



Addendum

Re	Addendum to the Jurisdictional Waters Report		
Project	Environmental Impact Statement: South Mountain Transportation Corridor in Maricopa County, Arizona		
Project numbers	Federal-aid Project Number: NH-202-D(ADY) ADOT Project Number: 202L MA 054 H5764 01L	Date	June 2014

Since publication of the Draft Environmental Impact Statement (DEIS), all technical reports supporting the DEIS have been updated to reflect current conditions. A jurisdictional delineation has been performed for the Preferred Alternatives, the E1 and W59. Additionally, the 2005 Operating Agreement between the Arizona Department of Transportation (ADOT), Federal Highway Administration (FHWA), and the US Army Corps of Engineers (USACE) has been superseded by the 2013 Memorandum of Agreement. Changes to the Jurisdictional Waters Report are underlined and presented below.

Because a jurisdictional delineation has been performed for the Preferred Alternatives, the conclusions and mitigation measures have changed.

1. Project Description and Purpose and Need

Page 1-3, paragraph 4:

- From 1980 to 2010, the Maricopa County population more than doubled, from 1.5 million to 3.8 million.
- Phoenix is now the sixth-largest city in the country, and the region ranks as the 13th-largest metropolitan area in the country.

Page 1-3, paragraph 5:

- MAG projections (conducted in collaboration with the Arizona Department of Economic Security) indicate Maricopa County's population will increase from 3.8 million in 2010 to 5.8 million in 2035 (MAG 2013). It is projected that in the next 25 years, daily vehicle miles traveled will increase from 91 million to 149 million.

Page 1-4, paragraph 1:

- Even with anticipated improvements in light rail service, bus service, trip-reduction programs, and existing roads and freeways, vehicle traffic volumes are expected to exceed the capacity of Phoenix metropolitan area streets and highways by as much as 18 percent in 2035.
- A freeway within the SMTTC would accommodate approximately 11 percentage points of the 18 percent of the unmet travel demand and would be part of an overall traffic solution.

2. Affected Environment

Clean Water Act Sections 404 and 401 Permitting

Page 2-1, paragraph 3 (replace paragraph with):

- On March 18, 2013, FHWA, ADOT, and USACE entered into a Memorandum of Agreement (MOA), amended from the original Memorandum of Agreement, effective June 18, 2012¹ (see Appendix A), which applies to transportation projects that are FHWA actions under NEPA and require USACE permits under Section 404 of the CWA (USACE 2013). The Memorandum of Agreement commits FHWA, USACE, and ADOT to establish priority review of federally funded projects with the goal of achieving timely design and implementation of highway improvements while ensuring the design and implementation is sensitive to the protection of aquatic resources under USACE's jurisdiction. The permitting process for Section 404 requires CWA Section 401 certification. This certification is regulated by the Arizona Department of Environmental Quality (ADEQ) for waters of the United States, except on tribal land, which is regulated by the U.S. Environmental Protection Agency (EPA).

Page 2-1, paragraph 4 (replace paragraph with):

- In the Western Section, the W59 (Preferred) Alternative would affect less than 0.5 acre of jurisdictional waters (the Salt River) and would be permitted under a nationwide permit. The E1 Alternative would require permanent disturbances of greater than 0.5 acre at individual wash crossings; therefore, an individual Section 404 permit that would comply with Section 404(b)(1) of the CWA and an Individual Section 401 certification would be required. It would be filed with USACE according to the MOA.

Description of Jurisdictional Waters

Page 2-1, paragraph 5:

- Jurisdictional waters are delineated at the action alternative corridor level rather than at the Study Area level. Jurisdictional waters in the action alternative corridors include the Salt and Gila rivers and ephemeral washes. No springs, wetlands, or other special aquatic sites are known to be within the action alternative corridors.

Page 2-2, paragraph 2, fourth bullet:

- field investigation of waters of the United States to determine jurisdictional limits (field investigation of ephemeral washes in the Eastern Section E1 Alternative was conducted in 2003 and for both the E1 Alternative and the W59 Alternative in 2013)

Page 2-2, paragraph 3:

- All delineations were conducted in accordance with *USACE Wetland Delineation Manual* (USACE 1987), *Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest* (USACE 2001), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid Region of the Western United States* (USACE 2008b). At that
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time, USACE concurred that the ephemeral washes identified were jurisdictional. Guidance from EPA and USACE (2008) called for these determinations to be revisited with USACE.

- As committed to in the DEIS, a field delineation of jurisdictional waters in the Preferred Alternatives (E1 and W59) was conducted in the summer of 2013 to identify jurisdictional waters and to define the jurisdictional limits for the CWA Section 404 permitting. A preliminary jurisdictional determination was submitted to USACE in December 2013 in accordance with USACE and ADOT guidelines. USACE approved the jurisdictional determination in March 2014.

Jurisdictional Waters within the Study Area

Western Section

Page 2-3, paragraph 2:

- Numerous lined and unlined irrigation conveyance channels (supply, feeder, and return) have been constructed in the upland agricultural areas. Jurisdictional waters in the Study Area, as depicted in the preliminary jurisdictional delineation, are shown in Figure 2.
- For a detailed exhibit showing the jurisdictional waters along the W59 Alternative, see Appendix B.

Page 2-4:

- Figure 2. Jurisdictional Waters (see page 6 of this addendum)

Eastern Section

Page 2-8, paragraph 3:

- Figure 2 shows the jurisdictional waters identified in the Eastern Section of the Study Area as presented in the preliminary jurisdictional delineation submitted to USACE in 2013. Detailed exhibits showing jurisdictional waters along the E1 Alternative can be found in Appendix B.

3. Environmental Consequences

Page 3-1, paragraph 2 (replace paragraph and bullets with):

- As stated previously, FHWA, ADOT, and USACE have entered into an MOA regarding the transportation projects that are both FHWA actions under NEPA and require a USACE individual permit under Section 404 of the CWA.

Page 3-1, paragraph 4 (replace paragraph with):

- USACE participated in the identification of the Preferred Alternative in accordance with Section 404(b)(1) of the CWA. USACE is obligated to select the least environmentally damaging practicable alternative after taking into consideration cost, existing technology, and logistics in light of overall project purposes (40 C.F.R. § 230). The permitting effort would need to consider the effects of the December 2, 2008, jurisdictional guidance memorandum (described in the *Affected Environment* section) on the designation of ephemeral washes as waters of the United States; the Final Compensatory Mitigation Rule issued on March 31, 2008; and USACE's 2008 Regulatory Guidance Letter 08-03, which sets minimum monitoring requirements for mitigation.

Page 3-2, paragraph 1:

- For this report, the Salt River Bridge design is preliminary.

Page 3-2, paragraph 3:

- Based on the 2013 preliminary jurisdictional delineation of the W59 Alternative, disturbances to jurisdictional waters caused by the W59 Alternative would be less than 0.5 acre; therefore, Nationwide Permit #14, Linear Transportation Projects, would be required.

Page 3-3, paragraph 3:

- USACE informally agreed with the conclusion that there were no jurisdictional constructed wetlands in the Study Area in 2003 and again in 2013 after submittal of the preliminary jurisdictional delineation.

Impacts Associated with Eastern Section Action Alternatives

Ephemeral Washes

Page 3-3, paragraph 4:

- A meeting was held with USACE in June 2013 to discuss its expectations for the preliminary jurisdictional delineation of the E1 Alternative. Following that meeting, a preliminary jurisdictional delineation of the E1 Alternative was conducted in the summer of 2013; it identified 49 ephemeral washes as jurisdictional waters. Drainages less than 3 feet in width were not identified as jurisdictional waters in accordance with USACE instructions.

Page 3-5, paragraph 2:

- The preliminary jurisdictional delineation limits of the E1 Alternative would not change.

Page 3-5, paragraph 3 (replace paragraph with):

- Implementation of the E1 Alternative would permanently affect between 1 and 2 acres of jurisdictional waters (ephemeral washes), including disturbances of greater than 0.5 acre at individual wash crossings; therefore, an individual permit that would comply with Section 404(b)(1) of the CWA would be required.
- Because the impact acreage is based on conservative design limits, it is anticipated that design refinement and construction sequencing would reduce impacts on jurisdictional waters.

4. Mitigation

Page 4-1, paragraph 1:

- The following describes potential mitigation measures for ADOT to consider as future commitments to be implemented as part of the project to avoid, reduce, or otherwise mitigate environmental impacts associated with the project. The discussion of these measures in this report does not obligate ADOT to these specific measures. ADOT, along with FHWA and USACE, may choose to modify, delete, or add measures to mitigate impacts. Final obligation of mitigation measures would be made in the record of decision.

Page 4-1, paragraph 2 (new paragraph):

- The W59 Alternative would qualify for Section 404 of the CWA Nationwide Permit #14, Linear Transportation Projects, because of the limited amount of fill that would be placed into jurisdictional waters. ADOT would comply with all terms and conditions of the Section 404 Nationwide Permit #14 as established by USACE.

Page 4-1, paragraph 3 (new paragraph):

- An Individual Permit under Section 404 of the CWA would be required for the E1 Alternative. The E1 Alternative would require permanent disturbances of greater than 0.5 acre at individual wash crossings; therefore, an individual permit that would comply with Section 404(b)(1) of the CWA would be required. USACE participated in identification of the Preferred Alternative. Under Section 404(b)(1), USACE is obligated to select the least environmentally damaging practicable alternative after considering cost, existing technology, and logistics, in light of overall project purposes (40 C.F.R. § 230).

Page 4-1, paragraph 2, first bullet (replace bullet with):

- ADOT would prepare and submit an application to the USACE for a CWA Section 404 permit as appropriate, dictated by impacts on jurisdictional waters. No work would occur within jurisdictional waters until the appropriate CWA Sections 401 and 404 permits were obtained.

5. Bibliography/References

Landiscor. 2013. Aerial Photography of the South Mountain Freeway Study Area.

Maricopa Area Governments (MAG). 2013. Socioeconomic Projections: Population, Housing, and Employment by Municipal Planning Area and Regional Analysis Zone. Phoenix.

U.S. Army Corps of Engineers (USACE), Federal Highway Administration (FHWA), and Arizona Department of Transportation (ADOT). 2013. Amended and Superseded Memorandum of Agreement. March.

6. Appendices

- Appendix A: Memorandum of Agreement, amended
- Appendix B: Detailed Maps Showing Waters of the United States for the W59 and E1 Alternatives
- Appendix C: Preliminary Jurisdictional Delineation sent to USACE in 2013

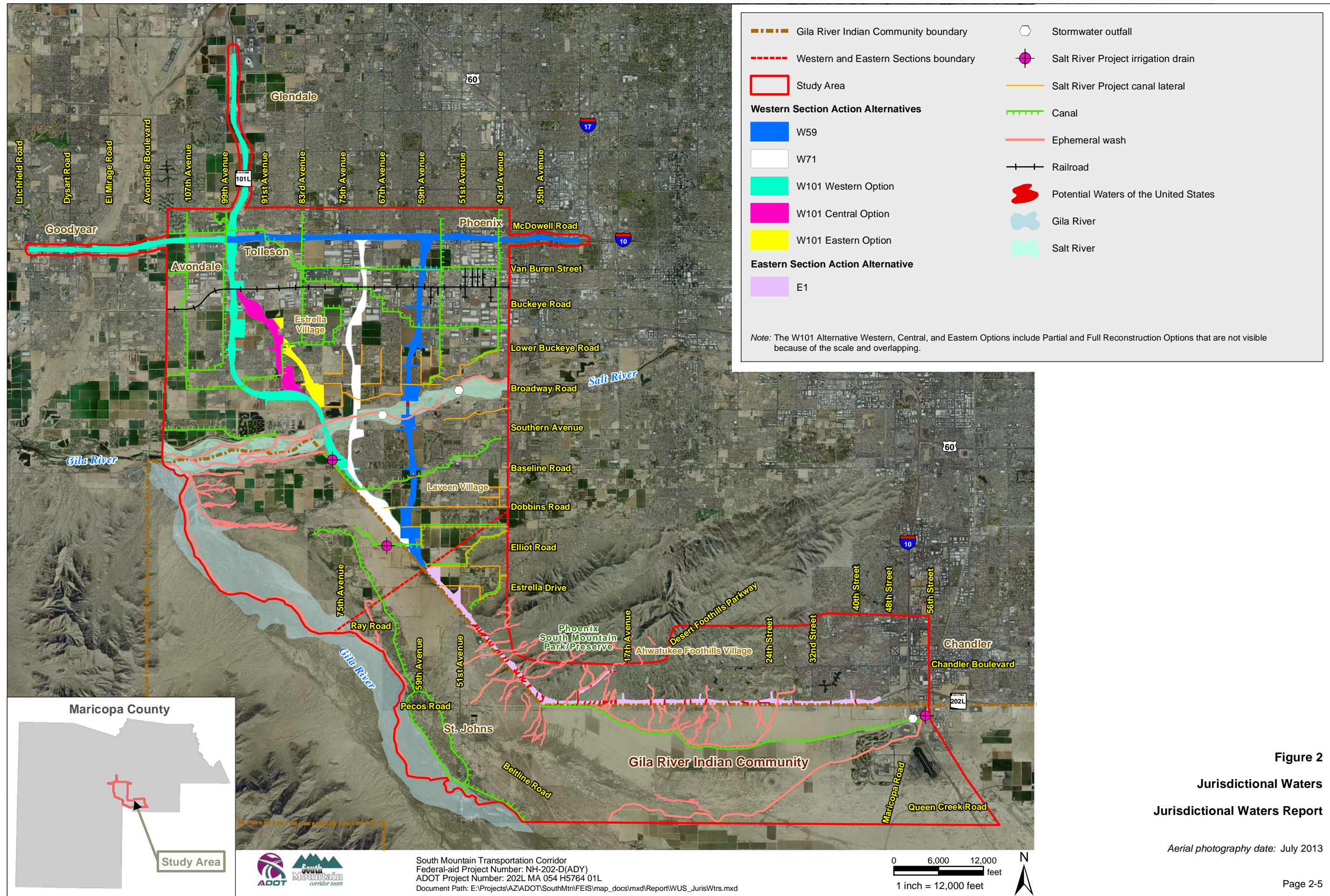


Figure 2
Jurisdictional Waters
Jurisdictional Waters Report

Aerial photography date: July 2013

Appendix A

Memorandum of Agreement, amended

**AMENDED AND SUPERSEDED
MEMORANDUM OF AGREEMENT
BETWEEN THE
ARIZONA DEPARTMENT OF TRANSPORTATION,
FEDERAL HIGHWAY ADMINISTRATION, ARIZONA DIVISION OFFICE
AND
THE UNITED STATES ARMY CORPS OF ENGINEERS'
LOS ANGELES DISTRICT
CONCERNING FUNDING FOR THE DEPARTMENT OF THE ARMY PERMIT PROCESS ON
PRIORITY FEDERAL-AID HIGHWAY PROJECTS**

THIS AMENDED AND SUPERSEDED MEMORANDUM OF AGREEMENT (“AMENDED MOA”) is entered into as of this day 18 of MARCH, 2013, between the U.S. Army Corps of Engineers’ Los Angeles District (hereinafter the “Corps”), Federal Highway Administration, Arizona Division Office (hereinafter the “FHWA”), and the Arizona Department of Transportation (hereinafter the “ADOT”), collectively, referred to herein as the “Parties.”

RECITALS

WHEREAS, the Parties entered into a Memorandum of Agreement (“Original MOA”) effective June 18, 2012 concerning funding for the Department of the Army permit process on priority Federal-aid highway projects; and

WHEREAS, the Parties wish to amend and supersede the Original MOA in its entirety; and

WHEREAS, the Corps has regulatory jurisdiction over certain activities occurring in waters of the United States, including wetlands; and

WHEREAS, because of Federal-aid transportation funding increases under the Moving Ahead for Progress in the 21st Century (“MAP-21”), Public Law 112-141, ADOT substantially increased the number of transportation projects the Corps must review pursuant to 33 U.S.C. 1344 (Section 404 of the Clean Water Act of 1972 (“CWA”)), as amended and 33 U.S.C. 403 (Section 10 of the River and Harbor Act of 1899 (“RHA”)); and

WHEREAS, the Corps has indicated that, due to staff resource constraints, it is currently unable to provide ADOT with priority review for permitting decisions for the increased number of Federal-aid transportation projects pursuant to its responsibilities; and

WHEREAS, ADOT desires the Corps to increase its level of early involvement during the project planning and development process, so that final Corps reviews will not constitute an unexpected delay in ADOT project implementation; and

WHEREAS, 23 U.S.C. 139(j) [Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)], allows ADOT to furnish Federal-Aid Highway Program (“FAHP”) funds to the Corps to expedite the processing of environmental documents for permit decisions for priority transportation projects, and

WHEREAS, this AMENDED MOA is intended to (1) enable the Parties to fully consider, address, and protect environmental resources early in the development of proposed transportation actions; (2) avoid conflicts late in project development through close coordination during early transportation planning and development stages; (3) provide sufficient information to the Corps for timely analysis of project effects and to assist ADOT in developing appropriate mitigation measures; (4) maximize the effective use of limited Corps personnel resources by focusing attention on projects that would most affect aquatic resources; (5) provide a mechanism for expediting project coordination when necessary; and (6) provide procedures for resolving disputes in this resource partnering effort, and

WHEREAS, the FHWA has indicated and agrees that the State’s apportioned Federal-aid highway funds can be used to support this AMENDED MOA.

NOW, THEREFORE, the Parties agree as follows:

AGREEMENT

Article I. PURPOSE AND AUTHORITIES

A. This AMENDED MOA is entered into by the Parties for the purpose of establishing the responsibilities of the Parties relative to priority review of FAHP-funded projects with the goal of achieving timely design and implementation of highway improvements while also assuring such design and implementation is sensitive to the protection of aquatic resources for which the Corps is responsible under Federal statute and regulation. This AMENDED MOA is not intended as the exclusive means of obtaining review of projects proposed by ADOT. This AMENDED MOA is a vehicle by which ADOT may obtain expedited review of FAHP-funded projects designated as priorities, outside of the ordinary Corps review process.

B. ADOT enters into this AMENDED MOA pursuant to Arizona Revised Statute section 28-401 and other relevant Arizona law and 23 U.S.C. 139(j) (Section 6002 of SAFETEA-LU).

C. The Corps enters into this AMENDED MOA pursuant to 23 U.S.C. 139(j) (Section 6002 of SAFETEA-LU).

D. FHWA enters into this AMENDED MOA pursuant to 23 U.S.C. 139(j) (Section 6002 of SAFETEA-LU).

Article II. SCOPE OF WORK

A. Activities that the Corps may pursue under this AMENDED MOA are restricted to actions taken under Corps regulatory authority that will expedite processing of environmental permits required by ADOT in furtherance of FAHP funded projects in accordance with the mandates of 23 U.S.C. 139(j), to facilitate permit application review in less than the customary time necessary for such review. Said processing shall include a full consideration of all relevant and applicable environmental laws and regulations. In no way shall it be construed or implied that the Parties intend to abrogate by entering into this AMENDED MOA any obligations or duties to comply with applicable Federal or state

laws, regulations, guidance, policies and procedures. Use of such funds will not affect the impartial decision-making of the Corps either substantively or procedurally.

B. The Corps' Regulatory Program is funded as a Congressionally appropriated line item in the annual Federal budget. ADOT will provide the Corps with funds in accordance with 23 U.S.C. 139(j). The Corps will provide one full-time Regulatory Program Manager qualified at grade GS-11 as described in **Attachment C**, exclusively dedicated to expediting permit evaluation-related services, as described in Article II.D, below, for ADOT-designated priority projects to support efficient decision-making related to ADOT's permitting needs.

C. The Corps will establish a separate internal financial account to track receipt and expenditure of the funds associated with its review of permit applications submitted by ADOT. The Corps full-time Regulatory Program Manager will charge his or her time and expenses against the account when they perform work to either expedite permit evaluation related requests designated by ADOT as a priority or undertake other programmatic efforts to support efficient decision-making related to ADOT's permitting needs. Corps Regulatory personnel will focus on permit approvals prioritized by ADOT; however, if no or less than three projects are designated by ADOT as a priority, Corps regulatory personnel will then work on other programmatic efforts, and assist with staff training for ADOT.

D. Funds contributed by ADOT hereunder will be expended by the Corps to defray the costs of the funded Regulatory Program Manager (including salary, associated benefits, overhead and travel expenses) and other costs in order to expedite the evaluation of priority permit applications designated by ADOT. Such activities will include, but not be limited to, the following: jurisdictional determinations; site visits; travel; federal register preparation; public notice preparation and distribution; public hearings; preparation of correspondence; public interest review; preparation and review of environmental documentation; meetings with ADOT and resource agencies; training for ADOT employees, partners and contractors; and any other permit evaluation related responsibilities that may be mutually agreed upon.

E. If the funds provided by ADOT are expended and not replenished, any remaining priority permit applications will be handled like those of any permit applicant.

Article III. INTERAGENCY COMMUNICATIONS

To provide for consistent and effective communication between the Parties, each party will appoint a Principal Representative to serve as its central point of contact on matters relating to this AMENDED MOA. Additional representatives may also be appointed to serve as points of contact on specific actions or issues. Each party will issue a letter to the other designating the Principal Representative for each party within fifteen (15) calendar days of AMENDED MOA execution. The Principal Representative for each party may be changed upon written notification to the other parties.

Article IV. RESPONSIBILITIES OF THE PARTIES

A. The Corps shall supplement, and not supplant, its existing Regulatory Program personnel, who currently review ADOT projects on a routine basis, with one qualified full-time Regulatory Program Manager at grade GS-11 as described in **Attachment C**, within projected funding levels provided by ADOT. The Corps shall use the funds provided to defray the costs of salaries and associated benefits and to reimburse travel expenses in order to:

1. Expedite review of ADOT's FAHP-funded priority projects in accordance with the purpose, terms, and conditions of this AMENDED MOA. ADOT will provide and update the list of

priority projects as needed. The Corps shall not redirect resources from, or otherwise postpone, other non-priority projects submitted by ADOT through the standard Corps review process.

2. Actively participate in ADOT scoping, planning, and project development meetings and field reviews, when requested, to identify critical issues, key decision points, and potential conflicts as early as possible. Participation includes sharing, when appropriate, the most current information to ensure that good transportation decisions result. The level of participation will be determined by the project's relative priority, as identified by ADOT, as well as the Corps' current and projected workload of priority projects and activities.

3. Participate with other federal, state, and local agencies in the concurrent and proactive review of transportation projects and provide any concurrences or recommendations, as required. The level of participation will be determined by the project's relative priority, as identified by ADOT, as well as the Corps' current and projected workload of priority projects and activities.

4. Participate in transportation planning meetings, their related activities, and the review of the environmental elements of any planning documents, as requested. The level of participation will be determined by the project's relative priority, as identified by ADOT, as well as the Corps' current and projected workload of priority projects and activities.

5. As appropriate, use a coordinated process to review draft and final environmental impact statements and other environmental documents, and provide timely agency comments.

6. Explore potential programmatic permitting approaches to facilitate reduced processing time.

7. Provide quarterly status updates on Corps decisions or pending actions that will affect ADOT.

8. Perform other related priority tasks, such as early project scoping/coordination as requested by ADOT and agreed to by the Corps.

9. Review application packages for completeness and notify ADOT within 15 calendar days of receipt if application is incomplete.

10. Provide periodic CWA section 404 permit training for ADOT employees, partners, consultants, and contractors.

11. Attend periodic application status meetings with ADOT as necessary.

12. Provide ADOT with quarterly accounting records of actual account of expenditures for salaries, benefits, travel and indirect costs as drawn against advance state payment in support of work contemplated by this AMENDED MOA.

B. ADOT will provide \$169,313.65 to fund Corps Regulatory personnel for the purpose of timely review of selected FAHP-funded priority projects and other identified activities. To facilitate the Corps' reviews and activities, ADOT will:

1. Identify individual projects and other activities requiring priority involvement by the Corps under this AMENDED MOA. The list of projects will be reviewed and revised by ADOT as

necessary.

2. Actively engage the Corps personnel in ADOT scoping, planning, and project development through various means, including, but not limited to, meetings, field visits, conference calls, video teleconferencing, and electronic correspondence.

3. Provide adequate information regarding projects and other specific activities. Provide sufficient information and time to the Corps, on projects requiring authorization by standard individual permit, for the timely determination of project purpose statements and range of alternatives, analysis of project effects, determination of the least environmentally damaging practicable alternative, and development of appropriate mitigation measures. Upon request, provide supplemental information necessary to assure that the Corps can effectively accomplish the tasks listed in Article IV. A. above.

4. In consultation with the Corps, recommend realistic timelines for the Corps' involvement.

5. Maintain a single focal point of contact at ADOT for general coordination with the Corps, arranging pre-application meetings, submittal of Department of the Army permit applications, and other requests for regulatory action.

6. Attend periodic application status meetings with the Corps, as necessary.

7. Participate, to the extent allowable, and in training provided by the Corps pursuant to Article IV.A.10 above.

8. Program a FAHP project to track costs contemplated by this AMENDED MOA.

9. Provide advance payments as contemplated by this AMENDED MOA.

C. FHWA will:

1. Approve programming a FAHP project to accomplish the work contemplated by this AMENDED MOA at the applicable federal-aid reimbursement rate.

2. Within 3 days after receiving an invoice from ADOT, reimburse ADOT for the total amount of Federal share payable for any project programmed (including advance payments) to support this AMENDED MOA.

3. In the event FHWA fails to fulfill the obligations set forth in this AMENDED MOA or withdraw its proposed plans for whatever reason, the FHWA shall, subject to the availability of funds, be responsible for all costs incurred by the ADOT up to the time of withdrawal, unless the reason for the FHWA failure or cancellation is due to ADOT's failure to comply with its obligations hereunder.

D. Performance Measures

1. ADOT and the Corps have agreed to a set of performance measures to monitor activities under this AMENDED MOA. These performance measures are included as **Attachment A** to this AMENDED MOA and incorporated herein by reference.

2. These performance measures may be revised by mutual agreement of ADOT and the Corps without necessitating a formal amendment to this AMENDED MOA.

Article V. FUNDING

A. Within 60 days of execution of this AMENDED MOA and prior to the Corps incurring any expenditure to expedite permit evaluation-related activities as specified in this AMENDED MOA, funds shall be provided by ADOT to the Corps in the amount of \$ 42,328.41 to cover a period of three months of the Corps' budget estimate, which is included as **Attachment B** to this AMENDED MOA and incorporated herein by reference. Payments by ADOT are to be made by check, wire transfer, or electronic funds transfer as follows:

1. For checks, the payment shall be mailed to:

U.S. Army Corps of Engineers, Los Angeles District
Finance and Accounting Officer
P.O. Box 532711
Los Angeles, CA 90053-2325
Attn: Carlos M. Tabares

2. For electronic funds transfers, payment shall be made in accordance with Standard Operating Procedure ("SOP") UFC 08 (**Attachment D**).

3. For wire transfers, payment shall be made in accordance with SOP UFC 07 (**Attachment E**). Paragraph 4a of this SOP refers to this AMENDED MOA instead of a Project Cooperation Agreement.

B. At the end of the calendar month in which the Corps received the advance payment specified in Article V.A. above and at the end of the calendar month of each month thereafter while this AMENDED MOA remains in effect, the Corps will invoice ADOT for an advance payment for the next month in the amount equal to what the Corps expended during the prior calendar month. Payment shall be made within a reasonable period of time after ADOT receives the invoice (not to exceed 30 calendar days) in the same manner as provided in Article V.A. above. Invoices shall be submitted by the Corps to:

Mr. Paul O'Brien
Arizona Department of Transportation
Manager, Environmental Planning Group
1611 W Jackson Street; Mail Drop EM02
Phoenix, AZ 85007

C. If the Corps' actual costs for providing the agreed upon level of service will exceed the amount of funds available, the Corps will notify ADOT prior to fund exhaustion of the incremental amount of funds needed to defray the remaining anticipated costs.

D. No later than July 31, 2013, and July 31 of each subsequent year that this AMENDED MOA remains in effect, the Corps and ADOT will discuss the Corps' anticipated costs to be incurred for the next Federal fiscal year, including any step-increase and locality adjustments. Revisions agreed to by ADOT and the Corps will be incorporated into a revised budget estimate, without necessitating a formal revision or amendment to this MOA. No later than August 30, 2013 and August 30 of each subsequent year that this AMENDED MOA remains in effect, the Corps will provide a written request to ADOT for the total amount specified in the revised budget estimate.

E. The Corps will carry over any unexpended and unobligated funds from year to year. In

the event any funds remain unexpended and unobligated when this AMENDED MOA is terminated or expires, the Corps will refund such unexpended and unobligated funds to ADOT.

Article VI. APPLICABLE LAWS

The applicable statutes, regulations, directives, and procedures of the United States will govern this AMENDED MOA and all documents and actions pursuant to it. Unless otherwise required by law, all expediting of permit applications undertaken by the Corps will be governed by Corps regulations, guidance, policies and procedures.

Article VII. DISPUTE RESOLUTION

In the event of a dispute, the Parties agree to use their best efforts to resolve the dispute in an informal fashion through consultation and communication, or other forms of non-binding alternative disputes resolution mutually acceptable to the Parties. The Parties agree that, in the event such measures fail to resolve the dispute, they shall proceed in accordance with applicable Federal law.

Article VIII. PUBLIC INFORMATION

Justification and explanation of FHWA and/or ADOT programs or projects before other agencies, departments and offices will not be the responsibility of the Corps. The Corps may provide, upon request from ADOT or the FHWA, any assistance necessary to support justification or explanations of activities conducted under this AMENDED MOA. In general, the Corps is responsible only for public information regarding Corps Regulatory activities. ADOT and/or FHWA will give the Corps advance notice before making formal, official statements regarding Corps activities funded under this AMENDED MOA.

Article IX. AMENDMENT, MODIFICATION AND TERMINATION

A. This AMENDED MOA may be modified or amended only by written, mutual agreement of the Parties.

B. Any Party may terminate this AMENDED MOA without cause upon thirty (30) days' written notice to the other Parties. In the event of termination, ADOT will continue to be responsible for all costs incurred by the Corps in performing expedited environmental permit review services up to the time of notice and for the costs of closing out any ongoing contracts in support of the provision of services by the Corps under this AMENDED MOA.

C. Within sixty (60) calendar days of termination, or the expiration of the AMENDED MOA, the Corps shall provide ADOT with a final statement of expenditures. Within sixty (60) calendar days after submittal of the Corps' final statement of expenditures, the Corps, subject to availability of funds, shall remit to ADOT any unobligated or unexpended funds.

Article X. MISCELLANEOUS

A. This AMENDED MOA will not affect any pre-existing or independent relationships or obligations between the Parties.

B. The Corps' participation in this AMENDED MOA does not imply endorsement of ADOT projects nor does it diminish, modify, or otherwise affect Corps statutory or regulatory authorities.

C. If any provision of this AMENDED MOA is determined to be invalid or unenforceable, the remaining provisions will remain in force and unaffected to the fullest extent permitted by law and regulation.

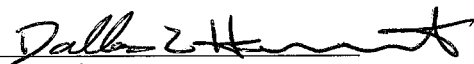
D. This AMENDED MOA, including any documents incorporated by reference or attachments thereto, constitute the entire agreement between the Parties. All prior or contemporaneous agreements, understandings, representations and statements, oral or written, are merged herein and shall be of no further force or effect.

Article XI. EFFECTIVE DATE AND DURATION

This AMENDED MOA and any amendments will become effective on the date of signature by the last Party, and the signing and dating of the Determination Letter by the Arizona State's Attorney General. ADOT shall provide written notice to the Corps and FHWA of the occurrence of the latter event. Unless amended or modified pursuant to Article IX.A., this AMENDED MOA shall remain in force until whichever of these events occurs first: 1) September 30, 2017; or 2) the AMENDED MOA is terminated pursuant to Article IX.B.

IN WITNESS WHEREOF, the Arizona Department of Transportation, acting by and through its authorized officer, the State Engineer, the U.S Army Corps of Engineers, acting by and through its authorized officer, the District Engineer, and the Federal Highway Administration, acting by and through its authorized officer, the Division Administrator, executes this AMENDED MOA.

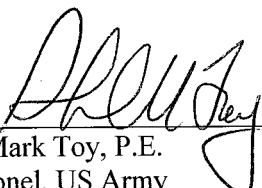
ARIZONA DEPARTMENT OF TRANSPORTATION



Dallas Hammit, P.E.
Deputy State Engineer, Development

Date: 2/21/2013

**U.S. ARMY CORPS OF ENGINEERS,
LOS ANGELES DISTRICT**



R. Mark Toy, P.E.
Colonel, US Army
Commander and District Engineer

Date: 18 MAR 2013

**FEDERAL HIGHWAY ADMINISTRATION,
ARIZONA DIVISION OFFICE**



Karla S. Petty
Division Administrator

Date: 3/4/2013

Attachment A

Performance Measures

For the measures listed below, ADOT and the Corps are expected to achieve the identified objective, for those projects designated as a priority by ADOT, unless ADOT and Corps have mutually agreed to extend the timeframe.

