

ARIZONA DEPARTMENT OF TRANSPORTATION



ADVERTISEMENT FOR BIDS SPECIAL PROVISIONS BIDDERS DOCUMENTS

SUBMITTED BY:

(Company or Firm Name)

(Mailing Address)

(City)

(State)

(Zip Code)

(Street Address - If Different From Above)

(City)

(State)

(Zip Code)

Arizona Commercial License No. _____

License Classifications(s) _____

TRACS/Proj. No.:

888 MA 000 H880901C CM-888-A(225)T
MARICOPA COUNTY
(Various Locations)

Contracts and Specifications Section
1651 West Jackson, Room 121F
Phoenix, Arizona 85007-3217

NOTICE

TO ALL BIDDERS

Read carefully the complete ADVERTISEMENT FOR BIDS and SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS in the Specifications. Important information is given in both documents which affects the acceptance of your bid proposal. Failure to comply may result in rejection of your bid.

Bids are to be prepared with black ink or typed and any alterations, initials or signatures must be in black ink.

Unit prices must be shown for each item of work in the Bidding Schedule, as well as, the extended bid amount. This applies to all items, including lump sum items.

If goals are established for participation by Disadvantaged Business Enterprises (DBE's), please read carefully the portion of the special provisions which addressed this subject. It is advisable to contact ADOT's Business Engagement and Compliance Office for assistance, particularly when bidding infrequently or for the first time.

It is **NOT** advisable to mail bid proposals. Proposals received in Contracts and Specifications Services, 1651 W. Jackson, Room 121F, Phoenix, Arizona 85007, after the designated time for opening will not be accepted regardless of the reason for not being received on time.

IMPORTANT

PRIOR TO SUBMITTING YOUR BID, PRINT
COMPANY NAME, ADDRESS, CITY, STATE, AND ZIP
IN THE SPACE PROVIDED ON THE COVER OF
YOUR PROPOSAL. PLEASE ENSURE THAT THIS
DATA IS THE SAME AS SHOWN ON THE BIDDING
DOCUMENTS.

ARIZONA DEPARTMENT OF TRANSPORTATION

ADVERTISEMENT FOR BIDS

BID OPENING: Friday, July 1, 2016, at 11:00 A.M. (M.S.T.)

TRACS No.: 888 MA 000 H8809 01C
Project No.: CM-888-A(225)T
Termini: Maricopa County
Location: Various Locations

Route No.	Milepost	District	Item No.
I-10, I-17, US 60, SR 51	n/a	Central	41315

The amount programmed for this contract is **\$2,200,000.00**. The location and description of the proposed work and the representative items and approximate quantities are as follows:

The proposed work is located in Maricopa County within the Phoenix Metropolitan Area at various sites along the urban I-10, I-17, US 60, and SR 51 freeways. The project consists of removing existing Passive Acoustic Detectors (PADs) and replacing them with loop detectors. The work includes installation of cut-in loop detectors, underground conduit, loop detector wiring, and miscellaneous work.

REPRESENTATIVE ITEMS	UNIT	QUANTITY
Elec. Conduit (Trench & Dir. Drill) (Var. Sizes & Config.)	L.Ft.	1,300
No. 7 FMS Pull Boxes	Each	5
Conductor	L.Ft.	270,000
Loop Detector (6' X 6')	Each	740
Detector Card	Each	370

The time allowed for the completion of the work included in this project will be **200 Working Days**.

The Arizona Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252.42 U.S.C. §§ 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, Disadvantaged Business Enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Project plans, special provisions, and proposal pamphlets may be purchased in paper format from Contracts and Specifications Section, 1651 W. Jackson, Room 121F, Phoenix, AZ 85007-3217, (602) 712-7221. The cost is **\$19**, payable at time of order by cash, check, or money order. Please indicate whether a bid proposal package or a subcontractor/supplier set is desired. An additional fee of **\$5** will be charged for each set of Special Provisions requested which is not accompanied by the purchase of a related set of project plans. Checks should be made payable to the Arizona Department of Transportation. We cannot guarantee mail delivery. No refund will be made for plans or specifications returned.

Contract documents and other project documents are available as electronic files, at no charge, from the Contracts and Specifications website, pursuant to Subsection 102.02 of the specifications. The Contracts and Specifications Current Advertisements website is located at: <http://www.azdot.gov/business/ContractsandSpecifications/CurrentAdvertisements>.

Documents should be available within one week following the advertisement for bids.

This project is eligible for electronic bidding.

To submit a valid bid, the bidder must (1) have prequalification from the Department as necessary for the project, and (2) be included on the project Plansholder List as a Prime. The Application for Contractor Prequalification shall be filed at least 15 calendar days prior to the bid opening date. The Application may be obtained from the Contracts and Specifications website.

This contract is subject to the provisions of Arizona Revised Statutes Section 42-5075 -- Prime contracting classification; exemptions; definitions.

No award will be made to any contractor who is not a duly licensed contractor in accordance with Arizona Revised Statutes 32-1101 through 32-1170.03.

All labor employed on this project shall be paid in accordance with the minimum wage rates shown in the General Wage Decision. These rates have been determined in accordance with the requirements of the law and issued by the Secretary of Labor for this project. The wage scale is on file in Contracts and Specifications Section and copies may be obtained at all reasonable times.

A proposal guaranty in the form of either a certified or a cashier's check made payable to the State Treasurer of Arizona for not less than ten percent of the amount of the bid or in the form of a surety (bid) bond for ten percent of the amount of the bid shall accompany the proposal.

Surety (bid) bonds will be accepted only on the form provided by the Department and only from corporate sureties authorized to do business in Arizona.

Proposal pamphlets in paper format shall be submitted only in the envelope provided by the Department to:

Arizona Department of Transportation
Infrastructure Delivery and Operations Division
Contracts and Specifications Section
1651 West Jackson Street, Room 121F
Phoenix, Arizona 85007-3217

Sealed bids will be received until the hour indicated and then publicly opened and read. No bids will be received after the time specified.

Engineering Specialist:	Thomas Mowery-Racz	(602) 712-6741
Construction Supervisor:	Girgis Girgis	(602) 712-6813

STEVE BEASLEY,
Engineer-Manager
Contracts & Specifications Section

888 MA 000 H8809 01C
CM-888-A(225)T
Project Advertised On: May 24, 2016

SPECIAL PROVISIONS

FOR

ARIZONA PROJECT

888 MA 000 H8809 01C

CM-888-A(225)T

MARICOPA COUNTY

VARIOUS LOCATIONS

PASSIVE ACOUSTIC DETECTORS REPLACEMENT PROJECT

PROPOSED WORK:

The proposed work is within Maricopa County in the Phoenix Metropolitan Area, located at various sites along the urban I-10, I-17, US 60, and SR 51 freeways. The project consists of removing existing Passive Acoustic Detectors (PADs) and replacing them with loop detectors. The work includes installation of cut-in loop detectors, underground conduit, loop detector wiring, and miscellaneous work.

PROFESSIONAL ENGINEER SEALS:

This book of specifications and related contract documents represents the combined efforts of the following firms Ritoch-Powell & Associates and United Civil Group:

A principal of each firm has affixed his/her seal below which attests that those portions of these specifications related to the drawings prepared by each firm were completed under his/her direction.

Ritoch-Powell & Associates (Traffic Control Plans & Specifications)



EXPIRES 03/31/2019

United Civil Group (Passive Acoustic Detectors Replacement Plans & Specifications)



EXPIRES 12/31/2018

(SPC00FA, 02/22/16)

SPECIFICATIONS:

The work embraced herein shall be performed in accordance with the requirements of the following separate documents:

Arizona Department of Transportation, Standard Specifications for Road and Bridge Construction, Edition of 2008 (Pub. # 31-066),

Arizona Department of Transportation, Intermodal Transportation Division, Standard Drawings, listed in the project plans, and available on the Department's website,

Arizona Department of Transportation, Traffic Group, Manual of Approved Signs, available on the Department's website,

Arizona Department of Transportation, Traffic Group, Traffic Control Design Guidelines, Edition of 2010, available on the Department's website,

Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 edition and Arizona Supplement to the 2009 edition, dated January, 2012,

The Proposal Pamphlet and Non-bid Pamphlet which include the following documents:

These Special Provisions,

List of Subcontractors, Suppliers, Service Providers and Manufacturers Bidding ADOT Contracts, dated 9/23/10,

Required Contract Provisions Federal-Aid Construction Contracts (Form FHWA 1273 Revised May 1, 2012),

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246), July 1, 1978, Revised November 3, 1980 and Revised April 15, 1981,

Title VI / Non-Discrimination Assurances,
Appendix A
Appendix E,

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246), July 1, 1978, Revised November 3, 1980 and Revised April 15, 1981,

Equal Employment Opportunity Compliance Reports, Federal-Aid Projects, February 1, 1977, Revised July 1, 1978, Revised November 3, 1980, Revised April 15, 1981, Revised September 7, 1983, Revised October 15, 1998, Revised January 1, 2005, Revised August 1, 2005, and Revised March 1, 2015,

Wage Determination Decision,

Bidding Schedule,

Included in the Proposal Pamphlet only:

Proposal,

Surety (Bid) Bond, 12-1303,

Certification With Regard to the Performance of Previous Contracts or Subcontracts Subject to the Equal Opportunity Clause and the Filing of Required Reports, Federal Aid Projects, April, 1969, Rev. July, 2003,

Certification With Respect to the Receipt of Addenda,

BID SUBMISSION:

In submitting a bid, the holder of a Bid Proposal Pamphlet shall completely execute the following documents:

Proposal,

Bidding Schedule,

Surety (Bid) Bond, 12-1303,

Certification With Regard to the Performance of Previous Contracts or Subcontracts Subject to the Equal Opportunity Clause and the Filing of Required Reports, Federal Aid Projects, April, 1969, Rev. July, 2003, and

Certification With Respect to the Receipt of Addenda.

PROPOSAL GUARANTY:

Each bidder is advised to satisfy itself as to the character and the amount of the proposal guaranty required in the Advertisement for Bids.

CONTRACT DOCUMENTS:

The bidder to whom an award is made will be required to execute a Performance Bond and a Payment Bond, each in 100 percent of the amount of the bid, an Insurance Certificate and the Contract Agreement.

A copy of these documents is not included in the Proposal Pamphlet which is furnished to prospective bidders; however, each bidder shall satisfy itself as to the requirements of each document.

The documents, approved by the Department of Transportation, Highways Division, are identified as follows:

Statutory Performance Bond, 12-1301, September, 1992

Statutory Payment Bond, 12-1302, September, 1992

Contract Agreement, 12-0912, August, 2000

Certificate of Insurance, 12-0100, June, 1998

A copy of each document may be obtained by making a request to Contracts and Specifications Services.

COPIES OF PROJECT DOCUMENTS:

Distribution of a limited number of plans and Special Provisions will be made to the successful low bidder, at no charge, following confirmation of bid prices and DBE submittal, if applicable. The distribution will be made on the following basis:

Contract Size (Dollars)	Full Size Plans	1/2 Size Plans	Bound Bid Books	Unbound Bid Books
\$0 - \$20,000,000	2	10	5	10
over \$20,000,000	5	20	5	20

These plans and Special Provisions will be set aside and designated for use by the low bidder along with an equal number held in reserve for the responsible District Office.

Any additional plans or Special Provisions that the low bidder may require beyond the above distribution will be available at the invoice cost of printing by ordering through the Engineer.

MATERIAL AND SITE INFORMATION:

Projects requiring materials, excavation, or site investigation may have additional information available concerning the material investigations of the project site and adjacent projects. This information, when available and applicable, may be examined in the Office of the Bridge Group-Geotechnical Section, located at 1221 N. 21st Avenue, Phoenix, Arizona 85009-3740. The contractor may contact Bridge Group at (602) 712-7481 to schedule an appointment to examine the information. This information will not be attached to the contract documents. Copies of available information may be purchased by prospective bidders.

(EPRISENGL, 03/15/11)

DISADVANTAGED BUSINESS ENTERPRISES:

1.0 Policy:

The Arizona Department of Transportation (hereinafter the Department) has established a Disadvantaged Business Enterprise (DBE) program in accordance with the regulations of the U.S. Department of Transportation (USDOT), 49 CFR Part 26. The Department has received Federal financial assistance from the U.S. Department of Transportation and as a condition of receiving this assistance, the Department has signed an assurance that it will comply with 49 CFR Part 26.

It is the policy of the Department to ensure that DBEs, as defined in Part 26, have an equal opportunity to receive and participate in USDOT-assisted contracts. It is also the policy of the Department:

1. To ensure nondiscrimination in the award and administration of USDOT-assisted contracts;
2. To create a level playing field on which DBEs can compete fairly for USDOT-assisted contracts;
3. To ensure that the DBE program is narrowly tailored in accordance with applicable law;
4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are counted as DBEs;
5. To help remove barriers to the participation of DBEs in USDOT-assisted contracts; and
6. To assist in the development of firms that can compete successfully in the market place outside the DBE program.

2.0 Assurances of Non-Discrimination:

The contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, sex or national origin in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the state deems appropriate. The contractor, subrecipient, or subcontractor shall ensure that all subcontract agreements contain this non-discrimination assurance.

3.0 Definitions:

(A) Disadvantaged Business Enterprise (DBE): a for-profit small business concern which meets both of the following requirements:

- (1)** Is at least 51 percent owned by one or more socially and economically disadvantaged individuals or, in the case of any publicly owned business, at least 51 percent of the stock is owned by one or more such individuals; and,

- (2) Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

(B) Socially and Economically Disadvantaged Individuals: any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is:

- (1) Any individual who is found to be a socially and economically disadvantaged individual on a case-by-case basis.
- (2) Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:
 - (i) "Black Americans," which includes persons having origins in any of the Black racial groups of Africa;
 - (ii) "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - (iii) "Native Americans," which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;
 - (iv) "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong;
 - (v) "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;
 - (vi) "Women;"
 - (vii) Any additional groups whose members are designated as socially and economically disadvantaged by the Small Business Administration (SBA), at such time as the SBA designation becomes effective.

(C) Joint Venture: an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

(D) Non-DBE: any firm that is not a DBE.

(E) RACE-CONSCIOUS: a measure or program is one that is focused specifically on assisting only DBEs, including women-owned DBEs.

(F) RACE-NEUTRAL: a measure or program is one that is, or can be, used to assist all small businesses. For the purposes of this part, race-neutral includes gender-neutrality.

4.0 Working with DBEs:

The Department works with DBEs and assists them in their efforts to participate in the highway construction program. All bidders should contact the Civil Rights Office at the address shown below for assistance in their efforts to use DBEs in the construction program of the Department:

Arizona Department of Transportation
Civil Rights Office
1135 N. 22nd Avenue (second floor), Mail Drop 154A
Phoenix, AZ 85009
Phone (602) 712-7761
FAX (602) 712-8429

5.0 Applicability:

The Department has established an overall annual goal for DBE participation on Federal-aid contracts. The Department intends for the goal to be met with a combination of race conscious efforts and race neutral efforts. Race conscious participation occurs where the contractor uses a percentage of DBEs, as defined herein, to meet the contract-specified goal. Race neutral efforts are those that are, or can be, used to assist all small businesses or increase opportunities for all small businesses. The regulation, 49 CFR 26, defines race neutral as when a DBE wins a prime contract, is awarded a subcontract on a project without DBE goals, and is awarded a subcontract from a prime contractor that did not consider the firm's DBE status.

The provisions are applicable to all bidders including DBE bidders.

6.0 Certification:

Certification as a DBE shall be predicated on:

- (1) The completion and execution of an application for certification as a "Disadvantaged Business Enterprise".
- (2) The submission of documents pertaining to the firm(s) as stated in the application(s), including but not limited to a statement of social disadvantage and a personal financial statement.

- (3) The submission of any additional information which the Department may require to determine the firm's eligibility to participate in the DBE program.
- (4) The information obtained during the on-site visits to the offices of the firm and to active job-sites.

Applications for certification may be filed with the Department at any time. Both hardcopy submission and online submission is available.

For hardcopy submissions, applications for certification are available at the Department's Civil Rights Office, 1135 N. 22nd Avenue (second floor), mail drop 154A, Phoenix, Arizona 85009, phone (602) 712-7761. Hardcopy applications may also be obtained through the internet at www.azdbe.org. Hardcopy applications must be filed through the Civil Rights Office at the above address.

For online submissions, the online application process may be accessed through the internet at www.azdbe.org.

DBE firms and firms seeking DBE certification shall cooperate fully with requests for information relevant to the certification process. Failure or refusal to provide such information is a ground for denial or removal of certification.

Arizona is a member of the AZ Unified Certification Program (AZUCP). Only DBE firms that are certified by the AZUCP are eligible for credit on ADOT projects. A list of DBE firms certified by AZUCP is available on the internet at www.azdbe.org. The list will indicate contact information and specialty for each DBE firm, and may be sorted in a variety of ways. However, ADOT does not guarantee the accuracy and/or completeness of this information, nor does ADOT represent that any licenses or registrations are appropriate for the work to be done.

The Department's certification is not a representation of qualifications and/or abilities. The contractor bears all risks that the firm may not be able to perform its work for any reason.

7.0 General:

Each contractor shall establish a program that will ensure nondiscrimination in the award and administration of contracts and subcontracts.

Each contractor shall also designate a full time employee who shall be responsible for the administration of the contractor's DBE program.

Agreements between the bidder and a DBE in which the DBE promises not to provide subcontracting quotations to other bidders are prohibited.

8.0 DBE Subcontractor Payment Reporting:

The Department is required to collect data on DBE and non-DBE participation to report to FHWA on Federal-aid projects. The contractor is notified that such record keeping is required by the Department for tracking DBE participation.

The contractor shall submit a report on a monthly basis indicating the amounts earned by and paid to all DBEs and non-DBEs working on the project. In addition, the contractor shall require that all DBE and non-DBE subcontractors verify receipt of payment.

The contractor shall provide all such required information for the current month by the 5th of the following month. The required information shall be submitted electronically through the Department's web-based payment tracking system (<https://adot.dbesystem.com>).

9.0 Goals:

The Department has not established contract goals for DBE participation in this contract. Contractors are still encouraged to employ reasonable means to obtain DBE participation. Contractors must retain records in accordance with these DBE specifications. The contractor is notified that this record keeping is important to the Department so that it can track DBE participation where only race neutral efforts are employed.

10.0 Crediting DBE Participation:

10.01 General Requirements:

Only the value of the work actually performed by the DBE can be credited toward DBE participation. Credit is given only after the DBE has been paid for the work performed.

The contractor bears the responsibility to determine whether the DBE possesses the proper contractor's license(s) to perform the work.

The Department's certification is not a representation of qualifications and/or abilities. The contractor bears all risks that the DBE may not be able to perform its work for any reason.

A DBE may participate as a prime contractor, subcontractor, joint venture partner with either a prime contractor or a subcontractor, or as a vendor of materials or supplies. A DBE joint venture partner shall be responsible for a clearly defined portion of the work to be performed, in addition to meeting the requirements for ownership and control.

The dollar amount of work to be accomplished by DBEs, including partial amount of a lump sum or other similar item, shall be on the basis of subcontract, purchase order, hourly rate, rate per ton, etc., as agreed to between parties.

With the exception of bond premiums, all work must be attributed to specific bid items. Where work applies to several items, the DBE contracting arrangement must specify unit price and amount attributable to each bid item. DBE credit for any individual item of work performed by the DBE shall be the lesser of the amount to be paid to the DBE or the prime contractor's bid price. If the amount bid by the DBE on any item exceeds the prime contractor's bid amount, the prime contractor may not obtain credit by attributing the excess to other items.

Where more than one DBE is engaged to perform parts of an item (for example, supply and installation), the total amount payable to the DBEs will not be considered in excess of the prime contractor's bid amount for that item.

Bond premiums may be stated separately, so long as the arrangement between the prime contractor and the DBE provides for separate payment not to exceed the price charged by the bonding company.

