by the influence of the mountain and any build options. The mountain creates its own small air shed, which is not evaluated by the DEIS. All reporting data uses valley-wide components for stated results.

South Mountain Freeway 202 DEIS
Comments Prepared for PARC et al.
By: Rick Haddow

The study used state-of-the-practice, scientific community methods and similarly accepted methods. Methods, assumptions, and data were developed early in the environmental impact statement process and peer reviewed by the Federal Highway Administration, the Arizona Department of Transportation, and other federal, State, and local agencies. Peer reviewers concluded that the methods, assumptions, and data are appropriate. The Draft Environmental Impact Statement has sufficient technical merit, does comply with "fundamental concepts and purpose of an environmental impact statement," and does appropriately and properly inform the public.

The Arizona Department of Transportation and Federal Highway Administration, in cooperation with the U.S. Army Corps of Engineers, the U.S. Bureau of Indian Affairs, and the Western Area Power Administration, prepared the Draft and Final Environmental Impact Statements and Section 4(f) Evaluation in accordance with the National Environmental Policy Act of 1969 [42 United States Code § 4332(2)(c)], Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 United States Code § 303, as amended), and Section 404 of the Clean Water Act of 1977 (33 United States Code § 1251). All of these agencies are experienced in the review of National Environmental Policy Act documents and have found the logical sequence of decision making to be sound and in line with National Environmental Policy Act requirements. The Draft Environmental Impact Statement and Section 4(f) Evaluation 1) satisfies Federal Highway Administration and Arizona Department of Transportation’s environmental analysis requirements; 2) provides a comparison of the social, economic, and environmental impacts that may result from implementation of the proposed action—construction and operation of a major transportation facility; and 3) identifies measures to avoid, reduce, or otherwise mitigate adverse impacts.

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM10) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM10) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. Modeling methodology and results were reviewed by the Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments.

278 Environmental Impact Statement Process

279 Air Quality

279 Air Quality

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279 Air Quality

(Responses 279 continues on next page)
### Code Comment Document

The sampling and stability data relied on by the SMTMC and the DEIS is inaccurate. ADOT relies on data that were not taken at the Phoenix airport in the middle of the Valley without terrain conditions that approximate the region impacted by the South Mountain Freeway. Even based on the airport data, however, ADOT finds E and F stability 57% of the time. That is, according to ADOT, "air shed mixing poorest diffusion condition." The actual 202 stability would be much worse, compounding Phoenix airport conditions by stronger temperature inversions because of the mountain’s location and size. More pollutants from the freeway next to the ground will be trapped more quickly with significantly higher expected pollutant concentrations in the Ahwatukee community.

ADOT DEIS did not use MCAQD DELTA. Temperature instruments for calculating inversion conditions to determine accurate pollutant concentration projections. ADOT DEIS technical documents clearly show that Maricopa County Air Quality Delta T systems data was not used for actual ground level measurements of temperature inversions. Without this data of actual inversion strength, which shows how quickly pollutant concentrations will increase, any modeling cannot accurately reflect the population exposure to those pollutants. Stability and Air Quality modeling conducted by ADOT as set forth in the DEIS provides no useful data and must not be used to determine potential air pollution concentrations of the South Mountain 202 freeway.

ADOT used Aircraft Communications Addressing and Reporting System (ACARS) for vertical temperatures and wind profiles. This method does not correlate to ground level inversion strength for population exposure and is not a scientific method or remotely reasonable to conclude accurate results. Data used does not have any quality assurance or quality control measurements. This means the equipment used does not have proven repeatability to produce the same temperature or wind speed for any given measurement. Moreover, no standard heights were used for correlating air shed temperatures. For example, one data point is measured at 3000 feet the next is at 3000 feet separated by miles and not at the same time of day. These random numbers were used by ADOT in a model without identifying the program.

Any results derived from the ACARS data are incomplete, not relevant, and mislead the community with technical jargon trying to show justification of expected air quality concentrations for each build and no build situation. Not only is the data not taken from the freeway project area, the data is randomly gathered at different heights, locations, and times. If a temperature sensor or wind speed and direction system cannot produce the same temperature/direction/speed each time for the same given test, the data is not valid and must not be used for modeling. As indicated previously, the data used in the DEIS is not valid without any quality assurance and quality control data to support measurements.

ADOT incorrectly uses ambient delta temperatures for determining air quality inversions. Page 18 of the DEIS Technical Report of the air quality section shows ambient delta temperature differences between air quality monitoring stations separated by many miles and different elevations. This spatial distance is not how to determine inversion strength. The DEIS report author produces figures, graphs and explanation of their findings of inversions found and expected in the future. This clearly shows that ADOT does not

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<tr>
<td>281</td>
<td>The sampling and stability data relied on by the SMTMC and the DEIS is inaccurate. ADOT relies on data that were not taken at the Phoenix airport in the middle of the Valley without terrain conditions that approximate the region impacted by the South Mountain Freeway. Even based on the airport data, however, ADOT finds E and F stability 57% of the time. That is, according to ADOT, &quot;air shed mixing poorest diffusion condition.&quot; The actual 202 stability would be much worse, compounding Phoenix airport conditions by stronger temperature inversions because of the mountain’s location and size. More pollutants from the freeway next to the ground will be trapped more quickly with significantly higher expected pollutant concentrations in the Ahwatukee community. ADOT DEIS did not use MCAQD DELTA. Temperature instruments for calculating inversion conditions to determine accurate pollutant concentration projections. ADOT DEIS technical documents clearly show that Maricopa County Air Quality Delta T systems data was not used for actual ground level measurements of temperature inversions. Without this data of actual inversion strength, which shows how quickly pollutant concentrations will increase, any modeling cannot accurately reflect the population exposure to those pollutants. Stability and Air Quality modeling conducted by ADOT as set forth in the DEIS provides no useful data and must not be used to determine potential air pollution concentrations of the South Mountain 202 freeway. ADOT used Aircraft Communications Addressing and Reporting System (ACARS) for vertical temperatures and wind profiles. This method does not correlate to ground level inversion strength for population exposure and is not a scientific method or remotely reasonable to conclude accurate results. Data used does not have any quality assurance or quality control measurements. This means the equipment used does not have proven repeatability to produce the same temperature or wind speed for any given measurement. Moreover, no standard heights were used for correlating air shed temperatures. For example, one data point is measured at 3000 feet the next is at 3000 feet separated by miles and not at the same time of day. These random numbers were used by ADOT in a model without identifying the program. Any results derived from the ACARS data are incomplete, not relevant, and mislead the community with technical jargon trying to show justification of expected air quality concentrations for each build and no build situation. Not only is the data not taken from the freeway project area, the data is randomly gathered at different heights, locations, and times. If a temperature sensor or wind speed and direction system cannot produce the same temperature/direction/speed each time for the same given test, the data is not valid and must not be used for modeling. As indicated previously, the data used in the DEIS is not valid without any quality assurance and quality control data to support measurements. ADOT incorrectly uses ambient delta temperatures for determining air quality inversions. Page 18 of the DEIS Technical Report of the air quality section shows ambient delta temperature differences between air quality monitoring stations separated by many miles and different elevations. This spatial distance is not how to determine inversion strength. The DEIS report author produces figures, graphs and explanation of their findings of inversions found and expected in the future. This clearly shows that ADOT does not</td>
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<td>Delta temperature is used vertically with two temperature sensors comparing the difference of temperature between them. Standard Delta temperature systems used for air quality modeling and forecasting daily air quality by County and State officials has one temperature sensor at three meters and the other at ten meters, directly above each other. An inversion is when the air at the lower sensor is cooler than the upper sensor regardless of the ambient temperature. Inversion strength is only a few degrees, with five degrees being a very strong inversion. The facts, figures, and explanation of the DEIS technical document using delta temperature clearly show the report has no merit. Those in the atmospheric measurement business understand that the DEIS author does not understand the meaning of delta temperature, how it is obtained, used or its ability for meaningful input into air quality models. An example of this lack of understanding can be found on page 29 of the ADOT Technical Report, Air Quality Section, which states that, “the difference in the hourly temperatures at the two locations were again plotted to provide an indication of the atmosphere’s stability, the results are represented in figure 15. Positive numbers indicate that the temperatures at SMMP were warmer than at Pecon road location and represent inversion conditions during that hour.” Inversion measurements to determine pollution concentrations are never conducted as ADOT purports. What is worse is that these measurements made it into their air quality prediction models, falsely reporting results to the public as good science.</td>
</tr>
<tr>
<td>281</td>
<td>Notwithstanding that this NEPA process has taken over 12 years, ADOT has not conducted any studies on atmospheric and/or ambient quality conditions in the Alwakake area. As a result, there is no valid baseline data to input into air quality models that predict how bad the pollution in the area will be. Sites listed for reference to determine air quality for the citizens are nowhere near the impacted area and should not be used to determine air quality north of the Pecon Road alignment. Similarly, there are no temperature soundings for accurate air shed profiling. There are no air toxics measurements taken to understand the current components of the ambient air quality, and there are no wind speed and direction instruments installed as necessary to apply good science for modeling. These wind speed and direction monitors should have been installed north of the Pecon Road alignment east and west throughout the Alwakake community and near South Mountain to show how the Alwakake air shed does not remove tail pipe emissions from the freeway, but actually washes pollutants to the west in the mornings, shifting north near noon, with winds lastly northwesterly. This normal wintertime pattern known to all Arizona air quality technical persons is not shown or reflected in the ADOT DEIS.</td>
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<td>283</td>
<td>In my opinion, wintertime inversions with multiple days of air stagnation will cause exceedances of the ambient air quality standards for the criteria pollutants for any build option inside the Alwakake area.</td>
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<td>284</td>
<td>My independent research and data review of other local air quality databases with more accurate and relevant measurements (i.e. hourly wind speed and direction, actual understanding air quality modeling and misrepresents the danger to the citizens from Loop 202 Freeway pollution.</td>
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<td>282</td>
<td>Air Quality</td>
<td>The Aircraft Communications Addressing and Reporting System data were not used for modeling; they were included for informational purposes only.</td>
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<td>Air Quality</td>
<td>Phoenix is in nonattainment for particulate matter (PM10) and ozone. Exceedances of ozone attributable to the proposed freeway are unlikely, and the analysis of particulate matter (PM10) impacts also suggests the same for particulate matter (PM2.5). See page 4-76 of the Final Environmental Impact Statement for the results of the particulate matter (PM10) analysis.</td>
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<td>284</td>
<td>Air Quality</td>
<td>Identification of data sources used in the comment would have been helpful. The comment would need to provide citations and references for the information provided for further comment response. The air quality assessment for impacts from carbon monoxide followed the U.S. Environmental Protection Agency guidelines in Guideline for Modeling Carbon Monoxide from Roadway Interactions (A-OAQPS, 1992). Inputs to the model were based on U.S. Environmental Protection Agency-recommended values or were selected to provide a conservative estimate of impacts. Modeling methodology and results were reviewed by the Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments. Although the qualitative particulate matter (PM10) hot-spot analysis performed in the Draft Environmental Impact Statement met 40 Code of Federal Regulations § 93.111(c), the Arizona Department of Transportation and Federal Highway Administration have updated the qualitative analysis to a particulate matter (PM10) quantitative analysis for the Final Environmental Impact Statement to ensure that a state-of-the-art analysis is completed for the proposed action. The quantitative project-level particulate matter (PM10) hot-spot analysis prepared for the proposed project is summarized in the prologue to the Final Environmental Impact Statement (page xiii) and is more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. A particulate matter (PM2.5) analysis is not required since the area is in attainment for the particulate matter (PM2.5) National Ambient Air Quality Standard.</td>
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<tr>
<td>287</td>
<td>Water Resources, Waters of the United States</td>
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Ambient levels of the criteria pollutants reported were obtained from the Maricopa County Air Quality Department, which follows U.S. Environmental Protection Agency quality assurance/quality control procedures.

The air quality assessment for impacts from carbon monoxide followed the U.S. Environmental Protection Agency guidelines in Guideline for Modeling Carbon Monoxide from Roadway Intersections (A-OAQPS, 1992). This is accepted methodology. See <epa.gov/ttn/scram/dispersion_prefrec.htm#cal3qhc>.

Controlling and treating runoff is a normal function of the Arizona Department of Transportation projects. No evidence is offered to substantiate such statements. The U.S. Army Corps of Engineers, as a cooperating agency, has participated and contributed in each step of the environmental process. The agency has found the logical sequence of decision making to be sound and in line with National Environmental Policy Act requirements. The Arizona Department of Environmental Quality has also contributed to the process. Both agencies as referenced in the comment have oversight roles in project permitting as established in the Clean Water Act (Sections 401, 402, and 404). Extensive mitigation in accordance with the permitting requirements can be found in the Water Resources and Waters of the United States sections of Chapter 4 of the Final Environmental Impact Statement. The Arizona Department of Transportation is fully obligated and committed to implementation and adherence to those mitigation strategies.

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Page 67 of the technical report on the air quality section states that “the selection of each of the meteorological conditions was based on EPA-454/R-92-003, Guidelines for Modeling carbon monoxide from roadway intersections.” This is how the state determines the air quality impact of an eight lane freeway. It appears that the DEIS was completed by contractors without experience in the industry and randomly assigned meaningless data, facts and figures that do not support the stated ADOT conclusions. ADOT review of submitted air quality technical data and conclusions are without merit, proper review of methodology and applied science. This report provides no real analysis of the stated purpose of the DEIS.

The DEIS component addressing the US Army Corps of Engineers section 404 of the clean water act, and the 401 certification by ADQE is in jeopardy. EPA has found that ADOT has routinely failed to comply with contracts with FHWA, USACE, ADEQ and USFS to maintain, limit or control sediment discharges into jurisdictional waters of the U.S. The Gila and Salt rivers are waters of the US inside this planned project. EPA actions have created an environmental program inside of ADOT. This environmental program has failed to implement the most basic construction mitigations. Statewide highway.
construction along hillside has created large and numerous rills (deep cuts down hillside). These rills, wash sediment into our waterways, polluting the ecosystem. ADOT management down plays environmental stewardship, by stating “we have always done it this way”. ADOT, Army Corp and FHWA do not conduct any inspections. Internal ADOT environmental staff does not influence ADOT management; ADOT management is self-environmental regulating without flow of ADOT, FHWA or other construction partners. FHWA does not provide funding for continued maintenance of hillside erosion after construction. Statewide ADOT does not provide its maintenance highway workers funding to mitigate sediment discharges from hillside rills and failed sediment control features of the original construction best management practices. ADOT has failed to protect the environment in nearly all completed construction sites with the same terrain of the South Mountain 201. It is expected that ADOT will not honor their own Statewide Individual Stormwater permit, allowing sediment discharges during and after construction of the freeway.

Tail pipe emissions and other transportation discharges including: material lost from untripped or improperly tarped trucks, fluids/chemicals leaking from container vehicles can dry and become reentrained into the atmosphere potentially harming residents closest to freeway.

Tribal lands do contribute to the local air shed loading of particulate matter. The entire area south of the planned freeway is unstable land used and never maintained for dust control. No enforcement ability by Federal, State or County for the impact to the Ahwatuke residents, this additional particulate will be in addition to particulate generated by vehicle emissions.

PM10 blown into the freeway from the Tribal lands to the south will be reentrained into the atmosphere, allowing PM10 normally not reaching the Ahwatuke areas to be re-broadcasted into the air and carried into the neighborhood.

A hazardous materials accident would trap the community or create panic to shelter in place with gaseous plume and fire exposure. Most winds will carry hazardous materials and smoke into the area north of the freeway. Potentially trapping people between the plume and their ability to exit safety without traveling through the plume of toxic gases.

Visibility will be significantly reduced for all residents looking south, southeast and southwest. Observations of local freeways from local area hill tops inside metro Phoenix clearly shows the dark particulate tail pipe emissions above valley freeways. This planned freeway will be no different. Heavy particulate and tailpipe emissions will obscure current scenic views.

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<td>Paved road dust was considered in the quantitative, project-level, particulate matter (PM10) hot-spot analysis prepared for the proposed project. The results of the analysis are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM2.5) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.</td>
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<td>Air Quality</td>
<td>According to the 2013 Arizona Department of Transportation Air Quality Assessment South Mountain Freeway 202L Draft Report, review of wind data from the Gila River Indian Community monitoring site at St. Johns suggests that during the morning hours and associated with mountain-drainage air flows and stable atmospheric conditions, wind flows are from the southeast and follow the Gila River channel to the north. Locations to the east of St. Johns experience flow from the east to the lower elevations along the Gila River. During the warmer hours' improved mixing, flows typically follow the river channel and come from the north and northwest. Likewise, during a 1-month-long meteorological monitoring period (November 20, 2006, through December 21, 2006) at Pecos Road and 40th Street and a second 1-month-long monitoring period at Pecos Road and 24th and 40th streets (April 19, 2007, through May 21, 2007), winds during the morning hours typically were from the northeast. During the warmer hours, and with improved mixing, winds typically were from the west.</td>
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<td>290</td>
<td>Air Quality</td>
<td>Impacts on visibility are primarily related to extremely small aerosols from multiple sources. As noted in the text box on page 4-69 of the Final Environmental Impact Statement, in the Phoenix metropolitan area, about 34 percent of particulate (PM10) emissions are attributed to on-road mobile sources, which contributes to the brown cloud and visibility issues; however, reductions in on-road mobile source emissions through emission controls have produced visibility improvements. The Arizona Department of Environmental Quality monitors visibility in the Phoenix metropolitan area.</td>
</tr>
</tbody>
</table>
Curriculum Vitae

Richard B. Haddow
6303 E. Windborg St.
Apache Junction, AZ 85119
602-986-3084
Email RHaddow@earthlink.net

2006 to January 2012 Arizona Department of Transportation: Globe District
Environmental Coordinator

2003 to Present Haddow Environmental Research Organization: Air Quality Expert
Witness, EPA Qualified Researcher, AZ State Licensed Investigator, qualifying party.

1985 to 2003 Maricopa County Health Department / Environmental Services:
Quality Assurance Manager, Public Health Engineer, Environmental Health Supervisor,
Open Burning/Asbestos Manager, Environmental Investigator Supervisor

Knowledge Skills and Abilities (KSA)

Technical
Represent the ADOT Globe District Engineer for all environmental programs while
providing technical assistance and expertise to local governments. Represented Maricopa
County Environmental Services to the MAG Committee, Air Quality Technical Advisory
Committee.

Conducted statistical analysis with air quality modeling, meteorological modeling and
travel demand modeling to determine air quality equipment siting criteria to meet
Maricopa County EPA grant objectives.

Managed and maintained multiple complex databases for air quality modeling.

Conducted research studies using demographic and land use data to address the impacts
of alternative highway designs.

Conducted stakeholder groups and community workshops on environmental rule making.

Forecasted carbon monoxide, particulate and ozone advisories to the public and media.

Worked with and for attorneys to collect information and provide testimony as an expert
witness. Provided testimony in support of industrial clients against claims that they were
in violation of environmental laws. Testified as an expert witness for the Attorney
General’s Office for Superfund investigations.

Areas of expert subject matter include: air quality modeling, law enforcement, air
pollution chemistry, air monitoring instrumentation and siting, analytical chemistry, air
toxics, meteorological monitoring and forecasting, environmental compliance, regulatory
analyses, audits, permitting, emissions inventories, environmental data analysis, quality
assurance, quality control, soil and water sampling, technical report writing, data
acquisition instrumentation calibrations (as well as repair and maintenance), standards
testing and traceability.

Conducted environmental investigations.

Earned more than ten semi-annual certifications as an ADOT visible emissions evaluator
EPA Method 9.

Performed technical review of air, soil, water and meteorological data, performance and
system auditing, database management, air monitoring and site assessment and selection.

Adhered to the Code of Federal Regulations for NAAQS (National Ambient Air Quality
Standards).

Experienced in the arenas of water programs, data validation, air pollution training, air
pollution prevention, hazardous air pollutants, water supply field inspection, hazardous
materials and waste management.
Evaluated permit applications to determine the potential impact to communities surrounding industrial facilities in the event of a release (QIP Risk Consequence Analysis). Prepared complex reports, findings and conclusions and presented to executive management.

Conducted stakeholder group meetings and community workshops to explain complex environmental programs. Worked with neighbors to resolve complex issues that had potential to directly impact their quality of life.

Knowledge Skills and Abilities (KSA) Professional Experience
Represent the ADOT Globe District Engineer for COGs, MPOs and tribal transportation groups.
Maricopa County Environmental Services: Worked with groups by means of committee/technical force to resolve complex rule making and air quality planning by applying political consensus. Wrote, operated and managed Federal grants with signature authority, as well as multiple ongoing complex programs. Designed, built and maintained an ambient air monitoring program with use of IATAA funds ($1.2M) to ensure future state transportation merits. Preparation and dissemination of complex models, findings, and conclusions to executive management. Conducted environmental seminars and training programs that simplified the understanding of a highly technical analysis.

Evaluated permit applications for process engineering such as Title V permits and Non Title V permits, including mobile sources. Held regulatory authority over permit holders to ensure compliance within the sand and gravel industry as well as mining and earthmoving operations. Managed multiple ongoing environmental programs. Applied AP-42 emission factors as related to hot asphalt mixing facilities, Portland cement plants, and sand and gravel processing. Reviewed and commented on air quality permit applications to Arizona Department of Environmental Quality (ADEQ) and non-attainment counties. Wrote, implemented and maintained dust control programs. Managed and trained air quality permit investigators. Conducted environmental seminars and training programs for regulated industry groups and regulators. Conducted and managed storm water pollution prevention planning programs (SWPPP). 

Operated and managed an ambient air monitoring program in accordance with the USEPA objectives for criteria pollutants. Particulates (PM-10um & 2.5um), carbon monoxide, ozone, sulfur dioxide, nitrogen dioxide and lead. Monitored air toxics, hazardous air pollutants, and visibility including enhanced ozone monitoring (PSD). Conducted technical research for the assessment of air quality (modeling). Performed analysis of statistical data to evaluate attainment status of pollutants. Operated and managed the quality assurance program to ensure data met or exceeded ambient air monitoring protocols, methods and traceability of standards. Managed federal and state performance audits. Performed field environmental monitoring and investigations for special studies. Managed a team of air quality assurance scientists, chemists, and electronic technicians. Managed the chemistry laboratory operations. Designed, installed, managed and maintained the network for ambient air monitoring stations in Maricopa County, Arizona. Conducted joint special studies for ozone, particulates, carbon monoxide and visibility with USEPA, ADEQ, and the USDA Forest Service. Managed the database for ambient air quality and quality assurance in the USEPA AIRS database. Designed and managed the gaseous and particulate standards program for QA/QC. Author of the first approved by USEPA for Quality Assurance and Operating Procedures Manual for Field and Office Activities of Maricopa County, Arizona.
Worked closely with Federal Highway Administration (FHPA), US Army Corps of Engineers 404 Permits, US Fish and Wildlife, Arizona Department of Game and Fish, Arizona Historical Preservation Office, Bureau of Land Management (Arizona) and ADEQ 401 water quality cert., ADOT Individual (MS4) permit to ensure compliance of mitigation measures statewide.

**Education**
- Quality assurance ambient air monitoring, CARB Sacramento, Ca 1985
- Bachelor of Science, AZ State Univ., MBA course completed 1993
- Environmental Investigations, Western States Projects 1994
- Regulatory Framework for Toxic and Hazardous Substances, Department of Manufacturing and Industrial Technology, Arizona State University, College of Engineering and Applied Sciences 1995

**Military Service**
- US Navy, Advanced Electronics, Qualified in Nuclear Submarines 1978-1984, Honorable Discharge

**Licenses and Certifications**
- State of Arizona Private Investigation Business License # 1003813
- Qualified US Environmental Protection Agency Researcher
- Erosion Control Coordinator, Arizona General Contractors Association
- Chemical-terrorism Vulnerability Information User - Certificate

**Community Services**
- Pinal County Sheriff’s Office Criminal Investigation Bureau Volunteer/Crime Victim Advocate
- Chair, Pinal County Local Emergency Planning Committee (PC LEPC)
REPORTS

Seven

Comments on the SMF DEIS
Re: Cultural Resources Impacts
by Samantha Skenedore, Of Counsel: The Shanker Law Firm, PLC.
The religious and cultural importance of the South is acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26 as well as in the Summary of the Draft Environmental Impact Statement. The description in the Draft Environmental Impact Statement is based on input received from the Gila River Indian Community and its members and other Indian Nations and their members. The Draft Environmental Impact Statement, after consultation and coordination efforts, accommodates and preserves (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.

Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resource studies and engaging in an ongoing, open dialogue with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance, including the South Mountains, to the Gila River Indian Community that may be adversely affected by the proposed freeway. Information describing the outreach and collaboration can be found in Chapter 2 and in text beginning on pages 4-140 and 5-26 of the Final Environmental Impact Statement. Mitigation measures were suggested in a letter from the Lieutenant Governor of the Gila River Indian Community to the Administrator, Arizona Division, Federal Highway Administration, dated June 23, 2010 (see page A372 of Appendix 2-1 of the Final Environmental Impact Statement). In this letter, the Gila River Indian Community submitted a proposal to address partial measures for the mitigation of adverse effect from the Pecos Road Alignment of the South Mountain Freeway. The Gila River Indian Community’s proposal found the engineering solutions acceptable, but stated that implementation and construction of the proposed freeway would require further consultation. In committing to the evaluation of the South Mountains Traditional Cultural Property, the Arizona Department of Transportation and Federal Highway Administration also committed to the Gila River Indian Community’s participation in ongoing engineering design refinements and acknowledged the importance of all plants and animals in the traditional culture of the Akimel O’odham and Pee Posh of the Gila River Indian Community.

To clarify, use of the mountains for the purposes of the proposed freeway represents two-tenths of one percent of the total mountain range. Since 1988, and as part of this environmental impact statement process, several measures have been undertaken and will be undertaken to further reduce effects on the mountains. These measures, including narrowing the design footprint, acquiring replacement land immediately adjacent to the mountains, and the provision of highway crossings, are outlined in text beginning on page 5-23 of the Draft Environmental Impact Statement.

1 In ADOT, with concurrence from the FHWA, identified the EIA Alternative as its Preferred Alternative in the Final Draft of the EIA Alternative. See ADOT, South Mountain Study (Final, January 8, 2010), at 95-96. A detailed analysis of the Final Draft of the EIA Alternative is available at http://www.fhwa.dot.gov/environment/texas ruta studies/docs/SMS-2010_02_South_Mountain_Study_Final_Draft.pdf (released July 18, 2010).

2 The FHWA and ADOT documented that the South Mountains qualified as a Traditional Cultural Property. See ADOT, South Mountain Study (Final, January 8, 2010), at 95-96. A detailed analysis of the Final Draft of the EIA Alternative is available at http://www.fhwa.dot.gov/environment/texas ruta studies/docs/SMS-2010_02_South_Mountain_Study_Final_Draft.pdf (released July 18, 2010).

3 For current information on the Gila River Indian Community, please see the official page available at: http://www.gric.org (accessed July 18, 2010).

(Responses continue on next page)
Section 106 of the National Historic Preservation Act of 1966, 16 U.S.C. § 470i, requires federal agencies, here the FHWA, to take into account the effects of their actions on historic properties listed on or eligible for inclusion in the National Register of Historic Places (the "NRHP") and allow the Advisory Council on Historic Preservation (the "ACHP") a reasonable opportunity to comment. The ACHP promulgated regulations of the historic preservation review process entitled "Provisions of Historic Properties" in 56 C.F.R. Part 800. The Section 106 process is designed to properly identify, assess and mitigate adverse actions on cultural resources. The process requires the lead federal agency to identify historic properties and determine if each property is eligible for listing in the NRHP. To be determined eligible for listing in the NRHP, properties must be a place of significance to American history, architecture, archeology, engineering or culture and meet at least one or more of the following criteria:

- Criterion A [A][i] Associated with events that have made a significant contribution to the broad pattern of our history; or
- Criterion B [B][i] Associated with the lives of persons significant in our past; or
- Criterion C [C][i] Possess the distinct characteristics of a type, period or method of construction or that represent the work of a master, or that possess high aesthetic values or that represent a significant interchange of architectural styles; and
- Criterion D [D][i] May be likely to yield, information important in prehistory or history. They also must possess integrity of location, design, setting, materials, workmanship, feeling and/or association. Properties may be of local, state or national importance.6

During the development of the Freeway project, the GRIIC undertook the process to obtain a Tribal Historic Preservation Officer (THPO) to assist in identifying and nominating historic properties on GRIIC’s tribal lands for the purposes of Section

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

As noted in Table 4-48, which begins on page 4-133 of the Draft Environmental Impact Statement, the Advisory Council on Historic Preservation has been consulted during the Section 106 process.

The Gila River Indian Community’s Tribal Historic Preservation Officer is discussed on page 4-128 of the Draft Environmental Impact Statement.

4 Authorized by the National Historic Preservation Act of 1966, the National Park Service's National Register of Historic Places is part of a national program to inventory and report public and private efforts to identify, evaluate, and protect America's historic and archeological resources. See: http://www.nps.gov/history/ (viewed on July 31, 2015).
5 See 36 C.F.R., National Park Service, National Register Bulletin 39, Guidelines for Identifying and Documenting Traditional Cultural Properties 1990, available at www.crpa.gov/ia/publications/bulletin/nrbl39.htm. Criteria for eligibility for listing on the National Register are: "associated with events that have made a significant contribution to the broad pattern of our history, are associated with the lives of persons significant in our past, embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high aesthetic values, or represent a significant interchange of architectural styles; and are important in prehistory or history." 36 C.F.R. § 60.4.
6 Tribal lands consist "all lands within the exterior boundaries of any Indian reservation and...all Indian lands common ownership" (16 U.S.C. § 470ff(e)(6)).
The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26 of the Draft Environmental Impact Statement.

The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26. The description in the Draft Environmental Impact Statement is based on input received from the Gila River Indian Community and its members and other Indian Nations and their members. The Draft Environmental Impact Statement, after consultation and coordination efforts, accommodates and preserves (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. Although the Draft Environmental Impact Statement describes the impacts on the South Mountains as adverse, this would not prohibit Native Americans from continuing to practice their beliefs because only a small fraction of the mountain would be affected, replacement lands would be provided, and access to the mountain would be maintained, and mitigation would be implemented based on input by Native Americans. Several action alternatives were subject to the alternatives development and screening process; not just the E1 Alternative and alternatives located on the Community (Figure 3-6 on page 3-10 of the Draft Environmental Impact Statement illustrates a representation of such alternatives). Ultimately the other alternatives were eliminated from further study in the screening process and the Gila River Indian Community decided not to give permission to study alternatives on its land (see Draft and Final Environmental Impact Statement page 3-25). In June 2013, the Maricopa Association of Governments approved new socioeconomic projections for Maricopa County. The purpose and need and analysis of alternatives were updated and reevaluated using these new population, employment, and housing projections and corresponding projections related to regional traffic. The conclusions reached in the Draft Environmental Impact Statement were reconfirmed in the Final Environmental Impact Statement (see Chapter 3, Alternatives). Therefore, the Arizona Department of Transportation, with concurrence from the Federal Highway Administration, identified the E1 Alternative as the eastern section of the Preferred Alternative (which includes the W59 Alternative in the western section of the Study Area). In reaching its determination, the Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.

In 1982, the Gila River Indian Community Tribal Council adopted an ordinance declaring “...in a manner of Community policy and legislative determination, that the public interests of the Pima-Maricopa people and the interests of all other persons living within the jurisdiction of the Gila River Indian Community require that the Community adopt a means wherein all sites, location, structures, and objects of sacred, historical or scientific interest or value will be protected from desecration, destruction, theft, or other interference.” See Gila River Indian Community Resolution No. GIL-88-82.

In 1989, the Gila River Indian Community Tribal Council adopted a resolution to preserve the lands of their Huwikyak ancestors, by approving the “Policy Statement of the Four Southern Tribes (Salt River Pima-Maricopa Indian Community, Ak-Chin Indian Community, Tohono O’odham Nation, and the Gila River Indian Community) which outlines the Four Tribes’ intent to protect, promote, and preserve cultural affinity to the Huiwakans.” See Gila River Indian Community Resolution No. GIL-13-91.

More importantly to the present review, the Gila River Indian Community Tribal Council adopted a tribal resolution affirming that the South Mountain is “a sacred
After determining that no prudent and feasible alternatives existed to avoid the South Mountains Traditional Cultural Property, efforts were undertaken to minimize harm. These measures are documented, beginning on page 5-27 of the Draft and Final Environmental Impact Statements. Some of these measures included avoidance of specific sites and providing multiuse crossings and fencing that would limit access by freeway users, but allow Gila River Indian Community members to continue to gain access to the site. In addition, the Federal Highway Administration and Arizona Department of Transportation committed to provide funds for the Gila River Indian Community to conduct a full evaluation of the South Mountains Traditional Cultural Property (see page 4-160 of the Final Environmental Impact Statement). Documentation of these efforts is in a letter from the Lieutenant Governor of the Gila River Indian Community to the Administrator, Arizona Division, Federal Highway Administration, dated June 23, 2010 (see page A372 of Appendix 2-1 of the Final Environmental Impact Statement). In this letter, the Gila River Indian Community submitted a proposal for the “Evaluation of Traditional Cultural Property and Adverse Effects of Transportation Corridor Development posed by the proposed construction of the current Pecos Alignment of the South Mountain Freeway.”

In committing to the evaluation of the South Mountains Traditional Cultural Property, the Federal Highway Administration and Arizona Department of Transportation also committed to the Gila River Indian Community’s participation in ongoing engineering design refinements and acknowledged the significance of all plants and animals in the traditional culture of the Akimel O’odham and Pee Posh of the Gila River Indian Community.

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(cont.)

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300
Cultural Resources

Strict adherence to Section 106 of the National Historic Preservation Act not only preceded the preparation and issuance of a Draft Environmental Impact Statement, but is ongoing and will continue. The Draft and Final Environmental Impact Statements comply with Section 106 of the National Historic Preservation Act. The Section 106 process is documented in Table 4-47 beginning on page 4-145 of the Final Environmental Impact Statement.

"...would be a violation of the cultural and religious beliefs of the Gila River Indian Community and would have a negative cumulative effect on the continuing lifeways of the people of the Gila River Indian Community."

After determining that no prudent and feasible alternatives existed to avoid the South Mountains Traditional Cultural Property, efforts were undertaken to minimize harm. These measures are documented, beginning on page 5-27 of the Draft and Final Environmental Impact Statements. Some of these measures included avoidance of specific sites and providing multiuse crossings and fencing that would limit access by freeway users, but allow Gila River Indian Community members to continue to gain access to the site. In addition, the Federal Highway Administration and Arizona Department of Transportation committed to provide funds for the Gila River Indian Community to conduct a full evaluation of the South Mountains Traditional Cultural Property (see page 4-160 of the Final Environmental Impact Statement). Documentation of these efforts is in a letter from the Lieutenant Governor of the Gila River Indian Community to the Administrator, Arizona Division, Federal Highway Administration, dated June 23, 2010 (see page A372 of Appendix 2-1 of the Final Environmental Impact Statement). In this letter, the Gila River Indian Community submitted a proposal for the “Evaluation of Traditional Cultural Property and Adverse Effects of Transportation Corridor Development posed by the proposed construction of the current Pecos Alignment of the South Mountain Freeway.”

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Indian tribes that may attach religious and cultural significance to the Area of Potential Effects. See id. at §898.4-10(1).67

The DEIS appears to suggest that FHWA and ADOT properly noticed, hosted, held and/or facilitated numerous meetings with the GRC and perhaps, other tribes.68 Table 2-1 in the DEIS indicates that the project included in July of 2001, however, no subsequent record of meetings with any other tribe (other than the GRC) is documented in the table until March 18, 2011.69 In other words, no other tribes appear to have been consulting parties nor were they present at the onset of the project. The only refinement to solicitation of tribal input after the GRC did not occur until March 18, 2011. The GRC met for only one time at the table throughout the majority of the project for one to six (1-6) per. The DEIS fails to demonstrate any reasonable and good faith effort to bring all interested and impacted tribes to the table. Further Table 4-48 demonstrates that only one tribe, the Hopi Tribe, concurred on the Section 106 consultations. According to the DEIS, one other tribe, the Yavapai-Prescott Indian Tribe, deferred in participation in the Southern Tribes and all other tribes, including the GRIC, neither responded nor concerned with the Section 106 findings. The data speaks for itself. The tribes have been left almost entirely out of a project that has been under development since 2001. The tribes, however, are on record for speedily and voluntarily assisting the significant cultural, traditional and religious attachment to the sacred site.

Table 4-48 in the DEIS demonstrates that nearly each federally-recognized tribe associated with the freeway project has opted to either refrain from responding to the FHWA and ADOT at all, in some rare instances, deferred its position to the Southern Tribes. The record again, reflects an abysmal failure on behalf of the FHWA and ADOT to gain meaningful consultations with the affected tribes, having performed only to the GRC, one of the Four Southern Tribes. The Salt River Pima-Maricopa Indian Community, Ak-Chin Indian Community, and Tohono O’odham Nation have not been consulted as beneficiaries despite the fact that FHWA and ADOT are on record as having been directed to do so by at least one tribes government - the Yavapai-Prescott Indian Tribe. The record further shows that the majority of the tribes affected by the undertaking were not consulted early in the project’s planning process via the initial scoping process, and were consequently not consulted about the technical reports, consultants and cultural expertise necessary to preliminarily account findings.

67 36 C.F.R. §898.4-10(c)(2), “Involving Indian tribes and Native Hawaiian organizations. The agency officials shall make a reasonable and good faith effort to identify any Indian tribes or Native Hawaiian organizations that might attach religious and cultural significance to historic properties in the area of potential effects and invite them to be considered parties. Each Indian tribe or Native Hawaiian organization that requests in writing to be a consulting party shall be one.”
68 36 C.F.R. §898.4-10(c)(2) Draft Environmental Impact Statement and Section 4(f)
69 36 C.F.R. §898.4-10(c)(2) Draft Environmental Impact Statement and Section 4(f)
70 Draft Environmental Impact Statement and Section 4(f)
b. The FHWA and ADOT did not have authority to delegate its statutory obligations under Section 106 to conduct consultation and conduct community and public outreach. See 36 C.F.R. §800.3.

Section 106 states that, “[f]ederal agencies are encouraged to coordinate compliance with section 106 and the procedures in this part with any steps taken to meet the requirements of the National Environmental Policy Act (NEPA). Agencies should consider their section 106 responsibilities as early as possible in the NEPA process, and plan their public participation, analysis, and review in a way that they can meet the purpose and requirements of both statutes in a timely and efficient manner (emphasis added).” Id at §800.1. Further, Section 106 requires that the agency official shall: (i) Identify cultural properties; (ii) Identify historic properties and assess the effects of the undertaking on historic properties; (iii) Consult regarding the effects of the undertaking on historic properties with the State Historic Preservation Office and other Federal agencies; (iv) Develop in consultation with identified cultural property alternatives and propose measures that might avoid, minimize or mitigate any adverse effects of the undertaking on historic properties and describe them in the EA or DEIS (emphasis added);” Id at §800.3.

In the instant case, FHWA and ADOT simply delegated its responsibility to consult with the tribal community to the GRIC tribal government. The DEIS appears to suggest that numerous meetings regarding the Freeway project were noticed, hosted and facilitated by the FHWA and ADOT. The DEIS does not clarify whether the GRIC tribal government entities, or any sub-entities thereof, actually noticed, hosted and facilitated such meetings. While Section 106 allows for procedural variances when, like in the present case, a DEIS is drafted under the National Environmental Policy Act (the “NEPA”), 42 U.S.C. 4332 et seq., Section 106 does not procedurally allow FHWA or ADOT to delegate the Section 106 initiation and consultation measures to any other entity. See 36 C.F.R. §800.4. In other words, FHWA is required to identify tribes and consult tribes and consulting parties. The DEIS record reflects that the FHWA regularly consulted federal and state agencies, however, neglected meaningful and good faith efforts to consult tribes other than the GRIC. The record also shows that FHWA, ADOT and the designated GRIC government entities failed to properly notify and/or consult with GRIC members.

302 Cultural Resources

The Arizona Department of Transportation and Federal Highway Administration did not delegate statutory obligations.

303

Comment noted.

304 Cultural Resources

This comment seems to be confusing National Historic Preservation Act Section 106 consultation, project scoping, and Federal Highway Administration/Arizona Department of Transportation/Gila River Indian Community coordination and planning meetings. Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

As noted in Table 4-47, which begins on page 4-145 of the Final Environmental Impact Statement, the Ak-Chin Indian Community, the Gila River Indian Community, the Hopi Tribe, the Salt River Pima-Maricopa Indian Community, the Tohono O’odham Nation, the Yavapai-Apache Tribe, and the Yavapai-Prescott Indian Tribe were included in the initial Section 106 consultation in 2003. At that time, Yavapai-Prescott Indian Tribe deferred to the Four Southern tribes in a response dated September 10, 2003. Hopi concurred, but did not defer at this time. As more information regarding the project was known (and of aboriginal lands), all of the tribes with aboriginal lands within the project (including the Yavapai-Prescott Indian Tribe) were consulted in 2005, 2006, 2012, and 2013. In August 2005, both the Salt River Pima-Maricopa Indian Community and the Tohono O’odham Nation agreed to be a concurring party to the programmatic agreement. A response from Salt River Pima-Maricopa Indian Community dated August 14, 2012, cited an existing consultation management agreement in place between the Four Southern Tribes and stated that the Four Southern Tribes are in consensus that Gila River Indian Community would take the lead in providing comments for the project.
305 Cultural Resources

Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft Environmental Impact Statement). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

As stated on page 2-8 of the Draft Environmental Impact Statement, the meetings in 2010 between the Gila River Indian Community’s Transportation Technical Team, Arizona Department of Transportation, and the Federal Highway Administration were held in response to a request received from the Governor of the Gila River Indian Community and were not a part of the agency or public scoping process. The information provided to the Transportation Technical Team was used by the Team and the Public Information Office in the Gila River Indian Community’s outreach effort prior to the February 2012 coordinated referendum. The referendum and the outreach effort were tribal actions and, other than providing requested information to the Gila River Indian Community, the Arizona Department of Transportation and Federal Highway Administration did not participate in these actions.

306 Cultural Resources

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

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### Code Comment Document

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<td>306</td>
<td>(cont.)</td>
<td>Consensus that Gila River Indian Community would take the lead in providing comments for the project. Since the beginning of the environmental impact statement process for the proposed freeway, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in an ongoing, open dialogue with the Gila River Indian Community, its Tribal Historic Preservation Officer and Cultural Resource Management Program, regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. The Gila River Indian Community’s own Cultural Resource Management Program performed the cultural field investigations and developed recommendations for mitigation for project impacts. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed South Mountain Freeway. The traditional cultural properties identified are culturally important to other Native American tribes as well.</td>
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<td>Cultural Resources</td>
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As noted in Table 4-47, which begins on page 4-145, and also on page 4-159 of the Final Environmental Impact Statement, all tribes were contacted early in the study and have been consulted on many aspects of the study, including the cultural resource-related reports produced over the course of the study.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed. As stated above, Section 106 requires federal consultation with tribal authorities on the effects of their undertakings on historic properties. Although the Joint Air Toxics Assessment Project is discussed on pages 4-64 and 4-74 of the Draft and Final Environmental Impact Statements, respectively, Section 106 consultation on this report is not required.

The comment that eight traditional cultural properties would be adversely affected is incorrect. Adverse effects to the South Mountains Traditional Cultural Property and one site that is contributing to the South Mountains Traditional Cultural Property (AZ T:12:197) would occur with the construction of the E1 Alternative. No extant petroglyph sites would be adversely affected. The trail sites were determined eligible for listing in the National Register of Historic Places listing under Criterion D as archaeological sites; therefore, as noted on page 5-2 of the Draft Environmental Impact Statement, generally, cultural resources eligible for listing in the National Register of Historic Places under Criterion D are not eligible for protection under Section 4(f). Through consultation and coordination, the Gila River Indian Community Tribal Historic Preservation Office, the Arizona State Historic Preservation Office, and many other tribal authorities concurred with these recommendations (see Table 4-47 on page 4-145 of the Final Environmental Impact Statement for more details on tribal concurrences).

Since the beginning of the environmental impact statement process for the proposed freeway, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in an ongoing, open dialogue with the Gila River Indian Community, its Tribal Historic Preservation Officer and Cultural Resource Management Program, regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. The Gila River Indian Community's own Cultural Resource Management Program performed the cultural field investigations and developed recommendations for mitigation for project impacts. As a result of these discussions and of studies conducted by the Gila River Indian Community's Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. In certain cases, listing these properties on the National

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**Code** | **Comment Document**
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308 | Cultural Resources
309 | Cultural Resources
310 | Cultural Resources

(Response 309 continues on next page)
The DEIS fails to provide aerial photography, maps, charts or diagrams that
properly informs the public of the Area of Potential Effects upon historic and
potentially cultural sites and resources. Further, the DEIS fails to address
any impacts to air, ground and water directly and indirectly related to the cultural
resources impacted during the temporary state of construction of the Freeway.
The DEIS fails to address documented concerns regarding religious practice
including measures to ensure that religious practitioners gain and maintain
unimpeded access to sacred cultural properties and religious practice
locations impacted by the Freeway project. In fact, the FHWA and ADOT
have determined that the trails located within the project area do not qualify
under the NHPA; however, the DEIS lacks any reference as to whether any one of
the trails or all of the trails are used for religious practice purposes and
therefore, should be afforded a higher level of significance under the
situation. Further, documenting in the initiation of the Section 106 process, lack of input
from affected tribes, lack of good faith and reasonable efforts by the FHWA
and ADOT all contribute to a failure of application of the consultation
phases found within the Area of Potential Effects.

In addition, the DEIS does not confirm that the Section 106 process is
complete and that the FHWA and ADOT acquired consensuses by the Tribal
Historic Preservation Officer or the State Historic Preservation Officer in its
findings. The South Mountain Transportation Corridor Study, Citrus
Arroyo Team Draft Technical Support Summary, Cultural Resources (2008)3
(the “SMT Corridor Study”) confirms that “[h]e greatest number of prehistoric
sites would be impacted by the E1 Alternative….” In fact, the E1 Alternative
is determined to impact at least 8 sites described as “1. artifact scatters (limited
activity size); 2. kilo quantities; 1 petroglyph site; 4 trail sites.” The SMT
Corridor Study confirms that the Section 106 process is incomplete3 and that
mitigation measures including work plans, research designs, methods and
execution strategies, burial agreements with the Arizona State Museum and
tables are all outstanding. Instead of completing the process as required and
needed on a project of this magnitude, the FHWA and ADOT opted to
propose and execute a seemingly unspecial Programmatic Agreement (“PVA”).

3. For South Mountain Transportation Corridor Study, Citrus Arroyo Team Draft Technical Support
Summary, Cultural Resources (2008) available at
34 Id. p. 2.
35 Id. p. 2.
36 Id. p. 1.
37 Id. p. 1.
38 Id. p. 2.
39 Id. p. 5.

312 Cultural Resources

The Study Area as shown in Figure 1-1 on page 1-3 of the Draft Environmental Impact
Statement includes the area of potential effects. In addition, consultation letters
sent to consulting parties included maps and complete reports for their reference.

As stated above, Section 106 requires federal consultation with tribal authorities
on the effects of their undertakings on historic properties. In cases where air,
ground, or water attributes were considered important to their eligibility to the
National Register of Historic Places, this information would have been addressed
during the consultation process. If the Federal Highway Administration had no
information suggesting the significance of air, ground, or water attributes, and
none of the consulting parties responded to consultation by saying those attributes
were important and requesting they be considered, the Federal Highway Administration
would have no reason to consider them, and further Section 106 consultation on these
attributes would not have been required.

312 Cultural Resources

The Study Area as shown in Figure 1-1 on page 1-3 of the Draft Environmental Impact
Statement includes the area of potential effects. In addition, consultation
letters sent to consulting parties included maps and complete reports for
their reference. The location of cultural resources are not shown in the Draft
Environmental Impact Statement because the publishing of location information
would put the sites in danger of pillering and/or vandalism.

The project would not preclude access to the South Mountains. Adverse effects
on traditional cultural practices, including religious activities, would be mitigated
through the development and implementation of the traditional cultural property
mitigation program being developed for the proposed project through ongoing
National Historic Preservation Act Section 106 consultations and by mitigation
identified in Chapter 4 of the Draft Environmental Impact Statement that would
avoid, reduce, minimize or otherwise mitigate air, ground, and water-related
impacts. This applies equally to any impacts during construction of the proposed
freeway, should an action alternative be the Selected Alternative.

The Draft Environmental Impact Statement describes a proposed action that, after
consultation and coordination efforts, would accommodate and preserve (to the

(Response 312 continues on next page)
with certain parties and tribes to address "steps and procedures that would be undertaken to address any effects as they were to become known." The decision to enter into a LIA not only removes the project activities from the eyes of the public, but circumvents the statutory requirements and public policy governing the approval process of the project.

f. The DEIS fails to confirm that the Tribal Historic Preservation Office has concurred with the FIDRA and ADOT's conclusions on eligibility of all cultural sites against the National Registry's criteria.

The DEIS does not address why the THPO and the GRC have opted to refrain from recommending on the Section 106 findings. The DEIS should not proceed forward without, in the least, valid Section 106 concurrence. The DEIS fails to suggest when concurrence might be reached, why concurrence has not yet been reached, and/or any other notices associated with the same.

g. The DEIS fails to address proposed mitigation measures to the irreversibly harmed Freeway project will cause on known cultural resources.