Performance Objective

Performance Measure

- When appropriate, the ADOT staff will utilize the Nationwide Permit (NWP) Information Form to ensure a complete Department of the Army permit application is received, which in turn is expected to expedite the Corps' permit review process.
The NWP Information Form shall be utilized at least 90% of the time.
 - Upon initial receipt of a permit application, the Corps will notify ADOT within fifteen (15) calendar days if additional information is necessary to deem the application complete.
The Corps shall provide such notification within the stated time frame at least 85% of the time.
 - Standard Individual Permits will be processed within sixty (60) days of a complete application, with the exception of those that are delayed due to: absence of CWA Section 401 certification; Section 7 of the Endangered Species Act (ESA) consultation(s); Section 106 of the National Historic Preservation Act (NHPA) consultations; untimely submittal of information or comments from ADOT; an extended comment period for the PN; and/or other environmental review processes with statutory time frames (e.g., Environmental Impact Statement).
The Corps shall meet the stated objective at least 90% of the time.
 - General Permits, including Nationwide Permits, will be processed within 45 calendar days, with the exception of those that are delayed due to the absence of CWA Section 401 certification, Section 106 of the NHPA and/or Section 7 of the ESA.
The Corps shall meet the stated objective at least 90% of the time.
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Attachment B

Corps' Budget Estimate
GS-11 Project Manager in Phoenix,
Arizona

	Yearly	Monthly
Salary	\$162,313.65	\$13,526.14
Travel	\$1,000.00	\$83.33
Administrative costs	\$6,000.00	\$500.00
Total:	\$169,313.65	\$14,109.47

Three month
estimate: \$42,328.41

Attachment C

Professional Standards for Supplemental Staff

One (1) full time employee, or equivalent, with experience and/or education in engineering, biology, natural resources, or other related environmental science. Working knowledge of Section 404 of the (Federal) Clean Water Act, Section 10 of the Rivers and Harbors Act or 1899, the National Environmental Policy Act, the (Federal) Endangered Species Act, and the National Historic Preservation Act is essential. In addition, the ability to travel, occasionally overnight, is mandatory (temporary duty may constitute 10-20% of the employee's time). This employee will be qualified to be paid under the Federal White Collar Pay Schedule at the GS-11 or GS-12 level.

Attachment D

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
FINANCE CENTER
5722 INTEGRITY DRIVE
MILLINGTON TENNESSEE 38054-5005

CEFC-FD
SOP No. UFC-08

1 June 2004
Revised 1 April 2006

STANDING OPERATING PROCEDURES
ELECTRONIC FUNDS TRANSFERS TO THE CORPS

1. **PURPOSE.** To Standing Operating Procedure (SOP) provides procedures for utilizing Electronic Funds Transfer (EFT) and the Automated Clearing House (ACH) networks in lieu of mailing a check for payment to the Corps.
2. **APPLICABILITY.** The provisions of this SOP apply to the USACE Finance Center (UFC) and activities supported by the UFC.
3. **REFERENCE.** SOP No. UFC-03, Collection/Deposit Procedures.
4. **PROCEDURES.** When a Corps customer wishes to use EFT or ACH processes to transfer of cash contributions in lieu of mailing a check to the UFC, the enclosed procedures must be followed to ensure accurate and timely credit for the funds transferred.
 - a. The customer must notify the supported activity F&A Officer or Project Manager in advance of the pending cash transfer. **The customer's notification should include the date of the transfer, amount, type of transfer (CCD+ or CTX format), and any other known data that will be used to identify the transfer.** The customer's financial institution will transfer the funds via the ACH network using the Cash Concentration or Disbursement Plus (CCD+) or Corporate Trade Exchange (CTX) formats of transactions. The required data elements for these types of transactions are provided in the enclosures.
 - b. Upon notification from the customer or the Project Manager of the pending EFT, the supported activity F&A Officer must enter a Collection Receiving Officer Voucher (ROV) in CEFMS. All EFT collection vouchers must be submitted to the UFC Disbursing Division using Form UFC-DISB-1 (available at: <http://fc.ufc.usace.army.mil/forms/a-ufcdisb1.pdf>). There should only be one EFT transaction per ROV and no other transactions should be attached to an ROV established for EFT purposes.

c. In addition to the enclosed format instructions, the F&A Officer or the Project manager must also provide the following information to the customer for the EFT transfer:

- (1) The District/Division/Laboratory/RBC two-digit EROC
- (2) The CEFMS ROV number
- (3) The Advance Account or Local Cost Share Number

5. **Ca\$hLink II Agency Access System.** Ca\$hLink II is an on-line U.S. Treasury system that allows the UFC to access and confirm our deposit information the next working day after the EFT is posted. The UFC monitors the Ca\$hLink II system daily. Upon verification of the EFT transfer in Ca\$hLink II, the UFC will certify the ROV and confirm the deposit. Funds will be available immediately after the deposit confirmation.

The UFC will not require any additional documentation from the supported activity or the customer provided all required documentation identified above is provided. **If an EFT transaction is received via Ca\$hLink II that cannot be identified, it will be rejected back to the sender.** Before rejecting an EFT, the UFC will research and try to determine the proper supported activity and CEFMS account to update. For those EFT transactions rejected by the UFC, the financial institution (bank) that initiated the EFT will notify the customer (sender) of the rejected transaction.

6. **CHANGES.** Refer all discrepancies, comments or questions regarding this SOP to the Chief, Disbursing Division, Directorate of Finance (CEFC-FD) 901-874-8648.

FOR THE DIRECTOR:



SHIRLEY L. AUTRY
Deputy Director, Finance

Encls

U.S. ARMY CORPS OF ENGINEERS FINANCE CENTER
Electronic Funds Transfer
Customer Implementation Data Sheet

ACH CCD+ Format

DATA Element Name	Contents	Size	Position
*Record Type Code	6	1	01-01
*Transaction Code	22	2	02-03
*Receiving ABA	05103670	8	04-11
*Check Digit	6	1	12-12
*Account Number	220025	17	13-29
Payment Amount	Amount of Payment (\$\$\$\$cc)	10	30-39
Identification Number	Optional	15	40-54
*Receiver Name	USACE Finance Center	22	55-76
**Discretionary Data	EROC Code of Corp Office	2	77-78
Addenda Indicator	1 (addenda present)	1	79-79
Trace Number	Assigned by Remitter's Bank	15	80-94

ADDENDA RECORD FORMAT

DATA Element Name	Contents	Size	Position
*Record type Code	7	1	01-01
*Addenda Type Code	05	2	02-03
***Payment Related Data	ROV #/Account #;EROC	80	04-83
Sequence Number	Addenda number starting at 0001	4	84-87
Addenda Trace Number	Same as the last 7 numbers of the detail trace number	7	88-94

*Data remains same for every transaction

**EROC Code of Corps District

***Data supplied by Corps District to Customer - If data is not present, transaction will be rejected

U.S. ARMY CORPS OF ENGINEERS FINANCE CENTER
Electronic Funds Transfer
Customer Implementation Data Sheet

ACH CTX Format

DATA Element Name	Contents	Size	Position
* Record Type Code	6	1	01-01
* Transaction Code	22	2	02-03
* Receiving ABA	05103670	8	04-11
* Check Digit	6	1	12-12
* Account Number	220025	17	13-29
Payment Amount	Amount of Payment (\$\$\$\$\$cc)	10	30-39
Identification Number	Optional	15	40-54
Number of Addenda	Number of Addenda Records attached	4	55-58
* Receiver Name	USACE Finance Center	22	59-74
Reserved	Blank	2	75-76
** Discretionary Data	EROC Code of Corp Office	2	77-78
Addenda Indicator	1 (addenda present)	1	79-79
Trace Number	Assigned by Remitter's Bank	15	80-94

ADDENDA RECORD FORMAT

DATA Element Name	Contents	Size	Position
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*** Payment Related Data	ROV #/Account #; EROC	80	04-83
Sequence Number	Addenda number starting at 0001	4	84-87
Addenda Trace Number	Same as the last 7 numbers of the detail trace number	7	88-94

* Data remains same for every transaction

** EROC Code of Corps District

*** Data supplied by Corps District to Customer - If data is not present, transaction will be rejected

Attachment E

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
FINANCE CENTER
5722 INTEGRITY DRIVE
MILLINGTON TENNESSEE 38054-5005

CEFC-FD
SOP No. UFC-07

1 June 2004
Revised: 1 April 2006

STANDING OPERATING PROCEDURE
WIRE TRANSFER OF FUNDS

1. **PURPOSE.** This Standing Operating Procedure (SOP) provides procedures to follow in order to deposit funds into an advance account or a cost sharing account through use of Wire Transfer.
2. **APPLICABILITY.** This SOP applies the USACE Finance Center (UFC) and activities supported by the UFC.
3. **REFERENCE.** SOP No. UFC-03, Collection/Deposit Procedures.
4. **PROCEDURES.** When a customer wishes to use wire transfer procedures to transfer funds to the Corps, the enclosed wire transfer procedures must be followed to ensure accurate and timely credit for funds transferred.
 - a. The customer must notify the supporting F&A Officer in advance of a transfer providing the date of the transfer, amount and the applicable Project Cooperation Agreement (PCA) number or advance account number the funds are intended for. The sponsor must wire the funds through the Federal Reserve Bank of New York using a Type 1000, Structured Third Party Funds Transfer Message to transfer the funds to the UFC. The data needed by the customer's sponsor bank is provided as enclosure 1.
 - b. When notification from the customer is received by the F&A Officer, a Collection Receiving Office Voucher (ROV) must be created in CEFMS. All wire transfer collection vouchers must be submitted to the UFC Disbursing Division using the UFC-DISB-6 Form (enclosure 2). The supported F&A Officer must ensure that all information on the form is provided and forwarded to the UFC arriving in advance of the transfer. There should only be one wire transfer for each ROV.
5. **Ca\$hLink II Agency Access System.** Ca\$hLink II is an on-line U.S. Treasury system that allows the UFC to access and confirm our deposit information the next working day after the wire transfer is posted. The UFC monitors the Ca\$hLink II system daily. Upon verification of the wire transfer in Ca\$hLink II, the UFC will certify the ROV and confirm the deposit. Funds will be available immediately after the deposit confirmation.

The UFC will not require any additional documentation from the supported activity or the customer provided all required documentation identified above is provided. **If a wire transfer is received via Ca\$hLink II that cannot be identified, it will be rejected back to the sender.** Before rejecting a wire transfer, the UFC will research and try to determine the proper supported activity and CEFMS account to update. For those wire transfers rejected by the UFC, the financial institution (bank) that initiated the transfer will notify the customer (sender) of the rejected transaction.

6. **CHANGES.** Refer all discrepancies, comments or questions regarding this SOP to the Chief, Disbursing Division, Directorate of Finance (CEFC-FD) 901-874-8648.

FOR THE DIRECTOR:



SHIRLEY L. AUTRY
Deputy Director, Finance

Encls

TYPE 1000, STRUCTURED THIRD PARTY FUNDS TRANSFER MESSAGE
(Information Provided by Customer when Making Transfer)

KEY FIELDS - 1000 FUNDS TRANSFER

FIELD NAME	LENGTH	VALUE
Receiver-dfi#	9	021030004 (Standard)
Type-subtype-code	4	1000
Sender-dfi #	9	Sender ABA-number (Bank Routing No.)
Sender-ref-#	16	Filled by sender (Use PCA No.)
Amount	18	Use dollar sign, commas, and decimal point
Sender-dfi-info	80	Filled by sender
Receiver-dfi-info	80	TREAS NYC/CTR/BNF=/AC-00008736

NOTE: THE RECEIVER-DFI-INFO FIELD IS OF CRITICAL IMPORTANCE. IT MUST APPEAR IN THE PRECISE MANNER SHOWN TO ALLOW FOR THE AUTOMATED PROCESSING AND CLASSIFICATION OF THE FUNDS TRANSFER MESSAGE.

Free-text-line-1	80	Filled in by sender
Free-text-line-1	80	Filled in by sender
Free-text-line-1	80	Filled in by sender

WIRE TRANSFER ONLY

RECEIVING VOUCHER ROUTING SLIP

Date Receiving Voucher Entered Into CEFMS: _____

Authorized Collector's Name: _____

District: _____

PCA#, Advance Account Number, Local Cost Share Number: _____

Sponsor Name: _____

CEFMS Receiving Voucher Number: _____

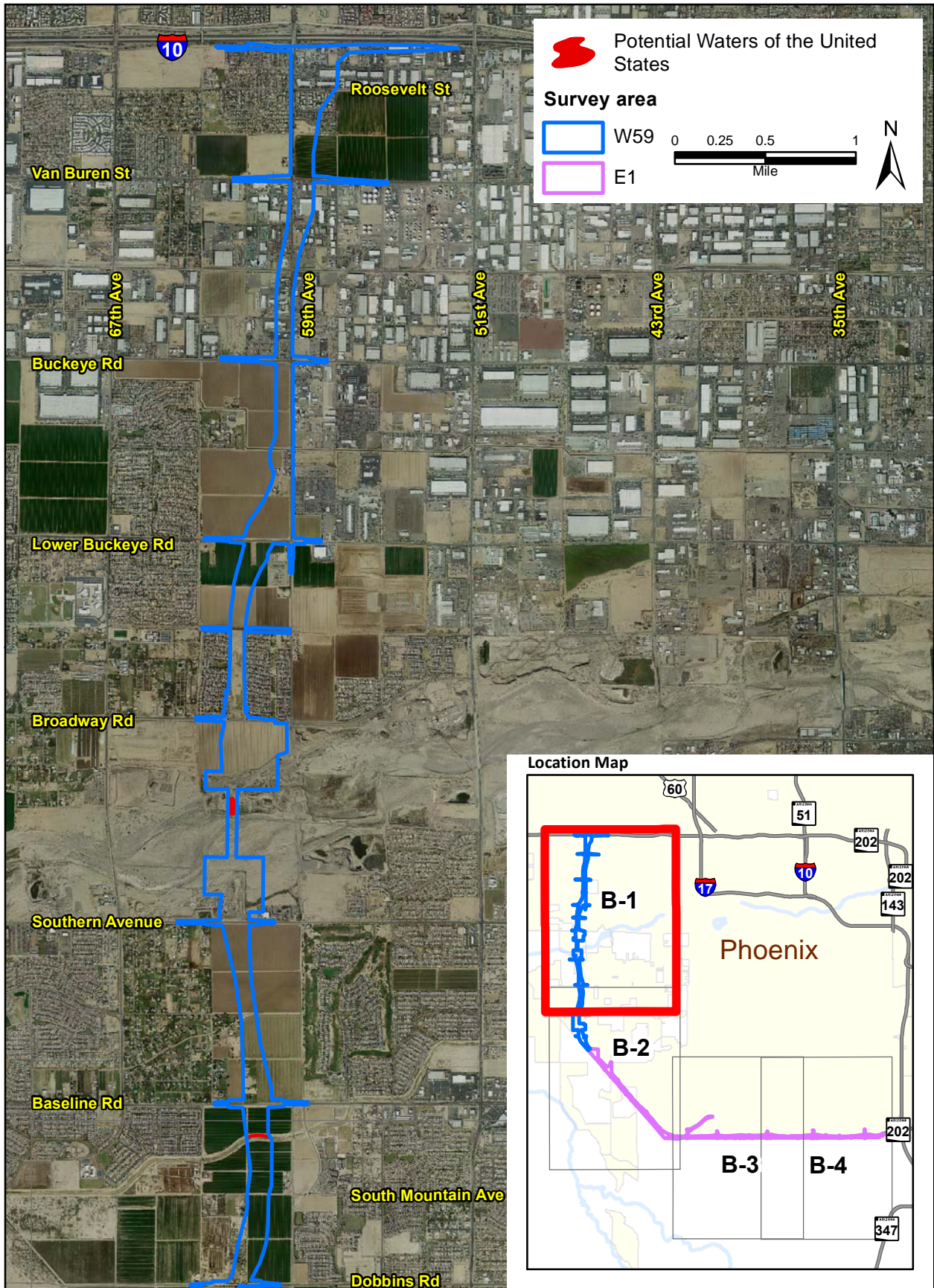
Date of Transfer: _____

Amount of Transfer: _____

If you have any questions please contact the Disbursing Division at (901) 874-8432.

Appendix B

Detailed Maps Showing Waters of the United States for the W59 and E1 Alternatives



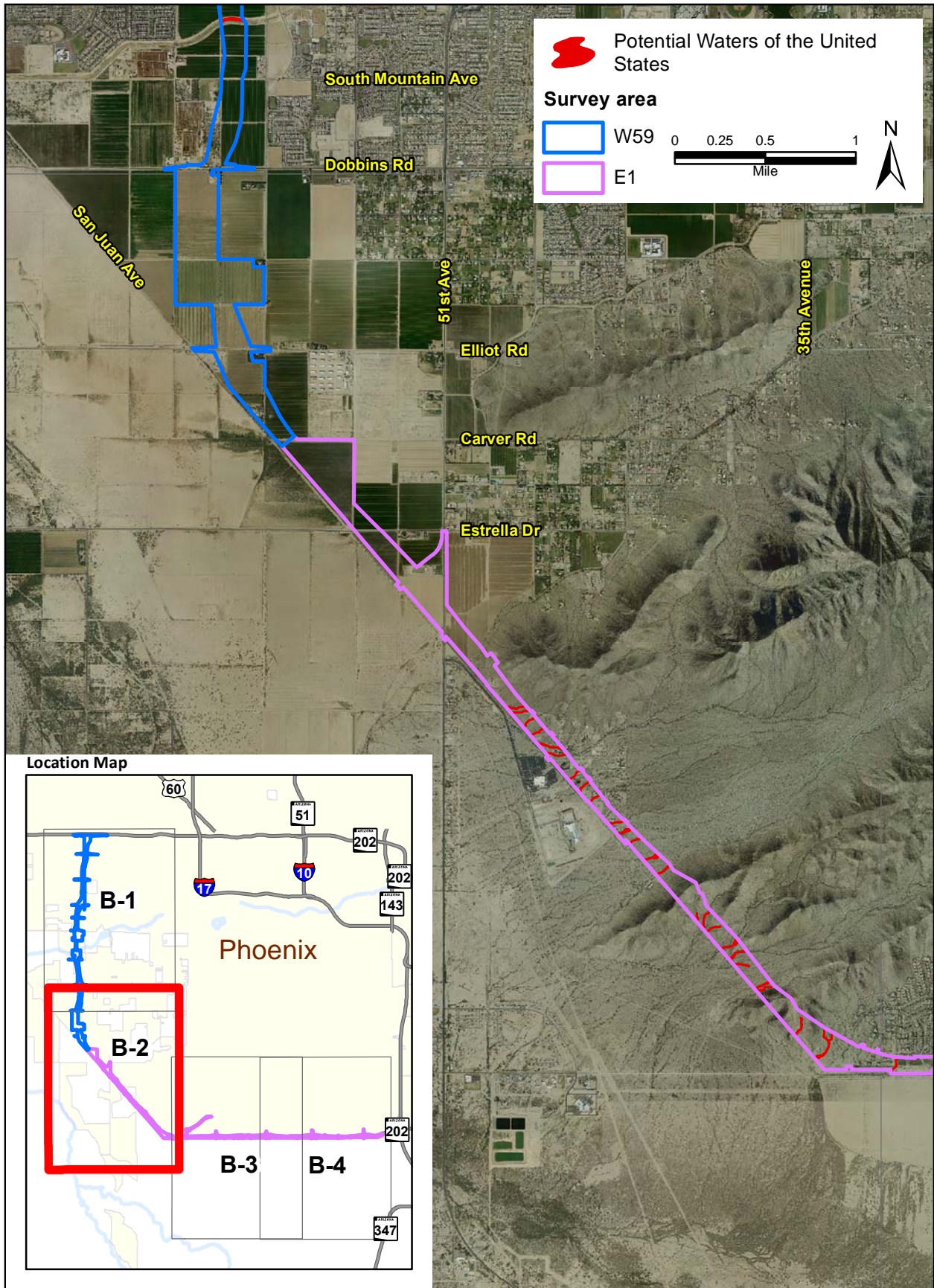
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 Federal-aid Project Number: NH-202-D(ADY)
 ADOT Project Number: 202L MA 054 H5764 01L

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B-1

**Jurisdictional Waters
 Jurisdictional Waters Report**

Aerial photography date: July 2013
 Page B-1



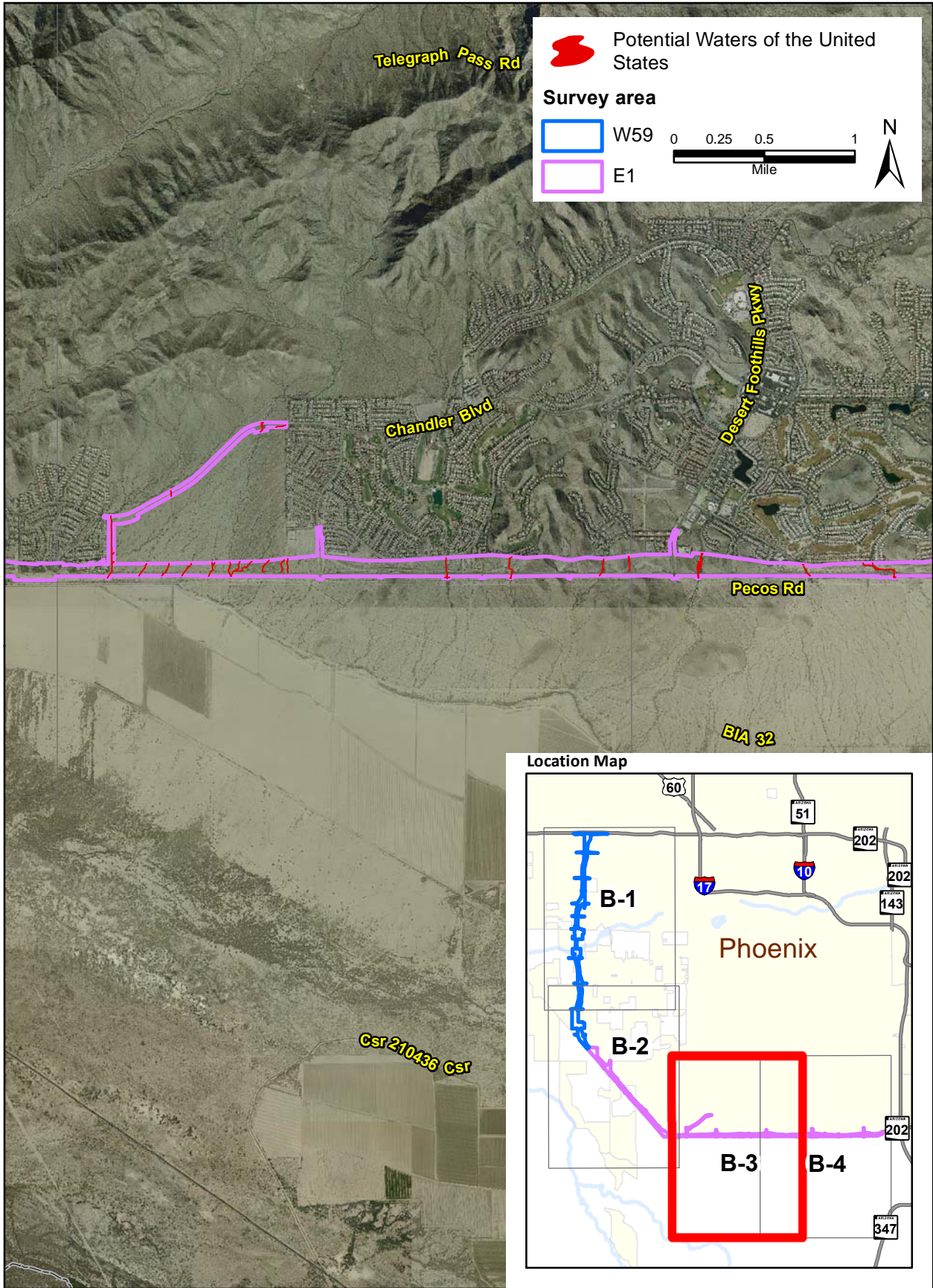
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 Federal-aid Project Number: NH-202-D(ADY)
 ADOT Project Number: 202L MA 054 H5764 01L

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B-2

Jurisdictional Waters Jurisdictional Waters Report

Aerial photography date: July 2013
 Page B-2



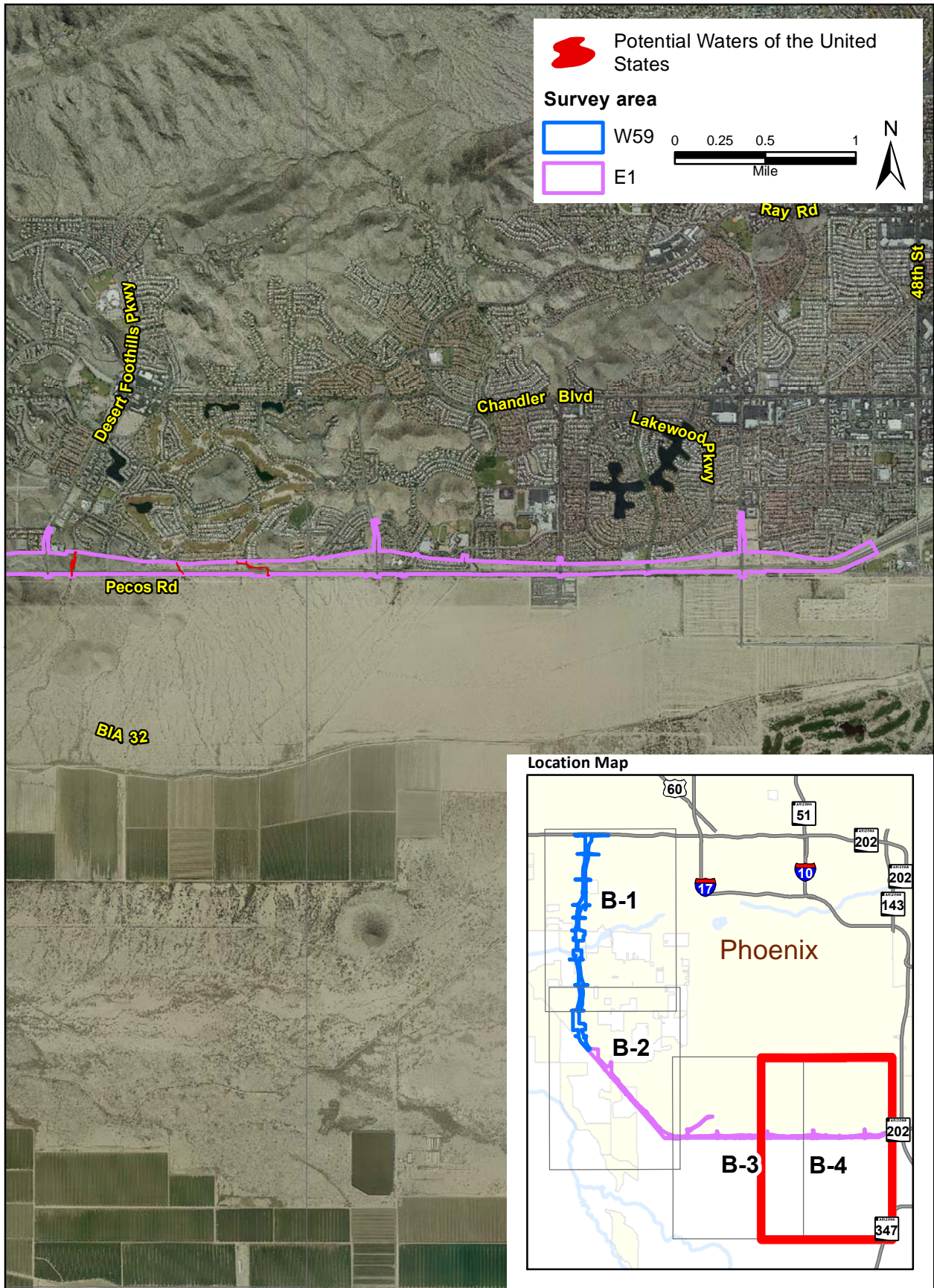
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 Federal-aid Project Number: NH-202-D(ADY)
 ADOT Project Number: 202L MA 054 H5764 01L

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B-3

**Jurisdictional Waters
 Jurisdictional Waters Report**

Aerial photography date: July 2013
 Page B-3



South Mountain Transportation Corridor
 Federal-aid Project Number: NH-202-D(ADY)
 ADOT Project Number: 202L MA 054 H5764 01L

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B-4

Jurisdictional Waters Jurisdictional Waters Report

Aerial photography date: July 2013
 Page B-4

Appendix C

Preliminary Jurisdictional Delineation sent to USACE in 2013



Intermodal Transportation

Janice K. Brewer, Governor

John S. Halikowski, Director

Jennifer Toth, State Engineer

Robert Samour, Senior Deputy State Engineer, Operations

Dallas Hammit, Senior Deputy State Engineer, Development

206 S. 17th Ave.
Phoenix, AZ 85007

January 23, 2014

Ms. Sallie Diebolt, Chief
Arizona Section Regulatory Branch
U.S. Army Corps of Engineers
3636 North Central Avenue, Suite 900
Phoenix, Arizona 85012-1927

Attention: Kathleen Tucker

RE: Clean Water Act Section 404 Preliminary Jurisdictional Delineation
NH-202-D(ADY)
202L MA 054 H5764 01L
South Mountain Transportation Corridor

Dear Ms. Diebolt:

The Arizona Department of Transportation (ADOT), in coordination with the Federal Highway Administration (FHWA), is preparing for the design of the South Mountain Freeway in southern Phoenix, Maricopa County, Arizona. The project would extend from Interstate 10 (I-10), (Maricopa Freeway), to I-10 (Papago Freeway), following an east to west alignment along Pecos Road, northwest along the Gila River Indian Community border and then north to I-10 between 59th and 63rd avenues (Figures 1 and 2). The project limits are approximately 22 miles long and can be located on the United States Geological Survey (USGS) Guadalupe, AZ, Lone Butte, AZ, Laveen, AZ, and Fowler, AZ 7.5-minute topographic quadrangles (Figure 3a-d). The geographic coordinates of the midpoint of the project limits are approximately 33.319040°N, 112.161501°W, NAD 83.

The project area includes existing Pecos Road and associated residential development, the undeveloped western limits of the South Mountain Park and Preserve, and agricultural fields and industrial properties in the remainder of the corridor. The scope of work includes constructing a freeway with five traffic lanes in each direction. The project will incorporate existing Pecos Road and the remainder will be on new alignment. Chandler Boulevard will also be extended to Pecos Road along an existing gravel road west of 19th Avenue, through an undeveloped parcel of land. New drainage facilities will be constructed and the Salt River will be spanned with a bridge.

A site visit to identify waters of the U.S. was conducted by Kurt Watzek (HDR Engineering, Inc.) in July, 2013. The aerial photograph used for this preliminary jurisdictional delineation was taken in June 2013 and accurately depicts waters of the U.S. and current site conditions. Drainages across most private properties were delineated from the aerials and photos taken of these drainages were taken from public right-of-way and in some cases from outside the survey boundary, to at a minimum, document evidence of flows. Within the survey area, approximately 10.5 acres are proposed as waters of the U.S., which includes the Salt River, Laveen Conveyance, 41 unnamed washes and 6 constructed drainage channels. The survey area consists of the project corridor that varied from 300 to 2,600 feet wide. The U.S. Fish and Wildlife Service National Wetland Inventory (NWI) maps were reviewed and no mapped wetlands were found within the project limits. No potential wetlands were observed in the project area, or immediately upstream or downstream.

Ms. Diebolt
January 23, 2014
202L MA 054 H5764 01L
Page 2

This letter serves as a request for review and issue of the preliminary jurisdictional delineation for the drainage features mentioned above in the project area.

The following items are included for your review:

- Project Figures (Figure 1 – State Map; Figure 2 – Vicinity Map; Figure 3a-d – Topographic Vicinity Map)
- Table 1. JD Physical Characteristics
- Preliminary Jurisdictional Determination Form
- Corps' Water Data Sheet
- Aerials showing proposed jurisdictional delineation and photo locations (11"x17", 50 sheets)
- Ground photographs of project drainages

If you require additional information or have any questions, please feel free to call me at (602) 712-7973 or Kurt Watzek at (602) 522-4327.

Thank you for your time and assistance.