DBE credit may be obtained only for specific work done for the project, supply of equipment specifically for physical work on the project, or supply of materials to be incorporated in the work. DBE credit will not be allowed for costs such as overhead items, capital expenditures (for example, purchase of equipment), and office items.

If a DBE performs part of an item (for example, installation of materials purchased by a Non-DBE), the DBE credit shall not exceed the lesser of (1) the DBE's contract or (2) the prime contractor's bid for the item, less a reasonable deduction for the portion performed by the Non-DBE.

When a DBE performs as a partner in a joint venture, only that portion of the total dollar value of the contract which is clearly and distinctly performed by the DBE's own forces can be credited.

The contractor may credit second-tier subcontracts issued to DBEs by non-DBE subcontractors. Any second-tier subcontract to a DBE must meet the requirements of a first-tier DBE subcontract.

All DBE and non-DBE subcontracting activity must be reported by the contractor. This includes lower-tier subcontracting regardless of whether or not the DBE is under contract with another DBE.

A prime contractor may credit the entire amount of that portion of a construction contract that is performed by the DBE's own forces. The cost of supplies and materials obtained by the DBE for the work of the contract can be included so long as that cost is reasonable. Leased equipment may also be included. No credit is permitted for supplies purchased or equipment leased from the prime contractor or its affiliate(s).

When a DBE subcontracts a part of the work of its contract to another firm, the value of the subcontract may be credited towards DBE participation only if the DBE's subcontractor is itself a DBE and performs the work with its own forces. Work that a DBE subcontracts to a non-DBE firm does not count towards DBE participation.

A prime contractor may credit the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a USDOT-assisted contract, provided the fees are reasonable and not excessive as compared with fees customarily allowed for similar services.

10.02 Police Officers:

DBE credit will not be permitted for procuring DPS officers. For projects on which officers from other agencies are supplied, DBE credit will be given only for the broker fees charged, and will not include amounts paid to the officers. The broker fees must be reasonable.

10.03 Commercially Useful Function:

As a prime contractor, a DBE shall perform a significant portion of the contract work with its own work force in accordance with normal industry practices and Subsection 108.01 - Subletting of Contract of the Standard Specifications.

A prime contractor can credit expenditures to a DBE subcontractor only if the DBE performs a commercially useful function on the contract. A DBE performs a commercially useful function when it is responsible for execution of the work of a contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, the Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.

A DBE will not be considered to perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, the Department will examine similar transactions, particularly those in which DBEs do not participate.

If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or if the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, the Department will presume that the DBE is not performing a commercially useful function.

When a DBE is presumed not to be performing a commercially useful function as provided above, the DBE may present evidence to rebut this presumption. Decisions on commercially useful function matters are subject to review by FHWA, but are not administratively appealable to U.S. DOT.

10.04 Trucking:

The Department will use the following factors in determining whether a DBE trucking company is performing a commercially useful function. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible

on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.

The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract on every day that credit is to be given for trucking.

The contractor will receive credit for the total value of transportation services provided by the DBE using trucks it owns, insures and operates, and using drivers it employs.

The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services.

The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of the transportation services provided by non-DBE lessees not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE lessees results in credit only for the fee or commission paid to the DBE as a result of the lease agreement.

Example: DBE Firm X uses two of its own trucks on contract. It leases two trucks from DBE Firm Y and six trucks from non-DBE firm Z. DBE credit would only be awarded for the total value of transportation services provided by Firm X and Firm Y, and may also be awarded for the total value of transportation services provided by four of the six trucks provided by Firm Z. In all, full credit would be allowed for the participation of eight trucks. With respect to the other two trucks provided by Firm Z, DBE credit could be awarded only for the fees or commissions pertaining to those trucks Firm X receives as a result of the lease with Firm Z.

10.05 Materials and Supplies:

The Department will credit expenditures with DBEs for material and supplies as follows. If the materials or supplies are obtained from a DBE manufacturer, 100 percent of the cost of the materials or supplies is credited. A manufacturer is defined as a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract, and of the general character described by the specifications.

If the materials or supplies are purchased from a DBE regular dealer, 60 percent of the cost of the materials or supplies is credited. A DBE regular dealer is defined as a firm that owns, operates, or maintains a store or warehouse or other establishment in which the materials, supplies, articles, or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A firm may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, stone or asphalt without owning, operating, or maintaining a place of business, as provided above, if the person both owns and operates distribution equipment for the products. Any supplementing

of regular dealers' own distribution equipment shall be by a long-term lease agreement, and not on an ad-hoc or contract-by-contract basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this paragraph and the paragraph above.

With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, the Department will credit the entire amount of the fees or commissions charged by the DBE for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, provided the fees are determined to be reasonable and not excessive as compared with fees customarily allowed for similar services. The cost of the materials and supplies themselves may not be counted toward the DBE goal.

DBE credit for supplying paving grade asphalt and other asphalt products will only be permitted for standard industry hauling costs, and only if the DBE is owner or lessee of the equipment and trucks. Leases for trucks must be long term (extending for a fixed time period and not related to time for contract performance) and must include all attendant responsibilities such as insurance, titling, hazardous waste requirements, and payment of drivers.

11.0 Joint Checks:

11.01 Requirements:

A DBE subcontractor and a material supplier (or equipment supplier) may request permission for the use of joint checks for payments from the prime contractor to the DBE subcontractor and the supplier. Joint checks may be issued only if all the conditions in this subsection are met.

1. The DBE subcontractor must be independent from the prime contractor and the supplier, and must perform a commercially useful function. The DBE subcontractor must be responsible for negotiating the price of the material, determining quality and quantity, ordering the materials, installing (where applicable), and paying for the material. The DBE subcontractor may not be utilized as an extra participant in a transaction, contract, or project in order to obtain the appearance of DBE participation.
2. The use of joint checks will be allowed only if the prime contractor, DBE subcontractor, and material supplier establish that the use of joint checks in similar transactions is a commonly recognized business practice in the industry, particularly with respect to similar transactions in which DBE's do not participate.
3. A material or supply contract may not bear an excessive ratio relative to the DBE subcontractor's normal capacity.
4. There may not be any exclusive arrangement between one prime and one DBE in the use of joint checks that may bring into question whether the DBE is independent of the prime contractor.

5. Any arrangement for joint checks must be in writing, and for a specific term (for example, one year, or a specified number of months) that does not exceed a reasonable time to establish a suitable credit line with the supplier.
6. The prime contractor may act solely as the payer of the joint check, and may not have responsibility for establishing the terms of the agreement between the DBE subcontractor and the supplier.
7. The DBE must be responsible for receiving the check from the prime contractor and delivering the check to the supplier.
8. The prime contractor cannot require the DBE subcontractor to use a specific supplier, and the prime contractor may not participate in the negotiation of unit prices between the DBE subcontractor and the supplier.

11.02 Procedure and Compliance:

1. The Civil Rights Office must approve the agreement for the use of joint checks in writing.
2. After obtaining authorization for the use of joint checks, the prime contractor, the DBE, and the supplier must retain documentation to allow for efficient monitoring of the agreement.
3. Copies of canceled checks must be submitted with the payment information for the period in which the joint check was issued. Certificates of payment must indicate whether or not joint checks were used.
4. The prime contractor, DBE, and supplier each have an independent duty to report to the Department in the case of any change from the approved joint check arrangement.

Any failure to comply will be considered by the Department to be a material breach of this contract and will subject the prime contractor, DBE, and supplier to contract remedies and, in the case of serious violations, a potential for termination of the contract, reduction or loss of prequalification, debarment, or other remedies which may prevent future participation by the offending party.

(MENTOR, 02/23/06)

MENTOR-PROTEGE PROGRAM

Description:

Purpose:

The Mentor-Protege program is an initiative to encourage and develop disadvantaged businesses in the highway construction industry. The program will permit contractors to provide certain types of assistance to certified Disadvantaged Business Enterprise (DBE) subcontractors on highway construction projects.

The program is intended to increase legitimate DBE activities and is not intended to diminish nor circumvent existing DBE rules or regulations. Abuse of this program may be used as the basis for actions against both categories of firms including suspension or debarment.

Policy:

It is the policy of ADOT that contractors and certified DBE subcontractors may engage in a Mentor-Protege agreement under certain conditions. Such an agreement must be mutually beneficial to both parties and ADOT in fulfilling requirements of 49 Code of Federal Regulations Part 23.

Definitions:

DBE: The definition, status, and requirements of DBE firms are defined by 49 CFR Part 23. Please also refer to the special provision entitled "Disadvantaged Business Enterprises".

Mentor: A designated contractor who oversees the development of a designated DBE subcontractor by training, counseling, assisting, and sponsoring the DBE firm in an ADOT approved Mentor-Protege Program.

Protege: An ADOT-certified DBE subcontractor who is guided by a mentor through training and specialized assistance to gain experience, develop expertise in highway construction, and attain general business growth in an approved Mentor-Protege program.

Mentor-Protege Development Plan: A detailed plan outlining a management agreement between a contractor (who agrees to serve as a mentor) and a DBE subcontractor (who agrees to serve as a protege).

Implementation:

Approval Process:

- (1) When a contractor and DBE agree to engage in a Mentor-Protege Development Plan Agreement, ADOT Civil Rights Office will be notified by either party for the purpose of (a) reviewing requirements of STAA, 49 CFR part 23, and Mentor-Protege program; (b) establishing timeline for processing Agreement; (c) preliminary review of Agreement objective(s) and duration; and (d) reporting requirements. (A copy of the suggested form of agreement is included in these special provisions).

- (2) A completed Mentor-Protege Development Plan will be submitted to ADOT within 30 days following the initial review. Approval of the Agreement by ADOT will be in two stages:
 - a) General approval of Agreement by ADOT within 15 working days following submission of Agreement.
 - b) Approval of working plan for the designated project where a Mentor-Protege Development Plan will be implemented.
- (3) Duration of a Mentor-Protege Development Plan may exceed that of a single project, not to exceed three years. Duration of a working plan may exceed that of a single project. However, the continued use of an existing working plan must be approved by the ADOT Civil Rights Office prior to beginning work on a new project.
- (4) The Mentor-Protege program is not intended to provide DBE firms with a means to avoid management and operational responsibilities. Mentors cannot be responsible for the management of DBE proteges. Under the program, all administrative functions must be performed by personnel responsible to or employed by protege. The protege must retain final decision making responsibilities.
- (5) Mentor and protege shall agree to an interview by ADOT Civil Rights Office during the development of the Mentor-Protege Development Plan.
- (6) Mentor and protege shall agree to evaluations by ADOT. The frequency and method will depend on the project.

Content of Mentor-Protege Development Plan:

A Mentor-Protege Development Plan Agreement shall address the following:

- (1) Areas of Assistance: Identify the specific areas in which the protege requires assistance.
- (2) Schedule of Assistance: Develop an Action Plan which defines the types and scope of assistance the mentor will provide to meet the protege's needs.
- (3) Responsibilities: Define the responsibilities of the mentor and the protege in each of the activities.
- (4) Benchmarks: Include measurable benchmarks to be reached by the protege at successive stages of the plan.

- (5) Evaluation: Provide formal evaluations of the protege's attainment of benchmarks. Evaluations must be made by both the mentor and the protege and reviewed by ADOT.
- (6) Duration: Specify the maximum time frame the development plan agreement can remain in effect not to exceed three years.
- (7) Assurances: Provide assurances that all agreements, oral and written, pertaining to the Mentor-Protege program do not improperly obtain the benefits of the DBE program.
- (8) Key Personnel: Identify mentor's representative(s) responsible for training and/or coordinating the assistance provided to the protege.
- (9) Fees: Identify any fees paid as a condition of the agreement.
- (10) Copies of agreements: Attach copies of all bonding, security, lease agreements, notes, contracts, etc., made for the duration of the Mentor-Protege Plan.

Type of Assistance:

The type of assistance provided by contractors may include, but not be limited to:

- (1) Financial:
 - a) Working Capital Secured by Time Demand Notes or Stocks. Proteges acquiring working capital through the issuance of stocks must maintain no less than 51 percent ownership to maintain DBE certification. Time demand notes may be used to secure working capital. However, any abusive use of recall features will be cause for terminating program. Where working capital is secured by stocks or demand notes, a third party such as a bank could receive progress payments for work accomplished by the protege, made out jointly to the agent and the protege and make payments, on behalf of the protege, to material suppliers or for Federal and State payroll taxes, etc. In no case can the day-to-day control of the firm be relinquished by the disadvantaged owner as a requirement of the loan.
 - b) Bonding. Mentors may bond the entire job and charge a pro-rata share of the cost to the protege. Mentors may bond the entire job and carry the protege by absorbing the cost of the bond. Arrangements of the bonding must be included in the Schedule of Assistance.
- (2) Management Technical Assistance:

- a) Assist in conducting a Protege Self-Assessment by areas to be strengthened for long-range planning of the protege firm.
 - b) Assist in developing business plan, loan packaging, and financial counseling.
 - c) Assist the protege in setting up a cost accounting system and train the protege's personnel to assume full control.
 - d) Provide training in plan interpretation, estimating, and materials supply function.
 - e) Provide guidance in general project management and related areas to make the protege aware of techniques to improve productivity and competitiveness and broaden knowledge of industry practices.
- (3) Operation:
- a) Equipment/Facilities Use. Equipment and facilities may be furnished by mentor, provided that separate lease agreements are made and control over the equipment and facilities are under the supervision of protege.
 - b) Training of managers and specialists of the protege in state-of-the-art methods in the contracting industry.
 - c) Mentors may provide personnel with specialized expertise for a specific purpose and duration as outlined in the Action Plan. Such personnel must be on the protege's payroll and under direct supervision of the protege. Long term, continual, or repetitive use by a protege of personnel primarily employed by the mentor will be construed as an attempt to artificially inflate DBE participation and may be cause for termination of the Mentor-Protege agreement and decertification of the DBE.

General Practice:

- (1) Agreements may not include exclusive arrangements which limit competition.
- (2) DBE firms shall have the latitude to quote bids to other contractors.
- (3) The contractor and the DBE involved in a Mentor Protege agreement must remain separate and independent business entities.

- (4) Middlemen or passive conduits which serve no commercially useful function, or subcontractors acting essentially as brokers are unacceptable.
- (5) Formal or informal agreements which limit control and management by DBE firms are unacceptable.
- (6) Part ownership in a DBE firm by a non-disadvantaged entity, including a mentor, is permitted by the regulations (49 CFR 23) and may be necessary to ensure adequate capital and technical guidance of the DBE participant. However, any financial investment by the mentor must not create a situation wherein the mentor may assume control over the DBE firm.

Modifications:

Modifications to the Mentor-Protege Development Plan shall be subject to the approval of ADOT.

Termination:

The Mentor-Protege Development Plan may be terminated by mutual consent by both parties with notice to ADOT. ADOT may terminate approval of the Plan upon determination that:

- (1) The protege firm no longer meets the eligibility standards for certification as a DBE.
- (2) Either party has failed or is unable to meet its obligations under the Development Plan.
- (3) The DBE is not progressing or is not likely to progress in accordance with the Development Plan.
- (4) The DBE has reached a satisfactory level of self-sufficiency to compete without special treatment provided in the Development Plan.

In the event a Mentor Protege Development Plan is terminated, the contractor will remain responsible for the DBE goals established in the project Special Provisions.

ARIZONA DEPARTMENT OF TRANSPORTATION

Mentor-Protege Development Plan Agreement

PART ONE: General Agreement

This agreement entered into this ____ day of _____, 20__, in the city of _____, Arizona, by and between _____ (hereafter known as Mentor), and _____ (hereafter known as Protege), in accordance with rules and regulations of the Arizona Department of Transportation (ADOT) Mentor-Protege program, and in accordance with the requirements for increased Disadvantaged Business Enterprises (DBE) participation in the Surface Transportation Act of 1982 (STAA) and Surface Transportation and Uniform Relocation Assistance Act of 1987 (STURAA).

This agreement is intended to cover the general relationship between the parties to insure compliance with STAA, STURAA, and ADOT guidelines, and to implement all provisions set forth in the Mentor-Protege Development Plan.

PART TWO: Assurances

- 2.1 Both mentor and protege will remain separate and independent business entities. Protege shall have the latitude to quote bids to other contractors.
- 2.2 Protege is an ADOT-certified DBE firm.
- 2.3 The Mentor-Protege program is not intended to provide DBEs with means to avoid management and operational responsibilities.
- 2.4 All agreements, oral and written, pertaining to this Mentor-Protege Plan Agreement do not cause the protege to improperly obtain the benefits of the DBE program.

PART THREE: Content of Plan

Both parties will agree to content of the plan which will include but not be limited to:

- 3.1 Exhibit A: Areas of Assistance--(Areas identified by both parties as the basis for providing assistance by mentor to protege.)
- 3.2 Exhibit B: Schedule of Assistance-- An Action Plan developed by both parties defining the types and scope of assistance; responsibilities of mentor and protege in each activity; resources to be utilized; and measurable benchmarks to be reached by protege.
- 3.3 Exhibit C: Key Personnel-- A list of mentor and protege representatives responsible for training and/or coordinating the Plan.
- 3.4 Exhibit D: Lease/Agreement(s)--Full copies of all lease agreements for equipment and facilities; financial agreements; and other agreements between the two parties and/or by third parties.

PART FOUR: Monitoring

4.1 Both parties hereby specifically consent to the monitoring of this contract by the appropriate federal and state officials or their agents, and to agree to cooperate with such agencies.

4.2 Both mentor and protege agree to evaluate the progress of the Plan at scheduled intervals with the results reviewed by ADOT.

PART FIVE: Duration

The duration of the Plan will coincide with the length of the project for which the plan was intended. Extended agreement plans shall not exceed a period of three years.

PART SIX: Modifications

None of these agreements may be modified except in writing signed by both parties and approved by ADOT.

PART SEVEN: Termination

The mentor or protege retains the right to terminate this agreement by showing cause in a written notice to all parties and ADOT. ADOT may terminate the approval of this agreement by showing cause in a written notice to mentor and protege. In the event of termination of agreement or termination of ADOT approval, the contractor will remain responsible for the DBE goals established in the project Special Provisions.

PART EIGHT: Privacy Act Provision

The information contained herein and on attachments is used for the ADOT Mentor-Protege Program only, and may not be disclosed without the express permission of all parties involved in this agreement.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed by their duly authorized officers on the day and year first above written.

_____	_____	_____
Date	Mentor Firm (Authorized Official Name)	Signature

_____	_____	_____
Date	Protege Firm (Authorized Official Name)	Signature

April 1987

GENERAL REQUIREMENTS

Availability of Documents:

Project documents will be available as shown below:

Documents	Paper Format	Electronic Format
Project Plans	X	X
Special Provisions	X	X
Proposal Pamphlet	X	X
Additional Documents (if available)		
Cross Sections		X
Earthwork Quantity Sheets		X
Other Reports		X
Existing Ground Digital Terrain Model (DTM)		X
Design Digital Terrain Model (DTM)		X

Documents in Electronic Format:

Project documents in electronic format are available on the Contracts and Specifications website.

In the case of any conflict or discrepancy between the project plans, specifications, or proposal pamphlet in paper and electronic format, the paper document shall govern.

The project plans are provided in PDF format. The Department makes no representation or warranties as to the compatibility, usability, or readability of the PDF plans with any system, software, hardware, or application package other than that on which the files were originally saved. The contractor bears the sole risk of any modifications, manipulations, or alterations to the plans.

The special provisions and proposal pamphlet are provided in PDF format. The Department makes no representation or warranties as to the compatibility, usability, or readability of the PDF documents with any system, software, hardware, or application package other than that on which the files were originally saved. The contractor bears the sole risk of any modifications, manipulations, or alterations to the special provisions and proposal pamphlet.

The cross sections, earthwork quantity sheets, and other reports, if applicable, are provided only in PDF format. They are provided for information purposes and contractor convenience only. They are not part of the contract documents. The contractor’s use of the information in the cross sections, earthwork quantity sheets, and other reports is at the contractor’s sole risk. The Department makes no representation or warranties as to the compatibility, usability, or readability of the PDF documents with any system, software, hardware, or application package other than that on which the files were originally saved. The contractor bears the sole risk of any modifications, manipulations, or alterations to the documents.