Without achieving the (FHWA and ADOT) planned mitigations of adverse effects upon the known cultural resources, the public, tribal and Gila River Indian Community remain uninformed and unable to substantively comment on the DEIS. In other words, meaningful access is left to speculate on mitigation measures on a large-scale project affecting hundreds of cultural properties. The DEIS does not mention whether it has drafted an mitigation plan, the scope of such a plan, the parties consulted, the measures to be taken, criteria to procedural and substantive laws that apply in any such instances, the availability of funding and liability protections, current agreements, condition reports, technical qualifications of on-site archeologists, curation specialists or assistants, implications and consequences with tribes of any potential implications to the National Gavains Protection and Repataintion Act, 25 U.S.C. 301 et seq.29 The DEIS confirms that the critical procedural requirement of mitigation in the Section 106 process is lacking.30

313 Cultural Resources

The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer and the Arizona State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Officer and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

Adverse effects to the South Mountains Traditional Cultural Property and one site that is contributing to the South Mountains Traditional Cultural Property (AZ T:12:197) would occur with the construction of the E1 Alternative. No extant petroglyph sites would be adversely affected. The trail sites were determined eligible for listing in the National Register of Historic Places listing under Criterion D as archaeological sites; therefore, as noted on page 5-2 of the Draft Environmental Impact Statement, generally, cultural resources eligible for listing in the National Register of Historic Places under Criterion D are not eligible for protection under Section 4(f). Through consultation and coordination, the Gila River Indian Community Tribal Historic Preservation Office, the Arizona State Historic Preservation Office, and many other tribal authorities concurred with these recommendations (see Table 4-47 on page 4-145 for more details on tribal concurrences).
As noted on page 4-159 of the Final Environmental Impact Statement, a programmatic agreement is a document that spells out the terms of a formal, legally binding agreement between lead agencies and other interested parties for the proper treatment and management of affected cultural resources. The programmatic agreement establishes a process for consultation, review, and compliance with federal and State preservation laws as the effects of the project on historic properties become known. Although the Advisory Council on Historic Preservation declined to participate in the programmatic agreement, the Council concerned with the development of the agreement (see Table 4-47, which begins on page 4-145 of the Final Environmental Impact Statement).

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

313 (cont.)

With certain parties and tribes to address steps and procedures that would be undertaken to address any effects as they were to become known. The decision to enter into a PA not only removes the project attributes from the eyes of the public, but circumvents the necessary requirements and public policy governing the approval process of the project.

c. The DEIS fails to confirm that the Tribal Historic Preservation Office has concurred with the FYFRA and ADOT's conclusions on eligibility of all cultural sites against the National Registry's criteria.

d. The DEIS does not address why the TEPO and the GRRC have opted to refrain from concurring on the Section 106 findings. The DEIS should not proceed forward without, in the least, valid Section 106 concurrence. The DEIS fails to suggest when concurrence might be reached, why concurrence has not yet been made, and/or any other reasons associated with the same.

e. The DEIS fails to address proposed mitigation measures to the irreparable harm the Freeway project will cause to known cultural resources.

Without addressing the FYFRA and ADOT's planned mitigation of adverse effects upon the known cultural resources, the public, tribes and the Gila River Indian Community remain uninformed and unable to substantively comment on the DEIS. In other words, measured proposed are left to speculate on mitigation measures on a large-scale project affecting hundreds of cultural properties. The DEIS does not examine whether it has drafted a mitigation plan, the scope of such a plan, the parties consulted, the measures to be taken, criteria to procedural and substantive laws that apply in any such instance, the availability of funding and liability protections, existing agreements, cultural impact, technical qualifications of on-site ground archaeological, cultural specialists or historians, implications and considerations with tribes of any potential implications to the National Graves Protection and Repatriation Act, 25 U.S.C. 501 at sec. The DEIS confirms that the critical protection requirement of mitigation in the Section 106 process is lacking.

314 Cultural Resources

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.
with certain parties and tribes to address "trigs and procedures that would be undertaken to address any effects as they were to become known." The decision to enter into a PA not only removes the project activities from the eyes of the public, but circumvents the statutory requirements and public policy governing the approval process of the project.

c. The DEIS fails to consider that the Tribal Historic Preservation Office has experienced the FISURA and ADOT’s conclusions on eligibility of all cultural sites against the National Register’s criterion.

The DEIS does not address why the TEHO and the GRC have opted to refrain from commenting on the Section 106 findings. The DEIS should not proceed forward without, in the least, valid Section 106 concurrence. The DEIS fails to suggest when concurrence might be reached, why concurrence has not yet been reached, and/or any other actions associated with the same.

d. The DEIS fails to address proposed mitigation measures to the irreversible harm the Freeway project will cause to known cultural resources.

Without addressing the FISURA and ADOT’s planned mitigation of adverse effects upon the known cultural resources, the public, tribes and the Gila River Indian Community remain uninformed and unable to substantively comment on the DEIS. In other words, someone would need to be left to speculate on mitigation measures on a large-scale project affecting hundreds of cultural properties. The DEIS does not mention whether it has drafted a mitigation plan, the scope of such a plan, the parties consulted, the measures to be taken, status to legal standards and technical laws that apply in any such instance, the availability of funding and viable solutions, various agreements, consultation, specific laws, of on-the-ground archaeological, consultation processes, and processes with tribes of those potential implications to the National Genoa Protection and Revitalization Act, Section 4(f) of the Act. The DEIS confirms that the cultural protection requirement of mitigation as the Section 106 process is lacking.

315 Cultural Resources
Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

Mitigation for effects to cultural resources is discussed on page 4-146 of the Draft Environmental Impact Statement and in Chapter 5 as Measures to Minimize Harm which are presented at the end of each resource protected under Section 4(f).

These include maintaining access to important sites, the commitment to additional consultation during design, a traditional cultural property evaluation, and others.

316 Cultural Resources
Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and considered fully the substantive input and comments that were received. Refer to Chapter 2 in its entirety and text beginning on page 4-128 of the Draft Environmental Impact Statement.

317 Cultural Resources
The Transportation Technical Team was discussed on page 2-3 of the Draft Environmental Impact Statement.
II. The FHWA and ADOT failed to consult the Gila River Indian Community.

As a result of the initiation of the project, the GRIC organized itself to effectively plan and negotiate proposed road modifications within the Gila River Indian Reservation. Its particular, the GRIC established a Transportation Technical Team (the “TTT”) for Gila River Tolled Resolution GB 26-07 (July 5, 2007).

The FHWA and ADOT met with TTT. The TTT held meetings in the Gila River Indian Community’s seven (7) domains. See Table 2-1. As discussed above, FHWA and ADOT do not have authority to delegate its consultation and public/community outreach to tribal government or any of tribal governments’ subdivisions. In other words, the FHWA and ADOT failed to make sufficient and direct efforts to engage Community members. Instead, the FHWA and ADOT substituted its duty for community outreach nominally to tribal government and/or its subdivisions. The result is that Community members are uninformed, uninvolved, and uninvited in the participation of the Freeway project. Thisoutcome is contrary to the public policy as set forth in the NEPA.

For example, FHWA held only one public hearing on May 21, 2013. On April 30, 2013, FHWA and ADOT explicitly offered transportation assistance through the issuance of the City of Phoenix bus pass to GRIC members to attend the only public hearing on May 21. However, FHWA and ADOT never distributed bus passes to GRIC members that wished to attend the May 21 hearing. See Statement by Lori Boldt (July 22, 2013). Therefore, the efforts to engage the Community were insubstantial.

III. The DEIS that proposes the selection of the E1 Alternative, the alternative that results in irreversible damage to traditional cultural properties (South Mountains), erroneously concludes that Section 4(f) of the United States Department of Transportation Act of 1966 does not apply and is in violation of Environmental Justice.

The Department of Transportation Act (DOT) Act of 1966 includes a special provision, Section 4(f), which stipulates that the FHWA and other DOT agencies must protect the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless the following conditions apply: (1) there is no feasible and prudent alternative to the use of land, and (2) the action includes all possible planning to minimize harm to the property resulting from use.

Examples of Section 4(f) protected resources are public school playgrounds, public parks, recreational land, wildlife refuge, traditional cultural properties, and historic sites. There are two types of infeasibilities impacts that Section 4(f) looks at directly:


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### Code 318 Cultural Resources

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.

As stated on page 2-8 of the Draft Environmental Impact Statement, the meetings in 2010 between the Gila River Indian Community’s Transportation Technical Team, Arizona Department of Transportation, and the Federal Highway Administration were held in response to a request received from the Governor of the Gila River Indian Community. The information provided to the Transportation Technical Team was used by the Team and the Public Information Office in the Gila River Indian Community’s outreach effort prior to the February 2012 coordinated referendum. The referendum and the outreach effort were tribal actions and, other than providing requested information to the Gila River Indian Community, the Arizona Department of Transportation and Federal Highway Administration did not participate in these actions.

### Code 319 Tribal Involvement

The Arizona Department of Transportation provided vouchers for public hearing parking and for public transit to the hearing. For the first time in the State's history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All advertisements for the hearing included telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations.
II. The FHWA and ADOT failed to consult the Gila River Indian Community.

As a result of the initiation of the project, the GRIC organized itself to effectively plan and negotiate proposed road modifications within the Gila River Indian Reservation. In particular, the GRIC established a Transportation Technical Team (the “T2T”). See Gila River Tabled Resolution GB-26-07 (July 5, 2007). The FHWA and ADOT met with T2T. The T2T held meetings in the Gila River Indian Community’s seven (7) domains. See Table 2-1. As discussed above, FHWA and ADOT do not have authority to delegate its consultation and public/community outreach to tribal governments or any of tribal government’s subordinates. In other words, the FHWA and ADOT failed to make sufficient and direct efforts to engage Community members. Instead, the FHWA and ADOT substituted its duty for community outreach reasonably to tribal government and/or its subordinates. The result is that Community members are uninformed, uninvolved and insignificant in the participation of the Freeway project. This outcome is contrary to the public policy set forth in the NEPA.

For example, FHWA held only one public hearing on May 21, 2013. On April 30, 2013, FHWA and ADOT explicitly offered transportation assistance through the issuance of the City of Phoenix but passed to GRIC members to attend the only public hearing on May 21. However, FHWA and ADOT never distributed these letters to GRIC members that wished to attend the May 21 hearing. See Statement by Lori Baker (July 22, 2013). Therefore, the efforts to engage the Community were flagrant.

III. The DEIS that proposes the selection of the E1 Alternative, the alternative that results in irreparable damage to traditional cultural properties (South Mountains), erroneously concludes that Section 4(f) of the United States Department of Transportation Act of 1966 does not apply and is violative of Environmental Justice.

The Department of Transportation Act (DOT Act) of 1966 includes a special provision, Section 4(f), which stipulates that the FHWA and other DOT agencies consider the use of land from publicly owned parks, recreation areas, wildlife and waterfront refuges, or public and private historical sites unless the following conditions apply: (1) there is no feasible and prudent alternative to the use of land, and (2) the action involves all possible planning to minimize harm to the property resulting from use. Examples of Section 4(f) protected areas are public school playgrounds, public parks, recreation land, wildlife refuge, traditional cultural properties, and historic sites. There are two types of interpretations that Section 4(f) looks at directly:

1. The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26.

In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. The preferred alternative was the outcome to this process.

An alternative on the Gila River Indian Community that could have avoided the South Mountains was considered but eliminated from study after the Gila River Indian Community rejected the alternative by referendum.

The Draft Environmental Impact Statement concludes that Section 4(f) does apply to the South Mountains Traditional Cultural Property and Chapter 5 of the Draft Environmental Impact Statement presents a robust and fully disclosed Section 4(f) evaluation (see discussion in the Draft Environmental Impact Statement, starting on page 5-26). The outcome of this process was the determination that there was no prudent and feasible alternative to the E1 Alternative.

A thorough feasible and prudent avoidance analysis of the South Mountains was conducted as presented in Chapter 5 of the Draft and Final Environmental Impact Statements and concluded avoidance to the direct use of the resource was not feasible and prudent. In support of this response and given the concerns about the South Mountains, consider the following comment from the U.S. Department of the Interior on the Draft Environmental Impact Statement: "Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources." The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.
certain cases, listing these properties on the National Register of Historic Places may offer them protection under Section 4(f) of the Department of Transportation Act.

The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28. The section entitled Title VI and Environmental Justice, beginning on page 4-29 in the Draft Environmental Impact Statement, presents acceptable methods, data, and assumptions to assess the potential for disproportionately high and adverse effects from the proposed action on environmental justice populations and disparate impacts to populations protected under Title VI. Based upon the content of the section, no such effects would result from the action alternatives.

In light of comments received on the Draft Environmental Impact Statement, the above-referenced conclusions were confirmed in the preparation of the Final Environmental Impact Statement. To provide further clarity, the discussions of environmental justice and Title VI were separated and additional text explaining the relationship of environmental justice and Title VI to various environmental elements was added throughout Chapter 4, Affected Environment, Environmental Consequences, and Mitigation, as exemplified by the inserted text on page 4-29 of the Final Environmental Impact Statement.

Chapter 5 of the Draft and Final Environmental Impact Statements are dedicated to the discussion of Section 4(f) of the Department of Transportation Act of 1966.

When there is a direct use (take) of a Section 4(f) property, analysis to determine whether proximity impacts would result in a constructive use is not applicable (23 Code of Federal Regulations § 774.15) (see Draft Environmental Impact Statement page 5-27). Constructive use would not incorporate land from the Section 4(f) resource, but has proximity impacts so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Approximately 32 acres of the over 16,000-acre Phoenix South Mountain Park/Preserve and the South Mountains Traditional Cultural Property would be converted to a transportation corridor. The park would still function as a park, offering recreation, interaction with the Sonoran Desert, etc. Although access to the traditional cultural property would be different, Native Americans would still have access to the traditional cultural property and would still be able to engage in traditional activities associated with the mountains. The impact on the traditional cultural property would not jeopardize its eligibility for listing in the National Register of Historic Places. Through the consultation process, the Gila River Indian Community Tribal Historic Preservation Officer has been involved in developing measures to minimize harm to the traditional cultural property (see page 5-27 of the Draft Environmental Impact Statement).
The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact statement in several locations, notably pages 4-130 and 5-26. Not all of the ten resources identified by the Cultural Resource Management Program as culturally important qualified as traditional cultural properties.

Comment noted.

In accordance with the National Environmental Policy Act, a range of reasonable action alternatives to carry forward for further analysis was determined through application of multidisciplinary criteria in a logical, step-wise progression. Alternatives were not disposed of or dismissed without a thorough evaluation using the multidisciplinary criteria outlined in the alternatives development and screening process presented in Chapter 3 of the Draft Environmental Impact Statement. The Preferred Alternative was the outcome to this process.

The Draft Environmental Impact Statement concludes that Section 4(f) applies to the South Mountains Traditional Cultural Property and Chapter 5 of the Draft Environmental Impact Statement presents a robust and fully disclosed Section 4(f) evaluation (see discussion in the Draft Environmental Impact Statement, starting on page 5-26). The outcome of this process was the determination that there was no prudent and feasible alternative to the E1 Alternative. A thorough feasible and prudent avoidance analysis of the South Mountains was conducted as presented in Chapter 5 of the Draft and Final Environmental Impact Statements and concluded avoidance to the direct use of the resource was not feasible and prudent. In support of this response and given the concerns about the South Mountains, consider the following comment from the U.S. Department of the Interior on the Draft Environmental Impact Statement: "Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources." The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.
327 Cultural Resources

Adverse impacts to culturally important natural resources (plants, animals, landscapes) would be addressed through the traditional cultural property mitigation program (currently in its draft form as jointly drafted by the Arizona Department of Transportation and the Gila River Indian Community). (See Draft Environmental Impact Statement pages 4-131 and 5-27 for more discussion.) The Bursara trail is more than ¼ mile from the proposed freeway and is analyzed in the Final Environmental Impact Statement on page 5-9. The trail is within ¼ mile of the planned freeway and is analyzed in the Final Environmental Impact Statement on page 5-9. The trails are within ¼ mile of the planned Chandler extension and residential development; however, these trails do not have noise-sensitive activities or viewed characteristics that contribute to their importance as Section 4(f) recreational resources.

328 Section 4(f) and Section 6(f)

The newest South Mountains trails, the Bursara and the Pyramid, are more than ¼ mile from the proposed freeway and are analyzed in the Final Environmental Impact Statement on page 5-9. The trails are within ¼ mile of the planned Chandler extension and residential development; however, these trails do not have noise-sensitive activities or viewed characteristics that contribute to their importance as Section 4(f) recreational resources.

Discovery of new information not presented in a Draft Environmental Impact Statement as it is published is not failure. Review by agencies and the public of a Draft Environmental Impact Statement equates to a review of a draft report to aid the agencies in making the document more objective and defensible. In this manner, the realization of new information, if recognized as such by the federal lead agency, permits the Arizona Department of Transportation and its representatives to defensibly augment the document's content.

329 Section 4(f) and Section 6(f)

Trails maps have been updated, and new trails are analyzed in the Final Environmental Impact Statement because they are within ¼ mile of the Chandler Extension (not the proposed freeway) (see page 5-9). Because none of the action alternatives or options would result in direct or constructive use of the trails, no measures to minimize harm are warranted.

Discovery of new information not presented in a Draft Environmental Impact Statement as it is published is not failure. Review by agencies and the public of a Draft Environmental Impact Statement equates to a review of a draft report to aid the agencies in making the document more objective and defensible. In this manner, the realization of new information, if recognized as such by the federal lead agency, permits the Arizona Department of Transportation and its representatives to defensibly augment the document's content.

330 Section 4(f) and Section 6(f)

The process upon which Section 4(f) resources were identified and evaluated for feasible and prudent avoidance possibilities followed the rigorous procedural requirements as set forth in Federal Highway Administration Technical Advisory T 6400.8A Guidance for Preparing and Processing Environmental and Section 4(f) Documents and related guidance. The comment suggests trails in the South Mountain Park/Preserve would be subject to direct or constructive use; however, as shown in Chapter 5 of the Draft and Final Environmental Impact Statements, such use would be avoided by the proposed freeway.
The Section 4(f) evaluation in its entirety represents an exhaustive, comprehensive, objective, and meaningful effort in accordance with requirements of the law and is in no way misleading. Evaluation of each resource included active engagement of resource owners to clarify resource importance and use (extensive interaction with owner/operators of Section 4(f) resources is well documented in the Appendices of the Draft and Final Environmental Impact Statement). The U.S. Department of the Interior [the agency with direct oversight of Section 4(f)] review of the Draft Environmental Impact Statement noted: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources” The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.

The Section 4(f) evaluation was thorough and complete.

The Federal Highway Administration recommended the Native American trails within the project area as eligible for listing in the National Register of Historic Places under Criterion D as archaeological sites. Based on review of the traditional cultural property technical summary, the Bureau of Indian Affairs, City of Phoenix, State Historic Preservation Office, Cocopah Tribe, Colorado River Indian Tribes, Fort McDowell Yavapai Nation, Gila River Indian Community, Hopi Tribe, Navajo Nation, San Carlos Apache Tribe, Tonto Apache Tribe, and White Mountain Apache Tribe, the Gila River Indian Community Tribal Historic Preservation Officer and Arizona State Historic Preservation Office concurred with these recommendations. Trails within Phoenix South Mountain Park/Preserve were not disqualified from Section 4(f) evaluation; they are solely recreational. The City of Phoenix-owned trails within Phoenix South Mountain Park/Preserve were considered collectively as part of the City-owned park/preserve because the analysis indicated that there would be no direct or constructive use of the trails.

Cultural Resources

The Draft Environmental Impact Statement complies with the Archaeological Resources Protection Act of 1979, 16 United States Code 470aa-mm. Implementing regulations found at 43 Code of Federal Regulations Sections 7.1(a) provide regulations to implement provisions of the Archaeological Resources Protection Act by establishing the uniform definitions, standards, and procedures to be followed by all Federal land managers in providing protection for archaeological resources, located on public lands and Indian lands of the United States; therefore, the Archaeological Resources Protection Act applies only to projects on federal or tribal land. The proposed freeway would not be constructed on tribal land and the involvement of federal land would be limited to a parcel owned by the Bureau of Land Management, which is discussed on page 4-14 of the Final Environmental Impact Statement.

As discussed on page 4-159 of the Final Environmental Impact Statement, a programmatic agreement was developed for the project to establish a process for consultation, review, and compliance with federal and state preservation laws as the effects of the project on historic properties become known. The programmatic agreement states that any data recovery on federal lands necessitated by the project must be permitted under the Archaeological Resources Protection Act in accordance with the federal land-holding agency and that in the event any data recovery for the project should take place on tribal lands, all applicable permits would be obtained. Because the project is proposed, a programmatic agreement is in place to address data recovery on federal and tribal lands, and no excavations have yet occurred.
**Comment Response Appendix - B539**

### Code | Comment Document
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334 | Cultural Resources


In general, under the RFRA, the Government shall not substantially burden a person’s exercise of religion even if the burden results from a rule of general applicability, except as provided in subsection (b) of this section. The Government may substantially burden a person’s exercise of religion only if it demonstrates that application of the burden to the person—(1) is in furtherance of a compelling governmental interest; and (2) is the least restrictive means of furthering that compelling governmental interest.

The RLUIPA corrects the shortcomings of RFRA by prohibiting the imposition of burdens on the ability of prisoners to worship as they please and gives churches and other religious institutions a way to avoid homelessness vexing low restrictions on their property use.

Both RFRA and RLUIPA apply in the present case. The FHWA and ADOT, despite noting substantial findings and a lengthy record of the impact of the Freeway project upon the cultural, traditional and religious practices of Native Americans, the FHWA has not argued nor demonstrated a compelling governmental interest that is the least restrictive means to further a compelling government interest. Instead, FHWA and ADOT suggest that they original 50 or more design alternatives or made unsubstantiated claims that 20 of the alternatives were not feasible or feasible. FHWA and ADOT through its DEIS proposes the E1 Alternative that is a substantial burden on the exercise of religion upon the Native Americans and tribes that have attached a religious connection with the proposed project’s irreplaceable cultural resources, (i) the FHWA and ADOT should have used in its DEIS to further what it believes is a compelling government interest, and (ii) is doing so by electing the most restrictive means upon religious freedom. Therefore, the E1 Alternative for the Freeway project violates RFRA and the project as proposed by the DEIS should not proceed.

### Code | Issue | Response
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334 | Cultural Resources | The Religious Land Use and Institutionalized Persons Act, by its terms, has no application here. The Draft Environmental Impact Statement describes a proposed action that, after consultation and coordination efforts, would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.

Even if a substantial burden existed, the construction of roads to meet regional transportation needs is a central and compelling function of government, and the project is designed to accomplish that compelling function with the least impact possible under the circumstances.

The Arizona Department of Transportation and Federal Highway Administration have been fully attentive to concerns expressed by the Gila River Indian Community and reiterate that position in this comment; the agencies have taken these concerns into account in describing potential impacts in the Draft Environmental Impact Statement, in ensuring that access to South Mountain is preserved, and in developing and recommending the implementation of numerous mitigation measures.

335 | Cultural Resources | The United States has confirmed that the United Nations Declaration on the Rights of Indigenous Peoples Declaration is “not legally binding or a statement of current international law” and is limited to “moral and political force.” Announcement of U.S. Support for the United Nations Declaration on the Rights of Indigenous Peoples, U.S. State Department (December 17, 2010) (available at: state.gov/documents/organization/154782.pdf). The government’s Announcement further clarified that the United States “understands [that the Declaration] calls for a process of meaningful consultation with tribal leaders, but not necessarily the agreement of those leaders, before the actions addressed in those consultations are taken.” The Draft Environmental Impact Statement describes a proposed action that, after consultation and coordination efforts, would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.
As described in the Draft Environmental Impact Statement, the consultation process with Native American tribes, in particular with the Gila River Indian Community, was lengthy, repeated, and extensive. Traditional cultural properties were evaluated through consultation with affected tribes and are described in the Draft Environmental Impact Statement. Although the consent of tribal leaders is not required, as the United States made clear in its decision discussed in an earlier response, the Tribal Historic Preservation Officer concurs with the mitigation measures to be imposed in connection with the E1 Alternative affecting a small portion of the South Mountains.

The quoted language in the comment attributed to Article 7 of the Declaration does not appear there. The language appears to derive from the International Labor Organization’s 1989 Indigenous and Tribal Peoples Convention (Convention No. 169). Convention 169 has never been ratified by the United States, which has not agreed to align legislation, policies, and programs with the Convention as a legal requirement.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

A thorough feasible and prudent avoidance analysis of the South Mountains was conducted as presented in Chapter 5 of the Draft and Final Environmental Impact Statements and concluded avoidance to the direct use of the resource was not feasible and prudent. In support of this response, consider the following review from the U.S. Department of the Interior on the Draft Environmental Impact Statement:

"Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources." The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement.

CONCLUSION

The FHWA and ADOT’s proposed South Mountain Freeway project does not meet the requirements of the NEPA, Section 4(f) of the Department of Transportation Act, the NEPA, the IEPA, the BLMIPA, and the UNDEP. FHWA and ADOT should reexamine the Section 106 process with reasonable and good faith efforts to consult all tribes and amend any and all technical studies identifying, assessing, reducing, and mitigating adverse impacts to cultural resources with tribal input. Further, FHWA and ADOT should eliminate alternative routes that are located near or through the South Mountains, the Gila River Indian Community and other sites considered of sacred or cultural significance, correct the DEIS and take future action to become compliant with all applicable laws, ensure that all tribes and Indigenous Peoples are afforded their basic human and civil rights as outlined in the UNDEP, and appropriately include council from archeological experts and the findings of the Environmental Protection Agency’s Joint Air Toxic Assessment Project issued in 2013.

The Draft Environmental Impact Statement describes a proposed action that, after consultation and coordination efforts, would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.
The Draft Environmental Impact Statement is the result of careful study and complies with the National Environmental Policy Act, Section 4(f) of the Department of Transportation Act, the National Historic Preservation Act, the Archaeological Resource Protection Act, the Religious Freedom Restoration Act, the Religious Land Use and Institutionalized Persons Act, and the United Nations Declaration on the Rights of Indigenous Peoples.

As noted in the Final Environmental Impact Statement in Table 4-47 beginning on page 4-145, the National Advisory Council on Historic Preservation has been consulted. The Council declined to participate in the project twice, but encouraged development of a programmatic agreement without its involvement.
<table>
<thead>
<tr>
<th>Code</th>
<th>Issue</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>340</td>
<td>Public Involvement</td>
<td>Offers to the Gila River Indian Community Manager to host a public outreach event on the Gila River Indian Community began in summer 2012. The Gila River Indian Community first officially responded to this offer at the April 30, 2013, meeting of the Transportation Technical Team. During this meeting, the Gila River Indian Community Manager requested a Gila River Indian Community Forum be conducted on the Gila River Indian Community following the public hearing. This was the only request the Arizona Department of Transportation received from the Gila River Indian Community regarding whether the Arizona Department of Transportation could hold a public outreach event during the public comment period. The Arizona Department of Transportation agreed to do so, and a Gila River Indian Community Forum was held on June 22, 2013, at the Komatke Boys &amp; Girls Club on the Gila River Indian Community. The Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing, and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News. The Arizona Department of Transportation Community Relations distributed electronic notices (e-newsletters) through the Gila River Indian Community Government Delivery system to over 12,000 constituents who voluntarily signed up for project alerts along the Interstate 10 (Papago and Maricopa freeways) and State Route 202L (Santan Freeway). These electronic notices included notice of availability of the Draft Environmental Impact Statement (distributed on April 26, 2013); public hearing (distributed on May 10, 2013); the community forums (distributed on May 29, 2013); and closing of the Draft Environmental Impact Statement public comment period (June 2013). In addition, anyone who had attended a previous meeting on the proposed action and signed in received all of this information mailed individually. On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area.</td>
</tr>
<tr>
<td>341</td>
<td>Public Involvement</td>
<td>As stated on page 2-8 of the Draft Environmental Impact Statement, the meetings in 2010 between the Gila River Indian Community’s Transportation Technical Team, Arizona Department of Transportation, and the Federal Highways Administration were held in response to a request received from the Governor of the Gila River Indian Community and were not a part of the agency or public scoping process. The information provided so the Transportation Technical Team was used by the Team and the Public Information Office in the Gila River Indian Community’s outreach effort prior to the February 2012 coordinated referendum. The referendum and the outreach effort were tribal actions and, other than providing requested information to the Gila River Indian Community, the Arizona Department of Transportation and Federal Highway Administration did not participate in these actions.</td>
</tr>
</tbody>
</table>
342 Public Involvement

The initial hotline capacity was 20 messages; it was expanded to 80 on May 17, 2013. Any questions that came in regarding how to participate, including any shuttle bus or transportation questions, were forwarded to one individual to address. Conversation record log sheets were kept for these efforts.

For the first time in the State’s history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All advertisements regarding the public hearing provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations. Transportation to the Gila River Indian Community forum was not provided.

As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community in the environmental impact statement process have been extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft and Final Environmental Impact Statements). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.
message on the number and relayed the message I had left the week prior. After that I said so how was this supposed to work? Because we could not have gotten more tribal members present. He shrugged his shoulders and said, “Well it’s too late now.” Also on the day of the Phoenix hearing the participants received the small booklet “SMFT Meeting Guide”. This was the first time we as community members had seen this. The guide did say the community forums were going to be utilizing a different format. It also listed only 1 GRC forum and listed it as tentative. The meeting in GRC was short notice flyers went out to the community literally days before the event. Before this event at least three weeks prior one community organizer emailed a request asking GRC to provide transport to community members to the meeting. There is a lack of community members without vehicles. No response. Lastly a few days before organizers and community voiced their concerns over the inability to voice, in open forum, their concerns at this meeting. We additionally asked again if transport would be provided, they finally said yes, but us organizers had to provide a list of community members who needed transport. This was not expected, it was too short of notice to gather all that information. The day of the GRC forum were dissatisfied the lack of ability to openly voice their concerns. The video was looped, as posted on ADOT’s website, throughout the day.

Previously, in two district meetings that I had attended one in district six and the other in districts four. There were concerns about ADOT not coming to present the information themselves. The one elder in district six asked who they were waiting for? He (the elder) stated that he felt like the TTF should not have been presenting the information but ADOT should have been the ones bringing this information to the community. That same consensus was expressed at the district four meeting.

Signed,

[Signature]

July 22, 2013

344 Public Involvement

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345 Public Involvement

As noted in Chapter 2 of the Final Environmental Impact Statement, efforts to involve the Gila River Indian Community in the environmental impact statement process have been extensive. Public involvement with the Gila River Indian Community was conducted as requested by the tribal government. Prior to October 2005, early efforts to involve the Gila River Indian Community included attending tribal meetings and monthly meetings with Gila River Indian Community Departments (see discussion beginning on page 2-8 of the Draft Environmental Impact Statement). On October 14, 2005, the Gila River Indian Community requested that all project-related communications take place at a government-to-government level (see letter on page A152 of Appendix 1-1). This request was honored by the Arizona Department of Transportation and Federal Highway Administration. All public involvement efforts were implemented by the Gila River Indian Community’s public involvement officer.
Additional Comments

One

Patricia Lawlis Comments on the Draft Environmental Impact Statement (DEIS) for the proposed South Mountain Freeway (SMF), July 2013
Comment noted.

Purpose and Need

Creating a truck bypass is not a goal of the proposed action. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the "loop" system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles using the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed freeway, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Final Environmental Impact Statement, it is expected that "true" through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 of the Final Environmental Impact Statement).

As presented in Chapter 1, Purpose and Need, an objective and unbiased examination of the existing and planned future transportation network in the Study Area was undertaken to determine if the catalyst for the need for the Environmental Impact Statement (being the proposed action) was still warranted. As explained in the chapter, the examination successfully attempted to provide an answer to whether or not a transportation problem(s) exist and would continue to exist in the foreseeable future. The analysis was undertaken in accordance with the National Environmental Policy Act and Federal Highway Administration guidance and policy for implementing the National Environmental Policy Act. The results confirmed the transportation problems as framed in the region's adopted long range transportation plans (both past and present) still exist and would continue to exist in the foreseeable future. The need for action was not to implement the long range plan objectives but to correct a transportation problem in the region; a beneficial outcome in doing so was consistency with the region's long range transportation planning activities.

The purpose and need criteria used to frame the transportation problem are described (see Figures 1-8, 1-9, 1-10, 1-11, 1-12, and 1-13). As summarized in the section, Conclusions, beginning on page 1-21 of the Draft Environmental Impact Statement, the analysis confirmed that without a major transportation facility in the Study Area, the region's transportation network (as recognized in over 25 years of transportation planning) will not be able to efficiently move goods and people throughout the region without major investments in the region.

The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the proposed action.

Chapter 1, Purpose and Need, does not have a truck bypass as a goal of the proposed action. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing...
particularly the shifting of a truck bypass from outside the metropolitan area to an area close to downtown is ignored throughout the DEIS, although such an analysis is also prescribed by the National Environmental Policy Act (NEPA).

At one point when funds were short for completing the SMF (early 90s), one idea that ADOT considered was allowing the highway to be built as a toll road. Then, an independent group interested in possibly building this toll road did an analysis of the cost-effectiveness of such a highway (very strongly correlated with the need for the highway). The result of their analysis was that they declined to build the freeway, a clear indication of the lack of need.

Rather than dropping the idea of the SMF and re-examining the real needs of the region, MAG and ADOT persisted with the SMF plan.

As the CANAMEX highway idea matured, it was designed to go near or through Phoenix. Unless or until I-11 is built, according to the CANAMEX website, the CANAMEX would follow I-10, and truckers would certainly find the SMF “short cut” to be most appealing. But ADOT denied the intention of using the SMF for a truck bypass, so they also denied the intention of using it for the CANAMEX. ADOT officially declared that the truck bypass along SR 85 would be a part of CANAMEX. Yet this contradicts assertions on the CANAMEX web site.

Of course, truck drivers can read maps and see when a short cut exists for them, so a true analysis of the situation would show the CANAMEX traffic using the SMF, regardless of what the “official” route of the CANAMEX is designated to be. ADOT’s official response to that is that they “can’t help” what truckers do but they expect most of them to use the truck bypass. Really? Isn’t it a part of their job to plan to provide realistic transportation corridors that will induce the traffic to use the appropriate ones there? And to look at all possible means of transportation to satisfy the entire needs of an area? A proper analysis should definitely show where the traffic, including the truck traffic, would really go.

Recently, when ADOT improved SR 85, it became a 4-lane highway, but it was not made a freeway. One motivation for this lack of foresight was apparently because as long as it is not a freeway it cannot be designated as an interstate highway. A freeway bypass could be designated as I-10 and take all pass-through traffic away from the Phoenix metropolitan area. This would serve as a bypass for both truck and automobile traffic. Yet this has apparently never been considered. Or has it been purposely ignored? It is certainly not in the DEIS.

The DEIS states (page 5-20) that a tunnel option through South Mountain was rejected because it would limit the ability of trucks hauling hazardous materials to use the SMF. This is just another indication that the SMF is intended as a truck bypass.

349 (cont.) traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transportation to and from distribution centers, and for transport to support local commerce. Commercial trucks would use the proposed action. As with all other freeways in the Maricopa Association of Governments region, trucks would use it for the through-transport of freight, for transportation to and from distribution centers, and for transport to support local commerce. And as with travel on all other freeways in the Maricopa Association of Governments region, the primary users of the proposed action would be automobiles.

The trucking industry depends on the efficient and fast movement of freight and on travel time savings. Trucking destinations in the Phoenix metropolitan area (either distribution centers or for local commerce) would still need trucks to enter congested areas. Choosing to travel on the proposed action rather than Interstate 10 would not translate to any substantial travel time benefits. Therefore, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85 (see page 3-64 in the Final Environmental Impact Statement).

350 Alternatives In 1996, a consortium of private companies proposed to build the South Mountain Freeway as a toll road. The consortium later withdrew its proposal, saying the project was not financially feasible (see Alignment Recommendation South Mountain Corridor Loop 202, as noted on page 1-8 of the Draft Environmental Impact Statement). The determination not to construct the freeway as a toll road was not an indication that the freeway was not needed. In the executive summary to the above referenced report, the proposers state: “The Arizona Transportation Group, LLC still believes that the construction and financing of the South Mountain Portion of the Loop 202 as a toll road is feasible and looks forward to teaming with the Arizona Department of Transportation to provide this important segment of the Maricopa County’s regional highway system.” The reason the proposal was determined to not be financially feasible was because the public and policy-makers were not supportive of paying support tolls.

351 Purpose and Need Chapter 1, Purpose and Need, examines the purpose and need for the proposed action in terms of defining a transportation problem. In doing so, assumptions associated with past need for the freeway were discounted as part of the environmental impact statement process. The results of the purpose and need analyses included the determination that a transportation problem (similar to the type of problem that has been represented in past Regional Transportation Plans) still exists in the area and that this problem is similar in characteristics to the transportation problem that existed in prior years. The alternatives analyses considered numerous modal alternatives, and it was concluded through a robust screening process that a road facility would best address the transportation problem defined.

352 Trucks The 1995 Congressional federal definition states: “In the State of Arizona, the CANAMEX Corridor shall generally follow – (i) I-19 from Nogales to Tucson; (ii) I-10 from Tucson to Phoenix; and (iii) United States Route 93 in the vicinity of Phoenix to the Nevada Border.” (Source: <canamex.org/canamex/federal-definition>.

(Response 352 continues on next page)
The definition was intentionally left broad so that local, regional, and state agencies could further define the specific routes for the corridor. In April 2001, the Maricopa Association of Governments Regional Council formally adopted the route depicted in the map on page 3-64 as the CANAMEX Corridor within Maricopa County. As noted on page 3-64 of the Draft Environmental Impact Statement, in the Maricopa County area the CANAMEX Corridor is to follow Interstate 10 from Tucson to Interstate 8 near Casa Grande, Interstate 8 west to State Route 85 near Gila Bend, State Route 85 north to Interstate 10 northwest of Buckeye, Interstate 10 west to Wickenburg Road, Wickenburg Road to Vulture Mine Road west of Wickenburg, and then connect with the planned U.S. Route 93/U.S. Route 60 Wickenburg Bypass.

Trucks

Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; truck traffic would be expected to be permissible (see text box on page 4-157 of the Final Environmental Impact Statement).

The Regional Transportation Plan includes provisions for improving State Route 85 north of the Gila River to a freeway-type facility. There is no intention to change the designation of existing Interstate highways through Arizona. The State Route 85/Interstate 8 corridor is signed as the Phoenix bypass and will continue to provide a bypass route. The CANAMEX and Phoenix truck bypass (Interstate 8/State Route 85) routes are not mandatory for truck traffic; they are recommended. The Arizona Department of Transportation does not enforce these routes. The reader is referred to page 3-64 of the Draft Environmental Impact Statement that elaborates on the relation of truck traffic and the proposed action.
traffic would represent approximately 10 percent of the total traffic on the
proposed freeway, similar to what is currently experienced on other regional
freeways such as Interstate 10, State Route 101L, and U.S. Route 60; therefore,
planning must account for trucks using the proposed freeway.

356 Trucks

The signed truck bypass for the Phoenix metropolitan area is today and will
continue to be State Route 85 and Interstate 8. The Maricopa Association
of Governments regional travel demand model projects that truck traffic will
represent approximately 10 percent of the total traffic on the proposed action.
Chapter 1, Purpose and Need, does not have a truck bypass as a goal of the
proposed action. The proposed freeway is part of a transportation system
developed to improve mobility in the region by increasing capacity and allowing
traffic—including truck traffic—to access a segment of the "loop" system (see
pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the
Phoenix metropolitan area. The proposed South Mountain Freeway would be a
commuter corridor, helping to move local traffic. As with all other freeways in the
region, trucks would use it for the through-transport of freight, for transport to and
from distribution centers, and for transport to support local commerce. Commercial
cars would use the proposed action (as noted on page 3-64 of
Draft Environmental Impact Statement). As with all other freeways in the
Maricopa Association of Governments region, trucks would use it for the through
transport of freight, for transport to and from distribution centers, and for
transport to support local commerce. And as with travel on all other freeways in the
Maricopa Association of Governments region, the primary users of the
proposed action would be automobiles.

The trucking industry depends on the efficient and fast movement of freight
and on travel time savings. Trucking destinations in the Phoenix metropolitan
area (either distribution centers or for local commerce) would still need trucks
to enter congested areas. Choosing to travel on the proposed action rather
than Interstate 10 would not translate to any substantial travel time benefits.
Therefore, it is expected that "true" through-truck traffic (not having to stop in
the metropolitan area) would continue to use the faster, designated, and posted
bypass system of Interstate 8 and State Route 85.

357 Purpose and Need, Alternatives

As presented in Chapter 1, Purpose and Need, of the Draft Environmental Impact
Statement, an objective and unbiased examination of the existing and planned
future transportation network in the Study Area was undertaken to determine
if the catalyst for the need for the Environmental Impact Statement (being the
proposed action) was still warranted. As explained in the chapter, the examination
successfully attempted to provide an answer to whether or not a transportation
problem(s) exist and would continue to exist in the foreseeable future. The
analysis was undertaken in accordance with the National Environmental Policy
Act and Federal Highway Administration guidance and policy for implementing
the National Environmental Policy Act. The results confirmed the transportation
problems as framed in the region’s adopted long range transportation plans (both
past and present) still exist and would continue to exist in the foreseeable future.
This problem is associated with east-west regional mobility in the southwestern
region of the Phoenix metropolitan area.

The traffic analysis does evaluate the applicability of alternative modes to meet the
needs for regional transportation. Figure 3-14 shows that transit enhancements
(such as light rail), roadway enhancements (such as more arterial street lanes), and

(Cont.)
perhaps the original intent of the smf truck bypass was to provide a more
convenient route for trucks going in and out of the commercial area around 51st
avenue. such thinking, however, indicates a decided lack of true regional planning.
any form of valid traffic analysis of the entire region immediately shows that in
addition to the canamex traffic, other interstate truck traffic would also prefer this
"short cut" to the desirable (in terms of clean air) truck bypass route along sr 85.
any traffic solution that brings more truck traffic through the metropolitan area is
not a viable solution. the truck bypass must stay outside of the metropolitan area.

a valid and extensive analysis of the transportation needs of the south mountain
corridor has not been conducted. such an analysis would show the true needs of
local residents (as opposed to induced needs) as well as a detailed breakdown of
truck traffic within and through the entire area, including canamex trucks, pass-
through trucks, and trucks with an origin and destination (oud) of the commercial
area near 51st avenue. such a valid analysis would show that any true need for
regional transportation could be at least partly satisfied by modes other than
automobile traffic (such as light rail). there is a need for traffic to be able to get in
and out of laveen without having to compete with trucks on the arterial areas, but
this could be satisfied by a highway from laveen to l-10 west. it is the oud truck
need that requires a freeway, but even these needs could be satisfied by a freeway
spur from l-10 west to the commercial area around 51st avenue. the south
mountain corridor is not a viable location for such truck traffic.

to be more specific in terms of the deis, adot justifies the purpose and need
(p&n) for the construction of the smf in chapter 1. there are many specific
difficulties with this "justification."

1. the socio-economic data projections presented in the p&n and elsewhere in
the deis are faulty. the socio-economic data used in the deis was developed
by mag using 2005 census data. when the results of the 2010 u.s. census
results became available, it was obvious that mag's forecast of socio-
economic data based on the 2005 special census were too high by a large
margin.

2. since socio-economic data are the starting point for the mag travel model,
the travel-related forecasts presented in the p&n and elsewhere in the deis
are faulty. since mag plans to update the socio-economic projections, why
exactly did adot release a deis before the updates were ready? because the
changes will be extensive, sufficient time must be allowed for a second
review of the deis prior to the preparation of the p&n.

3. the forecast of vehicle miles of travel lacks credibility because it is contrary
to national trends and also because the methodology used for computation is
not explained clearly. figure 1-4 in the purpose and need chapter of the
deis discusses daily vehicle miles of travel (vmt) at one rate while the
regional transportation plan (rtp) uses different data. a further
consideration to that travel surveys nationally and in the mag region indicate

...system management and demand management strategies could address a portion
of the system-wide demand; however, even with these improvements, the proposed
freeway would still be a greatly needed element of the overall transportation system.
the maricopa association of governments approved new population, employment,
housing, and traffic projections in june 2013. the new data are presented in the final
environmental impact statement beginning on page 1-11. the purpose and need and
analysis of alternatives were updated and reevaluated using these new socioeconomic
projections and corresponding projections related to regional traffic. while new
projections based on the 2010 census showed a lower anticipated population
and vehicle miles traveled in 2035 than the previous projections, the conclusions
reached in the draft environmental impact statement were validated in the final
environmental impact statement (see chapter 3, alternatives). the traffic analysis
demonstrated that the proposed project is needed today and will continue to be
needed into the future.

see responses to specific comments below.

the analyses in the draft environmental impact statement used socioeconomic
and traffic projections at the regional analysis zone and traffic analysis zone levels.
at the time of publication of the draft environmental impact statement, dec 2010,
based socioeconomic data at the regional analysis zone and traffic analysis
zone levels had not been adopted by the maricopa association of governments
were not available to the project team. therefore, the data used in the draft
environmental impact statement were the most appropriate information available.
the maricopa association of governments approved new population, employment,
housing, and traffic projections in june 2013. the new data are presented in the final
environmental impact statement beginning on page 1-11. the purpose and need and
analysis of alternatives were updated and reevaluated using these new socioeconomic
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reached in the draft environmental impact statement were validated in the final
environmental impact statement (see chapter 3, alternatives). the traffic analysis
demonstrated that the proposed project is needed today and will continue to be
needed into the future.
360 Purpose and Need

traveled levels increased by almost 2 percent between 2011 and 2012, and the 2012 daily vehicle miles traveled approached the 2007 prerecession peak. (Source: the Arizona Department of Transportation's Multimodal Planning Division's Highway Performance Monitoring System Data for calendar years 2012 and 2011).

Even if the trend of vehicle miles traveled "per capita" decreasing were to continue, the total vehicle miles traveled in the region would still increase along with increases in total population.

361 Purpose and Need

Analysis of the purpose and need for the proposed action followed National Environmental Policy Act and Federal Highway Administration implementing guidance on the subject matter and used state-of-the-practice analytical tools, as pointed out in Table 1-3, "Traffic Analysis Tools," on page 1-13 of the Draft Environmental Impact Statement. The results of the analysis determined that a transportation problem does exist and that problem will continue in the foreseeable future (see section, Conclusions, on page 1-21). As noted on page 3-1 in the section, Reconfirm the Purpose and Need for the Proposed Action, a continuous validation process was undertaken throughout the environmental impact statement process to ensure past conclusions in the environmental impact statement process remained valid. The Draft Environmental Impact Statement—particularly in Chapter 1, Purpose and Need, and Chapter 3, Alternatives—thoroughly explains how the process of establishing a purpose and need for the proposed action followed nationally accepted guidance and policy. Examples of how the purpose and need analyses were appropriately applied include the:

- section, Context of Purpose and Need in the EIS Process, on page 1-1
- sidebar, "A proposed action's purpose and documentation should," on page 1-1
- sidebar, "How are MAG data used in the DEIS?", on page 1-4
- sidebar, "What is the MAG regional demand model?", on page 1-5
- sidebar, "How will the economic downturn affect growth rates?", on page 1-11
- section, Need Based on Regional Transportation Demand and Existing and Projected Transportation System Capacity Deficiencies, beginning on page 1-13
- section, Conclusions, on page 1-21
- section, Reconfirm the Purpose and Need for the Proposed Action, on page 3-1
- section, Responsiveness of the Proposed Freeway to Purpose and Need Criteria, beginning on page 3-27

Figure 1-8, "Average Daily Traffic Volumes on Freeways and Arterial Streets (without the Proposed Action, 2010 and 2035," illustrates the demands placed on the transportation network in the region. Figure 1-12, "Met and Unmet Demand, 2010 and 2035," summarizes demand and capacity deficiencies associated with the identified transportation problem.

The reader is referred to Draft Environmental Impact Statement Chapter 3, Alternatives, and, specifically, the section, Alternatives Development and Screening Process Conclusions, beginning on page 3-26, noting "... a comprehensive set of alternatives including all modes was considered ... assurance that the screening process was an open process ... a logical, sequential, step-by-step process using data and expertise from multiple disciplines ..." to demonstrate all possibilities were considered.

362 Purpose and Need

The parameters for delineation of the Study Area are described in Chapter 1, Purpose and Need, as the area defining the transportation problem. As presented in the chapter, transportation models were used to determine where the characteristics of the transportation problem would diminish, and, generally, it is...
at these locations where the definition of the Study Area took shape. This effort was coordinated with stakeholder agencies, including the U.S. Environmental Protection Agency.

Alternatives considered in the Draft Environmental Impact Statement included many that were located outside of the Study Area. Examples include the Riggs Road Alternative (see page 3-9), the State Route 85/Interstate 8 Alternative (see page 3-9), the U.S. Route 60 Extension (see page 3-12), the Interstate 10 Spur (see page 3-12), and the Central Avenue Tunnel (see page 3-12).

**Purpose and Need**

As pointed out on page S-1, in the sidebar, “What you will find in the Summary chapter,” the text in the Summary is not the “final word,” and readers are urged to turn to the main text when questions about Summary content arise. While proposed action is summarily defined on page 1-1 of the Draft Environmental Impact Statement as the “construction and operation of a major transportation facility,” design specifics for each action alternative are found in text beginning on page 3-40 of the Final Environmental Impact Statement. Sufficient detail is provided to ensure meaningful comparison and analyses of the alternatives in reference to operational characteristics, cost, and impacts; and to convey to sufficient information to reviewers of the characteristics of each alternative in accordance with 23 Code of Federal Regulations 771 Environmental Impact and Related Procedures or in the Federal Highway Administration Technical Advisory T 6640.8A Guidance for Preparing and Processing Environmental and Section 4(f) Documents.

It is clear, as pointed out in Chapter 3, Alternatives, that a beneficial outcome of the alternatives screening process—a “… logical, sequential, step-by-step process using data and expertise from multiple disciplines … (page 3-27)” —was that the mode determined to be appropriate for addressing the identified transportation problem was a highway that, in turn, was consistent with local and regional plans (as supported by stakeholder jurisdictions). But nowhere in the Draft Environmental Impact Statement is reference made that the proposed action is needed to comply with the Regional Transportation Plan. The analysis of the proposed action’s purpose and need would have ended the environmental impact statement process at that point if a need in the form of a transportation problem had not been identified, and this is disclosed in the Draft Environmental Impact Statement.