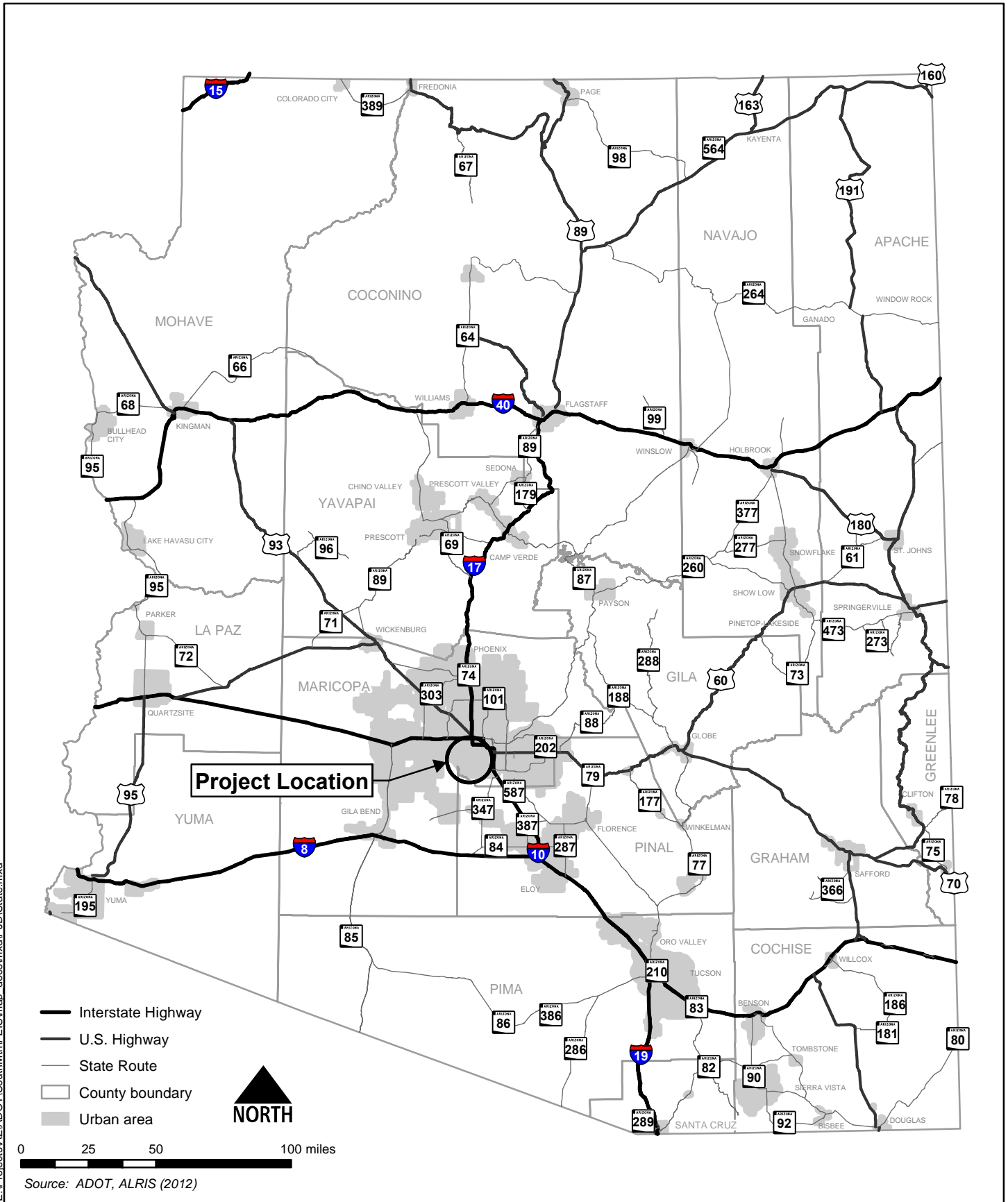
Sincerely,



Ralph Ellis
ADOT Environmental Planning Group

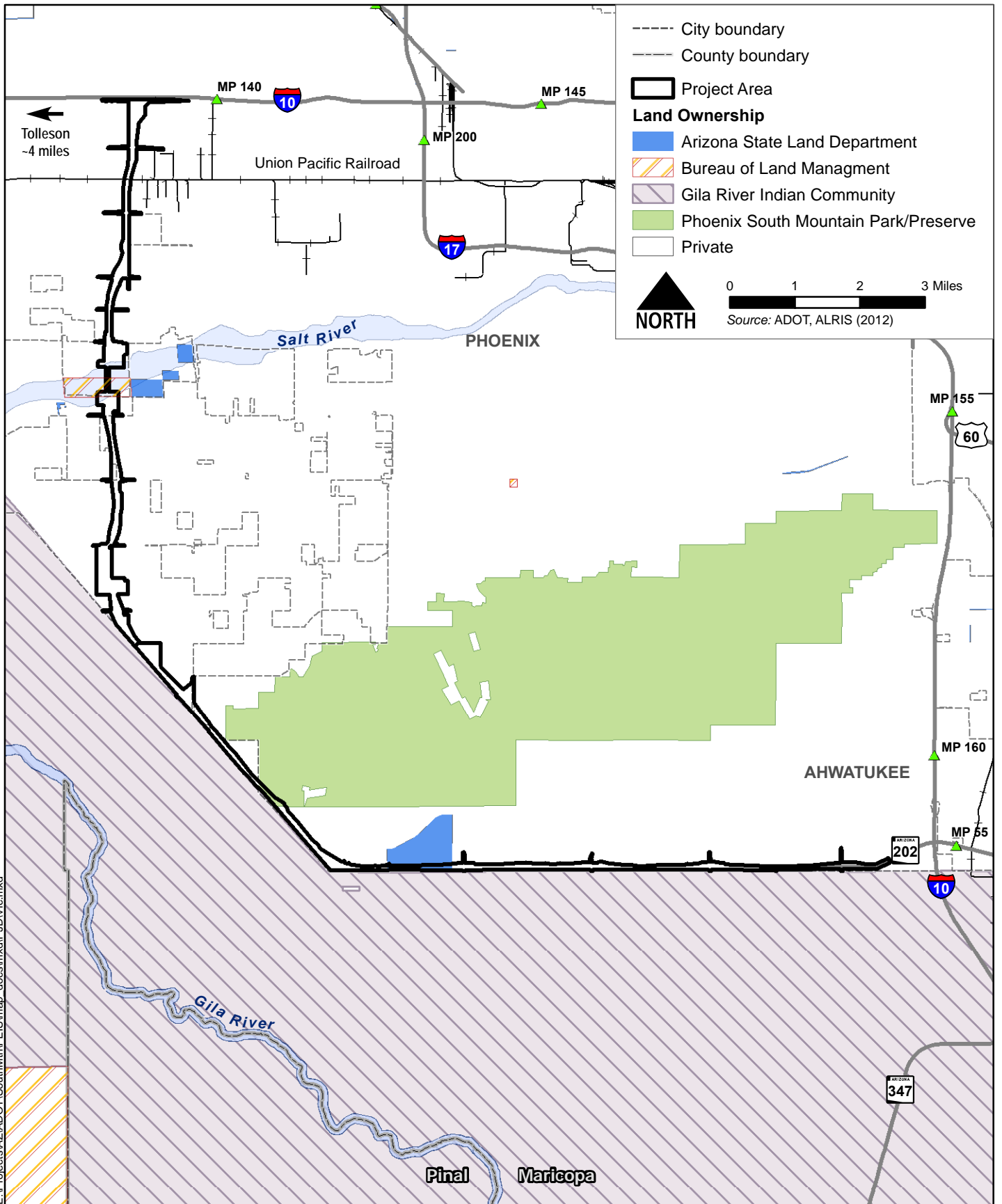
Enclosures

c: Kurt Watzek, HDR Engineering, Inc.



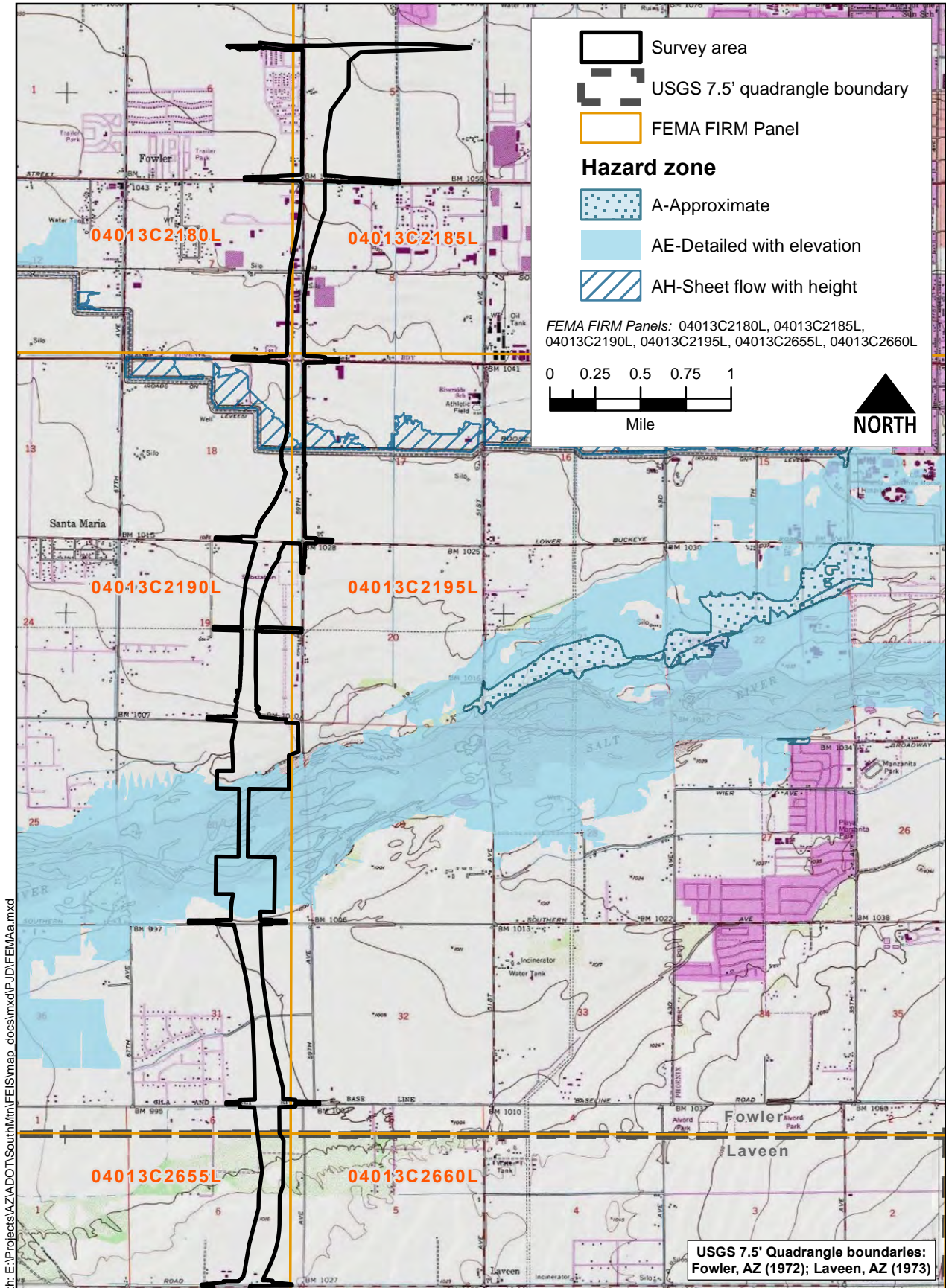
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Figure 1 – State Map



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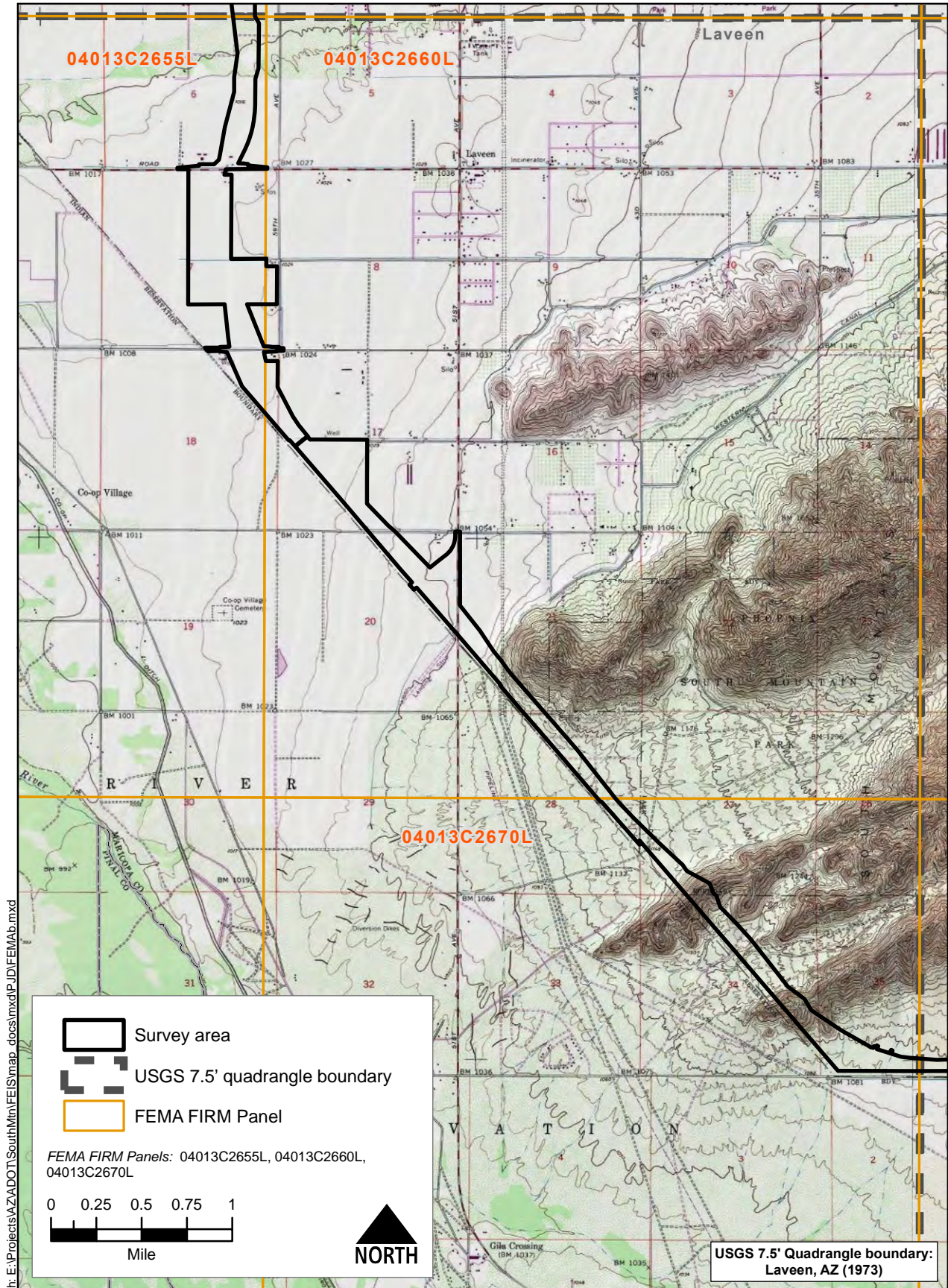
Figure 2 – Vicinity Map



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Source: FEMA (October 2013)

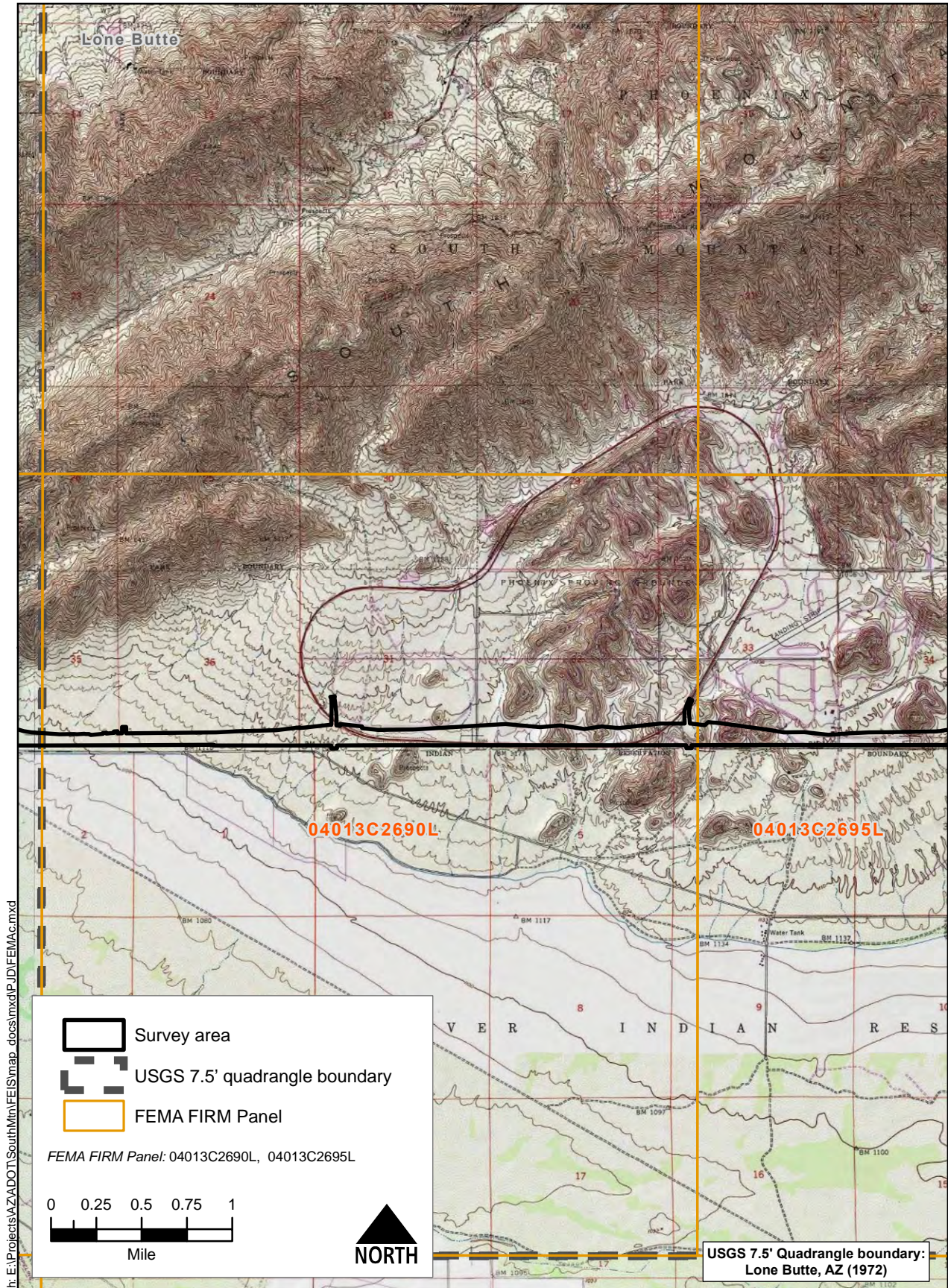
Figure 3a – Topographic Floodplain Map



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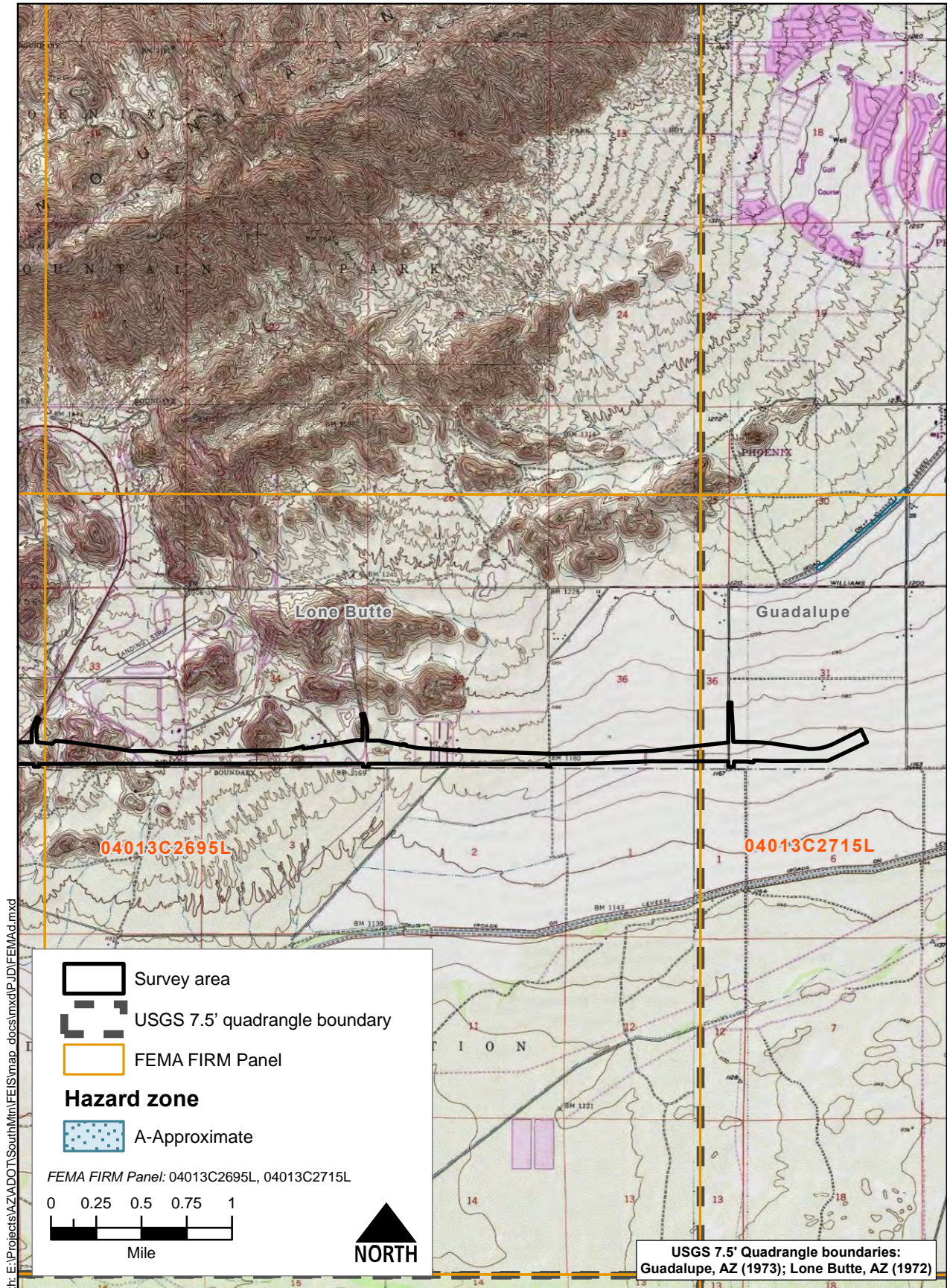
Source: FEMA (October 2013)

Figure 3b – Topographic Floodplain Map



Source: FEMA (October 2013)

Figure 3c – Topographic Floodplain Map



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Source: FEMA (October 2013)

Figure 3d – Topographic Floodplain Map

Table 1. J.D. Physical Characteristics & Other Information

NH-202-D(ADY)
 202L MA 054 H5764 01L
 South Mountain Transportation Corridor
 October 2013

Wash No. or Name	Approx. Station #	YES / NO									Wash Width (ft)	Wash Depth (ft or in)	Ground Photo Numbers	Existing Drainage Structure Type	YES/NO
		Vegetation Difference Between Wash & Upland	Change in Soil Characteristics	Waterline Mark on Bank	Water Stains	Shelving or Cut Banks	Exposed Roots	Sediments Deposits	Presence of Litter or Debris	WOUS					
Wash 1 (W1)	2074	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	9-40	<1'	1-4	4-cell CBC	YES
Constructed channel 1 (C1)	2109	No	No	No	Yes	No	No	No	Yes	No	30	1'	5-6	3-cell CBC	YES
Constructed channel 2 (C2)	2135	No	No	No	No	No	No	No	No	No	N/A	N/A	7-8	1-cell CBC	NO
Constructed channel 3 (C3)	2158	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	6-30	<1'	9-12	6-cell CBC	YES
Constructed channel 4 (C4)	2203	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	4-35	<1'	13-19	3-cell CMAP	YES
Wash 2 (W2)	2224	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	4-50	<1'	20-26	single CMAP	YES
Constructed channel 5 (C5)	2245	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	8-13	<1'	27-28	2-cell CMAP	YES
Stormwater channel (S1)	2250	No	Yes	No	No	No	No	No	No	No	4-8	<1'	29-32	none	NO
Wash 3 (W3)	2275	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	16-106	<1'	33-36	3-pipe CMP	YES
Wash 42 (W42)	2296	Yes	Yes	No	No	No	No	No	No	No	33-40	<1'	no photos	single CMP	YES
Wash 4 (W4)	2305	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	5-40	<1-1'	37-38	single CMP	YES
Wash 5 (W5)	2330	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	3-20	<1-1'	39-44	2-pipe CMP	YES
Detention basin (DB)	2340	Yes	No	No	No	No	No	Yes	No	No	N/A	N/A	45-47	none	NO
Constructed channel 6 (C6)	2350	No	Yes	No	No	No	No	No	Yes	Yes	4-9	<1'	48-51	5-pipe CMP	YES
Truncated wash east (T1)	2385	Yes	No	No	No	No	No	No	No	No	N/A	<1'	52-55	single CMP	NO
Wash 43 (W43)	2396	Yes	Yes	No	No	No	No	No	No	No	6-10	<1'	no photos	3-pipe CMP	YES
Truncated wash west (T2)	2398	Yes	Yes	No	No	No	No	No	No	No	3-6	<1'	56-59	single RCP	YES
Wash 44 (W44)	2403	Yes	Yes	No	No	No	No	No	No	No	4-6	<1'	no photos	2-pipe RCP	YES
Wash 6 (W6)	2410	Yes	Yes	No	No	No	No	No	Yes	Yes	3-10	<1'	60-63	none	YES
Wash 7 (W7)	2411	Yes	Yes	No	No	No	No	No	No	No	4-8	<1'	64-67	1-cell CBC	YES
Wash 8 (W8)	2412, 17	Yes	Yes	No	No	Yes	No	No	Yes	Yes	4-60	<1'	68-75	2-cell CBC	YES
Wash 9 (W9)	2416	Yes	Yes	No	No	No	Yes	No	No	No	3-12	<1'	76-81	1-cell CBC	YES
Wash 10 (W10)	2426	Yes	Yes	No	No	No	Yes	No	Yes	Yes	6-16	<1'	82-85	1-cell CBC	YES
Wash 11 (W11)	2432	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	2-6	<1'	86-89	single RCP	YES
Wash 12 (W12)	2439	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	3-8	<1'	90-93	single RCP	YES
Wash 13 (W13)	2447	No	Yes	No	No	No	Yes	Yes	Yes	Yes	3-9	<1'	94-102	2-pipe RCP	YES
Wash 14 (W14)	2447	Yes	Yes	No	No	No	No	No	Yes	Yes	5-7	<1'	103	none	YES
Truncated wash 14 (T14)	51	No	Yes	No	No	No	No	No	No	No	5-9	<1'	104-105	none	YES
Wash 15 (W15)	2448	Yes	Yes	No	No	No	No	No	Yes	Yes	4-5	<1'	106	none	YES
Constructed channel 7 (C7)	2475	No	Yes	No	No	No	No	Yes	No	No	3-20	<1'	107-109	none	YES
Stormwater feature (SF1)	2484	No	No	No	No	No	No	Yes	No	No	4-8	<1'	110-111	none	NO
Wash 16 (W16)	10	Yes	Yes	No	No	No	No	No	Yes	Yes	7-25	<1'	112-115	none	YES
Wash 17 (W17)	2495	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	4-6	<1'	116-121	none	YES
Wash 18 (W18)	2504	Yes	Yes	No	No	No	Yes	No	Yes	Yes	2-10	<1'	122-125	none	YES
Wash 19 (W19)	2520	Yes	Yes	No	No	No	Yes	No	Yes	Yes	3-7	<1'	126-129	none	YES
Wash 20 (W20)	2521	Yes	Yes	No	No	No	Yes	No	Yes	Yes	4-10	<1'	130-133	none	YES
Wash 21 (W21)	2530	Yes	Yes	No	No	No	Yes	No	Yes	Yes	4-12	<1'	134-137	none	YES
Wash 22 (W22)	2532	Yes	Yes	No	No	No	Yes	No	Yes	Yes	7-26	<1'	138-144	none	YES
Wash 23 (W23)	2536	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	10-22	<1'	145-148	none	YES
Wash 24 (W24)	2536	Yes	Yes	No	No	No	Yes	No	Yes	Yes	5-14	<1'	149-150	none	YES
Wash 25 (W25)	2542	Yes	Yes	No	No	No	Yes	No	Yes	Yes	4-8	<1'	151-155	none	YES
Wash 26 (W26)	2544	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	4-8	<1'	156-159	none	YES
Wash 27 (W27)	2546	Yes	Yes	No	No	No	No	No	Yes	Yes	2-7	<1'	160-161	none	YES
Wash 28 (W28)	2565	Yes	Yes	No	No	No	Yes	No	Yes	Yes	8-18	<1'	162-165	none	YES
Wash 29 (W29)	2570	Yes	Yes	No	No	No	Yes	No	Yes	Yes	8-30	<1'	166-169	none	YES
Wash 29A (W29A)	2571	Yes	Yes	No	No	No	Yes	No	Yes	Yes	15-20	<1'	no photos	none	YES
Wash 30 (W30)	2577	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	5-28	<1'	170-175	none	YES
Wash 31 (W31)	2582	Yes	Yes	No	No	No	Yes	No	Yes	Yes	4-32	<1'	176-181	none	YES
Wash 32 (W32)	2585	Yes	Yes	No	No	No	No	No	Yes	Yes	4-11	<1'	182-184	none	YES
Wash 33 (W33)	2595	Yes	Yes	No	No	No	No	No	Yes	Yes	3-11	<1'	185-186	none	YES
Wash 34 (W34)	2598	Yes	Yes	No	No	No	No	No	Yes	Yes	2-9	<1'	187-188	none	YES
Wash 35 (W35)	2604	Yes	Yes	No	No	No	Yes	No	Yes	Yes	4-10	<1'	189-191	none	YES
Wash 36 (W36)	2614	Yes	Yes	No	Yes	No	No	No	Yes	Yes	4-8	<1'	192-193	none	YES
Wash 37 (W37)	2618	Yes	Yes	No	No	No	Yes	No	Yes	Yes	5-20	<1'	194	none	YES
Wash 38 (W38)	2621	Yes	Yes	No	No	No	No	No	Yes	Yes	4-10	<1'	195-197	none	YES
Wash 39 (W39)	2624	Yes	Yes	No	No	No	Yes	No	Yes	Yes	3-9	<1'	198-201	none	YES
Wash 40 (W40)	2630	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	3-9	<1'	202-207	none	YES
Wash 41 (W41)	2631	Yes	Yes	No	No	No	Yes	No	Yes	Yes	3-12	<1'	208-211	none	YES
Constructed ditch (CD)	2649	No	No	No	No	No	No	No	No	No	4-5	<1'-1'	212-217	none	NO
Hillside drainage (HD)	2647	No	Yes	No	No	No	No	No	No	No	3-4	<1'	218-219	none	NO
Laveen Conveyance (LC)	3130	No	Yes	No	No	No	No	No	No	No	100	1'	220-221	none	YES
Irrigation tailwater ditch (TD)	3200	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	222-223	none	NO
Former tailwater discharge channel (FTD)	3206	No	No	No	No	No	No	No	No	No	N/A	<1'	224-225	none	NO
Salt River mine pit (SRMP)	3222	Yes	Yes	Yes	No	Yes	No	Yes	No	No	397-489	15'	226-229	none	YES
Old low flow channel (OLF)	3220	No	No	No	No	No	No	No	No	No	N/A	N/A	230-231	none	NO
Remnant channel (RC)	3213	No	No	No	No	No	No	No	No	No	N/A	N/A	232-233	none	NO
Low flood terrace (LFT)	3209	No	No	No	No	No	No	No	No	No	N/A	N/A	234-235	none	NO

Wash 8 crosses the survey area in two locations
 Stationing for Truncated wash 14, and Wash 16 are on Chandler Blvd plan sheets
 CBC - concrete box culvert
 CMAP - corrugated metal arch pipe
 CMP - corrugated metal pipe
 RCP - reinforced concrete pipe



**DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
3636 N CENTRAL AVENUE, SUITE 900
PHOENIX, AZ 85012-1939**

March 12, 2014

Ralph Ellis
ADOT EPG
1611 W. Jackson St (MD EM02)
Phoenix, AZ 85007

SUBJECT: Preliminary Jurisdictional Determination regarding geographic jurisdiction

Dear Mr. Ellis:

I am responding to your request (File No. SPL-2002-00055-KAT) dated January 23, 2014 for a preliminary Department of the Army jurisdictional determination (JD) for the South Mountain Transportation Corridor (TRACS 202L MA 054 H5764 01L) project site (33.319040°N, -112.161501°W) located in south Phoenix, Maricopa County, Arizona.

The Corps' evaluation process for determining whether or not a Department of the Army permit is needed involves two tests. If both tests are met, a permit would likely be required. The first test determines whether or not the proposed project is located within the Corps' geographic jurisdiction (i.e., it is within a water of the United States). The second test determines whether or not the proposed project is a regulated activity under Section 10 of the River and Harbor Act or Section 404 of the Clean Water Act. This evaluation pertains only to geographic jurisdiction.

Based on available information, I have preliminarily determined waters of the U.S. may be present on the South Mountain Transportation Corridor (TRACS 202L MA 054 H5764 01L) project site in the approximate locations noted on the enclosed drawing. The basis for this finding can be found on the enclosed Preliminary Jurisdictional Determination (JD) form. Please be aware preliminary JDs are non-binding indications of the presence of waters of the U.S., including wetlands, on a parcel, are advisory in nature and may not be appealed. However, you are hereby informed of your option to request an approved jurisdictional determination, which may be appealed. Note that for purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S.

Preliminary and approved jurisdictional determinations are fully explained in the enclosed Regulatory Guidance Letter 08-02, dated June 26, 2008. Further, proffered individual permits (and all terms and conditions contained therein), individual permit denials, and any jurisdictional issues may also be appealed pursuant to 33 CFR Part 331.