The existing ground DTM and the design DTM, if applicable, are provided as DGN files. They are provided for information purposes and contractor convenience only. The DTMs are not part of the contract documents. The contractor's use of the information in the DTMs is at the contractor's sole risk. The Department makes no representation or warranties as to the compatibility, usability, or readability of the DTMs with any system, software, hardware, or application package other than that on which the files were originally prepared. The version of Microstation used to save the DTMs is indicated at <http://www.azdot.gov/business/engineering-and-construction/CADD>.

The Department is providing the electronic project files to bidders for informational purposes in conjunction with work or services to be provided to the Department under this project. Any use of the electronic files for any purposes other than for this project is prohibited.

BIDDERS LIST REQUIREMENT:

Bidders shall submit a list of the names of all subcontractors, service providers, manufacturers and suppliers submitting bids, proposals or quotes for this project on the "List of Subcontractors, Suppliers, Service Providers and Manufacturers Bidding ADOT Contracts" form. The form is appended to the Special Provisions.

All bidders must submit the required form, whether or not the bid is the low bid.

Bidders must submit this form with all requested information to the ADOT Civil Rights Office no later than 4:00 p.m. on the fifth working day after bids are opened. Faxed copies are acceptable. The fax number is (602) 712-8429.

The address for the Department's Civil Rights Office is 1135 N. 22nd Avenue (second floor), Phoenix, Arizona 85009.

IF THE BIDDER FAILS TO SUBMIT THE REQUIRED INFORMATION BY THE STATED TIME AND IN THE MANNER HEREIN, THE BIDDER SHALL BE INELIGIBLE FOR AWARD OF THE CONTRACT.

The form must be complete and must include all the names and contact information for all subcontractors, service providers, manufacturers and suppliers that submitted bids, proposals, or quotes on this project regardless of the bidder's intentions to use the sub bid. Information on second tier bids is not required.

Title 49 of the Code of Federal Regulations, Part 26.11, required ADOT to create and maintain a bidders list. The purpose of this list is to develop the list of the DBE and non-DBE firms seeking to work on Federal-aid highway construction contracts. This information is then used to set ADOT's overall DBE goal. The regulation requires the following information be collected: the firm's name; the firm's address; the firm's status as a DBE or non-DBE; the age of the firm; and the annual gross receipts of the firm.

The Civil Rights Office will contact listed firms to obtain information from them that will be used in the agency's annual DBE goal setting process. This information will be maintained as confidential to the extent allowed by federal and state law.

CARGO PREFERENCE ACT:

1.0 Description

The Federal Highway Administration (FHWA) in partnership with the Federal Maritime Administration has mandated the implementation of 46 CFR 381 making the requirements of the Cargo Preference Act (CPA) applicable to the Federal Aid Highway Program.

The requirements apply to items transported by ocean vessel.

The requirements of 46 CFR 381 apply to materials or equipment acquired for a specific federal-aid highway project. In general, the requirements are not applicable to goods or materials that come from inventories independent of FHWA-funded contracts.

Information related to the CPA is presented in “Cargo Preference Requirements – Questions and Answers” available from the FHWA at <https://www.fhwa.dot.gov/construction/cqit/cargo/qa.cfm>.

2.0 Contract Requirements

The contractor shall comply with the requirements of the Cargo Preference Act 46 CFR 381.7(a)-(b). By executing a construction contract for this project, the contractor agrees:

- (1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- (2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in the paragraph above to both the Engineer and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
- (3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

ENVIRONMENTAL MITIGATION MEASURES:

The following project specific mitigation measures are required to address key environmental issues and other concerns that were identified as part of the plan development process. These mitigation measures are not subject to change without prior written approval from the Federal Highway Administration:

- To prevent the introduction of invasive species seeds, the contractor shall inspect all earthmoving and hauling equipment at the equipment storage facility and the equipment shall be washed prior to entering the construction site.
- To prevent invasive species seeds from leaving the site, the contractor shall inspect all construction equipment and remove all attached plant/vegetation and soil/mud debris prior to leaving the construction site.
- If previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor shall stop work immediately at that location notify the Engineer and shall take all reasonable steps to secure the preservation of those resources. The Engineer will contact the Arizona Department of Transportation Environmental Planning Group, Historic Preservation Team, (602.712.8636 or 602.712.7767) immediately, and make arrangements for proper treatment of those resources.
- If suspected hazardous materials are encountered during construction, work shall cease at that location and the Engineer will be notified. The Engineer will contact the Arizona Department of Transportation Environmental Planning Group hazardous materials coordinator (602.920.3882 or 602.712.7767) immediately, and make arrangements for assessment, treatment and disposal of those materials.
- The contractor shall comply with all local air quality and dust control rules, regulations and ordinances which apply to any work performed pursuant to the contract.

MAINTENANCE OF EXISTING FMS SYSTEM AND OTHER INFRASTRUCTURE:

The contractor shall ensure that all existing FMS infrastructure within the project limits remains operational and active during construction, except as approved by the Engineer. No disruption to service shall be permitted as a result of construction activities. The contractor shall repair any damage caused by its operations to existing infrastructure at no additional cost to the Department.

COORDINATION OF WORK:

The contractor shall coordinate its work with that of the contractor on the following Projects per Subsection 105.07 of the Standard Specifications to the benefit of the two contractors and the Department:

I-17 PAVEMENT PRESERVATION (19th AVE TO ARIZONA CANAL TRAIL) TRACS NO.: 017 MA 197 H8788 01C

The proposed work is located in Maricopa County on I-17 between 19th Avenue to Arizona Canal Trail and along each interchange within those limits. The project consists of a 1" mill and inlay on the I-17 mainline, ADA compliance improvements for the interchange areas, drainage basin construction, and guardrail improvements. The work includes asphalt concrete milling, asphalt concrete paving, signing and marking installation, grading for drainage, concrete curb ramp removal and replacement,

bridge rail modification, guardrail removal and replacement, glare screen removal, concrete barrier modification, and other related work.

The project is anticipated to begin construction September 2016 and be completed by November 2017.

Loop detectors called for installation within the limits of the H8788 project between Thomas Road and Arizona Canal Trail, shall not be installed until pavement mill and inlay is complete by the H8788 contractor. Contractor shall coordinate loop detector installation within the H8788 project limits to occur during the H8788 mainline closures so as to not require separate closures for loop detector installation.

(101ABRV, 02/04/16)

SECTION 101 DEFINITIONS AND TERMS:

101.01 Abbreviations: of the Standard Specifications is modified to add:

ARPA	Arizona Rock Products Association
IFI	International Fasteners Institute
ISO	International Organization for Standardization
ISSA	International Slurry Surfacing Association
NICET	National Institute for Certification in Engineering Technologies
NEC	National Electrical Code
NRMCA	National Ready Mixed Concrete Association
NSPS	National Society of Professional Surveyors
PPI	Plastic Pipe Institute
SSPC	Society for Protective Coatings

(101DEFN, 02/22/16)

SECTION 101 DEFINITIONS AND TERMS:

101.02 Definitions:

Bidding Schedule: of the Standard Specifications is revised to read:

The prepared schedule containing the estimated quantities of the pay items for which unit bid prices are invited.

Working Day: of the Standard Specifications is revised to read:

A day, exclusive of Saturdays, Sundays and State-recognized holidays, beginning at midnight, extending for a twenty-four hour period, and ending at midnight. Any Saturday, Sunday, or State-recognized holiday on which the contractor has been approved to work will also be counted as a working day. Working days on which weather conditions do not permit work on the project to proceed, as determined by the Engineer, will not be charged.

(102PREQ, 02/22/16)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS

102.02 Prequalification of Bidders: the title and text of the Standard Specifications is revised to read:

102.02 Prerequisites for Bidding:

(A) General:

To submit a valid bid, the bidder must:

- (1) have prequalification from the Department as necessary for the project, in accordance with paragraph (B) of this Subsection, and
- (2) be included on the project Plansholder List as a Prime in accordance with paragraph (C) of this Subsection.

(B) Prequalification of Bidders:

Prior to submitting a bid, the bidder will (unless waived by the Department) be required to be prequalified with the Department to bid on the project. The submission of Prequalification information and determination of Prequalification shall be in accordance with the requirements of the Rules for Prequalification of Contractors as approved and adopted by the Department.

(C) Plansholder List:

There are two ways for a bidder to be included on the project Plansholder List as a Prime. It is the bidder's responsibility to ensure that it is on the Plansholder List as a Prime prior to submitting a bid.

If a bidder is issued a proposal pamphlet in paper format by the Department, the Department will place the bidder on the project Plansholder List as a Prime.

Firms can register electronically requesting placement on the project Plansholder List as either a Prime or Subcontractor/Vendor as follows:

- (a) Go to the C&S Website.
- (b) Select "Current Advertisements".
- (c) Identify the project of interest.
- (d) Click on the "Register" icon.
- (e) Select the "Bidder" or "Subcontractor/Vendor" radio button.
- (f) Complete all required fields.
- (g) Click "Save". This submits the request to the Department.
- (h) If all required information is provided, the "ADOT C&S Advertisement Registration Confirmation Screen" will appear. An email will also be sent to the email address provided acknowledging the request.

Requests to be included on the Plansholder List as a Prime will be evaluated by the Department to determine whether the bidder is prequalified for the project. The Department cannot guarantee that requests to be on the Plansholder List will be considered if the request is submitted less than five working days prior to the bid opening. The Department will send an email to the email address provided notifying the contractor of the results of their request.

The Department's email will state whether the request was approved or denied. More information regarding the Department's decision may be obtained by contacting the Contracts and Specifications Section.

If an individual from a firm submits a duplicate request to be placed on the Plansholder List, the request will be denied. The Department will register the contact person listed on the duplicate request to receive email notices of updates to the project. The Department will send an email to the email address provided notifying the contractor of the results of their request.

(D) Registration for Notifications:

Firms on the Plansholder List as a Prime or a Subcontractor/Vendor will receive notification of any changes to the project. Other interested parties can register electronically to receive email notification of any changes to the project as follows:

- (a) Go to the C&S Website.
- (b) Select "Current Advertisements".
- (c) Identify the project of interest.
- (d) Click on the "Register" icon.
- (e) Select the "Other" radio button.
- (f) Select the "Yes" radio button in response to "Are you interested in registering to be notified about any changes made to this advertisement?"
- (g) Complete all required fields.
- (h) Click "Save". This submits the request to the Department.
- (i) If all required information is provided, the "ADOT C&S Advertisement Registration Confirmation Screen" will appear. An email will also be sent to the email address provided acknowledging the request.

All parties registering to receive notifications will be sent an email when changes are made to the project.

(102PRPMT, 02/22/16)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS:

102.04 Contents of Proposal Pamphlet: the first paragraph of the Standard Specifications is revised to read:

The proposal pamphlet will state the location and description of the contemplated construction and will show the approximate estimate of the various quantities and kinds of work to be performed or materials to be furnished and will have a schedule of items for which unit bid prices are invited. The proposal pamphlet will state the time in which the work must be completed, the type and amount of the proposal guaranty and the date, time and place of the opening of proposals. The pamphlet will also include any Special Provisions or requirements which vary from or are not included in the Standard Specifications. Additional contract documents applicable to the specific project are listed in the Special Provisions.

(102ISSPSL, 02/22/16)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS:

102.05 Issuance of Proposals: of the Standard Specifications is revised to read:

The Department reserves the right to refuse to issue proposal documents or to accept bids for any of the following reasons:

- (A) Lack of competency or adequate machinery, plant and other equipment, as revealed by the financial statement and experience questionnaires required under Subsection 102.02.
- (B) Incomplete work which, in the judgment of the Department, might hinder or prevent the prompt completion of additional work if awarded.
- (C) Failure to pay or settle satisfactorily all bills due for work on other contracts.
- (D) Failure to comply with any qualification regulations of the Department.
- (E) Default under previous contracts.
- (F) Unsatisfactory performance on previous work.
- (G) Entering into any contract, combination, conspiracy, or other unlawful act in restraint of trade or commerce.
- (H) Knowingly and willfully falsifying, concealing, or covering up a material fact by trick, scheme, or device.
- (I) Making false, fictitious, or fraudulent statements or representations.
- (J) Making or using a false writing or document knowing it to contain a false, fictitious, or fraudulent statement or entry.
- (K) Misrepresentation or false statement on any application for bonding.
- (L) Misrepresentation or false statement on any application for prequalification.
- (M) Lack of sufficient ability or integrity to complete the contract.

(102EXAM, 02/22/16)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS

102.07 Examination of Plans, Specifications and Site of Work: the second paragraph of the Standard Specifications is revised to read:

A set of plans, special provisions, and the proposal pamphlet will be on file at Contracts and Specifications, 1651 W. Jackson, Room 121F, Phoenix.

Project plans, special provisions, proposal pamphlets, and other project documents, if available, will be provided in electronic format, at no charge, on the Contracts and Specifications website. Any interested party can access the advertised project documents.

(102IRPSL, 02/22/16)

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS:

102.10 Irregular Proposals: Item (B) of the Standard Specifications is revised to read:

- (B) Proposals will be considered irregular and will be rejected for any of the following reasons:
- (1) If the bidder is not on the project Plansholder List as a Prime.
 - (2) If the proposal, bid bond or bidding schedule is on a form other than that furnished by the Department.
 - (3) If the bidder or surety fails to provide a proposal guaranty as specified in Subsection 102.12.
 - (4) If the bidder fails to sign the proposal when submitting a bid in the paper format.
 - (5) If the bidding schedule does not contain a unit price for each pay item listed except in the case of authorized alternate pay items.
 - (6) If the bidder fails to meet the required goal for Disadvantaged Business Enterprises (DBE) established in the Special Provisions or show good faith effort as determined by the Department.
 - (7) If the bidder submits a proposal in both the electronic format and in the paper format.

(102NOBID, 09/19/12)

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS:

102.03 Suspension from Bidding: of the Standard Specifications is revised to read:

The Department may suspend any person and any subsidiary or affiliate of any person from further bidding to the Department and from being a subcontractor or a supplier or otherwise participating in the work:

- (A) If that person or any officer, director, employee or agent of that person is convicted, in this State, or any other jurisdiction, of a crime involving any of the following elements or actions:
 - (1) Entering into any contract, combination, conspiracy or other unlawful act in restraint of trade or commerce;
 - (2) Knowingly and willfully falsifying, concealing, or covering up a material fact by trick, scheme, or device;
 - (3) Making false, fictitious, or fraudulent statements or representations;
 - (4) Making or using a false writing or document knowing it to contain a false, fictitious, or fraudulent statement or entry;
 - (5) Misrepresentation or false statement on any application for bonding;
 - (6) Misrepresentation or false statement on any application for prequalification; or
- (B) If the Department makes a finding of any of the above or finds that the contractor is not a Responsible Bidder or a Responsible Contractor.
- (C) If the Department determines that a contractor, subcontractor, or supplier has repeatedly or willfully failed to comply with federal or state immigration laws.

Under this subsection, a person means any individual, partnership, joint venture, corporation, association or other entity formed for the purpose of doing business as a contractor, subcontractor or supplier.

The signature of the bid proposal by a bidder constitutes the bidder's certification, under penalty of perjury under the laws of the United States, that the bidder, or any person associated therewith in the capacity of owner, partner, director, officer, principal investor, project director, manager, auditor, or any position involving the administration of federal funds, has not been, or is not currently, under suspension, debarment, voluntary exclusion or been determined ineligible by any federal agency within the past three years. Signature of the bid proposal also certifies, under penalty of perjury under the laws of the United

States, that the bidder does not have a proposed debarment pending. In addition, signature of the bid proposal certifies that the bidder has not been indicted, convicted, or had a civil judgment rendered against (it) by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

Any exceptions to the above paragraph shall be noted and fully described on a separate sheet and attached to the bid proposal.

(102LOBY, 10/01/90)

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS:

102.09 Non-Collusion Certification: of the Standard Specifications is modified to add:

(A) Lobbying:

The bidder certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- (1) No Federally appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract grant, loan, or cooperative agreement.

- (2) If any funds other than Federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions. Copies of Form-LLL, "Disclosure Form to Report Lobbying", are available at ADOT Contracts and Specifications Services, 1651 W. Jackson, Room 121F, Phoenix, AZ 85007.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The bidder also agrees, by submitting his or her bid or proposal, that he or she shall require that the language of this certification be included in all subcontracts and lower tier subcontracts which exceed \$100,000 and that all such subcontractors and lower tier subcontractors shall certify and disclose accordingly.

The Department will keep the prime contractors' certifications on file as part of their original bid proposals. Each prime contractor shall keep individual certifications from all subcontractors and lower tier subcontractors on file. Certifications shall be retained for three years following completion and acceptance of any given project.

Disclosure forms for the prime contractor shall be submitted to the Engineer at the pre-construction conference. Disclosure forms for subcontractors and lower tier subcontractors shall be submitted to the Engineer by the prime contractor along with the submittal of each subcontract or lower tier subcontract, as required under Subsection 108.01, when said subcontracts exceed \$100,000.00. During the performance of the contract the prime contractor and any affected subcontractors shall file revised disclosure forms at the end of each calendar year quarter in which events occur that materially affect the accuracy of any previously filed disclosure form. Disclosure forms will be submitted by the Engineer to the Federal Highway Administration for further processing.

(103RSBTY, 02/22/16)

SECTION 103 AWARD AND EXECUTION OF CONTRACT:

103.03 Responsibility: the third paragraph of the Standard Specifications is revised to read:

Non-responsibility may also be found for any of the following reasons:

- (A) Anti-competitive acts;
- (B) Lack of competency and adequate machinery, plant and other equipment, as revealed by the financial statement and experience questionnaires required under Subsection 102.02;
- (C) Incomplete work which, in the judgment of the Department, might hinder or prevent the prompt completion of additional work if awarded;
- (D) Failure to pay or settle satisfactorily all bills due for work on other contracts;
- (E) Failure to comply with any qualification regulations of the Department;

- (F) Default under previous contracts;
- (G) Unsatisfactory performance on previous work;
- (H) Knowingly and willfully falsifying, concealing, or covering up a material fact by trick, scheme, or device;
- (I) Making false, fictitious, or fraudulent statements or representations;
- (J) Making or using a false writing or document knowing it to contain a false, fictitious, or fraudulent statement or entry;
- (K) Lack of a proper contractor's license; or
- (L) Lack of sufficient ability or integrity to complete the contract.

(103AWARD, 12/14/09)

SECTION 103 - AWARD AND EXECUTION OF CONTRACT:

103.04 **Award of Contract:** the first paragraph of the Standard Specifications is modified to add:

When a contract is funded, either wholly or in part, by federal funds, an award of contract may be made contingent upon the successful bidder obtaining an appropriate license from the State Registrar of Contractors, in accordance with Arizona Revised Statutes 32-1101 through 32-1170.03. The license must be obtained within 60 calendar days following opening of bid proposals. No adjustment in proposed bid prices or damages for delay will be allowed as a result of any delay caused by the lack of an appropriate license.

Failure to acquire the necessary licensing within the specified period of time shall result in either award to the next lowest responsible bidder, or re-advertisement of the contract, as may be in the best interests of the Department.

Licensing information is available from:

Registrar of Contractors
3838 N. Central
Suite 400
Phoenix, AZ 85012
Phone: (602) 542-1525

(104DUST, 11/01/95)

SECTION 104 - SCOPE OF WORK:

104.08 Prevention of Air and Noise Pollution: of the Standard Specifications is modified to add:

For work performed within Maricopa County, the contractor will be required to prepare a comprehensive fugitive dust control plan, in accordance with the guidelines established in Rule 310 of Maricopa County Regulation III, Control of Air Contaminants. The contractor may contact Maricopa County, Division of Air Pollution Control, to purchase a copy of the guidelines. The contractor shall complete and submit the control plan with the permit application, and obtain approval prior to construction or any other activities which may produce dust pollutants.