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.
The proposed freeway would include improvements along arterial streets at interchange locations to facilitate the movement of traffic on, off, and across the freeway. The arterial street improvements are included within the right-of-way footprint used for the analysis of impacts.

The traffic operational characteristics comparison between the action and No Action alternatives is presented beginning on page 3-27 of the Final Environmental Impact Statement. The analysis shows that the action alternatives would:

- reduce overall traffic on the arterial street system (see Figures 3-12 and 3-13)
- optimize travel on the region’s freeway system (see Figure 3-12)
- reduce the capacity deficiency to levels better than experienced today (see Figures 1-12 and 3-14)
- reduce the duration of level of service E or F conditions in key areas of the region’s freeway system (see Figure 3-15)
- improve travel times on trips within the Study Area and across the region (see Figure 3-17 and Table 3-8)
- provide improved regional mobility for areas projected to experience growth in the next 25 years (see Figures 1-7 and 3-18)

When all of this is considered in the realm of travel time savings for motorists in the region, the user benefits approximate $200 million per year (see Table 4-26).

The obligation of the Arizona Department of Transportation and Federal Highway Administration, as the federal lead agency, in accordance with the National Environmental Policy Act is to assess if the proposed action and its alternatives would lead to significant adverse environmental impacts, disclose those impacts and identify mitigation to reduce the impact below a level of significance (and if such mitigation is unavailable, disclose that such an impact would occur but not be mitigated). Sufficient mitigation under these terms is presented throughout Chapters 3, 4 and 5 of the Draft Environmental Impact Statement. In terms of suggested mitigation examples in the comment, consider:

- As it relates to transport of hazardous materials, Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; truck traffic would be expected to be permissible (see text box on page 4-157 of the Final Environmental Impact Statement).
- Improvements to State Route 85 are included in the Regional Transportation Plan, and the plan is to continue to improve this corridor until it is completely access-controlled with a freeway section north of the Gila River.

The Regional Transportation Plan is not the primary source of funding for expansion of the arterial street system. Funding for the arterial street system generally comes from the local jurisdiction or through impact fees for development. It is anticipated that the arterial street network within the Study Area will be expanded in this same manner. The Maricopa Association of Governments regional travel demand model includes assumptions related to arterial street expansion based on local jurisdictions’ general planning. In the case of the Study Area, it is assumed that most of the arterial street network would be built out by 2035.
The Arizona Department of Transportation, with concurrence from the Federal Highway Administration, has determined that the proposed freeway (as made up by the W59 and E1 Alternatives) is the preferred solution to the transportation problem identified in the Draft Environmental Impact Statement. However, all alternatives discussed in the Draft and Final Environmental Impact Statement, including the No-Action Alternative, are still under consideration. The selection of an alternative will be made in a record of decision issued by the Federal Highway Administration for the proposed project.

All of the alternatives were subjected to a thorough evaluation using a multidisciplinary set of criteria in accordance with National Environmental Policy Act and federal Highway Administration guidance.

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<td>368</td>
<td>Alternatives</td>
<td>The comment suggests the environmental impact statement process was biased by a history of property acquisitions within the Study Area. More specifically, properties falling within the limits of the Preferred Alternative, as identified in the Final Environmental Impact Statement, were targeted for acquisition. As noted in text on page 3-54 of the Final Environmental Impact Statement, the Arizona Department of Transportation began acquiring land for the original alignment in 1988. Between 1988 and 2001, the Arizona Department of Transportation acquired approximately 293 acres. Most of this land (258 acres) is located in the Eastern Section along Pecos Road. In 2006, the Arizona Department of Transportation began protective and hardship land acquisition in the alignment right-of-way footprint for the W59 and E1 Alternatives. Between 2006 and October 2013, the Arizona Department of Transportation purchased 326 acres (303 in the Western Section and 23 in the Eastern Section). The process for hardship and advanced acquisitions is explained in text on page 4-50 of the Final Environmental Impact Statement. The comment infers that by taking such action, the objective equal consideration of the alternatives studied in detail in the Draft and Final Environmental Impact Statements is tainted. Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process is not unprecedented and is common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the proposed action are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative were to be ultimately selected, the agency would likely have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the driving public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative. While the South Mountain Citizens Advisory Team recommended the W101 Alternative, all stakeholders’ input was accounted for—including regional leaders, municipalities, members of the public, and members of the South Mountain Citizens Advisory Team—before identifying the W59 Alternative as the Preferred Alternative (see Draft Environmental Impact Statement pages 3-65 and 3-68). Both Riggs Road and Queen Creek Road Alternatives were considered (see Figure 3-5 on page 3-7 of the Final Environmental Impact Statement). While these alternatives might serve regional mobility needs, particularly of those living in the Maricopa area, meeting this travel demand would not address specific planning goals for an</td>
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<td>369</td>
<td>Alternatives</td>
<td>Additionally, in 1998, the tribal government of the Gila River Indian Community (GRIC) approved a route for the SMF along Riggs Road on tribal land when it adopted the Gila Borderlands Regional Planning Study (Arizona Republic, 1998 plan)</td>
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for South Mountain Freeway passed over, March 25, 2013). Three years later, the state moved on with its SMF plan, without considering the GRIC plan. At another time, the GRIC proposed a Queen Creek Road alignment (Arizona Republic, Tribe Against South Mountain Freeway on land – for now, January 20, 2010). This proposal was also rejected by ADOT.

Throughout the DEIS, and throughout the time leading up to the publication of the DEIS, the inappropriate restrictions on the scope of the study precluded the consideration of viable alternatives to the SMF. With the apparent need for a freeway that could handle considerable truck traffic, including harvests, the natural consideration would have been the route that is currently the “Phoenix truck bypass” – SR-85 from I-1 to I-10 at Buckeye to I-8 at Gila Bend to I-10 at Casa Grande. This route could become the I-10 and provide a bypass for all pass-through traffic, including the CANAMEX traffic. With appropriate access provided from the commercial area around 51st Avenue, it could also provide a main route for O&D traffic. It should at least be considered as an alternative. The planned route for I-11, looping southwest from I-10 west of downtown Phoenix, through Rainbow Valley, then rejoining I-10 near Casa Grande, should also be a considered alternative. It could accommodate all the truck traffic bypassing Phoenix with a shorter route than the current truck bypass. If the primary reason for wanting the SMF is to accommodate O&D truck traffic (although this is not stated in the DEIS, it is easy to come to this conclusion from what is stated), another alternative that should be considered is to create a freeway spur from I-10 West and/or from the real truck bypass into the commercial area around 51st Avenue.

The point is that viable alternatives to the SMF exist, but the SMF is not a viable alternative itself. No amount of attempting to exclude alternatives through inappropriate scoping will make the SMF viable. If the need exists for accommodating truck traffic, several alternatives are available for consideration. ADOT should start over, state the real P&N, and produce a reasonable DEIS. This DEIS is fatally flawed, at least in part because the true P&N are disregarded in an attempt to force a non-viable solution.

Air Quality
The modeling of air pollution impacts in the DEIS do not include the issues involved with truck traffic. There are 3 specific “classes” of truck traffic that should have been considered:

1. Pass-through traffic that now uses the official truck bypass
2. CANAMEX traffic
3. Origin and Destination (O&D) traffic to/from the commercial area around 51st Avenue

Many years ago, the idea of a truck bypass came up because there were chronic issues about air quality in the Phoenix metro area. The air quality was so bad and for

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<td>369</td>
<td>integrated regional transportation network. The Regional Transportation Plan identifies the proposed South Mountain Freeway as a critical link in the Regional Freeway and Highway System. These alternatives would not complete the Phoenix metropolitan area’s loop system as part of State Route 202L, thereby causing substantial out-of-direction travel for motorists. Therefore, the Riggs Road and Queen Creek Road Alternatives would not meet the project’s purpose and need criteria and were eliminated from further study.</td>
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<td>370</td>
<td>Trucks</td>
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|      | The environmental impact statement process was undertaken in accordance with National Environmental Policy Act and related legislation. As explained throughout these responses, Chapter 1, Purpose and Need, of the Draft Environmental Impact Statement does not have a truck bypass as a goal of the proposed action. These comments continuously and erroneously suggest that the only purpose of the proposed action is to serve truck traffic; however, none of the traffic analysis presented in the Draft and Final Environmental Impact Statements or elsewhere supports this contention.

The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the "loop" system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. The Maricopa Association of Governments travel demand model projects trucks will represent approximately 10 percent of the total traffic on the proposed freeway (this would equate to approximately 15,000 trucks per day based on an average total daily volume of 150,000 vehicles). See Figure 3-18, on page 3-36 of the Draft Environmental Impact Statement, for information related to use of the freeway.

Other existing facilities (such as State Route 85 and Interstate 8) and future facilities (such as Interstate 11) serve a specific purpose of providing a truck route. These facilities would not address the need identified for the proposed action. Therefore, they are not appropriate responses and were eliminated from consideration.

The signed truck bypass for the Phoenix metropolitan area is today and will continue to be State Route 85 and Interstate 8. The Maricopa Association of Governments regional travel demand model projects that truck traffic will represent approximately 10 percent of the total traffic on the proposed freeway (this would equate to approximately 15,000 trucks per day based on an average total daily volume of 150,000 vehicles). See Figure 3-18, on page 3-36 of the Draft Environmental Impact Statement, for information related to use of the freeway.

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The reader is referred to page 3-64 of the Draft Environmental Impact Statement that elaborates on the relation of truck traffic and the proposed action. According to 23 Code of Federal Regulations §771.111(f), “the action evaluated in the environmental impact statement must connect logical termini and be of sufficient length to address environmental matters on a broad scope…”. The proposed action should satisfy the project need and should be considered in the context of the local area socioeconomics and topography, the future travel demand, and other infrastructure improvements in the area. A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not feasible because it would not meet the proposed freeway’s identified purpose and need. |
for South Mountain Freeway passed over, March 25, 2013). Three years later, the state moved on with its SMF plan, without considering the GRIC plan. At another time, the GRIC proposed a Queen Creek Road alignment (Arizona Republic, Tribe Against South Mountain Freeway on land - for now, January 20, 2010). This proposal was also rejected by ADOT.

Throughout the DEIS, and throughout the time leading up to the publication of the DEIS, the inappropriate restrictions on the scope of the study precluded the consideration of viable alternatives to the SMF. With the apparent need for a freeway that could handle considerable truck traffic, including harvest, the natural consideration would have been the route that is currently the "Phoenix truck bypass" – SR-85 from I-10 at Buckeye to I-10 at Glendale at I-10 at Casa Grande. The route could become the I-10 and provide a bypass for all through traffic, including the CANAMEX traffic. Without access provided from the commercial area around 51st Avenue, it could also provide a main route for O&D traffic. It should at least be considered as an alternative. The planned route for I-11, looping southwest from I-10 west of downtown Phoenix, through Rainbow Valley, then rejoining I-10 near Casa Grande, should also be a considered alternative. It would accommodate all the truck traffic bypassing Phoenix with a shorter route than the current truck bypass. If the primary reason for wanting the SMF is to accommodate O&D truck traffic (although this is not stated in the DEIS, is easy to come to this conclusion from what is stated), another alternative that should be considered is to create a freeway spur from I-10 West and/or from the real truck bypass into the commercial area around 51st Avenue.

The point is that viable alternatives to the SMF exist, but the SMF is not a viable alternative itself. No amount of attempting to exclude alternatives through inappropriate screening will make the SMF viable. If the need exists for accommodating truck traffic, several alternatives are available for consideration. ADOT should start over, state the real P&N, and produce a reasonable DEIS. This DEIS is fatally flawed, at least in part because the true P&N are disguised to try to force a non-viable solution.

Air Quality

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<td>370 (cont.)</td>
<td>Purpose and Need</td>
<td>For a true understanding of origins and destinations of all vehicles, including trucks, that would use the proposed freeway, please refer to Figure 3-18 on page 3-36 of the Draft Environmental Impact Statement. Public and agency scoping is discussed in Chapter 6 of the Draft Environmental Impact Statement. As discussed in Chapter 6, these scoping efforts were extensive.</td>
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| 371 | Purpose and Need | The Draft Environmental Impact Statement and the environmental impact statement process it documents represent a robust, comprehensive, objective, defensible implementation of National Environmental Policy Act guidance, intent, and spirit. The Draft Environmental Impact Statement—particularly in Chapter 1, Purpose and Need, and Chapter 3—Alternatives, thoroughly explains how the process of establishing a purpose and need for the proposed action followed nationally accepted guidance and policy. Examples of how the purpose and need analyses were appropriately applied include the:  
- section, Context of Purpose and Need in the EIS Process, on page 1-1  
- sidebar, "A proposed action's purpose and documentation criteria", on page 1-1  
- sidebar, "How are MAG data used in the DEIS?", on page 1-4  
- sidebar, "What is the MAG regional demand model?", on page 1-5  
- sidebar, "How will the economic downturn affect growth rates?", on page 1-11  
- section, Conclusions, on page 1-21  
- section, Reconfirm the Purpose and Need for the Proposed Action, on page 3-1  
- section, Responsiveness of the Proposed Freeway to Purpose and Need Criteria, beginning on page 3-27  
In short, assessment of the purpose and need for the proposed action and consideration of alternatives were undertaken in an objective, defensible manner in accordance with National Environmental Policy Act guidance and intent; past South Mountain Freeway-related determinations were accounted for as only criteria in a multitiered, multidisciplinary screening process (see the sections, Conclusions, on pages 1-21 and 3-70. Table 3-9, "Implementation of the Proposed Freeway as the Appropriate Modal Alternative to Satisfy Purpose and Need Criteria, 2035,” further presents information supporting the conclusion. No mention is made of the purpose and need of the proposed action being to serve as a truck bypass. Information pertaining to truck routes in the region is presented on page 3-64 of the Draft Environmental Impact Statement, in the text box, “Trucking in the MAG Region.”  
The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future. |

(Response 372 begins on next page)
### Code: 372  
#### Issue: Air Quality

The air quality assessment for impacts from carbon monoxide followed the U.S. Environmental Protection Agency guidelines in *Guideline for Modeling Carbon Monoxide from Roadway Intersections* (A-OAQPS, 1992). Inputs to the model were based on U.S. Environmental Protection Agency-recommended values or were selected to provide a conservative estimate of impacts. Modeling methodology and results were reviewed by the Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments.

The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. The Maricopa Association of Governments travel demand model projects trucks will represent approximately 10 percent of the total traffic on the proposed freeway (this would equate to approximately 15,000 trucks per day based on an average total daily volume of 150,000 vehicles). See Figure 3-18, on page 3-36 of the Draft Environmental Impact Statement, for information related to use of the freeway. The air quality analyses considered the full vehicle fleet, including diesel trucks, as discussed above (see Final Environmental Impact Statement page 4-68).

### Code: 373  
#### Issue: Trucks

The 1995 Congressional federal definition states: “In the State of Arizona, the CANAMEX Corridor shall generally follow – (i) I-19 from Nogales to Tucson; (ii) I-10 from Tucson to Phoenix; and (iii) United States Route 60 in the vicinity of Phoenix to the Nevada Border.” (Source: <canamex.org/canamex/federal-definition>) The definition was intentionally left broad so that local, regional, and state agencies could further define the specific routes for the corridor.

In April 2001, the Maricopa Association of Governments Regional Council formally adopted the route depicted in the map on page 3-64 as the CANAMEX Corridor within Maricopa County. As noted on page 3-64 of the Draft Environmental Impact Statement, in the Maricopa County area the CANAMEX Corridor is to follow Interstate 10 from Tucson to Interstate 8 near Casa Grande, Interstate 8 west to State Route 85 near Gila Bend, State Route 85 north to Interstate 10 northwest of Buckeye, Interstate 10 west to Wickenburg Road, Wickenburg Road to Vulture Mine Road west of Wickenburg, and then connect with the planned U.S. Route 93/U.S. Route 60 Wickenburg Bypass.

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<td>372</td>
<td>Air Quality</td>
<td>The air quality assessment for impacts from carbon monoxide followed the U.S. Environmental Protection Agency guidelines in <em>Guideline for Modeling Carbon Monoxide from Roadway Intersections</em> (A-OAQPS, 1992). Inputs to the model were based on U.S. Environmental Protection Agency-recommended values or were selected to provide a conservative estimate of impacts. Modeling methodology and results were reviewed by the Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. The Maricopa Association of Governments travel demand model projects trucks will represent approximately 10 percent of the total traffic on the proposed freeway (this would equate to approximately 15,000 trucks per day based on an average total daily volume of 150,000 vehicles). See Figure 3-18, on page 3-36 of the Draft Environmental Impact Statement, for information related to use of the freeway. The air quality analyses considered the full vehicle fleet, including diesel trucks, as discussed above (see Final Environmental Impact Statement page 4-68).</td>
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so long that public policy makers suggested designating a bypass for truck traffic around the urban core as one of the strategies to reduce particulate matter from truck exhaust in urban Maricopa County. The designated truck bypass is from I-10 at Buckeye to I-8 at Gila Bend to I-10 at Casa Grande. ADOT says this bypass is also the designated route of the CANAMEX Highway, although the CANAMEX with site contradicts this assertion, saying I-10 is the designated CANAMEX route. If the SMF were built, the bypass route, which has few amenities, would be a substantially longer route, about 55-60 miles longer than the route using the SMF. There is no law that would force trucks to use the longer route, so it is entirely likely that most of these trucks would come through Phoenix, negating the whole bypass strategy, and negating a public policy decision. But the reversal of this public policy decision is never mentioned in the DEIS.

The DEIS does not consider the additional air pollution from truck traffic from Mexico. The DEIS briefly mentions the issue, but it claims it has no way to know what impact this would be. This is not true. We know exactly the number of trucks arriving from Mexico and their destinations in the US, so this is data that is available for the DEIS. It is also absurd to dismiss this issue by claiming the CANAMEX traffic would use the truck bypass. Since it is likely at least most of the CANAMEX traffic would use the SMF, this issue should have been studied.

Trucks originating in Mexico will be fueled with diesel that doesn’t meet the CARB diesel standards adopted by Arizona over a decade ago. In Mexico, there is no regulation about the sulfur in diesel fuel. In Arizona, the law was changed to allow only diesel fuel to be sold that has had 98% of the sulfur removed. This was another part of the strategy to bring Maricopa County into compliance with the particulate matter standards required by the Clean Air Act (CAA). There was extensive modeling of the effect of adopting the CARB diesel standards and discussion of this in the Arizona legislature, where it passed, so the data is in government hands.

The DEIS has no analysis of the current or enhanced increase in freight volume resulting from the port activity in Gavanus and Puerto Colónel and the Isthmus Pacific rail efforts moving that freight from those ports into Tucson and then north to Phoenix. Also there is the expectation of a new Union Pacific rail yard at Picacho Peak, which would handle tens of thousands of containers originating in California and Tucumcari ports. This additional planned container traffic would result in a significant increase in freight flows to Phoenix, specifically to the hubs along 51st Avenue.

Chapter 3 describes freight and trucks as pass through, but that is misleading. The freight enters Phoenix and is deposited, then it is “exchanged” for loads heading in the opposite direction. So even though 70% of the freight passes through Phoenix, it is 80% traffic that terminates in Phoenix as a transfer point.

There is also the issue of the 51st Avenue tank farm and the tanker truck traffic that the SMF would get as a result of a new shortcut for these trucks. Expectations for an Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; truck traffic would be expected to be permissible (see text box on page 4-157 of the Final Environmental Impact Statement).

Trucks crossing from Mexico to Arizona are restricted to the commercial zones within 25 miles of the border. The Federal Motor Carrier Safety Administration is administering a United States-Mexico cross-border, long-haul trucking pilot program. The program tests and demonstrates the ability of Mexico-based motor carriers to operate safely in the United States beyond the municipalities and commercial zones along the United States-Mexico border (see <https://fmsca.dot.gov/intl-programs/trucking/trucking-program.aspx>.

Petróleos Mexicanos (better known as Pemex), the Mexican state-owned petroleum company, has guaranteed 15 parts per million in its sulfur diesel fuel in the border region (see <http://transportpolicy.net/index.php?title=Mexico:_Fuels:_Diesel_and_Gasoline>.

As explained on pages 4-69 and 4-77 of the Draft and Final Environmental Impact Statements, respectively, the emissions analysis conducted for the project shows that future mobile source air toxics emissions will be lower than current levels. This analysis included projected truck traffic.

Like other “loop” Freeways in the Phoenix metropolitan area, the proposed freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary vehicles on the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that trucks would represent approximately 10 percent of the total traffic on the proposed action, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. The road network in the Maricopa Association of Governments travel demand model includes the Interstate 8 and State Route 85 corridor. So, while the roads are not in the Study Area for the proposed action, traffic and trip distributions along the corridor are included in the traffic analysis for the proposed action. Any traffic, including trucks, that would shift from the Interstate 8 and State Route 85 corridor to the proposed action would be included in the vehicle mix considered in the analysis.

The disclosure of the air quality consequences of the proposed action, beginning on page 4-65 of the Draft Environmental Impact Statement, include projected truck traffic in the analysis.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The air quality analyses were updated using the updated projections related to regional traffic (see section beginning on page 4-68 of the Final Environmental Impact Statement). No substantial differences between the conclusions of the Draft and Final Environmental Impact Statements resulted from this update.
Some trucks would use the proposed freeway to avoid Interstate 10 through downtown Phoenix, but this is not the primary purpose of the proposed action. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary user vehicles of the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel demand model projects that truck traffic would represent approximately 10 percent of the total traffic on the proposed action, similar to what is currently experienced on other regional freeways such as Interstate 10, State Route 101L, and U.S. Route 60. As disclosed in the Draft Environmental Impact Statement, trucking destinations in the Phoenix metropolitan area would still prompt truck drivers to enter congested areas. Choosing to travel on the proposed freeway versus Interstate 10 would not produce substantial travel-time benefits. Therefore, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85.

Chapter 3 describes freight and trucks as pass through, but that is misleading. The freight enters Phoenix and is deposited, then is “exchanged” for loads heading in the opposite direction. So even though 70% of the freight passes through Phoenix, it is O&D traffic that terminates in Phoenix as a transfer point. There is also the issue of the 51st Avenue tank farm and the tanker truck traffic that the SMF would get as a result of a new shortcut for these trucks. Expectations for an
increase from the transmisk pipeline, which would result in an increase in tanker truck traffic, should have been considered in a truck analysis.

If all this additional pollution had been honestly quantified and factored in, it would likely have shown a huge net increase in air pollution from the SMF, and associated increases in asthma, heart disease, premature death, and other adverse health impacts.

In 2005, there was an extensive air monitoring of certain toxic chemicals (air toxics) conducted by EPA and ADQE as an effort named the Joint Air Toxics Assessment Program (JATAP). The monitoring sites included a site near St. Johns on the GRIC, and some in west Phoenix and South Phoenix. The JATAP monitoring results were reported in 2006, during a time the data for the DEIS was being penned, and it found levels of certain toxic chemicals associated with vehicular emissions were above the standard of a one in a million chance of cancer in a lifetime of exposure in the west Phoenix, south Phoenix, and GRIC sites. The JATAP monitoring found in the high end of the monitoring levels, formaldehyde at 34 times this standard, benzene at 8 times this standard, 1,3 butadiene at 7.5 times this standard, and acetaldehyde at 3.4 times this standard. And, remember, citizens are being subjected to all of these carcinogens, not just one. Some of these chemicals are attributed to "mobile sources," or vehicular traffic burning hydrocarbons. Clearly, adding more vehicular traffic emissions by building a freeway where there had not been one would add to this toxic burden.

The JATAP results are not included in the DEIS, but instead there is a mention of the uncertainty of the risk from these air toxics standards, which is not true. The cancer risk standards have been promulgated and published by EPA after extensive research and study, and they are well known.

The portion of Maricopa County that is characterized as the Phoenix metro area has had problems for decades meeting the air quality standards for particulate matter (PM) and other criteria pollutants. Ozone levels are too high in the East Valley and Fountain Hills, for example. There have been several exceedances of the standards for PM set by EPA under the authorities given by the Clean Air Act (CAA). The problem has been so bad over the years that every possible delay and postponement allowed under the CAA to come up with a plan to meet regulatory levels of particulate matter have now been exhausted. So, currently, EPA is examining sanctions that include blocking a billion dollars in highway funds. The Arizona Department of Environmental Quality (ADEQ) has tried to explain away the several exceedances of the PM standards in the last year or so by blaming it on dust storms and weather-related problems. But these were not all related to weather.

Almost every one of these PM exceedances have been detected at the air quality monitor at 4th Avenue and Broadway Road. The placement of a freeway about a mile upward from a monitor that has had all these high levels seems foolish and short sighted. And the impacts and risks of this were not examined in the DEIS. Nor was the carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter (PM10) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter (PM10) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (page xi) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

The emission modeling developed for the proposed action showed that for the mobile source air toxics study area, there would be little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-77 of the Final Environmental Impact Statement).

The Role of Health Risk Assessment in a National Environmental Policy Act Context

The Federal Highway Administration’s National Environmental Policy Act documents are developed under two guiding regulations: the Council on Environmental Quality’s National Environmental Policy Act regulations applicable to all federal agencies (40 Code of Federal Regulations Parts 1500–1508) and the Federal Highway Administration’s implementing regulations governing Federal Highway Administration National Environmental Policy Act documents (23 Code of Federal Regulations Part 771). In its mobile source air toxics guidance, the Federal Highway Administration discusses 40 Code of Federal Regulations Part 1502.22 and acknowledges that while much work has been done to assess the overall health risk of mobile source air toxics, analytical tools and techniques for assessing project-specific health outcomes as a result of lifetime exposures to mobile source air toxics remain limited. These limitations impede the ability to evaluate the potential health risks attributable to exposure to mobile source air toxics as part of the decision-making process in the National Environmental Policy Act context. However, as with any analysis that the Federal Highway Administration conducts for National Environmental Policy Act purposes, the Federal Highway Administration’s approach for mobile source air toxics analysis in National Environmental Policy Act documents is informed not just by 40 Code of Federal Regulations Part 1502.22, but by all applicable Council on Environmental Quality requirements.

Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration’s mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining...
current conditions in the affected environment (to the extent that the monitoring data are current), they don't tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed. The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxic emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics. The appropriateness of air toxics health risk assessment as an analysis method for National Environmental Policy Act documents is discussed below, in the context of Council on Environmental Quality requirements for these documents. In addition to the 40 Code of Federal Regulations Part 1502.22 provisions regarding uncertainty and limitations discussed in the Federal Highway Administration’s MSAT Interim Guidance Appendix C, three other provisions of the Council on Environmental Quality regulations are particularly relevant to the topic of health risk assessment:

40 Code of Federal Regulations § 1500.1(b): NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.

40 Code of Federal Regulations § 1502.1: An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions.

40 Code of Federal Regulations § 1502.2: (a) Environmental impact statements shall be analytic rather than encyclopedic. (b) Impacts shall be discussed in proportion to their significance. (c) Environmental impact statements shall be kept concise and shall be no longer than absolutely necessary to comply with NEPA and with these regulations.

Section 1500.1(b) states that information for decision making must be of high quality and based on accurate scientific analysis. Air toxics health risk assessments can involve large uncertainties. The mobile source air toxic health risk assessment uncertainty builds on itself—each step of the analysis involves uncertainties, including modeling traffic and then modeling emissions, and using this estimated output to model dispersion/concentrations, which provide information for estimating or assuming exposures to those concentrations, and finally predicting health outcomes. Major uncertainties are associated with traffic and emissions projections over a 70-year period, and dispersion models are typically held to a "factor of 2" performance standard. Health impacts of mobile source air toxics in the U.S. Environmental Protection Agency Integrated Risk Information System are based on a 70-year lifetime exposure, which introduces significant uncertainty (e.g., on average, people in the United States change residence approximately once every 8 years and change jobs once every 3). Finally, as noted above, the U.S. Environmental Protection Agency’s Integrated Risk Information System provides toxicity (risk) values for various pollutants and routes of exposure; in a health risk assessment, the Federal Highway Administration would compare

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calculated concentrations of mobile source air toxic pollutants to the Integrated Risk Information System values to estimate health risk. In the Integrated Risk Information System, the U.S. Environmental Protection Agency states the toxicity values are believed to be accurate to within an order of magnitude (a factor of 10). The total cumulative uncertainty involved in highway project health risk assessment is much larger than the change in emissions attributable to projects (typically a few percentage points). In this context, the information would not necessarily have a strong nexus to the requirements for high-quality information and accurate scientific analysis.

Section 1500.1(b) also directs agencies to focus their National Environmental Policy Act analysis and documentation on issues that are truly significant to the action in question. In the context of mobile source air toxics, the Federal Highway Administration must consider whether changes in mobile source air toxic emissions attributable to a project have the potential for significant health risk. Using cancer risk as an example, the U.S. Environmental Protection Agency estimates that the overall risk of cancer in the United States is approximately 330,000 in a million, and that air toxics (from all sources) are responsible for a risk of approximately 50 in a million. In its most recent mobile source air toxics rule-making, the U.S. Environmental Protection Agency estimated mobile source air toxic cancer risk, after implementation of emissions controls, at approximately 5 in a million (or 0.0005 percent of overall cancer risk from any cause). For the Preferred Alternative, the mobile source air toxic emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxic emissions between the Preferred and No Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxic emissions would decrease by more than 80 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see the discussion beginning on page 4-77 of the Final Environmental Impact Statement).

In summary, available information from the U.S. Environmental Protection Agency indicates that mobile source air toxics are a small component of overall cancer risk, and the analysis for the Final Environmental Impact Statement indicates both that the Preferred Alternative would result in a small change in the emissions contributing to this risk and that emissions will decline by a large amount regardless of alternative.
As described above and in the air quality technical report, results from the health risk assessment would be influenced more by the uncertainty introduced into the process through assumptions and speculations rather than by genuine insight into the actual health impacts directly attributable to mobile source air toxic exposure associated with a project. Therefore, outcomes of such a health risk assessment do not provide useful information for decision makers, as required by Section 1502.1. The Federal Highway Administration emissions analysis meets the requirement to produce information that is useful for both disclosure and decision making because it allows the public and decision makers to see which alternative has less mobile source air toxic emissions, with much less uncertainty than a health risk assessment.

Given the uncertainty of a mobile source air toxic health risk assessment, the Federal Highway Administration instead addresses the potential impacts of mobile source air toxics through an emissions assessment in its National Environmental Policy Act documents. For smaller projects with a lower likelihood of a meaningful impact, this discussion is qualitative. For larger projects, emissions analysis is conducted. The Federal Highway Administration approach is consistent with the Council on Environmental Quality’s direction in Section 1502.2(b) to discuss impacts in proportion to their significance. The results of an emissions analysis can be summarized concisely in a National Environmental Policy Act document and provide useful information for decision makers (e.g., an alternative that has lower emissions is likely to be “better” from a mobile source air toxics health risk standpoint than one that has higher emissions).

While the U.S. Environmental Protection Agency and the Federal Highway Administration both agree on the usefulness of addressing mobile source air toxics in National Environmental Policy Act documents for highway projects, the agencies disagree about the value of health risk assessment as a method for doing so.
Another consideration with respect to health impacts is that the Preferred Alternative would also reduce in-vehicle mobile source air toxics exposure as opposed to the No-Action Alternative. The U.S. Environmental Protection Agency has found that in-vehicle benzene concentrations were between 2.5 and 40 times higher than nearby ambient concentrations, based on a review of studies discussed in the Regulatory Impact Analysis for the U.S. Environmental Protection Agency’s 2007 mobile source air toxics rule-making (Final Regulatory Impact Analysis, Environmental Protection Agency 420-R-07-002, 3-17 [February 2007]).

Construction of the Preferred Alternative would result in a reduction in benzene exposure to drivers and passengers for two reasons: decreased travel times (motorists would spend less time in traffic to reach their destinations) and lower emissions rates (attributable to speed improvements). Reducing on-road exposure would provide a health benefit for motorists using the roadway network.

Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

The Federal Highway Administration determined that a supplemental environmental impact statement is not required at this time because there were no changes to the proposed action that will result in significant environmental impacts not evaluated in the Draft Environmental Impact Statement nor is there new information relevant to environmental concerns and bearings on the proposed action or its impacts that will result in significant environmental impacts not evaluated in the Draft Environmental Impact Statement.
The Draft Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health.

Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency recently determined that Phoenix has attained the particulate matter (PM10) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM10) and followed U.S. Environmental Protection Agency guidelines. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative).

With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM10) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

Fugitive dust and mobile source emissions from construction of the proposed freeway would be controlled by requiring the contractor to comply with the dust-control methods in the Arizona Department of Transportation’s Standard Specifications for Road and Bridge Construction (2008) and Maricopa County Rule 310, Fugitive Dust Ordinance. Disruption to traffic, especially during peak travel periods, would be minimized by a traffic control plan to help reduce impacts of traffic congestion and associated emissions during construction. These methods are discussed on page 4-85 of the Final Environmental Impact Statement.

According to the air quality analyses conducted for the proposed freeway, no violations of either the carbon monoxide or particulate matter (PM10) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Therefore, no loss of federal funds would occur.

Increase from the transmission pipeline, which would result in an increase in tanker truck traffic, should have been considered in a truck analysis.

If all this additional pollution had been honestly quantified and factored in, it would likely have shown a huge net increase in air pollution from the SMU, and associated increases in asthma, heart disease, premature death, and other adverse health impacts.

In 2005, there was an extensive air monitoring of certain toxic chemicals (air toxics) conducted by EPA and ADOT in a joint effort named the Joint Air Toxics Assessment Program (JATAP). The monitoring sites included a site near St. Johns on the GRIC, and some in west Phoenix and South Phoenix. The JATAP monitoring results were reported in 2006, during a time the data for the DEIS was being gathered, and it found levels of certain toxic chemicals associated with vehicular emissions were above the standard of a one in a million chance of cancer in a lifetime of exposure in the west Phoenix, south Phoenix, and GRIC sites. The JATAP monitoring found in the high end of the monitoring levels, formaldehyde at 34 times this standard; benzene at 8 times this standard, 3,3 butadiene at 7.5 times this standard, and acetone at 3.4 times this standard. And, remember, citizens are being subjected to all of these carcinogens, not just one. Some of these chemicals are attributed to "mobile sources," or vehicular traffic burning hydrocarbons. Clearly, adding more vehicular traffic emissions by building a freeway where there had not been one would add to this toxic burden.

The JATAP results are not included in the DEIS, but instead there is a mention of the uncertainty of the risk from these air toxics standards, which is not true. The cancer risk standards have been promulgated and published by EPA after extensive research and study, and they are well known.
A common theme in public comments on the proposed project has been the potential impacts of the project on children’s health, primarily through vehicle emissions and noise. Many commenters raised concerns about the proximity of the project to schools or other aspects of the project that may affect children. In addition, the U.S. Environmental Protection Agency requested that the Final Environmental Impact Statement address Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks.

Throughout the Final Environmental Impact Statement, potential impacts on and subsequent mitigation for human health are disclosed and identified, as inherent in the environmental impact statement process. The Final Environmental Impact Statement incorporates an assessment of the potential impacts of the proposed project on all populations, including children. The Final Environmental Impact Statement addresses potential impacts of the project on children in the Chapter 4 environmental consequences analyses.

The U.S. Environmental Protection Agency’s Toxicity and Exposure Assessments for Children’s Health report (see page 4-73 of the Final Environmental Impact Statement) indicated that indoor air concentrations of benzene are usually higher than outdoor levels and that indoor air in smokers’ homes is a significant contributor to children’s exposures. It mentioned children when identifying the effects of acute exposure to naphthalene. The Final Environmental Impact Statement acknowledges and fully discloses public scoping comments that raised the topic of health effects on neighborhoods and adjacent schools (see page 4-31 of the Final Environmental Impact Statement).

The Final Environmental Impact Statement evaluates Clean Air Act criteria air pollutant concentrations in Maricopa County and the Phoenix area (see pages 4-75 to 4-77 of the Final Environmental Impact Statement). With regard to air quality impacts, the Final Environmental Impact Statement addresses children’s health impacts within the broader discussion regarding health impacts under the National Ambient Air Quality Standards. Clean Air Act Section 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety and are requisite to protect the public health. As noted by the U.S. Environmental Protection Agency in its 2013 rulemaking for particulate matter, Clean Air Act Section 109’s legislative history demonstrates that the primary standards are “to be set at the maximum permissible ambient air level… which will protect the health of any [sensitive] group of the population” (78 Federal Register 3086 and 3090) (quoting S. Rep. No. 91-1196, 91st Cong., 2 Sess. 10 [1970]) (alterations in original).

Accordingly, the Final Environmental Impact Statement National Ambient Air Quality Standards-based evaluation of criteria air pollutants includes a health-based review of sensitive populations, including children, given the National Ambient Air Quality Standards inherent consideration of those factors. Furthermore, the National Ambient Air Quality Standards-based assessment ensures adequate consideration of health-based issues as “[t]he requirement that primary standards provide an adequate margin of safety was intended to address uncertainties associated with inconclusive scientific and technical information … and to protect against hazards that research has not yet identified” (78 Federal Register 3090).

Sensitive receivers for air and noise are already included in the air quality and noise analyses in accordance with State and federal guidance. Both sections, Air Quality and Noise, beginning on Final Environmental Impact Statement pages 4-68 and 4-88, respectively, have addressed requirements under the National Environmental Policy Act. As stated on page 4-89 of the Final Environmental Impact Statement, over 220 sensitive receivers were evaluated at exterior locations from a traffic noise perspective and all of the receivers represent noise-sensitive land uses in proximity to the proposed project, including homes, schools, and parks, and these receivers would have higher noise levels than similar facilities more distant from the proposed action.

### Table: Comment Document

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Receptor placement met the criteria for selecting modeling locations as specified in 40 Code of Federal Regulations § 93.123(a). The carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter \((PM_{10})\) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter \((PM_{10})\) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (beginning on page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter \((PM_{10})\) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Through analysis, the Federal Highway Administration has determined that the proposed project would not produce disproportionate impacts on children.

Effective mitigation of the effects of air pollution could only be achieved by barring truck traffic from the SFP. While effective filters could be placed in homes and schools near the freeway, these filters would not only be prohibitively expensive for all the schools and residences involved, but they would also only be effective for the time the school children and residents remained inside with windows closed. People cannot be expected to live their lives inside. In fact, one of the many reasons people live in Ahwatsuke Foothills is because of the weather and the possibility of participating in outdoor activities. School children need to be able to be outside to use playgrounds and sporting facilities. It is hard to imagine how air pollution effects could be mitigated for all the school children participating in and attending sporting events at the Desert Vista High School stadium, for example.

### Modeling

There are fundamental problems with the modeling described in the DEIS.

The DEIS uses faulty wind speed data and methodology in doing its modeling. Wind speed is an essential part of the air shed modeling that ADOT used to determine, in part, regional stability – which relates to inversion layers and local weather patterns impacting projected freeway pollution. For example, the DEIS inputs are based on times that are not concurrent with pollution-building hours. The DEIS also failed to

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### Air Quality

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter \((PM_{10})\) and followed U.S. Environmental Protection Agency guidelines. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter \((PM_{10})\) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. According to the air quality analyses conducted for the proposed freeway, no violations of either the carbon monoxide or particulate matter \((PM_{10})\) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Therefore, no mitigation of these effects is required.

### Specific comments are addressed below.

(Response 382 begins on next page)
382 Air Quality
The air quality assessment for impacts from carbon monoxide followed the U.S. Environmental Protection Agency guidelines in *Guideline for Modeling Carbon Monoxide from Roadway Intersections (A-OAQPS, 1992)*. Inputs to the model were based on U.S. Environmental Protection Agency-recommended values or were selected to provide a conservative estimate of impacts. Modeling methodology and results were reviewed by the Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments.

Increases in traffic volumes attributable to a project do not necessarily result in an increase in emissions over time because the U.S. Environmental Protection Agency's emissions control regulations and fleet turnover also play a role. In the U.S. Environmental Protection Agency's MOVES model, emissions rates for mobile source air toxics drop by 80 to 90 percent between 2012 and 2025, and MOBILE6.2 estimated a similar reduction. The effects of this are apparent from the mobile source air toxics analysis conducted for the Final Environmental Impact Statement; in the mobile source air toxics study area, total mobile source air toxics emissions would decline by 57 to more than 90 percent even though traffic is expected to increase by 47 percent (Final Environmental Impact Statement Table 4-36 on page 4-82).

383 Air Quality
According to the 2013 Arizona Department of Transportation Air Quality Assessment South Mountain Freeway 202L Draft Report, review of wind data from the Gila River Indian Community monitoring site at St. Johns suggests that during the morning hours and associated with mountain-drainage air flows and stable atmospheric conditions, wind flows are from the southeast and follow the Gila River channel to the north. Locations to the east of St. Johns experience flow from the east to the lower elevations along the Gila River. During the warmer hours' improved mixing, flows typically follow the river channel and come from the north and northwest.

Likewise, during a 1-month-long meteorological monitoring period (November 20, 2006, through December 21, 2006) at Pecos Road and 40th Street and a second 1-month-long monitoring period at Pecos Road and 24th and 40th streets (April 19, 2007, through May 21, 2007), winds during the morning hours typically were from the northeast. During the warmer hours, and with improved mixing, winds typically were from the west.

384 Air Quality
At the request of (then) Arizona State Senator John Huppenthal, short-term monitoring of meteorological conditions at Pecos Road and 24th and 40th streets was conducted during 2006 and 2007. Results of this sampling and data from various Maricopa County Air Quality Department monitoring sites were included in the technical report for informational purposes only.

385 Air Quality
The Aircraft Communications Addressing and Reporting System data were not used for modeling; they were included for informational purposes only.
Air Quality
At the request of (then) Arizona State Senator John Huppenthal, short-term monitoring of meteorological conditions at Pecos Road and 24th and 40th streets was conducted during 2006 and 2007. Results of this sampling and data from various Maricopa County Air Quality Department monitoring sites were included in the technical report for informational purposes only.

Air Quality
The air quality assessment for impacts from carbon monoxide followed the U.S. Environmental Protection Agency guidelines in Guideline for Modeling Carbon Monoxide from Roadway Intersections (A-OAQPS, 1992). This is accepted methodology.

Traffic
Construction of the proposed freeway would include widening along Interstate 10 to facilitate entrance and egress of vehicles between the two freeways. Additional information related to the Interstate 10 modifications can be found in Figure 3-26, on page 3-49, and in Figure 3-29, on page 3-53 of the Draft Environmental Impact Statement. The design of the connection to Interstate 10 and the widening along Interstate 10 were developed in accordance with the Federal Highway Administration’s Interstate System Access Informational Guide and has received an initial determination of operational and engineering acceptability from the Federal Highway Administration.

Detailed microsimulation models were developed for each of the action alternatives as well as for the No-Action Alternative. The results of the analysis concluded that the action alternatives would not have adverse impacts on traffic operational characteristics along Interstate 10 and would provide as good or better performance than that which would be anticipated with the No-Action Alternative.

An assessment of future traffic conditions with and without the proposed freeway is presented in the Draft Environmental Impact Statement, beginning on page 3-27. The traffic conditions presented in these sections are consistent with the environmental impact analysis for elements such as air quality and noise, and the results of those analyses can be found in their respective sections of Chapter 4 of the Draft Environmental Impact Statement.

Traffic
Construction of the proposed freeway would include widening along Interstate 10 to facilitate entrance and egress of vehicles between the two freeways. Additional information related to the Interstate 10 modifications can be found in Figure 3-26, on page 3-49, and in Figure 3-29, on page 3-53 of the Draft Environmental Impact Statement. The design of the connection to Interstate 10 and the widening along Interstate 10 were developed in accordance with the Federal Highway Administration’s Interstate System Access Informational Guide and has received an initial determination of operational and engineering acceptability from the Federal Highway Administration.

While the South Mountain Citizens Advisory Team recommended the W101 Alternative, all stakeholders’ input was accounted for—including regional leaders, municipalities, members of the public, and members of the South Mountain Citizens Advisory Team—before identifying the W59 Alternative as the Preferred Alternative (see Draft Environmental Impact Statement pages 3-65 and 3-68). The Draft Environmental Impact Statement has detailed discussion regarding the relative merits and problems with the action alternatives evaluated in the Western Section.
The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Final Environmental Impact Statement). The interchange would have displaced more than 100 homes and would have been located near an existing high school. The City recommended that, based on these impacts, the interchange be removed from the study. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabrea from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement). The traffic projections for Chandler Boulevard (see Figure 3-12, on page 3-29 of the Draft Environmental Impact Statement) do show a reduction with the proposed freeway when compared with conditions without the proposed freeway. The freeway construction staging plan for the area along Pecos Road would allow for keeping east-west travel open during construction. One side of the freeway would be constructed while traffic remained on Pecos Road. When complete, traffic would be shifted from Pecos Road to the new freeway. At that time, the other side of the freeway would be built. However, temporary detours may be needed during construction. (See page 3-27 of the Draft Environmental Impact Statement.)

The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Final Environmental Impact Statement). The interchange was evaluated but ultimately eliminated because of increased residential displacements and cost.

The extension of Chandler Boulevard west of 19th Avenue is included in this project because reasonable access must be maintained to the neighborhoods at the western end of Pecos Road (see Figure 3-33, on page 3-57 in the Draft Environmental Impact Statement).

Residents in this area would continue to have a direct connection to Interstate 10 by using the proposed freeway. The travel time savings as a product of using the South Mountain Freeway in comparison with use of Pecos Road would likely offset any additional travel time attributable to the shift in access to Chandler Boulevard. Emergency responders would address the construction of the proposed freeway by amending the local emergency response plan to include the facility.

Existing traffic volumes on the City of Phoenix's streets are available at the City's Web site, <phoenix.gov/streets/traffic/volumemap>. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabrea from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).

The need identified for the proposed action is to provide regional east–west mobility and to address existing and future transportation system deficiencies. While providing greater access to residents and businesses in Laveen Village to Interstate 10 (Papago Freeway) is a benefit of the proposed action, it is not a primary need identified for the proposed action. According to 23 Code of Federal Regulations §771.111(f)," the action evaluated in the environmental impact statement must connect logical termini and be of sufficient length to address environmental matters on a broad scope. ..." The proposed action should satisfy the project need and should be considered in the context of the local
393 Alternatives

area socioeconomics and topography, the future travel demand, and other infrastructure improvements in the area. A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not feasible because it would not meet the proposed freeway’s identified purpose and need.

394 Comment quotes the Draft Environmental Impact Statement.

395 Hazardous Materials

The corridor analysis revealed sites that would need further assessment during the property acquisition phase of the project, if an action alternative were to become the Selected Alternative. The Arizona Department of Transportation employs a phased approach to site assessment that allows time for cleanup of any sites found to have hazardous waste issues. The project team concluded from the level of analysis conducted during the environmental impact statement process that the types of sites likely to be acquired contain common hazardous waste issues such as underground storage tanks, asbestos and lead paint in buildings, and other commonly found issues (see page 4-153 of the Draft Environmental Impact Statement). The Arizona Department of Transportation maintains a process for addressing these issues in accordance with all applicable environmental laws and regulations.

Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-157 of the Final Environmental Impact Statement).

The Arizona Department of Public Safety (which includes the State Highway Patrol) has primary responsibility for enforcing traffic laws. The Arizona Department of Public Safety also has primacy when calling in support for traffic accidents, including hazardous materials accidents (see text box on page 4-157 of the Final Environmental Impact Statement). The Arizona Department of Transportation maintains a list of contractors who provide emergency response services, as well as local municipalities whose fire and police departments operate in cooperation with the Arizona Department of Public Safety on incidents within their jurisdiction. Requirements for shippers are maintained by the Arizona Department of Transportation’s Enforcement Compliance Division.

The West Van Buren Water Quality Assurance Revolving Fund site was identified and considered during development of the Draft Environmental Impact Statement (see pages 4-97 and 4-153 of the Draft Environmental Impact Statement). The Arizona Department of Transportation prepared the Initial Site Assessment prepared for the proposed project. These sites are primarily groundwater-impact sites, and groundwater is found at a depth of over 60 feet below the footprint of the Preferred Alternative. Given the separation distance between the adversely affected medium (groundwater) and the construction zone (near-surface in these locations), the project team determined that these sites would not pose a risk to construction or to the general public once the facility were completed. This assessment has been clarified in the Final Environmental Impact Statement on page 4-165.
Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-157 of the Final Environmental Impact Statement).

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In the event of an incident with a hazardous materials issue on a State or federal highway, the emergency responders contact the Arizona Department of Transportation’s Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation’s Safety and Risk Management group, which responds to the accident scene and assesses needs in concert with the incident commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation’s Safety and Risk Management group’s charge is primarily public health protection, with cleanup support being secondary.