This determination was conducted to identify the extent of the Corps' Clean Water Act jurisdiction on the South Mountain Transportation Corridor (TRACS 202L MA 054 H5764 01L) project site identified in your request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

Thank you for participating in the regulatory program. If you have any questions, please contact Kathleen Tucker at 602-230-6956 or via e-mail at Kathleen.A.Tucker@usace.army.mil. Please be advised that you can now comment on your experience with Regulatory Division by accessing the customer survey form at: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

Sincerely,

Sallie Diebolt
Chief, Arizona Branch
Regulatory Division

Enclosure(s)

C: Julia Manfredi, ADOT OES

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office	Los Angeles District	File/ORM #	SPL-2002-00055-KAT	PJD Date:	January 2014
State	AZ	City/County	Phoenix/Maricopa County		
Nearest Waterbody:	Salt River, Gila River			Name/ Address of Person Requesting PJD	Ralph Ellis Arizona Department of Transportation Environmental Planning Group 1611 Jackson Street, MD EM02 Phoenix, AZ 85007
Location: TRS, LatLong or UTM:	see attached data sheet				

Identify (Estimate) Amount of Waters in the Review Area:	Name of Any Water Bodies on the Site Identified as Section 10 Waters:
Non-Wetland Waters: <input type="text"/> linear ft <input type="text"/> width <input type="text"/> 11.08 acres <input type="text"/> Stream Flow: <input type="text"/> Ephemeral Wetlands: <input type="text"/> 0 acre(s) Cowardin Class: <input type="text"/> Riverine	Tidal: <input type="text"/> N/A Non-Tidal: <input type="text"/> N/A <input checked="" type="checkbox"/> Office (Desk) Determination <input type="checkbox"/> Field Determination: <input type="text"/> Date of Field Trip: <input type="text"/>

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Arizona Department of Transportation
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite quad name: Guadalupe, Lone Butte, Laveen, Fowler
- USDA Natural Resources Conservation Service Soil Survey. Citation:
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: see attached FEMA/FIRM Map List
- 100-year Floodplain Elevation is:
- Photographs:
 - Aerial (Name & Date): Landiscor, June 2013
 - Other (Name & Date): Ground photographs, July, September 2013
- Previous determination(s). File no. and date of response letter:
- Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and Date of Regulatory Project Manager
(REQUIRED)

Ralph Ellis 01/23/2014
Signature and Date of Person Requesting Preliminary JD
(REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office File/ORM # PJD Date:
~~January 2014~~

State City/County Person Requesting PJD

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>




Notes:

See attached Data Sheet for all drainages within project limits

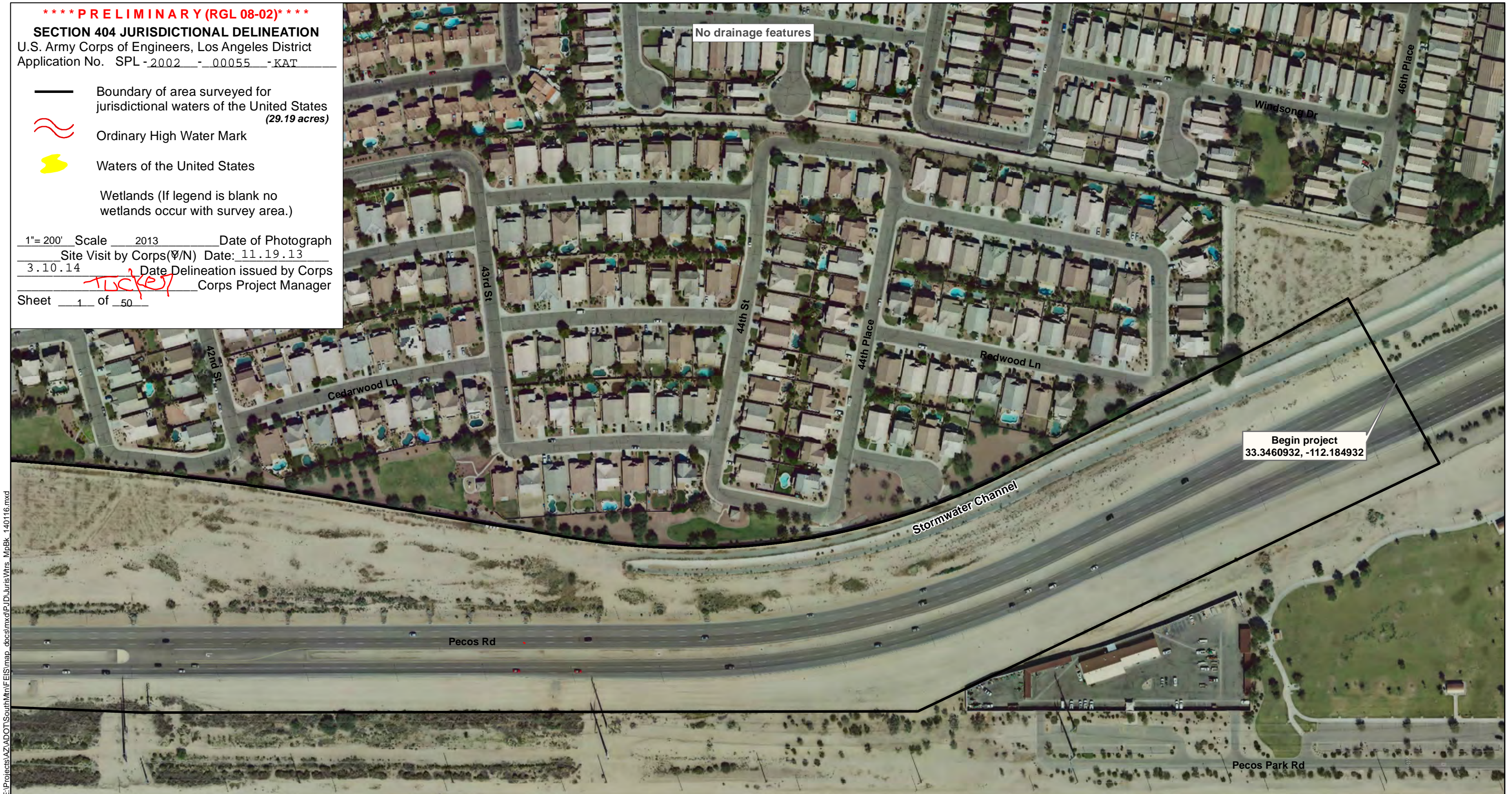
**** PRELIMINARY (RGL 08-02) ****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (29.19 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

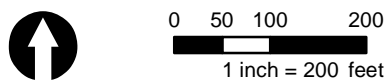
1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corp Project Manager
 Sheet 1 of 50







E:\Projects\AZ\ADOT\SouthMtn\FEIS\map_docs\mxd\PJ\Juris\Wtrs_MpBk_140116.mxd

Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Guadalupe, AZ (1973)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 4E; Section 31



-  Arrow indicates flow direction
-  #
Watercourse number
-  XX'
Wash width (feet)
-  #
Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

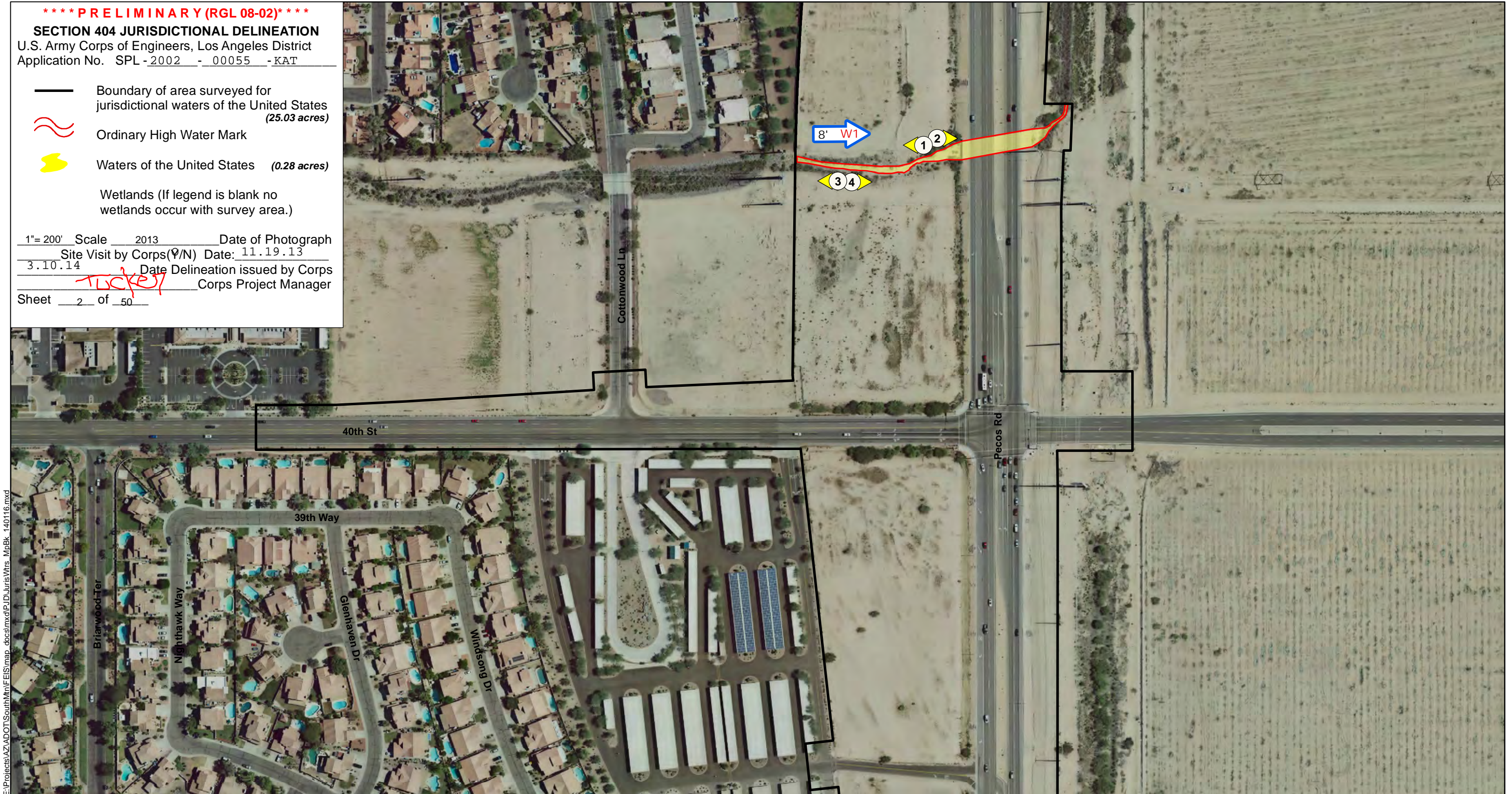
**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (25.03 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.28 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

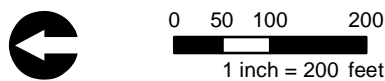
1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(V/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 2 of 50







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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Guadalupe, AZ (1973)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 3E, Section 36



-  # XX' Arrow indicates flow direction
-  # Watercourse number
-  XX' Wash width (feet)
-  # Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -2002 - 00055 -KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (24.49 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.24 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

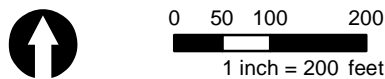
1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(V/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corp Project Manager
 Sheet 3 of 50







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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 3E, Section 36



-  Arrow indicates flow direction
-  #
Watercourse number
-  XX'
Wash width (feet)
-  Yellow arrow with #
Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

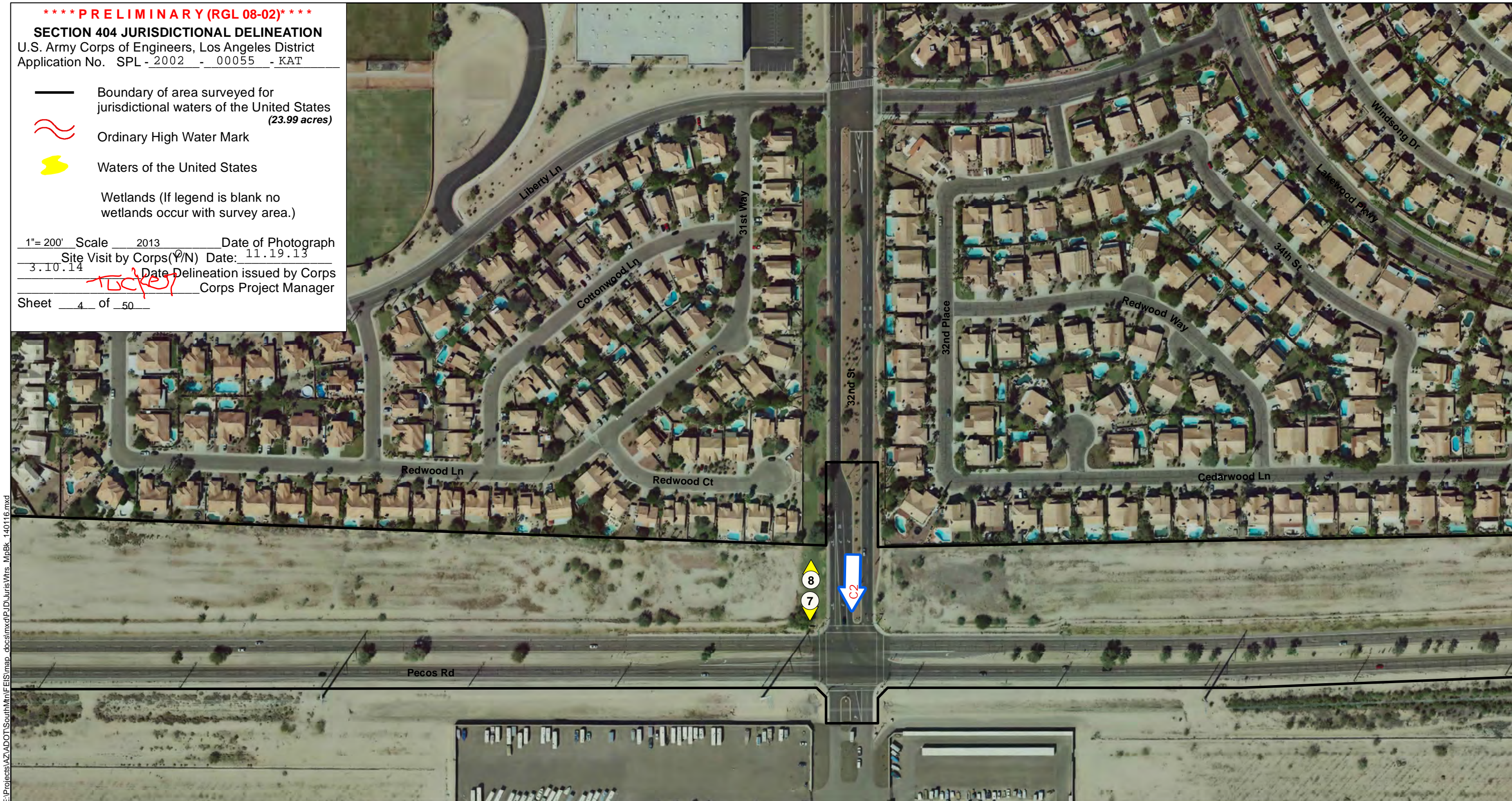
**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (23.99 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

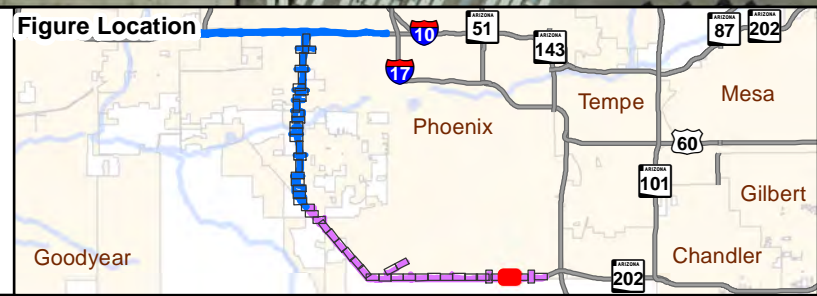
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Site Visit by Corps (Y/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
TUCKER Corps Project Manager
Sheet 4 of 50







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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 3E; Sections 35 and 36



-  Arrow indicates flow direction
-  #
Watercourse number
-  #
Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

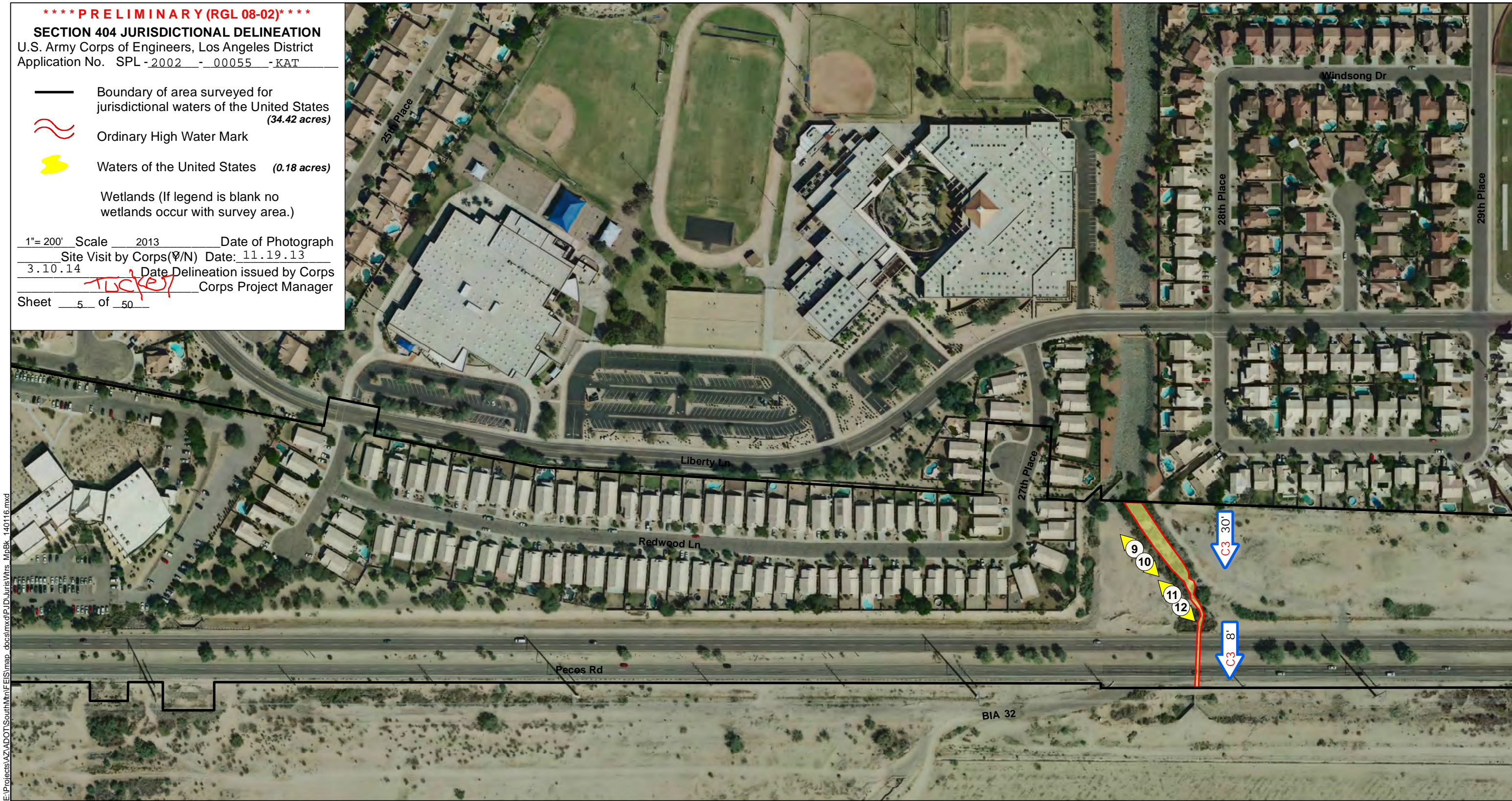
SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (34.42 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.18 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

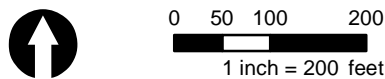
1"= 200' Scale 2013 Date of Photograph
Site Visit by Corps (Y/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
Sheet 5 of 50





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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 3E; Section 35



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

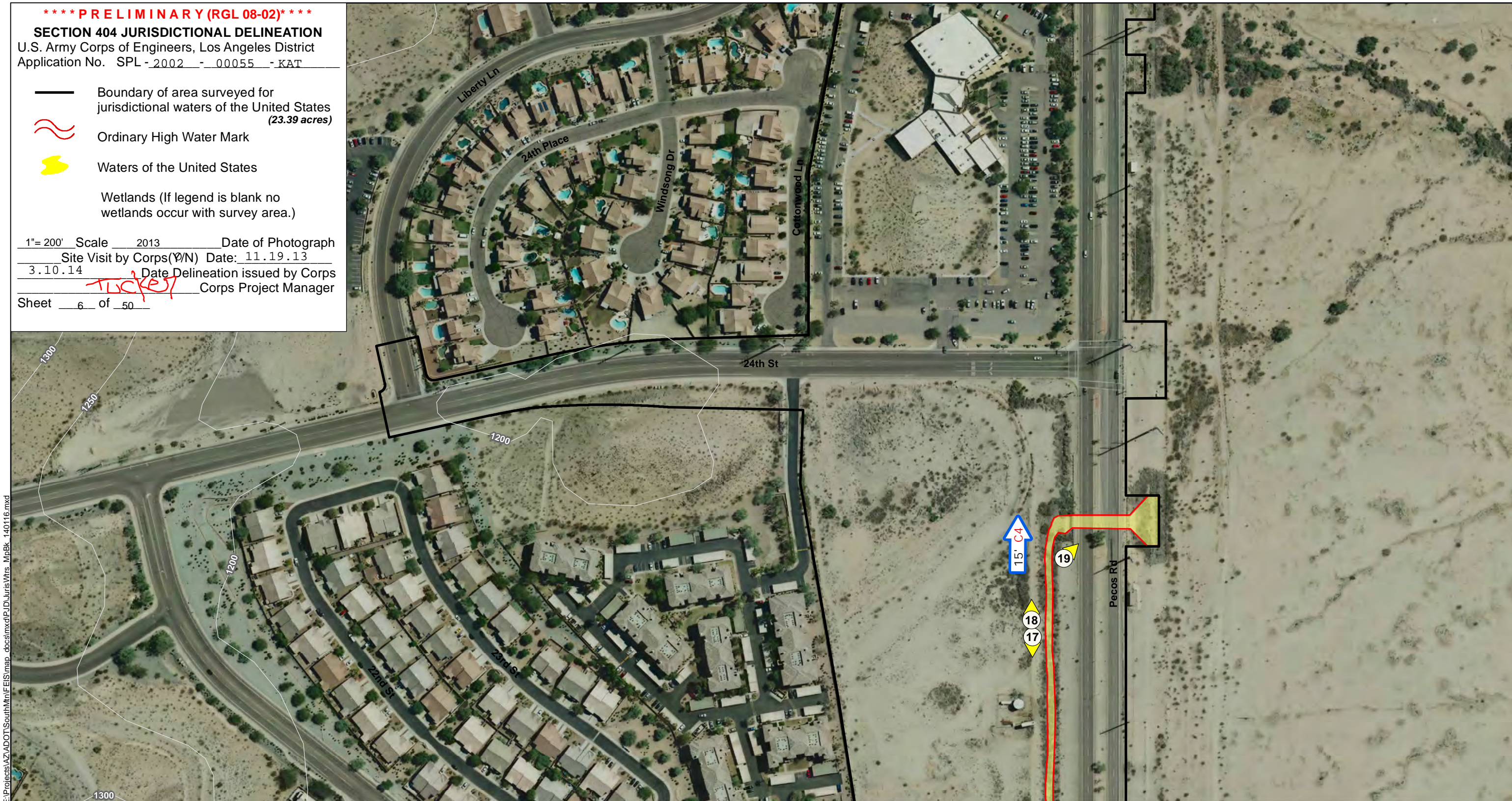
**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (23.39 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

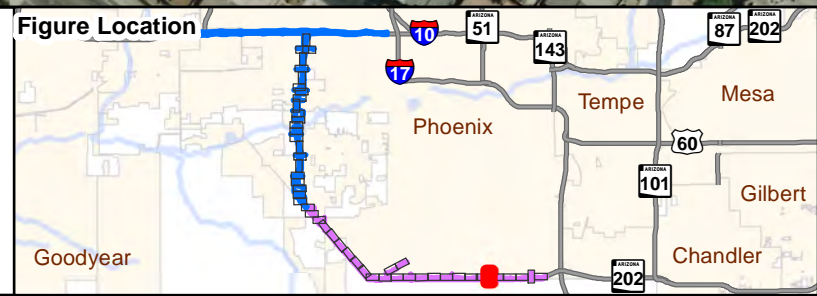
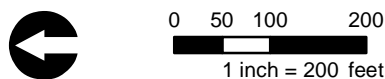
1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 6 of 50







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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 3E; Sections 34 and 35



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

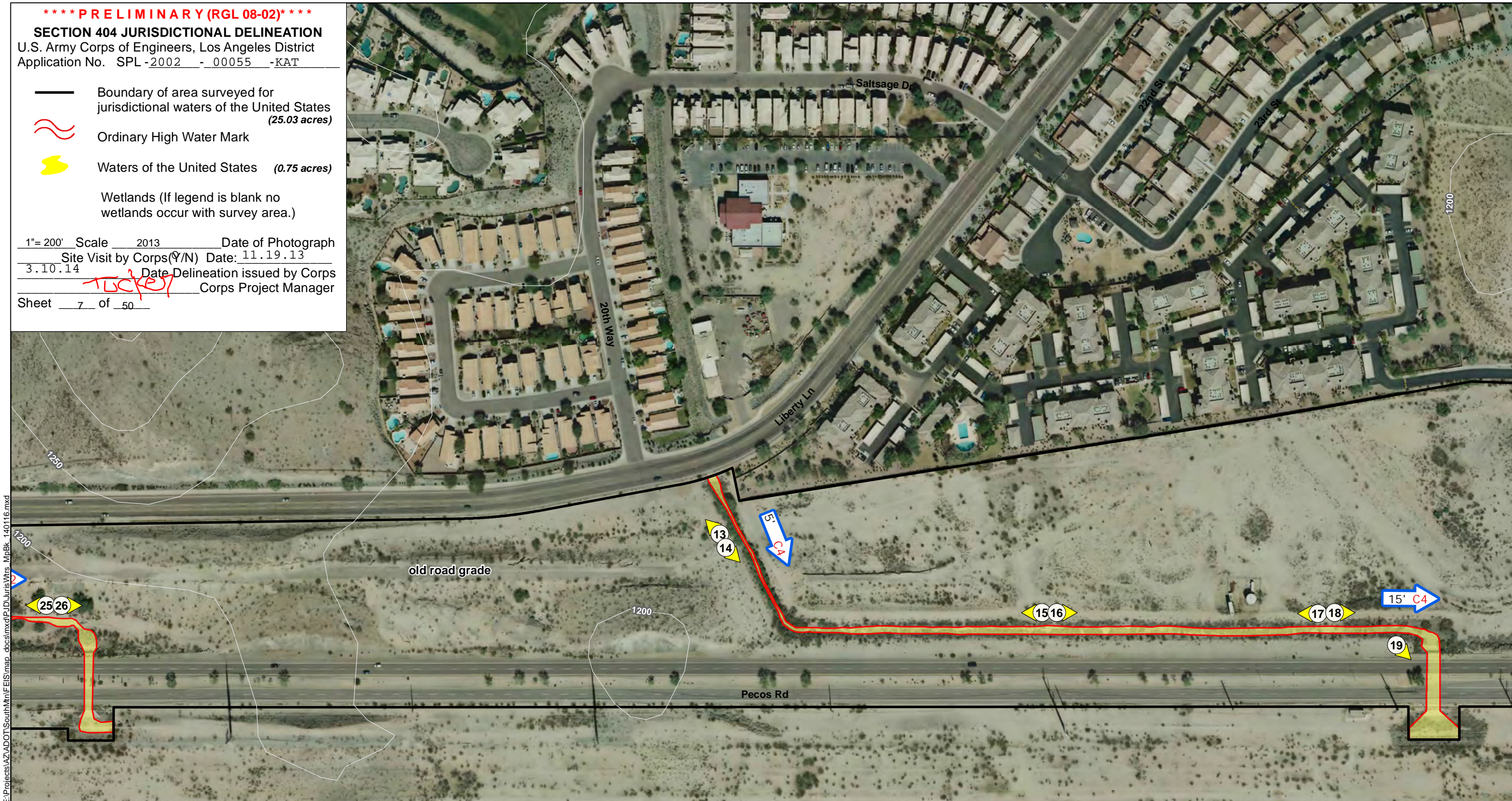
**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -2002 - 00055 -KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (25.03 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.75 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

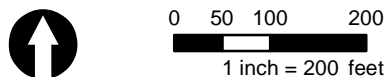
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Site Visit by Corps(Y/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
TUCKER Corps Project Manager
Sheet 7 of 50







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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 3E; Section 34



-  Arrow indicates flow direction
-  #
Watercourse number
-  XX'
Wash width (feet)
-  #
Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

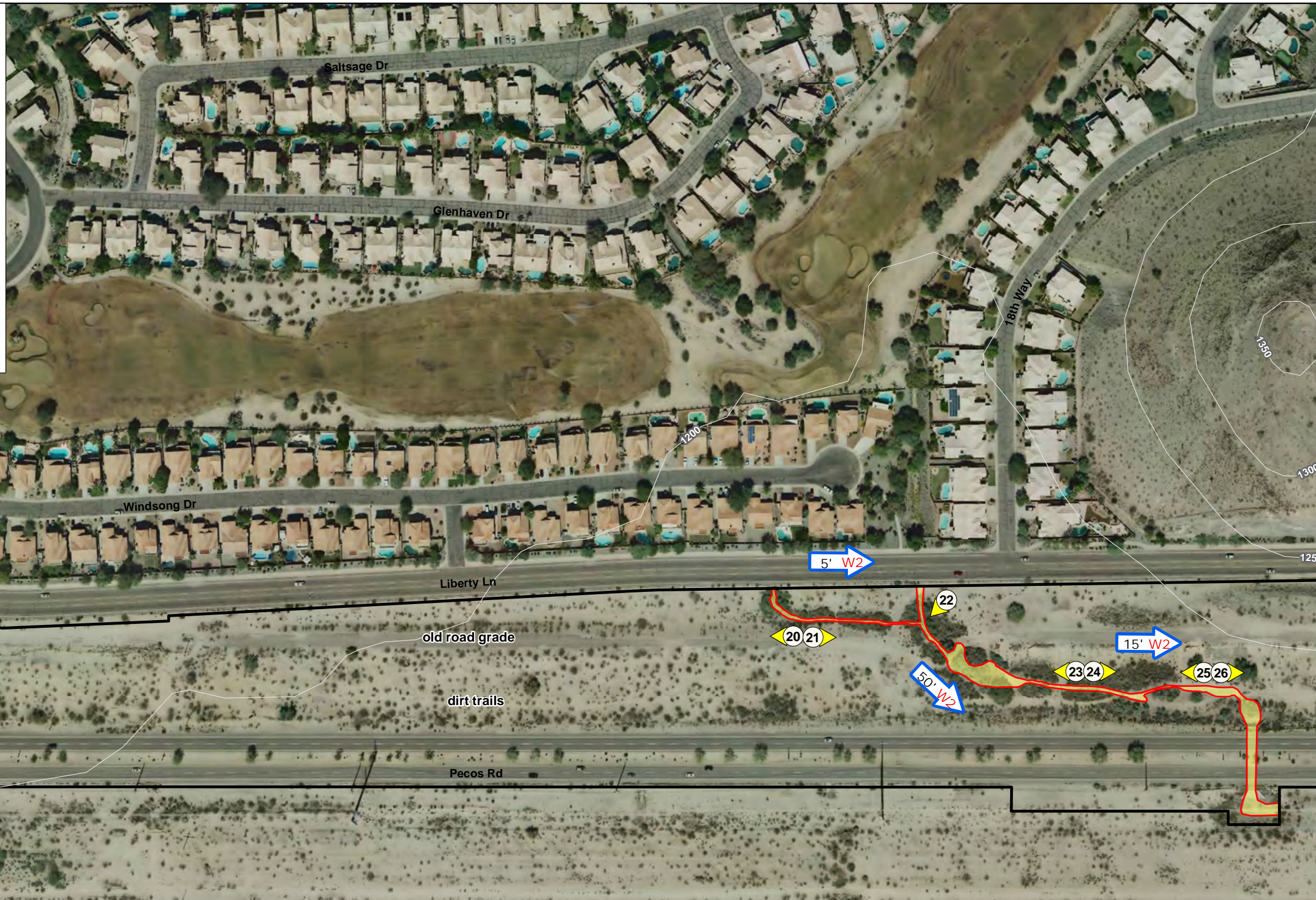
**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -2002 - 00055 -KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (23.69 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.51 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