Some of the measures which the contractor may use to control or minimize fugitive dust include: increased use of water or chemical dust suppressants, cease work temporarily during high winds, reducing vehicle speeds and number of trips, maintaining freeboard of three inches or more in hauling, and covering or stabilizing stockpiles. The contractor shall be required to cover haul trucks with tarps or other suitable enclosures.

No separate payment will be made for preparation and implementation of the fugitive dust control plan, the costs being considered as included in the price of contract items.

(104MTBRN, 06/04/96)

SECTION 104 - SCOPE OF WORK:

104.08 Prevention of Air and Noise Pollution: the first paragraph of the Standard Specifications is modified to add:

Burning of trash, debris, plant material, wood, or any other waste materials will not be allowed. The contractor shall dispose of such materials in accordance with the requirements of Subsection 107.11.

(104LIQD, 10/22/98)

SECTION 104 - SCOPE OF WORK:

104.04 Maintenance of Traffic: of the Standard Specifications is modified to add:

For each fifteen minute interval or portion thereof, outside of the allowable closure period, during which any portion of the roadway remains closed as a result of the contractor's activities, the contractor shall be assessed a sum of **\$500 per direction of travel that the contractor's work is in**, which shall be deducted from monies due or becoming due the contractor.

If the Engineer finds that the work was delayed because of conditions beyond the control and without fault of the contractor, he may extend the allowable time for lane closure activities in such amount as the conditions justify.

SECTION 104 - SCOPE OF WORK:

104.04 Maintenance of Traffic: of the Standard Specifications is modified to add:

(D) General Traffic Control Information:

In addition to the scheduled requirements of Subsection 108.03 of the Standard Specifications, the contractor shall provide individual schedules for each day of work and the required traffic control for those activities. The schedule shall specify the limits of the work activity by time of day and construction duration.

The schedule and the related traffic control shall be developed in such a way that access or emergency access is maintained at all times to all adjacent businesses and public rights of way. The schedule should be developed in such a manner that it can be released to other agencies and the public. The schedule shall be updated as necessary.

All existing signs in conflict with the construction signs shall be covered in place as directed by the Engineer. The temporary removal or covering of existing signs shall be in accordance with Subsection 701-3.11 and 701-5.10 of the Standard Specifications. All covered signs shall be uncovered as necessary to restore the existing or needed traffic control after the work activities are completed.

Traffic control devices shall not be permitted to remain stockpiled on the shoulder until the next closure. Traffic control devices shall be stored in designated staging areas only and must be kept at least 30 feet off the edge of the roadway.

The project shall be constructed in accordance with Part VI of the Manual on Uniform Traffic Control Devices (MUTCD) 2009 Edition, the Arizona Supplement to the 2009 MUTCD, the ADOT Traffic Control Design Guidelines (TCDG) 2010, and the traffic control matrix. The contractor is responsible for establishing the traffic control necessary to provide a safe and efficient work zone without unduly delaying traffic. Alterations and modifications to the traffic control matrix and special provisions will be considered if they conform to the references listed above. Any changes or revisions to the traffic control requirements in the traffic control matrix and Special Provisions must be approved in advance by the Engineer.

The contractor shall submit a traffic control plan for each work activity to the Engineer for approval. Work activities that impact traffic shall not begin until the traffic control plan has been reviewed and approved.

(E) Project Specific Traffic Control Requirements:

There will be no lane closures or freeway closures during the Arizona State Fair, October 7 thru October 30, 2016. Closure restrictions only apply to I-10 mainline and each interchange between 59th Avenue and SR 51 freeway, and I-17 mainline and each interchange between 19th Avenue and Bethany Home Road.

The Contractor's traffic control plan shall adhere to the following requirements:

Any work requiring a closure must have an approved traffic control plan. The traffic control plan must be approved by the Engineer.

Traffic control plans for detours to arterial streets must be submitted to the applicable local municipality 30 days in advance of construction for review and approval.

Full closures or partial freeway closures for loop installations, traffic control plans shall be submitted 30 days in advance of the work and shall be approved by the Engineer.

Full closures shall generally conform to Figure SA-9 of the ADOT TCDG, or as directed by the Engineer.

Ramp closures shall generally conform to Figure SA-10 of the ADOT TCDG, or as directed by the Engineer.

Full mainline and ramp closures will be allowed only at night, Sunday night through Thursday morning between the hours of 9:00 p.m. and 5 a.m., and Friday night through Sunday morning between the hours of 10:00 p.m. and 5 a.m., except for holiday periods as described below.

Rolling closures are not allowed.

Partial closures shall keep at least 2 travel lanes open at all times.

Shoulder closures are required for work outside of the traveled way. Daytime shoulder closures must be after 9:00 a.m. and before 2:00 p.m. in the direction of peak travel. Night shoulder closures are allowed on Sunday night through Friday morning between the hours of 9:00 p.m. and 5 a.m., except for holiday exclusions stated below.

There will be no lane closures or freeway closures on holidays or weekends that are adjacent to and/or following a State holiday.

The following State holidays are included: New Year's Day, Civil Rights Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving and Christmas.

Contractors shall remove all traffic control for temporary lane closures prior to holidays or weekends which adjoin a holiday.

There will be a moratorium on closures from November 15 to the weekend following January 1.

No partial or full closures are allowed on corridors where a special event is occurring.

Prior to each construction zone the contractor shall set a "ROAD WORK AHEAD" (W20-1) sign or a "SHOULDER WORK AHEAD" (W21-5x) sign with Type "A" warning lights 500 feet or as specified by the Engineer in advance of the work limits.

The contractor shall set "END ROAD WORK THANK YOU" (G20-2AZ) signs 500 feet or as specified by the Engineer beyond the work limits.

No more than 3 miles of full closure will be allowed at any time.

No two corridors which would act as alternates to each other may be closed in the same direction at the same time. I-17 and SR 51 are alternatives to each other.

No closures will be allowed in both directions at the same time.

No 2 sequential ramp closures will be allowed unless both are within an approved full closure.

The Contractor must obtain written approval from the District Engineer for Central District Construction and Central Maintenance District for any deviations from the above requirements.

Work on SR 51 shall be completed before work is performed on I-10, I-17, or US 60.

The Contractor must notify the Department at least 30 days in advance of any proposed closures. The Department shall notify the assigned communications representative of the Central Maintenance District and Central District Construction of the closure, if approved.

The Contractor must notify ADOT Communications and the ADOT Traffic Operations Center (TOC) TOC-PlannedClosure-RestrictionCoordination@azdot.gov by noon 3 days prior to closures and if there are any cancellations or changes in schedules. Notification of closure will include the type of closure, limits of restriction, direction, date(s), time(s) and approved detour information.

(104STORM, 11/01/95)

SECTION 104 - SCOPE OF WORK:

104.11 **Damage by Storm, Flood or Earthquake:** Item (D), Idled Equipment and Remobilization, of the Standard Specifications is hereby deleted.

104.11 **Damage by Storm, Flood or Earthquake:** Items (E) and (F) of the Standard Specifications are revised to read:

(D) Payment for Repair Work:

The State will pay the cost of the repair work as determined in Subsection 109.04.

(E) Termination of Contract:

If the Department elects to terminate the contract, the termination and the determination of the total compensation payable to the contractor shall be governed by the provisions of Subsection 108.11, Termination of Contract for Convenience of the Department.

(104ENVIR, 03/17/08)

SECTION 104 - SCOPE OF WORK:

104.12 **Environmental Analysis:** of the Standard Specifications is revised to read:

The contractor shall prepare an environmental analysis for approval by the Engineer, under any of the following conditions:

- (A) If the contractor elects to provide material, in accordance with Section 1001, from a source that involves excavation.

- (B) If the contractor elects to use any site to set up a plant for the crushing or processing of base, surfacing, or concrete materials. The contractor may request an exemption from this requirement to provide an environmental analysis if all of the following conditions apply:
 - (1) the site is exclusively used for the processing of materials,
 - (2) the site will not be used for excavation of borrow material,
 - (3) the site was developed as a processing area on or before January 1, 1999,
 - (4) the site is currently operating as a processing area, and
 - (5) the plant is located within that portion of the site that was disturbed prior to January 1, 1999.

- (C) If the contractor requests that the Engineer approve access to controlled access highway at points other than legally established access points.

The contractor may incorporate an existing environmental analysis approved after January 1, 1999, provided that the analysis is updated as necessary to be in compliance with current regulations and with the contractor's planned activities.

Regulatory changes, specification changes, or other reasons may preclude the approval of a materials source. The contractor acknowledges that the Department may refuse to approve a material source even if the Department had approved the source for other projects.

The environmental analysis shall include all areas of proposed excavation, crushing, processing, and haul roads. For the purposes of Subsection 104.12, a haul road is defined as any road on material excavation, processing, or crushing sites, and any road between the respective site and a public highway that may be used by the contractor.

The contractor shall promptly advise the Engineer that it is preparing the environmental analysis and shall submit it upon completion. The contractor should anticipate needing a minimum of 30 calendar days to prepare the environmental analysis. The contractor shall allow a minimum of 45 calendar days after submittal, or subsequent resubmittal, to the Department for the Department to review the environmental analysis and to consult with the appropriate jurisdictions and/or agencies. At the end of the review period, the Engineer will notify the contractor whether or not the environmental analysis is acceptable.

If the approval of the environmental analysis causes a delay to a controlling activity of the project, the contractor may seek, and the Engineer may grant, an extension of time in accordance with the terms of Subsection 108.08. The time extension shall not exceed 30 working days for a working-day contract, or 45 calendar days for a calendar-day project. The time extension will not be considered unless the contractor can show evidence of due diligence in pursuing the environmental analysis. No time extension will be granted for a fixed completion date contract.

The Environmental analysis shall address all environmental effects, including, but not limited to, the following:

- (1) The location of the proposed source and haul road, and the distance from the source to either an existing highway or an established alignment of a proposed Federal, State or County highway along with vicinity maps, sketches or aerial photographs.
- (2) The ownership of the land.
- (3) The identity and location of nearby lakes, streams, parks, wildlife refuges or other similar protected areas.
- (4) The former use, if known, of the source, and haul road and their existing condition.

- (5) The identification of present and planned future land use, zoning, etc., and an analysis of the compatibility of the removal of materials with such use.
- (6) The anticipated volume of material to be removed; the width, length and depth of the excavation; the length and width of the haul road, and other pertinent features and the final condition in which the excavated area and haul road will be left, such as sloped sides, topsoil replaced, the area seeded, etc.
- (7) The archaeological survey of the proposed source prepared by a person who meets the Secretary of the Interior's Professional Qualification Standards (48 FR 44716) and possesses a current permit for archaeological survey issued by the Arizona State Museum (ASM). The survey shall be prepared in a State Historic Preservation Office standardized format. The survey shall identify all historic properties within the area of potential effect (APE), as defined by the National Historic Preservation Act (36 CFR 800.4). This includes the materials source, processing area, and the haul road. Additionally, the survey report shall identify the effects of the proposed source on any historic properties within the APE, and recommend measures to avoid, minimize, or mitigate those effects.
- (8) If the proposed source, or haul road will utilize Prime and Unique Farm land or farm land of statewide importance, a description of such remaining land in the vicinity and an evaluation whether such use will precipitate a land use change.
- (9) A description of the visual surroundings and the impact of the removal of materials on the visual setting.
- (10) The effect on access, public facilities and adjacent properties, and mitigation of such effects.
- (11) The relocation of business or residences.
- (12) Procedures to minimize dust in pits and on haul roads and to mitigate the effects of such dust.
- (13) A description of noise receptors and procedures to minimize impacts on these receptors.
- (14) A description of the impact on the quality and quantity of water resulting from the materials operation shall be provided. The potential to introduce pollutants or turbidity to live streams and/or nearby water bodies shall be addressed. Measures to mitigate potential water quality impacts shall be coordinated through the Environmental Protection Agency (EPA) for sites located on tribal land, and the Arizona Department of Environmental Quality (ADEQ) for sites located on non-tribal land.

- (15) A description of the impact on endangered or threatened wildlife and plants and their habitat. The analysis of potential impact to plants and wildlife shall be coordinated through the Arizona Game and Fish Department and U.S. Fish and Wildlife Service. Compliance with the Arizona Native Plant Law shall be coordinated through the Arizona Commission of Agriculture and Horticulture.
- (16) A discussion of the effects of hauling activities upon local traffic and mitigating measures planned where problems are expected.
- (17) A description of the permits required, such as zoning, health, mining, land use, flood plains (see Section 404 of the Clean Water Act), etc.
- (18) The effect of removing material and/or stockpiling material on stream flow conditions and the potential for adverse impacts on existing or proposed improvements within the flood plain which could result from these activities. Measures to mitigate potential water quality impacts shall be coordinated through the Environmental Protection Agency (EPA) for sites located on tribal land, and the Arizona Department of Environmental Quality (ADEQ) for sites located on non-tribal land.

Guidance in preparing the environmental analysis is available on the Department's Internet Website through the Environmental Planning Group, or by calling Environmental Planning Group at 602-712-7767.

(105PLNS, 10/18/10)

SECTION 105 CONTROL OF WORK:

105.03 Plans and Working Drawings: the thirteenth paragraph of the Standard Specifications is revised to read:

All working drawings or prints shall be 22 inches in height and 34 inches in length. There shall be 1 1/4-inch margins on the left and right sides, and 3/4-inch margins on the top and bottom. A blank space, four inches wide by three inches high, shall be left inside the margin in the lower right hand corner. All drawings shall be made in such a manner that clear and legible copies can be made from them. When half-size copies are required, they shall be provided on standard 11 by 17 inch sheets.

(106QCMAT, 10/03/14)

SECTION 106 CONTROL OF MATERIAL:

106.04(A) General: the fourth and fifth paragraphs of the Standard Specifications are revised to read:

The sampling, testing, and acceptance of materials shall be in accordance with the requirements of the specifications, in conjunction with the following:

- The ADOT Materials Testing Manual.
- The ADOT Materials Policy and Procedure Directives Manual.
- Applicable Federal, AASHTO, or ASTM specifications or test designations.
- Applicable specifications or test designations of other nationally recognized organizations.

Unless otherwise specified, whenever a reference is made to an Arizona Test Method or an ADOT Materials Policy and Procedure Directive, it shall mean the test method or policy and procedure directive in effect on the bid opening date.

106.04(C)(2) Quality Control Laboratory: the first paragraph is revised to read:

All field and laboratory sampling and testing shall be performed by a laboratory or laboratories approved by the Department. The requirements for approval of laboratories are specified in ADOT Materials Policy and Procedure Directive No. 19, "ADOT System for the Evaluation of Testing Laboratories". Approved laboratories, and the test methods for which they are approved to perform, are listed in the "ADOT Directory of Approved Materials Testing Laboratories". Approved test methods listed in the "ADOT Directory of Approved Materials Testing Laboratories" do not include field sampling and testing procedures. When field sampling and testing procedures are performed, the appropriate valid Arizona Technical Testing Institute (ATTI) and/or American Concrete Institute (ACI) certification(s) are required. ADOT Materials Policy and Procedure Directive No. 19, "ADOT System for the Evaluation of Testing Laboratories" and the "ADOT Directory of Approved Materials Testing Laboratories" may be obtained on the internet from the ADOT Materials Quality Assurance Section website.

106.04(C)(6) Weekly Quality Control Reports: of the Standard Specifications is revised to read:

The contractor shall submit Weekly Quality Control Reports to the Engineer. The weekly reports shall be complete and accurate, and shall state the types of work which have been performed during the report period. The report shall also include the process control measures taken to assure quality. The report shall provide sample identification information for materials tested during the report period, including sample number, date sampled,

sample location, first and last name of person obtaining sample, and original source of material. The report shall also provide the results for all required tests and any retests, corrective actions, and other information relevant to quality control. The report shall include daily diaries for each day of testing, a weekly summary, the ADOT TRACS number, and the testing laboratory's project identification number.

Except as stated in the following paragraph, the weekly quality control report shall be prepared using standard forms provided by the Department. The standard forms are available on the Department's website at www.azdot.gov. After accessing the Department's website, select "Business", "Engineering and Construction", "Construction", "Contractors' Information", "Forms and Documents", and then "Weekly Quality Control Forms". Except for the daily diaries, all documentation and information required on the forms shall be typed. Daily diaries may be hand-written if acceptable to the Engineer. The weekly report shall be submitted to the Engineer in paper form with a transmittal letter signed by the contractor's quality control manager.

In lieu of using the standard weekly quality control forms available on the Department's website, the contractor or testing laboratory may prepare the weekly report using proprietary or other software, if acceptable to the Engineer, provided that all required information is included, the format is comparable to the Department's standard format, and the report is submitted in paper form with the required transmittal letter.

The report period shall end at midnight of each Friday, and the report shall be submitted to the Engineer no later than 5:00 p.m. of the following Wednesday. The Engineer will verify that the report is timely, complete and accurate.

Reports that are not submitted by the above-referenced deadline shall be considered delinquent. Reports that are submitted by the above-referenced deadline, but are not complete and accurate, shall also be considered delinquent. In either case monies shall be deducted from the contractor's monthly estimate in accordance with the requirements for Contractor Quality Control, as specified in these special provisions.

(106CERT, 09/14/12)

SECTION 106 CONTROL OF MATERIAL:

106.05 Certificates: of the Standard Specifications is revised to read:

(A) General:

The contractor shall submit to the Engineer an original or copy of either a Certificate of Compliance or a Certificate of Analysis, as required, prior to the use of any materials or manufactured assemblies for which the specifications require that such a certificate be furnished.

Certificates shall be specifically identified as either a "Certificate of Compliance" or a "Certificate of Analysis".

The Engineer may permit the use of certain materials or manufactured assemblies prior to, or without, sampling and testing if accompanied by a Certificate of Compliance or Certificate of Analysis, as herein specified. Materials or manufactured assemblies for which a certificate is furnished may be sampled and tested at any time, and, if found not in conformity with the requirements of the plans and the specifications, will be subject to rejection, whether in place or not.

Certificates of Compliance and Certificates of Analysis shall comply with the requirements specified herein, the ADOT Materials Testing Manual, and applicable ADOT Materials Policy and Procedure Directives.

(B) Certificate of Compliance:

A Certificate of Compliance shall be submitted on the manufacturer's or supplier's official letterhead, and shall contain the following information:

- (1) The current name, address, and phone number of the manufacturer or supplier of the material.
- (2) A description of the material supplied.
- (3) Quantity of material represented by the certificate.
- (4) Means of material identification, such as label, lot number, or marking.
- (5) A statement that the material complies in all respects with the requirements of the cited specifications. Certificates shall state compliance with the cited specification, such as AASHTO M 320, ASTM C 494; or specific table or subsection of the Arizona Department of Transportation Standard Specifications or Special Provisions. Certificates may cite both, if applicable.
- (6) A statement that the individual identified in item seven below has the legal authority to bind the manufacturer or the supplier of the material.
- (7) The name, title, and signature of the responsible individual. The date of the signature shall also be given.

Each of the first six items specified above shall be completed prior to the signing of the certificate as defined in item seven. No certificate will be accepted that has been altered, added to, or changed in any way after the authorized signature has been affixed to the original certificate. However, notations of a clarifying nature, such as project number, contractor, or quantity shipped are acceptable, provided the basic requirements of the certificate are not affected.

A copy or facsimile reproduction of the original certificate will be acceptable; however, the original certificate shall be made available upon request.

(C) Certificate of Analysis:

A Certificate of Analysis shall include all the information required for a Certificate of Compliance and, in addition, shall include the results of all tests required by the specifications.

(106APL, 02/10/12)

SECTION 106 - CONTROL OF MATERIAL:

106.14 Approved Products List: of the Standard Specifications is revised to read:

The Approved Products List is a list of products which have been shown to meet the requirements of these Standard Specifications. The Approved Products List is maintained by the Department and updated monthly. Copies of the most current version are available on the internet from the ADOT Research Center, through its Product Evaluation Program.

The contractor shall verify that any products chosen for use from the Approved Products List are selected from the version which was most current at the time of the bid opening.