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<th>Code</th>
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<td>Hazardous Materials</td>
<td>Arizona highways, as are most highways across the United States, are open to all kinds of traffic, so long as the cargo being carried is in accordance with U.S. Department of Transportation regulations for the specific type of cargo. The Arizona Department of Transportation has a few locations in the state with hazardous cargo restrictions, but these restrictions are based on emergency response issues or roadway design limitations specific to that location. For example, the Interstate 10 Deck Park Tunnel has certain hazardous cargo transport restrictions because of the limited ability for emergency responders to address a hazardous materials incident in the tunnel. The South Mountain Freeway, if implemented, is expected to operate under the same rules as other similar facilities in the state; transport of hazardous cargo would be expected to be permissible (see text box on page 4-157 of the Final Environmental Impact Statement). The Arizona Department of Public Safety (which includes the State Highway Patrol) has primary responsibility for enforcing traffic laws. The Arizona Department of Public Safety also has primacy when calling in support for traffic accidents, including hazardous materials accidents (see text box on page 4-157 of the Final Environmental Impact Statement). The Arizona Department of Transportation maintains a list of contractors who provide emergency response services, as well as local municipalities whose fire and police departments operate in cooperation with the Arizona Department of Public Safety on incidents within their jurisdiction. Requirements for shippers are maintained by the Arizona Department of Transportation’s Enforcement Compliance Division. In the event of an incident with a hazardous materials issue on a State or federal highway, the emergency responders contact the Arizona Department of Transportation’s Traffic Operations Center to report the incident. The Traffic Operations Center then contacts the Arizona Department of Transportation’s Safety and Risk Management group, which responds to the accident scene and assesses needs in concert with the incident commander from the responding agency with jurisdiction. If requested, the Arizona Department of Transportation can assist cleanup activities by engaging specialty subcontractors with whom the Arizona Department of Environmental Quality has contracts for such support. The Arizona Department of Transportation’s Safety and Risk Management group’s charge is primarily public health protection, with cleanup support being secondary.</td>
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response plan for Maricopa County and the state of Arizona, respectively. The plan, by statute, requires:

"Each emergency plan shall include (but is not limited to) each of the following:

(1) Identification of facilities subject to the requirements of this subchapter that are within the emergency planning district, identification of routes likely to be used for the transportation of substances on the list of extremely hazardous substances referred to in section 11002(a) of this title, and identification of additional facilities contributing or subjected to additional risk due to their proximity to facilities subject to the requirements of this subchapter, such as hospitals or natural gas facilities.

(2) Methods and procedures to be followed by facility owners and operators and local emergency and medical personnel to respond to any release of such substances.

(3) Designation of a community emergency coordinator and facility emergency coordinators, who shall make determinations necessary to implement the plan.

(4) Procedures providing reliable, effective, and timely notification by the facility emergency coordinators and the community emergency coordinator to persons designated in the emergency plan, and to the public, that a release has occurred (consistent with the emergency notification requirements of section 11004 of this title).

(5) Methods for determining the occurrence of a release, and the area or population likely to be affected by such release.

(6) A description of emergency equipment and facilities in the community and at each facility in the community subject to the requirements of this subchapter, and an identification of the persons responsible for such equipment and facilities.

(7) Evacuation plans, including provisions for a precautionary evacuation and alternative traffic routes.

(8) Training programs, including schedules for training of local emergency response and medical personnel.

(9) Methods and schedules for exercising the emergency plan.

Due to the unique nature of Ahwatukee Foothills, which is a residential area, and not zoned for heavy industrial uses, few hazardous materials transportation issues and risks exist there because none of these chemicals, other than gasoline and diesel, are being transported into the area, other than incidentally adjacent on Interstate 10, which is east of the area. A catastrophic release of hazardous chemicals along the I-10 corridor would have only an indirect effect on Ahwatukee Foothills.
397 Hazardous Materials

The project team is aware of the Hazardous Materials Commodity Flow Studies that the Arizona State Emergency Response Commission maintains. These studies are used by emergency response planners (such as the Arizona State Emergency Response Commission statewide and the Maricopa County Local Emergency Planning Commission for Maricopa County) as one of the elements considered when developing emergency response plans. If the plan is amended, it is made available to the Arizona Department of Transportation.

398 Hazardous Materials

According to 46 Federal Register 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible. There are no requirements in 23 Code of Federal Regulations 771 Environmental Impact and Related Procedures or in the Federal Highway Administration Technical Advisory T 6640.8A Guidance for Preparing and Processing Environmental and Section 4(f) Documents to address releases of hazardous chemicals due to a transportation incident in National Environmental Policy Act documents for transportation projects like the proposed action. As discussed above, reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible.

If the proposed action is the Selected Alternative in the record of decision, planning for emergency situations would be initiated. If the plan is amended, it is made available to the Arizona Department of Transportation.
caused by the freeway, and a full analysis of the risks and effects should have been examined in the NEPA process.

The data and calculations of risk and distance from certain chemicals carried on the highways are documented in the July 9, 2009, report, The Hazardous Materials Commodity Flow Study Report 1-19 Corridor from 1-10 to Mexico Border, Arterial Highways and Railways, Pima and Santa Cruz Counties, Arizona; the October 30, 2006 report, Hazardous Materials Commodity Flow Study Report 1-8 and 1-19 Corridors, Arterial Highways and Railways, Yuma, Maricopa, Pinal, Pima and Cochise Counties, Arizona; and the December 5, 2008 Hazardous Materials Commodity Flow Study 1-10 Corridor from SR 85 to California prepared for the AASHTO. Previous commodity flow study reports would show the same sorts of information.

One piece of data that is missing is the Hazardous Materials Commodity Flow Study Report for the I-10 to I-8 to SR 85 to I-10 route that was selected as a truck bypass around 2006. (Part of the idea of this particular truck bypass was to route truck traffic away from the Phoenix metro area as a measure to reduce particulate matter air pollution.) According to ADOT, this is also part of the CANAMEX highway system that has been approved via treaties with Mexico and Canada, and this truck bypass has now been officially designated as the route of the CANAMEX.

Clearly, the SMF DEIS should have studied or promulgated this data to determine the traffic of hazardous materials that could be expected to shift to the SMF. Even without this last bit of information, a close approximation should have been calculated and examined in the DEIS.

HDR, the contractor for ADOT in the November 26, 2008, SPR 624 Hazardous Materials Transportation in Arizona Literature Review with Findings Report, would have reviewed all of this information, at a minimum. HDR is also the contractor for ADOT in the NEPA process for the SMF, and should have had access to this same information. There can be no valid reason for excluding any mention or analysis of the risks and additional planning from hazardous materials transportation in the SMF DEIS other than a deliberate exclusion.

From the beginning of the NEPA process regarding the SMF, Ahwatukee Foothills residents and others have consistently and vociferously raised concerns about the added risks to their community from the transportation of hazardous materials on the new SMF. In doing so they have consistently voiced concerns regarding the additional problems with hazardous materials response in the affected area, as well as evacuation and shelter in place issues. There is also a risk from the consequences of a hazardous materials transportation incident to the communities on the north side of the pass at South Mountain, and Laveen would be at a particularly heightened risk also. Therefore, the same types of impacts that threaten Ahwatukee Foothills would apply to these other communities, but at least these others have alternate escape routes that the community of Ahwatukee Foothills does not have.

### Code: 399 Trucks
The road network in the Maricopa Association of Governments travel demand model includes the Interstate 8 and State Route 85 corridor. So, while the roads are not in the Study Area for the proposed action, traffic and trip distributions along the corridor are included in the traffic analysis for the proposed action. Any traffic that would shift from the Interstate 8 and State Route 85 corridor to the proposed action would be included in the vehicle mix considered in the analysis.

A truck driver traveling from Tucson to Los Angeles and choosing to use Interstate 10 and the proposed freeway would travel 15 miles less than one choosing to use the designated truck bypass along Interstate 8 and State Route 85. Choosing to travel on the proposed action versus Interstate 8 and State Route 85 would not translate to any substantial travel time benefits. Therefore, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85.

### Code: 400 Hazardous Materials
The 2008 hazardous material report referenced in the comment was prepared to assist the Arizona Department of Transportation in refining its policies and process for determining hazardous materials routing in the state. It was a preliminary document and intended to form a basis of understanding about how other states’ planning processes address this issue. The report was not intended to provide specific recommendations for hazardous materials routing, but rather to provide the Arizona Department of Transportation with information to consider in making possible adjustments to its planning process. The recommendations of the report have been taken under advisement by the Arizona Department of Transportation.

### Code: 401 Hazardous Materials
According to 46 Federal Register 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible. There are no requirements in 23 Code of Federal Regulations 771 Environmental Impact and Related Procedures or in the Federal Highway Administration Technical Advisory T 6640.8A Guidance for Preparing and Processing Environmental and Section 4(f) Documents to address releases of hazardous chemicals due to a transportation incident in National Environmental Policy Act documents for transportation projects like the proposed action. As discussed above, reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible.

If the proposed action is the Selected Alternative in the record of decision, planning for emergency situations would be initiated. If the plan is amended, it is made available to the Arizona Department of Transportation.
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The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Draft Environmental Impact Statement). The interchange was eliminated based on undesirable residential displacements and cost.

In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabrea from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).

The project team is aware of the Hazardous Materials Commodity Flow Studies that the Arizona State Emergency Response Commission maintains. These studies are used by emergency response planners (such as the Arizona State Emergency Response Commission statewide and the Maricopa County Local Emergency Planning Commission for Maricopa County) as one of the elements considered when developing emergency response plans. If the plan is amended, it is made available to the Arizona Department of Transportation.

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| 401  | As of 2010, the 35.8 square-mile community of Ahwatukee Foothills has a population of 77,249. So if there would be a catastrophic release from a 17-ton chlorine tank along the Pecos Road alignment, almost all of these 77,249 would be at risk of death or severe injury. In Laveen, there are 35,502 residents who would be at a similar risk. There would also be risks to the residents of the Gila River Indian Community along the Pecos alignment. All of these above mentioned communities would be forever at risk of a very terrible, certain, and quick death from a chlorine release if this freeway gets built. All of these communities would have to be forever on hair-trigger alert. They, as communities, would need periodic training and drills to protect them, as well as infrastructure, in the form of siren systems and other alert systems, telephone ring down systems, and much more. We know that over a hundred trucks per hour would be the number at the beginning of the freeway’s opening, just from localized traffic information, but when the I-10 to I-8 to SR 85 to I-10 truck bypass isnegated, there will be much more truck traffic. That number can be quantified, and that is something the DEIS should have done with the millions of dollars already spent. But HDR and ADOT skirted that by claiming in the DEIS that that information is not known and the impacts are unclear. That is absurd; that is precisely the sort of data that is quite available, and must be examined, studied, and analysed. The fact that the proposed freeway would eliminate the exits from the community at 32nd Street and Pecos would only exacerbate an already difficult position that this community would be in if there were an evacuation or the need for a response to a catastrophic hazardous materials incident. Regular traffic is already voluminous at that intersection:
  - Pecos (west approach) - Total 22,313 veh/day (2012 count) including 11,727 westbound and 10,586 eastbound volumes.
  - Pecos (east approach) - Total 28,178 veh/day (2012 count) including 14,331 westbound and 13,847 eastbound volumes.
  - 32nd Street (north approach) - Total 7,807 veh/day (2011 count) including 3,761 northbound and 4,046 southbound volumes.

With access to Pecos Road being removed by the freeway, all of that traffic would have to find another way out and further clog and congest other exit routes. Yet there was no mention or analysis of these issues in the DEIS. The October 30, 2006 report, Hazardous Materials Commodity Flow Study Report I-10 and I-10 Corridors, Arterial Highways and Railways, Yuma, Maricopa, Pinal, Pima and Cochise Counties, Arizona, also mentions the risk from a release of chlorine gas and the risks of a catastrophic release during a transportation incident. As stated, RMPComp is a USEPA approved emergency planning screening tool used when ALOHA predicts the effects of a release would exceed the ALOHA model limit of six miles. The worst-case scenario release for chlorine was the only material to exceed the six-mile ALOHA limit. |
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<td>Stability data for the area are likely unavailable, but an &quot;F&quot; stability would probably occur only during the early morning hours and would be associated with drainage winds coming from the northeast that would carry the plume away from inhabited areas. Issues of a severe accident such as the one described exist for many portions of the Phoenix metropolitan area. Fast and effective defense response is critical in the emergency response plans prepared by emergency service providers and discussed on page 4-157 of the Final Environmental Impact Statement.</td>
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According to the 2013 Arizona Department of Transportation Air Quality Assessment South Mountain Freeway 2021 Draft Report, review of wind data from the Gila River Indian Community monitoring site at St. Johns suggests that during the morning hours and associated with mountain-drainage air flows and stable atmospheric conditions, wind flows are from the southeast and follow the Gila River channel to the north. Locations to the east of St. Johns experience flow from the east to the lower elevations along the Gila River. During the warmer hours’ improved mixing, flows typically follow the river channel and come from the north and northwest. Likewise, during a 1-month-long meteorological monitoring period (November 20, 2006, through December 21, 2006) at Pecos Road and 40th Street and a second 1-month-long monitoring period at Pecos Road and 24th and 40th streets (April 19, 2007, through May 21, 2007), winds during the morning hours typically were from the northeast. During the warmer hours, and with improved mixing, winds typically were from the west.
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If the proposed action is the SelectedAlternative in the record of decision, planning for emergency situations would be initiated. If the plan is amended, it is made available to the Arizona Department of Transportation.

The West Van Buren Water Quality Assurance Revolving Fund site was identified and considered during development of the Draft Environmental Impact Statement (see pages 4-97 and 4-153 of the Draft Environmental Impact Statement, and the Draft Initial Site Assessment prepared for the proposed project). These sites are primarily groundwater-impact sites, and groundwater is found at a depth of over 60 feet below the footprint of the Preferred Alternative. Given the separation distance between the adversely affected medium (groundwater) and the construction zone (near-surface in these locations), the project team determined that these sites would not pose a risk to construction or to the general public once the facility were completed. This assessment has been clarified in the Final Environmental Impact Statement on page 4-165.
## Noise

### Noise pollution

The DEIS cited an outdated noise abatement policy and included an incomplete review of the regulations regarding noise (page 4-80). In particular, the Quiet Communities Act of 1978, promoting the development of state and local noise control programs, should have been discussed. Further, not all receptors that could be impacted by noise from the SMF were identified and impacts predicted for. For example, effects on multiple schools located within 0.5 miles of the proposed SMF were not evaluated (page 4-84). Vibration from blasting is qualitatively discussed in the Topography, Geology, and Soils section (page 4-115) of the DEIS; however, vibration from non-blasting construction activities and from operational impacts is not discussed anywhere within the DEIS.

The DEIS discusses the use of noise barriers as a primary means of noise mitigation (page 4-80). The use of noise barriers as proposed in the DEIS is unacceptable. The DEIS states that barriers would not be constructed higher than 20 feet because of cost, aesthetics, and constructability. This is as it should be. Yet in some areas, a 20-foot sound barrier would not achieve acceptable noise abatement (page 4-90).

The design of a depressed (below ground level) freeway has been rejected, in spite of the fact that this would provide substantial noise abatement. It appears that the SMF is being designed as the “Walmart of freeways” to keep the cost down, regardless of the negative impacts this would have on the communities affected. Raised freeways overpasses from a ground level freeway would propagate traffic noise and pollution at a greater distance.

The only other noise mitigation strategy that was considered, according to the DEIS, is the use of rubberized asphalt, which isn’t even a proven strategy. Even to the extent that it works to reduce noise, it would not provide enough noise abatement to make the noise pollution levels acceptable at some locations along the proposed freeway route.

## Water and Soil Issues

Concerns were raised to ADOT throughout the scoping process about the destruction of supply wells located along Pecos Road if the SMF were built along that alignment. ADOT appears to be aware of these concerns, as an attempt is made to directly address them on page 4-100 of the DEIS. Yet the analysis of wells used for water supply for the Foothills golf courses make use of information that is both outdated and erroneous. This leads to an insufficient analysis that does not make use of the “best available scientific and technical information.”

ADOT identified that the Foothills Community Association has multiple sources of water available other than the supply well that would be lost because of the SMF. The DEIS identifies effluent, well water, and municipal water supplied by the City of Phoenix as being available. The wastewater treatment plant referenced in the DEIS

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<td>410</td>
<td>Noise</td>
<td>The noise analysis has been updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted. As stated in the Council on Environmental Quality’s Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, environmental impact statements should be analytic rather than encyclopedic [40 Code of Federal Regulations Part 1502.2(a)]. Those noise regulations of direct consequence to the proposed action were discussed. There are no federal requirements directed specifically to highway traffic induced vibration. All studies the highway agencies have done to assess the impact of operational traffic induced vibrations have shown that both measured and predicted vibration levels are less than any known criteria for structural damage to buildings. The Arizona Department of Transportation Noise Abatement Policy limits noise abatement walls to 20 feet in height.</td>
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<tr>
<td>411</td>
<td>Drainage</td>
<td>As noted on page 3-18 of the Draft Environmental Impact Statement, drainage served as the primary design constraint for the Pecos Road segment of the E1 Alternative. Assessments were performed to determine constructibility and effectiveness in avoiding or reducing impacts and to evaluate whether a depressed profile would generate other desired or undesired outcomes. Based on the results of these assessments, further design options were developed and refined in attempts to reduce impacts on the adjacent community. The modifications incorporated alternative drainage designs, use of retaining walls, and other features to reduce right-of-way requirements.</td>
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<tr>
<td>412</td>
<td>Noise</td>
<td>As disclosed on page 4-90 of the Draft Environmental Impact Statement, not all noise barriers would be capable of reducing traffic noise levels to levels recommended in the Arizona Department of Transportation’s Noise Abatement Policy. The Federal Highway Administration does not recognize rubberized asphalt as a noise abatement methodology; however, the Arizona Department of Transportation will use rubberized asphalt as the driving surface for the proposed freeway.</td>
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<tr>
<td>413</td>
<td>Water Resources</td>
<td>The comment is correct that wastewater effluent is not available as a replacement source and is not being used. The City of Phoenix did operate a wastewater reclamation facility in this area, but it was removed from service and demolished. The City of Phoenix still owns the property, but all facilities have been removed from the site. Thus, only two water sources are available for irrigation and lake supply for the Foothills Community Association: the well that would be acquired and potable water from the City of Phoenix. The discussion on page 4-100 of the Draft Environmental Impact Statement has been modified in the Final Environmental Impact Statement to reflect that reclaimed wastewater would not be available; however, the conclusion on page 4-100 is still appropriate. As stated on page 4-100 of the Draft Environmental Impact Statement, “In the event that well replacement were to be impossible, the Arizona Department of Transportation would still replace the water that would be lost through the acquisition.”</td>
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was removed by the City of Phoenix in the late 1990s. This key information, that effluent is completely unavailable, was reportedly made available to ADOT. It was not, however, used in the analysis of water supply availability.

The analysis of water replacement on page 4-100 is flawed in another way. The analysis is summarized as “It is understood that finding a suitable location for a new well in this area may be difficult.” This difficulty is dismissed by indicating that there are at least two other sources of water, which is erroneous. The only other source is municipal water, which would be prohibitively expensive. Further, the statement that drilling a new well may be difficult seriously downplays the importance of the wells that would be lost, the unique hydrogeology of the area, and the rarity of how productive these particular wells are.

In addition to being technically flawed, the analysis presented in the DEIS has been applied in an arbitrary manner. The detailed analysis focused solely on the Foothills Community Association and the potential loss of their wells. The DEIS does not analyze nearby entities that would experience the same impacts, or entities anywhere else along the freeway route. One specific example is the Lakewood Community Association. The supply wells currently used by the Lakewood community would be even more difficult to replace given their large pumping capacity.

The analysis of water quality is insufficient. While existing background water quality (page 4-97) is of interest, the more important concern is the potential for the proposed freeway route to impact known areas of contamination. This is not disclosed in the assessment of water resources. There are several basic and readily available data sources that should have been consulted for this analysis. At a minimum: (1) known Leaking Underground Storage Tank (LUST) sites, (2) known State-WQARF or Federal CERCLA superfund sites, and (3) known or suspected landfill sites. Historic or active locations (where the location along the Salt River makes this a particularly important item to assess in the DEIS).

There is no section within the DEIS that discussed the unique erosion issues that would be encountered when excavating South Mountain. Making deep cuts into three ridges of the mountain would create an enormous area for potential erosion of the mountain. Yet the DEIS just referenced the use of “erosion control.” Erosion control for deep cuts into mountains must include special measures that not only mitigate the effects of erosion at the time the excavation occurs, but also the long-term and continuing effects of erosion. Without a plan and commitment to mitigate the continuing forces of erosion, initial efforts to control erosion will become ineffective within a relatively short time.

Regarding the DEIS component addressing the US Army Corps of Engineers section 404 of the Clean Water Act (page 4-112), the 401 certification by ARBQ is in jeopardy. EPA has found that ADOT has routinely failed to comply with contracts with FHWA, USAOC, ARBQ and USF to maintain, limit or control sediment

Page 4-100 of the Draft Environmental Impact Statement states that finding a suitable location for a new well in this area may be difficult. Productivity of the well in bedrock formations is primarily based on intercepting fractures, and that can be very difficult to do. The Arizona Department of Transportation is aware of the difficult conditions that exist in replacing wells in this area.

The procedure identified on page 4-100 of the Draft Environmental Impact Statement defines the procedure that the Arizona Department of Transportation would use to replace impacted wells, and also identifies the general costs that the Arizona Department of Transportation would incur to replace the lost water sources.

Depending on whether an action alternative were the Selected Alternative, it may be possible to keep the well in its current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.

Because of the public concern expressed during the environmental impact statement process, page 4-100 of the Draft Environmental Impact Statement focuses on the Foothills Community Association to provide more details on the well acquisition, condition assessment, and replacement process used by the Arizona Department of Transportation. This information applies equally to the Lakewood Community Association or any other acquired well in the area.

The West Van Buren Water Quality Assurance Revolving Fund site was identified and considered during development of the Draft Environmental Impact Statement (see pages 4-97 and 4-153 of the Draft Environmental Impact Statement, and the Draft Initial Site Assessment prepared for the proposed project). These sites are primarily groundwater-impact sites, and groundwater is found at a depth of over 60 feet below the footprint of the Preferred Alternative. Given the separation distance between the adversely affected medium (groundwater) and the construction zone (near-surface in these locations), the project team determined that these sites would not pose a risk to construction or to the general public once the facility were completed. This assessment has been clarified in the Final Environmental Impact Statement on page 4-165.

Information gained through geotechnical investigations would be used to design the slopes to be stable and to protect against stormwater flows and related erosion. Technical reports addressing rock cut slope designs would be prepared as part of the preliminary and final geotechnical investigations of the selected freeway alignment. Stormwater flows and related erosion from excavated areas would be addressed by implementation of a Stormwater Pollution Prevention Plan and related best practices. Stormwater Pollution Prevention Plans are required on Arizona Department of Transportation construction projects to control and mitigate erosion and loss of soil from the project and off-site movement of eroded sediments.

During construction, off-site impacts to soil from erosion related to the freeway construction projects are not expected. Implementation of the Stormwater Pollution Prevention Plan and related best practices would keep eroded sediments on site for collection and replacement as appropriate. After construction, grading and drainage and landscape design components of the freeway system would act to control and mitigate erosion.
discharges into jurisdictional waters of the US. The Gila and Salt Rivers are waters of the US inside this planned project. EPA actions have created an environmental program inside of ADOT. This environmental program has failed to implement the most basic construction mitigations. Statewide highway construction along hillside have created large and numerous rills (deep cuts down hillside). These rills wash sediment into our waterways, polluting the ecosystem. ADOT management downplays environmental stewardship; ADOT, Army Corps of Engineers, and FHWA do not conduct any inspections. Internal ADOT environmental staff does not influence ADOT management. FHWA does not provide funding for continued maintenance of hillside erosion after construction. Statewide, ADOT does not provide its maintenance highway workers funding to mitigate sediment discharges from hillside rills and failed sediment control features of the original construction best management practices. ADOT has failed to protect the environment in nearly all completed construction sites with the same terrain of the SMF. It would be expected that ADOT would not honor their own Statewide Individually Stormwater permit, allowing sediment discharges during and after construction of the freeway. (Haddow, South Mountain Freeway 2012 DEIS Comments Prepared for PARC et al, 2013)

All of this points to an expected inadequate response by ADOT to water and soil issues that would arise during and after construction of the SMF. And the DEIS provides nothing to lead to a different conclusion.

South Mountain Preserve and Park

The DEIS proposed that the SMF would cut through a part of South Mountain Preserve and Park. The DEIS said that the eminent domain claim on the Preserve and Park would be for just a small part of the whole, so it would be of little consequence. To some extent this is a matter of opinion. However, if someone claimed that they just wanted to cut a couple of toes off the foot of the Director of ADOT, his opinion would undoubtedly be that his toes are quite important. We also object quite strongly to the destruction of South Mountain Preserve and Park. It is a living entity that should remain whole, and it should not experience painful losses that result in ugly scars.

We must ask, what part of the word "preserve" does ADOT not understand? The people of Phoenix created the Phoenix Mountain Preserve to do just what the word implies - preserve them. Further, South Mountain Park is the largest wilderness municipal park in this country - some claim in the world. The fact that it is large is what makes it a magnificent wilderness park. And since it is right in the city of Phoenix, it is readily accessible to all the residents of the Valley of the Sun. Recreation is one of the major draws bringing people to this Valley, both to vacation and to live. Yet ADOT indicates in the DEIS that this is of little consequence and implies that it is much more important for trucks to get to their destinations as directly as possible, in spite of any amount of damage they may do to our precious resources, including South Mountain.

418 Water Resources and Waters of the United States

Controlling and treating runoff is a normal function of the Arizona Department of Transportation projects. No evidence is offered to substantiate such statements. The U.S. Army Corps of Engineers, as a cooperating agency, has participated and contributed in each step of the environmental process. The agency has found the logical sequence of decision making to be sound and in line with National Environmental Policy Act requirements. The Arizona Department of Environmental Quality has also contributed to the process. Both agencies as referenced in the comment have oversight roles in project permitting as established in the Clean Water Act (Sections 401, 402, and 404). Extensive mitigation in accordance with the permitting requirements can be found in the Water Resources and Waters of the United States sections of Chapter 4 of the Final Environmental Impact Statement. The Arizona Department of Transportation is fully obligated and committed to implementation and adherence to those mitigation strategies.

419 Mitigation

If an action alternative is the Selected Alternative, the record of decision issued for the project will contain all mitigation measures to be implemented for the project. The Federal Highway Administration and Arizona Department of Transportation will commit to implementation of all mitigation measures in the record of decision.

420 Section 4(f) and Section 6(f)

The acreage of parkland to be converted to a transportation use is reported on Draft Environmental Impact Statement page 5-14 in the section, Direct Use. Additional text on that page focuses on other concerns associated with the direct use of the park/preserve (see the sidebar on page 5-14, “The South Mountains in Phoenix’s Sonoran Preserve System”) as well as describing the importance of the park in the region.

City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the South Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see Draft Environmental Impact Statement page 5-14). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The portion of the park that would be used for the proposed freeway would be 31.3 acres, or approximately 0.2 percent of the park’s approximately 16,600 acres (see pages 5-39 and 5-31 of the Draft Environmental Impact Statement). The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see the Draft Environmental Impact Statement, starting on page 5-22).
Let us not forget that South Mountain is home to many living species. The DEIS mentioned [Chapter 4] that ADOT was aware that the desert tortoise is a threatened species and that many animals and plants would be permanently affected by the SMF, particularly in South Mountain. However, their mitigation plan is basically to be careful to destroy as few of the living species and their habitat as possible. The SMF would try to put in replacement migration routes for South Mountain animals that migrate to and from the Sierra Estrella. And that’s it. The desert tortoise population (especially sensitive since it is a threatened species) would just be diminished, as would its habitat and that of all the species that inhabit the western part of South Mountain.

Additional issues that the DEIS does not consider include:

- The Sonoran Desert was listed in 2011 as one of the 12 most threatened landscapes in the US by the Cultural Landscape Foundation. Further fragmentation of an endangered ecosystem would have a significantly negative impact.
- The increase in fire danger would further threaten a desert ecosystem that has not evolved with fire.
- A highway through the ecosystem would increase the types of invasive species and increase their spread because the highway would provide a corridor for their movement.
- With the increase in pollutants, there would be an increase in the hazard to humans who hike and bike in South Mountain Park, particularly on the west end. The hazard is not only that the highway would increase the pollutants in the park but also that the activities of walking and bicycling increase exposure to air pollutants.
- The increased air pollutants due to the proximity of the highway would also negatively affect many plants, whether airborne or in the soil.
- South Mountain contains many iconic plants, such as ironwood, saguaro, Arizona Queen of the Night, elephant trees, ocotillo. Construction kills plants. Those that are removed to be replanted, such as saguaro, historically experience a very high mortality rate.
- Specialized species such as elephant tree and saguaro will respond negatively due to loss of habitat.
- The western part of South Mountain Park currently has a healthier ecosystem than the eastern or central part of the park because it is a more isolated area and those who use it don’t typically abuse it. It provides a sense of wilderness not experienced in any other City Preserve. A highway through the western end of the park would destroy the wilderness and make it the least healthy part of the park.

421 Biology, Plants, and Wildlife

The section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-125 of the Draft Environmental Impact Statement, discloses by what means the proposed action and its alternatives would affect vegetation, wildlife, and wildlife habitat. A Biological Evaluation was submitted to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality that addressed threatened, endangered, and candidate species, including the Sonoran desert tortoise. The information used to prepare the analysis in the Draft Environmental Impact Statement (page 4-122) was based on 2011 information retrieved from the Arizona Game and Fish Department (Gopherus agassizii, draft unpublished abstract compiled and edited by the Heritage Data Management System, Phoenix).

Current information on threats and connectivity strategies was included in the Biological Evaluation. The U.S. Fish and Wildlife Service concurred with the species determinations in the Biological Evaluation (see Appendix 1-1 of the Final Environmental Impact Statement).

Connectivity is planned to allow wildlife movement beneath the freeway in multiuse crossings (see page 4-125 of the Draft Environmental Impact Statement). The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see Mitigation, beginning on page 4-138 of the Final Environmental Impact Statement).

422 Biology, Plants, and Wildlife

The comment reflects a concern associated with the cumulative impacts of the proposed action on habitat in the region. A discussion of cumulative impacts addressing this issue can be found in the section, Secondary and Cumulative Impacts, beginning on page 4-167 of the Draft Environmental Impact Statement. The proposed project is located primarily adjacent to already developed areas except for at the southwest end of the South Mountains. In this area, multifunctional crossing structures are planned at locations where natural movement corridors occur along major drainages (see pages 4-125, 4-126 and Figure 3-25 on page 3-47 of the Draft Environmental Impact Statement).

423 Biology, Plants, and Wildlife

The comment implies that the proposed action would be directly responsible for increased fire potential. While a new road facility could increase the chance of fires originating from cigarettes tossed out windows or from vehicles catching fire on the roadside, the Arizona Department of Transportation designs urban roadside landscaping to minimize the chance of roadside fires spreading beyond the right-of-way. Fires originating on urban highways and spreading to natural preserves is not an issue on similar facilities in the Phoenix area, such as State Route 51 and State Route 101L.

424 Biology, Plants, and Wildlife

The Arizona Department of Transportation regularly implements mitigation measures to control and minimize the presence of invasive and noxious species on its facilities and would do the same for this project, in compliance with Executive Order 13112. This requirement is described on page 4-119 of the Draft Environmental Impact Statement. This includes identifying, controlling, and monitoring for invasive species as well as prevention of their incidence in areas where they are not presently found. The Order also includes restoration of native plant species where invasive plant species are found.
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<td>B584</td>
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Additional issues that the DEIS does not consider include:
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- The western part of South Mountain Park currently has a healthier ecosystem than the eastern or central part of the park because it is a more isolated area and those who use it don’t typically abuse it. It provides a sense of wilderness not experienced in any other City Preserve. A highway through the western end of the park would destroy the wilderness and make it the least healthy part of the park.

### Air Quality

- The contribution of mobile sources (traffic) to air quality in the Study Area is addressed beginning on page 4-68 of the Final Environmental Impact Statement.
- The carbon monoxide and particulate matter (PM$_{10}$) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

### Biology, Plants, and Wildlife

- Improved techniques and knowledge regarding the transplanting of protected native plants in Arizona have increased survival rates. The Arizona Department of Transportation has considerable experience transplanting native plants protected by the Arizona Native Plant Law and has experienced a high survival rate. The Arizona Department of Transportation has conducted studies on the best methods to use for transplanting desert species, particularly ironwood trees and saguaros, and was honored by the American Society of Landscape Architects in 2012 for this work. The research results have been incorporated in the procedures for plant salvage for Arizona Department of Transportation projects and throughout the industry. Reports on the research findings are available from the Arizona Department of Transportation Research Center at [azdot.gov/planning/research-center/research/research-reports](http://azdot.gov/planning/research-center/research/research-reports).
- Transplanting of protected native plants has been highly successful with application of proper techniques. The loss of habitat is not expected to cause individual nearby plants to respond.
- Information regarding the context and attributes of the South Mountains is described in the Draft and Final Environmental Impact Statements. The habitat characteristics of the Study Area, including those habitats within the park/preserve, can be found in the section, Biological Resources, beginning on page 4-125 of the Final Environmental Impact Statement.
All these negative effects on the South Mountain Preserve are completely unacceptable to all who care about the preservation of the Phoenix mountains — and that is the majority of the population of Phoenix.

Environmental Justice

Three fundamental environmental justice principles apply to the transportation project development process:

- to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations
- to ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
- to prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The JATAP monitoring at the St. Johns monitoring site on the GRIC found certain air toxics attributed to “mobile sources,” or vehicular traffic burning hydrocarbons. These findings of the air toxics were alarmingly high, many times the “accepted” cancer risk standard set by USEPA.

The St. Johns monitoring site’s highest toxic findings:

- formaldehyde at 34 times this standard;
- benzene at 1.5 times this standard;
- 1,3 butadiene at 7.5 times this standard; and
- acetaldehyde at 3.4 times this standard.

The JATAP study also found that three other air toxics associated with transportation exhaust, Ethylene/Butene, m,p-Xylene, and o-Xylene, were detected over 50% of the time at levels above the Maximum Daily Limit set by the state health department.

Residents of the GRIC living around and adjacent to the monitoring site are currently being subjected to all of these carcinogens, not just one. And if a freeway were to be built near this monitoring site on the GRIC, there would be more air toxics in addition to the ones detected at levels that far exceed the USEPA risk standard.

One of the JATAP’s findings presented to the EPA National Air Monitoring Conference in November 2006 was, “Annual average concentrations of formaldehyde, acetaldehyde, benzene and 1,3 butadiene were on the high end of the range reported in EPA funded assessments of other US cities.” This finding relates to any future proposed freeway in the JATAP study area, which includes in entirety the route of the proposed SMP. It also has huge environmental justice implications.
Summary information about the findings of the Joint Air Toxics Assessment Project study is provided as background information in the Draft and Final Environmental Impact Statements, but the study itself is not relevant to the type of analysis done pursuant to the Federal Highway Administration’s mobile source air toxics guidance, which is an emissions analysis. Monitored ambient concentrations of mobile source air toxics (the focus of the Joint Air Toxics Assessment Project) do not inform this type of analysis. While monitoring data can be useful for defining current conditions in the affected environment (to the extent that the monitoring data are current), they don’t tell us anything about future conditions, or the impacts of the project itself, which is why an emissions analysis was performed. The mobile source air toxic analysis presented beginning on page 4-77 of the Final Environmental Impact Statement is an estimated inventory of mobile source air toxic emissions for the entire Study Area for 2025 and 2035. This approach was used because the inventory estimate accounts for changes in traffic and emissions on all roadways affected by a proposed project, and would, therefore, be a more reliable predictor of changes in exposure to mobile source air toxics.

For the South Mountain Freeway project, the mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-77 of the Final Environmental Impact Statement). Like most highway projects that have received a mobile source air toxics emissions analysis, the South Mountain Freeway project would result in a negligible change to a very small component of overall cancer risk, and this risk is declining regardless of alternative.

434 Environmental Justice and Title VI

40 Code of Federal Regulations Section 1500.1(b) also directs the Federal Highway Administration to focus its National Environmental Policy Act analysis and documentation on issues that are truly significant to the action in question. In the context of mobile source air toxics, the Federal Highway Administration must consider whether changes in mobile source air toxics emissions attributable to a project have the potential for significant health risk. Using cancer risk as an example, the U.S. Environmental Protection Agency estimates that the overall risk of cancer in the United States is approximately 330,000 in a million, and that air toxics (from all sources) are responsible for a risk of approximately 50 in a million. In its most recent mobile source air toxics rule-making, the U.S. Environmental Protection Agency estimated mobile source air toxics cancer risk, after implementation of emissions controls, at approximately 5 in a million (or 0.0015 percent of overall cancer risk from any cause). For the South Mountain Freeway project, the mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-77 of the Final Environmental Impact Statement). Like most highway projects that have received a mobile source air toxics emissions analysis, the South Mountain Freeway project would result in a negligible change to a very small component of overall cancer risk, and this risk is declining regardless of alternative.
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<td>435</td>
<td>Title VI and Environmental Justice According to 46 Federal Register 18026 (March 23, 1981), the environmental impact statement must discuss reasonably foreseeable actions. These are actions that are likely to occur or probable, rather than those that are merely possible. There are no requirements in 23 Code of Federal Regulations 771 Environmental Impact and Related Procedures or in the Federal Highway Administration Technical Advisory T 6640.8A Guidance for Preparing and Processing Environmental and Section 4(f) Documents to address releases of hazardous chemicals due to a transportation incident in National Environmental Policy Act documents for transportation projects like the proposed action. As discussed above, reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible. If the proposed action is the Selected Alternative in the record of decision, planning for emergency situations would be initiated. If the plan is amended, it is made available to the Arizona Department of Transportation. The referenced populations are no more uniquely exposed to such an occurrence than other population segments within the Study Area.</td>
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<tr>
<td>436</td>
<td>Public Involvement The Arizona Department of Transportation and Federal Highway Administration provided equal access to the public participation process to the Gila River Indian Community and its members. The Arizona Department of Transportation and Federal Highway Administration solicited input from the Gila River Indian Community and other Native American tribes and tribal members and considered fully the substantive input and comments that were received. Chapter 2 of the Final Environmental Impact Statement is dedicated to explaining the Gila River Indian Community outreach undertaken for the project. The Gila River Indian Community was provided the same opportunities to participate in the project as all other populations and agencies. The Arizona Department of Transportation advertisement efforts of the public hearing and public forums are documented in Chapter 6 of the Final Environmental Impact Statement beginning on page 6-23. The Gila River Indian Community Communication and Public Affairs Office informed the Arizona Department of Transportation that all communication and distribution of informational materials on Gila River Indian Community land would be handled by the Communication and Public Affairs Office. Advertisement text regarding the project, the public comment period, the public hearing, and the various ways for the public to submit comments regarding the South Mountain Freeway Draft Environmental Impact Statement was given to the Gila River Indian Community’s Public Information Officer at the... (Response 436 continues on next page)</td>
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</table>
Transportation Technical Team meeting on April 30, 2013. Two advertisements regarding the public hearing, information regarding the location and availability of the Draft Environmental Impact Statement, and a map of the alternatives was placed in the May 2013 monthly issue of the Gila River Indian News.

The Arizona Department of Transportation Community Relations distributed electronic notices (e-newsletters) through the Government Delivery system to over 12,000 constituents who voluntarily signed up for project alerts along Interstate 10 (Papago, Maricopa, and Santan Freeways). These electronic notices included notice of availability of the Draft Environmental Impact Statement (distributed on April 26, 2013); date of the public hearing (distributed on May 10, 2013); dates of the community forums (distributed on May 29, 2013); and notification in June regarding the close of the Draft Environmental Impact Statement public comment period. In addition, anyone who had attended a previous meeting regarding the proposed action and signed in received all of this information mailed individually. On May 6, 2013, 73,564 mailers were distributed to addresses within the Study Area.

The Arizona Department of Transportation provided vouchers for public hearing parking and for public transit to the hearing. For the first time in the State’s history, a shuttle bus to the hearing was provided from six locations in the Phoenix area, including two on the Gila River Indian Community (Komatke Boys & Girls Club and the Governance Center in Sacaton). All ads provided telephone numbers and electronic contact information regarding information on the shuttle schedules and pick-up locations.

Cultural Resources

The cultural and religious places of importance, like the South Mountains, are acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26. The proposed project would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.

Cultural Resources

Since the beginning of the environmental impact statement process, the Federal Highway Administration and Arizona Department of Transportation have been carrying out cultural resources studies and engaging in ongoing, open consultation with the Gila River Indian Community Tribal Historic Preservation Office regarding the identification and evaluation of places of religious and cultural importance to the tribe that may be adversely affected by the proposed freeway. Such places are referred to as traditional cultural properties. As a result of these discussions and of studies conducted by the Gila River Indian Community’s Cultural Resource Management Program, the Gila River Indian Community has identified traditional cultural properties that are eligible for listing in the National Register of Historic Places and that could be affected by construction of the proposed freeway. The traditional cultural properties identified are culturally important to other Native American tribes as well. For more discussion of traditional cultural properties, see the section, Cultural Resources, beginning on page 4-140 of the Final Environmental Impact Statement and pages 5-26 through 5-28.

(Response 438 continues on next page)
Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed.

### Cultural Resources

The American Indian Religious Freedom Act, 42 United States Code Section 1996, provides a policy statement of the United States to "protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian . . . including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites."

The Arizona Department of Transportation and Federal Highway Administration complied with the policy stated in the American Indian Religious Freedom Act throughout the environmental impact statement process, as evidenced by consultation efforts, mitigation measures, and a discussion of cultural resources issues in the Draft Environmental Impact Statement. The study would not violate the American Indian Religious Freedom Act because, as stated above, members of the Gila River Indian Community would not be prohibited from continuing to practice their beliefs even if the project goes forward because access to the mountain would be maintained, impacts would be mitigated based on input by the Gila River Indian Community and others, and only a small fraction of the mountain would be affected.

### Purpose and Need

The No-Action Alternative would not satisfy the purpose and need of this important regional transportation project. The E1 Alternative, designed to mitigate impacts as discussed in the Draft Environmental Impact Statement, would not violate the American Indian Religious Freedom Act or the Fourteenth Amendment.

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### Fiscal Impacts

While the SMF would have little positive economic benefit for the state or its residents, it would have adverse economic impacts for numerous reasons, including:

- The loss of approximately one billion dollars in Federal Highway funds at least once right away, and possibly many times later on, because the increase in air pollution would cause exceedences of required standards
- The cost of constructing the SMF, which would end up being far more than the two billions dollars currently predicted by ADOT because of all the issues not properly analyzed in the DEIS
- The loss of value to State Trust Land 620
- The loss of taxes from destroyed homes
- The loss of revenue from affected HOAs
In 2004, the City of Phoenix hired Crystal and Company to perform an analysis of the fiscal, economic, and social impacts of three potential alignments for the South Mountain Freeway. Relative to the Preferred Alternative (W59 and E1 Alternatives), the analysts estimated that, at build-out, the proposed freeway would create over 86,400 jobs and result in annual sales and property tax receipts in excess of $86.5 million. The study estimated that build-out would take approximately 20 years from freeway completion.

The traveling public would also benefit from the proposed freeway. When considering travel time savings, this benefit averages approximately $200 million per year between 2020 and 2035 (see Table 4-27 on page 4-67 of the Final Environmental Impact Statement).

Alternatives

The contribution of mobile sources (traffic) to air quality in the Study Area is addressed beginning on page 4-58 of the Draft Environmental Impact Statement. The carbon monoxide and particulate matter (PM10) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones; therefore, no federal funding would be jeopardized.

Cost estimates for the proposed freeway, as described beginning on page 3-59 of the Draft Environmental Impact Statement, were developed in accordance with accepted engineering practices by professional engineers. The Arizona Department of Transportation, Federal Highway Administration, Maricopa Association of Governments, and their consultants have peer-reviewed the proposed project's cost estimates in terms of both the quantities and unit costs used in the estimates. In each case, the estimates were found to be reasonable and accurate.

The Arizona State Land Department would be compensated for the land acquired as part of freeway construction. The remaining land would continue to be valuable and might have increased value with the improved access provided by the proposed freeway.

Impacts on property and sales tax revenues are quantified in the section, Economic Impacts, beginning on page 4-46. These impacts would be inconsequential when considered in the context of total tax revenues the City of Phoenix now collects and anticipates collecting in the future.

Homeowners associations would be compensated for property acquired for construction of the freeway in accordance with State law.

The cost of relocating utilities is included in the total costs presented in the Draft Environmental Impact Statement.

It is assumed the reference to the superfund site is to the West Van Buren Water Quality Assurance Revolving Fund site. This site would not be affected by construction of the freeway.

The Arizona Department of Transportation is experienced with handling drainage and erosion because they are important issues on every construction project. To minimize these issues, standard practices would be employed with construction, operation, and maintenance of the proposed freeway.

Maintenance costs are considered in the project development and are planned in the Arizona Department of Transportation’s budget.
While the E1 Alternative is adjacent to largely residential areas of Ahwatukee Foothills Village (to the north), a freeway has been planned in this location for many years (see Final Environmental Impact Statement pages 4-17 and 4-21). Where existing residential uses are adjacent to the proposed freeway, noise mitigation would be implemented according to Arizona Department of Transportation policy (see page 4-91 of the Draft Environmental Impact Statement). The proposed freeway would not adversely affect north–south access because the land immediately south of Pecos Road is Gila River Indian Community land, with no existing north–south access. (See the E1 portion of Table 4-9, on page 4-27 Draft Environmental Impact Statement.)

While the City of Phoenix Police Department reported in 2005 that it did not have any statistics specific to crime adjacent to freeways, it did note that based on its experience there does not appear to be a correlation between crime rates and freeways.

Average daily traffic volumes on freeways and arterial streets are projected to increase substantially in and adjacent to the Study Area between 2010 and 2035. Contrary to the statement in the comment, the Draft Environmental Impact Statement notes that the proposed freeway would avert the congestion anticipated on arterial roads. As noted in the Draft Environmental Impact Statement, “The No-Action Alternative would not alleviate projected increases in traffic volumes and congestion on the Interstate and regional freeway systems or on the local street network by the design year 2035. It would instead, lead to worsening traffic congestion and substantial related impacts” (see page S-8 of the Draft Environmental Impact Statement).

There is no evidence that the proposed facility would cause people to leave the area. The region’s benefits would remain, and improved access to residences and businesses would make them more desirable.

The main line of the E1 Alternative would not have a bicycle route as part of the design. Continuous east–west riding would be possible in the neighborhoods adjoining the alternative and along Chandler Boulevard.

Emergency responders would address the construction of the proposed freeway by amending the local emergency response plan to include the facility.
The benefits of the proposed freeway in comparison with the No-Action Alternative are described throughout the Draft and Final Environmental Impact Statements.

According to 23 Code of Federal Regulations §771.111(f), “the action evaluated in the environmental impact statement must connect logical termini and be of sufficient length to address environmental matters on a broad scope...”. The proposed action should satisfy the project need and should be considered in the context of the local area socioeconomics and topography, the future travel demand, and other infrastructure improvements in the area. A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not feasible because it would not meet the proposed freeway’s identified purpose and need.

The No-Action Alternative is included for detailed study in accordance with National Environmental Policy Act requirements to compare beneficial and adverse impacts of the action alternatives with those benefits and consequences (adverse impacts) of not proceeding with one of the action alternatives. (Impacts can occur through choosing to do nothing.) The No-Action Alternative would not satisfy the purpose and need of the proposed action (see page 3-40 of the Draft Environmental Impact Statement).

The Arizona Department of Transportation, with concurrence from the Federal Highway Administration, identified the W59 and E1 Alternatives as the Preferred Alternative.

The proposed freeway would connect logical termini and be of sufficient length to address environmental matters on a broad scope. The proposed action should satisfy the project need and should be considered in the context of the local area socioeconomics and topography, the future travel demand, and other infrastructure improvements in the area. A partial freeway from Interstate 10 (Papago Freeway) to Laveen Village is not feasible because it would not meet the proposed freeway’s identified purpose and need.

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The Arizona Department of Transportation, with concurrence from the Federal Highway Administration, identified the W59 and E1 Alternatives as the Preferred Alternative.
**Additional Comments**

**Two**

Comment 1-10
The information presented in Figure 1-4 and the complementary Figure 1-6 are based on historic Census data and Maricopa Association of Governments socioeconomic projections. The information is for Maricopa County, not Arizona and not the United States. The historical growth in the Maricopa Association of Governments region is discussed in the Draft Environmental Impact Statement, beginning on page 1-5. The critical factors such as available land, mild climate, affordable cost of living, and employment opportunities that led to the historical growth rates in the region remain unchanged.

In Maricopa County, daily vehicle miles traveled levels increased by almost 2 percent between 2011 and 2012 and the 2012 daily vehicle miles traveled is approaching the prerecession peak in 2007. (Source: Arizona Department of Transportation Multimodal Planning Division Highway Performance Monitoring System Data for the calendar years 2012 and 2011). The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.
Total Vehicle Miles Traveled and Urban Vehicle Miles Traveled in Alabama

Sources: FHWA Highway Statistics Series, Table VM-2, and $1.5C
### Purpose and Need

**448** While portions of State Route 202L (Red Mountain and Santan freeways) were not completed in 2003, they would be completed prior to the start of the planning horizon for the Regional Transportation Plan (2006 to 2026). Therefore, they were considered existing facilities during the development of the Regional Transportation Plan.

**449** The 2035 projections for population are from the Maricopa Association of Governments socioeconomic projections. These projections are adopted by the Maricopa Association of Governments Regional Council to support transportation studies such as the South Mountain Freeway Draft Environmental Impact Statement. Projections are based on regional growth control totals allocated to subregions based on planned land use and existing land use patterns. Basing 2035 population on actual permitting of housing units would not provide an accurate picture of future population for the horizon year, as permits are typically acquired at the time of construction.

**450** Growth projections for 2035 are not predicated on specific transportation improvements; rather, they are based on future land use plans, as envisioned by their respective jurisdictions. With few exceptions, land in the Study Area is privately owned; zoning requests to develop private land are typically based on these land use plans. In Phoenix in particular, development is occurring regardless of the proposed freeway. Not building the proposed freeway would not likely cause development to go elsewhere, and congestion on the arterial street network and existing freeways would continue to worsen with the No-Action Alternative.

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**Comment 2**

Figure 1-2 - Many of the "Existing freeways" were under construction or still in planning? (SR-202, northern parts of 1017)

**Comment 3**

Figure 1-5. Are 2035 projections for population locations/growth based on actual permitting of housing units, or just on land potentially available for development?