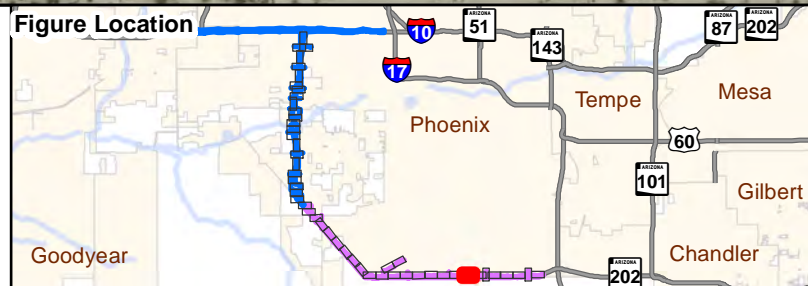
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Site Visit by Corps(Y/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
TUCKER Corps Project Manager
Sheet 8 of 50







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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 3E; Sections 33 and 34



-  Arrow indicates flow direction
-  #
Watercourse number
-  XX'
Wash width (feet)
-  #
Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (37.06 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.93 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
Site Visit by Corps (V/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
TUCKER Corps Project Manager
Sheet 9 of 50






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Aerial imagery: LandisCor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 3E, Section 33



-  Arrow indicates flow direction
-  #
Watercourse number
-  XX'
Wash width (feet)
-   #
Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (43.79 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.13 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

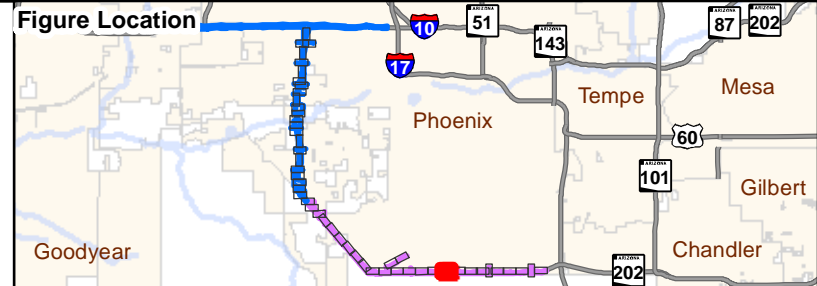
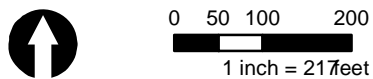
1"= 200' Scale 2013 Date of Photograph
Site Visit by Corps (Y/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
TUCKER Corps Project Manager
Sheet 10 of 50





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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 3E, Sections 32 and 33



-  Arrow indicates flow direction
-  #
Watercourse number
-  XX'
Wash width (feet)
-  Yellow arrow with #
Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL-2002 - 00055 KAT

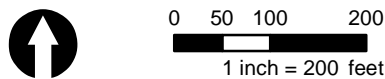
-  Boundary of area surveyed for jurisdictional waters of the United States (40.87 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.21 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)





1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 11 of 50



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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 3E; Section 32



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

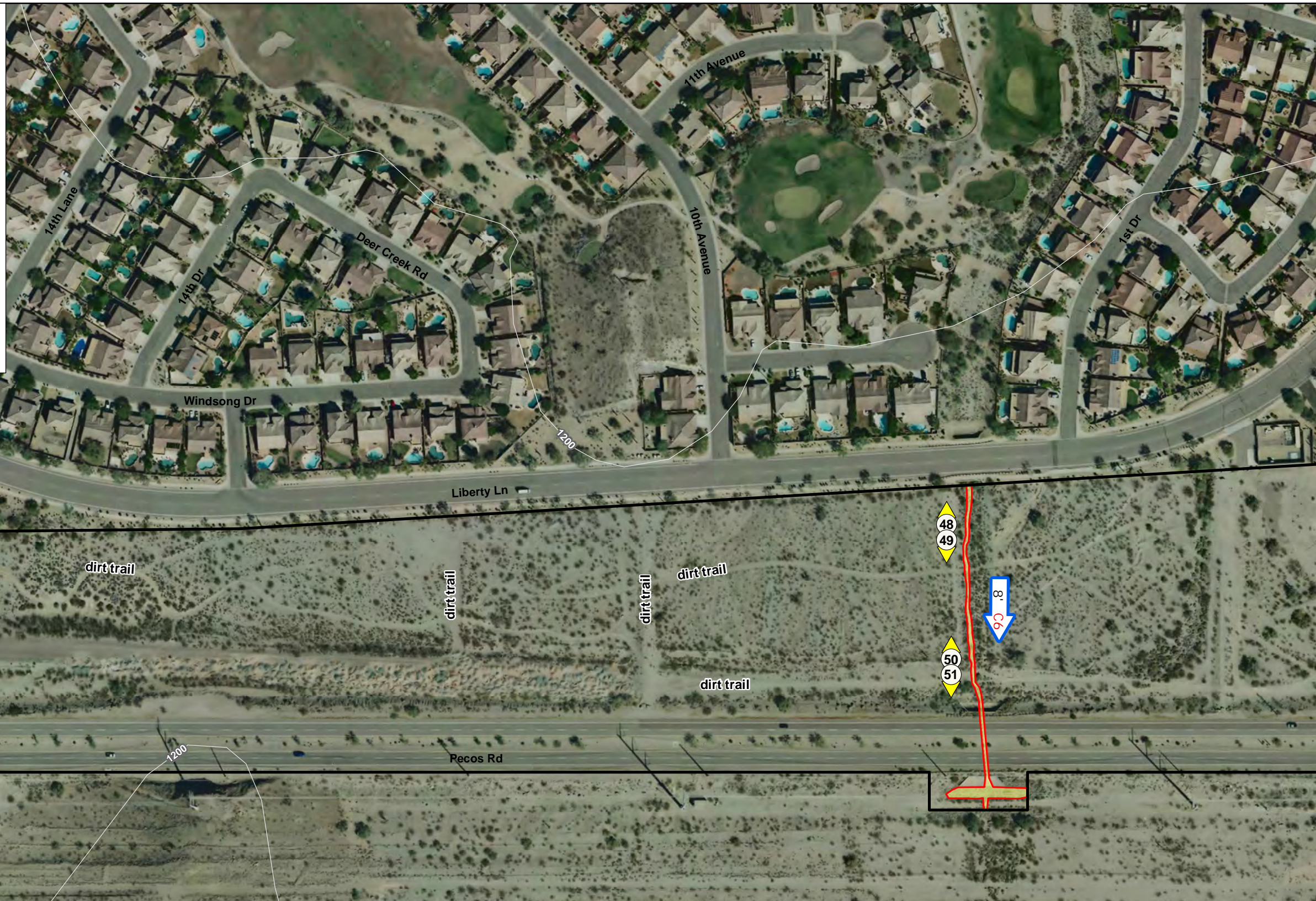
**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (35.88 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.18 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

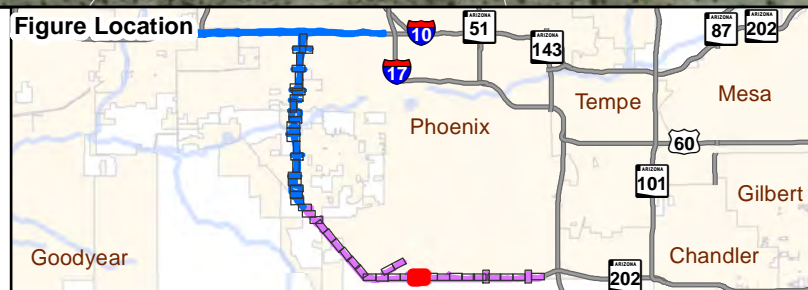
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Site Visit by Corps (Y/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
TICKET Corps Project Manager
Sheet 12 of 50






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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 3E, Section 31



-  Arrow indicates flow direction
-  #
XX' Watercourse number
Wash width (feet)
-  # Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL-2002-00055-KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (40.37 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.17 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

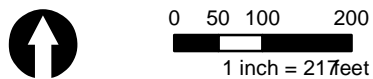
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 Site Visit by Corps(Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
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Aerial imagery: LandisCor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 2E, Section 36



-  Arrow indicates flow direction
-  #
Watercourse number
-  XX'
Wash width (feet)
-  Yellow arrow with '#'
Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

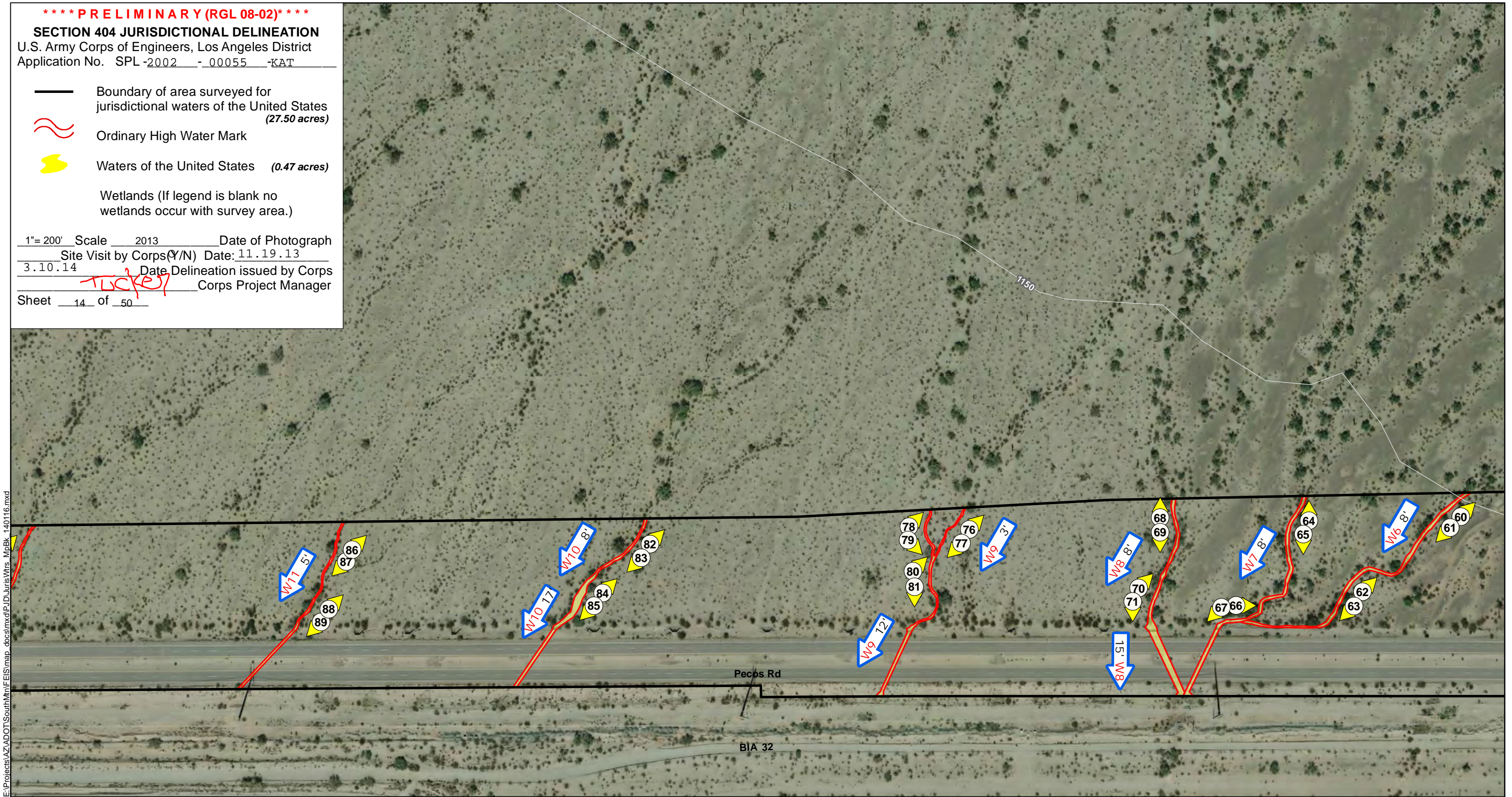
SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL-2002-00055-KAT

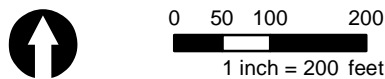
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-  Ordinary High Water Mark
-  Waters of the United States (0.47 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)





1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 14 of 50

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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E, Section 36



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -2002 - 00055 -KAT

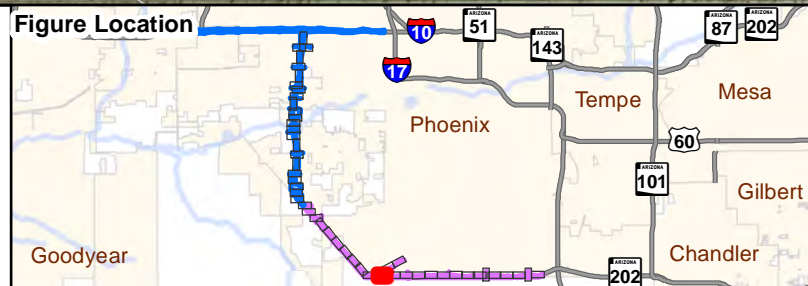
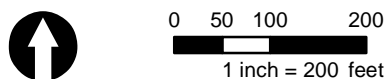
-  Boundary of area surveyed for jurisdictional waters of the United States (30.74 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.29 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)





1"= 200' Scale 2013 Date of Photograph
Site Visit by Corps(✓/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
TUCKER Corps Project Manager
Sheet 15 of 50



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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 2E; Sections 35 and 36



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

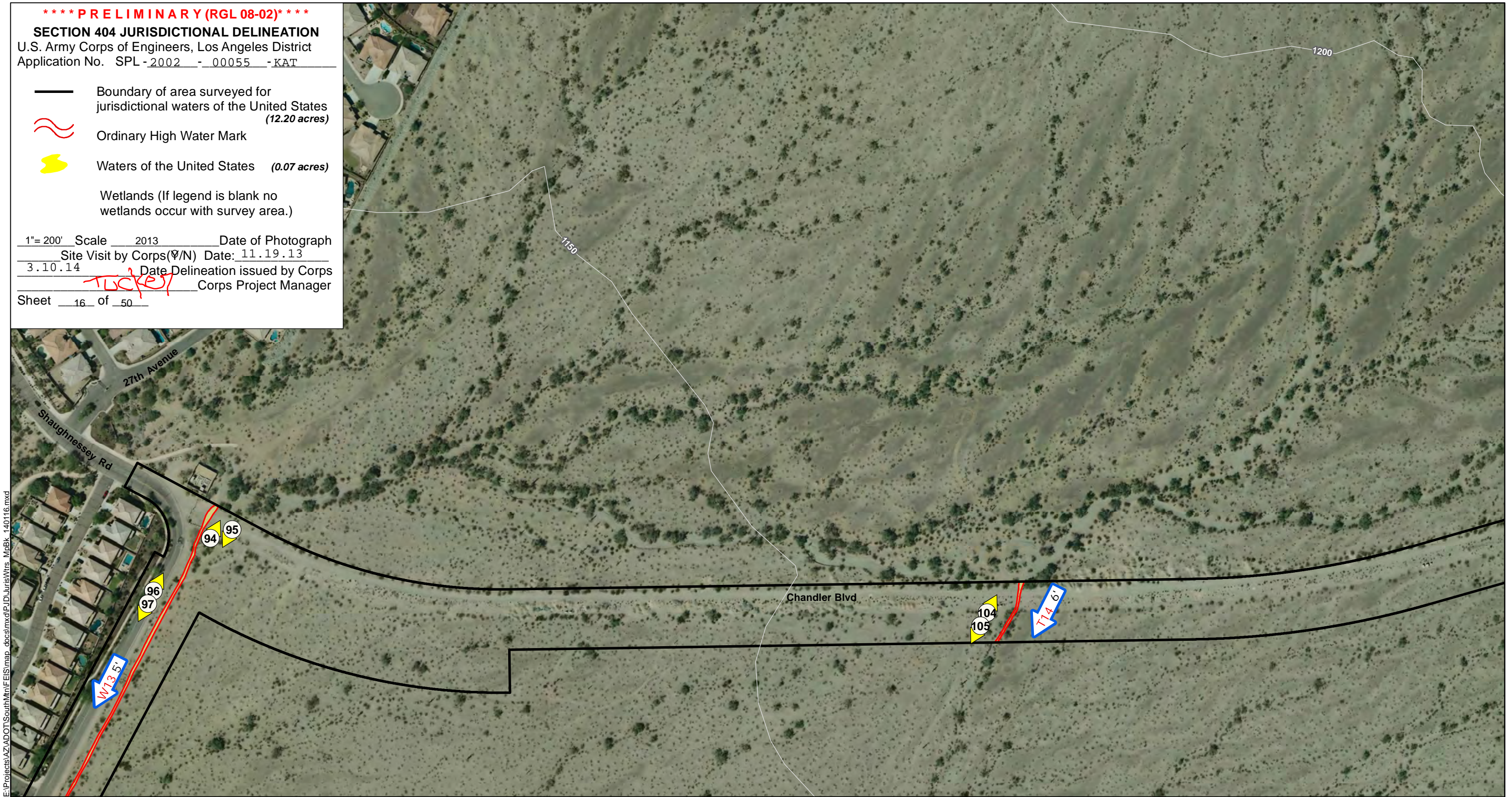
SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

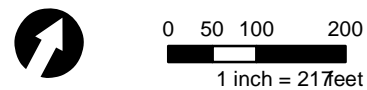
-  Boundary of area surveyed for jurisdictional waters of the United States (12.20 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.07 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)




1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(✓/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 16 of 50

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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E; Sections 35 and 36



-  Arrow indicates flow direction
-  #
Watercourse number
-  #
Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL-2002-00055-KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (10.66 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.19 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

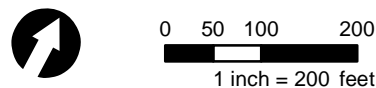
1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(✓/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 17 of 50




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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Lone Butte, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E; Section 36



-  Arrow indicates flow direction
-  #
XX' Wash width (feet)
-  #
Ground photo number and direction

Aerial of area surveyed

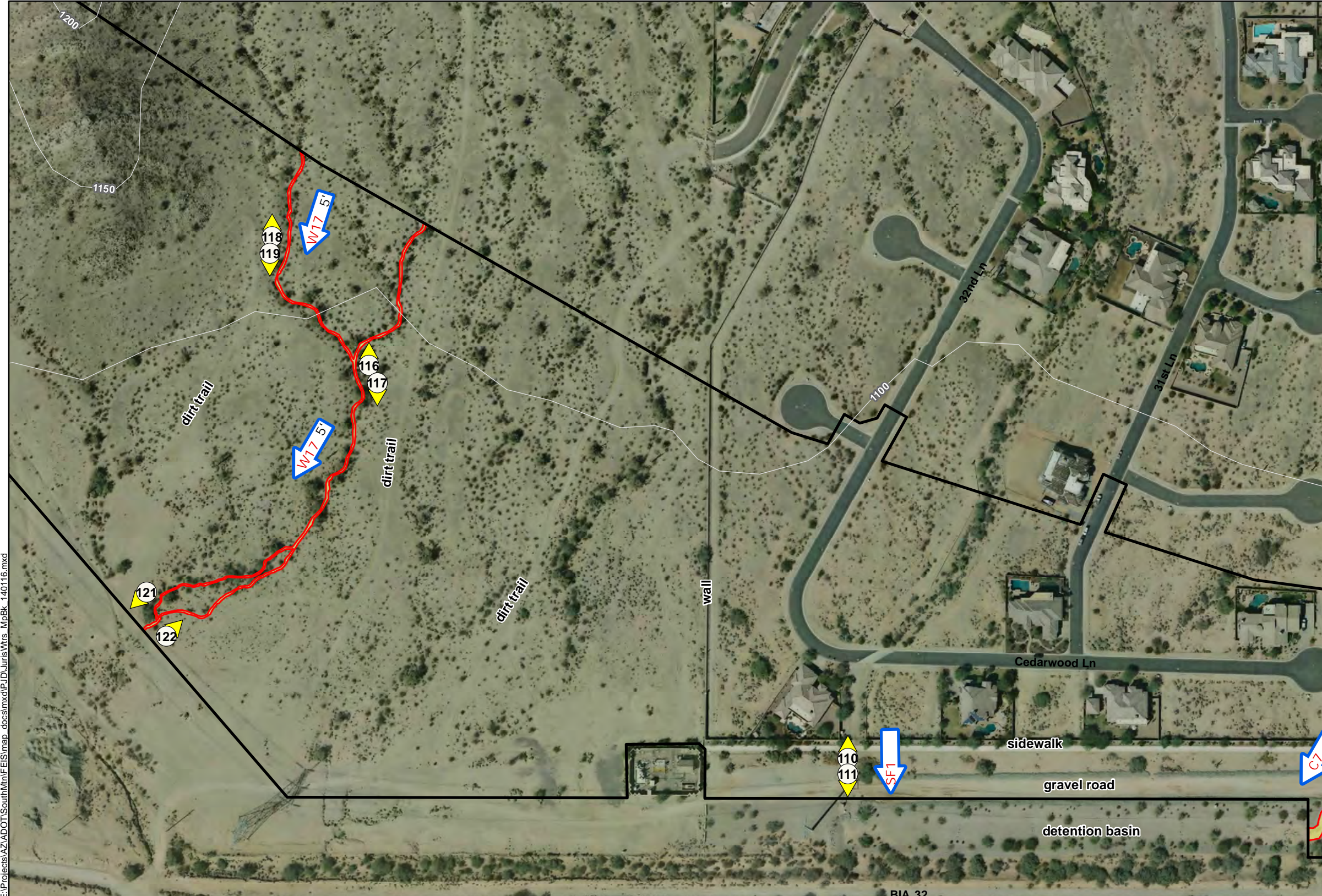
202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

****** PRELIMINARY (RGL 08-02)******
SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT

— Boundary of area surveyed for jurisdictional waters of the United States (54.31 acres)
 ~ Ordinary High Water Mark
 Waters of the United States (0.28 acres)

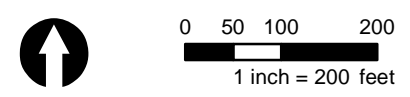
Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 18 of 50



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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E, Section 35



- Arrow indicates flow direction
- Wash width (feet)
- Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

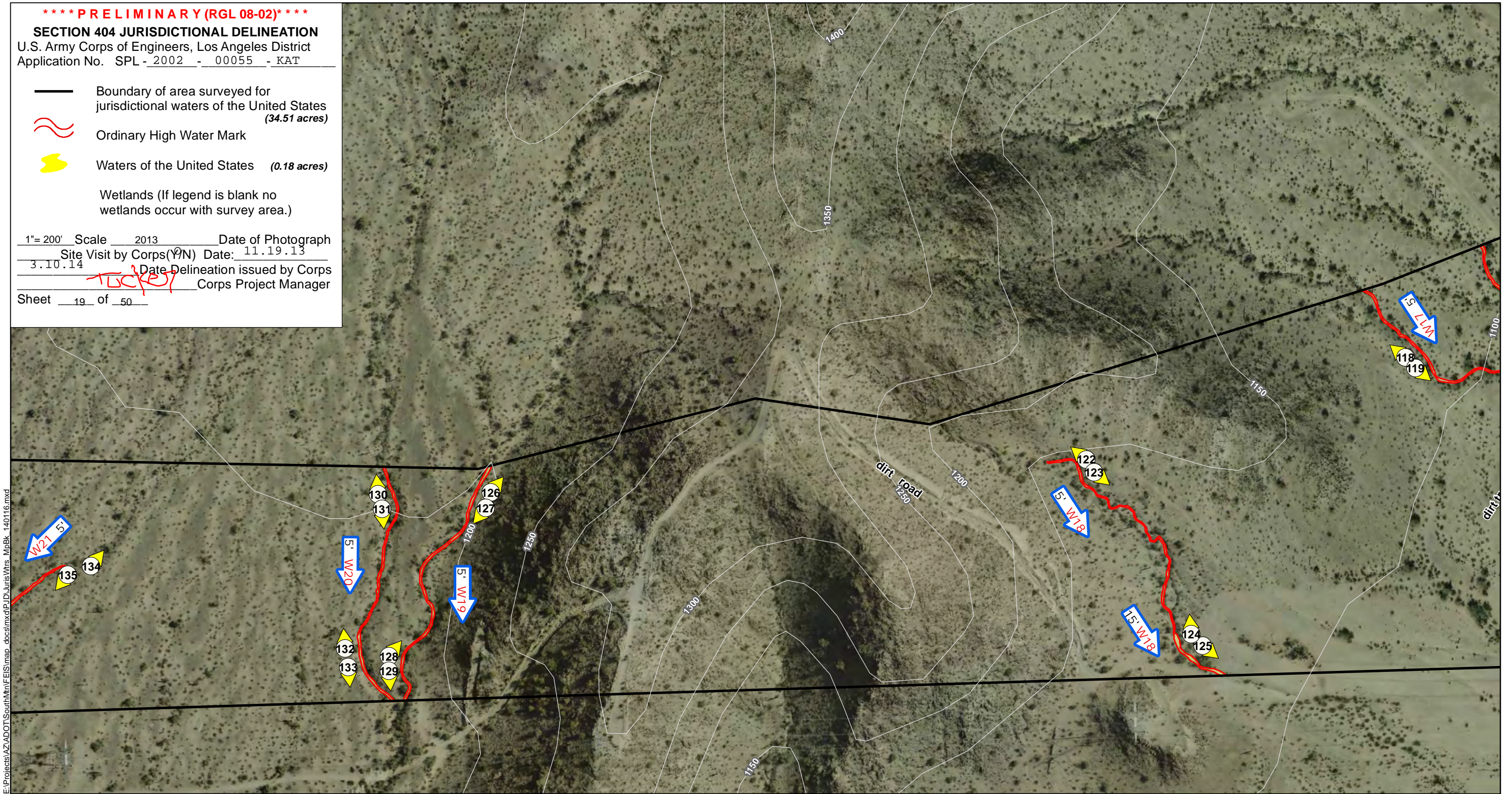
SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (34.51 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.18 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

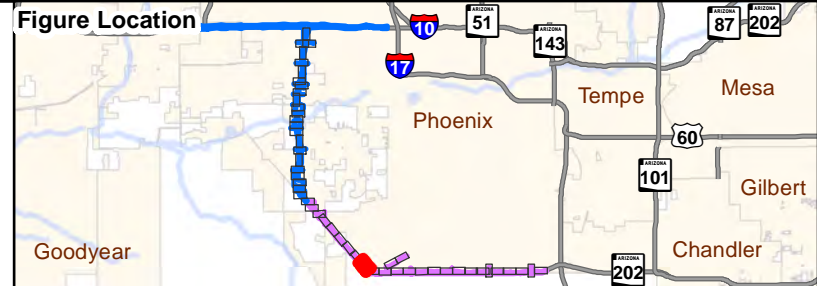
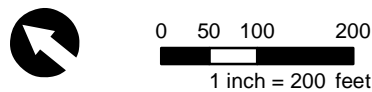
1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 19 of 50





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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E; Sections 34 and 35



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

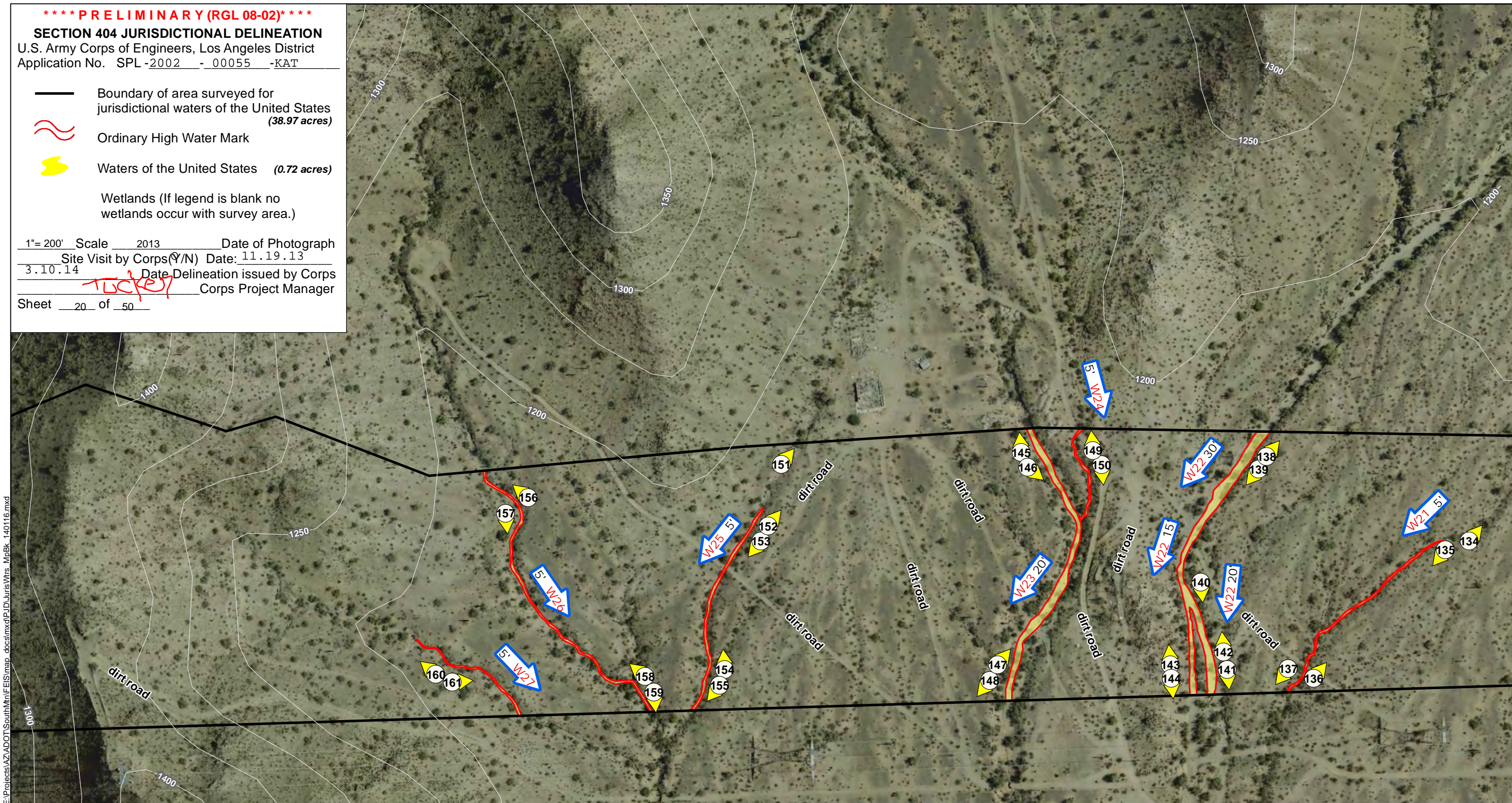
SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL-2002 - 00055 -KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (38.97 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.72 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

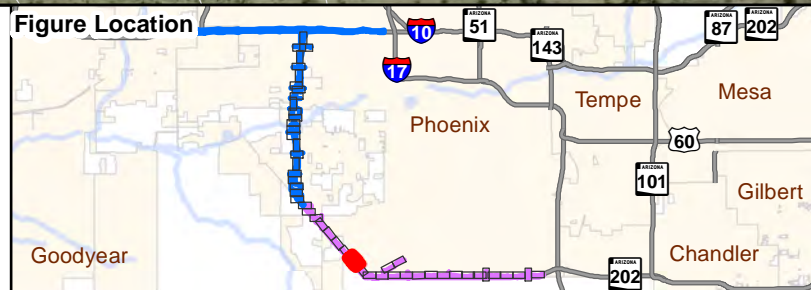
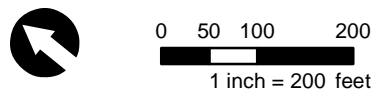
1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E; Sections 27 and 34