Unless otherwise specified in the Special Provisions, products not appearing on the Approved Products List at the time of the bid opening may be used if they meet the requirements of the plans and specifications.

When the Special Provisions limit product selection to only those listed on the Approved Products List, other products will not be evaluated or approved.

(106DMAT, 2/15/11)

SECTION 106 - CONTROL OF MATERIALS: of the Standard Specifications is modified to add:

106.15 Domestic Materials and Products:

Steel and iron materials and products used on all projects shall comply with the current "Buy America" requirements of 23 CFR 635.410.

All manufacturing processes to produce steel and iron products used on this project shall occur in the United States. Raw materials used in manufacturing the steel and iron products may be foreign or domestic. Steel or iron not meeting these requirements may be used in products on this project provided that the invoiced cost to the contractor for such steel products incorporated into the work does not exceed either one-tenth of one percent of the total (final) contract cost or \$2,500, whichever is greater.

Any process which involves the application of a coating to iron or steel shall occur in the United States. These processes include epoxy coating, galvanizing, painting, or any other coating which protects or enhances the value of covered material.

The requirements specified herein shall only apply to steel and iron products permanently incorporated into the project. "Buy America" provisions do not apply to temporary steel items, such as sheet piling, temporary bridges, steel scaffolding and falsework, or to materials which remain in place at the contractor's convenience.

The contractor shall furnish the Engineer with Certificates of Compliance, conforming to the requirements of Subsection 106.05, which state that steel or iron products incorporated in the project meet the requirements specified. Certificates of Compliance shall also certify that all manufacturing processes to produce steel or iron products, and any application of a coating to iron or steel, occurred in the United States.

Convict-produced materials may not be used unless the materials were produced prior to July 1, 1991 at a prison facility specifically producing convict-made materials for Federal-aid construction projects.

(107INS, 7/10/12)

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC:

107.14 Insurance: the first paragraph of the Standard Specifications is revised to read:

Prior to the execution of the contract, the contractor shall file with the Department a certificate or certificates of insurance evidencing insurance as required by this contract has been placed with an insurer authorized to transact insurance in the State of Arizona pursuant to ARS Title 20, Chapter 2, Article 1, or with a surplus lines insurer approved and identified by the Director of the Department of Insurance pursuant to ARS Title 20, Chapter 2, Article 5.

All insurers shall have an "A.M. Best" rating of A- VII or better.

The State of Arizona in no way warrants that the above-required minimum insurer rating is sufficient to protect the contractor from potential insurer insolvency.

The contractor's submission of the required insurance certificates constitutes a representation to the Department that:

1. The contractor has provided a copy of these specifications to every broker who has obtained or filed a certificate of insurance and has communicated the necessity of compliance with these specifications to the broker; and
2. To the best of the contractor's knowledge, each certificate of insurance and each insurance coverage meets the requirements of these specifications.

The contractor shall provide the Department with certificates of insurance (ACORD form or equivalent acceptable to the State of Arizona) as required by the contract. The certificates for each insurance policy shall be signed by a person authorized by that insurer.

(107UTIL, 04/09/15)

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC:

107.15 Contractor's Responsibility for Utility Property and Services: of the Standard Specifications is modified to add:

The contractor shall be ADOT's Blue Stake field locator, and perform all requirements as prescribed in A.R.S. 40-360.21 through .29, for all underground facilities that have been installed by the contractor on the current project, until the project is accepted by ADOT.

At least two working days prior to commencing excavation, the contractor shall call BLUE STAKE CENTER, between the hours of 7:00 a.m. and 4:30 p.m., Monday through Friday for information relative to the location of buried utilities. The number to be called is as follows:

Projects In Maricopa County

(602) 263-1100

Copies of existing ADOT permits, subject to availability, may be obtained from the ADOT Area Permit Supervisor as listed below:

CENTRAL MAINTENANCE DISTRICT

(602) 712-7521

(602) 712-7522

2140 W. Hilton Avenue

Phoenix, AZ 85009

Due to the nature of the work proposed for this project, which involves installation of new loop detectors and removal of existing passive acoustical detectors, we do not anticipate any utility conflicts with construction of the above referenced project.

In addition to your stored specifications under section 107.15, please include the following in the Project Special Provisions:

The following utility companies have facilities within the project limits but are not anticipated to be in conflict:

Company Name	Representative	Facility Type	Route			
			I-10	I-17	US 60	SR51
AGL	Darrel Goolsby (602) 278-3190	COMMUNICATION VAULT, CONDUIT, FIBER		X	X	X
APS	Baldemar Garza (602) 371-7989	ELECTRIC	X	X		X
AT&T	Jeff Forkit (714) 963-7964	COAXIAL, FIBER	X	X	X	
Baker Commodities, Inc.	Conflict Liaison (602) 254-5971	SEWER		X		
Blue Cross Blue Shield of Arizona	Roxanne Long (602) 864-2187	COAXIAL, FIBER		X		
CenturyLink	Eric Hitchcock (602) 630-5474	COAXIAL, FIBER	X	X	X	X
Chem Research	Kyle Parham (Lab & Regulatory Affairs Dir.) (602) 288-6181	MONITORING		X		
City of Chandler	Steve Didomenico (480) 782-3315	RECLAIMED WATER, SEWER, WATER	X			
City of Mesa Utilities	Joan Lasher (480) 644-2882	CHILLED WATER, ELECTRIC, FIBER, GAS, RECLAIMED WATER, SEWER, STORM DRAINS, STREET LIGHTS, TRAFFIC SIGNALS, WATER			X	
City of Phoenix Information Technology Services	Wayne Cook (602) 534-0444	COAXIAL, FIBER	X	X		X
City of Phoenix Traffic Signals	Conflict Liaison (602) 262-6021	FIBER, JUNCTION BOX, TRAFFIC SIGNALS	X	X		X
City of Phoenix Water Services Department	Art Nunez (602) 534-6979	RECLAIMED WATER, SEWER, WATER	X	X		X
City of Tempe	CMMS Group (480) 350-8237	SEWER, TRAFFIC SIGNALS, WATER	X		X	
City of Tempe	Craig Hayton	SPRINKLERS			X	

Parks	(Maint. Spvr.) (480) 350-5971					
City of Tempe Parks - Electric	Dave Cash (480) 250-5096	ELECTRIC			X	
City of Tolleson	Bryce Bragelman (623) 936-7141	SEWER, WATER	X			
Cox Communications	Randy Simms (602) 694-1783	CATV, FIBER	X	X	X	X
El Paso Gas	Russell Williams (Supvr. Damage Prevention) (928) 768-6975	GAS			X	
FCDMC	Rose Wiley (602) 980-6142	ELECTRIC, STORM		X		X
Freescale Semiconductor Inc & Honeywell Intl. Inc.	Pegasus Utility Jeffery Mortenson (602) 278-9168	MONITORING WELLS, UG PIPING	X	X		
Integra Telecom/Electric Lightwave	Lee Stauber (602) 889-6076	FIBER		X		
Kinder Morgan Energy	Garry Zieske (602) 438-4237	PETROLEUM	X			
Level 3 Communications , LLC	Judy Henry (877) 366-8344	FIBER			X	
Maricopa Department of Transportation	Steve Poole (602) 506-8660	FIBER		X		
MCI	Dan Garden (909) 421-3316	FIBER	X			
Mesa Golfland, Ltd.	Royce Stine (480) 834-8319 x104	ELECTRIC, WATER			X	
Roosevelt Irrigation District	Ken Craig (623) 386-2046	IRRIGATION		X		
Roosevelt Water Conservation District	EJ Rusiski (480) 988-9586	IRRIGATION			X	
Secor International (dba Stantec)	Theresa K. Jones (Senior Project Mgr.) (602) 707-4739	WATER		X		
Sprint Communications Company	Colin Sword (800) 521-0579	FIBER		X		

SRP	Mary Anne Itillis (602) 236-0459	COMMUNICATION, ELECTRIC, FIBER, IRRIGATION	X	X	X	X
SWG	Yvonne Aguire (602) 484-5338	GAS	X	X	X	X
SWG High Pressure	Keith Johns (602) 763-9010 Saul Carrasco (SWG High Pressure NE) (602) 768-4521 Keith Jorgensen (SE) (602) 723-3709	HIGH PRESSURE GAS	X	X	X	
Turner Ranches Water & Sanitation Co.	First National Mngt. Inc. (480) 677-6080	IRRIGATION, RELCAIMED WATER, WATER			X	
Windstream Communications, Inc.	Brad Hahn (319) 790-7809	FIBER				X
X.O. Communications, Inc.	Stake Center (888) 267-1063	FIBER	X		X	X

The project is located at various sites on I-10, I-17, US 60 and SR 51. The following tables show the milepost locations where loop detectors will be installed into existing pavement.

I-10

Milepost	Direction	Description
135.85	EB	83rd Ave
136.47	WB	75th Ave
136.89	EB	75th Ave
137.48	WB	67th Ave
137.89	EB	67th Ave
138.44	WB	59th Ave
138.80	EB	59th Ave
139.49	WB	51st Ave
139.80	EB	51st Ave
140.50	WB	43rd Ave
140.81	EB	43rd Ave
141.54	WB	35th Ave
141.82	EB	35th Ave
142.51	WB	27th Ave
142.83	EB	26th Ave (I-10 EB between I-17 NB & SB exit ramps)
143.28	WB	22nd Ave (I-10 WB between I-17 ramps)

143.76	WB	I-10 EB 19th Ave (just east/downstream of I-17 ramps)
147.67	WB	N of Washington

I-17

Milepost	Direction	Descripon
197.94	SB	19th Ave
201.99	NB	Thomas Rd
202.75	SB	Indian School Rd
202.99	NB	Indian School Rd
203.72	SB	Camelback Rd
203.99	NB	Camelback Rd
204.72	SB	Bethany Home Rd
205.01	NB	Bethany Home Rd
205.70	SB	Glendale Ave
206.09	NB	Glendale Ave
206.77	SB	Northern Ave
207.09	NB	Northern Ave
207.77	SB	Dunlap Ave
208.12	NB	Dunlap Ave
208.54	SB	Peoria Ave

US 60

Milepost	Direction	Descripon
172.37	WB	W of Priest
172.37	EB	W of Priest
172.65	EB	Priest Dr
173.61	WB	Mill Ave
173.72	EB	Mill Ave
174.38	WB	Rural Rd
174.61	EB	Rural Rd
175.25	WB	McClintock Rd
175.45	EB	McClintock Rd
176.55	WB	W of Dobson Rd (within SR 101L ramps)
176.67	EB	W of Dobson Rd (within SR 101L ramps)
177.24	WB	Dobson Rd
177.54	EB	Dobson Rd
178.37	WB	Alma School Rd
178.62	EB	Alma School Rd
179.37	WB	Country Club Dr
179.58	EB	Country Club Dr
180.35	WB	Mesa Dr
180.58	EB	Mesa Dr

181.33	WB	Stapley Rd
181.46	EB	Stapley Rd
182.23	WB	Gilbert Rd
182.44	EB	Gilbert Rd
183.19	WB	W of Val Vista
183.52	EB	W of Val Vista
184.36	WB	Val Vista Dr
184.42	EB	Val Vista Dr
185.24	WB	Greenfield Rd
185.54	EB	Greenfield Rd
186.41	WB	Higley Rd
186.41	EB	Higley Rd
187.00	WB	E of Recker Rd
187.50	EB	E of Recker Rd
187.75	WB	Superson Springs
188.26	WB	Power Rd

SR 51

Milepost	Direction	Descripon
0.34	NB	S of McDowell
0.40	SB	McDowell Rd
0.72	NB	McDowell Rd
1.32	SB	Thomas Rd
1.79	NB	Thomas Rd
2.53	SB	Indian School Rd
2.71	NB	Indian School Rd
3.27	SB	Highland Ave
3.97	NB	Colter Ave
4.44	SB	Bethany Home Rd
4.82	NB	Bethany Home Rd
5.48	SB	Glendale Ave

Railroad: There are BNSF and UPRR railroads within ½ mile of the project limits; but, there are no conflicts with the railroads and there is no railroad work on this project.

Prior to the start of construction, AZ 811 should be utilized to locate the existing utilities and verify there are no conflicts. Any discrepancies shall be brought to attention of engineer.

It shall be the contractor’s responsibility to determine the exact location of the utilities prior to any construction operations, and to notify the Engineer at least 2 working days prior to commencing any work if any potential conflicts are observed.

POWER LINES:

The project has overhead power lines and other utilities at various locations throughout the project limits. However, they are not anticipated to be in conflict. All work at or in close

proximity to said power lines shall be performed in accordance with all Federal, State, and local laws and regulations, including but not limited to:

- (1) Arizona law regarding "Underground Facilities" (A.R.S. 40-360.21, .22, .24, .26 & .28)
- (2) Arizona law regarding "High Voltage Power Lines and Safety Restrictions" (A.R.S. 40-360.41-.45)
- (3) The Occupational Safety and Health Administration
- (4) The National Electric Safety Code

The Contractor shall contact AZ 811 a minimum of 10 working days in advance of any need for overhead protection. The contractor will be responsible for protection of utilities facilities.

(107FINA, 09/19/12)

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC:

107.19 Federal Immigration and Nationality Act: of the Standard Specifications is revised to read:

(A) General:

The contractor and all subcontractors shall comply with all federal, state and local immigration laws and regulations, as set forth in Arizona Executive Order 2005-30, relating to the immigration status of their employees who perform services on the contract during the duration of the contract. The State shall retain the right to perform random audits of contractor and subcontractor records or to inspect papers of any employee thereof to ensure compliance.

The contractor shall include the provisions of Subsection 107.19 in all its subcontracts.

In addition, the contractor shall require that all subcontractors comply with the provisions of Subsection 107.19, monitor such subcontractor compliance, and assist the Department in any compliance verification regarding any subcontractor.

(B) Compliance Requirements for A.R.S. § 41-4401, Government Procurement, E-Verify Requirement; Sanctions:

By submission of a bid, the contractor warrants that the contractor and all proposed subcontractors are and shall remain in compliance with:

- (1) All federal, state and local immigration laws and regulations relating to the immigration status of their employees who perform services on the contract, and
- (2) A.R.S. Section 23-214, Subsection A (That subsection reads: "After December 31, 2007, every employer, after hiring an employee, shall verify the employment eligibility of the employee through the E-Verify program.").

A breach of a warranty regarding compliance with immigration laws and regulations shall be deemed a material breach of the contract, and the contractor and subcontractors are subject to sanctions specified in Subsection 107.19(D).

Failure to comply with a State audit process to verify the employment records of contractors and subcontractors shall be deemed a material breach of the contract, and the contractor and subcontractors are subject to sanctions specified in Subsection 107.19(D).

(C) Compliance Verification:

The State may, at any time and at its sole discretion, require evidence of compliance from the contractor or subcontractor.

Should the State request evidence of compliance, the contractor shall complete and return the State Contractor Employment Record Verification Form and Employee Verification Worksheet, provided by the Department, no later than 21 days from receipt of the request for such information.

Listing of the compliance verification procedure specified above does not preclude the Department from utilizing other means to determine compliance.

The State retains the legal right to inspect the papers of any employee who works on the contract to ensure that the contractor or subcontractor is complying with the warranty specified in Subsection 107.19(B).

(D) Sanctions for Non-Compliance:

For purposes of this paragraph, non-compliance refers to either the contractor's or subcontractor's failure to follow immigration laws or to the contractor's failure to provide records when requested. Failure to comply with the immigration laws or to submit proof of compliance constitutes a material breach of contract. At a minimum, the Department will reduce the contractor's compensation by \$10,000 for the initial instance of non-compliance by the contractor or a subcontractor. If the same contractor or subcontractor is in non-compliance within two years from the initial non-compliance, the contractor's compensation will be reduced by a minimum of \$50,000 for each instance of non-compliance. The third instance by the same contractor or subcontractor within a two-year period may result, in addition to the minimum \$50,000 reduction in compensation, in removal of the offending contractor or subcontractor, suspension of work in whole or in part or, in the case of a third violation by the contractor, termination of the contract for default.

In addition, if a contractor is in non-compliance three times within a two-year period, the Department will revoke the contractor's prequalification for a minimum of one year. Subcontractors and suppliers who are in non-compliance three times within a two-year period will be prohibited from participating in Department contracts for a minimum of one year.

Subcontractors who are in non-compliance three times within a two-year period, and who are prequalified with the Department as prime contractors, will also have such pre-qualifications revoked for a minimum of one year.

After the minimum one-year suspension, contractors, subcontractors, and suppliers may be considered eligible to participate in Department contracts, but only after successful demonstration, to the satisfaction of the Department, that their hiring practices comply with the requirements specified herein. If considered eligible, contractors shall be required to re-apply for prequalification and be accepted prior to bidding on Department contracts. Subcontractors interested in bidding on Department contracts as prime contractors shall also be required to re-apply for prequalification and be accepted prior to bidding. For purposes of considering suspension: (1) non-compliance by a subcontractor does not count as a violation by the contractor, and (2) the Department will count instances of non-compliance on other Department contracts.

The sanctions described herein are the minimum sanctions; in case of major violations the Department reserves the right to impose any sanctions up to and including termination, revocation of prequalification, and prohibition from participation in Department contracts, regardless of the number of instances of non-compliance.

Contractors, subcontractors, and suppliers may appeal the sanctions to the State Engineer. That appeal must be in writing and personally delivered or sent by certified mail, return receipt requested, to the State Engineer. The appeal must be received by the State Engineer no later than seven calendar days after the Department's determination. The State Engineer shall promptly consider any appeals and notify the interested party of the State Engineer's findings and decision. The State Engineer's decision shall be considered administratively final.

Any delay resulting from a compliance verification or a sanction under this subsection is a non-excusable delay. The contractor is not entitled to any compensation or extension of time for any delays or additional costs resulting from a compliance verification or a sanction under subsection 107.19.

An example of the minimum sanctions under this subsection is presented in the following table:

Offense by:			Minimum Reduction in Compensation
Contractor	Subcontractor A	Subcontractor B	
First			\$10,000
	First		\$10,000
	Second		\$50,000
		First	\$10,000
	Third		\$50,000 *
* Will, in addition, result in removal of the subcontractor, prohibition from			

participating in Department contracts, and revocation of any Department pre-qualifications that the subcontractor may have obtained.

(108SUBLT, 02/22/16)

SECTION 108 PROSECUTION AND PROGRESS:

108.01 Subletting of Contract: the fifth paragraph of the Standard Specifications is revised to read:

The Department may also refuse to approve any entity as a subcontractor or supplier for any of the reasons for which it could refuse to allow an entity to submit a bid, suspend the entity from bidding, or declare the entity non-responsible.

108.01 Subletting of Contract: the sixth paragraph of the Standard Specifications is modified to add:

- (G) Verification that an alternative dispute resolution process to resolve payment and prompt payment disputes is included in each subcontract. The alternative dispute resolution process shall include a means of prompt escalation beyond the project level and provide the opportunity to hire a mediator.

108.01 Subletting of Contract: the seventh paragraph of the Standard Specifications is revised to read:

The Engineer will not consent to subletting of any portion of the contract until:

- (a) The Engineer receives a copy of the subcontract or lower tier subcontract, and
- (b) The AZUTRACS Registration Number for the subcontractor has been provided.

The contractor's schedule shall allow seven calendar days for the Department's subcontract review of each subcontract.

The Engineer's consent shall in no way be construed to be an endorsement of the subcontractor or its ability to complete the work in a satisfactory manner.

If a subcontractor, of any tier, begins work on the contract prior to the contractor submitting the required documentation and receiving consent from the Engineer, the Department will withhold \$1,000 from monies due or becoming due the contractor as liquidated damages. The liquidated damages will be withheld for each subcontractor, of any tier, that starts work without the consent of the Engineer. These liquidated damages shall be in addition to all other retention or liquidated damages provided for elsewhere in the contract.

If a subcontractor, of any tier, is found working on the project without an approved contract the Engineer will immediately stop work on the subcontract. Work shall not resume until all required documentation is submitted and approved by the Engineer. The contractor shall not be entitled to additional compensation or an extension of contract time for any delays to the work because of the contractor's failure to submit the required documentation.