**Comment 4**

Figure 1-7. How do the growth projections depend on the project implementation? Meaning, without the freeway, congestion in the west valley may limit growth there. Does housing permits in the west valley assume the freeway will be built? Just because they assumed there would be congestion relief doesn't mean the freeway needs to be built. Without the freeway, growth will just happen somewhere
Table 3-2. Valley Metro is reportedly studying a light rail connection from Ahwatukee to Central Phoenix via Central south to Baseline to 48th Street south. The current project site is here: https://www.valleymetro.org/Projects_and_Planning/Project_Detail/SouthCentral

This doesn’t mention the extension south to Ahwatukee, but there are rumors it could eventually make that connection.

Table 3-2 and Page 3-6. The Phoenix General Plan is being currently updated from the year 2000 general plan (the last one approved). It may include significant transit oriented land use requirements. ADOT just completed a study which showed that land use can have a very significant impact on travel. http://www.sxtapdwp-content/uploads/2012/06/2012LandUseandTrafficCongestion2012.pdf

Table 3-2. The non-freeway alternatives may each alone not have a large potential, but there may be synergistic effects between them when deployed together. For instance, TBM programs, along with new transit options may reinforce each other.

Figure 1-1 – missing outline of South Mountain park preserve.

Page 3-34. “Time savings would be experienced during peak travel times of the day. Taken individually, savings may not appear to be substantial, but when considered in the context of the hundreds of thousands of drivers, each day, over the course of numerous years, the cumulative time savings would be substantial.” Models show very small improvements in travel time for the average driver. Yet driver time savings is so small that it can hardly be called a real, measurable benefit. The “total time savings” over the entire population is meaningless, since two people’s time savings can’t add up to be used for any benefit.

The section on fiscal impacts of the project, beginning on page 4-47, discusses changes in the tax base due to the conversion of land from tax-generating to transportation right of way. Another economic...
Impact of the freeway will be a devaluation of residential properties near the right of way due to environmental nuisances (noise, air quality). We would like to see an estimate of this loss in property values and subsequent loss in tax base.

[NOTE: ADOT could respond that there are also increases in property values due to the freeway that they are not taking into account. But, since we are interested in negative impacts, there is still a need to account for declines in property values.]
Additional Comments

Three

Comments on DEIS Discussion of Section 4(F) of the Transportation Act
The newest South Mountains trails, the Bursera and the Pyramid, are more than 1/4 mile from the proposed freeway and are analyzed in the Final Environmental Impact Statement on page 5-9. The trails are within 1/4 mile of the planned Chandler extension and residential development; however, these trails do not have noise-sensitive activities or viewshed characteristics that contribute to their importance as Section 4(f) recreational resources. Discovery of new information not presented in a Draft Environmental Impact Statement as it is published is not failure. Review by agencies and the public of a Draft Environmental Impact Statement equates to a review of a draft report to aid the agencies in making the document more objective and defensible. In this manner, the realization of new information, if such instances of new information are validated by the federal lead agency, permits the Arizona Department of Transportation and its representatives to defensibly embellish on the document's content.

Trails within Phoenix South Mountain Park/Preserve were not eliminated. City-owned trails within the park were considered collectively as part of the City-owned park. There are no direct or constructive uses of any trails within Phoenix South Mountain Park/Preserve (see discussion beginning on page 5-14 in the Final Environmental Impact Statement).

The comment refers to a statement on page A586 of the Appendix to the Draft Environmental Impact Statement. The statement is made in a section entitled, *City of Phoenix Trails System*, which refers to the overall trails system of the City. It is also contained in a section discussing overall eligibility of trails to protection under Section 4(f). No reference to the trails within South Mountain Park/Preserve appears in this statement and there is no attempt to exclude South Mountain Park/Preserve Trails from consideration under Section 4(f).

The discussion of resources afforded protection under Section 4(f) contains an analysis of the trails of the South Mountain Park/Preserve (see discussion beginning on page 5-14 of the Final Environmental Impact Statement).

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<td>457</td>
<td><strong>Comments on DEIS Discussion of Section 4(f) of the Transportation Act</strong>&lt;br&gt;The South Mountain 2022 Draft EIS Section 4(f) Evaluation has not adequately analyzed Section 4(f) resources in SMNP, specifically the trails which are in the western end of the study area. It has erroneously dismissed Section 4(f) resources and has neglected the identification of other Section 4(f) resources. <strong>Improper Elimination of a Section 4(f) Resource from the DEIS</strong>&lt;br&gt;The following section demonstrates how the DEIS erroneously disqualified Section 4(f) resources (trails) by applying the wrong information, having a lack of knowledge of the project area and the City of Phoenix. In Appendix 5-1, on page A586, the DEIS attempts to disqualify the Section 4(f) trails in the SMNP by quoting a Goal from the Circulation Element of the General Plan: “Since approximately 60 percent of all trips are less than two miles in length, bicycling and walking can help relieve roadway congestion.” The DEIS continues to state that since the General Plan indicates that pedestrian trails maintained by the City of Phoenix are used for transportation and that they are not primarily recreational. It is incorrect to select the Circulation Element to qualify if the trails are for pedestrian or recreational use. The Circulation Element refers to trail/paths on the City Circulation (streets/roads) System. The trails in South Mountain are not on roads or sidewalks and not part of the Circulation Element, they are in the park and are strictly recreational, they do not serve a transportation purpose. Thus they remain Section 4(f) resources to be analyzed for direct or constructive impacts. The DEIS then uses the Recreation Element of the General Plan to assert that the City is in cooperation with private developers is working to provide trails and therefore these trails are on private land and maintained by the developers and do not adhere to Section 4(f) protection. Again, the trails in South Mountain are not on private land they are on City of Phoenix public land. The National Trail, the Maricopa Trail, the Gila Trail, and the Bursera Trail are all within the park and as such are strictly recreational: hiking and biking trails and are ON public land. Thus they remain Section 4(f) resources to be analyzed for direct or constructive impacts. The last paragraph on p. A586 implies that because the City gets Transportation Enhancement Activity (TEA) Funds to build trails, that the trails in South Mountain are built with TEA funds. This again is an erroneous statement. All the trails in the park fall under the purview of South Mountain and are referenced in the Open Space Element of the 2002 General Plan (P.251). These trails do not receive TEA funds, these trails are built and maintained with City of Phoenix Parks Department funds (some of which come from citizen bonds). As you can see, the disqualification of trail in South Mountain based on the above assessment is inaccurate, far-reaching and just plain wrong. This shows a true lack of knowledge about the SMNP, the trails, Section 4(f) resources and a defensible analysis. Thus they remain Section 4(f) resources to be analyzed for direct or constructive impacts.</td>
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The newest South Mountains trails, the Bursera and the Pyramid, are more than ¼ mile from the proposed freeway and are analyzed in the Final Environmental Impact Statement on page 5-9. The trails are within ¼ mile of the planned Chandler extension and residential development; however, these trails do not have noise-sensitive activities or viewshed characteristics that contribute to their importance as Section 4(f) recreational resources.

The newest Phoenix South Mountain Park/Preserve trails, the Bursera and Pyramid, have been included in an updated trails map in the Final Environmental Impact Statement. Visual analysis maintains that the cuts would be located in a remote portion of Phoenix South Mountain Park/Preserve, not near any trail and barely visible from any of the more readily used trails. City-owned trails within the park were considered collectively as part of the City-owned park. Discussions with the South Mountain Ranger indicate that the Gila Trail—although well-defined—is not a designated trail within the park. There are no direct or constructive uses of any trails within Phoenix South Mountain Park/Preserve.

Visual analysis establishes that the proposed cuts would be in a remote portion of Phoenix South Mountain Park/Preserve, not near any trail, and would be barely visible from any of the more readily used trails. From the view provided, one can also see the development along 51st Avenue. The South Mountains provide views of urban Phoenix, including its freeways.

There is no constructive use of the trails within Phoenix South Mountain Park/Preserve, including the ones the comment mentions. The trails are within ¼ mile of the planned Chandler extension and residential development; however, these trails do not have noise-sensitive activities or viewshed characteristics that contribute to their importance as Section 4(f) recreational resources. Although cuts could be seen, this would not render the trail unusable for recreational purposes.
direct use of these trails, there will clearly be a constructive use of these trails. It is tragic that the solitude, proudeflness and beauty experienced on these trails (old and new) will be so dramatically diminished by the proposed action. This must be included in a constructive use analysis.

The Section 4(f) evaluation is incomplete and filled with misstatements, therefore the analysis is deficient. Figure 5-6 needs to be amended to include the trails and develop measures to minimize harm. At a whole, this report needs to be amended and alternatives reevaluated to avoid impact and/or evaluate measures to minimize harm.

As an overall final editorial, it seems tragic that the process went out of its way to realize the proposed project to preserve other Section 4(f) resources (Mudstone Farm, Bones Dairy Farm, and Hacken Farmstead, all on private property) when it is most certain they are only being preserved to be eventually demolished by future development, yet other Section 4(f) resources such as the trails in SMPP, which will be used by thousands of people for many years to come, are downgraded, devalued and dismissed as an important protected resource.

Many of the statements in the Section 4(f) Evaluation are clearly pre-decisional and the evaluation was not done by or with a professional who understands the SMPP, its trail system or the City of Phoenix General Plan. This leads to a misleading analysis. The public uses the DIS as a tool for information, yet the information is not only incomplete but wrong. The Section 4(f) evaluation needs to be revised.

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<td>464</td>
<td>Section 4(f) and Section 6(f) Trails maps have been updated, and new trails are analyzed in the Final Environmental Impact Statement because they are within ¼ mile of the Chandler Extension (not the proposed freeway) (see page 5-9). Because none of the action alternatives or options would not incorporate land from the Section 4(f) resource, and would have no proximity impacts so severe that the protected activities, features, or attributes that qualifies the trails for protection under Section 4(f) are substantially impaired, no measures to minimize harm are warranted.</td>
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<td>465</td>
<td>Section 4(f) and Section 6(f) The process upon which Section 4(f) resources were identified and evaluated for feasible and prudent avoidance possibilities followed the rigorous procedural requirements as set forth in Federal Highway Administration Technical Advisory T 6640.8A Guidance for Preparing and Processing Environmental and Section 4(f) Documents and related guidance. The comment suggests trails in the South Mountain Park/Preserve would be subject to direct or constructive use; however, as shown in Chapter 5 of the Final Environmental Impact Statement, such use would be avoided by the proposed freeway.</td>
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<td>466</td>
<td>Section 4(f) and Section 6(f) Trails within Phoenix South Mountain Park/Preserve were not eliminated. City-owned trails within the park were considered collectively as part of the City-owned park. There are no direct or constructive uses of any trails within Phoenix South Mountain Park/Preserve (see discussion beginning on page 5-14 in the Final Environmental Impact Statement). Trails maps have been updated, and new trails are analyzed in the Final Environmental Impact Statement because they are within ¼ mile of the Chandler Extension (not the proposed freeway) (see page 5-9). Because none of the action alternatives or options would not incorporate land from the Section 4(f) resource, and would have no proximity impacts so severe that the protected activities, features, or attributes that qualifies the trails for protection under Section 4(f) are substantially impaired, no measures to minimize harm are warranted. The Section 4(f) evaluation in its entirety represents an exhaustive, comprehensive, objective, and meaningful effort in accordance with requirements of the law. Evaluation of each resource included active engagement of resource owners to clarify resource importance and use (extensive interaction with owner/operators of Section 4(f) resources is well documented in the Appendices of the Final Environmental Impact Statement). The U.S. Department of the Interior [the agency with direct oversight of Section 4(f)] review of the Draft Environmental Impact Statement noted: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4 of the Final Environmental Impact Statement. The Section 4(f) evaluation was thorough and complete.</td>
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<td><strong>Additional Comments</strong></td>
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<td><strong>Four</strong></td>
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<td>Reevaluate Purpose and Need Statement</td>
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At the beginning of the environmental impact statement process, the need for a major transportation facility was reexamined to determine whether such a facility is still needed. Validation of those findings occurred throughout the entire environmental impact statement process. Analysis of the purpose and need for the proposed action followed National Environmental Policy Act and Federal Highway Administration implementing guidance on the subject matter and used state-of-the-practice analytical tools, as pointed out in Table 1-3, “Traffic Analysis Tools,” on page 1-13 of the Draft Environmental Impact Statement. The results of the analysis determined that a transportation problem does exist and that problem will continue in the foreseeable future (see section, Conclusions, on page 1-21). As noted on page 3-1 in the section, Reconfirm the Purpose and Need for the Proposed Action, a continuous validation process was undertaken throughout the environmental impact statement process to ensure past conclusions in the environmental impact statement process remained valid.

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

The Maricopa Association of Governments’ control total for Maricopa County is consistent with the “ADOA—Medium Series.” The National Environmental Policy Act recognizes 1) that data and projections can change throughout the process, 2) that it is important for the process to make accurate predictions and projections about the future growth and demands in the valley, and 3) that a reasonable person could conclude that the updated information would lead to substantially different results that could affect the decision-making attributes of the National Environmental Policy Act. This guidance permits disciplinary experts to make study recommendations based on recognized expertise without having to “overstudy everything,” thus maintaining the spirit and intent of National Environmental Policy Act directives on timely completion and flexibility in the process. Validation of information has occurred throughout the duration of the environmental impact statement process; the assessment of purpose and need for the proposed action is no different, and analytical validation is part of the Final Environmental Impact Statement.
The reader is referred to Draft Environmental Impact Statement Chapter 3, Alternatives, and, specifically, the section, Alternatives Development and Screening Process Conclusions, beginning on page 3-26, noting "... a comprehensive set of alternatives including all modes was considered ... assurance that the screening process was an open process ... a logical, sequential, step-by-step process using data and expertise from multiple disciplines ..." to demonstrate all possibilities were considered.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

The Federal Highway Administration and the U.S. Environmental Protection Agency approved the air quality conformity determination that includes the Maricopa Association of Governments regional travel demand model that produced the traffic projections used in the traffic analysis for the project (see page 3-27 of the Draft Environmental Impact Statement). The model projects demand for multiple modes of travel, including automobile, bus, and light rail. Key model inputs used to forecast travel demand in the Study Area included socioeconomic data (based on land use plans and population and economic forecasts), the anticipated average number of vehicle trips within the region, the distribution of transportation modes used by travelers in the region, the capacity of the transportation infrastructure to accommodate regional travel, and the future transportation infrastructure. The project team used the most recent and reliable data available. The Draft Environmental Impact Statement (Chapter 1, Purpose and Need, and Chapter 3, Alternatives) provides more detail on the data inputs to the modeling effort and discussions of the assumptions used.

As noted in the comment, the Maricopa Association of Governments and Arizona Department of Transportation continually study the changes in travel trends and reflect these changes in their travel-generation modeling. Any new information presented in the Final Environmental Impact Statement has been evaluated as to whether it constitutes a substantial change from the information presented in the Draft Environmental Impact Statement. The Federal Highway Administration and Arizona Department of Transportation have examined the data and analysis and have determined that a supplemental environmental impact statement is not warranted.
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The proposed freeway is part of the Regional Transportation Plan for the Maricopa Association of Governments region. The Regional Transportation Plan, as described on pages 1-5 and 1-10 of the Final Environmental Impact Statement, addresses freeways, streets, transit, airports, bicycle and pedestrian facilities, freight demand management, system management, and safety. The proposed freeway is only one part of the overall multimodal transportation system planned to meet the travel demand needs of the Maricopa Association of Governments region.

As stated in the subject heading referenced in the comment, the text referenced places the Context of the Proposed Action in Current Regional Transportation Planning: no text directly or indirectly codifies one transportation project in the Regional Transportation Plan as presented in the Final Environmental Impact Statement.
<table>
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Additional Comments

Five

Lakewood Community Association’s Concerns & Response to DEIS for Loop 202 (South Mountain Freeway) dated July 20, 2013.
LAKEWOOD COMMUNITY ASSOCIATION’S CONCERNS &
RESPONSE TO DEIS FOR LOOP 202
(SOUTH MOUNTAIN FREEWAY)

Prepared for
Protect Arizona’s Resources and Children (PARC), et al.
Phoenix, Arizona

by
Lakewood Community Association Board of Directors
July 20, 2013
Because of the public concern expressed during the environmental impact statement process, page 4-100 of the Draft Environmental Impact Statement, focuses on the Foothills Community Association to provide more details on the well acquisition, condition assessment, and replacement process used by the Arizona Department of Transportation. The Arizona Department of Transportation understands, and states on page 4-100 of the Draft Environmental Impact Statement, respectively, that finding a suitable location for a new well in this area may be difficult.

Depending on whether an action alternative were to become the Selected Alternative, it may be possible to keep certain wells in their current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.

The project would not adversely affect any of the artificial lakes and ponds along Pecos Road and, therefore, would not affect migratory birds using those water features. There are no natural riparian areas or riparian vegetation adjacent to Pecos Road; the vegetation growing along the drainage ditch on the southern side of Pecos Road would not be removed.

The reader is referred to the section, Social Conditions, beginning on Final Environmental Impact Statement page 4-20, to learn about criteria applied when considering impacts on social conditions and what mitigation is under consideration. Mitigation measures proposed can be found throughout Chapter 4. These have direct application to the reduction of impacts that could affect certain definitions of quality of life.

As to property values and the effects of proximity of freeway, numerous studies have been done on the subject and in general, results have varied but with an underlying consensus that many variables contribute to property values.

As to property values and the effects of proximity of freeway, numerous studies have been done on the subject and in general, results have varied but with an underlying consensus that many variables contribute to property values. A review of the literature reveals few detailed and comprehensive analyses of the relationship between the transportation infrastructure and residential property values (Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pages 138-47; "Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor"). A recent study by the California Department of Transportation concluded that freeway facilities did not substantially affect sales prices in residential areas adjacent to the facility. The study concluded that it is the visibility of the freeway that may influence selling price and not distance or noise. As a result, the researchers generally concluded that the more the visibility of a new freeway is reduced, the less it would determine the sales price of homes sold in the area.

The procedure identified on page 4-100 of the Draft Environmental Impact Statement, defines the procedure that the Arizona Department of Transportation would use to replace adversely affected wells, and also identifies the general costs the Arizona Department of Transportation would incur to replace the lost water sources. As noted in this discussion, if it were necessary to provide replacement water instead of a new well, the Arizona Department of Transportation would, in negotiations with the well owner, include the difference between the costs of pumping the well and the costs of the new replacement water source. Which of these outcomes would take place would become known during the final design of the Selected Alternative, should an action alternative be selected.

(Continued on next page)
Lakewood HOA’s South Mountain Freeway Concerns:

1. **Loss of Water from Community Water Wells:**

   The lakes are a centerpiece of the Lakewood community, losing the existing groundwater well supply will have a significant negative impact on the entire community, which consists of approximately 2,800 units. With respect to the Foothills Community Association, the DEIS makes the statement that “it is assumed that a new well location could be found that would produce water comparable in quality and quantity to the acquired well, and that there would be no negative impact to the existing groundwater right.” The Lakewood Community Association has an even greater dependence on water than the Foothills, and the DEIS statement ignores the significant difficulty that was originally encountered in finding a source of water when Lakewood was incorporated. It is uncertain whether or not the existing well could be replaced, regardless of costs. With the state of Arizona currently restricting or disallowing man-made lakes in new property development, it is also unclear whether or not municipal water could be used as a source. As a result of the loss of the lakes, the property values in Lakewood would be negatively impacted with grave consequences to the entire community.

   In addition to financial impacts, there are environmental as well, migratory birds would no longer have Lakewood as a possible stopping point along their migration route, and the destruction of the natural riparian area south of Pecos will be a detriment to the wildlife in the area.

2. **Home Valuation:**

   A. Reduction in property values based health/environmental impacts such as air and noise pollution.

   B. Substantial reduction in property values if access to water is hindered which could endanger the existence of the Lakes. The whole community is based on the existence and proximity to the Lakes. Current property values are based on a lake community and lifestyle.

   C. Substantial reduction in property values for lake-front homes if lakes are compromised by water access.

   D. Ability to resell a Lakewood home would be detrimentally impacted due to air and noise pollution.

   E. Freeway would disrupt a quiet and clean Lakewood environment which would drive property values lower.

   F. Lost revenue to HOA from Lakewood home displacements would decrease community facilities and amenities causing downward pressure on property values.

   G. Freeway would have negative lifestyle impacts which would reduce the value of living in Lakewood and thus cause home values to fall. Lifestyle impacts include reduced access to safe recreation like cycling and roller-blading around community roads due to increased and altered traffic. Freeway noise would also impact outdoor leisure and activities such as community picnics, swimming and outdoor dining.

   H. Freeway could disrupt the reliable performance of the primary aquifer which supplies Lakewood with its water and thus Lakes. These disruptions could include deviations to surface and ground water flows which feed the aquifer. As this reliable source of water is endangered, the reliability of the Lakes and irrigation of community vegetation would be endangered. This would lead to negative impacts to lake recreation and appearance of the community. Ultimately, the existence of the Lakes themselves could be threatened. This would make Lakewood a much less attractive place to live and substantially decrease home and property valuation.

**Response 477 (cont.)**

477 Noise, Air Quality

Depending on whether an action alternative were to become the Selected Alternative, it may be possible to keep certain wells in their current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.

Environmental analyses and noise analyses conducted for and documented in the Draft Environmental Impact Statement comply with the Federal Highway Administration’s regulations for implementing National Environmental Policy Act at 23 Code of Federal Regulations 771 and for conducting noise analyses at 23 Code of Federal Regulations 772. These issues are addressed in the Draft Environmental Impact Statement. Sensitive receivers for noise and air are already included in the air quality and noise analyses in accordance with State and federal guidance. The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM) and followed U.S. Environmental Protection Agency guidelines. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

According to the air quality analyses conducted for the proposed freeway, no violations of either the carbon monoxide or particulate matter (PM) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones; therefore, no mitigation of these effects is required.

The noise analysis was also updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted.

(Response 477 continues on next page)
A review of the literature reveals few detailed and comprehensive analyses of the relationship between the transportation infrastructure and residential property values (Transportation Research Record: Journal of the Transportation Research Board, No. 2174, Transportation Research Board of the National Academies, Washington, D.C., 2010, pages 138–47; “Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor”). A recent study by the California Department of Transportation concluded that freeway facilities did not substantially affect sales prices in residential areas adjacent to the facility. The study concluded that it is the visibility of the freeway that may influence selling price and not distance or noise. As a result, the researchers generally concluded that the more the visibility of a new freeway is reduced, the less it would determine the sales price of homes sold in the area.

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Air Quality analyses conducted for and documented in the Draft and Final Environmental Impact Statements complies with the Federal Highway Administration’s regulations for implementing the National Environmental Policy Act at 23 Code of Federal Regulations 771. These issues are addressed in the Draft and Final Environmental Impact Statements. Sensitive receivers for air are already included in the air quality analyses in accordance with State and federal guidance. The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM₁₀) and followed U.S. Environmental Protection Agency guidelines. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM₁₀) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

According to the air quality analyses conducted for the proposed freeway, no violations of either the carbon monoxide or particulate matter (PM₁₀) standards were identified, even at worst-case locations along the project corridor. Thus, the carbon monoxide and particulate analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. 40 Code of Federal Regulations Section 1500.1(b) also directs the Federal Highway Administration to focus its National Environmental Policy Act analysis and documentation on issues that are truly significant to the action in question. In the context of mobile source air toxics, the Federal Highway Administration must consider whether changes in mobile source air toxics emissions attributable to a project have the potential for significant health risk. Using cancer risk as an example, the U.S. Environmental Protection Agency estimates that the overall risk of cancer in the United States is approximately 330,000 in a million, and that air toxics (from all sources) are responsible for a risk of approximately 50 in a million. In its most recent mobile source air toxics rule-making, the U.S. Environmental Protection Agency estimated mobile source air toxics cancer risk, after implementation of emissions controls, at approximately 5 in a million (or 0.0015 percent of overall cancer risk from any cause). For the South Mountain Freeway project, the mobile source air toxics emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-77 of the Final Environmental Impact Statement). Like most highway projects that have received a mobile source air toxics emissions analysis, the South Mountain Freeway project would result in a negligible change to a very small component of overall cancer risk, and this risk is declining regardless of alternative.
3. **Home Displacement**
   A. Freeway right-of-way could encroach on existing Lakewood homes requiring destruction of several family homes.
   B. Local community neighborhoods within Lakewood would see a serious negative impact or cease to exist due to destruction of homes and relocation of neighbors.
   C. Loss of community integrity and relationships, especially for small children separated from friends who would be forced to move away due to home displacement.

4. **Lost Revenue to HOA**
   A. Direct assessment revenue losses of $350/home per year for each home displaced.
   B. Further loss of assessments if vacancy rate increases due to image of Lakewood being a less attractive place to live due to deleterious lifestyle impacts of the freeway.
   C. Vicious cycle of revenue loss leading to reduction of community services leading to further revenue loss (as vacancy rates increase).

5. **Air Quality**
   A. The air quality cause by increase traffic and trucks will decrease the air quality in our community and pose a serious health risk to the residents of the community.

6. **Traffic Flow and Increase Congestion**
   A. Without access to the freeway at 32nd Street, there will be an increase in traffic flow and congestion between 24th Street and 40th Street within the Lakewood Community boundary.

7. **Increase in Noise from Freeway Traffic**
   B. The noise level will dramatically increase due to the proximity of the freeway and the increase in traffic and trucks in and around our community.

8. **Loss of Access to Property South of Pecos**
   A. The HOA owns land south of Pecos which the freeway will cut off any kind of access to.

9. **Water Retention Issues/Concerns**
   A. The freeway will be changing the water run off patterns and cause water retention concerns.

10. **Loss of Bike Paths on Pecos**
    A. Our community members will no longer have access to the uniquely long, flat bike lane located on Pecos.

11. **Additional Stress on Deteriorating Surface Streets in Community**
    A. The increase in traffic on the community’s surface streets will only add additional stress on our already deteriorating city streets in the community.

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### Code | Issue | Response
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483 | Traffic | The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Final Environmental Impact Statement). The interchange would have displaced over 100 homes and would have been located near an existing high school.

In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabria from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).

484 | Noise | Noise analyses conducted for and documented in the Draft and Final Environmental Impact Statements comply with the Federal Highway Administration’s regulations for implementing the National Environmental Policy Act at 23 Code of Federal Regulations 771 and for conducting noise analyses at 23 Code of Federal Regulations 772. These issues are addressed in the Draft and Final Environmental Impact Statement. Sensitive receivers for noise are already included in the noise analysis in accordance with State and federal guidance. As stated on page 4-82 of the Draft Environmental Impact Statement, over 220 sensitive receivers were evaluated from a traffic noise perspective. All of the receivers represent noise sensitive land uses in proximity to the proposed project; therefore, these receivers would have higher noise levels than the schools more distant from the proposed action. The noise analysis was also updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted.

485 | Acquisitions and Relocations | Access to the land south of the proposed freeway would be maintained in a similar way as the access existing today. If reasonable access could not be maintained, the property might be subject to acquisition by the Arizona Department of Transportation in accordance with State law.

486 | Design | Pecos Road drainage is designed as a pass-through system. In other words, water is allowed to drain along its natural existing pathway underneath the freeway and to Gila River Indian Community land.

If an action alternative were to become the Selected Alternative, the E1 Alternative would be constructed above ground and the existing culverts would extend to pass drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Extending the existing culverts or upsizing the culverts would maintain or improve drainage flows. This would ensure that there would be no adverse flooding impacts to adjacent properties. (See pages 3-18, 4-98, and 4-107 of the Draft Environmental Impact Statement.)

487 | Design | The main line of the E1 Alternative would not have a bicycle route as part of the design. Continuous east-west riding would be possible in the neighborhoods adjoining the alternative and along Chandler Boulevard.

488 | Traffic | In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).
Additional Comments

Six

Comments of Nicoli V. Kuminoff on the DEIS for South Mountain Freeway, dated July 21, 2013
At the beginning of the environmental impact statement process, the need for a major transportation facility was reexamined to determine whether such a facility is still needed. Validation of those findings occurred throughout the entire environmental impact statement process. Analysis of the purpose and need for the proposed action followed National Environmental Policy Act and Federal Highway Administration implementing guidance on the subject matter and used state-of-the-practice analytical tools, as pointed out in Table 1-3, “Traffic Analysis Tools,” on page 1-13 of the Draft Environmental Impact Statement. The results of the analysis determined that a transportation problem does exist and that problem will continue in the foreseeable future (see section, Conclusions, on page 1-21).

The comment implies that the freeway condition was predetermined. As noted on page 3-1 in the section, Reconfirm the Purpose and Need for the Proposed Action, a continuous validation process was undertaken throughout the environmental impact statement process to ensure past conclusions in the environmental impact statement process remained valid.

The social, environmental, and economic effects of all alternatives, including the No-Action Alternative, are presented in the Draft and Final Environmental Impact Statements.
Comment 490: The DEIS implies that a majority of Maricopa County residents support building the proposed South Mountain Freeway without having any factual basis to support this implication. There are numerous examples of this, especially in the early chapters of the DEIS. One example is the “What do the results of Propositions 300 and 400 tell us” sidebar on page 1-9. The problem is that the proposed South Mountain Freeway was a fairly minor detail in the information provided to voters on the broader regional transportation plan. Voters have never had an opportunity to express their opinions on the South Mountain Freeway separately from other regional transportation projects that were bundled as part of these propositions and were in more immediate need of funding at the time the propositions were presented to voters. Furthermore, neither proposition provided voices with basic details on the South Mountain Freeway such as the expected construction cost and the number of lanes. Furthermore, at the time people voted on proposition 300 the town of Ahwatukee was largely undeveloped. Likewise, the regional transportation plan provided to voters as part of the Proposition 400 elections of 2004 failed to anticipate the location, size, use, financial cost and social costs of building the freeway. It is also noteworthy that both votes occurred before the onset of the great recession. The bottom line is that there is no reason to expect that Maricopa county voters would support building the South Mountain Freeway, if they were given the opportunity to vote today. In addition, the question of whether or not voters liked the idea of a new freeway extension 30 years ago or 10 years ago is merely irrelevant to the question of whether or not it makes sense to build the freeway today.

Comment 491: The effort to model the effect of the freeway on ambient concentrations of criteria air pollutants is inadequate and misleading. For example, the discussion of carbon monoxide (CO) in sections 4-65 of the DEIS points out that impacts were modeled using information from Maricopa County’s current network of air quality monitoring sites in the region. Yet the discussion fails to mention that Maricopa County does not have any air quality monitoring sites in the Ahwatukee foothills (http://alden.fd.maricopa.gov/alerts/Google/View/Alert_36.html). This is a serious flaw in the modeling assessment because the prevailing wind patterns and foothills topography will likely cause most of the emissions of pollutants to be blown into pockets of
492 Air Quality

As noted on page 4-76 of the Final Environmental Impact Statement, since ozone is a regional pollutant, there is no requirement to analyze potential impacts and no possibility of localized violations of ozone to occur at the project level. The Maricopa Association of Governments is responsible for developing plans to reduce emissions of ozone precursors in the Maricopa area. The Preferred Alternative is included in the Regional Transportation Plan that has been determined by the U.S. Department of Transportation to conform to the State Implementation Plan on February 12, 2014.

A common theme in public comments on the proposed project has been the potential impacts of the project on children’s health, primarily through vehicle emissions and noise. Many commenters raised concerns about the proximity of the project to schools or other aspects of the project that may affect children. In addition, the U.S. Environmental Protection Agency requested that the Final Environmental Impact Statement address Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks.

Throughout the Final Environmental Impact Statement, potential impacts on and subsequent mitigation for human health are disclosed and identified, as inherent in the environmental impact statement process. The Final Environmental Impact Statement incorporates an assessment of the potential impacts of the proposed project on all populations, including children. The Final Environmental Impact Statement addresses potential impacts of the project on children in the Chapter 4 environmental consequences analyses.

The U.S. Environmental Protection Agency’s Toxicity and Exposure Assessments for Children’s Health report (see page 4-73 of the Final Environmental Impact Statement) indicated that indoor air concentrations of benzene are usually higher than outdoor levels and that indoor air in smokers’ homes is a significant contributor to children’s exposures. It mentioned children when identifying the effects of acute exposure to naphthalene. The Final Environmental Impact Statement acknowledges and fully discloses public scoping comments that raised the topic of health effects on neighborhoods and adjacent schools (see page 4-31 of the Final Environmental Impact Statement).

The Final Environmental Impact Statement evaluates Clean Air Act criteria air pollutant concentrations in Maricopa County and the Phoenix area (see pages 4-75 to 4-77 of the Final Environmental Impact Statement). With regard to air quality impacts, the Final Environmental Impact Statement addresses children’s health impacts within the broader discussion regarding health impacts under the National Ambient Air Quality Standards. Clean Air Act Section 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety and are requisite to protect the public health. As noted by the U.S. Environmental Protection Agency in its 2013 rulemaking for particulate matter, Clean Air Act Section 109’s legislative history demonstrates that the primary standards are “to be set at the maximum permissible ambient air level... which will protect the health of any [sensitive] group of the population” (78 Federal Register 3086 and 3090) (quoting S. Rep. No. 91-1196, 91st Cong., 2 sess. 10 [1970]) (alterations in original). Accordingly, the Final Environmental Impact Statement National Ambient Air Quality Standards-based evaluation of criteria air pollutants includes a health-based review of sensitive populations, including children, given the National Ambient Air Quality Standards inherent consideration.
of those factors. Furthermore, the National Ambient Air Quality Standards-based assessment ensures adequate consideration of health-based issues as “[t]he requirement that primary standards provide an adequate margin of safety was intended to address uncertainties associated with inconclusive scientific and technical information ... and to protect against hazards that research has not yet identified” (78 Federal Register 3090).

Sensitive receivers for air and noise are already included in the air quality and noise analyses in accordance with State and federal guidance. Both sections, Air Quality and Noise, beginning on Final Environmental Impact Statement pages 4-68 and 4-88, respectively, have addressed requirements under the National Environmental Policy Act. As stated on page 4-89 of the Final Environmental Impact Statement, over 220 sensitive receivers were evaluated at exterior locations from a traffic noise perspective. All of the receivers represent noise-sensitive land uses in proximity to the proposed project, including homes, schools, and parks, and these receivers would have higher noise levels than similar facilities more distant from the proposed action.

Receptor placement met the criteria for selecting modeling locations as specified in 40 Code of Federal Regulations § 93.123(a). The carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter (PM_{10}) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter (PM_{10}) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (beginning on page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM_{10}) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Through analysis, the Federal Highway Administration has determined that the proposed project would not produce disproportionate impacts on children.

Air Quality Data from various Maricopa County Air Quality Department monitoring sites were used in the air quality analyses. Siting, operation, and recording information from monitoring sites are the responsibility of the Maricopa County Air Quality Department. See <maricopa.gov/aq/>. The monitoring information used in the air quality analyses is discussed in greater detail in the air quality technical report prepared for the project which is available on the project Web site at <azdot.gov/southmountainfreeway>. The results of the analyses are summarized in the Final Environmental Impact Statement.

Air Quality The air quality assessment for impacts from carbon monoxide followed the U.S. Environmental Protection Agency guidelines in Guideline for Modeling Carbon Monoxide from Roadway Intersections (A-OAQPS, 1992). Inputs to the model were based on U.S. Environmental Protection Agency-recommended values or were selected to provide a conservative estimate of impacts. Modeling methodology and results were reviewed by the Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments. Included in the analyses are data on the proposed vehicles using the proposed freeway, including heavy trucks.

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As noted on page 4-65 of the Draft Environmental Impact Statement, over 700 receptors were modeled for carbon monoxide concentrations. Receptor placement met the criteria for selecting modeling locations as specified in 40 Code of Federal Regulations Part 93.123(a). The carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter \( (PM_{10}) \) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter \( (PM_{10}) \) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

The carbon monoxide and particulate matter \( (PM_{10}) \) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

The emission modeling developed for the proposed action showed that for the mobile source air toxics study area, there would be little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-77 of the Final Environmental Impact Statement).

The Role of Health Risk Assessment in a National Environmental Policy Act Context

The Federal Highway Administration’s National Environmental Policy Act documents are developed under two guiding regulations: the Council on Environmental Quality’s National Environmental Policy Act regulations applicable to all federal agencies (40 Code of Federal Regulations Parts 1500–1508) and the United States Environmental Protection Agency’s Guidelines for Preparing Economic Analysis. For example, OMB Circular A-4 has a special section devoted to the appropriate treatment of uncertainty in the evaluation of public projects. It clearly states that uncertainty outcomes should be quantified and this information should be provided for public review and to decision makers. For example, it instructs analysts involved in the preparation of impact statements that “the important uncertainties connected with regulatory decisions need to be analyzed and presented as part of the overall regulatory analysis” and that “by increasing the sources of uncertainty and the way in which benefit and cost estimates may be affected under plausible assumptions, you can shape your analysts to inform decision makers and the public about the effects and the uncertainties of alternative regulatory actions” and that “whenever possible, you should use appropriate statistical techniques to determine a probability distribution of the relevant outcome.” It also states that “when uncertainty has significant effects on the final conclusion about net benefits, your agency should consider additional research prior to rulemaking. The cost of being wrong may outweigh the benefits of a faster decision. This is true especially for cases with irreversible or large upfront investments.”

B. The South Mountain Freeway is likely to have large negative health effects. The large impacts of air pollution on morbidity and mortality are well documented as is the fact 495 Air Quality, Health Risk Assessment

The carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter \( (PM_{10}) \) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter \( (PM_{10}) \) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.
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<td>Administration conducts for National Environmental Policy Act purposes, the Federal Highway Administration’s approach for mobile source air toxic analysis in National Environmental Policy Act documents is informed not just by 40 Code of Federal Regulations Part 1502.22, but by all applicable Council on Environmental Quality requirements. The appropriateness of air toxics health risk assessment as an analysis method for National Environmental Policy Act documents is discussed below, in the context of Council on Environmental Quality requirements for these documents. In addition to the 40 Code of Federal Regulations Part 1502.22 provisions regarding uncertainty and limitations discussed in the Federal Highway Administration’s MSAT Interim Guidance Appendix C, three other provisions of the Council on Environmental Quality regulations are particularly relevant to the topic of health risk assessment: 40 Code of Federal Regulations § 1500.1(b): NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail. 40 Code of Federal Regulations § 1502.1: An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions. 40 Code of Federal Regulations § 1502.2: (a) Environmental impact statements shall be analytic rather than encyclopedic. (b) Impacts shall be discussed in proportion to their significance. (c) Environmental impact statements shall be kept concise and shall be no longer than absolutely necessary to comply with NEPA and with these regulations. Section 1500.1(b) states that information for decision making must be of high quality and based on accurate scientific analysis. Air toxics health risk assessments can involve large uncertainties. The mobile source air toxic health risk assessment uncertainty builds on itself—each step of the analysis involves uncertainties, including modeling traffic and then modeling emissions, and using this estimated output to model dispersion/concentrations, which provide information for estimating or assuming exposures to those concentrations, and finally predicting health outcomes. Major uncertainties are associated with traffic and emissions projections over a 70-year period, and dispersion models are typically held to a “factor of 2” performance standard. Health impacts of mobile source air toxics in the U.S. Environmental Protection Agency Integrated Risk Information System are based on a 70-year lifetime exposure, which introduces significant uncertainty (e.g., on average, people in the United States change residence approximately once every 8 years and change jobs once every 3). Finally, as noted above, the U.S. Environmental Protection Agency's Integrated Risk Information System provides toxicity (risk) values for various pollutants and routes of exposure; in a health risk assessment, the Federal Highway Administration would compare calculated...</td>
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concentrations of mobile source air toxic pollutants to the Integrated Risk Information System values to estimate health risk. In the Integrated Risk Information System, the U.S. Environmental Protection Agency states the toxicity values are believed to be accurate to within an order of magnitude (a factor of 10). The total cumulative uncertainty involved in highway project health risk assessment is much larger than the change in emissions attributable to projects (typically a few percentage points). In this context, the information would not necessarily have a strong nexus to the requirements for high-quality information and accurate scientific analysis.

Section 1500.1(b) also directs agencies to focus their National Environmental Policy Act analysis and documentation on issues that are truly significant to the action in question. In the context of mobile source air toxics, the Federal Highway Administration must consider whether changes in mobile source air toxic emissions attributable to a project have the potential for significant health risk. Using cancer risk as an example, the U.S. Environmental Protection Agency estimates that the overall risk of cancer in the United States is approximately 330,000 in a million, and that air toxics (from all sources) are responsible for a risk of approximately 50 in a million. In its most recent mobile source air toxics rule-making, the U.S. Environmental Protection Agency estimated mobile source air toxic cancer risk, after implementation of emissions controls, at approximately 5 in a million (or 0.0015 percent of overall cancer risk from any cause). For the Preferred Alternative, the mobile source air toxic emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxic emissions between the Preferred and No Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxic emissions would decrease by more than 80 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see the discussion beginning on page 4-77 of the Final Environmental Impact Statement).

In summary, available information from the U.S. Environmental Protection Agency indicates that mobile source air toxics are a small component of overall cancer risk, and the analysis for the Final Environmental Impact Statement indicates both that the Preferred Alternative would result in a small change in the emissions contributing to this risk and that emissions will decline by a large amount regardless of alternative.
As described above and in the air quality technical report, results from the health risk assessment would be influenced more by the uncertainty introduced into the process through assumptions and speculations rather than by genuine insight into the actual health impacts directly attributable to mobile source air toxic exposure associated with a project. Therefore, outcomes of such a health risk assessment do not provide useful information for decision makers, as required by Section 1502.1. The Federal Highway Administration emissions analysis meets the requirement to produce information that is useful for both disclosure and decision making because it allows the public and decision makers to see which alternative has less mobile source air toxic emissions, with much less uncertainty than a health risk assessment.

Given the uncertainty of a mobile source air toxic health risk assessment, the Federal Highway Administration instead addresses the potential impacts of mobile source air toxics through an emissions assessment in its National Environmental Policy Act documents. For smaller projects with a lower likelihood of a meaningful impact, this discussion is qualitative. For larger projects, emissions analysis is conducted. The Federal Highway Administration approach is consistent with the Council on Environmental Quality’s direction in Section 1502.2(b) to discuss impacts in proportion to their significance. The results of an emissions analysis can be summarized concisely in a National Environmental Policy Act document and provide useful information for decision makers (e.g., an alternative that has lower emissions is likely to be “better” from a mobile source air toxics health risk standpoint than one that has higher emissions).

While the U.S. Environmental Protection Agency and the Federal Highway Administration both agree on the usefulness of addressing mobile source air toxics in National Environmental Policy Act documents for highway projects, the agencies disagree about the value of health risk assessment as a method for doing so.
Another consideration with respect to health impacts is that the Preferred Alternative would also reduce in-vehicle mobile source air toxics exposure as opposed to the No Action Alternative. The U.S. Environmental Protection Agency has found that in-vehicle benzene concentrations were between 2.5 and 40 times higher than nearby ambient concentrations, based on a review of studies discussed in the Regulatory Impact Analysis for the U.S. Environmental Protection Agency’s 2007 mobile source air toxics rule-making (Final Regulatory Impact Analysis, Environmental Protection Agency 420-R-07-002, 3-17 [February 2007]). Construction of the Preferred Alternative would result in a reduction in benzene exposure to drivers and passengers for two reasons: decreased travel times (motorists would spend less time in traffic to reach their destinations) and lower emissions rates (attributable to speed improvements). Reducing on-road exposure would provide a health benefit for motorists using the roadway network. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

The Federal Highway Administration determined that a supplemental environmental impact statement is not required at this time because there were no changes to the proposed action that will result in significant environmental impacts not evaluated in the Draft Environmental Impact Statement nor is there new information relevant to environmental concerns and bearings on the proposed action or its impacts that will result in significant environmental impacts not evaluated in the Draft Environmental Impact Statement.
Comment 86: Pages 4-69 and 4-70 provide a deeply flawed rationale for ignoring the impact of the freeway on human health outcomes. The DEIS claims that decision makers should not be provided with information on health outcomes of building the freeway because the magnitudes of those outcomes are judged by DOT to be highly uncertain. I will explain three problems with this logic:

A. Ignoring uncertainty violates federal standards for evaluating public projects, as outlined by the United States Office of Management and Budget’s Circular A-4 (http://www.whitehouse.gov/omb/circulars_a-4) and the United States Environmental Protection Agency’s Guidelines for Preparing Economic Analysis. For example, OMB Circular A-4 has a special section devoted to the appropriate treatment of uncertainty in the evaluation of public projects. It clearly states that uncertainty outcomes should be quantified and this information should be provided for public review and to decision makers. For example, it instructs analysts involved in the preparation of impact statements that “the important uncertainties connected with your regulatory decisions need to be analyzed and presented as part of the overall regulatory analysis” and that “by assessing the sources of uncertainty and the way in which benefits and cost estimates may be affected under plausible assumptions, you can shape your analysis to inform decision makers and the public about the effects and the uncertainties of alternative regulatory actions” and that “wherever possible, you should use appropriate statistical techniques to determine a probability distribution of the relevant outcomes.” It also states that “when uncertainty has significant effects on the final conclusion about net benefits, your agency should consider additional research prior to proposing the cost of being wrong may outweigh the benefits of a faster decision. This is true especially for cases with irrevocable or large upfront investments.”

B. The South Mountain Freeway is likely to have large negative health effects. The large impacts of air pollution on morbidity and mortality are well documented as is the fact...
that these impacts are largest for sensitive groups such as children and seniors. This is of special concern due to the large proportion of families with young children and communities of seniors in Abastoikie. See the EPA’s 2011 Second Perspective Study 1990-2020 of the Clean Air Act and the associated appendices for the epidemiological consensus on health impacts and calibrated dose-response functions. The range of potential health impacts should be quantified and monetized using standard measures of the “value of a statistical life” consistent with best practices in regulatory evaluation established in the OMB and EPA guidelines. Even the lower bound on number of lives lost is likely to be sufficiently high to raise serious concerns for policy makers.

C. The effects of the freeway on health outcomes are no more uncertain than the effects of the freeway on commute times. Yet, there is no mention of uncertainty in commute times. Throughout the DEIS, the economic benefits of building the freeway are conveyed with a false sense of precision whereas the environmental costs are dismissed altogether because they are uncertain. This asymmetric treatment of uncertainty has the effect of biasing the DEIS in favor of building the freeway with the Pecos road alignment.

Comment #7: The DEIS fails to adequately address the uncertainty of benefits from building the freeway. For example, the actual reduction in commute time that would be realized if the freeway were to be build will depend on several sources of uncertainty, including but not limited to: (i) future patterns of residential development; (ii) future location choices made by firms; (iii) future residential and job location choices made by workers; (iv) future trends in telecommuting; (v) future trends in “flex-time” and the ability of workers to commute during off-peak hours; (vi) future trends in the national economy; (vii) future trends in the international economy and trade that influence the rate of tracking through Phoenix; (viii) future trends in automobile design; (ix) the impact of building the freeway on the desirability of living in Abastoikie; and (x) future trends in the price of gasoline, electricity, and other factors affecting commuting costs. These sources of uncertainty should be carefully analyzed and policy makers should be informed
Purpose and Need

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. While new projections based on the 2010 Census showed a lower anticipated population in 2035 than the previous projections, the need for the freeway has not changed. The traffic analysis demonstrated that the proposed project is needed today. The models, methods, and assumptions used throughout the Draft Environmental Impact Statement account for reasonably foreseeable future conditions and rightfully dismiss speculative considerations. As examples, the Maricopa Association of Governments, as the federally designated regional transportation planning agency, is nationally recognized as a leader in air quality modeling and traffic modeling and forecasting. The models used account for the assumptions made in the comment.

Traffic

The Federal Highway Administration and the U.S. Environmental Protection Agency approved the air quality conformity determination that includes the Maricopa Association of Governments regional travel demand model that produced the traffic projections used in the traffic analysis for the project (see page 3-27 of the Draft Environmental Impact Statement). The model is run with and without the proposed freeway. Traffic projections are regularly updated by the Maricopa Association of Governments based on studies of travel patterns and changes in land use conditions. The traffic projections in the Draft Environmental Impact Statement are from a model adopted in 2011.
500 General Impacts

The study used state-of-the-practice, scientific community methods and similarly accepted methods. Methods, assumptions, and data were developed early in the environmental impact statement process and peer reviewed by the Federal Highway Administration, the Arizona Department of Transportation, and other federal, State, and local agencies. Peer reviewers concluded that the methods, assumptions, and data are appropriate. The Draft Environmental Impact Statement has sufficient technical merit, does comply with "fundamental concepts and purpose of an environmental impact statement," and does appropriately and properly inform the public.

The Arizona Department of Transportation and Federal Highway Administration, in cooperation with the U.S. Army Corps of Engineers, the U.S. Bureau of Indian Affairs, and the Western Area Power Administration, prepared the Draft and Final Environmental Impact Statements and Section 4(f) Evaluation in accordance with the National Environmental Policy Act of 1969 (42 United States Code § 4332(2)(c)), Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 United States Code § 303, as amended), and Section 404 of the Clean Water Act of 1977 (33 United States Code § 1251). All of these agencies are experienced in the review of National Environmental Policy Act documents and have found the logical sequence of decision making to be sound and in line with National Environmental Policy Act requirements. The Draft Environmental Impact Statement and Section 4(f) Evaluation 1) satisfies Federal Highway Administration and Arizona Department of Transportation's environmental analysis requirements; 2) provides a comparison of the social, economic, and environmental impacts that may result from implementation of the proposed action—construction and operation of a major transportation facility; and 3) identifies measures to avoid, reduce, or otherwise mitigate adverse impacts.

501 Traffic

Hazardous Materials Commodity Flow Studies and other information are used by emergency response planners (such as the Arizona State Emergency Response Commission statewide and the Maricopa County Local Emergency Planning Commission for Maricopa County) as one of the elements considered when developing Emergency Response Plans. If the plan were amended, it would be made available to the Arizona Department of Transportation.

In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).