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

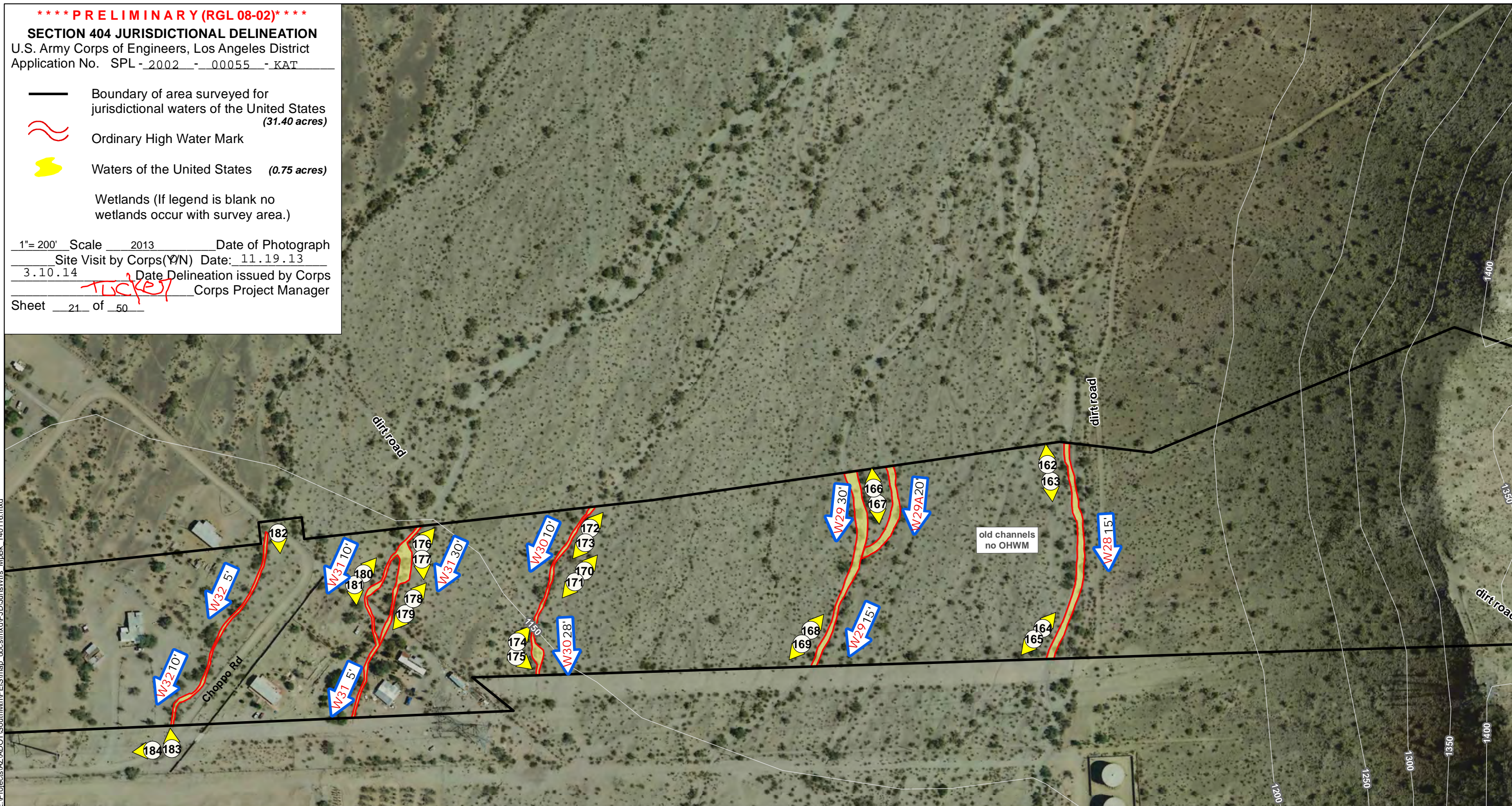
SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (31.40 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.75 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

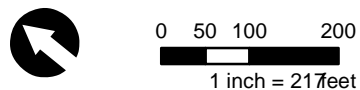
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Site Visit by Corps(Y/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
TUCKER Corps Project Manager
Sheet 21 of 50





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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 2E, Section 27



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (32.03 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.54 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

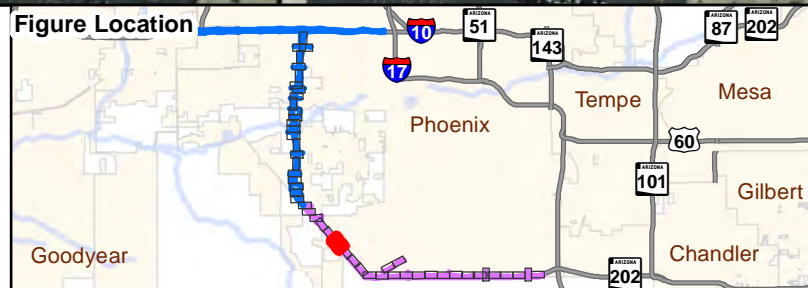
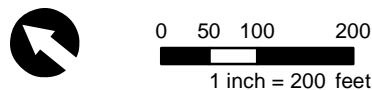
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 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 22 of 50







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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E; Section 28



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

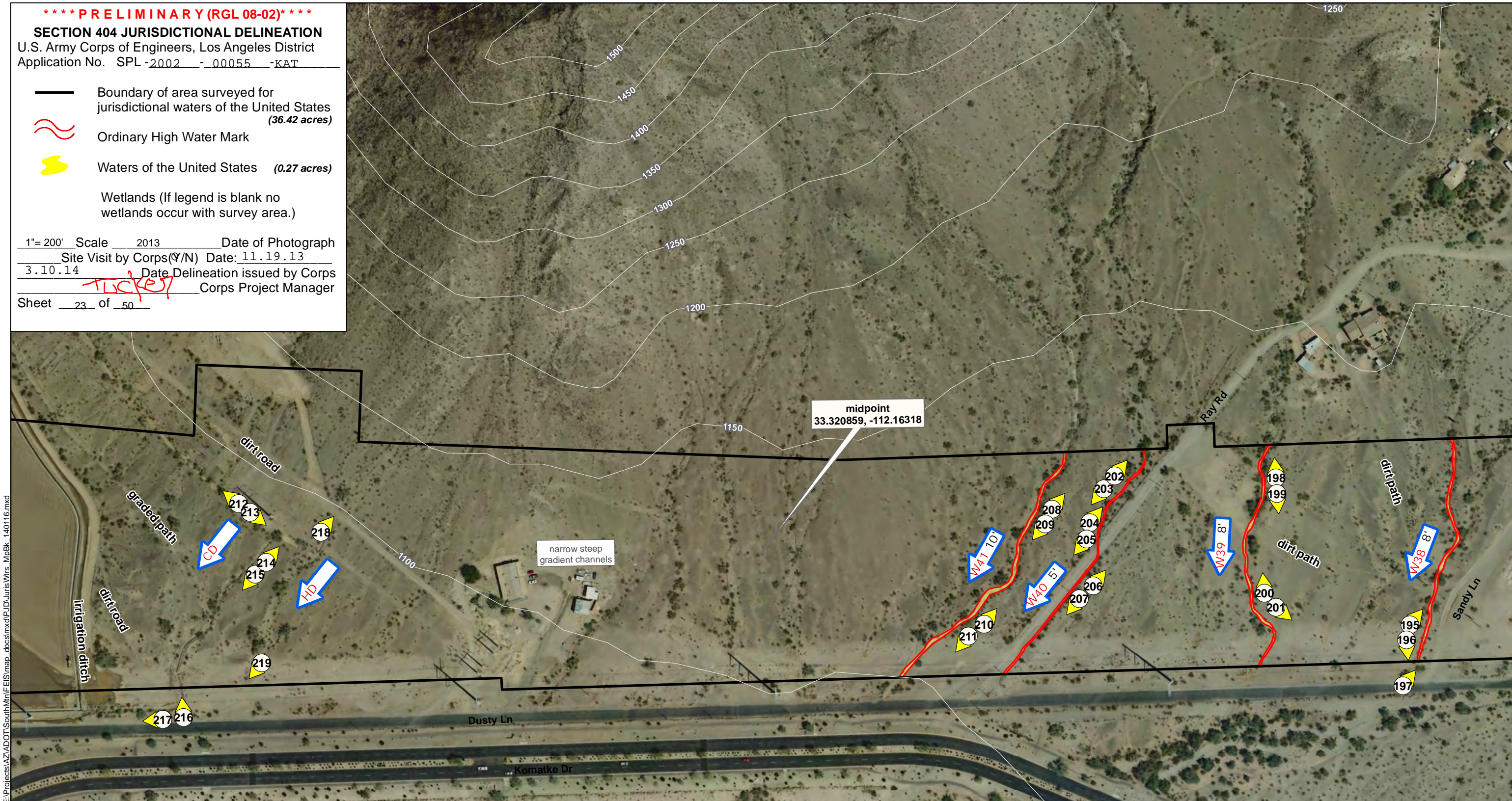
**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL-2002-00055-KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (36.42 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.27 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

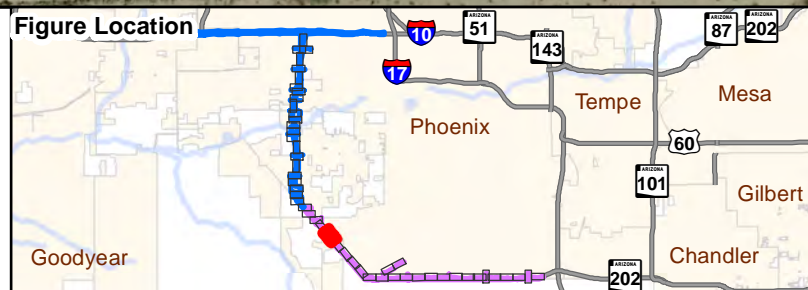
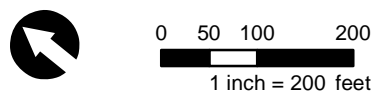
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 Site Visit by Corps(Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 23 of 50







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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 2E; Sections 21 and 28



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

No drainage features

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (61.90 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 24 of 50



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

Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 2E; Sections 20 and 21



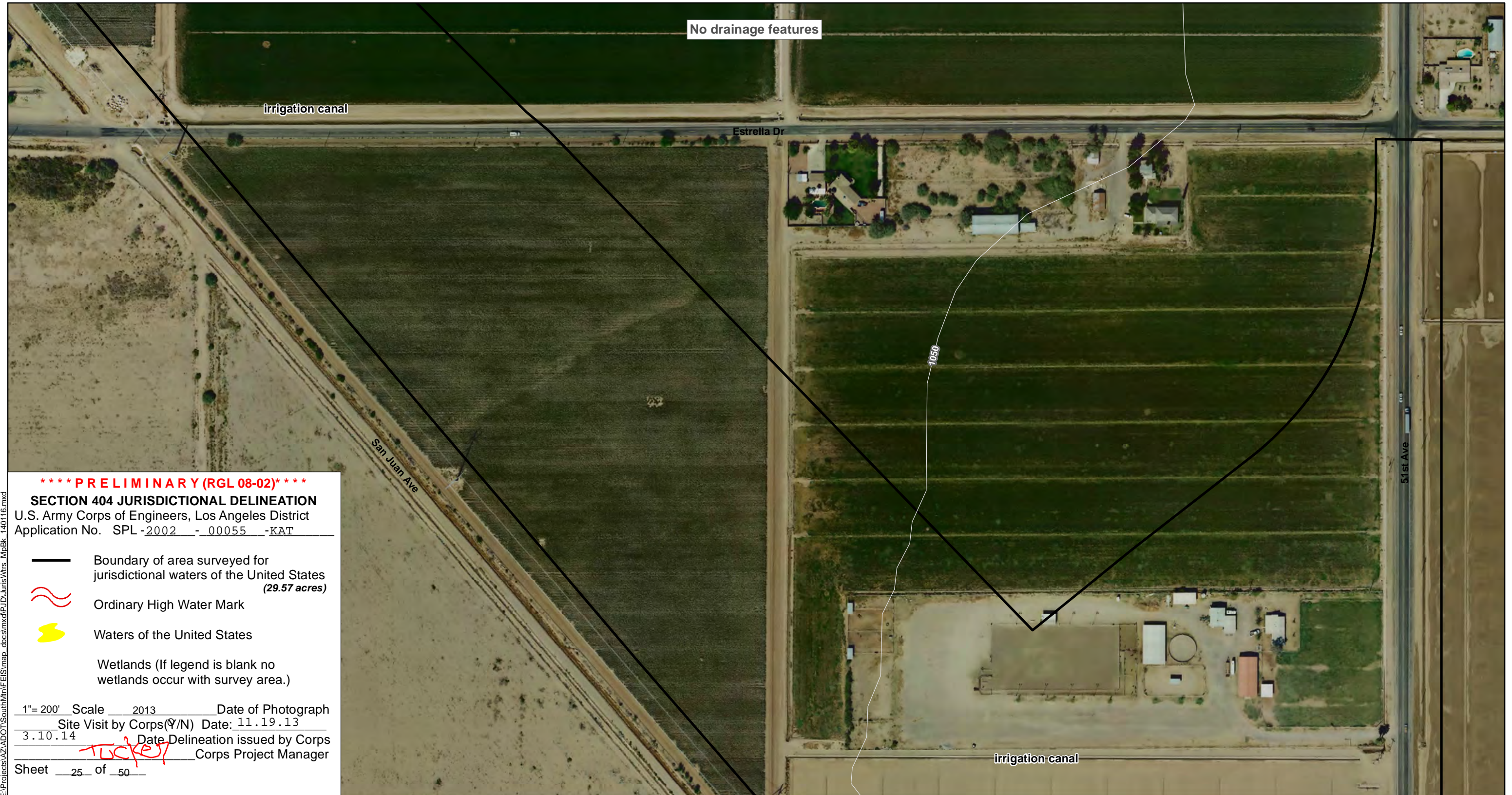
0 50 100 200
1 inch = 200 feet



-  Arrow indicates flow direction
-  #
Watercourse number
-  XX'
Wash width (feet)
-  #
Ground photo number and direction

Aerial of area surveyed




202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor



**** PRELIMINARY (RGL 08-02) ****

SECTION 404 JURISDICTIONAL DELINEATION

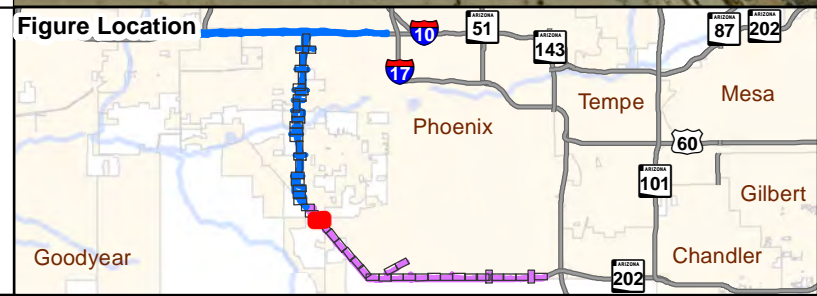
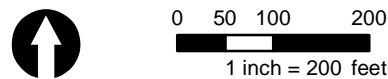
U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL -2002 - 00055 -KAT




-  Boundary of area surveyed for jurisdictional waters of the United States (29.57 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

1" = 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 25 of 50

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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E, Section 20



-  Arrow indicates flow direction
-  #
XX' Watercourse number
Wash width (feet)
-  # Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor



No drainage features

San Juan Ave

Irrigation canal

****** PRELIMINARY (RGL 08-02)******

SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT

- Boundary of area surveyed for jurisdictional waters of the United States (34.96 acres)
- Ordinary High Water Mark
- Waters of the United States

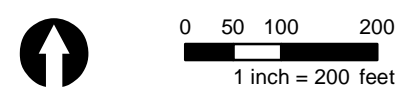
Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 Tucker Corps Project Manager

Sheet 26 of 50

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Aerial imagery: LandisCor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E, Section 17



- Arrow indicates flow direction
- Watercourse number
- Wash width (feet)
- Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor



****** PRELIMINARY (RGL 08-02)******

SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT

— Boundary of area surveyed for jurisdictional waters of the United States (48.38 acres)
 ~ Ordinary High Water Mark
 ② Waters of the United States

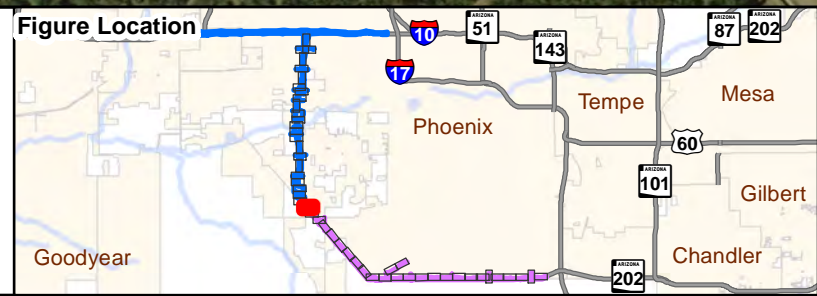
Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(✓/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 27 of 50

Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E; Sections 17 and 18

0 50 100 200
 1 inch = 200 feet



← # XX' Arrow indicates flow direction
 # Watercourse number
 XX' Wash width (feet)
 ◀ # Ground photo number and direction

Aerial of area surveyed




202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

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**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -2002 - 00055 -KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (38.29 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

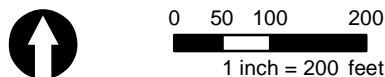
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 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 28 of 50





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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E; Sections 17 and 18



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor



***** PRELIMINARY (RGL 08-02) *****

SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL -2002 - 00055 -KAT

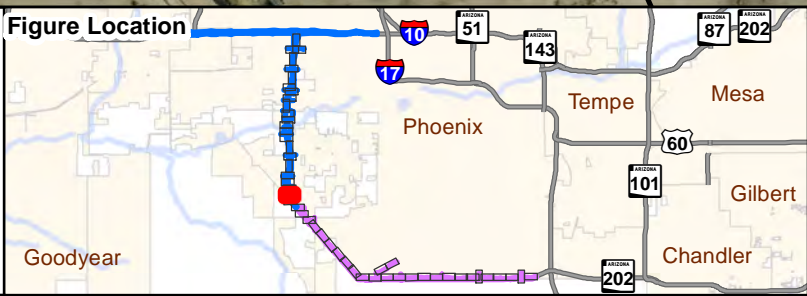
— Boundary of area surveyed for jurisdictional waters of the United States (37.98 acres)
 ~ Ordinary High Water Mark
 ☀ Waters of the United States
 Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corp Project Manager
 Sheet 29 of 50

Aerial imagery: LandisCor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E; Sections 7 and 8

0 50 100 200
 1 inch = 200 feet



← # XX' Arrow indicates flow direction
 # Watercourse number
 XX' Wash width (feet)
 # Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

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****** PRELIMINARY (RGL 08-02)******
SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL -2002 - 00055 -KAT

— Boundary of area surveyed for jurisdictional waters of the United States (84.76 acres)
 ~ Ordinary High Water Mark
 Waters of the United States

Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 30 of 50

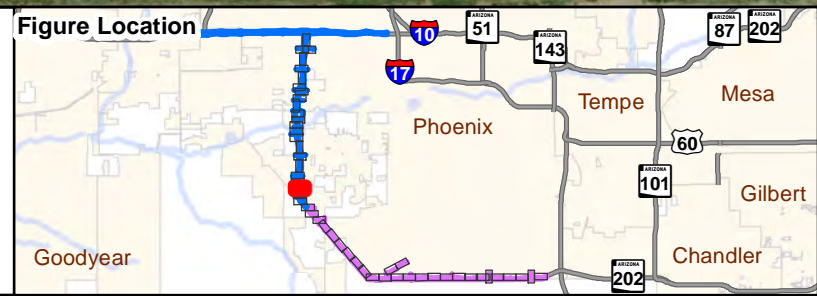
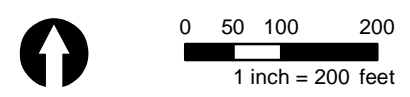
No drainage features





irrigation canal

59th Avenue

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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E; Sections 7 and 8



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor




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No drainage features

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION
U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

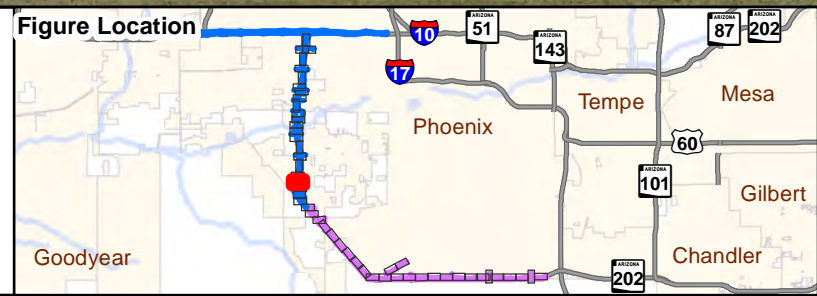
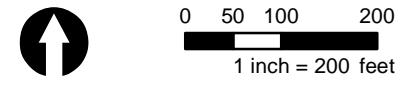
-  Boundary of area surveyed for jurisdictional waters of the United States (45.78 acres)
-  Ordinary High Water Mark
-  Waters of the United States





Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(✓/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 31 of 50

59th Avenue

Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E; Sections 7 and 8



-  Arrow indicates flow direction
-  # Watercourse number
-  XX' Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL-2002-00055-KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (38.80 acres)
 -  Ordinary High Water Mark
 -  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

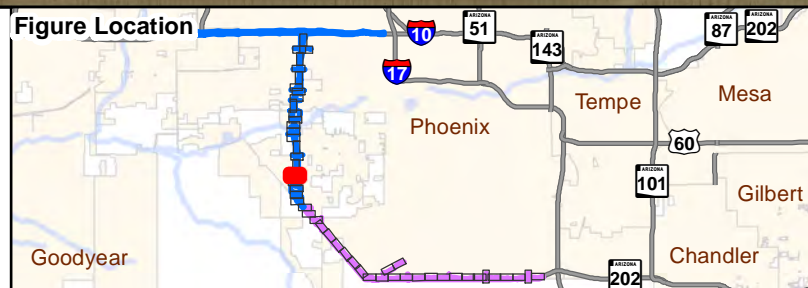
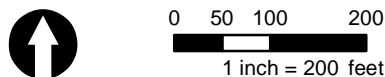
1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(√/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 32 of 50







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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

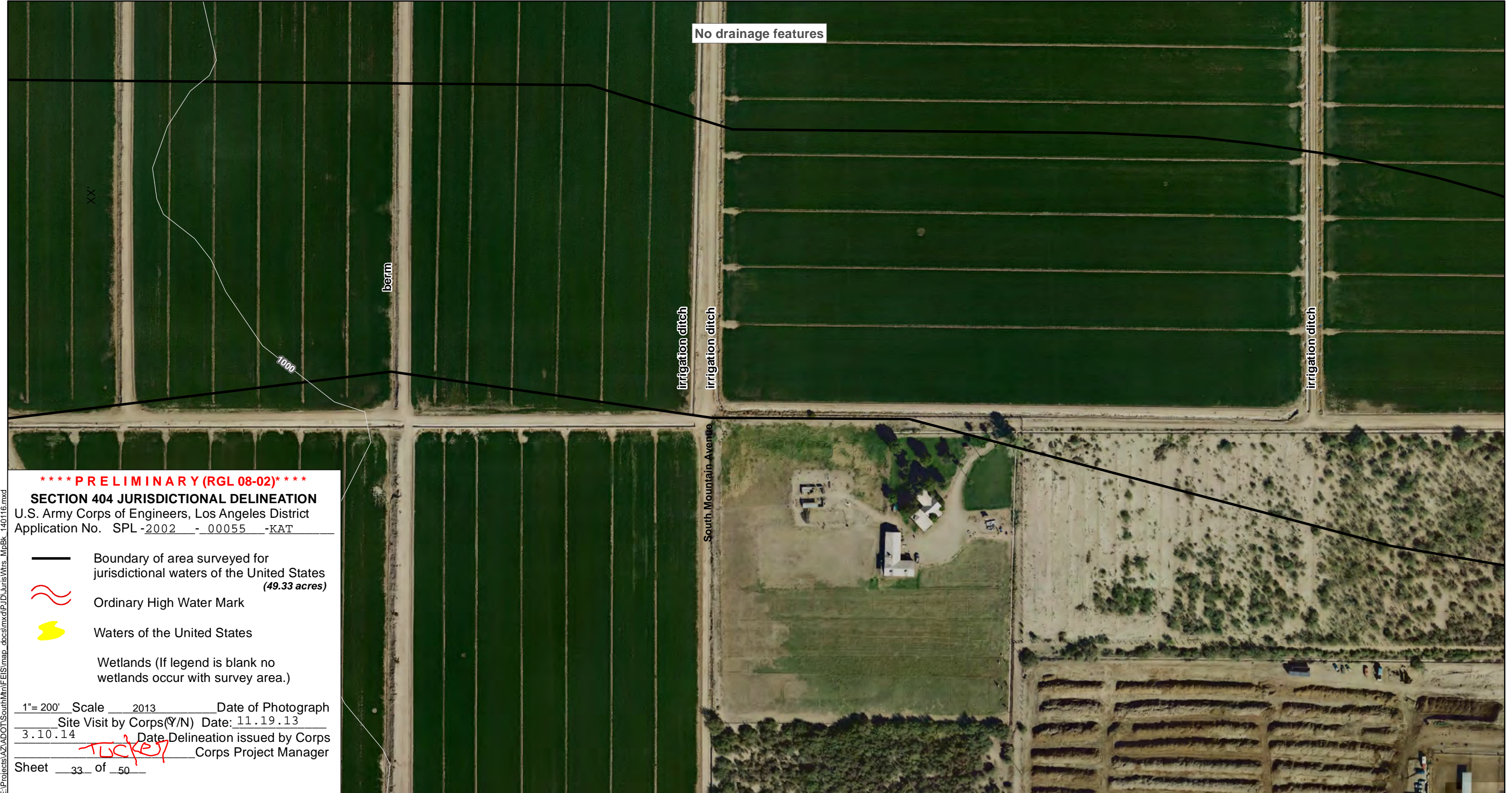
USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1S, Range 2E; Sections 6 and 7



-  Arrow indicates flow direction
-  # Watercourse number
-  XX' Wash width (feet)
-  # Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor



No drainage features

berm

irrigation ditch

irrigation ditch




irrigation ditch

South Mountain Avenue

**** PRELIMINARY (RGL 08-02) ****

SECTION 404 JURISDICTIONAL DELINEATION

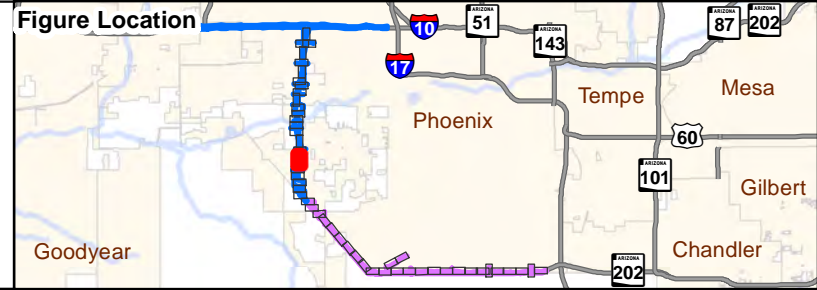
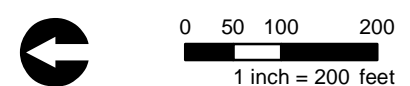
U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL-2002 - 00055 -KAT





-  Boundary of area surveyed for jurisdictional waters of the United States (49.33 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

1" = 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 33 of 50

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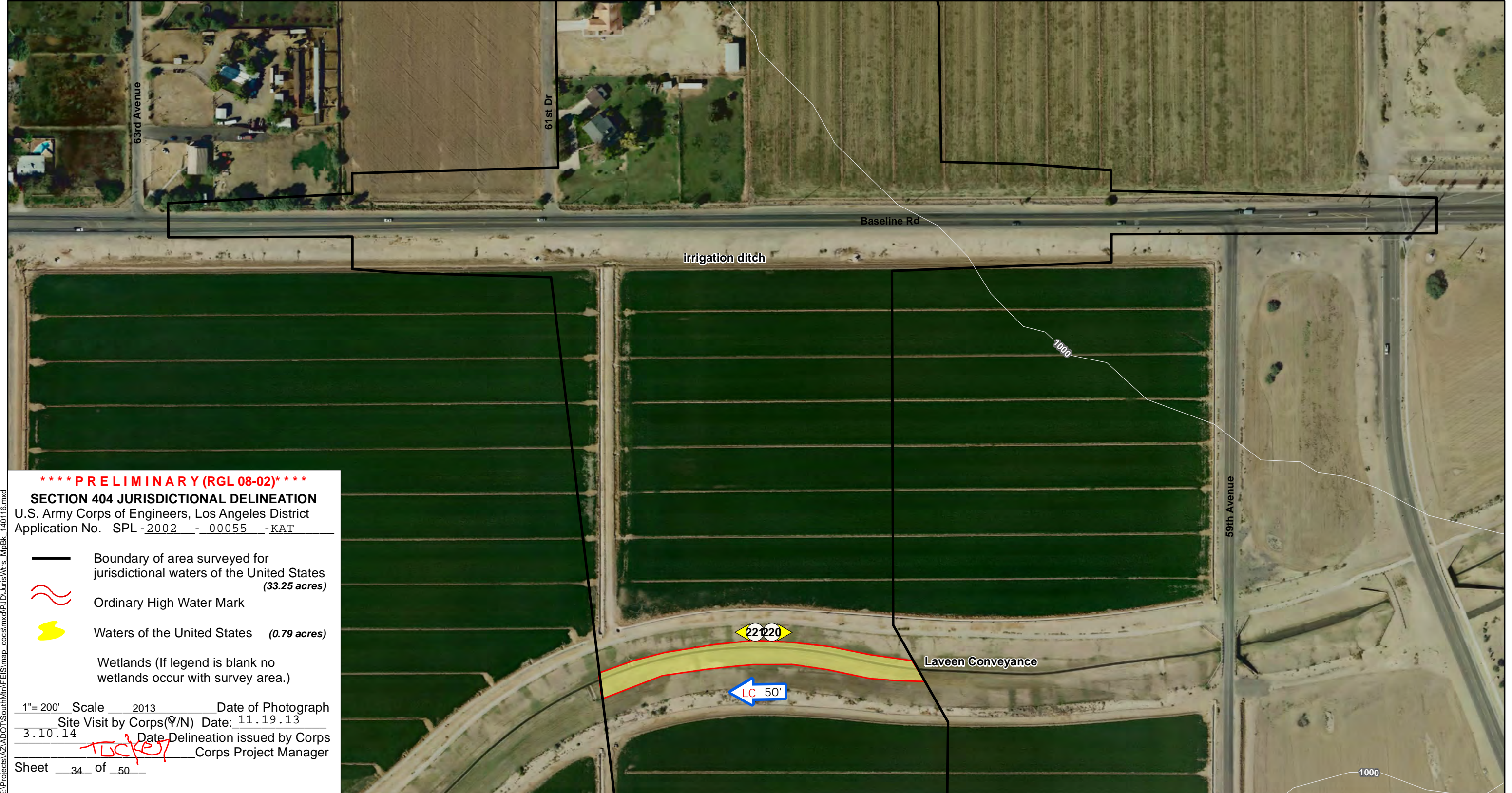
Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Laveen, AZ (1973)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E, Section 6



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor



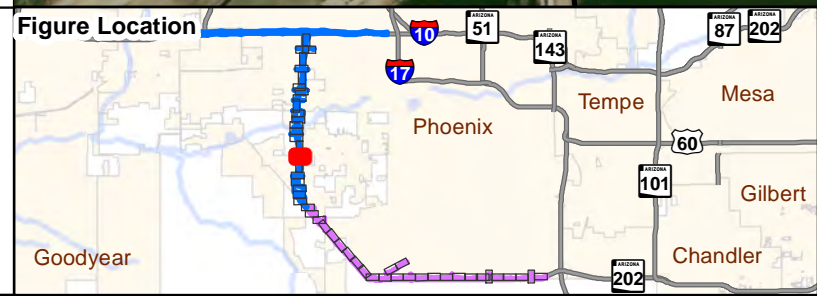
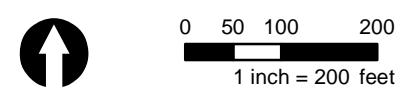
***** PRELIMINARY (RGL 08-02) *****





SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL -2002 - 00055 -KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (33.25 acres)
-  Ordinary High Water Mark
-  Waters of the United States (0.79 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

1" = 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 34 of 50

Aerial imagery: LandisCor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1S, Range 2E, Section 6



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction

Aerial of area surveyed




202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

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**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (40.02 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 35 of 50

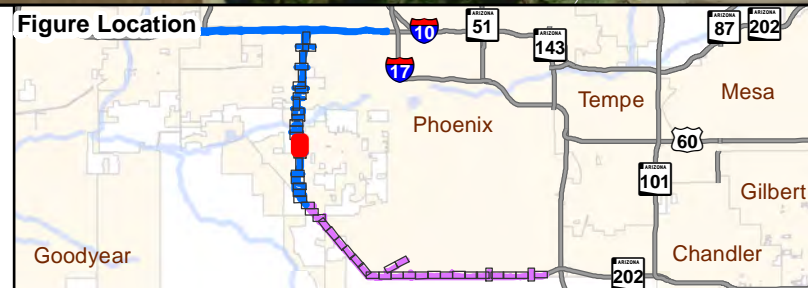
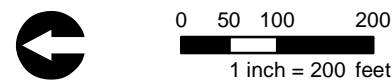
No drainage features







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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1N, Range 2E, Section 31