(108PRCN, 10/03/14)

SECTION 108 PROSECUTION AND PROGRESS:

108.03 Preconstruction Conference: the seventh paragraph of the Standard Specifications is revised to read:

The contractor shall submit a traffic control plan in accordance with Subsection 701-1. The contractor shall designate an employee who is competent and experienced in traffic control to implement and monitor the traffic control plan. The qualifications of the designated employee must be satisfactory to the Engineer. After June 30th, 2015, such designated employee shall have successfully completed a recognized traffic control supervisor training and certification program. The traffic control supervisor training certification provided by the American Traffic Safety Services Association (A.T.S.S.A.) or the International Municipal Signal Association (IMSA) shall be acceptable. Certification through other programs must be approved in advance by the Engineer. The contractor shall submit proof of the proposed individual's certification at the preconstruction conference. The certification shall be current, and must be valid throughout the duration of the project.

(108TIME, 10/12/01)

SECTION 108 - PROSECUTION AND PROGRESS:

108.08 Determination and Extension of Contract Time: the first paragraph of the Standard Specifications is revised to read:

The time allowed for the completion of the work included in the contract will be **200 Working Days**, and will be known as the "Contract Time."

(108FCWT, 7/01/14)

SECTION 108 - PROSECUTION AND PROGRESS:

108.09 Failure to Complete the Work on Time: the Schedule of Liquidated Damages table of the Standard Specifications is revised to read:

SCHEDULE OF LIQUIDATED DAMAGES			
Original Contract Amount		Liquidated Damages Per Day	
From More Than:	To and Including:	Calendar Day or Fixed Date:	Working Day:

SCHEDULE OF LIQUIDATED DAMAGES			
Original Contract Amount		Liquidated Damages Per Day	
From More Than:	To and Including:	Calendar Day or Fixed Date:	Working Day:
\$ 0	\$ 100,000	\$ 430	\$ 600
100,000	500,000	640	900
500,000	1,000,000	1,000	1,400
1,000,000	2,000,000	1,290	1,800
2,000,000	5,000,000	1,860	2,600
5,000,000	10,000,000	2,710	3,800
10,000,000	20,000,000	2,790	3,900
20,000,000	30,000,000	3,570	5,000
30,000,000	60,000,000	5,500	7,700
60,000,000	90,000,000	9,430	13,200
90,000,000	-----	9,430	13,200

(109FORCE, 02/20/08)

SECTION 109 - MEASUREMENT AND PAYMENT:

109.04(D)(3)(a) Rental Rates (Without Operators): of the Standard Specifications is modified to add:

The Rental Rate Blue Book adjustment factor (F) will be **0.933**.

(109RET, 7/01/14)

SECTION 109 - MEASUREMENT AND PAYMENT:

109.06(C) Payroll Submittals: of the Standard Specifications is revised to read:

The contractor shall submit payrolls electronically through the internet to the Department's web-based certified payroll tracking system. This requirement shall also apply to every lower-tier subcontractor that is required to provide certified payroll reports.

If, by the 15th of the month, the contractor has not submitted its payrolls for all work performed during the preceding month, the Engineer will provide written notification of the discrepancies to the contractor. For each payroll document that the contractor fails to submit within 10 days after the written notification, the Department will retain \$2,500.00 from the progress payment for the current month. The contractor shall submit each complete and correct payroll within 90 days of the date of written notification. If the payroll is complete and correct within the 90-day time frame, the Department will release the \$2,500.00 on the next monthly estimate. For each payroll that is not acceptable until after the 90-day time frame, the Department will only release \$2,000.00 of the \$2,500.00 retained. The

Department will retain \$500.00 as liquidated damages. Such \$500.00 retentions will not relieve the contractor of its responsibility to provide each required payroll, complete and correct, as specified above. These liquidated damages shall be in addition to all other retention or liquidated damages provided for elsewhere in the contract.

109.07 Partial Payment for Material on Hand: the fifth paragraph of the Standard Specifications is hereby deleted.

(201MTBRN, 10/18/10)

SECTION 201 - CLEARING AND GRUBBING:

201-3.02 Removal and Disposal of Materials: the second and third paragraphs of the Standard Specifications are revised to read:

In the disposal of all tree trunks, stumps, brush, limbs, roots, vegetation and other debris, the contractor shall comply with the requirements of Title 49, Chapter 3, of the Arizona Revised Statutes, and with the Rules and Regulations for Air Pollution Control, Title 18, Chapter 2, Article 6, adopted by the Arizona Department of Environmental Quality pursuant to the authority granted by the Arizona Administrative Code.

Burning of trash, debris, plant material, wood, or any other waste materials will not be allowed.

(202RMVL, 10/03/14)

SECTION 202 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS:

202-3.07 Removal of Embankment Curb: the second paragraph of the Standard Specifications is revised to read:

Asphaltic concrete obtained from sources approved by the Engineer shall be used to fill and repair voids on the existing pavement surface that result from the removals.

202-3.09 Removal of Guardrail: the first paragraph of the Standard Specifications is revised to read:

All guardrail to be removed shall become the property of the contractor unless otherwise specified on the project plans. Guardrail removal shall include complete removal of posts, concrete foundations, and foundation tubes, and subsequent backfill of the remaining holes with moist soil in compacted lifts, as approved by the Engineer.

202-5 **Basis of Payment:** the first paragraph of the Standard Specifications is revised to read:

Payment for the accepted quantities of removal of structures and obstructions will be made by lump sum or by specific removal items or by a combination of both. Payment for removal of structures and obstructions not listed in the bidding schedule, but necessary to perform the construction operations designated on the project plans or specified in the Special Provisions shall be considered as included in the prices of contract items.

When saw cutting is not included as a contract pay item, full compensation for any saw cutting necessary to perform the construction operations designated on the plans shall be considered as included in the price of contract items.

ITEM 2020053 **REMOVE (PASSIVE ACOUSTIC DETECTORS):**

Description:

The work under this item shall consist of removing the existing Passive Acoustic Detectors (PADs) and the corresponding mounts, straps, brackets, wiring, and any other miscellaneous components related to the PADs in accordance with and at the locations shown on the plans.

Construction Requirements:

Where existing PADs are being removed from existing light poles, CCTV poles, or any other pole supporting various components unrelated and in addition to the PADs, the PADs and their straps, brackets, mounts and any other component specifically related to the PADs shall be removed and the contractor shall ensure the lights, CCTV cameras, or any other separate components on the support poles are untouched and remain in good working order.

All removed PADs, brackets, wiring, and any other miscellaneous components removed shall become the property of the contractor and shall be in accordance with Section 202-3.03(A). These materials shall be removed from the jobsite and disposed of at a location secured by the contractor and approved by the Engineer.

Method of Measurement:

The work Remove (Passive Acoustic Detectors) will be measured as a unit for each PAD removed.

Basis of Payment:

The accepted quantities of Remove (Passive Acoustic Detectors), measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work completed as defined and described above, including removal of the PADs,

brackets, mounts, straps, wiring, disposing of these removed items, and all incidentals necessary to complete the work.

ITEM 2020054 REMOVE (CONCRETE FOUNDATION):

Description:

The work under this item shall consist of removing the existing Passive Acoustic Detectors (PADs) support pole concrete foundations.

Construction Requirements:

Where PADs to be removed are located on stand-alone support poles, the concrete foundations for these support poles shall be removed to a depth of at least 2 feet below grade. After foundation removal, the contractor shall restore the ground to the existing condition.

Method of Measurement:

The work Remove (Concrete Foundation) will be measured as a unit for each concrete foundation successfully removed to at least 2 feet below grade. The work shall include all materials, tools, equipment, and labor necessary to remove and dispose of the items identified on the plans and in this special provision.

No additional measurement will be made for restoring the ground to existing conditions.

Basis of Payment:

The accepted quantities of Remove (Concrete Foundation), measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work completed as defined and described above, including removal of the concrete foundations of the PAD support poles to be removed, disposing of these removed items, restoring the ground to its existing condition, and all incidentals necessary to complete the work.

ITEM 2020155 REMOVE (PASSIVE ACOUSTIC DETECTOR POLE):

Description:

The work under this item shall consist of removing the existing Passive Acoustic Detectors (PADs) support poles at the locations shown on the project plans and in accordance with the requirements of these Special Provisions.

Construction Requirements:

Where PADs to be removed are located on stand-alone poles having the sole purpose of supporting a PAD(s), the poles shall be removed. Where PADs to be removed are located on stand-alone poles having the sole purpose of supporting a PAD(s) located on median concrete traffic barrier, the poles shall be removed and the bolts shall be cut flush with the median concrete traffic barrier.

Method of Measurement:

The work Remove (Passive Acoustic Detector Pole) will be measured as a unit for each pole removed.

Basis of Payment:

The accepted quantities of Remove (Passive Acoustic Detector Pole), measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place.

(207DSP, 02/20/08)

SECTION 209 FURNISH WATER: of the Standard Specifications is hereby deleted.

SECTION 207 BLANK of the Standard Specifications is revised to read:

SECTION 207 DUST PALLIATIVE:

207-1 Description:

The work under this section shall consist of applying all water required for the control of dust as considered necessary for the safety and convenience of the traveling public, and for the reduction of the dust nuisance to adjacent property.

207-2 Blank

207-3 Construction Requirements:

The use of pressure pumps and spray bars on all sprinkling equipment used for the application of dust palliative will be required. The use of gravity flow spray bars and splash plates will not be permitted.

Water applied for dust control shall be as approved or directed by the Engineer. The contractor shall provide appropriate equipment for effective control of dust.

207-4 Method of Measurement and Basis of Payment:

No measurement will be made for application of dust palliative, including furnishing water and all necessary equipment and labor, the cost being considered as included in contract items.

(607POST, 9/08/11)

SECTION 607 - ROADSIDE SIGN SUPPORTS:

607-1 Description: the first paragraph of the Standard Specifications is revised to read:

The work under this section shall consist of furnishing and installing roadside sign supports in accordance with the details shown on the plans and the requirements of the specifications.

607-2.05 Concrete: the last paragraph of the Standard Specifications is revised to read:

Reinforcing steel bars for breakaway sign post foundations shall conform to the requirements of ASTM A 615. Unless otherwise specified, steel bars meeting the requirements of ASTM A 706 may be substituted for ASTM A 615 steel bars. When ASTM A 706 bars are used, tack welding of the reinforcement will not be permitted unless approved in writing by the Engineer. Reinforcing steel wire shall conform to the requirements of ASTM A 82.

(608PANEL, 01/26/16)

SECTION 608 - SIGN PANELS:

608-1 Description: of the Standard Specifications is revised to read:

The work under this section shall consist of furnishing and installing sign panels in accordance with the details shown on the plans and the requirements set forth herein.

The sign panels shall be of the following types:

- Extruded Aluminum Sign Panels with Direct-Applied, Digitally-Imaged, or Demountable Characters
- Flat Sheet Aluminum Sign Panels With Direct-Applied, Digitally-Imaged, Electronic-Cut, or Screen-Printed Characters
- Warning, Marker, and Regulatory Sign Panels
- Route Shields for Installation on Sign Panels
- EXIT ONLY Panels for Installation on Sign Panels

608-2.01 **General:** of the Standard Specifications is modified to add:

Signs shall be fabricated in accordance with the recommendations established by the manufacturer of the sign sheeting. All processes and materials used to make a sign shall in no way impact the performance, uniform appearance (day and night), or durability of the sheeting, or invalidate the sign sheeting manufacturers' warranty.

All sheeting used for background and legend shall be from the same manufacturer. Sign panels shall not be overlaid.

All text and numerals shall all be installed at the same orientation: either zero degrees or 90 degrees.

Design of letters and numbers shall be in accordance with the project plans with a tolerance of $\pm 1/16$ th of an inch.

The contractor shall not paint the bolts or the washers unless otherwise specified.

608-2.02 **Extruded Aluminum Sign Panels With Demountable Characters:** the title of the Standard Specifications is revised to read:

608-2.02 **Extruded Aluminum Sign Panels With Direct-Applied, Digitally-Imaged, or Demountable Characters:**

608-2.02 **Extruded Aluminum Sign Panels With Demountable Characters:** the third paragraph of the Standard Specifications is revised to read:

The letters, numerals, symbols, borders and other features of the sign message shall be direct-applied, digitally-imaged, or demountable, and shall conform to the requirements of Subsection 608-2.14, Demountable Characters, Subsection 608-2.15, Screen-Printed, Direct-Applied, or Electronic-Cut Characters, or Subsection 608-2.16, Digitally-Imaged Characters.

608-2.07 **Flat Sheet Aluminum Sign Panels With Direct-Applied or Silk-Screened Characters:** the title and text of the Standard Specifications are revised to read:

608-2.07 Flat Sheet Aluminum Sign Panels With Direct-Applied, Digitally-Imaged, Electronic-Cut, or Screen-Printed Characters:

Panels shall be fabricated from 0.125-inch thick 5052-H36, or 5052-H38 Aluminum Alloy conforming to the requirements of ASTM B 209.

Panel facing shall be prepared and covered with retroreflective sheeting in accordance with the recommendations of the sheeting manufacturer. The color of the sheeting shall be as specified on the plans or as shown in the Manual of Approved Signs.

All surfaces not covered shall be etched to reduce glare from reflected sunlight.

The retroreflective sheeting shall conform to the requirements of Section 1007. Splicing of retroreflective sheeting shall not be allowed on sign panels having a minimum dimension up to and including four feet.

Messages shall be reflectorized white or, if called for on the plans, opaque black, and shall be produced by either screen printing, direct-applying, digital imaging, or electronic cutting, as specified under Subsections 608-2.15 and 608-2.16.

608-2.09 Warning, Marker, and Regulatory Sign Panels: of the Standard Specifications is revised to read:

Panels shall be fabricated from flat sheet aluminum and shall be reflectorized as specified herein.

Panels shall be fabricated in one piece from 0.125-inch thick 5052-H36, 5052-H38, or 6061-T6 Aluminum Alloy conforming to the requirements of ASTM B 209.

All surfaces of panels to be covered with retroreflective sheeting shall be prepared in accordance with the recommendations of the sheeting manufacturer. Surfaces not covered shall be etched to reduce glare from reflected sunlight. Retroreflective sheeting shall conform to the requirements of Section 1007.

Warning signs shall be reflectorized with fluorescent yellow retroreflective sheeting.

Regulatory signs shall be reflectorized with white retroreflective sheeting.

Reflectorized red signs shall be reflectorized with white retroreflective sheeting. The red color shall be produced by screen printing.

Regulatory signs with reflectorized red circles and slashes shall be reflectorized with white retroreflective sheeting. The red color shall be produced by screen printing.

Interstate route markers shall be cut to shape. The colors and legend shall be as shown on the plans and shall be reflectorized with white retroreflective sheeting. The Interstate route

colors shall be screen-printed. The numerals may be screen-printed, electronic-cut, or direct-applied characters.

United States, State Route, and Cardinal Direction markers shall be reflectorized with white retroreflective sheeting unless otherwise shown on the plans.

Splicing of retroreflective sheeting shall not be allowed on sign panels having the minimum dimension up to and including four feet.

608-2.11 Route Shields (For Installation on Sign Panels): of the Standard Specifications is revised to read:

Route shields may be demountable, direct-applied, or digitally-imaged.

Demountable route shields shall be cut to shape and shall consist of 0.063-inch thick, 5052-H36, or 5052-H38 Aluminum Alloy conforming to the requirements of ASTM B 209. The aluminum shall be degreased and etched in accordance with the recommendations of the sheeting manufacturer. Retroreflective sheeting shall be white and shall conform to the requirements of Section 1007. Route shields shall be attached to the sign panel with self-plugging aluminum blind rivets.

608-2.12 EXIT ONLY (For Installation on Sign Panels): the title and text of the Standard Specifications are revised to read:

608-2.12 EXIT ONLY Panels (For Installation on Sign Panels):

EXIT ONLY panels may be demountable, direct-applied, or digitally-imaged. Demountable EXIT ONLY panels shall be attached to the sign panel with self-plugging aluminum blind rivets.

Demountable EXIT ONLY panels shall be fabricated from 0.063-inch thick, 5052-H36 or 5052-H38 Aluminum Alloy conforming to the requirements of ASTM B 209 with fluorescent yellow retroreflective sheeting adhered to the face side. The aluminum shall be degreased and etched in accordance with the recommendations of the sheeting manufacturer. Retroreflective sheeting shall conform to the requirements of Section 1007.

608-2.13 Retroreflective Sheeting, Inks and Opaque Film: the second and third paragraphs of the Standard Specifications are hereby deleted.

608-2.14(A) General: the second paragraph of the Standard Specifications is revised to read:

Flat sheet aluminum substrates used for characters and borders shall be either aluminum alloy 3105-H14, 3003-H14, 5052-H36, or 5052-H38 as specified in ASTM B 209. Characters produced from the flat sheet aluminum alloy shall sit flat on the face of the sign panel without visible gap or deformation.

608-2.14(B) Sheeting and Colors: the third, fourth, and fifth paragraphs of the Standard Specifications are revised to read:

The color for demountable letters, numbers, symbols, and route shields on green, blue, and brown background signs shall be white, and shall conform to the requirements of Section 1007. Demountable legends on white and yellow background signs shall be black, and shall be opaque and non-reflective. Black characters shall be finished with laminated black opaque acrylic film.

When borders are used with demountable characters, white legend and border shall be used on green, blue, or brown sign backgrounds, and black legend and border shall be used on white or yellow sign backgrounds. Sign sheeting conforming to Section 1007 shall be used for white borders. Black borders shall be laminated black opaque acrylic film.

Laminated black opaque acrylic film to be used for characters or borders, as specified above, shall be applied in accordance with the coating manufacturer's recommendations. The contractor shall provide copies of any warranties provided by the manufacturer to the Engineer.

608-2.15 Silk-Screened or Direct-Applied Characters: the title and text of the Standard Specifications is revised to read:

608-2.15 Screen-Printed, Direct-Applied, and Electronic-Cut Characters:

Screen-printed letters, numerals, arrows, symbols, and borders, shall be applied on the retroreflective sheeting background of the sign by direct or reverse screen process. Messages and borders of a color darker than the background shall be applied to the retroreflective sheeting by direct process. Messages and borders of a color lighter than the sign background shall be produced by the reverse screen process.

Opaque or transparent colors, inks, and paints used in the screen process shall be of the type and quality recommended by the manufacturer of the retroreflective sheeting.

The screening shall be performed in a manner that results in a uniform color and tone, with sharply defined edges of legends and borders and without blemishes on the sign background that will affect intended use.

Signs, after screening, shall be air dried or baked in accordance with the manufacturer's recommendations to provide a smooth hard finish. Any signs on which blisters appear during the drying process will be rejected.

Direct-applied letters, numerals, symbols, borders, and other features of the sign message shall be cut from black opaque or retroreflective sheeting of the color specified and applied to the retroreflective sheeting of the sign background in accordance with the instructions of the manufacturer of the retroreflective sheeting.

Direct-applied legend may be moved vertically 1/2 inch to avoid placing only a small amount of material over the adjacent extruded panel. The bottom of all characters for a line of legend shall line up within 1/8 of an inch.

Electronic-cut characters shall be cut from translucent acrylic sheeting using computerized automated cutting processes.

608-2 **Materials:** of the Standard Specifications is modified to add:

608-2.16 **Digitally-Imaged Characters:**

Digitally-imaged characters shall consist of characters produced through ultraviolet jet-printing or thermal transfer. Signs with digitally-imaged characters shall be manufactured using matched component ink, transparent electronic-cutable film, and/or overlay film as supplied by the reflective sheeting manufacturer. For digitally-imaged copy on white sheeting, the coefficient of retroreflection shall be not less than 70 percent of the original values for the corresponding integral color. When characters are spread over two adjacent extruded panels, the characters shall align with each other within 1/16th of an inch.