The traffic projections for Chandler Boulevard (see Figure 3-12 on page 3-29 of the Draft Environmental Impact Statement) do show a reduction with the proposed freeway when compared with conditions without the proposed freeway.

502 Health Effects

A common theme in public comments on the proposed project has been the potential impacts of the project on children’s health, primarily through vehicle emissions and noise. Many commenters raised concerns about the proximity of the project to schools or other aspects of the project that may affect children. In addition, the U.S. Environmental Protection Agency requested that the Final Environmental Impact Statement address Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks.

Throughout the Final Environmental Impact Statement, potential impacts on and subsequent mitigation for human health are disclosed and identified, as inherent in the environmental impact statement process. The Final Environmental Impact Statement incorporates an assessment of the potential impacts of the proposed project on all populations, including children. The Final Environmental Impact Statement

(Comment codes 501 and 502 on next page)
Statement addresses potential impacts of the project on children in the Chapter 4 environmental consequences analyses.

The U.S. Environmental Protection Agency's Toxicity and Exposure Assessments for Children's Health report (see page 4-73 of the Final Environmental Impact Statement) indicated that indoor air concentrations of benzene are usually higher than outdoor levels and that indoor air in smokers' homes is a significant contributor to children's exposures. It mentioned children when identifying the effects of acute exposure to naphthalene. The Final Environmental Impact Statement acknowledges and fully discloses public scoping comments that raised the topic of health effects on neighborhoods and adjacent schools (see page 4-31 of the Final Environmental Impact Statement).

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Sensitive receivers for air and noise are already included in the air quality and noise analyses in accordance with State and federal guidance. Both sections, Air Quality and Noise, beginning on Final Environmental Impact Statement pages 4-68 and 4-88, respectively, have addressed requirements under the National Environmental Policy Act. As stated on page 4-89 of the Final Environmental Impact Statement, over 220 sensitive receivers were evaluated at exterior locations from a traffic noise perspective. All of the receivers represent noise-sensitive land uses in proximity to the proposed project, including homes, schools, and parks, and these receivers would have higher noise levels than similar facilities more distant from the proposed action. Each modeled school was reexamined to determine whether noise impacts would result from the proposed freeway and whether appropriate mitigation of these impacts was provided. Of the nine schools modeled in the analysis for the Final Environmental Impact Statement, all were predicted to exceed Federal Highway Administration noise abatement criteria (see Table 4-40, beginning on page 4-93). Mitigation, in the form of noise walls, was proposed for all schools. After applying this mitigation, all schools except one were mitigated according to the Arizona Department of Transportation noise policy. According to Arizona Department of Transportation policy, noise mitigation should achieve a reduction of 3 to 7 A-weighted decibels and result in a noise level of less than 64 A-weighted decibels.
for residential and similar areas. These criteria were not reached for one school (receiver 67, Santa Maria Elementary School) because the policy limits wall heights to 20 feet. A wall taller than 20 feet would be required to bring levels at this receiver down to 64 A-weighted decibels. However, a 5-A-weighted decibels reduction would be provided by the 20-foot wall proposed in this area. It is important to note that this receiver would be affected only by the W71 Alternative, which is not the Preferred Alternative.

The Arizona Department of Transportation noise policy also states that noise abatement shall be considered if “substantial increases” (defined as a 15 A-weighted decibels or greater increase) are predicted. Of the nine schools modeled, substantial increases were predicted at six schools. As discussed above, however, noise walls would reduce noise levels at all schools according to the Arizona Department of Transportation policy, with the exception of Santa Maria Elementary School, which would be affected only by the W71 Alternative, which is not the Preferred Alternative. According to the Federal Highway Administration’s 1995 Highway Traffic Noise Analysis and Abatement Policy and Guidance, in most cases, if the exterior area can be protected, the interior will also be protected.

Receptor placement met the criteria for selecting modeling locations as specified in 40 Code of Federal Regulations § 93.123(a). The carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter (PM<sub>10</sub>) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter (PM<sub>10</sub>) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM<sub>10</sub>) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Through analysis, the Federal Highway Administration has determined that the proposed project would not produce disproportionate impacts on children.

Many studies have investigated the prevalence of adverse health effects in the near-road environment. Given concerns about the possibility of air pollution exposure in the near-road environment, the Health Effects Institute has dedicated a number of research efforts toward investigating this issue. In November 2007, the Health Effects Institute published Special Report #16: Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects. This report concluded that the cancer health effects attributable to mobile sources are difficult to discern because the majority of quantitative assessments are derived from occupational cohorts with high concentration exposures and because some cancer potency estimates are derived from animal models. In January 2010, the Health Effects Institute released Special Report #17, investigating the health effects of traffic-related air pollution. The goal of the research was to synthesize available information on the effects of traffic on health. Researchers looked at linkages between: 1) traffic emissions (at the tailpipe) with ambient air pollution in general, 2) concentrations of ambient pollutants with human exposure to pollutants from traffic, 3) exposure to pollutants from traffic with human-health effects and toxicological data, and 4) toxicological data with epidemiological associations. Overall, researchers felt that there was “sufficient” evidence for causality for the exacerbation of asthma. Evidence was “suggestive but not sufficient” for health outcomes such as cardiovascular mortality and others.

Mountain Park and the proposed Pecos Road alignment of the freeway. The EPA identifies children as a “sensitive group” for ambient noise. An example of the safety risk is the increase in traffic on arterial streets that wind through residential neighborhoods in Ahwatukee, particularly during periods of heavy traffic, road work, or freeway accidents when drivers will naturally use Chandler Blvd as a bypass. The traffic poses a safety risk because children frequently walk / bike / run / play on the streets that will experience increased traffic, such as Chandler Blvd from S. 17th Ave through Desert Foothills Parkway. This will increase the risk of accidental deaths of children.

(Response 502 continues on next page)
Study authors also noted that past epidemiological studies may not provide an appropriate assessment of future health associations because vehicle emissions are decreasing over time. Finally, in 2011 three studies were published by the Health Effects Institute evaluating the potential for mobile source air toxics “hot spots.” In general, the authors confirmed that while highways are a source of air toxics, they were unable to find that highways were the only source of these pollutants. They determined that near-road exposures were often no different or no higher than background (or ambient) levels of exposure and, hence, no true hot spots were identified. These reports are available from the Health Effects Institute’s Web site at <healtheffects.org>. The Federal Highway Administration and U.S. Environmental Protection Agency provide financial support to the Health Effects Institute's research work.

Another source of information is the U.S. Environmental Protection Agency’s recently released report on Children’s Health and the Environment:

The level of knowledge regarding the relationship between environmental exposures and health outcomes varies widely among the topics [presented in this report], and the inclusion of an indicator in the report does not necessarily imply a known relationship between environmental exposure and children’s health effects. The report provides data for selected children’s health conditions that warrant further research because the causes, including possible contributing environmental factors, are complex and not well understood at this point.

In the case of asthma, researchers do not fully understand why children develop the condition. However, substantial evidence shows exposure to certain air pollutants, including particulate matter and ozone, can trigger symptoms in children who already have asthma. Although the report found the percentage of children reported to currently have asthma increased from 8.7 percent in 2001 to 9.4 percent in 2010 and that minority populations are particularly affected by asthma, the severity of children’s asthma and respiratory symptoms has declined. The rate of emergency room visits for asthma decreased from 114 visits per 10,000 children in 1996 to 103 visits per 10,000 children in 2008. Between 1996 and 2008, hospitalizations for asthma and for all other respiratory causes decreased from 90 hospitalizations per 10,000 children to 56 hospitalizations per 10,000 children.

The report also looks at trends in other health conditions, such as Attention-Deficit/Hyperactivity Disorder (ADHD) and preterm births, for which rates have increased. There is no conclusive information on the role of environmental contaminants in ADHD or preterm births, and additional research is ongoing.

Finally, the Federal Highway Administration notes that while the incidence of some health effects (such as asthma, autism, and attention deficit/hyperactivity disorder) in the U.S. population appear to have been increasing, motor vehicle emissions have declined. This decline in mobile source air toxics emissions is documented in Figure 4-24 of the Final Environmental Impact Statement and for other pollutants at <epa.gov/ttn/chief/trends/>. This negative correlation between emissions trends and health effects trends illustrates the complexity of the issues.
Additional Comments

Seven

Comments by Hugh S. Mason dated July 21, 2013, resident of Phoenix and the Ahwatukee area and Associate Professor at Arizona State University, School of Life Sciences.
### Code 503

**Comment Document**

--- Original Message ---
From: Hugh Mason <hugh.mason@asu.edu>
To: projects <projects@asu.edu>
Cc: PAVCRedHeader <ASU_CEO_MSMK@asu.edu>
Sent: Sun, Jul 21, 2013 1:44 pm
Subject: Comments on DEIS for SMF

Dear ADOT:

I am a citizen and resident of Phoenix and the Ahwatukee area, and Associate Professor at Arizona State University School of Life Sciences. I am writing to ADOT regarding its draft environmental impact study (DEIS) for the South Mountain freeway (SMF). I would like to register my opposition to the building of the SMF. I am a member of Protecting Arizona’s Resources and Children’s Health (PARC), and fully support its efforts to prevent the building of SMF. I have great concerns about the DEIS, as presented below.

One of my main concerns is that the DEIS greatly underestimates the impact of the SMF on the air quality for residents living nearby. The DEIS minimizes the potential pollution that will be caused by trucks burning diesel fuel, especially those coming from Mexico having fuel that is poorly regulated and high in contaminants like sulfur. The DEIS suggests that the “truck bypas” route on I-10 and SH-50 will be preferred by truckers. However, this route is substantially longer than the proposed SMF, and it is thus unlikely to be viewed as economically feasible. Due to the geographic features along the E1 freeway corridor, concentration of the vehicle emissions is likely to compound toxicity issues in this area. The extreme proximity of several schools to the E1 route puts a huge number of children at risk of health problems due to air pollution.

The E1 route would require massive cuts in the ridges of South Mountain on the west side. This action isfeasible for two main reasons. All of the Native American tribes in the area consider South Mountain to be sacred, and the proposed action would desecrate the land. Although that reasoning alone is enough to abandon the plan, another factor is more important to most of us: air quality. The blasting required for the SM ridge cuts (and other cuts along the E1 route) would generate huge amounts of airborne particulate matter. The fine dust generated by construction (especially PM10 particles that can be inhaled deeply) will produce respiratory problems for people in the area. Moreover, it will threaten federal lands for transportation that require control of air quality. Maricopa county has had great difficulty maintaining PM10 standards, and the construction of the SMF would certainly make it more difficult, if not impossible.

The DEIS makes dire predictions for adverse effects on the regional economy if the “no action” option is chosen. However, we must remember that the SMF was first proposed more than 25 years ago, when fuel was relatively cheap and few people saw any problem with continuation of the freeway transportation paradigm. Data on climate change and greenhouse gases in the atmosphere have steadily accumulated over the years. To the point that it is obvious that we need a transportation paradigm shift in order to address the problems we face. We must reallocate most of our resources away from freeway construction and invest them in technologies that will minimize extreme environmental effects. I strongly advocate light rail expansion throughout the valley. Thus, not building the SMF should not be called “no action”, because there are other actions that can be funded with the resources.

I strongly urge the ADOT to abandon the SMF plan and intensity studies of other transportation options that are more environmentally friendly.

Sincerely,
Hugh S. Mason

### Code 504

**Issue**

Trucks

**Response**

The road network in the Maricopa Association of Governments travel demand model includes the Interstate 8 and State Route 85 corridor. So, while the roads are not in the Study Area for the proposed action, traffic and trip distributions along the corridor are included in the traffic analysis for the proposed action. Any traffic that would shift from the Interstate 8 and State Route 85 corridor to the proposed action would be included in the vehicle mix considered in the air quality analysis.

A truck driver traveling from Tucson to Los Angeles and choosing to use Interstate 10 and the proposed freeway would travel 15 miles less than one choosing to use the designated truck bypass along Interstate 8 and State Route 85. Choosing to travel on the proposed action versus Interstate 8 and State Route 85 would not translate to any substantial travel time benefits. Therefore, it is expected that “true” through-truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85.

Trucks crossing from Mexico to Arizona are restricted to the commercial zones within 25 miles of the border. The Federal Motor Carrier Safety Administration is administering a United States-Mexico cross-border, long-haul trucking pilot program. The program tests and demonstrates the ability of Mexico-based motor carriers to operate safely in the United States beyond the municipalities and commercial zones along the United States-Mexico border (see <fmcsa.dot.gov/intl-programs/trucking/trucking-program.aspx>).

Petróleos Mexicanos (better known as Pemex), the Mexican state-owned petroleum company, has guaranteed 15 parts per million in its sulfur diesel fuel in the border region (see <http://transportpolicy.net/index.php?title=Mexico:_Fuels:_Diesel_and_Gasoline>).

As explained on pages 4-69 and 4-77 of the Draft and Final Environmental Impact Statements, respectively, the emissions analysis conducted for the project shows that future mobile source air toxics emissions will be lower than current levels. This analysis included projected truck traffic.

### Code 505

**Issue**

Air Quality

**Response**

A common theme in public comments on the proposed project has been the potential impacts of the project on children’s health, primarily through vehicle emissions and noise. Many commenters raised concerns about the proximity of the project to schools or other aspects of the project that may affect children. In addition, the U.S. Environmental Protection Agency requested that the Final Environmental Impact Statement address Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. Throughout the Final Environmental Impact Statement, potential impacts on and subsequent mitigation for human health are disclosed and identified, as inherent in the environmental impact statement process. The Final Environmental Impact Statement incorporates an assessment of the potential impacts of the proposed project on all populations, including children. The Final Environmental Impact Statement addresses potential impacts of the project on children in the Chapter 4 environmental consequences analyses.

The U.S. Environmental Protection Agency’s Toxicity and Exposure Assessments for Children’s Health report (see page 4-73 of the Final Environmental Impact Statement) indicated that indoor air concentrations of benzene are usually higher than outdoor levels and that indoor air in smokers’ homes is a significant contributor to children’s exposures.

It mentioned children when identifying the effects of acute exposure to naphthalene. The Final Environmental Impact Statement acknowledges and fully discloses public scoping comments that raised the topic of health effects on neighborhoods and adjacent schools (see page 4-31 of the Final Environmental Impact Statement).

The Final Environmental Impact Statement evaluates Clean Air Act criteria air pollutant concentrations in Maricopa County and the Phoenix area (see pages 4-75 to 4-77 of the
Final Environmental Impact Statement. With regard to air quality impacts, the Final Environmental Impact Statement addresses children’s health impacts within the broader discussion regarding health impacts under the National Ambient Air Quality Standards. Clean Air Act Section 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety and are requisite to protect the public health. As noted by the U.S. Environmental Protection Agency in its 2013 rulemaking for particulate matter, Clean Air Act Section 109’s legislative history demonstrates that the primary standards are “to be set at the maximum permissible ambient air level... which will protect the health of any [sensitive] group of the population” (78 Federal Register 3086 and 3090) (quoting S. Rep. No. 91-1196, 91st Cong., 2 Sess. 10 [1970]) (alterations in original). Accordingly, the Final Environmental Impact Statement National Ambient Air Quality Standards-based evaluation of criteria air pollutants includes a health-based review of sensitive populations, including children, given the National Ambient Air Quality Standards inherent consideration of those factors. Furthermore, the National Ambient Air Quality Standards-based assessment ensures adequate consideration and evaluation of health-based issues as “[t]he requirement that primary standards provide an adequate margin of safety was intended to address uncertainties associated with inconclusive scientific and technical information... and to protect against hazards that research has not yet identified” (78 Federal Register 3090).

Sensitive receivers for air and noise are already included in the air quality and noise analyses in accordance with State and federal guidance. Both sections, Air Quality and Noise, beginning on Final Environmental Impact Statement pages 4-68 and 4-88, respectively, have addressed requirements under the National Environmental Policy Act. As stated on page 4-89 of the Final Environmental Impact Statement, over 220 sensitive receivers were evaluated at exterior locations from a traffic noise perspective. All of the receivers represent noise-sensitive land uses in proximity to the proposed project, including homes, schools, and parks, and these receivers would have higher noise levels than similar facilities more distant from the proposed action. Receptor placement met the criteria for selecting modeling locations as specified in 40 Code of Federal Regulations § 93.123(a). The carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter (PM) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter (PM) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM) hot-spot analysis demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. Through analysis, the Federal Highway Administration has determined that the proposed project would not produce disproportionate impacts on children.

Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic
B636

506 (cont.)

507 Air Quality

The Arizona Department of Transportation and Federal Highway Administration have updated the particulate matter (PM) qualitative analysis performed for the Draft Environmental Impact Statement to a quantitative analysis for the Final Environmental Impact Statement to ensure that a state-of-the-art analysis is completed for the proposed project. The results of the analysis are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM) analyzes demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

The transportation conformity rule in 40 Code of Federal Regulations § 93.123(c)(5) states that hot-spot analyses are not required to consider construction-related activities that cause temporary increases in emissions. Temporary increases are defined as those that occur only during the construction phase and last 5 years or less at any individual site. The Arizona Department of Transportation is evaluating construction delivery methods for the proposed freeway. One concept is to deliver it as a single design-build project. This method would expedite the construction duration for the entire project to around 3 to 3.5 years. Another concept would be to deliver the project in a more traditional method, breaking the 22-mile corridor into nine segments (each 1 to 3 miles long) and constructing them in phases. Each segment would be under construction for 1 to 3 years and the total construction duration for the entire corridor would be 5 to 6 years. A discussion of construction implementation is provided beginning on page 3-59 of the Final Environmental Impact Statement. Any particular area of the Preferred Alternative would not be expected to see construction activities beyond an approximate 2-year period; therefore, the construction effects described above would be temporary and would not require additional analysis.

508 Purpose and Need

At the beginning of the environmental impact statement process, the need for a major transportation facility was reexamined to determine whether such a facility is still needed. Validation of those findings occurred throughout the entire environmental impact statement process. Analysis of the purpose and need for the proposed action followed National Environmental Policy Act and Federal Highway Administration implementing guidance on the subject matter and used state-of-the-practice analytical tools, as pointed out in Table 1-3, “Traffic Analysis Tools,” on page 1-13 of the Draft Environmental Impact Statement. The results of the analysis determined that a transportation problem does exist and that problem will continue in the foreseeable future (see section, Conclusions, on page 1-21). As noted on page 3-1 in the section, Reconfirm the Purpose and Need for the Proposed Action, a continuous validation process was undertaken throughout the environmental impact statement process to ensure past conclusions in the environmental impact statement process remained valid.

The reader is referred to Draft Environmental Impact Statement Chapter 3, Alternatives, and, specifically, the section, Alternatives Development and Screening Process Conclusions, beginning on page 3-26, noting “…a comprehensive set of alternatives including all modes was considered … assurance that the screening process was an open process … a logical, sequential, step-by-step process using data and expertise from multiple disciplines …” to demonstrate all possibilities were considered.
Additional Comments

Eight

Comment by
Phoenix Mountains Preservation Council
Responses to specific comments appear below.

Comment noted.

The information regarding the context and attributes of the South Mountains is described in the Draft Environmental Impact Statement. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, Direct Use. It is reported that 31.3 acres or just less than 0.2 percent of the parkland would be converted (this is a reduction in the amount of use planned for in 1988). The text goes on to point out other concerns associated with the direct use reported, and text on page 5-14 in the sidebar, “The South Mountains in Phoenix’s Sonoran Preserve System,” describes the importance of Phoenix South Mountain Park/Preserve in the region. Beginning on page 5-23 in the section, Measures to Minimize Harm, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park. The section, Cultural Resources, beginning on page 4-128, also discloses the relation of the proposed action to the cultural resource attributes of the South Mountains.

City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the South Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see page 5-14 of the Draft Environmental Impact Statement). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Draft Environmental Impact Statement, starting on page 5-23).

Alternatives

The comment suggests the environmental impact statement process was biased by a history of property acquisitions within the Study Area. More specifically, properties falling within the limits of the Preferred Alternative, as identified in the Final Environmental Impact Statement, were targeted for acquisition. As noted in text on page 3-54 of the Final Environmental Impact Statement, the Arizona Department of Transportation began acquiring land for the original alignment in 1988. Between 1988 and 2001, the Arizona Department of Transportation acquired approximately 293 acres. Most of this land (258 acres) is located in the Eastern Section along Pecos Road. In 2006, the Arizona Department of Transportation began protective and hardship land acquisition in the alignment right-of-way footprint for the W59 and E1 Alternatives. Between 2006 and October 2013, the Arizona Department of Transportation purchased 326 acres (303 in the Western Section and 23 in the Eastern Section). The process for hardship and advanced acquisitions is explained in text on page 4-50 of the Final Environmental Impact Statement.
The comment infers that by taking such action, the objective equal consideration of the alternatives studied in detail in the Draft and Final Environmental Impact Statements is tainted. Advanced acquisitions in parallel to a National Environmental Policy Act environmental determination process is not unprecedented and is common practice. In this case, property acquisitions by the Arizona Department of Transportation for purposes of implementing the proposed action are done at risk as communicated to the agency by the Federal Highway Administration. If another action alternative were to be ultimately selected, the agency would likely have to place the acquired properties on the market for sale and purchase. The Arizona Department of Transportation attempts to balance the risk against its mission of timely delivery of transportation infrastructure to the driving public. Further, Federal Highway Administration regulations do not allow the ownership of right-of-way to be a factor in the decision regarding the selection of an alternative.

The section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-125 of the Draft Environmental Impact Statement, discloses by what means the proposed action and its alternatives would affect vegetation, wildlife, and wildlife habitat. A Biological Evaluation was submitted to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality that addressed threatened, endangered, and candidate species, including the Sonoran desert tortoise. The information used to prepare the analysis in the Draft Environmental Impact Statement (page 4-122) was based on 2011 information retrieved from the Arizona Game and Fish Department (Gopherus agassizii, draft unpublished abstract compiled and edited by the Heritage Data Management System, Phoenix). Current information on threats and connectivity strategies was included in the Biological Evaluation. The U.S. Fish and Wildlife Service concurred with the species determinations in the Biological Evaluation (see Appendix 1-1 of the Final Environmental Impact Statement).

Connectivity is planned to allow wildlife movement beneath the freeway in multiuse crossings (see page 4-137 of the Final Environmental Impact Statement). The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see Mitigation, beginning on page 4-138 of the Final Environmental Impact Statement).

The cultural and religious importance of the South Mountains is acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26. The proposed project would accommodate and preserve (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities as noted in the beginning of this response. Consultation has occurred.
### Code Comment Document

PMPC: May 21, 2013  
Phoenix Mountains Preservation Council  
Official position on the Arizona Department of Transportation’s  
South Mountain Freeway Draft Environmental Impact Study

PMPC is an organization put into place by Arizona visionaries, and for the last 40 years PMPC has continued to monitor and anticipate the impact that rapid population growth would have on our precious Mountain Preserve system.

PMPC is steadfastly opposed to any alignment of the Loop 202 South Mountain Freeway that allows for trespass onto the Mountain Preserve or for any excavation into the South Mountain what so ever. These mountains preserves ensures a lifestyle that 80% of Arizona voters consistently support. The mountains preserve are for people and wildlife, not for people to trespass. PMPC does not agree with many of the DEIS assumptions finding them objectionable and deficient in the following analysis areas.

Unacceptable Pre-Decisional Actions: ADOT has made some pre-decisional actions with the purchase of property before the Draft Environmental Impact Statement (DEIS) was released. Phoenix Mountains Preservation Council (PMPC) questions the legality of this action and the entire DEIS when it appears ADOT has already made considerable financial investment to establish the alignment for the South Mountain Freeway rather than follow the prescribed process.

Desert Wildlife Connectivity: The DEIS does not meet the minimal requirements for coordination and analysis of wildlife resources. The Arizona Game and Fish Department was consulted in 2000 during scoping. The current connection to the Estrella Mountains allows for passage of mule deer, javelina, bobcat, and mountain lion. There is no evidence of further efforts to ascertain wildlife connectivity needs or possible mitigation. The Sonoran desert tortoise provides additional evidence of inadequate cumulative analysis given its status as a U.S. Fish & Wildlife Service’s candidate species. The mountain ridge area studied for demolition meets the definition for the species’ habitat.

Unreasonable Taking of Mountain Preservation Lands: The DEIS states in Figure 5-7 Public Parkland the avoidance of taking over 30 acres of the Preserve is “not prudent and feasible”. The taking of this mountainside will destroy important archeological, spiritual, cultural and recreational sites with no realistic or reasonable mitigation possible in the study. The study failed to recognize and address new two trails, Gila and Bursera Trails, created in the southwest end of the Preserve in 2010.

Outdated Data Projections Used: The DEIS is based on outdated data projections that are now six to eight years old. The analysis does not acknowledge the impact the major economic downturn had and it brings into question the validity of projected growth levels put forth in the DEIS. In all the alternative studies, the DEIS does not provide one alternative analysis to the demolitions of the southwest edges of South Mountain. Furthermore, nowhere in this study is there an assessment of hazardous material truck traffic nor any mention of managing this truck traffic and the consequences of a serious hazardous waste incident.

Over 3 million visitors come to South Mountain Park/Preserve annually, according to City of Phoenix statistics. Destroying any part of the mountain to align a high-capacity freeway will only have a negative impact on tourism and the many unique resources the park offers.

We urge ADOT to stop providing studies that do not accurately or thoroughly address the impact this freeway has on South Mountain. It’s time to stop the $20 million and more in wasted tax payer’s money to study the environmental impact and design for an alignment that no longer makes sense.

### Code Issue Response

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<th>Code</th>
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<td>515</td>
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<td>with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed. Mitigation measures were suggested in a letter from the Lieutenant Governor of the Gila River Indian Community to the Administrator, Arizona Division, Federal Highway Administration, dated June 23, 2010 (see page A372 of Appendix 2-1 of the Final Environmental Impact Statement). In this letter, the Gila River Indian Community submitted a proposal to address partial measures for the mitigation of adverse effect from the Pecos Road Alignment of the South Mountain Freeway. The Gila River Indian Community’s proposal found the engineering solutions acceptable, but stated that implementation and construction of the proposed freeway would require further consultation. In committing to the evaluation of the South Mountains Traditional Cultural Property, the Arizona Department of Transportation and Federal Highway Administration also committed to the Gila River Indian Community’s participation in ongoing engineering design refinements and acknowledged the importance of all plants and animals in the traditional culture of the Akimel O’odham and Pee Posh of the Gila River Indian Community. The newest South Mountains trails, the Bursera and the Pyramid, are more than ¼ mile from the proposed freeway and are analyzed in the Final Environmental Impact Statement on page 5-9. The trails are within ¼ mile of the planned Chandler extension and residential development; however, these trails do not have noise-sensitive activities or viewshed characteristics that contribute to their importance as a Section 4(f) recreational resource. The newest South Mountains trails, the Bursera and the Pyramid, are more than ¼ mile from the proposed freeway and are analyzed in the Final Environmental Impact Statement on page 5-9. The trails are within ¼ mile of the planned Chandler extension and residential development; however, these trails do not have noise-sensitive activities or viewshed characteristics that contribute to their importance as a Section 4(f) recreational resource. Use of the mountains for the purposes of the proposed freeway represents two-tenths of one percent of the total mountain range. Since 1988, and as part of this environmental impact statement process, several measures have been undertaken and will be undertaken to further reduce effects on the mountains. These measures, including narrowing the design footprint, acquiring replacement land immediately adjacent to the mountains, and the provision of highway crossings, are outlined in text beginning on page 5-23 of the Draft Environmental Impact Statement.</td>
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516 Purpose and Need

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. |
While new projections based on the 2010 Census showed a lower anticipated population in 2035 than the previous projections, the need for the freeway has not changed. The traffic analysis demonstrated that the proposed project is needed today. If the proposed action is the Selected Alternative in the record of decision, planning for emergency situations would be initiated. If the plan is amended, it is made available to the Arizona Department of Transportation.

A number of alternatives that avoided the South Mountains were considered during the study (see text beginning on page 5-1 of the Draft Environmental Impact Statement). These avoidance alternatives were determined to not be prudent and were eliminated from further consideration. To support this response, here is the comment from the U.S. Department of Interior on the Draft Environmental Impact Statement: “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources.” The complete letter can be found in Appendix 7, Volume III, on page B4.

The information regarding the context and attributes of the South Mountains is described in the Draft Environmental Impact Statement. The acreage of parkland to be converted to a transportation use is reported on page 5-14 in the section, Direct Use. It is reported that 31.3 acres or just less than 0.2 percent of the parkland would be converted (this is a reduction in the amount of use planned for in 1988). The text goes on to point out other concerns associated with the direct use reported, and text on page 5-14 in the sidebar, “The South Mountains in Phoenix’s Sonoran Preserve System,” describes the importance of Phoenix South Mountain Park/Preserve in the region. Beginning on page 5-23 in the section, Measures to Minimize Harm, measures are presented to be undertaken to address the use impacts, including land replacement, on properties adjacent to the park. The section, Cultural Resources, beginning on page 4-128, also discloses the relation of the proposed action to the cultural resource attributes of the South Mountains. City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the South Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see Draft Environmental Impact Statement page 5-14). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Draft Environmental Impact Statement, starting on page 5-23). The activities that make the park such a highly valued tourist attraction (recreational activities, interaction with the Sonoran Desert) would remain.
Attachments

One

Brown and Caldwell Study dated August 24, 1995
Comment Response Appendix - B643

Comment noted.

Wastewater effluent is not available as a replacement source as noted on page 4-100 of the Draft Environmental Impact Statement; therefore, only two water sources are available for irrigation and lake supply for the Foothills Community Association. The well that would be acquired and potable water from the City of Phoenix. The discussion on page 4-100 of the Draft Environmental Impact Statement has been modified in the Final Environmental Impact Statement to reflect that reclaimed wastewater would not be available; however, the conclusion on page 4-100 is still appropriate. As stated on page 4-100 of the Draft Environmental Impact Statement, "In the event that well replacement were to be impossible, the Arizona Department of Transportation would still replace the water that would be lost through the acquisition."

Page 4-100 of the Draft Environmental Impact Statement states that finding a suitable location for a new well in this area may be difficult. Productivity of the well in bedrock formations is primarily based on intercepting fractures, and that can be very difficult to do. The Arizona Department of Transportation is aware of the difficult conditions that exist in replacing wells in this area.

The procedure identified on page 4-100 of the Draft Environmental Impact Statement, define the procedure that the Arizona Department of Transportation would use to replace affected wells, and also identifies the general costs that the Arizona Department of Transportation would incur to replace the lost water sources.

Depending on whether an action alternative were the Selected Alternative, it may be possible to keep the well in its current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.

Hydrogeologic report reviewed.

The Foothills Golf Club is currently served by an existing well, which is supplemented during the summer months by City of Phoenix fire hydrant water. Use of City of Phoenix water for turf irrigation at the Foothills Golf Club is very expensive and, in addition, the existing well is located in the right-of-way for the proposed expansion of Pecos Road, and will need to be abandoned in the future. Therefore, a new water source is needed immediately to supplement the existing well, and to provide a future water supply for the Foothills Golf Club as a sole source.

BASIC DATA

The available hydrogeologic literature relating to the Foothills Golf Club area is limited. Available data were collected from the Arizona Department of Water Resources (ADWR), Cobblestone Golf Group files, and the files of Gilbert Pump Company (the pump maintenance contractor for the Foothills Golf Course well).
Mr. Tighue Shields  
August 26, 1995  
Page 2

HYDROGEOLOGIC ANALYSIS

The hydrogeologic analysis of the Foothills Golf Club area includes a geologic evaluation, based on review of available literature, and limited geologic mapping by a Brown and Caldwell geologist. The hydrogeologic analysis of the study area also included an evaluation of the groundwater conditions in the study area, based on hydrologic information from ADWR files and regional published reports. Generally, the available data relating to the geology of the Foothills Golf Club area were moderate, but the data relating to the hydrology and groundwater conditions of the Foothills area were quite sparse.

Geologic Setting

The study area is located along the southern flanks of South Mountain, which is a southwest trending mountain range that was formed during the Middle Tertiary Period (20 to 25 million years before present) as a result of low angle normal faulting. The rock types that make up South Mountain, and also occur within the study area include:

Precambrian amphibolite gneiss, which is a fine-grained, dark green rock that is present along the western flank of South Mountain;

Tertiary granite and granodiorite, which is a fine-grained, pink-to-cream-colored rock that comprises the remaining portion of the range; and

dikes, which are veins of rock that result from intrusion of molten rock into older pre-existing rocks. Dikes in South Mountain have various compositions, and they cross-cut the Precambrian and Tertiary rocks.

Hydrologic Setting

The data collected by ADWR were insufficient for the preparation of a groundwater elevation contour map. However, available driller’s logs for nearby wells were used to construct a generalized geologic cross-section of the area (Figure 1). A video survey obtained from Gilbert Pump Company was used to determine the static water level in the Foothills Golf Club well (Figure 1). Groundwater flow through bedrock aquifers occurs along fractures (broken or cleaved zones in the rock, along which movement has occurred) and joints (narrowly spaced penetrative cracks in the rock that do not show evidence of movement). The overlying alluvium in this area is relatively thin, and does not appear to significantly contribute water to wells in the Foothills Golf Club area. Therefore, the alluvium was not targeted as a major groundwater resource in this investigation. Rather, the fractured bedrock material within the study area was evaluated to identify preferable locations for installation of a new water well(s) for the facility.
Mr. Tighe Shields  
August 24, 1993 
Page 3

FRACTURE TRACE ANALYSIS

The most favorable well location in a fractured bedrock aquifer is generally along major fracture systems, or at the intersection of two or more fractures. Groundwater preferentially flows along the fracture systems and thus, a greater volume of groundwater is typically produced from wells along those geologic structures. In order to characterize the fractured bedrock in the Foothills Golf Club area, Brown and Caldwell conducted a fracture trace analysis, utilizing photography and field mapping, to determine the orientation (strike and dip) and overall character of the fractures.

Aerial photographs of the Foothills Golf Club area were obtained and evaluated by Brown and Caldwell hydrogeologists to identify the principal geologic lineaments in the study area. Geologic lineaments include such linear features as unusually straight drainages, vegetation alignments, and alignment of discolored or weathered surfaces along outcrops. Lineaments such as these typically occur as a result of underlying geologic structures that control the weathering, vegetation, and outcrop pattern observed at the land surface. The principal geologic lineaments in the study area are presented in Figure 2. Two primary lineament orientations were identified. The dominant (primary) lineament orientation trends to the west-southwest, and the minor (secondary) lineament orientation is nearly perpendicular to the primary lineaments, trending to the southeast. The primary lineaments are more clearly defined on the aerial photographs, and are probably associated with the tectonic event that originally formed South Mountain during the Middle Tertiary Period.

The photogeologic analysis was augmented with limited geologic mapping, and field measurement of selected fracture and joint orientations in the area. The field measurement of geologic structure orientations involves the use of a Brunton compass (a specially designed compass used for measurement of geologic formations and structures) to determine the strike (horizontal direction) and dip (vertical orientation) of dikes, fractures, and joints in the area. The joint, fracture, and dike orientations are presented in Figure 2, and are also listed in Table 1. Notes that occur in the study area frequently occur in sets of two or three intersecting joint planes (Figure 2, Table 1). The orientation of the joint planes parallels the orientation of the primary and secondary lineaments determined in the photogeologic study, and provides confirmation of Brown and Caldwell’s photogeologic interpretation of the Foothills Golf Club area.

FINDINGS AND RECOMMENDATIONS

Based on our fracture trace analysis, Brown and Caldwell has identified three locations that appear favorable for the installation of a water well. Each of these locations is at the intersection of at least two fracture systems, as indicated in Figure 3. A more detailed map showing the location of the proposed well sites is presented in Figure 3. The three proposed well locations have been prioritized from the most favorable (indicated as “T” in Figures 2 and 3) to least favorable.
Mr. Tighue Shields  
August 24, 1995

Page 4

(indicated as "3" in Figures 2 and 3). The prioritization is primarily based on the hydrogeologic setting, but also considers the location of the existing water distribution system.

An additional option would be the installation of a replacement well near the existing well site. The proposed location of a replacement well is designated as "B" in Figures 2 and 3. The Rules and Regulations of the ADWR stipulate that an additional well spacing/well impact analysis is required only if the replacement well is located more than 600 feet from the existing well. Therefore, if a replacement well is to be drilled, it should be located within 600 feet of the existing well, but beyond the right-of-way for the Pecos Road expansion.

Brown and Caldwell appreciates the opportunity to provide this well feasibility/well sting report to the Cobblestone Golf Group. If you have any questions regarding this report, or require additional information, please do not hesitate to call.

Very truly yours,

BROWN AND CALDWell

Marvin F. Glossip, R.G.  
Groundwater Resources Manager

MFG: rjb

Attachments (4)

c: Mr. Brett Marsh, Brown and Caldwell  
Mr. Raymond Roessel, Brown and Caldwell
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### Attachments

**Two**

Correspondence Foothills Golf Re: Water
Only two water sources are available for irrigation and lake supply for the Foothills Community Association. The well that would be acquired and potable water from the City of Phoenix. The discussion on page 4-100 of the Draft Environmental Impact Statement has been modified in the Final Environmental Impact Statement to reflect that reclaimed wastewater would not be available; however, the conclusion on page 4-100 is still appropriate. As stated on page 4-100 of the Draft Environmental Impact Statement, “In the event that well replacement were to be impossible, the Arizona Department of Transportation would still replace the water that would be lost through the acquisition.”

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Depending on whether an action alternative were the Selected Alternative, it may be possible to keep the well in its current location, but move the well controls and associated piping to outside of the right-of-way. Such an analysis would be performed later in the design process.
HELLO

The Lakes Golf Club
The Duke Golf Club
(C) 488-939-9772
(C) 488-882-1947
(F) 488-699-4490

----Original Message-----
From: chapbloston@cox.net [mailto:chapbloston@cox.net]
Sent: Wednesday, May 29, 2013 6:39 PM
To: Terry
Subject: Re: Re:

Do you know of another well the foothills owns in the area - SS 6180427? Is it being used? If not, can it be used?

How much water are you pulling from SS 6180427 in gallons per day?

I've asked this before but need to ask again - would the foothills be unprofitable if you were transitioned from well to city potable water? Could it lead to closure?

Thx

Sent on the Sprint(r) Now Network from my BlackBerry(r)

----Original Message-----
From: Terry @goodManWakes.com
Date: Wed, 20 May 2013 16:48:07
To: chapbloston@cox.net
Subject: Re: Re:

Chad,

Sounds good! I am sure that Clear Creek will be able to give you the most information regarding the area.

Terry Duggan
President
Foothills Golf Group
Foothills Golf Club
Meadows Country Club
Club West Golf Club
The Lakes Golf Club
The Duke Golf Club
(C) 488-939-9772
(C) 488-882-1947
(F) 488-699-4490

----Original Message-----
From: chapbloston@cox.net [mailto:chapbloston@cox.net]
Sent: Wednesday, May 29, 2013 9:46 AM
To: Terry
Subject: Re: Re:

I'm going to call Clear Creek and southwest water. I'll tell them I got your names from you. Anything they give the nos that I will be forwarding to abot I'll send to you first. I don't want to get in the way of your objectives. Thx.
Sent on the Sprint(r) Now Network from my Blackberry(r)

----Original Message-----
From: Terry Jammes@cox.net
Date: Wed, 29 May 2013 13:40:56
To: chadbilstonem@cox.net
Subject: Re: Re:
Chad,

I think we used Clear Creek & Associates for the geological study. Along with either Boman Drilling or Weber to drill the wells. We are currently working with Southwest Water Works.

Terry Duggan
President
Foothills Golf Group
Foothills Golf Club
Alwakake Country Club
Club West Golf Club
The Lakes Golf Club
The Dute Golf Club
(C) 480-893-9772
(C) 480-662-2947
(f) 480-699-4489

----Original Message-----
From: chadbilstonem@cox.net [mailto:chadbilstonem@cox.net]
Sent: Wednesday, May 29, 2013 8:31 AM
To: Terry
Subject: Re:

Do you have any idea who did the work? What type of contractor consults on this type of question?

----Original Message-----
From: Terry Duggan Golf course
To: Chad Bilston
Subject: Re:
Sent: May 29, 2013 8:07 AM

Chad,

Unfortunately that was a company we had that did the drilling. I do not have access to those records; however I think the ADNR tracks all wells and what they produce.

From my understanding of this area you would need to hit a fracture in order to get water. The current well that we have is in a fracture. Most everything north of Pecos and west of 48th Street is bedrock. The best and highest chance to get water in the sandy areas of the desert; which is everything south of Pecos Road.

I don’t think that the water table moves as it always seeks the lowest point.

I hope this helps.

Terry Duggan
President
Foothills Golf Group
Foothills Golf Club
RE: Re:

Abb Najakee Country Club
Club West Golf Club
The Lakes Golf Club
The Saddle Golf Club

To: chb@linton@com.net [mailto:chb@linton@com.net]
Sent: Tuesday, May 28, 2013 11:44 PM

Subject: Terry - can u send me the reports that show the test drilling coming up dry? Adot
tells they "allow" they can replace the well. They need to show they can't just
simply drill anywhere on the course to replace. They need to study replacement
sites off the foothills prior to making a decision to take the on site well.

Any chance those areas test drilled 14 yrs ago could now have water? Does the
underground water table move?

THX.

Sent on the Sprint(r) Now Network from my BlackBerry(r)

Sent on the Sprint(r) Now Network from my BlackBerry(r)
Attachments

Three

Hydrologist Statement
Subject: Foothills GC wells
From: Marvin Gloffelty <mgloffelty@clearcreekassociates.com>
Date: 6/12/2013 3:02 PM
To: "chadblestone@cox.net" <chadblestone@cox.net>

Chad,

As you requested, copies of the well reports that were done for your group back in 1995 and 1996 are attached. In general, groundwater resources become very sparse and uncertain to the north of Pecos Road, due to the chalccar bundock. It would be technically possible to drill a directional (planted) well near the Pecos Road alignment that would tap into the region of the alluvial basin to the south. However, I would strongly recommend against that action without first obtaining approval from the Gila River Indian Community to the south, and also the Arizona Department of Water Resources. Otherwise, you may encounter substantial legal challenges to the water rights associated with the directional well. I hope this helps to clarify the situation for you.

Best regards,

Marvin
Marvin P. Gloffelty, P.G.
Principal Hydrogeologist
Clear Creek Associates
6105 E. Indian School Road, Suite 200
Scottsdale, AZ 85251
Phone: (480) 956-7131
Fax: (602) 980-2319
Email: mgloffelty@clearcreekassociates.com

This e-mail sent by 100% solar energy

Attachments:

- Well Completion Report for the Foothills Golf Club North and South Wells.pdf 1.5 MB
- Well Feasibility Well Siting Investigation 08.24.95.pdf 978 KB
### Attachments

**Four**

Well Completion Report for the Foothills Golf Club
North and South Wells dated April 23, 1996
WELL COMPLETION REPORT FOR THE
FOOTHILLS GOLF CLUB
NORTH AND SOUTH WELLS

April 23, 1996

Code | Comment Document
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523 |

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  2.2 LITHOLOGIC LOG ..................................................................................................................................... 2
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  3.1 PUMPING TEST ....................................................................................................................................... 4

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Appendix B. Aquifer Test Data, Foothills North Well ............................................................. B-1
Appendix C. Lithologic Log, Foothills South Well ................................................................. C-1
WELL COMPLETION REPORT FOR THE
FOOTHILLS GOLF CLUB
NORTH AND SOUTH WELLS

April 23, 1996

Prepared for:
Coholentene Golf Group
2201 East Calleman Drive
Phoenix, Arizona 85048

Prepared by:
Brown and Caldwell
3636 North Central Avenue
Suite 300
Phoenix, Arizona 85012
(602) 222-4444
### SECTION 2.0

#### DRILLING AND INSTALLATION OF THE NORTH WELL

**2.1 BOREHOLE DRILLING**

The pilot borehole for the North Well was drilled by Arizona Drilling Company of Apache Junction, Arizona utilizing an air rotary drilling technique with drilling foams added to the fresh water drilling fluid. A Gardner-Denver 1400 rotary rig was used to perform all work associated with the drilling and installation of the well. B. Brown and Caldwell personnel performed field inspection and documentation of the key field operations. Drilling and well installation operations were performed during daylight hours only (7:00 a.m. to 6:00 p.m.), Monday through Friday. Sound blankets were used to prevent rig noise from being a nuisance to neighboring residences.

Drilling of the pilot hole commenced on February 6, 1996, and was completed on February 8, 1996. A 1 3/4-inch diameter borehole was drilled to 20 feet below land surface (bls). A temporary surface casing was set to 20 feet bls using 10 3/4-inch outside diameter low-carbon steel casing. After the temporary surface casing was installed with cement, the pilot hole was drilled using a 9 7/8-inch bottom hole from 20 feet bls to a depth of 190 feet bls. In order to increase the drilling rate, an 8-inch downhole hammer bit was used from 100 feet bls to the total depth of 400 feet bls.

Drilled cuttings were collected at 10-foot intervals throughout the pilot borehole. The samples were preserved in 4-inch by 6-inch cloth sample bags for future reference. An additional set of the drilled cuttings samples was placed in specially-designed "Ice cube tray" plastic containers, and submitted to Cobbstonian personnel for archival purposes.

**2.2 LITHOLOGIC LOG**

A detailed lithologic log of the drilled cuttings from the North Well pilot hole is presented in Appendix A and is summarized below. From the land surface to 17 feet bls, the materials encountered by the North Well are comprised of light brown feldspar sands and fines to medium gravels.

From 17 feet to 400 feet bls, bedrock was encountered which was composed of dark green to bluish-colored clays including amphibole, epidote, and biotite, with minor amounts of green-colored feldspar and quartz minerals. Pyrite minerals are present in the drill cuttings from about 120 feet bls to 400 feet bls in varying amounts. The bedrock is considered to be an amphibolite gneiss.

**2.3 WELL INSTALLATION**

The well rating installation at the North Well was conducted on February 16, 1996. A record drawing of the North Well is presented in Figure 1. The temporary casing was removed and the borehole stunted with a 1 3/4-inch mill tooth bit to approximately 60 feet bls. Low-carbon steel 10 3/4-inch outside diameter casing with 0.250-inch wall thickness was installed to 60 feet bls. Below 60 feet bls, the well was completed as an open borehole with no casing or screen. The annulus

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between the casing and the 14 3/4-inch borehole was sealed with cement grout from 60 feet bbl to approximately 3 3/2 feet bbl.
SECTION 3.0
POST-CONSTRUCTION NORTH WELL ANALYSIS

3.1 PUMPING TEST

A modified step-test discharge aquifer test was conducted at the North Well on March 12 and 13, 1996 to evaluate the production capability of the well and the optimum depth to set the permanent submersible pump. The data from the aquifer test were collected by Brown and Caldwell personnel with the pumping equipment supplied by Stewart Brothers Drilling Company of Milan, New Mexico. The pumping test data is presented in Appendix B.

The submersible pump was initially set and pumped at a shallow depth (60 feet bds), then progressively lowered and pumped at various pump-setting depths (100 feet, 200 feet and 300 feet bds) to help determine where the permanent pump can be set. A static water level of 48 feet bds was measured prior to the pumping test. At the various pump depth settings, the discharge rate varied from 45 gpm to 90 gpm. The discharge rates were calculated using a flow meter. At the pump settings of 60 feet and 100 feet, the groundwater level drawdown reached the submersible pump intake indicating the pump needed to be set at a lower depth. At a pump setting of 200 feet bds, the groundwater level drawdown in the well was 62 feet after 36 minutes of pumping at approximately 65 gpm. The pump was then lowered to 300 feet bds and pumped at a discharge rate of approximately 65 gpm. The water level drawdown after 44 minutes of pumping was approximately 58 feet.

On March 13, 1996, the pumping test resumed with the pump set at 300 feet bds. The groundwater level drawdown in the well was 66 feet after pumping at an average discharge rate of 61 gpm for 84 minutes. Throughout the test, the specific capacity of the well ranged from 0.8 gpm per feet of drawdown (gpm/ft) to 7.4 gpm/ft. A semi-log plot of the water level drawdown data for the North Well on March 13, 1996 is presented in Figure 2. Using the Cooper-Jacob method of analysis, the transmissivity of the aquifer was calculated to be approximately 340 gallons per day per foot (gpd/ft) as shown in Figure 2. At the conclusion of the pumping test, the water level drawdown recovery was recorded. A semi-log plot of the water level recovery data (Theis Recovery Plot) is presented in Figure 3. Utilizing the Theis Recovery Plot, the transmissivity value was calculated to be approximately 290 gallons per day per feet (gpd/ft) as shown in Figure 3. The calculated transmissivity values are based on a short-term pumping test and the basic assumption that the fractures are interconnected and behave as porous medium. Therefore, these values may vary after long-term pumping due to dewatering of fractures or when other hydrogeologic boundaries are encountered.
SECTION 4.0

NORTH WELL RECOMMENDATIONS

4.1 PUMP SETTING AND DISCHARGE RATE

Based on the data and analyses presented herein, Brown and Caldwell recommends that the North Well be equipped with a permanent submersible pump capable of producing up to 55 gallons per minute (gpm). The permanent pump equipment should be set at a depth no less than 500 feet b.g. in order to supply the minimum "net positive suction head" necessary to avoid cavitation in the submersible pump. The pumping water level should not be allowed to drop to within 40 feet above the pump intake. This value is variable and depends upon the pump equipment installed and should be verified at the time of installation. It should also be noted that the pumping test was not a long-term test and continuous long-term pumping of the well may result in greater drawdown than was recorded during the test. As a result, it is also recommended that the well be initially pumped on an 8-to 12-hour cycle to allow for additional well performance evaluation.
SECTION 5.0

DRILLING AND ABANDONMENT OF THE SOUTH WELL

5.1 BOREHOLE DRILLING

The drilling of the South Well was conducted by Stewart Brothers Drilling Company. The pilot borehole was drilled using a Gardner-Denver 1500 drill rig using the air hammer drilling method. Brown and Caldwell personnel performed field inspection and documentation of the key field operations. Drilling operations were performed during daylight hours (7:00 a.m. to 6:00 p.m.) Monday through Friday.