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

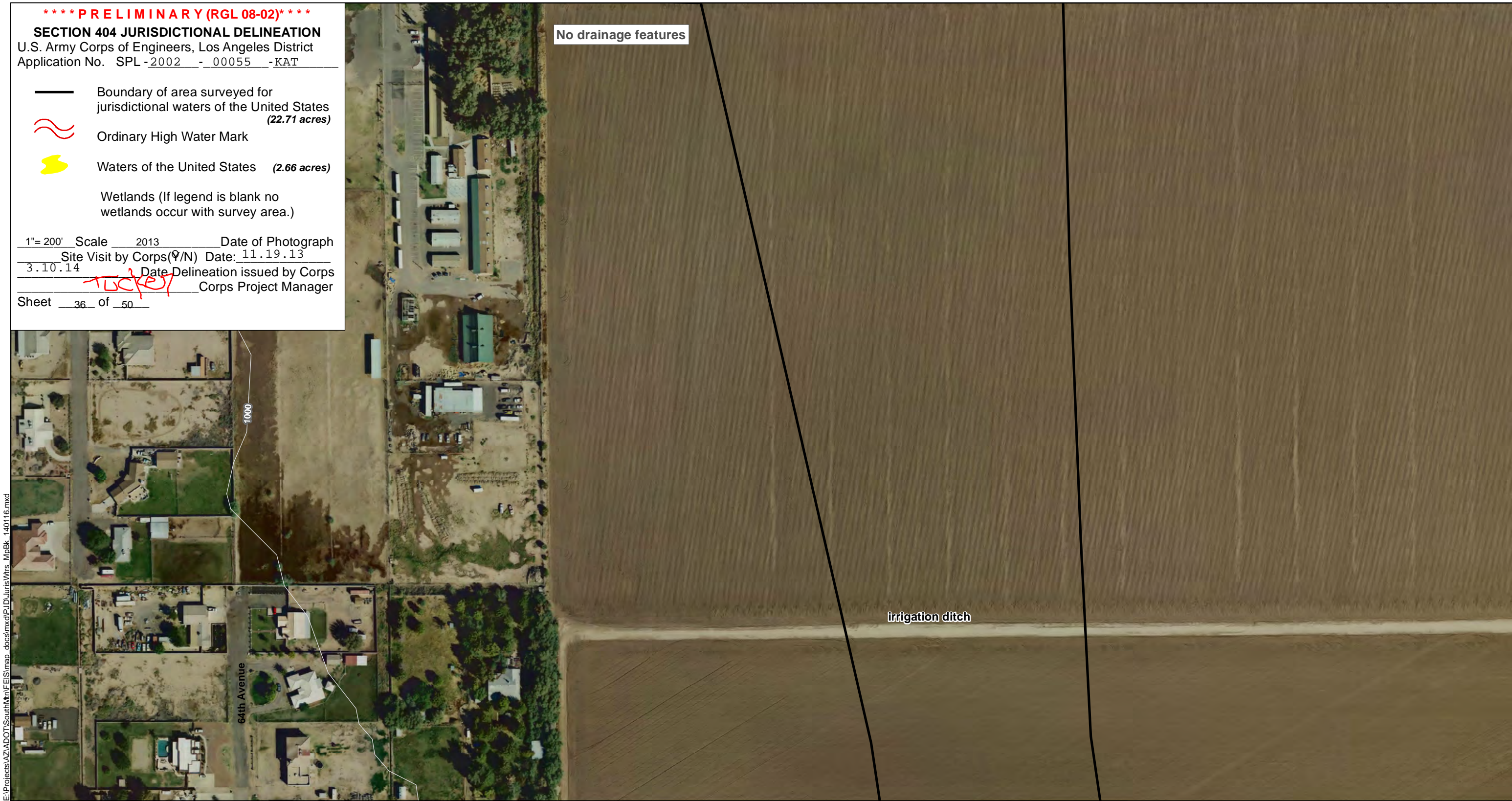
SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -2002 - 00055 -KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (22.71 acres)
-  Ordinary High Water Mark
-  Waters of the United States (2.66 acres)
- Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 36 of 50

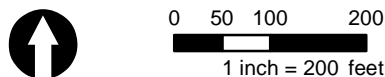
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No drainage features

irrigation ditch

Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E; Section 31



-  Arrow indicates flow direction
-  #
Watercourse number
-  XX'
Wash width (feet)
-  #
Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL -2002 - 00055 -KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (56.82 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

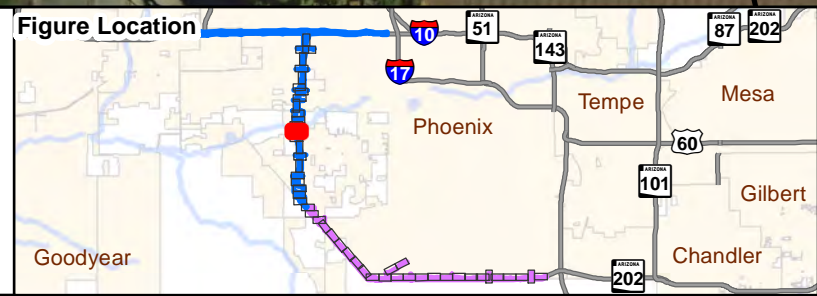
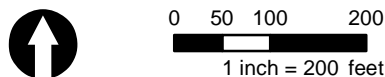
1"= 200' Scale 2013 Date of Photograph
Site Visit by Corps (Y/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
Tucker Corps Project Manager
Sheet 37 of 50







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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1N, Range 2E; Section 30



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

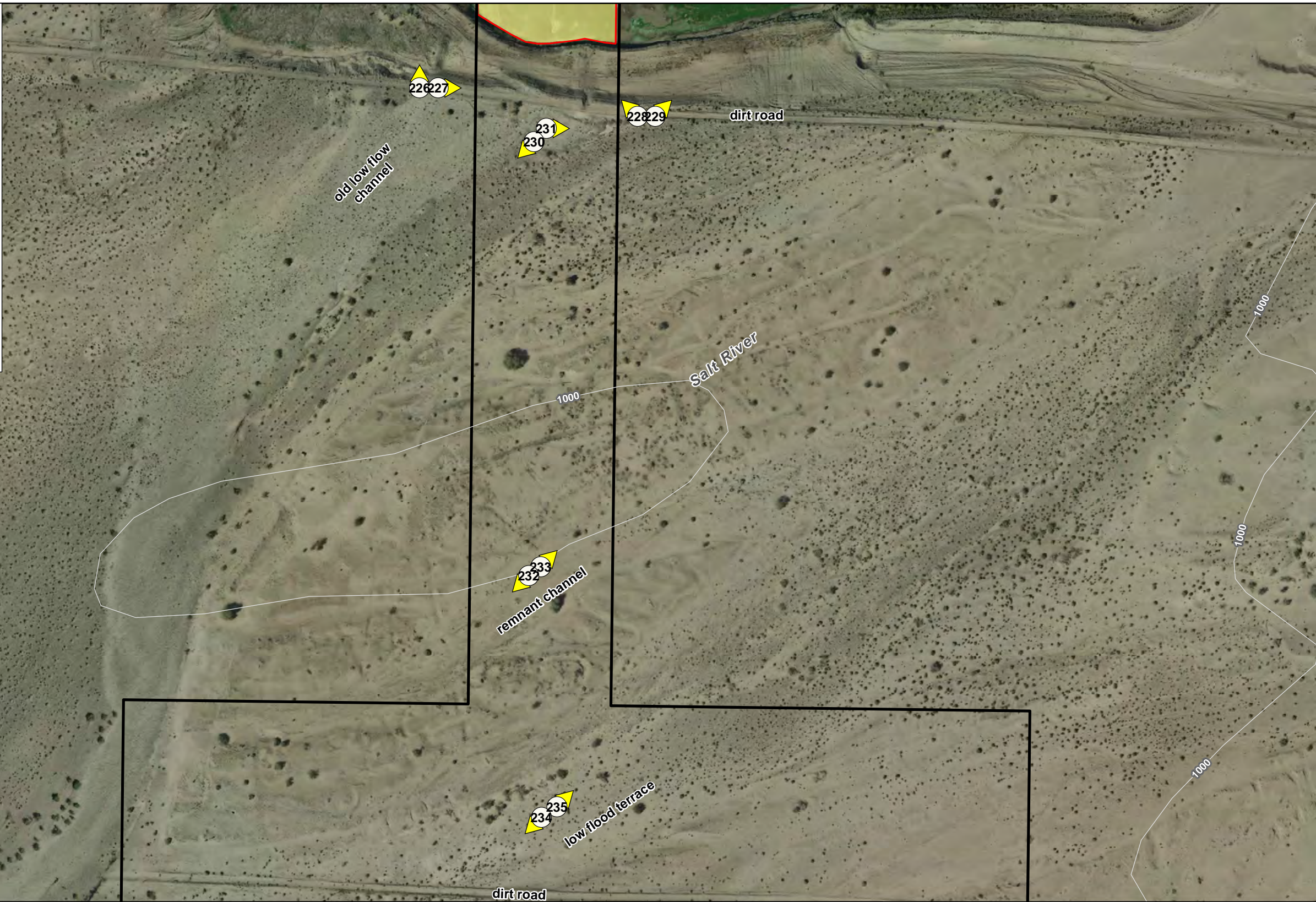
SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (21.07 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

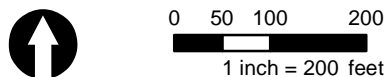
1"= 200' Scale 2013 Date of Photograph
Site Visit by Corps(V/N) Date: 11.19.13
3.10.14 Date Delineation issued by Corps
Sheet 38 of 50





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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1N, Range 2E; Section 30



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor



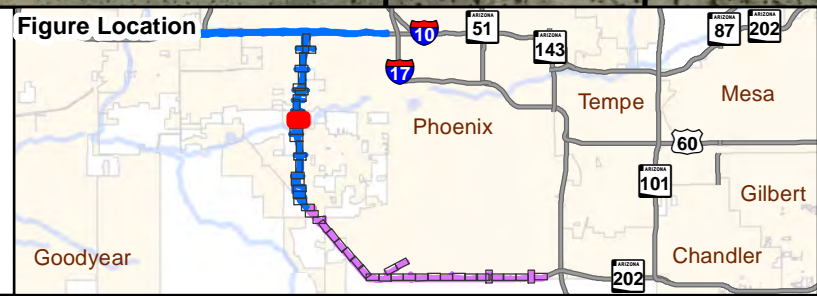
***** PRELIMINARY (RGL 08-02) *****
SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT

— Boundary of area surveyed for jurisdictional waters of the United States (33.70 acres)
 ~ Ordinary High Water Mark
 Waters of the United States
 Wetlands (If legend is blank no wetlands occur with survey area.)

1" = 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 39 of 50

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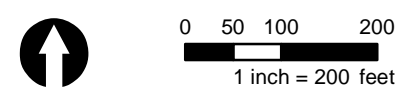
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 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E, Section 30



← # XX' Arrow indicates flow direction
 # Watercourse number
 XX' Wash width (feet)
 ↙ # Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

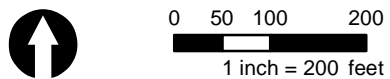




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Aerial imagery: LandisCor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

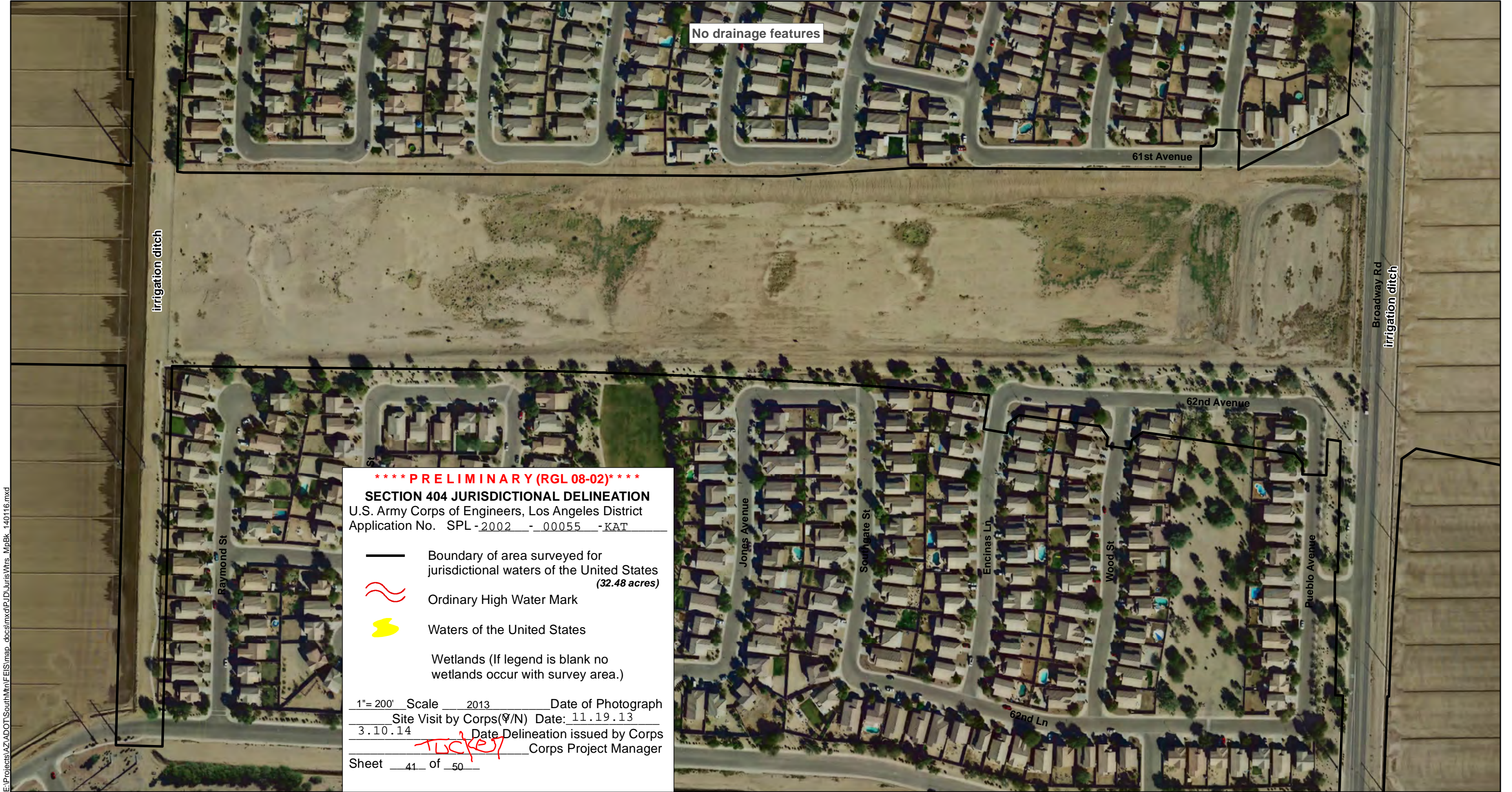
USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E; Sections 19 and 30



- Arrow indicates flow direction
- Watercourse number
- Wash width (feet)
- Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor






No drainage features

61st Avenue

irrigation ditch

Broadway Rd
irrigation ditch

****** PRELIMINARY (RGL 08-02)******
SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL -2002 - 00055 -KAT

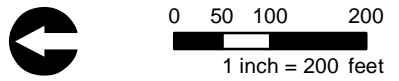
-  Boundary of area surveyed for jurisdictional waters of the United States (32.48 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)





1" = 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corp Project Manager
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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E; Section 19



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction




Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL - 2002 - 00055 - KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (16.48 acres)
 -  Ordinary High Water Mark
 -  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

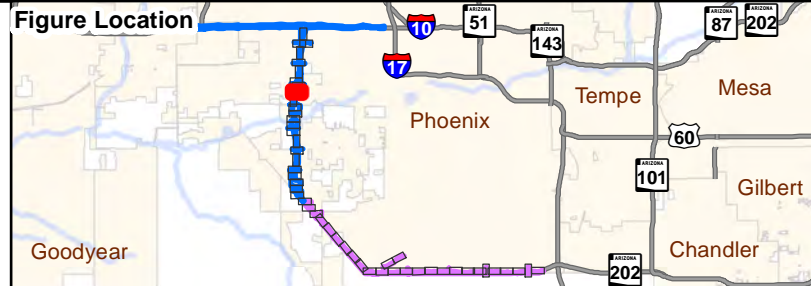
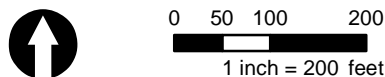
1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
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Aerial imagery: LandisCor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

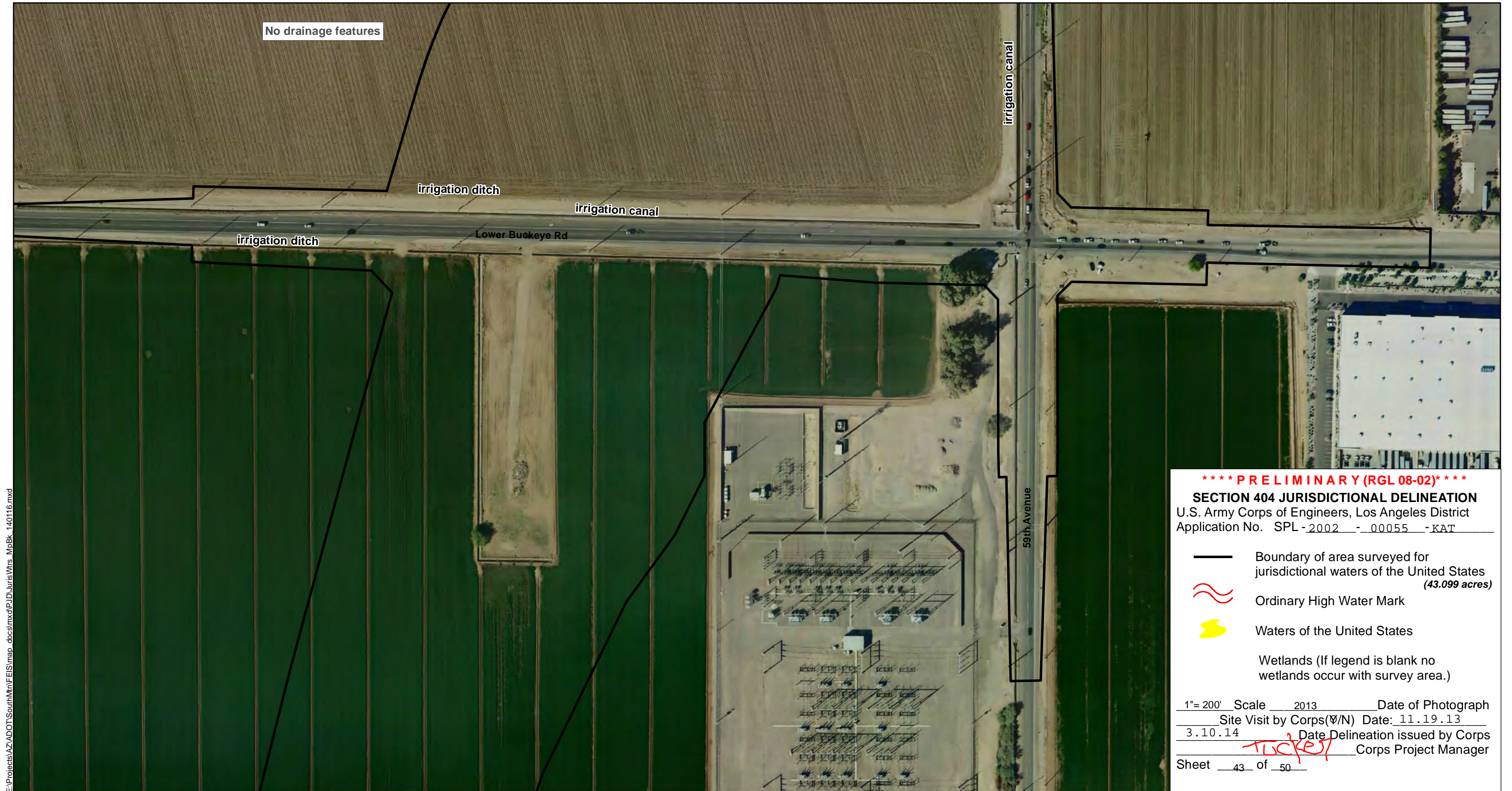
USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1N, Range 2E; Sections 19 and 20



-  Arrow indicates flow direction
-  #
Watercourse number
-  XX'
Wash width (feet)
-  #
Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor



***** PRELIMINARY (RGL 08-02) *****

SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT

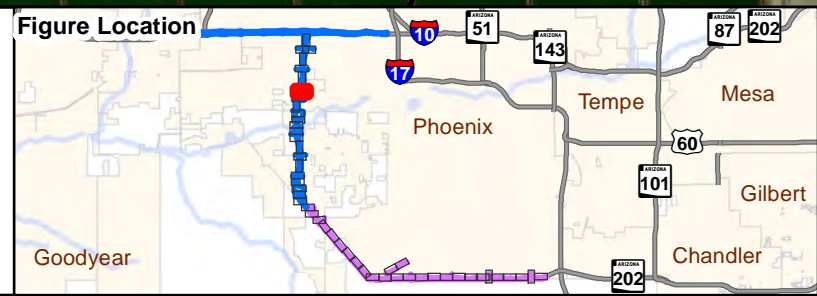
— Boundary of area surveyed for jurisdictional waters of the United States (43.099 acres)
 ~ Ordinary High Water Mark
 Waters of the United States
 Wetlands (If legend is blank no wetlands occur with survey area.)

1" = 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corp Project Manager
 Sheet 43 of 50

Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E; Sections 17, 18, 19 and 20

0 50 100 200
 1 inch = 200 feet



← # XX' Arrow indicates flow direction
 # Watercourse number
 XX' Wash width (feet)
 ◀ # Ground photo number and direction

Aerial of area surveyed




202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

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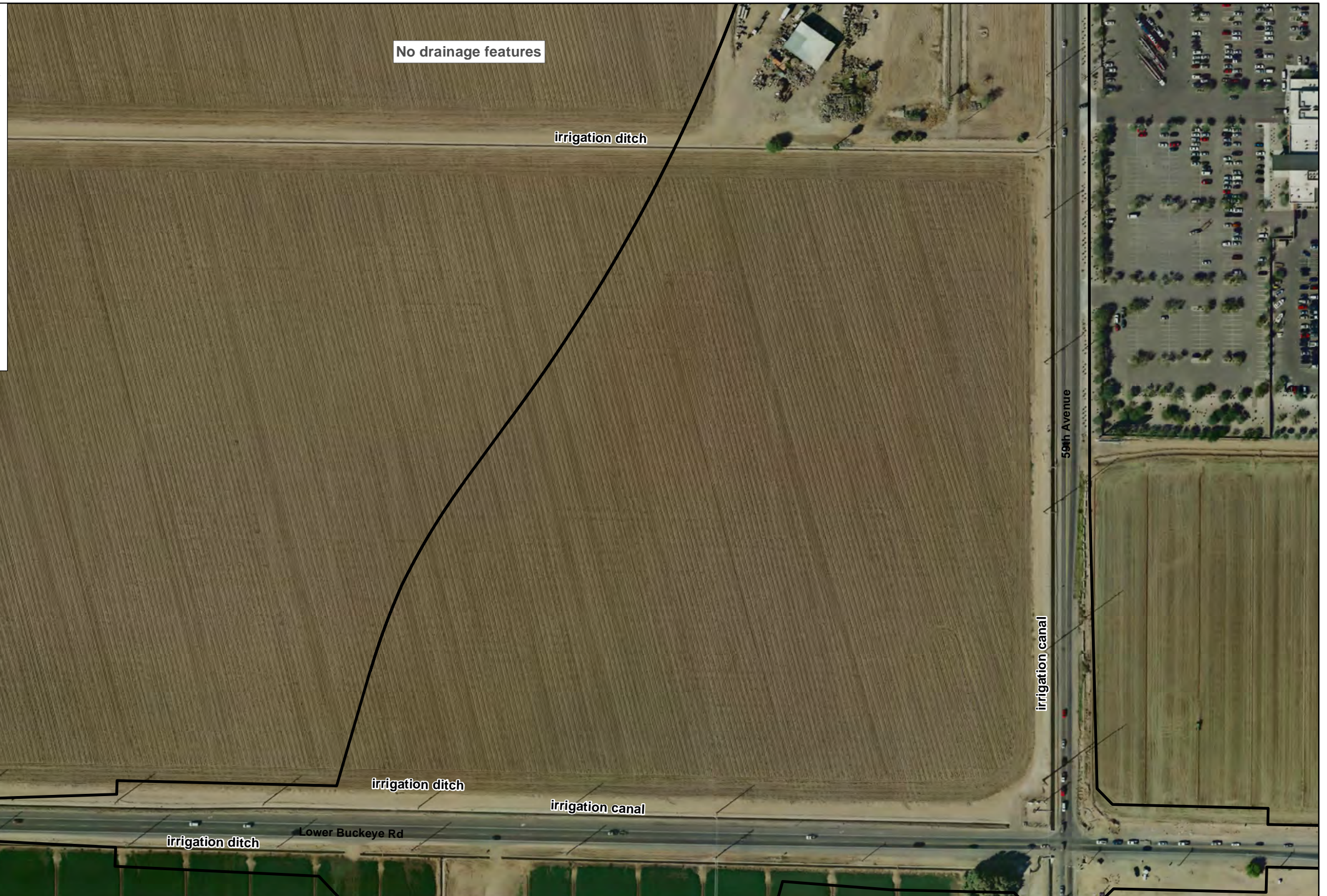
**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL-2002-00055-KAT

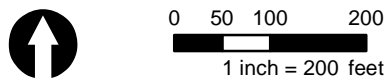
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-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)





1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

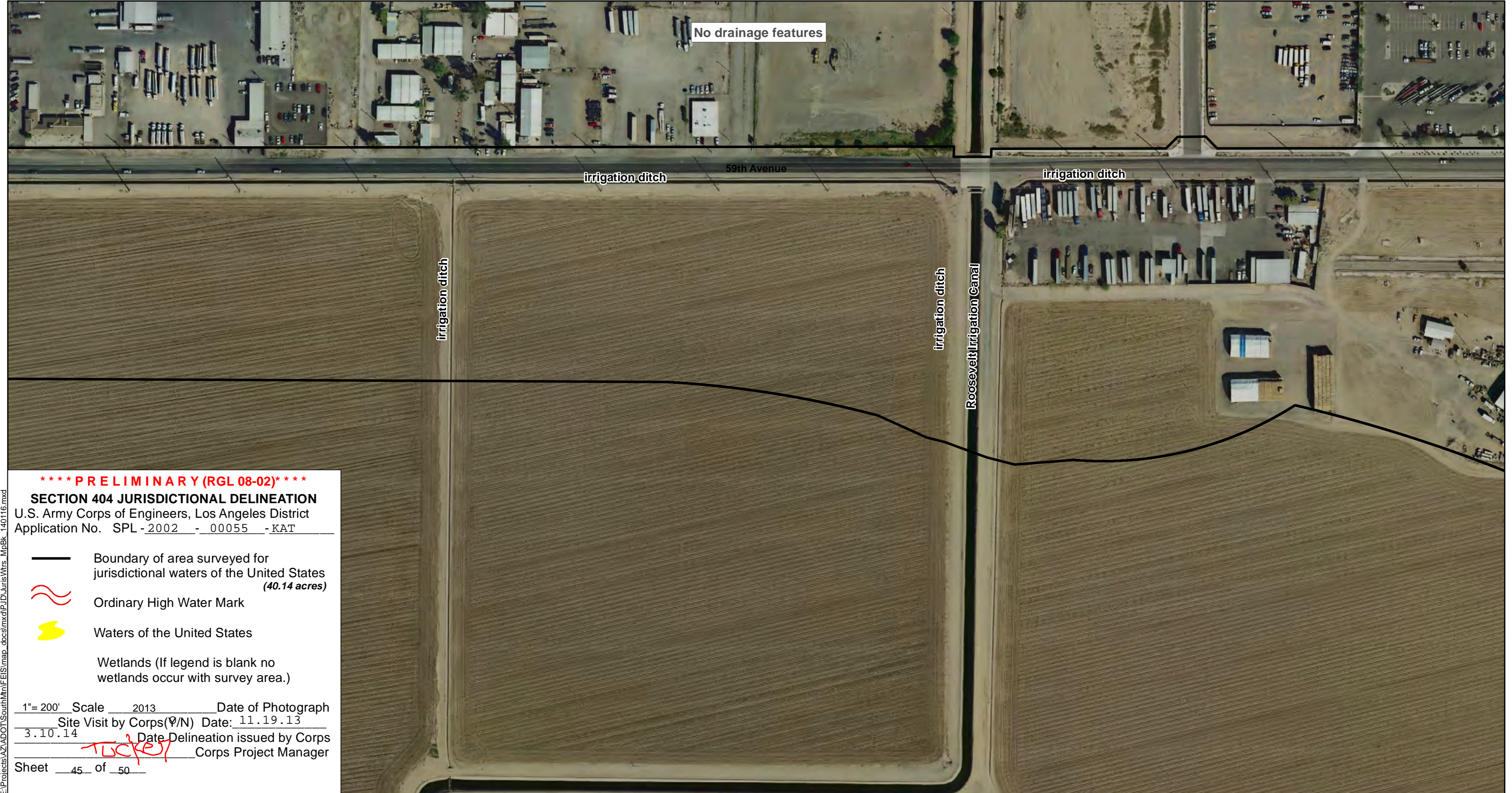
USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E; Sections 17 and 18



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor



****** PRELIMINARY (RGL 08-02) ******
SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT

Boundary of area surveyed for jurisdictional waters of the United States (40.14 acres)
 Ordinary High Water Mark
 Waters of the United States
 Wetlands (If legend is blank no wetlands occur with survey area.)