608-3.01 **Fabrication:** of the Standard Specifications is modified to add:

During fabrication of the sign panels, the contractor shall ensure the bolt holes on each sign panel are placed so the holes will not coincide with any legend and any bolts, washers, or other hardware used will not cover any portion of the legend. If the bolt holes on a sign panel do not comply with these requirements, the Engineer may reject the sign panel or accept the sign panel and require the contractor to paint the bolts, washers, and any hardware coinciding with the sign legend to match the color of the legend.

608-3.02 **Installation of Sign Panels:** of the Standard Specifications is revised to read:

The sign panels shall be installed on overhead sign structures and roadside sign supports in accordance with the details shown on the plans and in accordance with the recommendations of the manufacturers of the sign panel components.

Minor scratches and abrasions resulting from fabrication, shipping and installation of panels may be patched; however, patching shall be limited to one patch per 50 square feet of sign area with the total patched area being less than five percent of the sign area. Panels requiring more patching than the specified limit will be rejected. Patches shall be edge sealed by a method approved by the retroreflective sheeting manufacturer.

Sign panels shall be attached to the posts with hex head bolts as shown in the Standard Drawings; slotted head bolts shall not be used. A cadmium-plated or zinc-plated fender washer shall be placed between the bolt head and panel face.

For flat sheet panels, bolts shall be fastened with a cadmium-plated or zinc-plated fender washer and two standard nuts. Nylon washers shall not be used. The fender washer shall be placed against the sign post, the first nut shall be tightened against the fender washer, and the second nut shall be tightened against the first nut. Bolts shall be tightened from the back by holding the bolt head stationary on the face of the panel. Twisting of the bolt head on the panel face will not be allowed.

The contractor shall provide two copies of a detailed list of all new signs installed on the project to the Engineer. The list shall include the sign identification code, the date each sign was installed (month and year), the fabricator of the sign, and the materials used to make the sign (manufacturer, type of sheeting, ink and film). The list shall be provided in a commonly used electronic spreadsheet format, such as EXCEL, and the two copies shall be submitted on CD-ROM disks. Signs shall be listed in numerical order by route, direction, and milepost and, where more than one sign is installed at the same general location, a letter subscript.

Sign panels within the same sign assembly shall be placed at the same orientation along the roadway so that the entire legend of the signs appear uniform under normal viewing conditions, both day and night.

Upon fabrication or installation of each sign, the contractor shall place information on the back of the sign showing the sign identification code, the sign fabricator, the manufacturer of the sheeting used, and the month and year of the installation. The formatting of the required information shall be as shown on the standard drawings. The information shall be positioned to be readily visible from a vantage point outside the flow of traffic and not obstructed by sign posts, extrusions, stringers or brackets. All letters shall be made of a long life material such as a black opaque acrylic film. Signs not marked as required will not be eligible for payment.

Temporary traffic control signs are exempt from the installation information requirement unless noted otherwise on the project plans.

608-3.04 **Inspection:** the second paragraph of the Standard Specifications is revised to read:

Each sign panel face shall be cleaned thoroughly just prior to the inspection by a method recommended by the manufacturer. The cleaning material shall in no way scratch, deface or have any adverse effect on the sign panel components.

608-4 **Method of Measurement:** of the Standard Specifications is revised to read:

Sign panels will be measured by the square foot for each type or types of sign panels furnished and installed. Individual sign panels will be measured to the nearest 0.1 square foot. The total area of each type of sign panel will be summed and rounded to the nearest square foot.

The area of each sign panel, except for warning, regulatory and marker sign panels, will be measured per plans dimensions.

For warning, regulatory and marker sign panels, the area of each sign panel will be determined as follows:

The areas of each rectangular, square or triangular sign panel will be determined from the dimensions shown on the plans.

The area of irregular shaped signs, such as stop signs and route markers, will be determined by multiplying the maximum height in feet by the maximum width in feet, using the dimensions shown on the plans.

Miscellaneous Work (Sign Panels) will be measured on a lump sum basis.

608-5 **Basis of Payment:** first and second paragraphs of the Standard Specifications are revised to read:

The accepted quantities of each type of sign panel designated in the bidding schedule, measured as provided above, will be paid for at the contract unit price per square foot, complete in place, regardless of the type of sheeting or type of character used on the sign panel. Payment shall be made on the total area of each type of sign panel to the nearest square foot.

No additional payment will be made for signs with sheeting applied to both sides, the cost being considered as included in the contract unit price for the sign panel.

No measurement or payment will be made for Route Shields and EXIT ONLY Panels (for installation on sign panels), the cost being considered as included in the contract unit price for the sign panel.

ITEM 6080110 REMOVE AND REINSTALL SIGN:

Description:

The work under this item shall include furnishing all materials, tools, equipment and labor necessary to remove and reinstall the existing sign panels as identified on the project plans to new sign supports with new foundations...

Construction Requirements:

The contractor shall remove the sign panels located on PAD support poles that are being removed as part of this project and reinstall the sign panels onto new sign supports with new foundations at the locations indicated on the project plans. The contractor shall safeguard the existing sign panels so they are not damaged. If the Engineer determines the existing sign panels are damaged due to the contractor's operations, the contractor shall repair or replace the damaged sign panels, as directed by the Engineer, at the contractor's

expense. The contractor shall install existing sign panels onto the new supports and new foundations in accordance with section 608-3.02 of the Standard Specifications and this Special Provisions document.

Method of Measurement:

The work Remove and Reinstall Sign will be measured as a unit for each sign panel successfully removed from its existing location and reinstalled on the new sign supports. The work shall include all materials, tools, equipment, and labor necessary to remove the existing sign panel and reinstall it on the new sign supports.

Basis of Payment:

The accepted quantities of Remove and Reinstall Sign, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place.

(701PDMPT, 9/26/14)

SECTION 701 - MAINTENANCE AND PROTECTION OF TRAFFIC:

701-1 Description: the third paragraph of the Standard Specifications is revised to read:

When a traffic control plan is included in the project plans, this plan shall govern unless an alternate plan, acceptable to the Engineer, is submitted by the contractor. If no traffic control plan is provided or if the contractor desires to deviate from the provisions for maintaining traffic as described in this section, it shall submit to the Engineer for approval a proposed sequence of operations and a compatible method of maintaining traffic. After June 30th, 2015, such submittal shall be prepared by an employee of the contractor that has successfully completed a recognized traffic control supervisor training and certification program, as specified in Subsection 108.03. A traffic control plan proposed by the contractor may also be prepared by an individual that is not an employee of the contractor provided the individual is also currently certified through the traffic control supervisor training and certification program specified in Subsection 108.03. However, the contractor bears all responsibility for any such contractor-submitted traffic control plan, whether prepared by its direct employee or other individual.

The contractor's proposal shall be submitted early enough to allow at least two weeks for review and approval before use of the proposed traffic control plan.

701-2.01(B)(1) General Requirements: item (d) of the second paragraph of the Standard Specifications is revised to read:

- (d) The name, title and signature of a person having legal authority to bind the manufacturer or supplier of the Category I and II devices. The binding authority

shall be in accordance with the applicable requirements of Subsection 106.05(B).

701-2.03 Temporary Concrete Barrier: the second paragraph of the Standard Specifications is revised to read:

The contractor shall provide, at the preconstruction conference, a certificate of compliance, conforming to the requirements of Subsection 106.05, stating that any temporary concrete barrier to be used on the project conforms to Signing and Marking Standard Drawing C-3. The contractor shall include the project number on the submittal.

701-2.04 Temporary Impact Attenuation Devices: the second paragraph of the Standard Specifications is revised to read:

Temporary impact attenuation devices shall also meet evaluation criteria for Test Level 3 per NCHRP (National Cooperative Highway Research Program) Report 350, or for Test Level 3 per MASH (AASHTO Manual for Assessing Safety Hardware). The contractor shall provide, at the preconstruction conference, a certificate of compliance, conforming to the requirements of Subsection 106.05, certifying that any temporary impact attenuation devices to be used on the project will meet the above requirement. The contractor shall include the project number on the submittal.

701-3.05 Temporary Pavement Markings (Application and Removal):

(C) Preformed Pavement Markings: the first paragraph of the Standard Specifications is revised to read:

Preformed pavement markings for temporary applications shall be Type II (Temporary-Removable) and III (Temporary-Nonremovable) and shall conform to the requirements of Section 705 of the specifications.

701-3.07 Truck-Mounted Attenuator: the title and text of the Standard Specifications are revised to read:

701-3.07 Truck-Mounted and Trailer-Mounted Attenuators:

The contractor shall provide trucks and truck-mounted attenuators, or trailer-mounted attenuators and host vehicles, at the locations shown on the project plans and/or as directed by the Engineer.

Truck-mounted or trailer-mounted attenuators shall meet either NCHRP Report 350, Test Level 3 criteria, or MASH (Manual for Assessing Safety Hardware), Test Level 3 criteria, passing both mandatory and optional tests. The truck and attenuator combination shall only be used in the configuration tested. Trailer-mounted attenuators shall be used with a host vehicle meeting the minimum weight requirements specified in the MASH or NCHRP tests.

A truck being used for a truck-mounted attenuator shall have a sequential arrow display panel or changeable message board.

Truck-mounted attenuators that require chocking or blocking of the vehicle to meet NCHRP Report 350 or MASH certification shall not be used.

Truck-mounted attenuators shall have rear-mounted, black and yellow chevron stripes and a standard trailer lighting system, including brake lights, turn signals, ICC-bar lights, and two yellow rotating beacons or strobe lights mounted on opposite rear corners of the truck approximately 4-1/2 feet above the bottom of the tires. A Type C arrow panel or changeable message board shall be provided on the truck, and shall be designed for truck installation. There shall be a minimum of seven feet from the roadway to the bottom of the panel or board. Frame work shall be an integral part of the truck and be permanently mounted in such a way as to prevent the unit from separating from the truck in the case of a collision.

Trailer-mounted attenuators shall include rear-mounted black and yellow chevron stripes.

For each proposed truck-mounted or trailer-mounted attenuator, the contractor shall provide a Certificate of Compliance, in accordance with Subsection 106.05, to the Engineer for approval prior to use. For truck-mounted attenuators, the certificate shall also include the certified weigh bill for the truck, and for trailer-mounted attenuators the certificate shall state the minimum weight for the host vehicle. The certificate shall state that the attenuator meets the specified criteria, and shall clearly state the roll-ahead distance. A copy of this documentation shall be kept in the truck cab or host vehicle, available for immediate inspection when requested by the Engineer.

When in use for attenuation, trucks with attenuators shall be used exclusively as truck-mounted attenuators. Such trucks shall not be used to carry or store equipment or devices, secured or unsecured. No modification in configuration or use shall be allowed without a resubmitted certified weigh bill for the Engineer's approval.

Truck-mounted or trailer-mounted attenuators used as shadow vehicles per the MUTCD shall be positioned at a distance greater than the roll-ahead distance in advance of the workers or equipment being protected so that there will be sufficient distance, but not so much that errant vehicles will travel around the shadow vehicle and strike the protected workers and/or equipment.

The contractor shall cease operations when a truck-mounted or trailer-mounted attenuator is damaged. The contractor shall not resume operations until the attenuator has been repaired or replaced, unless authorized by the Engineer.

701-3.08 **Changeable Message Board:** of the Standard Specifications is revised to read:

Changeable message boards shall be furnished and maintained by the contractor at the locations shown on the plans and as specified by the Engineer. The operations and messages programmed into the board controller shall be as directed by the Engineer. The

changeable message board shall be a complete and operational portable unit which shall consist of a wheeled trailer with an adjustable, changeable message board, board message controller and self-contained power supply.

The power supply for the changeable message board shall be a fully independent self-contained trailer-mounted system. The changeable message board power supply shall be battery operated and rechargeable from a solar panel mounted above the changeable message board.

The message characters shall be delineated by either electromagnetically actuated reflective dots or optically enhanced Light Emitting Diode (LED) pixels operating under the control of a digital computer.

The contractor shall submit, at the pre-construction conference, a Certificate of Compliance that the changeable message board to be used on this project shall be as described herein.

The character formation system and components shall conform to the following requirements:

- (1) The changeable message board shall be programmable, and shall be capable of displaying a minimum of three lines of message copy, with a minimum of eight characters per line, in various alphanumeric combinations.
- (2) The changeable message board matrix configuration shall be 35 dots or pixels per character in a 5 horizontal by 7 vertical arrangement of the dots or pixels.
- (3) The dot or pixel size shall be a 2.5-inch high by 1.625-inch wide rectangle (minimum), or equivalent area.
- (4) Each character shall be 18 inches in height and 12 inches in width (minimum).
- (5) The horizontal character separation shall be 3 inches or more.
- (6) Dot color shall be fluorescent yellow upon activation and flat black when not activated. The LED pixels shall emit amber light upon activation and be dark when not activated.
- (7) The line separation shall be 5 to 12 inches.
- (8) Changeable message boards shall be protected with a clear lexan-type or equivalent shield that shall not interfere with or diminish the visibility of the sign message.
- (9) The programmable message board shall be capable of displaying moving arrow patterns as one of the operator-selected programs.
- (10) The message board shall also be capable of displaying up to 2 messages in sequence, with variable timing in a minimum of quarter-second increments.

- (11) The message board shall be clearly visible and legible from a distance of 800 feet under both day and night conditions. The dot-matrix board shall have an internal illumination system that shall automatically activate under low light conditions to achieve the visibility requirements. The LED-pixel matrix board shall adjust light output (pulse width modulation) to achieve the visibility requirements.
- (12) The power supply achieved from the battery and solar panel recharging system shall have sufficient capacity to operate the changeable message board for a minimum of 20 days without direct sunshine. The solar panel array shall be capable of recharging the batteries such that 2.5 to 3.5 hours of direct sunshine shall provide for a minimum of one 24-hour period of usage. Additionally, the battery recharging controller shall have an ambient temperature sensing device which will automatically adjust the voltage supplied from the solar panels to the batteries. The sensing device shall ensure that the batteries are properly charged in hot or cold weather and shall provide the sign with sufficient power to operate the sign as specified.

When in operation, the changeable message board trailer shall be offset a minimum of 8 feet from the nearest edge of pavement. If the trailer is located behind temporary concrete barrier, a minimum offset of 6 feet will be required. Should the specified shoulder width not be available, a minimum 2-foot offset from the nearest edge of pavement or temporary concrete barrier shall be required. When positioned on the highway, the changeable message board trailer shall be delineated with a minimum of 10 Type II barricades or vertical panels with Type C steady burn lights at a spacing of 10 to 20 feet, or as shown on the approved traffic control plan.

When not in operation, the changeable message board shall be moved a minimum of 30 feet from the edge of pavement.

The changeable message board trailer shall be placed on a level surface and be secured as recommended by the manufacturer and as directed by the Engineer. The contractor shall provide any necessary incidental grading and clearing work required to provide a level surface and clear area for the sign.

701-3.10 Sign Sheetings: of the Standard Specifications is revised to read:

Sign sheeting for all temporary work zone signs shall conform to the requirements of Section 1007.

701-3.13 Flagging Services: of the Standard Specifications is revised to read:

Flagging services shall consist of either civilian, local enforcement officers and their vehicles, or DPS (Department of Public Safety) officers and their vehicles. The Engineer will determine the type of flagger needed, and may adjust the relative number of hours of each type of flagger specified in the traffic control plan.

If available, only DPS officers shall be used on Interstate Highways and Urban Freeways. DPS officers shall also be used on other construction projects except when a local law enforcement agency has jurisdiction, in which case a local law enforcement officer and vehicle shall be used.

The contractor shall be responsible to procure civilian flaggers, DPS officers, and local enforcement officers. When procuring DPS officers, the contractor shall contact DPS at least two business days before flagging services will be required. Such contact must be made between the hours of 7:00 A.M. and 5:00 P.M. (M.S.T.).

In the event that local enforcement officers or DPS officers are temporarily unable to provide flagging services, the contractor shall ensure that traffic control is maintained and all personnel are protected, either by providing civilian flaggers or through other means as approved by the Engineer. No adjustments to the contract will be allowed for any delays resulting from the unavailability of local enforcement officers or DPS officers.

A DPS or local enforcement officer shall not work more than 12 consecutive hours unless an emergency situation exists which, in the opinion of the Engineer, requires that the officer remain in the capacity of a flagger.

The contractor shall furnish verification to the Engineer that all civilian flaggers have completed a recognized training and certification program. Flaggers certified by the American Traffic Safety Services Association (A.T.S.S.A.) or by the National Safety Council shall be acceptable. Certification through other programs offering flagger training must be approved by the Engineer. Flagger certification must be current. Training and certification shall be required at least once every four years.

701-4.03(E) Limitation of Measurement: the second paragraph of the Standard Specifications is revised to read:

Measurement will be made after the initial installation and once weekly thereafter for items in continuous use and at any other times changes are made in the use of traffic control elements listed under Subsection 701-4.01(B). The contractor shall notify the Engineer when any changes are made in the use or location of traffic control elements.

701-4.04 Measurement of Work Elements: Sub-paragraph (A) of the Standard Specifications is revised to read:

- (A) Temporary concrete barrier will be measured by the linear foot along the center line of the uppermost surface upon its initial installation (Complete-in-Place), and upon any subsequent relocations, as defined in Subsection 701-5.01. Barrier will be measured by linear foot for each 24-hour day for the "In-Use" condition.

701-4.04 Measurement of Work Elements: Sub-paragraph (C) of the Standard Specifications is revised to read:

- (C) Truck-Mounted Attenuators, including driver, and Trailer-Mounted Attenuators, including host vehicle and driver, will be measured by the day for each 24-hour

day that a truck-mounted or trailer-mounted attenuator and operator are used to protect the work site.

701-4.04 Measurement of Work Elements: Sub-paragraph (F) of the Standard Specifications is revised to read:

- (F) Civilian flagging services will be measured by the hour for each hour that a civilian flagger is provided. Flagging services by DPS officers and local enforcement officers will be measured for each hour that a uniformed, off-duty DPS officer or law enforcement officer with vehicle is employed directly by the contractor as a flagger within the project limits, when authorized in advance by the Engineer. Quantities will be rounded to the nearest 0.5 hour.

Civilian, DPS, or local enforcement flagging services and traffic control devices required to permit contractors' traffic to enter safely into normal traffic within the project limits will be paid under their respective items. Flaggers required by a written local permit agreement will be measured for payment under this item. Additional civilian, DPS, or local enforcement flagging services used within the project limits shall be measured for payment under this item, subject to the approval of the Engineer.

Civilian, DPS, or local enforcement flagging services and traffic control devices used outside the project limits will be measured under their respective items. The Department will pay 50 percent of the unit bid price for such flaggers and traffic control devices used as described in this paragraph, subject to the approval of the Engineer. The project limits are defined as the construction work zone as shown on the approved traffic control plan for the specific section of highway under construction.

701-5.01 Temporary Concrete Barrier (Installation and Removal): of the Standard Specifications is revised to read:

Temporary concrete barrier, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, as specified herein and as shown on the plans, including furnishing, placing, dismantling, and removal. The price bid shall also include any required connection devices, barrier markers, and glare screen.

Fifty percent of the contract unit price for temporary concrete barrier will be paid upon satisfactory installation.

Should it be necessary to dismantle, pick up and relocate a portion of the barrier installation during construction, whether laterally or vertically, that portion of the removed and relocated barrier will be considered a new installation and paid for at 100 percent of the contract unit price.

Fifty percent of the contract unit price will be paid upon final removal.

No payment will be made for portions of the barrier which the contractor can adjust or realign without dismantling and picking up, such cost being considered as included in the bid price for Temporary Concrete Barrier "Installation and Removal." The Engineer will be the sole judge as to whether devices are to be dismantled, picked up and reinstalled, or are to be adjusted or realigned.

701-5.02 Temporary Impact Attenuators (Installation and Removal): of the Standard Specifications is revised to read:

Temporary Impact Attenuation Devices shall include Sand Barrels and Energy Absorbing Terminals. Temporary Impact Attenuation Devices, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, as specified herein and as shown on the plans, including furnishing the devices with replacement parts, installing, removing and stockpiling the devices.