Drilling of the pilot hole commenced on March 28, 1996, and was completed on March 29, 1996. A 13 3/4-inch diameter pipe was driven to the top of bedrock which was approximately 50 feet b.s.l.; to help stabilize the hole. A 7-inch diameter liner was installed to 50 feet b.s.l. inside the 13 3/4-inch pipe to help facilitate circulation of fluids during the drilling process. The pilot hole was then drilled using a 6 1/4-inch downhole hammer from 50 feet b.s.l. to the total depth of 400 feet b.s.l.

Drilled cuttings were collected at 10-foot intervals throughout the pilot borehole. The samples were preserved in 4-inch by 6-inch cloth sample bags for future reference. An additional set of the drilled cuttings samples was placed in specially-designed “ice cube tray” plastic containers and submitted to Coblentz personnel for archival purposes. A detailed lithologic log of the drilled cuttings from the South Well pilot hole is presented in Appendix C. In general, from the surface to 48 feet b.s.l., the materials presented by the South Well are comprised of light brown to pink feldspar and fine gravel. From 48 feet to 400 feet b.s.l., bedrock was encountered which was comprised of dark green to gray colored clinopyroxene, hornblende, and amphiboles with minor amounts of light-green feldspar and quartz minerals. The bedrock is considered to be an amphibole gneiss.

5.2 BOREHOLE ABANDONMENT

During the drilling of the pilot hole the water production of the borehole was monitored. No notable fractures yielding significant groundwater were encountered during the drilling process. At 400 feet b.s.l., the well was developed by airlifting for approximately 1 hour with no significant improvement in groundwater production. The borehole was backfilled with drilled cuttings and abandoned per Arizona Department of Water Resources requirements (Arizona Administrative Code 812-15-810).
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Figure 1
FOOTHILLS NORTH WELL
RECORD DRAWING

NOTE:
D.O. = OUTSIDE DIAMETER
LOCATION: (1-3)34bad
ADMR REGISTRATION NO. 55-552400

BROWN AND CALDWELL
Cobblestone Golf Group
Figure 2. Footwall North Wall
Cooper Jacob Plot
March 13, 1996

$\Delta z =$ change in drawdown over one log cycle
$Q =$ average discharge rate (gpm)
$T =$ transmissivity ($= 240/\Delta z \cdot \log (10)$)
$T =$ transmissivity ($= 30 \log 10$)

\[ T = 236.62 \text{ gpm} \]

\[ T = 51.2 \text{ ft}^2/\text{h} \]
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APPENDICES
APPENDIX A

LITHOLOGIC LOG
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<td>Gross unit change</td>
<td>60-90</td>
<td></td>
<td>Changed to 9 1/2&quot; later 90-110</td>
</tr>
<tr>
<td>Sandstone 9 1/2&quot;</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td></td>
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</tr>
<tr>
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<td></td>
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<tr>
<td>Gross unit change</td>
<td>200-260</td>
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</table>

BROWN AND CALDWELL
<table>
<thead>
<tr>
<th>Description</th>
<th>Depth (ft)</th>
<th>Drill Rate</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellbore 1, incl. gravel control</td>
<td>0-50</td>
<td>2/12</td>
<td>Drilling ceased at 213 ft.</td>
</tr>
<tr>
<td></td>
<td>50-100</td>
<td>2/12</td>
<td>Drilling ceased at 213 ft.</td>
</tr>
<tr>
<td></td>
<td>100-150</td>
<td>2/12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>150-200</td>
<td>2/12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>200-250</td>
<td>2/12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>250-300</td>
<td>2/12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>300-350</td>
<td>2/12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>350-400</td>
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<tr>
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<td>2/12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>450-500</td>
<td>2/12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>500-550</td>
<td>2/12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>550-600</td>
<td>2/12</td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
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<td>650-700</td>
<td>2/12</td>
<td></td>
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<tr>
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<tr>
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<tr>
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BROWN AND CALDWELL
**WELL NO. 66**

<table>
<thead>
<tr>
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<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intake in gravity (no valve)</td>
<td>100</td>
</tr>
<tr>
<td>From 8500 to 8000</td>
<td></td>
</tr>
<tr>
<td>Core at 150’ interval</td>
<td></td>
</tr>
<tr>
<td></td>
<td>500</td>
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<tr>
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<td>550</td>
</tr>
<tr>
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</tr>
<tr>
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</tr>
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<tr>
<td></td>
<td>850</td>
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<tr>
<td></td>
<td>900</td>
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</table>

- Maximum discharge @ 70 gpm
- Total depth unknown

Signed:

BROWN AND CALDWELL
APPENDIX B

AQUIFER TEST DATA
FOOTHILLS NORTH WELL
<table>
<thead>
<tr>
<th>Code</th>
<th>Comment Document</th>
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AquaEx: EST 130TA

<table>
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<tr>
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<th>Issue</th>
<th>Response</th>
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BROWN AND CALDWELL
### Aquifer Test Data

<table>
<thead>
<tr>
<th>Check Time</th>
<th>Draw</th>
<th>Recovery Time</th>
<th>Cosine Thall</th>
<th>Water Level</th>
<th>Depression</th>
<th>Discharge</th>
<th>Specific Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:30:00</td>
<td>0.75</td>
<td>0.75</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
</tr>
<tr>
<td>10:00:00</td>
<td>0.75</td>
<td>0.75</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
</tr>
<tr>
<td>10:30:00</td>
<td>0.75</td>
<td>0.75</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
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</tr>
<tr>
<td>11:00:00</td>
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<tr>
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<tr>
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<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
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</tr>
</tbody>
</table>

**Notes:**
- Draw: drawdown in feet
- Recovery Time: time in minutes
- Cosine Thall: cosine of the slant distance
- Water Level: water level in feet
- Depression: depression in feet
- Discharge: discharge in cubic feet per second
- Specific Capacity: specific capacity in cubic feet per second per foot

**Remarks:**
- Initial drawdown is 0.7 feet.
- Recovery rate is 0.5 feet per minute.
- Subsequent draws show a consistent recovery pattern.

**Graph:**
- Graph showing the relationship between drawdown and time.

**Analysis:**
- The data indicates a steady recovery rate, suggesting a stable aquifer system.

**Conclusion:**
- The aquifer is adequately responsive to drawdown, with no signs of diminishing yield.

**References:**
- Brown and Caldwell (2023)

---

**Brown and Caldwell**
AQUIFER TEST DATA

<table>
<thead>
<tr>
<th>Code</th>
<th>Comment Document</th>
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<th>Response</th>
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BROWN AND CALDWELL
## Aquifer Test Data

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<th>Code</th>
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**Brown and Caldwell**
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<td>LITHOLOGIC LOG</td>
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<table>
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<td>Drift Rate</td>
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BROWN AND CALDWELL
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BROWN AND CALDWELL
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<tr>
<td>Change in size to light gray to</td>
<td>30</td>
<td>-</td>
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</tr>
<tr>
<td>geum (Co P</td>
<td>50</td>
<td>-</td>
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</table>
| Increased in 
  quartz to 
  sandstone with 
  minor quartzite | 100 | -   |         |
| Increased in 
  quartz to 
  sandstone with 
  minor quartzite | 400 | -   |         |
| Total depth | 400 | -   |         |
| Normal 
  discharge @ 5 gpm | 30 | -   |         |
| Normal 
  discharge @ 5 gpm | 50 | -   |         |
| Normal 
  discharge @ 7 gpm | 100 | -   |         |

BROWN AND CALDWELL
Attachments

Five

South Mountain Land Acquisitions - The spreadsheet was created by ADOT on June 11, 2013. It has W in the right side if it is a parcel in the western alignment; it has an E in the right side if it is a parcel in the eastern alignment. Parcels 7-11316 and 7-10612 are two parcels in the western alignment that were not included in the spreadsheet. The parcel transmittal sheet for each is also attached.
<table>
<thead>
<tr>
<th>Parcel</th>
<th>Tract</th>
<th>Owner</th>
<th>Acquisition Date</th>
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<td>7-1066</td>
<td>H-43001R</td>
<td>WING FLOY</td>
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<td>H-43001R</td>
<td>SHEEHAN ADAM</td>
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<td>H-44001R</td>
<td>MARSHALL DAVID R ET UX</td>
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<td>H-44001R</td>
<td>VAUGHN-CHRISTYER ET AL</td>
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<td>$250,000.00</td>
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<td>H-44001R</td>
<td>DONAHUE GEORGE R ET UX</td>
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<td>12/06/99</td>
<td>$222,685.50</td>
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<td>GRASS THOMAS O ET UX</td>
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<td>$200,000.00</td>
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<td>WOODS DE JESU LLC</td>
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Number of acquisitions: 10

Acquisition cost total: $2,061,960.00
**PARCEL TRANSMITTAL**

**Transaction Code Date:** Sept. 14, 2010

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<table>
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<td></td>
</tr>
<tr>
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<tr>
<td>Improvements</td>
<td>O Square Feet</td>
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<tr>
<td>Severance Damages</td>
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<td></td>
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<tr>
<td>Cost to Cure</td>
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<td>Administrative Entitlement</td>
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**Description:**
- WD 58, SEC 6, T15 S, R8E, GSP4M
- Maricopa County, Arizona

**Appraisal Data:**
- Approved: $295,000.00
- Approval Review Amount: $285,000.00

**Comments:**
- Acquisition Code: R001
- Acquired by Consultant, Contract #
- ESCCD Waived
- Right of Way Contract Approved by
- Right of Way Committee
- Approved by
- Waiver to alter sales amount
- Administrative Entitlement
- Approved by
- Waiver to alter sales amount
- Right of Way Waiver
- Tax Waiver

**Warrant Needed By:** September 30, 2019
**Agent Phone:** (602-712-8999)

**Certification:**
I hereby certify that, to the best of my knowledge and belief, all statements contained in this parcel are true and complete and contain all agreements and considerations between the Recipient and the Granter, and that such agreements were executed without coercion, promises other than those shown in the Right of Way Contract, or threats of any kind whatsoever by or to either party.

Furthermore, I have not directed or induced, present or contemplated future personal benefit in any property, nor will I in any way benefit from the acquisition of such property.

**Approver:**
**Directors of ADOT:**

Panel 7-11316

Transaction Code Date: Sept. 14, 2010
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**Description:**

LOT 4, VAN BUREN STREET LTD,
Maricopa County, Arizona

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**Certification:**

I hereby certify that, to the best of my knowledge and belief, all statements contained in this parcel file are true and complete to the best of my knowledge and belief, and that all agreements and considerations between the parties and the Grantor, and that such agreements and considerations are true and complete to the best of my knowledge and belief, and that all agreements and considerations are true and complete to the best of my knowledge and belief.

**Approved:**

DIRECTOR OF ADOT

PARCEL 7-101612
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**Addendum to the Comments Filed on July 23, 2013 By:**

Protecting Arizona Resources and Children, Inc. (PARC); The Foothills Community Association; The Foothills Club West Community Association; The Lakewood Community Association; The Calabria Community Association; Don’t Waste Arizona, Inc. (DIWAZ); Gila River Alliance for a Clean Environment (GRACE); Gila River Environmental Youth (GREY); Patricia Lawlis; Timothy Lank; Chad Blostone; Michael Hinz; Chris Boettcher; Phoenix Mountains Preservation Council (PMPC) - (collectively referred to herein as “Commenters”).

1. As discussed in Commenters' previous submission, the DEIS failed to adequately consider the health impacts resulting from freeway related air pollution. Given the large number of schools, community areas, and homes within approximately one-half mile of the proposed right-of-way (the "Hot Zone" for health impacts), ADOT should also have considered, inter alia, future health care costs and impacts on human capital in general as indirect and/or cumulative impacts under NEPA. It is likely that thousands of children living and/or going to school in this Hot Zone will suffer from, in part, inhibited lung growth and development, as well as asthma – as a direct and proximate result of the freeway. The primary health threat from proposed freeway air pollution to adults will be increased risks of chronic cardiovascular illness, acute myocardial infarctions, and premature mortality. Given the certainty of the science at issue, future health care related costs and health related impacts in general should have been considered in the DEIS.

2. Commenters expressly incorporate herein, by this reference, any comment on the DEIS submitted by: The Sierra Club; PIRG/Arizona PIRG; the Gila River Indian Community; and any member of any of the above identified organizations/associations.

Thank you.
Howard M. Shanker
The Shanker Law Firm, PLC
www.ShankerLaw.net

**Offices**

700 E. Baseline Rd., Bldg. B
Tempe, Arizona 85283
Phone: (480) 838-9300
Fax: (480) 838-9433

---

**1 Air Quality, Health Risk Assessment**

The carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter ($PM_{10}$) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter ($PM_{10}$) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (page xi) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter ($PM_{10}$) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

The emission modeling developed for the proposed action showed that for the mobile source air toxics study area, there would be little difference in total annual emissions of mobile source air toxics emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-77 of the Final Environmental Impact Statement).

The Role of Health Risk Assessment in a National Environmental Policy Act Context

The Federal Highway Administration’s National Environmental Policy Act documents are developed under two guiding regulations: the Council on Environmental Quality’s National Environmental Policy Act regulations applicable to all federal agencies (40 Code of Federal Regulations Parts 1500–1508) and the Federal Highway Administration’s National Environmental Policy Act documents (40 Code of Federal Regulations Part 771). In its mobile source air toxics guidance, the Federal Highway Administration National Environmental Policy Act documents (23 Code of Federal Regulations Part 771) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

The carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter ($PM_{10}$) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter ($PM_{10}$) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (page ix) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter ($PM_{10}$) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

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The Role of Health Risk Assessment in a National Environmental Policy Act Context

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(Response 1 continues on next page)
The appropriateness of air toxics health risk assessment as an analysis method for National Environmental Policy Act documents is discussed below, in the context of Council on Environmental Quality requirements for these documents. In addition to the 40 Code of Federal Regulations Part 1502.22 provisions regarding uncertainty and limitations discussed in the Federal Highway Administration’s MSAT Interim Guidance Appendix C, three other provisions of the Council on Environmental Quality regulations are particularly relevant to the topic of health risk assessment:

40 Code of Federal Regulations § 1500.1(b): NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.

40 Code of Federal Regulations § 1502.1: An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions.

40 Code of Federal Regulations § 1502.2: (a) Environmental impact statements shall be analytic rather than encyclopedic. (b) Impacts shall be discussed in proportion to their significance.(c) Environmental impact statements shall be kept concise and shall be no longer than absolutely necessary to comply with NEPA and with these regulations.

Section 1500.1(b) states that information for decision making must be of high quality and based on accurate scientific analysis. Air toxics health risk assessments can involve large uncertainties. The mobile source air toxic health risk assessment uncertainty builds on itself—each step of the analysis involves uncertainties, including modeling traffic and then modeling emissions, and using this estimated output to model dispersion/concentrations, which provide information for estimating or assuming exposures to those concentrations, and finally predicting health outcomes. Major uncertainties are associated with traffic and emissions projections over a 70-year period, and dispersion models are typically held to a “factor of 2” performance standard. Health impacts of mobile source air toxics in the U.S. Environmental Protection Agency Integrated Risk Information System are based on a 70-year lifetime exposure, which introduces significant uncertainty (e.g., on average, people in the United States change residence approximately once every 8 years and change jobs once every 3). Finally, as noted above, the U.S. Environmental Protection Agency’s Integrated Risk Information System provides toxicity (risk) values for various pollutants and routes of exposure; in a health risk assessment, the Federal Highway Administration would compare calculated concentrations of mobile source air toxic pollutants to the Integrated Risk Information System values to estimate health risk. In the Integrated Risk Information System, the U.S. Environmental Protection Agency states the toxicity values are believed to be accurate to within an order of magnitude (a factor of 10). The total cumulative uncertainty involved in highway project health risk assessment is much larger than the change in emissions attributable to projects (typically a few percentage points). In this context, the information would not necessarily have a strong nexus to the requirements for high-quality information and accurate scientific analysis.
Comment Response Appendix - B693

Section 1500.1(b) also directs agencies to focus their National Environmental Policy Act analysis and documentation on issues that are truly significant to the action in question. In the context of mobile source air toxics, the Federal Highway Administration must consider whether changes in mobile source air toxic emissions attributable to a project have the potential for significant health risk. Using cancer risk as an example, the U.S. Environmental Protection Agency estimates that the overall risk of cancer in the United States is approximately 330,000 in a million, and that air toxics (from all sources) are responsible for a risk of approximately 50 in a million. In its most recent mobile source air toxics rule-making, the U.S. Environmental Protection Agency estimated mobile source air toxic cancer risk, after implementation of emissions controls, at approximately 5 in a million (or 0.0005 percent of overall cancer risk from any cause). For the Preferred Alternative, the mobile source air toxic emissions analysis for the Study Area found little difference in total annual emissions of mobile source air toxic emissions between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxic emissions would decrease by more than 80 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see the discussion beginning on page 4-77 of the Final Environmental Impact Statement).

In summary, available information from the U.S. Environmental Protection Agency indicates that mobile source air toxics are a small component of overall cancer risk; and the analysis for the Final Environmental Impact Statement indicates both that the Preferred Alternative would result in a small change in the emissions contributing to this risk and that emissions will decline by a large amount regardless of alternative.

As described above and in the air quality technical report, results from the health risk assessment would be influenced more by the uncertainty introduced into the process through assumptions and speculations rather than by genuine insight into the actual health impacts directly attributable to mobile source air toxic exposure associated with a project. Therefore, outcomes of such a health risk assessment do not provide useful information for decision makers, as required by Section 1502.1. The Federal Highway Administration emissions analysis meets the requirement to produce information that is useful for both disclosure and decision making because it allows the public and decision makers to see which alternative has less mobile source air toxic emissions, with much less uncertainty than a health risk assessment.

(Response 1 continues on next page)
Given the uncertainty of a mobile source air toxic health risk assessment, the Federal Highway Administration instead addresses the potential impacts of mobile source air toxics through an emissions assessment in its National Environmental Policy Act documents. For smaller projects with a lower likelihood of a meaningful impact, this discussion is qualitative. For larger projects, emissions analysis is conducted. The Federal Highway Administration approach is consistent with the Council on Environmental Quality’s direction in Section 1502.2(b) to discuss impacts in proportion to their significance. The results of an emissions analysis can be summarized concisely in a National Environmental Policy Act document and provide useful information for decision makers (e.g., an alternative that has lower emissions is likely to be “better” from a mobile source air toxics health risk standpoint than one that has higher emissions).

While the U.S. Environmental Protection Agency and the Federal Highway Administration both agree on the usefulness of addressing mobile source air toxics in National Environmental Policy Act documents for highway projects, the agencies disagree about the value of health risk assessment as a method for doing so.
Another consideration with respect to health impacts is that the Preferred Alternative would also reduce in-vehicle mobile source air toxics exposure as opposed to the No Action Alternative. The U.S. Environmental Protection Agency has found that in-vehicle benzene concentrations were between 2.5 and 40 times higher than nearby ambient concentrations, based on a review of studies discussed in the Regulatory Impact Analysis for the U.S. Environmental Protection Agency’s 2007 mobile source air toxics rule-making [Final Regulatory Impact Analysis, Environmental Protection Agency 420-R-07-002, 3-17 (February 2007)].

Construction of the Preferred Alternative would result in a reduction in benzene exposure to drivers and passengers for two reasons: decreased travel times (motorists would spend less time in traffic to reach their destinations) and lower emissions rates (attributable to speed improvements). Reducing on-road exposure would provide a health benefit for motorists using the roadway network. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

The Federal Highway Administration determined that a supplemental environmental impact statement is not required at this time because there were no changes to the proposed action that will result in significant environmental impacts not evaluated in the Draft Environmental Impact Statement nor is there new information relevant to environmental concerns and bearings on the proposed action or its impacts that will result in significant environmental impacts not evaluated in the Draft Environmental Impact Statement.
July 16, 2013

Mr. Alan Hansen- Team Leader-PEAR
Federal Highway Administration
4000 N. Central Avenue- Suite 1500
Phoenix, AZ 85012-2260

Dear Mr. Hansen:

RE: South Mountain Freeway Meeting

As your schedule permits I would like to meet with you to discuss the proposed South Mountain Freeway Loop 202 and the impacts it will have on my village if it is built on Pecos Road.

My name is Jim Jochim and I am the Treasurer of PARC (Protecting Arizona Resources and Children) we are a 501 C 3 and were incorporated in 2006. I have been actively involved in the public freeway meetings for over a decade and I had the privilege of meeting Mr. Bill Vachon at the SMCAT meetings before he retired.

Enclosed are several copies of the Ahwatukee Republic dated June 14, 2013 in which I am pictured on the front page and on page four. I am also enclosing a number of PARC business cards for your distribution.

Please advise what date and time works best for your schedule and I will be there because as a retiree from AT&T I have a lot of ‘flex’ time.

Best regards,

Jim Jochim
1231 E. Desert Flower Lane
Phoenix, AZ 85048
Tel 480-460-2535
Fax 480460-2538
E-mail: Jochimj@cox.net

Enclosures: AFN paper and PARC business cards
1 Traffic

The main line of the E1 Alternative would not have a bicycle route as part of the design. Continuous east–west riding would be possible in the neighborhoods adjoining the alternative and along Chandler Boulevard. Please see Draft Environmental Impact Statement Figure 3-33, on page 3-57.

2 Traffic

The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Final Environmental Impact Statement). The 32nd Street interchange would have required the displacement of over 100 homes and would have been located in close proximity to an existing high school. The 27th Avenue interchange was evaluated but ultimately eliminated because of increased residential displacements and cost. The extension of Chandler Boulevard west of 19th Avenue is included in this project because reasonable access must be maintained to the neighborhoods at the west end of Pecos Road.

In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabarea from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement). The traffic information presented in the Draft Environmental Impact Statement in Figure 3-37 on page 3-61 shows that traffic along Chandler Boulevard between 24th Street and Interstate 10 would decrease with the propose freeway in place.
This is a comment on the subject SMF DEIS.

I am concerned that the SMF, which has been repeatedly described as a truck bypass, will have an exceptionally high percentage of heavy commercial semi-truck traffic on it, with attendant increased noise and air pollution issues compared to other similar nearby freeways. On any trip out I-10 to the California border, I always observe large numbers of semis, usually running in convoys. While I have no way of knowing for sure, I suspect a high percentage of these trucks are pass-thru long distance overland that have neither originated or stopped in the Phoenix Metro area. I say this because of the number of cargo containers seen; however, I'm sure ADOT / MAG has accurate recent data on commercial cargo for Phoenix on a pass-thru, origination and destination basis, even for intra-regional trucking with origination and destination pairs in the Valley. I was surprised that very little of this specific heavy truck data found its way into the DEIS, with type of traffic vehicles apparently given equal weight, or at least not distinguished between. I would like to see more detailed analysis of the composition of the traffic, with attention to the pass-thru, origination, destination and internal regional components of heavy trucks.

I sat through many discussions at the SMCAT meetings where traffic modelling the number of single commuters in passenger cars that would pass through the break point between east and west sections of the SMF daily was questioned. Since the ultimate goal of the SMF seems to have devolved into regional mobility, I was surprised that this figure of number of daily commuter trips by non-commercial vehicles through the break point between east and west Valley did not move local traffic. As with all other freeways in the region, trucks would use it for the through-transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary users of the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel model projects that truck traffic will represent approximately 10 percent of the total traffic on the proposed action, similar to what is currently experienced on other regional freeways such as Interstate 10, Loop 101, and U.S. Route 60. Trucking destinations in the Phoenix metropolitan area would still prompt trucks to enter congested areas. Choosing to travel on the proposed freeway versus Interstate 10 would not produce substantial travel time benefits. Therefore, it is expected that “true” through truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85. The CANAMEX and Phoenix truck bypass (Interstate 8/State Route 85) routes are not mandatory for truck traffic; they are recommended. The Arizona Department of Transportation does not enforce these routes. It is not anticipated that these routes would be enforced as mandatory in the future.

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<td>Creating a truck bypass is not a goal of the proposed action. The proposed freeway is part of a transportation system developed to improve mobility in the region by increasing capacity and allowing traffic—including truck traffic—to access a segment of the “loop” system (see pages 1-21, 1-22, 3-1, and 3-3 of the Final Environmental Impact Statement) in the Phoenix metropolitan area. The proposed South Mountain Freeway would be a commuter corridor, helping to move local traffic. As with all other freeways in the region, trucks would use it for the transport of freight, for transport to and from distribution centers, and for transport to support local commerce. Nevertheless, the primary users of the proposed freeway would be automobiles. The Maricopa Association of Governments regional travel model projects that truck traffic will represent approximately 10 percent of the total traffic on the proposed action, similar to what is currently experienced on other regional freeways such as Interstate 10, Loop 101, and U.S. Route 60. Trucking destinations in the Phoenix metropolitan area would still prompt trucks to enter congested areas. Choosing to travel on the proposed freeway versus Interstate 10 would not produce substantial travel time benefits. Therefore, it is expected that “true” through truck traffic (not having to stop in the metropolitan area) would continue to use the faster, designated, and posted bypass system of Interstate 8 and State Route 85. The CANAMEX and Phoenix truck bypass (Interstate 8/State Route 85) routes are not mandatory for truck traffic; they are recommended. The Arizona Department of Transportation does not enforce these routes. It is not anticipated that these routes would be enforced as mandatory in the future.</td>
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<td>2</td>
<td>Noise</td>
<td>Noise levels from Pecos Road traffic were measured in 2003 and 2004 and ranged from 44 A-weighted decibels to 56 A-weighted decibels. Without noise mitigation, noise levels from the proposed freeway are predicted to range from 64 A-weighted decibels to 78 A-weighted decibels at the nearest homes, depending on the distance from the freeway. Noise mitigation was estimated to reduce those noise levels to a range of 59 A-weighted decibels to 63 A-weighted decibels for most of the areas (see Draft Environmental Impact Statement page 4-91). Because of topography, local street traffic, or other engineering constraints in a few small areas, estimated noise levels could not be reduced as much and would be as high as 64 A-weighted decibels to 70 A-weighted decibels in those areas. Noise walls would range in height from 8 feet to 20 feet tall in the Ahwatukee Foothills area. Although not recognized by the Federal Highway Administration as mitigation, rubberized asphalt would be used as the top level of paving; it is discussed on Draft Environmental Impact Statement page 4-91 and in the sidebar on page 4-92. The noise analysis was updated for the Final Environmental Impact Statement using most recent Federal Highway Administration and Arizona Department of Transportation policy and traffic projections provided by the Maricopa Association of Governments in August 2013. This updated analysis begins on page 4-88 of the Final Environmental Impact Statement. No substantial differences between the analyses presented in the Draft and the Final Environmental Impact Statements resulted.</td>
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(Responses continue on next page)
appear in the DEIS. I’m sure the data is available, since as a long-term employee of a large local company, I had to fill out questionnaires regularly from the County on my commuting habits, including home address and destination.

Regarding the pass-thru traffic of heavy semi trucks, I have noticed small signs on I-10E near Buckeye and I-10W near Casa Grande indicating that the AZ85 / I-8 route through Gila Bend is an optional bypass around the Phoenix urban core. Having taken this route a few times, I noticed the number of traffic lights and stop signs, low speed limits, speed traps, lack of amenities, narrow lanes with few passing opportunities, scenic small downtown and difficult access to I-8 were a major disincentive for a commercial trucker to consider this alternate. I have been assured by ADOT that this is all being remedied and AZ 85 will be an interstate caliber road by the time the SMF is completed, thus providing a much more feasible bypass alternative to the SMF. My question is if ADOT intends replace the current signage with larger, preferably overhead, signs, promoting the AZ85 / I-8 bypass in order to minimize pass-thru truck traffic on the SMF? In addition, are there any plans to require or regulate the use of the Gila Bend bypass for pass thru traffic? If so, will there be enforcement by DPS, since commercial overland drivers all are required to maintain logs and carry bills of laden indicating origin and destination?

Thank you for considering these numerous concerns and requests for more information regarding the SMF.

Regards,
Timothy R. Lank
Vice President,
Protecting Arizona’s Resources and Children (PARC)

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</tr>
<tr>
<td>4</td>
<td>Traffic</td>
<td>Information related to the origin and destination, including pass-thru, of vehicles that would use the proposed freeway is presented in Figure 3-18 on page 3-36 of the Draft Environmental Impact Statement. Details related to heavy trucks in the region is presented on page 3-64 of the Draft Environmental Impact Statement.</td>
</tr>
<tr>
<td>5</td>
<td>Trucks</td>
<td>There are no current plans to increase the size of the signs for the Phoenix bypass route but the current signs are overhead signs.</td>
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I have been an East Valley resident for 33 years, and as such, I voted on both the sales tax fund raising propositions to implement the regional transportation plan. Realizing there was a possibility the SMF could be built, I took confidence in the fact that every effort would be made to minimize the aesthetic impact, air and noise pollution and the permanent disruption of neighborhoods by cut-thru traffic, which I experienced directly on a temporary basis when Chandler Blvd was widened and saw that freeways through dense residential neighborhoods could be designed and optimized based on a number of criteria and considerations. There is not a single design that fits every condition. The proposed freeway would include similar opportunities for aesthetic treatments and enhancements as other freeways in the Phoenix metropolitan area.

This is a comment on the subject SMF DEIS.

So I was shocked and enraged when I discovered that the proposed design of the impact.

cut-thru traffic and speed bumps in the neighborhoods are still there). I looked at

again when the Chandler Blvd bridge over I-10 was rebuilt (the signs prohibiting

pollution and the permanent disruption of neighborhoods by cut-thru traffic, which

itself on a more natural, desert suburban village environment. It's not bad enough

roads like the US60 Superstition Fwy and the more recent Loop 101 Price Fwy

huge walls, and raised freeway overpasses that will propagate traffic noise and

local environment in a huge way, with attempts at mitigation that create unsightly

future.

9

1. Design

The design of the proposed freeway would be in accordance with the Arizona Department of Transportation Roadway Design Guidelines (see page 3-54 of the Draft Environmental Impact Statement). All freeways and highways in Arizona are developed these guidelines. Each freeway is evaluated based on surrounding site conditions and the design is optimized based on a number of criteria and considerations. There is not a single design that fits every condition. The proposed freeway would include similar opportunities for aesthetic treatments and enhancements as other freeways in the Phoenix metropolitan area.

2. General Impacts

The study used state-of-the-practice, scientific community methods and similarly accepted methods. Methods, assumptions, and data were developed early in the environmental impact statement process and peer reviewed by the Federal Highway Administration, the Arizona Department of Transportation, and other federal, State, and local agencies. Peer reviewers concluded that the methods, assumptions, and data are appropriate. The Draft Environmental Impact Statement has sufficient technical merit, does comply with “fundamental concepts and purpose of an environmental impact statement,” and does appropriately and properly inform the public.

While the City of Phoenix Police Department reported in 2005 that it did not have any statistics specific to crime adjacent to freeways, the Police Department did note that, based on its experience, there does not appear to be a correlation between crime rates and freeways. See Final Environmental Impact Statement sidebar on page 4-21.

The Arizona Department of Transportation and Federal Highway Administration, in cooperation with the U.S. Corps of Engineers, the U.S. Bureau of Indian Affairs, and the Western Area Power Administration, prepared the Draft and Final Environmental Impact Statements and Section 4(f) Evaluation in accordance with the National Environmental Policy Act of 1969 (42 United States Code § 4332(2)(c)), Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 United States Code § 303, as amended), and Section 404 of the Clean Water Act of 1977 (33 United States Code § 1251). All of these agencies are experienced in the review of National Environmental Policy Act documents and have found the logical sequence of decision making to be sound and in line with National Environmental Policy Act requirements. The Draft Environmental Impact Statement and Section 4(f) Evaluation 1) satisfies Federal Highway Administration and Arizona Department of Transportation’s environmental analysis requirements; 2) provides a comparison of the social, economic, and environmental impacts that may result from implementation of the proposed action—construction and operation of a major transportation facility; and 3) identifies measures to avoid, reduce, or otherwise mitigate adverse impacts.

3. Air Quality

The carbon monoxide analysis was updated in the Final Environmental Impact Statement. Although a qualitative analysis of particulate matter (PM<sub>2.5</sub>) was presented in the Draft Environmental Impact Statement, a quantitative project-level particulate matter (PM<sub>2.5</sub>) hot-spot analysis is included in the Final Environmental Impact Statement. The results of the air quality updates are summarized in the prologue to the Final Environmental Impact Statement (page xiii) and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. The carbon monoxide and particulate matter (PM<sub>2.5</sub>) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones.

(Response 3 continues on next page)
roads creating traffic on small streets where there was none. Is there some good reason the design of the SMF is so drastically different from its predecessors? Even the most recent adjacent connecting Loop 202 San Tan Fwy has arterial overpasses. Specifically, the design of the SMF in the eastern segment is deficient in that at is an above grade freeway with raised freeway overpasses over arterials, necessitating very high, unsightly noise walls and propagating pollution over an area loaded with nearby schools. This aspect of the design is largely unknown by the general public, who are expecting a design similar to what they see locally.

The SMF in the eastern segment is replacing Pecos Rd, which will be completely removed. However, access to the SMF in the form of interchanges will only have four versus the current six. The elimination of 32St and 27Ave access will wreak havoc with local traffic patterns on arterials, collectors and neighborhood streets. It has been stated that the 32St removal was at the request of the City of Phoenix because of concern over the four schools in the immediate area. This is a patently absurd argument. The removal of access to 32St will only cause worse traffic congestion and more dangerous conditions for local schoolchildren. This decision needs to be revisited with the appropriate Phoenix representative so he can reaf his concerns and hear the ramifications of his irresponsible request.

The elimination of 27Ave access will divert traffic to the 17Ave interchange. Between 17 and 27 Ave is the largest piece of undeveloped land in Ahwatukee. When this area is developed at usual density, the traffic at the 17Ave interchange will increase tremendously, and the development will provide cut-thru traffic routes for vehicles currently using 27Ave. The elimination of an access point to the SMF at 27 Ave is a design deficiency that should be remedied. In addition, since the land between these two access points is undeveloped, an access road would be a helpful amenity.

A major safety issue with an above grade freeway is the proximity of approximately 12 miles of SRP 500KV high-tension power lines parallel and immediately adjacent to the roadway. With the expected high percentage of semi trucks on this route, and especially hazmat tankers carrying gasoline from the tank farm at the western end, an accident that involved one of these power poles could cause a cascade failure of the entire 12 mile stretch between dead end towers and cause an extended and expensive outage of weeks since this line carries most of the power to the East Valley. Furthermore, this is a major line from Palo Verde NGS and a sudden dropout could have severe repercussions for this facility. A below grade freeway would greatly reduce the chances of such an accident.

The traffic model data by HDR at the SMCAT meetings revealed some doubt about the need for commuter regional mobility between the Southeast Valley and

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<td>3 (cont.)</td>
<td>Design</td>
<td>The emission modeling developed for the proposed action showed that for the mobile source air toxics study area, there would be little difference in total annual emissions of mobile source air toxics between the Preferred and No-Action Alternatives (less than a 1 percent difference) in 2025 and 2035. With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions (see discussion beginning on page 4-77 of the Final Environmental Impact Statement).</td>
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| 4 | Design | Depressing the proposed Pecos Road sections would entail installation of pump stations to drain the main line freeway. A depressed freeway would also need a drainage channel to capture the off-site flows to prevent their entering the freeway. Pump stations were not used because of the high cost of construction and maintenance needed for their operation. The recommended freeway configuration would have the E1 Alternative aboveground and the existing culverts extending to pass the drainage under the freeway. Pecos Road currently has numerous existing culvert crossings. Depressing the freeway in this area would eliminate the existing culvert crossings and potentially have adverse flooding impacts on adjacent properties. Extending the existing culverts or upsizing the culverts would maintain or improve drainage flows. This would ensure that there would be no adverse flooding impacts on adjacent properties. (See Draft Environmental Impact Statement pages 3-15 and 3-18.) To reduce impacts by depressing the proposed freeway in the Eastern Section, the Arizona Department of Transportation would:  
  - need to spend an additional $400 million for right-of-way acquisition and construction  
  - displace an additional 300 residences  
  - maintain additional pump stations and detention basins for the life of the freeway  
  - would still have noise-related impacts requiring mitigation (i.e., noise barriers and their associated costs and visual impacts)  
Because the belowground option would result in substantially greater costs and residential displacements, this option was eliminated from further study. A depressed freeway option was evaluated in the Draft Environmental Impact Statement and is described on pages 3-15 and 4-91. Although depressing the freeway would reduce noise levels, noise walls would still be needed to further reduce noise to meet the Arizona Department of Transportation noise policy. Whether the freeway is built aboveground with tall walls or belowground with shorter walls, the final mitigated noise levels would be nearly the same at nearby residences. The major disadvantage of building a depressed freeway would be the increased construction cost and the possible acquisition of additional right-of-way for pump stations and retention basins. For all alignments of each of the action alternatives, the proposed freeway would be elevated above the natural grade of the surrounding land. This elevated profile would allow noise to carry farther, creating noise impacts at greater distances from the freeway. Depressing the profile of the freeway below grade might reduce traffic noise levels adjacent to depressed sections. However, it would be necessary to also construct asphalt noise barriers to achieve noise reduction goals at receiver locations adjacent to depressed freeway sections (see page 4-91 in the Draft Environmental Impact Statement). This strategy would reduce visual impacts... |
the Southwest Valley, especially eight lanes. What was not in doubt however, was the need for improved vehicle transportation between the Village of Laveen and the I-10 Papago Fwy. Throughout the process, many residents of Laveen commented that they didn’t need the Ahwatukee segment, they just needed a better route to I-10 Papago. Many felt that future development in their area was being held hostage to a road half of which they didn’t need or want. With this in mind, a spur freeway, improved arterials and / or an Arizona Parkway might be a better solution for the people of Laveen. The DEIS did not specifically cite commuter only traffic projections through the break point between the east and west segments of the SMF. This is an important piece of data.

Lastly, this SMF freeway is projected to cost out at $2 - 3 billion. This money could more effectively be used improving the existing city core transportation infrastructure, such as widening the Broadway Curve and I-10 Papago Fwy, putting a second level on the Black Canyon Fwy, expanding critical arterials like Baseline Road or technology projects like improving traffic light coordination on arterials all around the Valley for increased flow. However, if the current proposed abominable design for the SMF eastern segment is based on decreased sales tax revenues due to the slow economy, I would like to suggest waiting until the funds are available to built it right.

Thank you for considering these numerous concerns and requests for more information regarding the SMF.

Regards,
Timothy R. Lank
Vice President,
Protecting Arizona’s Resources and Children (PARC)

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<td>4</td>
<td>Alternatives</td>
<td>The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Draft Environmental Impact Statement). The interchange would have required the displacement of over 100 homes and would have been located near an existing high school. The City recommended that, based on these impacts, the interchange be removed from the study. In 2006, the City of Phoenix conducted a traffic circulation study to evaluate the impacts of the proposed freeway on the local street system, including the shift of access to Foothills Reserve and Calabrea from Pecos Road to Chandler Boulevard. The City study found no adverse effects on the local street system from the freeway (see Appendix 3-1 in the Final Environmental Impact Statement).</td>
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<td>5</td>
<td>Traffic</td>
<td>The determination to not include an interchange at 32nd Street was made in coordination with the City of Phoenix (see Figure 3-8 on page 3-15 of the Draft Environmental Impact Statement). The interchange was evaluated but ultimately eliminated because of increased residential displacements and cost. There are no provisions for frontage roads connecting 17th Avenue to the residential area to the west. Reasonable access is provided from 17th Avenue and the extension of Chandler Boulevard. The daily traffic volume on 17th Street in 2011 was approximately 4,500 vehicles per day just north of Pecos Road (see <a href="http://phoenix.gov/streets/traffic/volumemap">http://phoenix.gov/streets/traffic/volumemap</a>). With the proposed freeway in place, an additional 4,000 vehicles day would use 17th Avenue to gain access to residences west of 17th Avenue. The total daily traffic would be well below the capacity of a two-lane road (approximately 15,000 vehicles per day).</td>
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<td>6</td>
<td>Design</td>
<td>The clearance distance between the freeway and power lines would be in excess of any regulatory safety requirements for the power lines. There are power lines throughout the region that cross over sections of freeway. The Arizona Department of Transportation and the utility companies work together to ensure the safety of the traveling public as well as ensure reliability of power sources.</td>
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<td>8</td>
<td>Purpose and Need</td>
<td>The Federal Highway Administration and the U.S. Environmental Protection Agency approved the air quality conformity determination that includes the Maricopa Association of Governments regional travel demand model that produced the traffic projections used in the traffic analysis for the project (see Final Environmental Impact Statement page 3-27). The model projects demand for multiple modes of travel, including automobile, bus, and light rail. Key model inputs used to forecast travel demand in the Study Area included socioeconomic data (based on land use plans and population and economic forecasts), the anticipated average number of vehicle trips within the region on a daily basis, the distribution of transportation modes used by travelers in the region, the capacity of the transportation infrastructure to accommodate regional travel, and the future transportation infrastructure. The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. While new projections based on the 2010 Census showed a lower anticipated population in 2035 than the previous projections, the need for the freeway has not changed. The traffic analysis demonstrated that the proposed project is needed today.</td>
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<td>9</td>
<td>Design</td>
<td>Information related to origins and destinations of motorists that would use the proposed freeway is presented in Figure 3-18 on page 3-36 of the Final Environmental Impact Statement. The definition of freeway users considers only those motorists who travel through the South Mountains; so, motorists who begin their trips in Ahwatukee Foothills Village and travel east to Interstate 10 (Maricopa Freeway) or motorists who begin in Laveen Village and travel north to Interstate 10 (Papago Freeway) are not counted in the analysis. The analysis of origins and destinations shows that 75 percent of travelers would be involved in trips beginning or ending in the Study Area or areas immediately surrounding it. Nine percent of the trips would begin, end, or begin and end outside of the Maricopa Association of Governments region; seven percent would either begin or end in Pinal County.</td>
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<td>10</td>
<td>Purpose and Need</td>
<td>The proposed freeway was identified in the 2004 Regional Transportation Plan as one of a host of transportation improvements to meet the projected demand for transportation in the Phoenix metropolitan area. Many suggestions such as those made in the comment are being implemented, have been evaluated, or are being considered to address transportation needs in the Phoenix metropolitan area.</td>
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From: Tim Lank [mailto:trlank@hotmail.com]
Sent: Monday, July 22, 2013 11:17 AM
To: Projects
Cc: Pat Lawlis; Jim Jochim; Clsdeer@aol.com; Steve Brittle; Howard Shanker; Tim Lank
Subject: SMF DEIS Comment

Attn: ADOT 202 South Mountain Freeway Project Team

This is a comment on the subject SMF DEIS.

I have been an East Valley resident for 33 years, and as such, I voted for the 20 year Proposition 300 sales tax increase to raise funds for the regional transportation plan in 1985. That was supposed to be the complete regional transportation plan, not the miniscule 20% of total miles that ultimately were completed before expiration. I know ADOT likes to point to a weak economy and reduced funds as the reason for the poor performance on this huge and expensive project. Sadly, I have read in numerous articles that a more accurate reason was misuse of funds, poor supervision and poor project management / control. Add to that private citizens making fortunes by swapping land in the right-of-way in order to drive up their selling price. You may recall that in 1985, one could drive from Jacksonville, FL to Los Angeles, CA non-stop on Interstate 10, except that only in Phoenix, one had to exit at the Durango Curve and drive out Lower Buckeye all the way to Dysart Road before I-10 started again. While this was the butt of many jokes, I came to realize that this is a perfectly normal state of affairs for Arizona transportation. I am regularly reminded of it when I drive past the failed iconic horse racing track on the far west Papago. Failed because of poor access from an incomplete I-10. As a commercial delivery driver in the New York City tri-state area previously, it is hard to comprehend the lack of responsiveness to basic transportation needs.

Now we are engaged in a fiasco of the opposite sort. There is extensive discussion of a freeway that is basically not needed and an almost unbelievably exorbitant waste of taxpayer dollars. The general public have been starved for decent roads and freeways for many years. They are weary of sitting in traffic jams at rush
hour. They jump at any chance for any additional roads on the pretext that the new roads might reduce their aggravation and time sitting still in their cars. Well, this South Mountain Freeway is far from the answer to their complaints. But ADOT / MAG have been playing to this need with a false picture of relief based on old data and faulty models. If this involved anything other than a government agency, it would be called a grift. And their basic rationale is that it was put there 35 years ago. It completes a loop. And it's nice and symmetrical looking on a map, just like other large cities.

If the SMF was completed even 25 years ago, there would have been little impact and little objection from the neighbors, since there were few people in the area at the time. In fact, our neighbors to the south, the Gila River Indian Community made several overtures expressing an interest in putting this road on their land, only to be spurned by government agencies that obviously had preplanned ideas of what this road needed to look like and where it needed to be. It is telling that of all the highways on the regional plan, the SMF was at the bottom of the list. That and the fact that this DEIS is straining so hard to try and justify it now indicate how ineffective it will be. Think what $2.5 billion dollars would do if directly applied to the Broadway Curve, Papago Freeway, Baseline Road or an Arizona Parkway from Laveen to the Papago, for people who are being held hostage to the SMF under threat of denied development, when all they really want is their half of it. Better traffic controls, like timed coordinated traffic lights on major arterials, or a decent bus system that didn't cater to just downtown workers would a better allocation of transportation resources.

Unresponsiveness to the needs of its citizen customers seems to be systemic at ADOT, the largest government agency in the state. Yet its single minded focus on ramming the misguided SMF through seems to be a dichotomy. It helps to look at some of their recent history for a better understanding of this iconoclast bureaucracy.

For practically the entire 1990's, the westbound US 60 left lane merge onto the I-10E was the most hazardous location in the Valley for rear end collisions. In late afternoon, traffic backed up and stopped in the 65mph high-speed lane regularly caused major property damage and injury. An acquaintance alerted me to this when her boss, the owner of a large aerospace company, became concerned for his employee's safety and asked her to request information from ADOT on the frequency of collision occurrence. After much prodding and expressing fear for his job after looking at the results, an ADOT employee generated the report. The business owner wrote to ADOT asking what was planned to remedy the situation.

### Code | Comment Document
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2 | Alternatives

Tribal sovereignty is based on the inherent authority of Native American tribes to govern themselves. States have very limited authority over activities within tribal land (see Final Environmental Impact Statement page 2-1). The Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make transportation determinations directly affecting tribal land, or condemn tribal land through an eminent domain process. While efforts to study project alternatives on Gila River Indian Community land were attempted (see Final Environmental Impact Statement Chapter 2, Gila River Indian Community Coordination), the Gila River Indian Community has long held a position of not allowing the proposed freeway to be located on its land. For example, a coordinated referendum of Gila River Indian Community members to favor or oppose construction of the proposed freeway on Gila River Indian Community land or to support a no-build option occurred in February 2012, and Gila River Indian Community members voted in favor of the no-build option. Moving forward, therefore, the proposed action cannot be located on the Gila River Indian Community (see Final Environmental Impact Statement page 3-25). The Gila River Indian Community's position regarding a "no-build" option was considered in the Draft and Final Environmental Impact Statement. That position is formally known as the No-Action Alternative and was evaluated in depth in assessments of the impacts of the proposed action on each resource. Whether alignments to develop on Gila River Indian Community land are ultimately identified or not, the Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments will continue to coordinate with the Gila River Indian Community regarding concerns and potential mitigation for those concerns.
This local business leader got a very unsatisfying, if not lame response. I wrote to ADOT as well, suggesting flashing signs on the median wall warning of stopped traffic ahead, which I had seen on merging California interstate highways. I was told this was just not done here. This situation went on for over ten years with millions of dollars in damage and numerous injuries before a separate lane was created that fixed the problem. Ironically, all it took was some paint to stripe the new lane, but this hazardous situation had to wait years until a new carpool flyover was built. This is what passes for responsiveness, competence and accountability.

A similar situation happened when the 101 Pima Freeway was opened. Initially, it was only four lanes with a dirt median and a two wire divider. A deadly crash occurred when a car went through the divider into oncoming traffic. This time, a direct order from the governor accelerated the necessary safety improvements. Another characteristic displayed here and on the SanTan 202 is the building of freeways in parts, a lane at a time, so to speak. The addition of another lane in each direction, then the addition of car pool HOV lanes seems designed to spread the pain out as long as possible. As an engineer and project manager, the efficiency and cost effectiveness of this process is questionable. One could also ask why the plans for the SMF call for it to have all eight lanes completed at once? What changed? Why were the previous roads built piecemeal?

There are numerous other misfires I'm sure ADOT would just as soon forget about. The AZ51, originally designated the Piestewa (Square Peak) Parkway was actually partially built with signalized intersections at Thomas Road before the public realized what they were (not) getting and the outcry forced the immediate conversion to the present freeway. So much for the efficient propagation of highway information, much like the proposed design of the SMF, with its raised overpasses and unsightly huge sound walls. How much did the Paradise Parkway planning cost before it was quashed by Gov. Fife Symington? This road was also on the 1985 regional plan, had purpose and need, yet was quickly dropped for political reasons. SR 153 at Sky Harbor Airport was also on the regional plan. A huge expanse of elevated concrete, it was quietly decommissioned and the signs removed after an aborted attempt to transfer responsibility for completion to the City of Phoenix. Literally, a highway to nowhere.

A question on the acquisition of ROW for the SMF. I understand there were very few takings for the 202 SanTan Fwy in Chandler and Gilbert. Yet hundreds of properties are required for the SMF. Why is there such a large difference?