1" = 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
 Sheet 45 of 50

Aerial imagery: LandisCor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E; Sections 17 and 18



- Arrow indicates flow direction
- # Watercourse number
- XX' Wash width (feet)
- Ground photo number and direction

Aerial of area surveyed




202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

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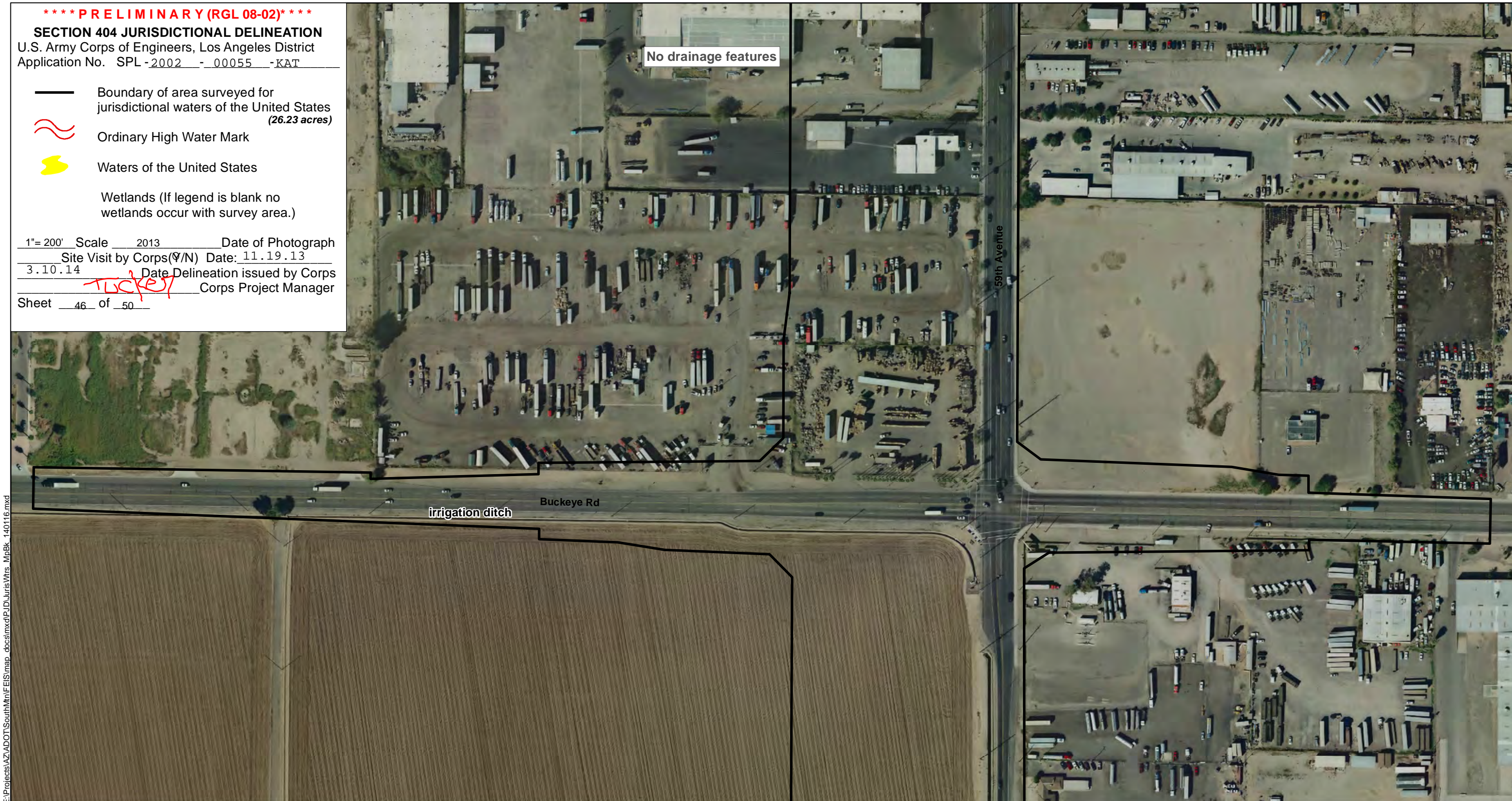
**** PRELIMINARY (RGL 08-02)****

SECTION 404 JURISDICTIONAL DELINEATION

U.S. Army Corps of Engineers, Los Angeles District
Application No. SPL-2002-00055-KAT

-  Boundary of area surveyed for jurisdictional waters of the United States (26.23 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

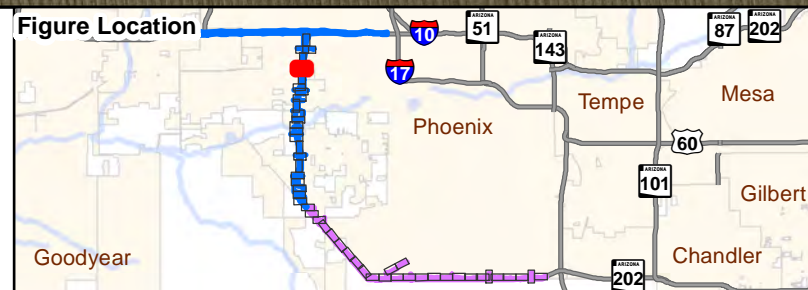
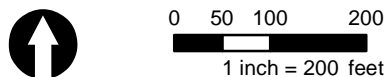
1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(✓/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corp Project Manager
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Aerial imagery: Landiscor July 2013
Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013

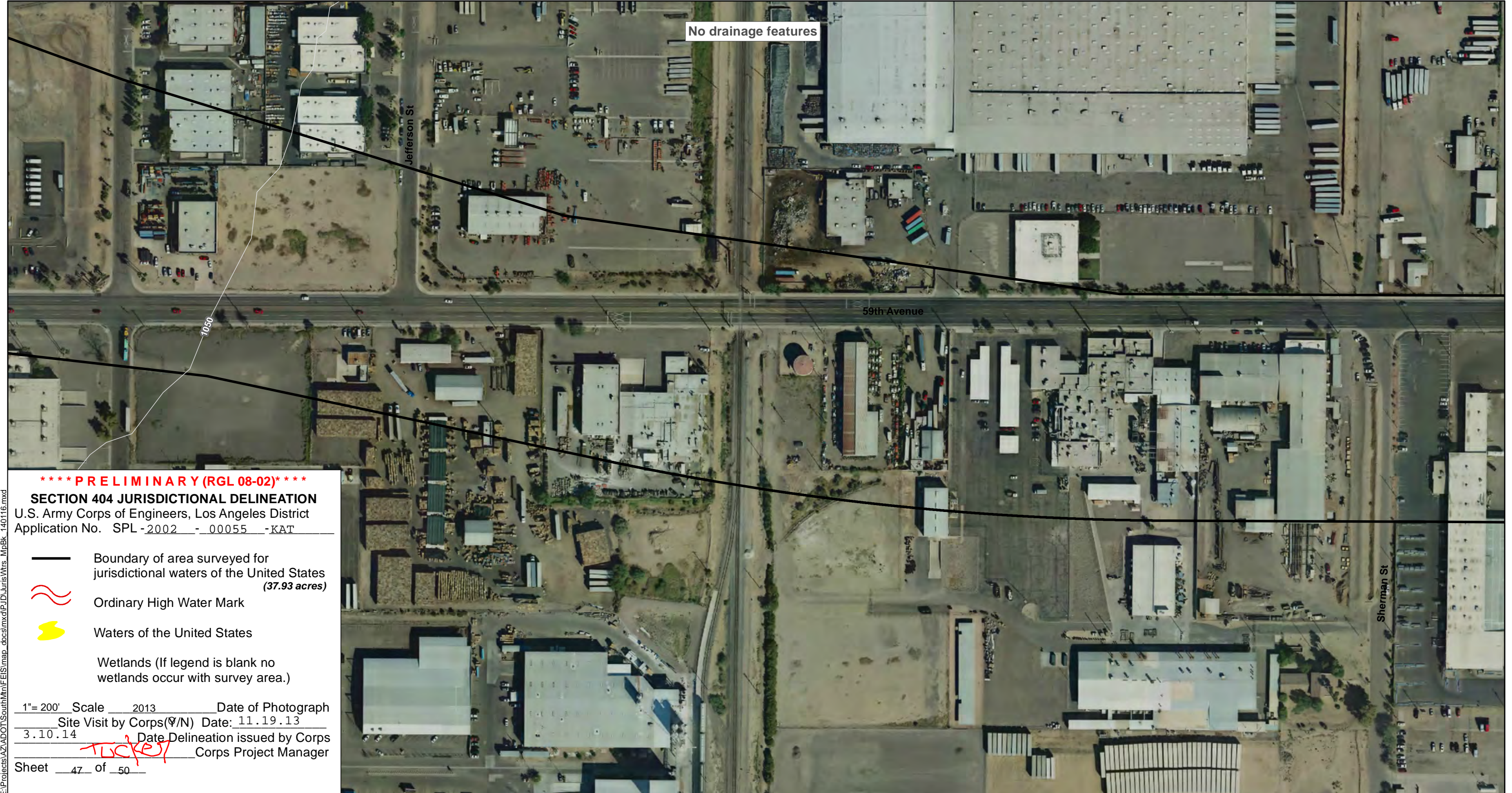
USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
Township 1N, Range 2E; Sections 7, 8, 17 and 18



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction

Aerial of area surveyed




202L MA 054 H5764 01L
NH-202-D(ADY)
South Mountain Transportation Corridor



No drainage features

**** PRELIMINARY (RGL 08-02) ****

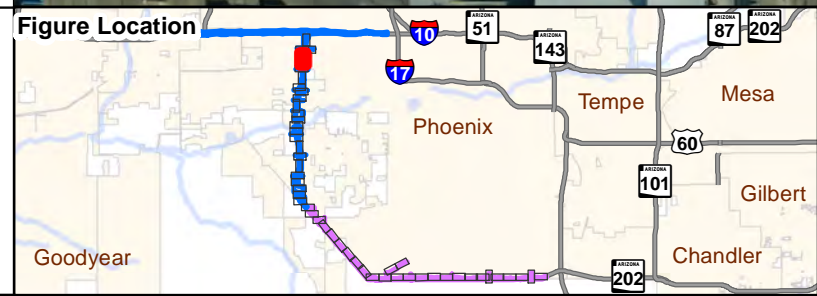
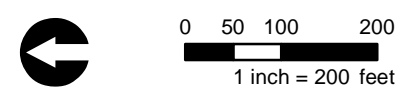
SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT





-  Boundary of area surveyed for jurisdictional waters of the United States (37.93 acres)
-  Ordinary High Water Mark
-  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

1" = 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corp Project Manager
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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E; Sections 7 and 8



-  Arrow indicates flow direction
-  Watercourse number
-  Wash width (feet)
-  Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor



No drainage features

Van Buren St

Adams St

61st Avenue

59th Avenue

57th Dr

*** PRELIMINARY (RGL 08-02) ***

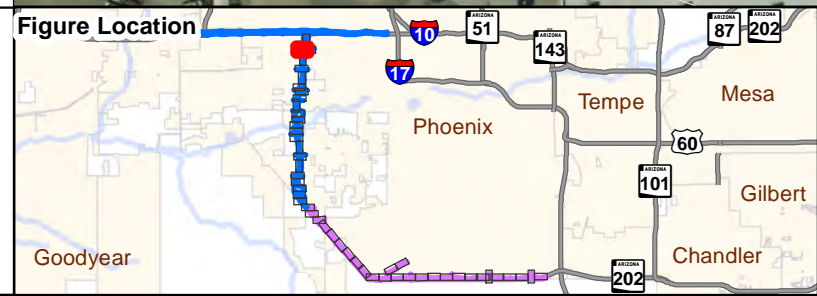
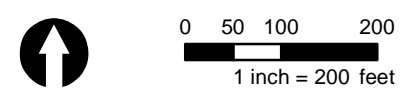
SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT

- Boundary of area surveyed for jurisdictional waters of the United States (32.99 acres)
- Ordinary High Water Mark
- Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

1" = 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corps Project Manager
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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E; Sections 5, 6, 7 and 8



- Arrow indicates flow direction
- # Watercourse number
- XX' Wash width (feet)
- # Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor



No drainage features

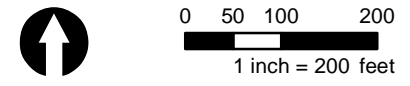
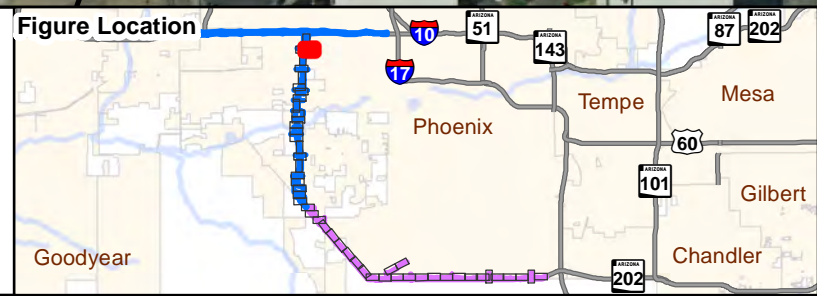
***** PRELIMINARY (RGL 08-02) *****
SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT

— Boundary of area surveyed for jurisdictional waters of the United States (3.55 acres)
 ~ Ordinary High Water Mark
 ☀ Waters of the United States

Wetlands (If legend is blank no wetlands occur with survey area.)

1" = 200' Scale 2013 Date of Photograph
 Site Visit by Corps (Y/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corp Project Manager
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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E; Sections 5, 6, 7 and 8



- Arrow indicates flow direction
- Watercourse number
- Wash width (feet)
- Ground photo number and direction

Aerial of area surveyed




202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor

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**** PRELIMINARY (RGL 08-02)****

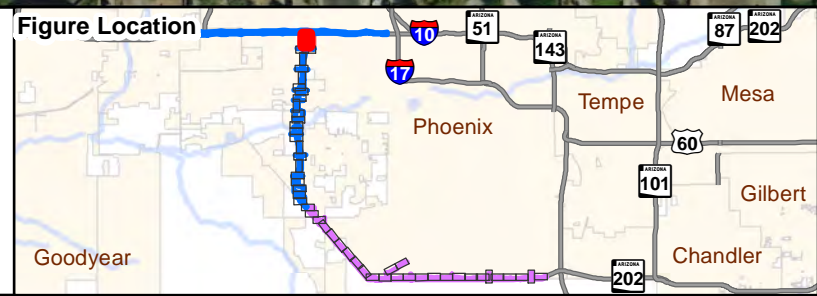
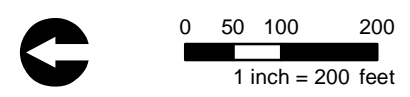
SECTION 404 JURISDICTIONAL DELINEATION
 U.S. Army Corps of Engineers, Los Angeles District
 Application No. SPL - 2002 - 00055 - KAT




-  Boundary of area surveyed for jurisdictional waters of the United States (74.36 acres)
 -  Ordinary High Water Mark
 -  Waters of the United States
- Wetlands (If legend is blank no wetlands occur with survey area.)

1"= 200' Scale 2013 Date of Photograph
 Site Visit by Corps(✓/N) Date: 11.19.13
 3.10.14 Date Delineation issued by Corps
 TUCKER Corp Project Manager
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Aerial imagery: Landiscor July 2013
 Prepared by: Kurt Watzek, HDR Engineering, Inc., September 2013
 USGS 7.5' Quadrangle boundary: Fowler, AZ (1972)
 Projection: NAD 1983 State Plane Arizona Central FIPS 0202 Feet
 Township 1N, Range 2E; Sections 5 and 6



-  Arrow indicates flow direction
-  #
XX' Watercourse number
Wash width (feet)
-  Ground photo number and direction

Aerial of area surveyed

202L MA 054 H5764 01L
 NH-202-D(ADY)
 South Mountain Transportation Corridor



Photo 1. Wash (W1) 1 facing north (upstream); 4-foot-long scale



Photo 2. Wash 1 (W1) facing south (downstream) toward Pecos Road; 4-foot-long scale



Photo 3. Wash 1 (W1) facing north (upstream); rip-rap lined channel near homes; 4-foot-long scale



Photo 4. Wash 1 (W1) facing south (downstream); 4-foot-long scale



Photo 5. Constructed channel 1 (C1) facing south (downstream) toward Pecos Road; OHWM at the break of slope; 4-foot-long scale



Photo 6. Constructed channel 1 (C1) facing north (upstream); OHWM at the break of slope; 4-foot-long scale



Photo 7. Constructed channel 2 (C2) along 32nd Street facing south (downstream) toward Pecos Road; provides stormwater drainage for development



Photo 8. Constructed channel 2 (C2) along 32nd Street facing north (upstream); provides stormwater drainage for development



Photo 9. Constructed channel 3 (C3) facing northwest (upstream); rip-rapped segment; 4-foot-long scale



Photo 10. Constructed channel 3 (C3) facing southeast (downstream); rip-rapped segment; 4-foot-long scale



Photo 11. Constructed channel 3 (C3) facing northwest (upstream); 4-foot-long scale



Photo 12. Constructed channel 3 (C3) facing south (downstream); 4-foot-long scale



Photo 13. Constructed channel 4 (C4) facing northwest (upstream); 4-foot-long scale



Photo 14. Constructed channel 4 (C4) facing southeast (downstream); 4-foot-long scale



Photo 15. Constructed channel 4 (C4) facing west (upstream); 4-foot-long scale



Photo 16. Constructed channel 4 (C4) facing east (downstream); 4-foot-long scale



Photo 17. Constructed channel 4 (C4) facing west (upstream); 4-foot-long scale



Photo 18. Constructed channel 4 (C4) facing east (downstream); 4-foot-long scale



Photo 19. Constructed channel 4 (C4) facing southeast (downstream) toward Pecos Road



Photo 20. Wash 2 (W2) facing west (upstream) near storm drain inlet; 4-foot-long scale



Photo 21. Wash 2 (W2) facing east (downstream); 4-foot-long scale



Photo 22. Wash 2 (W2) at culvert inlet



Photo 23. Wash 2 (W2) facing west (upstream); 4-foot-long scale



Photo 24. Wash 2 (W2) facing east (downstream); 4-foot-long scale



Photo 25. Wash 2 (W2) facing west (upstream); 4-foot-long scale.



Photo 26. Wash 2 (W2) facing east (downstream); 4-foot-long scale



Photo 27. Constructed channel 5 (C5) facing northwest (upstream); rip-rapped; 4-foot-long scale



Photo 28. Constructed channel 5 (C5) facing southeast (downstream); rip-rapped; 4-foot-long scale



Photo 29. Stormwater drainage channel (S1) for development; facing north (upstream)



Photo 30. Stormwater drainage channel (S1) outlet; facing south (downstream)



Photo 31. Stormwater drainage channel (S1) facing west (upstream); 4-foot-long scale



Photo 32. Stormwater drainage channel (S1) facing east (downstream); 4-foot-long scale



Photo 33. Wash 3 (W3) facing north (upstream); OHWM (debris) present through grass area; 4-foot-long scale



Photo 34. Wash 3 (W3) facing south (downstream)



Photo 35. Wash 3 (W3) facing north (upstream); 4-foot-long scale near middle of frame



Photo 36. Wash 3 (W3) facing south (downstream) to Pecos Road; 4-foot-long scale near culvert



Photo 37. Wash 4 (W4) facing north (upstream); 4-foot-long scale



Photo 38. Wash 4 (W4) facing south (downstream); 4-foot-long scale



Photo 39. Wash 5 (W5) facing north (upstream); 4-foot-long scale



Photo 40. Wash 5 (W5) facing south (downstream); 4-foot-long scale



Photo 41. Wash 5 (W5) facing north (upstream); 4-foot-long scale



Photo 42. Wash 5 (W5) facing south (downstream); 4-foot-long scale



Photo 43. Wash 5 (W5) facing northwest (upstream); dirt trail becomes channel; 4-foot-long scale



Photo 44. Wash 5 (W5) facing southeast (downstream); channel continues to the right of photo; 4-foot-long scale



Photo 45. Detention basin (DB) near inlet facing south (downstream); 4-foot-long scale



Photo 46. Detention basin (DB) near outlet facing northwest (upstream); no channel or OHWM to outlet



Photo 47. Detention basin (DB) near outlet facing south (downstream) to Pecos Road; no channel to outlet



Photo 48. Constructed channel 6 (C6) facing north (upstream); 4-foot-long scale



Photo 49. Constructed channel 6 (C6) facing south (downstream); 4-foot-long scale



Photo 50. Constructed channel 6 (C6) facing north (upstream); 4-foot-long scale



Photo 51. Constructed channel 6 (C6) facing south (downstream) to Pecos Road; 4-foot-long scale



Photo 52. Truncated wash (T1) east of 17th Avenue facing northeast (upstream); 4-foot-long scale



Photo 53. Truncated wash (T1) east of 17th Avenue facing southwest (downstream); 4-foot-long scale



Photo 54. Truncated wash (T1) east of 17th Avenue facing northeast (upstream); 4-foot-long scale



Photo 55. Truncated wash (T1) east of 17th Avenue facing southwest (downstream) to Pecos Road; 4-foot-long scale



Photo 56. Truncated wash (T2) west of 17th Avenue facing northeast (upstream); 4-foot-long scale



Photo 57. Truncated wash (T2) west of 17th Avenue facing southwest (downstream); 4-foot-long scale



Photo 58. Truncated wash (T2) west of 17th Avenue facing northeast (upstream); 4-foot-long scale



Photo 59. Truncated wash (T2) west of 17th Avenue facing southwest (downstream); 4-foot-long scale



Photo 60. Wash 6 (W6) facing northeast (upstream); 4-foot-long scale



Photo 61. Wash 6 (W6) facing southwest (downstream); 4-foot-long scale



Photo 62. Wash 6 (W6) facing northeast (upstream); 4-foot-long scale



Photo 63. Wash 6 (W6) facing southwest (downstream); 4-foot-long scale



Photo 64. Wash 7 (W7) facing north (upstream); 4-foot-long scale



Photo 65 Wash 7 (W7) facing south (downstream); 4-foot-long scale



Photo 66. Wash 7 (W7) facing north (upstream); 4-foot-long scale



Photo 67. Wash 7 (W7) facing south (downstream) to Pecos Road; 4-foot-long scale



Photo 68. Wash 8 (W8) near Pecos Road facing north (upstream); 4-foot-long scale



Photo 69. Wash 8 (W8) near Pecos Road facing south (downstream); 4-foot-long scale



Photo 70. Wash 8 (W8) near Pecos Road facing north (upstream); 4-foot-long scale



Photo 71. Wash 8 (W8) near Pecos Road facing south (downstream); 4-foot-long scale



Photo 72. Wash 8 (W8) near Chandler Blvd. facing north (upstream); 4-foot-long scale



Photo 73 Wash 8 (W8) near Chandler Blvd. facing south (downstream); 4-foot-long scale



Photo 74. Wash 8 (W8) near Chandler Blvd. facing north (upstream); 4-foot-long scale



Photo 75. Wash 8 (W8) near Chandler Blvd. facing south (downstream); 4-foot-long scale



Photo 76. Wash 9 (W9) east tributary facing north (upstream); 4-foot-long scale



Photo 77 Wash 9 (W9) east tributary facing south (downstream); 4-foot-long scale



Photo 78. Wash 9 (W9) west tributary facing north (upstream); 4-foot-long scale



Photo 79. Wash 9 (W9) west tributary facing south (downstream); 4-foot-long scale



Photo 80. Wash 9 (W9) facing north (upstream); 4-foot-long scale



Photo 81. Wash 9 (W9) facing south (downstream); 4-foot-long scale



Photo 82. Wash 10 (W10) facing north (upstream); 4-foot-long scale



Photo 83. Wash 10 (W10) facing south (downstream); 4-foot-long scale



Photo 84. Wash 10 (W10) facing north (upstream); 4-foot-long scale



Photo 85. Wash 10 (W10) facing south (downstream); 4-foot-long scale



Photo 86. Wash 11 (W11) facing north (upstream); 4-foot-long scale



Photo 87. Wash 11 (W11) facing south (downstream); 4-foot-long scale



Photo 88. Wash 11 (W11) facing north (upstream); 4-foot-long scale



Photo 89. Wash 11 (W11) facing south (downstream); 4-foot-long scale



Photo 90. Wash 12 (W12) facing north (upstream); 4-foot-long scale



Photo 91. Wash 12 (W12) facing south (downstream); 4-foot-long scale



Photo 92. Wash 12 (W12) facing north (upstream); 4-foot-long scale



Photo 93. Wash 12 (W12) facing south (downstream); 4-foot-long scale



Photo 94. Wash 13 (W13) facing north (upstream); OHWM not visible but flow path could be seen in gravel where overflow from larger wash flows over the gravel road; 4-foot-long scale



Photo 95. Wash 13 (W13) facing south (downstream); OHWM not visible but flow path could be seen in gravel; 4-foot-long scale



Photo 96. Wash 13 (W13) (in roadside ditch) facing north (upstream); 4-foot-long scale



Photo 97. Wash 13 (W13) (in roadside ditch) facing south (downstream); 4-foot-long scale



Photo 98. Wash 13 (W13) (in roadside ditch) facing north (upstream); 4-foot-long scale



Photo 99. Wash 13 (W13) (in roadside ditch) facing south (downstream); 4-foot-long scale



Photo 100. Wash 13 (W13) (in roadside ditch) facing north (upstream); 4-foot-long scale



Photo 101. Wash 13 (W13) (in roadside ditch) facing south (downstream); 4-foot-long scale



Photo 102. Wash 13 (W13) outlet under Pecos Road facing south (downstream); 4-foot-long scale near middle of frame



Photo 103. Wash 14 (W14) facing southwest (downstream); 4-foot-long scale



Photo 104. Truncated portion of Wash 14 (T14) (Wash 14 starts further downstream); flows blocked by road; 4-foot-long scale



Photo 105. Truncated portion of Wash 14 (T14) (Wash 14 starts further downstream); flows blocked by road; 4-foot-long scale



Photo 106. Wash 15 (W15) facing northeast (upstream); 4-foot-long scale



Photo 107. Constructed channel 7 (C7) facing north (upstream); 4-foot-long scale



Photo 108. Constructed channel 7 (C7) facing south (downstream); 4-foot-long scale



Photo 109. Constructed channel 7 (C7) facing south (downstream) at outlet to detention basin; 4-foot-long scale



Photo 110. Stormwater feature (SF) conveying drainage from housing development facing north (upstream); 4-foot-long scale



Photo 111. Stormwater feature (SF) conveying drainage from housing development facing south (downstream); water ponds in this location; 4-foot-long scale



Photo 112. Wash 16 (W16) facing west (downstream) at point where roadway runoff from Chandler Blvd. enters wash; 4-foot-long scale



Photo 113. Wash 16 (W16) facing east (upstream); 4-foot-long scale



Photo 114. Wash 16 (W16) facing west (downstream); 4-foot-long scale



Photo 115. Wash 16 (W16) facing southwest (downstream); 4-foot-long scale



Photo 116. Wash 17 (W17) east tributary facing north (upstream); 4-foot-long scale



Photo 117. Wash 17 (W17) east tributary facing south (downstream); 4-foot-long scale



Photo 118. Wash 17 (W17) west tributary facing north (upstream); 4-foot-long scale



Photo 119. Wash 17 (W17) west tributary facing southwest (downstream); 4-foot-long scale



Photo 120. Wash 17 (W17) facing northeast (upstream); 4-foot-long scale



Photo 121. Wash 17 (W17) facing southwest (downstream); 4-foot-long scale



Photo 122. Wash 18 (W18) facing north (upstream); 4-foot-long scale



Photo 123. Wash 18 (W18) facing south (downstream); 4-foot-long scale



Photo 124. Wash 18 (W18) facing north (upstream); 4-foot-long scale



Photo 125. Wash 18 (W18) facing south (downstream); 4-foot-long scale



Photo 126. Wash 19 (W19) facing northeast (upstream); 4-foot-long scale



Photo 127. Wash 19 (W19) facing southwest (downstream); 4-foot-long scale



Photo 128. Wash 19 (W19) facing northeast (upstream); 4-foot-long scale



Photo 129. Wash 19 (W19) facing southwest (downstream); 4-foot-long scale



Photo 130. Wash 20 (W20) facing northeast (upstream); 4-foot-long scale



Photo 131. Wash 20 (W20) facing southwest (downstream); 4-foot-long scale



Photo 132. Wash 20 (W20) facing north (upstream); 4-foot-long scale



Photo 133. Wash 20 (W20) facing south (downstream); 4-foot-long scale



Photo 134. Wash 21 (W21) facing southeast (upstream); 4-foot-long scale



Photo 135. Wash 21 (W21) facing northwest (downstream); near start of OHWM; 4-foot-long scale



Photo 136. Wash 21 (W21) facing northeast (upstream); 4-foot-long scale



Photo 137. Wash 21 (W21) facing southwest (downstream); 4-foot-long scale



Photo 138. Wash 22 (W22) facing east (upstream); 4-foot-long scale



Photo 139. Wash 22 (W22) facing west (downstream); 4-foot-long scale



Photo 140. Wash 22 (W22) facing southwest (downstream); channel braids into two; 4-foot-long scale



Photo 141. Wash 22 (W22), left channel facing northeast (upstream); 4-foot-long scale



Photo 142. Wash 22 (W22), left channel facing southwest (downstream); 4-foot-long scale



Photo 143. Wash 22 (W22), right channel facing northeast (upstream); 4-foot-long scale



Photo 144. Wash 22 (W22), right channel facing southwest (downstream); 4-foot-long scale



Photo 145. Wash 23 (W23) facing north (upstream); 4-foot-long scale



Photo 146. Wash 23 (W23) facing south (downstream); 4-foot-long scale



Photo 147. Wash 23 (W23) facing northeast (upstream); 4-foot-long scale



Photo 148. Wash 23 (W23) facing southeast (downstream); 4-foot-long scale



Photo 149. Wash 24 (W24) facing northeast (upstream); 4-foot-long scale



Photo 150. Wash 24 (W24) facing southeast (downstream); 4-foot-long scale



Photo 151. Wash 25 (W25) facing east (upstream); less than 3-foot-wide; 4-foot-long scale



Photo 152. Wash 25 (W25) facing east (upstream) near start of OHWM; 4-foot-long scale



Photo 153. Wash 25 (W25) facing west (downstream); 4-foot-long scale



Photo 154. Wash 25 (W25) facing northeast (upstream); 4-foot-long scale



Photo 155. Wash 25 (W25) facing southwest (downstream); 4-foot-long scale



Photo 156. Wash 26 (W26) facing north (upstream); 4-foot-long scale



Photo 157. Wash 26 (W26) facing southwest (downstream); 4-foot-long scale



Photo 158. Wash 26 (W26) facing north (upstream); 4-foot-long scale



Photo 159. Wash 26 (W26) facing south (downstream); 4-foot-long scale



Photo 160. Wash 27 (W27) facing northwest (upstream); 4-foot-long scale



Photo 161. Wash 27 (W27) facing southeast (downstream); 4-foot-long scale



Photo 162. Wash 28 (W28) facing northeast (upstream); 4-foot-long scale



Photo 163. Wash 28 (W28) facing southwest (downstream); 4-foot-long scale



Photo 164. Wash 28 (W28) facing northeast (upstream); 4-foot-long scale



Photo 165. Wash 28 (W28) facing southwest (downstream); 4-foot-long scale



Photo 166. Wash 29 (W29) facing north (upstream); 4-foot-long scale



Photo 167. Wash 29 (W29) facing southwest (downstream); 4-foot-long scale



Photo 168. Wash 29 (W29) facing east (upstream); 4-foot-long scale



Photo 169. Wash 29 (W29) facing west (downstream); 4-foot-long scale



Photo 170. Side drainage of Wash 30 (W30), facing east (upstream); 4-foot-long scale



Photo 171. Side drainage of Wash 30 (W30), facing west (downstream); 4-foot-long scale



Photo 172. Wash 30 (W30) facing east (upstream); 4-foot-long scale



Photo 173. Wash 30 (W30) facing west (downstream); 4-foot-long scale



Photo 174. Wash 30 (W30) facing northeast (upstream); 4-foot-long scale



Photo 175. Wash 30 (W30) facing southwest (downstream); 4-foot-long scale



Photo 176. Wash 31 (W31) facing east (upstream); 4-foot-long scale



Photo 177. Wash 31 (W31) left channel facing southwest (downstream); 4-foot-long scale



Photo 178. Wash 31 (W31) left channel facing northeast (upstream); 4-foot-long scale



Photo 179. Wash 31 (W31) left channel facing southwest (downstream); 4-foot-long scale



Photo 180. Wash 31 (W31) right channel facing east (upstream); 4-foot-long scale



Photo 181. Wash 31 (W31) right channel facing west (downstream); 4-foot-long scale



Photo 182. Wash 32 (W32) facing southwest (downstream); 4-foot-long scale



Photo 183. Wash 32 (W32) facing northeast (upstream); 4-foot-long scale



Photo 184. Wash 32 (W32) facing west (downstream); no channel, water flows across road



Photo 185. Wash 33 (W33) facing northeast (upstream) from outside survey boundary; 4-foot-long scale



Photo 186. Wash 33 (W33) facing west (downstream) from outside survey boundary; no channel, water flows along edge of road



Photo 187. Wash 34 (W34) facing northeast (upstream); freshly graded road shoulder; 4-foot-long scale



Photo 188. Wash 34 (W34) facing south (downstream); no channel; freshly graded road shoulder; water flows along edge of road



Photo 189. Wash 35 (W35) facing northeast (upstream) at edge of road; 4-foot-long scale



Photo 190. Wash 35 (W35) facing southwest (downstream) at edge of road; 4-foot-long scale



Photo 191. Wash 35 (W35) facing east (upstream) from outside survey boundary; 4-foot-long scale



Photo 192. Wash 36 (W36) facing southeast (upstream) from outside survey boundary; 4-foot-long scale



Photo 193. Wash 36 (W36) facing northwest (downstream) from outside survey boundary; 4-foot-long scale



Photo 194. Wash 37 (W37) facing southeast (upstream) from outside survey boundary; 4-foot-long scale



Photo 195. Wash 38 (W38) facing northeast (upstream); 4-foot-long scale



Photo 196. Wash 38 (W38) facing southwest (downstream); 4-foot-long scale



Photo 197. Wash 38 (W38) facing northeast (upstream) from outside survey boundary; 4-foot-long scale



Photo 198. Wash 39 (W39) facing northeast (upstream); 4-foot-long scale



Photo 199. Wash 39 (W39) facing southwest (downstream); 4-foot-long scale



Photo 200. Wash 39 (W39) facing northeast (upstream); 4-foot-long scale



Photo 201. Wash 39 (W39) facing southwest (downstream); 4-foot-long scale



Photo 202. Wash 40 (W40) facing east (upstream); 4-foot-long scale



Photo 203. Wash 40 (W40) facing west (downstream); 4-foot-long scale



Photo 204. Wash 40 (W40) facing northeast (upstream); 4-foot-long scale



Photo 205. Wash 40 (W40) facing southwest (downstream); water crosses road and flows along road ditch; 4-foot-long scale



Photo 206. Wash 40 (W40) facing east (upstream); water flows along road ditch; 4-foot-long scale



Photo 207. Wash 40 (W40) facing west (downstream); water flows along road ditch; 4-foot-long scale



Photo 208. Wash 41 (W41) facing east (upstream); channel in area of bedrock; 4-foot-long scale



Photo 209. Wash 41 (W41) facing west (downstream); channel in area of bedrock; 4-foot-long scale



Photo 210. Wash 41 (W41) facing east (upstream); 4-foot-long scale



Photo 211. Wash 41 (W41) facing west (downstream); 4-foot-long scale



Photo 212. Constructed ditch (CD) facing north (upstream); 4-foot-long scale



Photo 213. Constructed ditch (CD) facing south (downstream); 4-foot-long scale



Photo 214. Constructed ditch (CD) facing east (upstream); 4-foot-long scale



Photo 215. Constructed ditch (CD) facing west (downstream); 4-foot-long scale



Photo 216. Constructed ditch (CD) facing northeast (upstream); 4-foot-long scale



Photo 217. Constructed ditch (CD) facing northwest (downstream); 4-foot-long scale



Photo 218. Steep hillside drainage (HD) showing exposed bedrock facing east (upstream); 4-foot-long scale



Photo 219. Bottom of steep hillside drainage (HD) facing west (downstream); no channel beyond this point; 4-foot-long scale



Photo 220. Laveen Conveyance Channel (LC) facing east (upstream); 4-foot-long scale



Photo 221. Laveen Conveyance Channel (LC) facing west (downstream); 4-foot-long scale



Photo 222. Irrigation tailwater ditch (TD) facing south (upstream); outside survey boundary; 4-foot-long scale



Photo 223. Irrigation tailwater ditch (TD) facing north (downstream); outside survey boundary; 4-foot-long scale



Photo 224. Former tailwater discharge channel (FTD) in Salt River floodplain, facing southeast (upstream); 4-foot-long scale



Photo 225. Former tailwater discharge channel (FTD) in Salt River floodplain, facing southwest (downstream); 4-foot-long scale



Photo 226. Mine pit in the Salt River channel (SRMP) facing north bank of Salt River; flow channel is through the pit; dark brown vegetation is carelessweed (*amaranthus palmeri*)



Photo 227. Mine pit in the Salt River channel (SRMP) facing east; flow channel is through the pit; dark brown vegetation is carelessweed (*amaranthus palmeri*)



Photo 228. Mine pit in the Salt River channel (SRMP) facing northwest toward north bank of Salt River; flow channel is through the pit; vegetation is predominantly carelessweed (*amaranthus palmeri*)



Photo 229. South bank of the mine pit in the Salt River channel (SRMP) facing east



Photo 230. Old low flow channel (OLF) in Salt River facing southwest; 4-foot-long scale



Photo 231. Old low flow channel (OLF) in Salt River facing east; 4-foot-long scale



Photo 232. Remnant channel (RC) in Salt River facing southwest



Photo 233. Remnant channel (RC) in Salt River facing east



Photo 234. Low flood terrace (LFT) in Salt River facing southwest



Photo 235. Low flood terrace (LFT) in Salt River facing northeast

End of Photos