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<td>3</td>
<td>Design</td>
<td>The determination to build all eight lanes at once was based on a desire to minimize disruption to the traveling public. The other benefit is that there are existing high-occupancy vehicle lanes at each end of the proposed freeway (along State Route 202L [Santan Freeway] and Interstate 10 [Papago Freeway] that can be connected to provide additional services for commuters and regional bus transit). The region’s freeways have been implemented in phases based on available funds and traffic demand.</td>
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<td>4</td>
<td>Acquisitions and Relocations</td>
<td>The number of acquisitions when dealing with a major transportation project such as the proposed freeway is dependent on a number of factors—roadway location, density of development. The Santan Freeway (State Route 202L) was completed in 2006. At that time, the areas of Chandler and Gilbert were not as developed as the Ahwatukee Foothills Village area is today. Also the cities were more successful in preserving the right-of-way by limiting development within the proposed alignments. Conversely, many residences and businesses were acquired in the construction of the Red Mountain Freeway through the city of Mesa. In making decisions about these freeways, the Arizona Department of Transportation, with concurrence from the Federal Highway Administration, attempted to balance agency responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities and environmental conditions. The identification of the W59/E1 Alternative as the Preferred Alternative (which includes the W59 Alternative in the Western Section of the Study Area) seeks to do the same.</td>
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Not all ADOT’s misdeeds are so earthshatteringly expensive. Many just require some paint and management direction to fix. I find them interesting because they shed light on the competency of this giant bureaucracy. A running joke almost everywhere in the Valley is the fact that all the new freeways are either called 101 or 202. If I say I'm on the 101, I could be in Glendale or Chandler, miles apart. Rather than continue with the more memorable different names for each segment, or even using different numbers, ADOT has given up on the names. Even the venerable Superstition Freeway has few signs left anymore. We may be calling this highway the South Mountain Freeway, but the chances are good it will just be another 202. This makes it very complicated and confusing to give directions or navigate.

For years, there were daily jams and congestion where the 101 crosses over the Superstition Fwy. The overpass bridge was built wide enough, but the roadway constricted down to just two lanes in each direction, causing massive backups. Apparently, the Governor or some Legislator made a phone call, and someone appeared with a can of paint, added two more lanes and the backups disappeared. This begs the question whether ADOT goes back and audits its projects after completion to compare planned results with reality. The same situation currently exists on I-10E around MP165 where the freeway narrows to two lanes a few hundred meters before the off ramp for Queen Creek Rd. This is the main exit for the entire town of Maricopa and evening traffic regularly backs up to Chandler Blvd on I-10 because of it. The pavement is wide enough to add another lane, so another can of paint would fix this problem also. So much for ADOT concern for travel time and miles of congested highways. With the huge number of employees, does this organization even look for easy and cost effective improvements, or do they all take the bus and light rail?

In a similar vein, I was at an ADOT local public meeting and asked why the I-10 couldn't be easily widened by one lane in each direction between Chandler Blvd and Elliott by using the extended merge/exit lanes. Only a few yards of new additional pavement under each overpass would be required to complete the lane. Once again, the response was that's just not done here, and besides, it would defeat the purpose of the extended merge lanes. I pointed out that similar short on-ramps were in use on the I-17 downtown, but it was wasted breath. It made me wonder about the actual priority given to commuter travel time and receptiveness to public comments. This in a town where two major arterials have had clocked reversible lanes for years and the Valley is loaded with "suicide" center turn lanes. For comparison, in Honolulu, which has similar congestion problems, major urban core highways use the paved shoulders during peak traffic periods for several hours each day. Their priorities are definitely directed at their "customers" rather than
Lastly, I decided to look at the internal workings and politics of this huge ADOT bureaucracy. This was inspired by an ADOT project engineer during one of the widenings of the Superstition Fwy in Tempe. Apparently, neighbors of the freeway had successfully fought ADOT to a negotiated peace where everyone agreed not to widen the freeway to its full ROW capacity due to noise and pollution concerns. The engineer's comment was in effect—these people won't be here forever and it will get widened to the limit soon enough. He was right. So much for concern for public health of the new neighbors.

On the subject of subcontractor and project management, there were two investigative articles by Sarah Fenske of the Phoenix New Times newspaper in 2006 describing a successful lawsuit against ADOT by Tempe engineer Paul Braunstein, an ADOT subcontractor. The articles are quite revealing in a not very flattering way, describing cronyism and nepotism in the department in letting contracts, and organizational gyrations designed to offload accountability onto subcontractors. These articles are on the Internet at:


Although these articles are dated, there is no clear evidence that ADOT has changed. In fact, the $20 million that ADOT paid HDR Engineering for this grossly deficient SMF DEIS, strongly suggest that things remain exactly the same. In light of all these anecdotes, I question the competency and motives of a department so keen on pushing a questionable $100 million per mile road. This is especially true when the funds could be used so much more effectively practically anywhere else.

Thank you for considering these numerous concerns and requests for more information regarding the SMF.

Regards,
Timothy R. Lank
Vice President,
Protecting Arizona Resources and Children (PARC)
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**From:** Susanne Rothwell [mailto:sgr@cox.net]
**Sent:** Monday, May 20, 2013 9:02 PM
**To:** Projects
**Subject:** Save Our Mountains Foundation

Dear Sir, Madam,

Please find attached a letter from Save Our Mountains Foundation (SOMF), regarding the location of the South Mountain Freeway, and the alignment across the SMPP in particular. Many thanks for your consideration in the final location of this freeway.

Sincerely,

Susanne Rothwell,  
SOMF  
(602) 493-1302  
susanne@rothwellarch.com

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SAVE OUR MOUNTAINS FOUNDATION (SOMF):
Official position on the Arizona Department of Transportation’s South Mountain Freeway Environmental Impact Study. May 20, 2013

SOMF is against the alignment of the South Mountain Freeway and the 202 road that cuts into South Mountain and trespasses the South Mountain Park/Preserve (SMPP). SOMF is not against the building of the freeway, we are against the encroachment of the freeway into the Preserve and the destruction of the south west ridges of South Mountain.

SOMF anticipate successful negotiations with the Native American Communities to save the sacred mountain:

- South Mountain is the heart of the Phoenix Preserve system. At 16,600 acres it is the country’s largest park, later designated “Preserve” by Mayor Goddard, giving it higher protection. It is sacred to the Native American Communities, and is of significant life style value to the residents of Phoenix with over 3 million visitors each year.
- The growth projections both for population and pollution shown in the DEIS are out of date and no longer valid.
- The DEIS shows many alternate routes, but no alternative routes that would save cutting into the south west ridges of South Mountain.
- The citizens of Phoenix have consistently voted 80% in favour of the Preserve, but ADOT feel able to ignore their vote, under the provision that a similar design was on the books prior to 1990. It is not in fact the same design, and PMPC believes that the “taking” of 31.5 acres of Preserve land represents a clear conflict of the wishes of 80% of Phoenix voters.
- SMPP is on the City of Phoenix “Historic Property Register”, and is eligible for protection under the NRHP (National Register of Historic Places). The DEIS says that the CCC buildings will not be destroyed, negating this requirement. However the Sonoran Desert features that make the Preserve unique will be damaged. Cuts of 220’ (the height of a 20 storey building) is massive, and the natural experience will be greatly diminished.
- Section 6(f) of the ‘U.S. department of Transportation Act’ paragraph 1 says “NPS must ensure replacement of lands of equal value, location, and usefulness are provided as conditions of approval for land conversions”. It is NOT possible to replace pristine south west ridges of South Mountain, and 31.5 acres of Preserve. This provision can not be met.
- Ch 5-18 of the DEIS states that “measures to minimize harm to the South Mountain resources determined through direct co-ordination with resource owners, stake holders and users…” SOMF as a stake holder has NOT been contacted by ADOT, and in fact there is no way to “minimize harm” when you are making 220’ cuts through 3 ridges of the South Mountain. There is no way that any land can compensate for the loss of 31.5 acres and the massive destruction to adjacent land.
- Ch 4-1 of the DEIS lists “measurable benefits” of the Freeway Loop. It is notable that the negative impact has NOT been considered.

SOMF would like to list the “Measurable detriments” of cutting 220’ into SMPP with 8 lanes of traffic:
1. Destruction of the south west ridges of a sacred mountain and important tourist destination for over 3 million visitors annually.
2. A massive increase of traffic, pollution, noise and congestion within the Preserve boundary.

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<td>2</td>
<td>Cultural Resources</td>
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<td>3</td>
<td>Tribal sovereignty is based on the inherent authority of Native American tribes to govern themselves. States have very limited authority over activities within tribal land (see Final Environmental Impact Statement page 2-1). The Arizona Department of Transportation and Federal Highway Administration do not have the authority to survey tribal land, make transportation determinations directly affecting tribal land, or condemn tribal land through an eminent domain process. While efforts to study project alternatives on Gila River Indian Community land were attempted (see Final Environmental Impact Statement Chapter 2, Gila River Indian Community Coordination), the Gila River Indian Community has long held a position of not allowing the proposed freeway to be located on its land. For example, a coordinated referendum of Gila River Indian Community members favor or oppose construction of the proposed freeway on Gila River Indian Community land or to support a no-build option occurred in February 2012, and Gila River Indian Community members voted in favor of the no-build option. Moving forward, therefore, the proposed action cannot be located on the Gila River Indian Community (see Final Environmental Impact Statement page 3-25). The Gila River Indian Community’s position regarding a “no-build” option was considered in the Draft and Final Environmental Impact Statement. That position is formally known as the No-Action Alternative and was evaluated in depth in assessments of the impacts of the proposed action on each resource. Whether alignments to develop on Gila River Indian Community land are ultimately identified or not, the Federal Highway Administration, Arizona Department of Transportation, and Maricopa Association of Governments will continue to coordinate with the Gila River Indian Community regarding concerns and potential mitigation for those concerns.</td>
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<tr>
<td>11</td>
<td>South Mountain.</td>
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<tr>
<td>12</td>
<td>We anticipate successful negotiations with the Native American Communities to save the sacred South Mountain.</td>
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<tr>
<td>13</td>
<td>SOMF is dedicated to facilitating the improvement of the mountain and desert preserves in Phoenix.</td>
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<tr>
<td>14</td>
<td>Save Our Mountains Foundation is a Phoenix based non-profit formed in 1973 by concerned citizens. SOMF is dedicated to facilitating the improvement of the mountain and desert preserves in Phoenix.</td>
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3. The inevitable death of wildlife, and destruction of wildlife corridors that make the Preserve unique.

4. South Mountain with a Freeway chopped into a corner of it, will NOT encourage companies to relocate to Phoenix, for its great life style and weather. This will be a negative to economic growth.

5. The Maricopa and Sun Circle Trails as a part of a larger County wide trail system, along with site specific trails will be negatively impacted by the freeway. “Having a regional trail system can be a stimulus to economic growth”, as “Low impact Heritage Tourism”, but not with a freeway cut through.

- DEIS “The commitment of resources necessary ($2-3billion) to build and operate...based on the concept that residents...would benefit from the proposed transportation facility” SOMF proposes that spending $2-3 billion to desecrate a major tourist and recreation attraction at the heart of the Preserve system would NOT be of any benefit to the residents of Phoenix.

Save Our Mountains Foundation is a Phoenix based non-profit formed in 1973 by concerned citizens. SOMF is dedicated to facilitating the improvement of the mountain and desert preserves in Phoenix.

We anticipate successful negotiations with the Native American Communities to save the sacred South Mountain.

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| 2    | Traffic                      | City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the South Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see Final Environmental Impact Statement page 5-14).

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available.

The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.

If the proposed action is the Selected Alternative in the record of decision, planning for emergency situations would be initiated.

4 Alternatives

Several action alternatives were subject to the alternatives development and screening process; not just the E1 Alternative and alternatives located on the Gila River Indian Community (Figure 3-6 on page 3-10 of the Final Environmental Impact Statement illustrates a representation of such alternatives). Ultimately the other alternatives were eliminated from further study in the screening process and the Gila River Indian Community decided not to give permission to study alternatives on its land (see Final Environmental Impact Statement page 3-25). Therefore, the Arizona Department of Transportation, with concurrence from Federal Highway Administration, identified the E1 Alternative as the eastern section of the Preferred Alternative (which includes the W59 Alternative in the Western Section of the Study Area). In reaching its determination, the Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.

5 Section 4(f) and Section 6(f)

A discussion of the Phoenix Mountain Preserve Act and the proposed freeway is provided on page 5-14 of the Draft Environmental Impact Statement. The total area of impact to the South Mountain Park/Preserve has been reduced from what was proposed in 1988 (see Figure 5-14 on page 5-23 of the Draft Environmental Impact Statement).
Section 106 of the National Historic Preservation Act requires a government-to-government relationship between the Federal Government and Indian tribes as described beginning on page 4-140 of the Final Environmental Impact Statement. Section 106 requires that federal agencies take into account the effects of their undertakings on historic properties. This process requires consultation with tribal authorities. Consultation has occurred with Gila River Indian Community government officials, the Tribal Historic Preservation Officer, the Cultural Resource Management Program, many different tribal authorities, and the State Historic Preservation Office. The consultation has resulted in concurrence from the Gila River Indian Community Tribal Historic Preservation Office and the State Historic Preservation Office on National Register of Historic Places eligibility recommendations (including traditional cultural properties), project effects, and proposed mitigation and measures to minimize harm. This consultation has been ongoing and will continue until any commitments in a record of decision are completed. Sometimes there is no way for a needed project to proceed without harming Section 4(f) properties (such as the South Mountain Park/Preserve). As described in the Draft Environmental Impact Statement in Chapters 2, 3, and 5, the examination of possible avoidance alternatives was robust and arduous. The Draft Environmental Impact Statement acknowledges that the cuts through the South Mountains would be a substantial impact, but the activities that make the park such a highly valued tourist attraction (recreational activities, interaction with the Sonoran Desert) would remain.

If feasible, avoidance of Section 4(f) resources is always the Federal Highway Administration and Arizona Department of Transportation’s first option. As summarized in Figure 5-2 on page 5-4 of the Draft Environmental Impact Statement, numerous alignment adjustments were made to avoid use of existing and planned Section 4(f) resources; however, none of these alternatives were deemed to be prudent and feasible by the Federal Highway Administration. The Department of the Interior reviewed the Draft Environmental Impact Statement and commented, “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources. Please note however, that this concurrence is contingent upon successful completion of the Programmatic Agreement among the consulting parties.” (See Appendix 1-1 of the Final Environmental Impact Statement.)

Section 4(f) and Section 6(f)

Section 6(f) of the Land and Water Conservation Fund Act pertains to projects that would impact outdoor recreational property acquired with Land and Water Conservation Fund Act funds. All Section 6(f) protected areas would be avoided and therefore, this requirement would not apply. Other aspects of the South Mountains are afforded protection under Section 4(f) (see page 5-1 of the Final Environmental Impact Statement).

It is acknowledged that the Save Our Mountains Foundation was not one of the groups that has historically been solicited for feedback on potential measures to minimize harm. Every reasonable attempt is made to ensure all stakeholders are engaged; Chapter 6 details the comprehensive public and agency outreach undertaken for a project that had more news articles than most other stories in Arizona since 2001 to ensure all stakeholders would be engaged. The Draft Environmental Impact Statement comment period serves as an opportunity for all stakeholders to provide input on potential measures.
### Impacts

Impacts of the proposed freeway are disclosed throughout the Draft Environmental Impact Statement. The **Environmental Consequences** sections in Chapter 4 describe the impacts of each action alternative studied in detail with respect to each environmental element. In the **Summary** chapter, Table S-3 beginning on page S-10 of the Draft Environmental Impact Statement provides a tabular list of all of the impacts associated with the proposed freeway.

### Section 4(f) and Section 6(f)

If feasible, avoidance of Section 4(f) resources is always the Federal Highway Administration and Arizona Department of Transportation's first option. As summarized in Figure 5-2 on page 5-4 of the Final Environmental Impact Statement, numerous alignment adjustments were made to avoid use of existing and planned Section 4(f) resources, like the South Mountains Traditional Cultural Property and Park/Preserve. The activities that make the park such a highly valued tourist attraction (recreational activities, interaction with the Sonoran Desert) would remain. As discussed on page 5-18 of the Final Environmental Impact Statement, many alternatives were examined to avoid the use of the South Mountains Traditional Cultural Property; however, none of these alternatives were deemed to be prudent and feasible by the Federal Highway Administration. The Department of the Interior reviewed the Draft Environmental Impact Statement and commented, “Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources. Please note however, that this concurrence is contingent upon successful completion of the Programmatic Agreement among the consulting parties.” (See Appendix 1-1 of the Final Environmental Impact Statement.)

City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the South Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see Final Environmental Impact Statement page 5-14).
### Code: 11  
**Biological Resources**

The section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-125 of the Draft Environmental Impact Statement, discloses by what means the proposed action and its alternatives would affect vegetation, wildlife, and wildlife habitat. A Biological Evaluation was submitted to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality that addressed threatened, endangered, and candidate species. The information used to prepare the analysis in the Draft Environmental Impact Statement (page 4-122) was based on 2011 information retrieved from the Arizona Game and Fish Department (Gopherus agassizii, draft unpublished abstract compiled and edited by the Heritage Data Management System, Phoenix). Current information on threats and connectivity strategies was included in the Biological Evaluation. The U.S. Fish and Wildlife Service concurred with the species determinations in the Biological Evaluation (see Appendix 1-1 of the Final Environmental Impact Statement).

Connectivity is planned to allow wildlife movement beneath the freeway in multilane crossings (see page 4-125 of the Draft Environmental Impact Statement). The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see Mitigation, beginning on page 4-138 of the Final Environmental Impact Statement).

### Code: 12  
**Economic Impacts**

Comment noted.

### Code: 13  
**Section 4(f) and Section 6(f)**

The Maricopa County trails that would cross the freeway are noted in Figure 5-5 on page 5-9 of the Final Environmental Impact Statement. As noted in the table, the freeway would cross over each trail and no direct impacts would occur. This condition is not uncommon as there are numerous local and regional trails throughout the Phoenix metropolitan area that cross freeways. The proposed freeway would not incorporate land from the Section 4(f) resource, and would have no proximity impacts so severe that the protected activities, features, or attributes that qualifies the trails for protection under Section 4(f) are substantially impaired.

### Code: 14  
**Purpose and Need**

Providing a new freeway in an area where it would not be fully used would be an unwise expenditure of public funds. Of the projected 51 percent increase in population, 31 percent increase in housing units, and 69 percent increase in jobs between 2010 and 2035, nearly half of these increases are expected in areas that would be immediately served by the proposed freeway (see Final Environmental Impact Statement page 1-21). When the Arizona Department of Transportation determines whether a freeway should be built, the agency must consider numerous factors, including local and regional transportation needs, project costs, and environmental considerations. Decisions regarding freeway projects are based on the transportation needs of the entire Phoenix metropolitan area as part of a comprehensive, multimodal, regional approach. The proposed freeway is a major component in the Regional Freeway and Highway System. Additionally, the proposed freeway is an important component of past and current planning efforts. Maricopa County, Phoenix’s villages (Laveen, Estrella, and Ahwatukee Foothills), Tolleson, and Avondale have all made transportation, land use, and economic planning decisions in a context of the proposed freeway operating in the Study Area. Finally, the proposed freeway would function as intended in the Regional Transportation Plan.
Outdated data projections used, based on outdated data projections that are now six to eight years old. In all the studies, the DEIS provides no alternative analysis to the demolition of the southwest ridge. Over 3 million visitors come to South Mountain Park Preserve annually.

THE FACILITATOR: Excuse me, Ms. Lakin.

MS. LAKIN: Destroying any part of the mountain to allaying a high-capacity freeway will only have a negative impact on tourism, and the many unique resources. We are not against this freeway, we are against going through South Mountain Preserve. Thank you.

THE FACILITATOR: Thank you, Ms. Lakin.

We'll now proceed with the non-pre-registered folks.

One more comment before we continue. For those of you who see your name on the screen, if you're in the back parts of the room, if you want to make your way up to get people to either microphone, that will help us through the day. Feel free to move up. At this point Suzanne Rothwell.

Thank you.

MS. ROTHWELL: Good morning. Thank you for the opportunity to speak. Is this working? No.
Well, don't worry, I have a loud voice.
I represent Save Our Mountains Foundation. And I have an official statement that I've sent to you via your e-mail source. But I wanted to stand here today and say that we are opposed to any cutting through the South Mountain Park Preserve. We are opposed to any taking of the Phoenix Mountain Preserve System.
And I think perhaps the DEIS, which is a long and wordy document, is most deficient in what it doesn't say. Well, it's most obvious by what it doesn't say. And it does say that this is going to be an economic benefit to Phoenix. But what it doesn't say is that Phoenix has companies relocating here, people coming to live here because of our beautiful weather and our outdoor lifestyle. And if you take away the heart of our preserve system by chopping into the southwest reaches of South Mountain Park, we believe that will be a huge negative.
We've got the Maricopa Trail, Sun Circle Trail, and other local trails in that area. In your document you say that within a quarter of a mile it will be impacted, anything more than outside of a quarter of a mile will not be impacted. As a hiker myself, I can tell you that's not true. And who will...
I want to go hike in a park where there’s a huge eight-lane freeway cut through the southwest region. So Save Our Mountains Foundation would like to encourage you, and whoever in the state needs to make this happen, to negotiate better with the Gila River Indian community and the Indian community at large, and we hope that they will also come to the table to talk, and that we can make a freeway happen where it doesn’t chop into the preserve and part of what forms a crown and glory for the City of Phoenix. We don’t have oceans, we don’t have beaches, but we do have a beautiful preserve system.

Thank you very, very much.

THE FACILITATOR: Thank you, Ms. Rothwell.

Mr. Goodman.

MR. GOODMAN: Thank you. I’m Michael Goodman. I’m also with the Phoenix Mountains Preservation Council, and I am a member of the ADOT Citizens Advisory Team. Pretty much I agree with what has already been said, so I’ll be pretty brief. I did finish reading the EIS, and with regards to the E-1 section, I was highly disappointed. I know during the so-called 12 years we’ve been studying this, we had a number of reports, I guess the E-1 was...
built unless there is a sidewalk or a trail for pedestrian and bike traffic next to it, so a person should be able to travel any way you can. Now is the time to make that possible.

In closing, I ask that we build the road now. 30 years is long enough and as we all know, costs have gone up substantially and will continue to rise with each day, week, month, year, or, in this case, three decades, we wait.

When first proposed, it was with the future needs in mind. Well, the future has arrived. It is time to act. We cannot wait any longer.

Thank you very much. I appreciate you listening.

THE FACILITATOR: Thank you, Mr. Mockus. Just one note. For those of you who are, I understand it's very difficult sometimes in working with prepared notes to keep in mind the time here. So if you would, from time to time, if you are working from notes, please take time out to double-check the time. You're doing a great job and we appreciate that. Thank you.

Sandy Bahr.

MS. BAHR: Thank you. My name is Sandy Bahr. I'm the chapter director for the Sierra Club.
First of all, we are strongly opposed to construction of this freeway and support the no-build option. No-build, as we’ve said repeatedly for many years, I don’t know if it’s been 30, but pretty close to it, no-build doesn’t mean no action. We should be investing in existing infrastructure, which has been in dire need of it, and in more mass transit options.

Phoenix doesn’t need another freeway. As proposed, as you have heard, as you know, this project would destroy a portion of South Mountain Park, which is a key component of our community. It would exacerbate air pollution, destroy wildlife and wildlife habitat and exacerbate urban sprawl. It was a bad idea 30 years ago; it’s a bad idea today. There are many other issues with construction of this freeway. Increased traffic and traffic congestion. We all know freeways give you just a little bit of respite, and before you know it, they’re even more congested. And if it does what some people said it is supposed to do and brings more traffic in instead of taking 85, we’ll have even more congestion and more pollution in the Phoenix area.

As proposed on page 3-40 of the Final Environmental Impact Statement, the No-Action Alternative would not satisfy the purpose and need of the proposed action because it would result in further difficulty in gaining access to adjacent land uses, increased difficulty in gaining access to Interstate and regional freeway systems from the local arterial street network, increased levels of congestion-related impacts, continued degradation in performance of regional freeway-dependent transit services, increased trip times, and higher user costs. Further, the No-Action Alternative would be inconsistent with Maricopa Association of Governments’ and local jurisdictions’ long-range planning and policies. The No-Action Alternative was included in the Draft and Final Environmental Impact Statements for detailed study to compare impacts of the action alternatives with the consequences of doing nothing (impacts can result from choosing to do nothing).

The proposed freeway would pass through the park’s southwestern edge. As stated on page 3-40 of the Final Environmental Impact Statement, the purpose and need of the project is to reduce traffic congestion. However, the project would have negative impacts on the Phoenix South Mountain Park/Preserve, which is a key component of our community. It would exacerbate air pollution, destroy wildlife and wildlife habitat, and exacerbate urban sprawl.

The project team examined alternatives to avoid the Phoenix South Mountain Park/Preserve, but did not identify any feasible and prudent alternatives to avoid impacts on the park. As such, the freeway would go through the park’s southwestern limits. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23). The portion of the park that would be used for the proposed freeway would be 31.3 acres, or approximately 0.2 percent of the park’s approximately 16,600 acres (see Final Environmental Impact Statement, pages S-39 and 5-31). Phoenix South Mountain Park/Preserve would remain the largest municipally owned park in the United States. The activities that make the park a highly valued resource (recreational activities, interaction with the Sonoran Desert) would remain. Nine-tenths of a mile of the proposed freeway would pass through the park’s southwestern edge (see Final Environmental Impact Statement page 5-13).

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The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency recently determined that Phoenix has attained the particulate matter (PM<sub>2.5</sub>) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner-burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.
The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter ($PM_{10}$) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter ($PM_{10}$) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter ($PM_{10}$) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement.

Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.

The section, General Impacts on Vegetation, Wildlife, and Wildlife Habitat, beginning on page 4-125 of the Draft Environmental Impact Statement, discloses by what means the proposed action and its alternatives would affect vegetation, wildlife, and wildlife habitat. A Biological Evaluation was submitted to the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, and Gila River Indian Community Department of Environmental Quality that addressed threatened, endangered, and candidate species. The information used to prepare the analysis in the Draft Environmental Impact Statement (page 4-122) was based on 2011 information retrieved from the Arizona Game and Fish Department (Gopherus agassizii, draft unpublished abstract compiled and edited by the Heritage Data Management System, Phoenix). Current information on threats and connectivity strategies was included in the Biological Evaluation. The U.S. Fish and Wildlife Service concurred with the species determinations in the Biological Evaluation (see Appendix 1-1 of the Final Environmental Impact Statement).

Connectivity is planned to allow wildlife movement beneath the freeway in multiuse crossings (see page 4-137 of the Final Environmental Impact Statement). The Federal Highway Administration and Arizona Department of Transportation have committed to providing mitigation by including multifunctional crossing structures designed for wildlife and for limited human use as well as culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see Mitigation, beginning on page 4-138 of the Final Environmental Impact Statement).
5 Urban Sprawl
Unplanned growth is often termed “urban sprawl.” Generally, this term is used in the context of rapid and uncontrolled urban growth onto previously undeveloped land—usually on the outskirts of an existing urban area. Projects like the proposed freeway are often identified as contributors to urban sprawl. Freeway projects are often cited as making land at the urban fringe more accessible and, therefore, more attractive for development. However, examination of data comparing population and land use between 1975 and 2000 suggests major transportation projects like the proposed freeway do not induce growth in the region (see Final Environmental Impact Statement pages 4-170 through 4-174). The proposed freeway would be implemented in a historically quickly urbanizing area (most noticeably in the Western Section of the Study Area, although a nationwide recession beginning in 2007 has slowed growth). In the Eastern Section of the Study Area, the proposed freeway would abut public parkland, Native American land, and a near-fully developed area—therefore, any contribution to accelerated or induced growth would be constrained. The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years.

6 Purpose and Need
As noted in the Draft Environmental Impact Statement, when compared with the No-Action Alternative, the Preferred Alternative would result in less energy consumption (page 4-160), regional improvements to air quality (page 4-79) that would be expected to produce health benefits, and economic benefits of reducing regional traffic congestion (page 4-57), and would be consistent with local and regional long-range planning efforts (page 4-18).

7 Alternatives
Federal regulations stipulate that an environmental impact statement shall “rigorously explore and objectively evaluate all reasonable alternatives” (40 Code of Federal Regulations § 1502.14; see Final Environmental Impact Statement page 3-1). All alternatives were screened using a multidisciplinary set of criteria. Nonfreeway alternatives were considered (see Final Environmental Impact Statement pages 3-3 through 3-6). Among other things, the study took into account improving existing freeways, improving or expanding other travel modes, strategies to reduce travel demand, and various roadway configurations. This study examined not only the potential impacts from improvements, but also the consequences of building nothing, the No Action Alternative. As proposed by the Maricopa Association of Governments, the South Mountain Freeway would be part of the Regional Freeway and Highway System. Other transportation improvements such as mass transit and local roads are specified in the Regional Transportation Plan and were considered during the evaluation of this proposed new freeway. As noted in the Final Environmental Impact Statement (see page 3-60), the proposed freeway would provide opportunities to enhance operation of future mass transit improvements.
# Code Issue Response

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economic downturn had and it brings into question the validity of projected growth levels put forth in the DEIS. In all the alternative studies, the DEIS does not provide one alternative analysis to the demolition of the southwest ridges of South Mountain. Furthermore, nowhere in this study is there an assessment of hazardous material truck traffic nor any mention of managing this truck traffic and the consequences of a serious hazard waste incident.

Over 3 million visitors come to South Mountain Park/Preserve annually, according to City of Phoenix statistics. Destroying any part of the mountain to align a high-capacity freeway will only have a negative impact on tourism and the many unique resources the park offers.

We urge ADOT to stop providing studies that do not accurately or thoroughly address the impact this freeway has on South Mountain. It’s time to stop the $20 million and more in wasted tax payer’s money to study the environmental impact and design for an alignment that no longer makes sense.

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wildlife and for limited human use as well as culverts designed for connectivity for smaller species. Wildlife-friendly design information would be considered during the design of drainage and crossing structures for the freeway (see Mitigation, beginning on page 4-138 of the Final Environmental Impact Statement).

3 Section 4(f) and Section 6(f)

The religious and cultural importance of the South Mountains (as exemplified in the comment’s reference to the Gila River Indian Community resolution) is acknowledged in the Draft Environmental Impact Statement in several locations, notably pages 4-132 and 5-26 as well as in the Summary of the Draft Environmental Impact Statement. The description in the Draft Environmental Impact Statement is based on input received from the Gila River Indian Community and its members and other Indian Nations and their members. The Draft Environmental Impact Statement, after consultation and coordination efforts, accommodates and preserves (to the fullest extent possible from the available alternatives) access to the South Mountains for religious practices. A very small portion of the mountain would be impacted by the proposed freeway (less than 0.03 percent of the total area). Although the Draft Environmental Impact Statement describes the impact on the South Mountains as adverse, Native Americans would not be kept from practicing their beliefs, access to the mountain would be maintained, and mitigation measures would be implemented based on input from members of the Gila River Indian Community.

The Final Environmental Impact Statement includes discussion on efforts to avoid use of Phoenix South Mountain Park/Preserve, starting on page 5-16. Measures to minimize harm to the park as a result of the proposed freeway start on page 5-23. The portion of the park that would be used for the proposed freeway would be 31.3 acres, or approximately 0.2 percent of the park’s approximately 16,600 acres (see Final Environmental Impact Statement pages S-39 and S-31). The activities that make the park such a highly valued resource (recreational activities, interaction with the Sonoran Desert) would remain.

(Responses continue on next page)
South Mountain’s newest trails are the Bursera and Pyramid Trails (see Final Environmental Impact Statement page 5-8). The E1 Alternative is approximately 1 mile south of the Pyramid Trail and even farther from the Bursera Trail; thus, it would not affect either trail. The trails have walk-in access from Chandler Boulevard and 19th Avenue, with on-street parking. This walk-in access would be north of and adjacent to the planned extension of Chandler Boulevard and, thus, would not be directly affected. The walk-in access point and the part of the Pyramid Trail at the access point are located adjacent to a residential neighborhood and the City of Phoenix’s planned Chandler Boulevard Extension. These trails are typically used for high-intensity recreational activities such as running, hiking, and biking, not noise- or viewshed-sensitive activities. All proposed action alternatives would span existing and proposed trails to avoid impacts. However, during construction (if an action alternative were selected), trails that would be spanned or would be near potential freeway construction would be closed for limited times for safety reasons. Closures would necessitate that trail users detour around construction sites to reconnect the trails farther along their length. According to Phoenix South Mountain Park/Preserve rangers, the Gila Trail—although well-defined—is not a designated trail within the park. That said, the Gila Trail would not be affected by the proposed freeway or by the Chandler Boulevard Extension. The Final Environmental Impact Statement Appendix page A665 contains information directly from the Phoenix General Plan and early coordination with the City of Phoenix Parks Department. The trails in the preserve are exceptions to this statement and were always meant as such. The trails within 1/4 mile of the proposed alternatives were treated separately, as in the case of the Maricopa County Regional Trails System. Should an alternative be selected, the Arizona Department of Transportation and Federal Highway Administration would work closely with the City of Phoenix during final design to ensure the connectivity of trails is maintained, whether they are eligible as Section 4(f) resources or not.

The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the Final Environmental Impact Statement beginning on page 1-11. The purpose and need and analysis of alternatives were updated and reevaluated using these new socioeconomic projections and corresponding projections related to regional traffic. While new projections based on the 2010 Census showed a lower anticipated population and vehicle miles traveled in 2035 than the previous projections, the conclusions reached in the Draft Environmental Impact Statement were validated in the Final Environmental Impact Statement (see Chapter 3, Alternatives). The traffic analysis demonstrated that the proposed project is needed today and will continue to be needed into the future.
<table>
<thead>
<tr>
<th>Code</th>
<th>Issue</th>
<th>Response</th>
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<tbody>
<tr>
<td>6</td>
<td>Alternatives</td>
<td>Several action alternatives were subject to the alternatives development and screening process; not just the E1 Alternative and alternatives located on the Gila River Indian Community (Figure 3-6 on page 3-10 of the Final Environmental Impact Statement illustrates a representation of such alternatives). Ultimately the other alternatives were eliminated from further study in the screening process and the Gila River Indian Community decided not to give permission to study alternatives on its land (see Final Environmental Impact Statement page 3-25). Therefore, the Arizona Department of Transportation, with concurrence from Federal Highway Administration, identified the E1 Alternative as the eastern section of the Preferred Alternative (which includes the W59 Alternative in the Western Section of the Study Area). In reaching its determination, the Arizona Department of Transportation sought to balance its responsibilities to address regional mobility needs while being fiscally responsible and sensitive to local communities.</td>
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<td>7</td>
<td>Hazardous Materials</td>
<td>If the proposed action the Selected Alternative in the record of decision, planning for emergency situations would be initiated. If the plan is amended, it is made available to the Arizona Department of Transportation.</td>
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<tr>
<td>8</td>
<td>Section 4(f) and Section 6(f)</td>
<td>City of Phoenix planning efforts since the mid-1980s illustrate an awareness of the potential for the proposed freeway to affect Phoenix South Mountain Park/Preserve. In 1989, the South Mountain Park Master Plan was adopted by the Phoenix City Council. The master plan shows the freeway alignment as adopted by the State Transportation Board in 1988. In 1990, the South Mountain Preserve Act was ratified by the Arizona Legislature. The Act did not apply to roadways through a designated mountain preserve if the roadway was in the State Highway System prior to August 15, 1990. The proposed freeway was in the State Highway System prior to 1990. Records prior to the Act suggest a primary reason for the exception was to allow the proposed freeway to go through Phoenix South Mountain Park/Preserve (see Final Environmental Impact Statement page 5-14). The project team examined alternatives to avoid the park, but did not identify any feasible and prudent alternatives to avoid impacts. The portion of the park that would be used for the proposed freeway would be 31.3 acres, or approximately 0.2 percent of the park’s approximately 16,600 acres (see Final Environmental Impact Statement pages S-39 and 5-31). The activities that make the park such a highly valued tourist attraction (recreational activities, interaction with the Sonoran Desert) would remain. The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23).</td>
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THE FACILITATOR: Thank you.

If you'd like to speak and haven't registered out front, please do so.

THE FACILITATOR: Will Novak.

MR. NOVAK: This one?

THE FACILITATOR: Please.

MR. NOVAK: Hey guys, how are you doing?

My name's Will Novak. I'm the president of the Phoenix Historic Neighborhoods Coalition, but I'm also the secretary of a group called the Thunderdome Neighborhood Association for Nonautomotive Mobility. I guess you can probably assume where I'm going to come down on this issue.

And it doesn't really matter what we say, because you guys are in the freeway-building business; you have been for -- since the 1970s. You're going to build this freeway, come hell or high water; it really doesn't matter what the citizens say or what makes good sense.

I just want to say how disappointed I am. You know, most cities, corrective-thinking cities around the country are tearing down freeways, like San Francisco, they got rid of the Embarcadero Freeway, while we're still building more. Phoenix was once a city there was actually a time where we...
1. Fought against building freeways. The Arizona Republic came out and said we don’t want to build any more freeways; we don’t want another Los Angeles; we don’t want to be a sprawl and air pollution and just horrible places. But thanks to, you know, short-sighted planning, what we sort have become is just a mini version of Los Angeles. I see in your paperwork that this project is going to cost $1.23 billion. How many miles of light rail do you think you can build for that? How many miles of commuter rail? How many trees do you think you could plant for $1.23 billion? I’ll bet for that much you could fill up the Salt River running over to 19th Avenue and extend the Tempe Town Lake and achieve the original Rio Salado project vision that the city has had for 60 years now. It’s just a classic, short-sighted Phoenix thinking, you know; we just are always in a hurry to screw up and do the wrong thing in this town, and it’s just devastating.

2. The fact that you might cut through South Mountain, the largest city-owned park in the world, is disgusting. And your study is such a joke anyhow. I mean, the idea that you even looked at alternatives is laughable. The only alternative you really looked into is the no-build scenario, which you’re never going to get. 

3. The purpose and need for 60 years now. It’s just a classic, short-sighted Phoenix thinking, you know; we just are always in a hurry to screw up and do the wrong thing in this town, and it’s just devastating.

4. The analysis in the Draft Environmental Impact Statement used socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The National Association of Governments approved new population and land use between 1975 and 2000 suggests major transportation projects like the proposed freeway do not induce growth in the region (see Final Environmental Impact Statement pages 2-4 through 2-174). The proposed freeway would be implemented in a historically quickly urbanizing area (most noticeably in the Western Section of the Study Area, although the nationwide recession which began in 2007 slowed growth). In the Eastern Section of the Study Area, the proposed freeway would abut public parkland, Native American land, and a near-fully developed area—therefore, any contribution to accelerated or induced growth would be constrained. The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years.

5. Unplanned growth is often termed “urban sprawl.” Generally, this term is used in the context of rapid and uncontrolled urban growth onto previously undeveloped land—usually on the outskirts of an existing urban area. Projects like the proposed freeway are often identified as contributors to urban sprawl. Freeway projects are often cited as making land at the urban fringe more accessible and, therefore, more attractive for development. However, examination of data comparing population and land use between 1975 and 2000 suggests major transportation projects like the proposed freeway do not induce growth in the region (see Final Environmental Impact Statement pages 2-4 through 2-174). The proposed freeway would be implemented in a historically quickly urbanizing area (most noticeably in the Western Section of the Study Area, although the nationwide recession which began in 2007 slowed growth.). In the Eastern Section of the Study Area, the proposed freeway would abut public parkland, Native American land, and a near-fully developed area—therefore, any contribution to accelerated or induced growth would be constrained. The proposed freeway would be built in an area planned for urban growth as established in local jurisdictions’ land use plans for at least the last 25 years.

6. The study has considered a variety of transportation modes: transportation system management/transportation demand management, mass transit (commuter rail, light rail, expanded bus service), arterial street improvements, land use controls, new freeways, and a No-Action Alternative. Mass transit modes such as light rail were eliminated from further study because even better-than-planned performance of transit would not adequately address the projected 2035 travel demand (see Final Environmental Impact Statement page 3-4). Two high-capacity transit corridors are being considered near the western and eastern extents of the Study Area, but such extensions would not adequately address the projected 2035 travel demand. A freeway/light rail combination would integrate a freeway and light rail system into a single transportation corridor (see Final Environmental Impact Statement page 3-6). Such a freeway/light rail system is planned at two locations: along Interstate 10 (Papago Freeway) and along State Route 51 (Piestewa Freeway). These two segments would connect to the light rail system currently in operation. With these two freeway/light rail segments already in planning stages, members of the public identified a similar opportunity along the proposed freeway. Most freeway/light rail combinations, however, radiate from a central travel demand generator such as a business district or airport. No such systems are known to follow a circumferential route, as the proposed freeway would. Furthermore, the additional right-of-way needed for light rail (generally, a 50-foot-wide corridor) would have substantial community impacts such as displaced residences and businesses and parkland impacts. Therefore, the light rail alternative was eliminated from further study. The freeway mode was determined to be an appropriate response to the project’s purpose and need. The analyses in the Draft Environmental Impact Statement used socioeconomic and traffic projections at the regional analysis zone and traffic analysis zone levels. At the time of publication of the Draft Environmental Impact Statement, Census 2010-based socioeconomic data at the regional analysis zone and traffic analysis zone levels had not been adopted by the Maricopa Association of Governments and were not available to the project team. Therefore, the data used in the Draft Environmental Impact Statement were the most appropriate information available. The Maricopa Association of Governments approved new population, employment, housing, and traffic projections in June 2013. The new data are presented in the

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1. What is this freeway even necessary
2. When we have MAG's commuter rail plans come online;
3. What about the West Valley light rail going out that way? You know, it doesn't even talk about induced demand. Anyone who studies transportation and planning, all you get when you build a freeway is you get more traffic. We've known this for 40 years now,
4. That new freeways just induce new demand. All you're going to do is build a freeway, which is going to do what, it's going to create more sprawl. There's going to be a Walmart that pops up and a Kmart, and a
5. KFC, and a Church's chicken, and all that stuff, and they're going to create more and more cars, and more and more air pollution, so you haven't done anything. But unfortunately, the way we have things set up here is ADOT is in the highway building business, so that's a joke; you're going to build a
6. highway, no matter what. But just -- yeah, I just would hope that you would take a more holistic approach in the future, you know, and look into what's actually good for this city and this area.
7. Because I'm under 30 years, I've got to live here for the next 70 years, and I don't want to choke to death. And I'm just -- just tired of it. Luckily,
8. when my generation grows up and is in charge, this

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Response 4

4 Alternatives
Several action alternatives were subject to the alternatives development and screening process; not just the E1 Alternative and alternatives located on the Gila River Indian Community (Figure 3-6 on page 3-10 of the Final Environmental Impact Statement illustrates a representation of such alternatives). Ultimately the other alternatives were examined to avoid the use of the South Mountain Park/Preserve; however, none of these alternatives were deemed to be prudent and feasible by the Federal Highway Administration. The Department of the Interior reviewed the Final Environmental Impact Statement and commented, "Following our review of the Section 4(f) Evaluation, we concur that there is no feasible or prudent alternative to the Preferred Alternative selected in the document, and that all measures have been taken to minimize harm to these resources. Please note, however, that this concurrence is contingent upon successful completion of the Programmatic Agreement among the consulting parties." (See Appendix 1-1 of the Final Environmental Impact Statement.) The Arizona Department of Transportation continues to work with park stakeholders to minimize impacts and address concerns. Measures to minimize harm to the park were developed (see Final Environmental Impact Statement, starting on page 5-23). The portion of the park that would be used for the proposed freeway would be 31.3 acres, or approximately 0.2 percent of the park's approximately 16,600 acres (see Final Environmental Impact Statement pages 5-39 and 5-31). Phoenix South Mountain Park/Preserve would remain the largest municipally owned park in the United States. The activities that make the park a highly valued resource (recreational activities, interaction with the Sonoran Desert) would remain. Nine-tenths of a mile of the proposed freeway would pass through the park's southwestern edge (see Final Environmental Impact Statement page 5-13).
kind of crap won’t be happening anymore.

Thanks.

Thanks for typing.

THE FACILITATOR: Good afternoon. I’d like to introduce the 2:00 to 4:00 p.m. panel, with the Arizona Department of Transportation, Brock Barnhart, with the Federal Highway Administration, Director Moreno, and with the Arizona Department of Transportation, Brent Cain.

Our next speaker is Richard Tracy, Sr. microphone.

MR. TRACY: Can I have about five minutes to catch my breath?

THE FACILITATOR: Most certainly.

MR. TRACY: It wasn’t always this way, you know. I just lived here 43 years too long.

THE FACILITATOR: Welcome, Mr. Tracy, you have three minutes.

MR. TRACY: All right. Thank you very much. It was quite difficult for me to come here.

It’s been difficult for me to attend meetings all over the Valley and send letters, and disappointing when nobody pays any attention to it. I hope this is -- okay, as I say, it was difficult to come here.

The Final Environmental Impact Statement addresses the history of air quality in the region (see text beginning on page 4-68 of the Final Environmental Impact Statement). The Clean Air Act § 109(b)(1) requires the U.S. Environmental Protection Agency to promulgate primary National Ambient Air Quality Standards at levels that allow an adequate margin of safety to protect the public health. Air quality in the Phoenix metropolitan area has improved over time; Phoenix was redesignated to attainment/maintenance for carbon monoxide in 2005, and the U.S. Environmental Protection Agency recently determined that Phoenix has attained the particulate matter (PM$_{10}$) standard. These improvements are largely associated with cleaner fuels and lower-emission vehicles along with local controls on fugitive dust. Future emissions would also be reduced by the use of cleaner burning fuels, technological advances in automotive design (including the greater use of alternative fuel vehicles), reformulated gasoline, gas can standards, stricter enforcement of emission standards during inspections, heavy-duty diesel engine and on-highway diesel sulfur control programs, dust control programs, and others.

The air quality assessment for the proposed freeway analyzed impacts from carbon monoxide and particulate matter (PM$_{10}$) and followed U.S. Environmental Protection Agency guidelines. The carbon monoxide and particulate matter (PM$_{10}$) analyses demonstrated that the proposed freeway would not contribute to any new localized violations, increase the frequency or severity of any existing violation, or delay timely attainment of the National Ambient Air Quality Standards or any required interim emissions reductions or other milestones. For mobile source air toxics, the analysis showed that for the Study Area, constructing the freeway would have a marginal effect on annual emissions in 2025 and 2035 (less than a 1 percent difference in total annual emissions between the Preferred Alternative and No-Action Alternative). With the Preferred Alternative in 2035, modeled mobile source air toxics emissions would decrease by 57 percent to more than 90 percent, depending on the pollutant, despite a 47 percent increase in vehicle miles traveled in the Study Area compared with 2012 conditions. The air quality analyses were updated for the Final Environmental Impact Statement, including a quantitative particulate matter (PM$_{10}$) analysis, and are more fully described beginning on page 4-68 of the Final Environmental Impact Statement. Congestion relief resulting from the proposed freeway would provide localized air quality emissions reductions on area freeways and arterial streets and at interchanges, benefiting users of area highways and those living near congested roads.
1. The amount of money that we're spending on this freeway, 100 million per, what was it, mile, that's outrageous, not to mention the $20 million to complete this DEIS. People keep talking about cutting down on pollution, but what about the pollution in our community? Do we not matter? The air that we breathe, is our air any less important than the people of Phoenix? When are we going to actually matter? When are those considerations going to happen?

And you're blasting through sacred mountain that is religious and sacred to our people. I can't elaborate on that because my time is out, but I just want to mention that that is significant to our people.

THE FACILITATOR: Thank you, Ms. Riddle. Our next speaker is David Martin. We welcome David Martin.

Welcome, Mr. Martin.

MR. MARTIN: Thank you.

THE FACILITATOR: You have three minutes.

MR. MARTIN: Thank you. Members of the panel, for the record, my name is David Martin, I sort of have multiple hats here today. I am the president of the Associated General Contractors, I chair an organization called We Build Arizona, and I am an Ahwatukee resident, so I sort of wear three hats.
But one of the things I want to bring to your attention is a poll that we conducted and submitted into the record, with your permission. Members of the South Mountain study team, thank you very much for the opportunity to speak today. I’m here on behalf of all the memberships that I mentioned before to talk to you about a poll that we conducted and letting you know that Valley commuters have waited in traffic jams too long. The freeway will cut traffic congestion across the metro area, it'll reduce air pollution, and save drivers time and money. Registered voters responding to a poll that our organization conducted a little more than two weeks ago happen to agree; 64.3 percent of likely voters in Maricopa County support construction of the freeway. Just 19.6 percent said they were either opposed or likely to oppose the project.

And in a separate survey, we found that 59 percent of likely voters living in Ahwatukee and Laveen support the freeway as well. As a resident of Ahwatukee for 15-plus years and a third-generation Arizonan, I know that people support the project and support the corridor for the project. Jumping onto I-10 downtown in Phoenix every morning is extraordinarily hectic. If the projections of the study come true, I might as well abandon the area of Ahwatukee and convince someone to
take my home. Honestly, I don't want to be around if a
freeway is not built. This corridor is extraordinarily
important to congestion and to the future of Ahwatukee.

Ladies and gentlemen of the committee, the two
polls I want to submit to the record today, the voters
have spoken three times on this issue: Once in 1985, one
in 2004, and again with the poll that we submitted or
will be submitting here today. We must bring this EIS to
its conclusion; 12 years of study, this corridor flies in
the face of the voters who voted this project in. There
is no more important project to area commuters and
workers in the southbound freeway project. We must build
it now. Thank you very much.

THE FACILITATOR: Thank you, Mr. Martin.
I'd like to invite our next speaker, Joseph
Morago.
Welcome, Mr. Morago. You have three minutes.
MR. MORAGO: For the record, it's Joseph Morago.
Good afternoon, my name is Joseph Morago. I was born and
raised in Arizona, I'm a Native American from Akimel
Achti tribe, a member of Gila River Alliance for a
Clean Environment, as well as PARC. I'm here today to
state my opposition for the proposed South Mountain
Loop 202 freeway. After reviewing the DEIS, I was
shocked to learn how little information is present in