Fifty percent of the contract unit price for temporary impact attenuators will be paid upon satisfactory installation.

Should it be necessary to dismantle, pick up and reinstall attenuation devices during construction, the work of removing and reinstalling the devices will be considered a new installation and paid for at 100 percent of the contract unit bid price.

Fifty percent of the contract unit price will be paid upon final removal.

The Engineer will be the sole judge as to whether devices are to be dismantled, picked up and reinstalled or are to be adjusted or realigned. No additional payment will be made for devices which are adjusted or realigned, the cost being considered as included in the contract unit price paid for Temporary Impact Attenuator "Installation and Removal."

Measurement and payment for furnishing materials, equipment and labor and repairing attenuation devices that are damaged by the traveling public will be made in accordance with the requirements of Subsection 109.04 of the specifications.

No measurement or direct payment will be made for furnishing replacement parts and repairing devices damaged by other than the traveling public.

701-6.05 Truck-Mounted Attenuators: of the Standard Specifications is revised to read:

The accepted quantities of truck-mounted attenuators or trailer-mounted attenuators, measured as provided above, will be paid for at the unit bid price for truck-mounted attenuators per day of work site protection, which rate shall be full compensation for the work, complete, including, but not limited to, furnishing all materials; equipment; attached arrow panel or changeable message board; and labor (including the operator); and maintaining and repairing the truck and truck-mounted attenuator, or trailer-mounted attenuator and host vehicle, as specified herein and on the project plans. No adjustment to the unit bid price for truck-mounted attenuators will be made when trailer-mounted

attenuators are provided, such price being considered as full compensation for the work, as specified herein, regardless of which type of attenuator is used to protect the work site. It shall be the contractor's responsibility to replace any damaged or destroyed parts of the truck-mounted attenuator or trailer-mounted attenuator and host vehicle at no additional cost to the Department.

701-6.06 Flashing-Arrow Panels, and Changeable Message Boards: the second paragraph of the Standard Specifications is revised to read:

The accepted quantities of changeable message boards, measured as provided above, will be paid for at the unit bid price per day, which price shall be full compensation for the work, complete, including incidental grading; furnishing, operating, maintaining, and relocating the boards on the work site; and providing all necessary labor. Signs, sign stands, Type II barricades, or vertical panels and lights that are used to delineate changeable message boards shall be paid for at the respective unit bid prices.

701-6.07 Pilot Services, and Flagging Services: the last paragraph of the Standard Specifications is revised to read:

The accepted quantities of flagging services provided by the DPS officers, measured as provided above, will be paid for at the predetermined hourly rate of \$65.26, as shown in the bidding schedule. Of this amount, \$44.00 per hour shall be remitted to the DPS officer, and \$12.75 per hour shall be remitted to DPS. The remaining \$8.51 per hour represents profit and overhead for both the prime contractor and subcontractor. Such price shall be considered full compensation for the work. No additional payment will be made for costs in excess of the predetermined rate, for overtime hours, and for travel time to and from the project, such costs being considered as included in contract items.

SECTION 732 - ELECTRICAL UNDERGROUND MATERIALS:

732 – 1 Description: of the Standard Specifications is modified to add:

The work under this section shall consist of furnishing and installing conduit, pull boxes, bonding and grounding systems, fiber optic cable systems, cable tray systems, and equipment racks as shown on the project Plans or required by the project Special Provisions. The work shall include excavation, installation of conduit, removal of spoils, backfill, compaction of directional drilling and jack and bore pits, warning tape, detectable pull tape, connectors and fittings, locating existing conduit when new is to be intercepted with existing, and restoration of the surface to existing condition, including the replacement of decomposed granite and other landscaping items where appropriate.

732 – 2.02 Electrical Conduit and Warning Tape: of the Standard Specifications is modified to add:

All conduit, innerduct, and fiber optic cable installations that require a pull tape shall use pull tape with a minimum of 2,500 lbs pulling tension.

732 – 2.01B(3) IMSA Cable: of the Standard Specifications is modified to add:

IMSA No. 19-1, or approved equal, four-conductor, No. 14 AWG, solid conductor, shall be used for the ramp metering signals and beacons.

All electrical conductors that are left un-terminated shall be coated by a waterproofing method that is approved by the Engineer.

732 - 2.03 Pull Boxes: of the Standard Specifications is modified to add:

During pulling, all cables shall be lubricated at each No. 7 with extension and No. 9 pull box.

732 - 2.03 Pull Boxes: the fourth paragraph of the Standard Specifications is revised to read:

No. 7 and No. 7 w/extension pull box covers shall be marked as follows: "ADOT FMS" in one-inch letters. Unless otherwise stated on the Plans. All No. 7 pull boxes shall be 18 inches in height.

732 - 3.01 Installation of Electrical Conduit and Pull Boxes: tenth paragraph of the Standard Specifications is revised to read:

All underground conduits shall be at a minimum depth of 30 inches, unless noted otherwise on the project Plans. Where conduit in protected and open areas cannot be installed at the minimum depths, it shall be encased in Class B concrete.

All new and existing conduits shall be cleared by pulling through a metal-disc mandrel with a diameter of 90 percent of the conduit inside diameter for PVC conduit, or a ball mandrel with a diameter of 80 percent of the conduit inside diameter for HDPE.

732 - 3.01 Installation of Electrical Conduit and Pull Boxes: of the Standard Specifications is modified to add:

A minimum of three feet shall separate any expansion coupling on any PVC conduit from the pipe sleeve the PVC enters. Expansion couplings shall be staggered to keep the PVC entering the pipe sleeve as straight as possible.

Conduits containing communication cable shall follow NEC guidelines for power conduits with regard to installation.

The contractor shall positively identify all exposed power and communication cables in each pull box using color coded labels attached within 3 feet of the cable entry into a pull box, and on both sides of a splice.

Prior to any trenching, the contractor shall verify, with utility record drawing information, the existence of any cathodic protection in all existing utilities and take all possible precautions to maintain existing cathodic protection.

732-5.03 Conduits: of the Standard Specifications is modified to add:

Payment for conduit shall include, but not limited to: materials, labor, excavation, backfill and compaction, pavement replacement, potholing existing utilities, saw cutting, conduit, warning tape, pull tape, couplings, fittings, expansion fittings, sweeps (36-inch minimum), hangers, core drilling, raking back granite and preserving the existing conditions, replacement of landscaping and other surface improvements as incidental to the bid item for each conduit classification as shown in the bidding schedule. Vertical conduits and conduit sweeps, conduit in pull boxes, conduit in foundations, and clearing and grubbing are not measured and are not paid. The contractor shall account for these conditions in the unit prices bid for other items. The contractor is alerted to the fact that hand digging may be required in the installation of trenches and pull boxes. No extra payments will be made for hand digging.

732-5.04 Pull Boxes: of the Standard Specifications is modified to add:

If a larger pull box is required where an existing pull box is installed, all activities in regard to the removal of the smaller pull box shall be considered included to the installation of the new, larger pull box and will not be measured or paid.

ITEM 7320050	ELECTRICAL CONDUIT (2") (PVC):
ITEM 7320070	ELECTRICAL CONDUIT (3") (PVC):
ITEM 7320150	ELECTRICAL CONDUIT (3") (RIGID METAL):
ITEM 7320291	ELECTRICAL CONDUIT (2") (HDPE DIRECTIONAL DRILL):

Description:

The work under these items shall consist of furnishing and installing conduit, including horizontal directional drilling, horizontal directional boring, excavating, backfilling, compacting, warning tape, detectable pull tape, connectors and fittings, locating existing conduit when new is to be intercepted with existing, and restoration of the surface to

existing condition, including but not limited to the replacement of concrete slabs, stabilizing concrete, decomposed granite, irrigation and other landscaping items where appropriate, in accordance with the ITS Standard details and as shown on the project plans and these project Special Provisions.

The contractor shall replace or adjust, as requested by the Engineer and based upon the inventory, existing conduit sweeps into pull boxes, conduit orientation and alignment, unusable conduit, bell ends or fittings within the project limits as called for on the project plans and as resulting from an inventory of existing conduit.

Materials:

Conduits are constructed of various materials, including, but not limited to, Schedule 40 Polyvinyl Chloride (PVC), Rigid Metal Conduit (RMC), Intermediate Metal Conduit (IMC), and Flexible Metal Conduit, conforming to Subsection 732-2.02, and High Density Polyethylene (HDPE), conforming to the following specifications.

Should the contractor choose to substitute HDPE conduit in place of the installation of direct buried PVC conduit, the HDPE conduit must meet the specifications for HDPE conduit listed below, and the contractor shall provide original data sheets or a Certification of Compliance letter from the HDPE conduit manufacturer to the Engineer stating that the product meets these Special Provisions and obtain the written approval from the Engineer prior to procuring and installing the HDPE conduit.

Unless otherwise shown on the Plans; bends, conduit fittings, expansion joints, 36-inch sweeps and other conduit accessories not specifically mentioned shall be manufactured from a material similar to the connecting conduit.

Conduit elbows intended for new or future fiber optic cable installations shall have a minimum radius of 36-inches. All other conduit elbows shall be a minimum radius of 24-inches.

(A) HDPE Conduit:

HDPE conduit shall have a minimum rating of SDR 11. It shall have a cell classification of PE334470C (for black conduit) and PE334470E (for colored conduit) per ASTM 3350: Standard Specification for Polyethylene Pipe and Fittings Materials.

The polyethylene base resin shall meet the density requirement and melt index properties described herein. The density shall not be less than 0.940 and not more than 0.955 g/CM³ in accordance with ASTM D 1505: Standard Test Method for Density of Plastics by the Density-Gradient Technique. The range for the melt index shall be between 0.05 to 0.5g/10 minutes in accordance with ASTM D 1238: Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer. The HDPE conduit shall have a minimum Flexural Modulus, of 80,000 psi, per ASTM D 790 and a minimum tensile strength at yield of 3,000 psi, per ASTM D-638.

Additives to the base resin shall be included to provide heat stabilization, oxidation prevention and ultraviolet (UV) protection. It shall utilize carbon black in the range of 2 to 3 percent for long term protection against UV degradation. The minimum protection period shall be one year from date of manufacture in unprotected, outdoor storage in accordance with ASTM D 1603: Standard Test Method for Carbon Black in Olefin Plastics.

HDPE conduit and fittings shall comply with ASTM D 2241 and ASTM-F2160-01.

The contractor shall provide the Engineer with manufacturer's certification of analysis and compliance showing that HDPE conduit meets these specifications.

(B) Conduit Warning Tape:

Conduit warning tape shall be a minimum four-mil composite reinforced thermoplastic, with a minimum width of 3 inches and minimum length of 5 feet. Warning tape shall be highly resistant to alkalis, acids, and other destructive agents found in the soil.

Warning tape shall have a continuous printed message warning of the location of underground conduits. The message shall be in permanent ink specifically formulated for prolonged underground use and shall bear the words, "CAUTION - ELECTRIC LINE BURIED BELOW" or "CAUTION - COMMUNICATION CABLE BURIED BELOW" in black letters on a red (electric) or orange (communications) background. Where both electric and communications lines are in a single trench, both tapes, and described above, shall be provided.

(C) Detectable Pull Tape:

Detectable pull tape shall be constructed of fiber and have an imbedded No. 22 AWG conductor. The tape shall be low-stretch and moisture-resistant. The tape shall have nominal pull strength of 2,500 pounds. The tape shall include distance markings at intervals not to exceed two feet.

Construction Requirements:

Construction Requirements shall conform to Section 732, unless otherwise specified in the ITS Standard Drawings, in the ITS Standard Drawings, on the project plans, or these Special Provisions.

Conduit installation shall conform to Subsection 732-3.01, with the exception of the following requirements and revisions.

(A) Conduit Routing and Underground Obstructions:

The contractor shall restore, repair or replace, as directed by the Engineer, any damaged or contaminated vegetation and/or landscaping features, decomposed granite and irrigation facilities, walkways, utilities, other existing electrical items resulting from its construction activities.

The contractor shall contact the Engineer to arrange and coordinate work in the vicinity of any irrigation lines. Spaghetti lines to vegetation and feeder hoses may not be Blue Staked, but shall be repaired or replaced if damaged during construction, at no additional cost to the Department.

Excavations shall not be left open over 48 hours unless a plan has been submitted and approved by the Engineer to allow for open excavation. Safety devices used for the protection of excavations shall not be considered as traffic control items.

Conduit shall be placed in accordance with the lines, grades, details and dimensions as shown on the project plans and these Special Provisions, unless otherwise approved by the Engineer.

Conduit runs shown on the plans are depicted to indicate the intended path from point to point. The actual pathway shall be staked prior to any excavation and shall be modified as necessary, as approved and directed by the Engineer, to avoid obstacles and obstructions that will prevent ease of installation, obstacles and future maintenance or conformance with appropriate codes and specifications. Final conduit locations shall be documented and submitted to the Engineer in the form of a record drawing.

(B) Conduit Size:

Changes in the size of the conduit shall, prior to construction, be submitted to the Engineer for approval. All changes in conduit size shall be documented by the contractor in the form of a record drawing.

(C) Conduit Bends and Deflection:

Except for factory bends, conduit bends shall have a radius of not less than that specified in the NEC. Conduit shall be bent without crimping or flattening, using the longest radius practicable. Communications conduits shall not deflect more than one inch per foot (1:12) vertically or horizontally. This is equivalent to a minimum radius of 6 feet.

If the 1:12 rule cannot be achieved, standard factory-made elbows of 11 1/4, 22 1/2, 30 or 45 degrees shall be used if approved by the engineer.

(D) Conduit Ends and Connections:

New runs of HDPE conduit shall be continuous from pull box to pull box, unless otherwise shown on the project plans. HDPE conduit shall not be joined to PVC conduit in the length of the run. At pull boxes and/or cabinets where new HDPE is required to transition into new or existing PVC elbows, the contractor shall submit for approval a manufacturer recommended coupling.

When joining segments of HDPE conduit, the contractor shall utilize non-corrosive, sit-tight, water-tight couplings. Heat fusion, electrofusion fittings and mechanical connections shall

be permitted if the HDPE conduit and joining device manufactures recommendations are observed and the internal diameter of the HDPE conduit is not reduced. Extrusion welding and hot gas welding to join HDPE conduits is not permitted.

Upon completion of joining HDPE conduit sections and setting the pull boxes, the contractor shall clean the HDPE conduit with compressed air. The contractor shall demonstrate by pulling a cleaning mandrel or ball mandrel, correctly sized for the conduit (80 percent of the HDPE inside diameter), that the conduit was not deformed during installation. If the mandrel passes through the HDPE the contractor shall install the pull tape in accordance with Section 732 of these Special Provisions. If the mandrel encounters a deformity in the HDPE conduit, the contractor shall replace the entire segment of HDPE between pull boxes with new HDPE at no cost to the Department.

(E) Conduit Expansion Fittings:

Expansion fittings shall be installed in conduit runs which cross an expansion joint in a structure. Approved expansion fittings shall be as shown in the ITS Standard Drawings or project plans. Conduit encased in a structural member shall be installed in accordance with the National Electrical Code, or as approved by the Engineer.

A minimum of three feet shall separate any expansion coupling on any conduit from the pipe sleeve the conduit enters. Expansion couplings shall be staggered to keep the conduit entering the pipe sleeve as straight as possible.

Where bonding is not continuous, expansion fittings shall be provided with a bonding jumper of No. 6 AWG conductor. Allow enough slack conductor to accommodate the range of expansion supported by the expansion coupling.

Where it is not possible to use expansion fittings, sleeves of sufficient size shall be installed to provide a minimum 0.5 inch clearance between the conduit and the inside wall of the sleeve. The sleeve shall be discontinuous at the expansion joints.

(F) Conduit Depth:

Conduits shall be at a minimum cover depth of 30 inches, or as indicated in the project plans. Backfill compaction shall be in accordance with Subsection 203-5.03 (B) (4).

When conduit in protected and open areas cannot be installed at the minimum depths, it shall be encased in Class B concrete, as defined in Section 1006.

(G) Conduit in Trenches:

Immediately after conduits are installed, they shall be sealed to prevent the intrusion of water, mud, gravel, vermin, etc. The conduits shall be sealed after mandrelling, tracer wire and/or pull tape, cable and/or fiber, installation. Taping the ends of the conduit is not allowed.

All unoccupied conduits on which work is performed shall be sealed with a water-tight, corrosion-proof, removable, reusable, and vermin resistant conduit plug or cap. Prior to use, the conduit plug or cap shall be submitted to the Engineer for approval.

Occupied conduits on which work is performed shall be sealed with a conduit cap, as approved by the Engineer. The conduit cap must be water-tight, corrosion-proof, removable, and vermin resistant.

All unoccupied innerduct on which work is performed extending beyond the end of the capped conduit shall be sealed with a water-tight, corrosion-proof, removable, reusable, and vermin resistant innerduct plug or cap. Prior to use, the innerduct plug or cap shall be submitted to the Engineer for approval.

Occupied innerduct on which work is performed extending beyond the end of the capped conduit shall be sealed with a innerduct cap, as approved by the Engineer. The innerduct cap must be water-tight, corrosion-proof, removable, and vermin resistant.

A three inch "Y" shall be cut into the face of the curb directly over conduit located under rolled or vertical curbs.

The contractor shall place warning tape in all trenches in which new PVC or trenched HDPE conduit is placed. Warning tape is not required in conduit segments where trenchless methods are used for installation. All warning tape shall be buried at a depth of six to eight inches below the finished grade.

(H) Conduit by Trenchless Methods:

Conduit under existing pavement, curbs and gutters, traffic barrier, sidewalks, concrete flatwork, textured or decorative surfaces, and at other specified locations, shall be installed by Horizontal Directional Boring (HDB) or Horizontal Directional Drilling (HDD) methods. Use of either method is allowed, subject to approval of the Engineer.

Conduit installation in areas where trenching would typically be allowed may be installed by trenchless method, if preapproved by the Engineer as a means of facilitating installation or mitigating potential damage to existing surface and subsurface elements.

The proposed profile shall be submitted to the Engineer, after the contractor has completed the necessary potholing, and approved prior to beginning the operation at each location.

Directional boring/drilling shall be used to install all conduits along a prescribed path from the surface with minimal impact to the surrounding area. Installation shall be performed in accordance with industry standards and as directed by the Engineer.

The contractor's installation process shall utilize the "walkover" locating system, or other Engineer approved equivalent, for determining the installation profile. The installation equipment shall register the depth, angle, rotation and directional data. At the surface, equipment shall be used to gather the data and relay the information to the equipment operator.

Excavation and backfill of excavated pits shall be in accordance with the requirements of Subsection 203-5.03 (B) (4).

When enlargement of an installation hole is necessary, the hole shall be at least 25 percent larger than the conduit to be installed, unless otherwise specified by the Engineer. Pulling equipment such as grips, pulling eyes, and other attachment hardware external to the conduit will be permitted as long as a wooden dowel is placed inside the conduit to prevent it from collapsing at the point of attachment when pull tension is at its peak. A swivel shall be used with all pulling hardware when pulling back the conduit into the installation path. Drilling fluid shall be pumped down the hole to provide lubrication for the conduit as it is pulled in. The pulling tension for installing conduit into the installation path shall not exceed 75 percent of the conduit manufacturer's tensile strength rating in order to prevent the conduit from "necking down" or deforming.

All final installation profiles shall be submitted to the Engineer.

(I) Detectable Pull Tape:

The contractor shall install detectable pull tape with a minimum of 2,500 lbs pulling tension in all new and existing empty conduits and all conduits with new fiber optic cable.

For all conduits that require detectable pull tape, the detectable pull tape shall terminate at the end of the conduit with a minimum of 2 feet of coiled slack in each pull box. The detectable pull tape traveling through conduit that terminates in a pull box, shall have its wire ends connected together to allow for a continuous locating signal to be used for the entire conduit run.

(J) Conduits Embedded in Concrete Structures or attached to Concrete Structures:

Attachment or embedding conduit in any concrete structure shall require advance approval of the Engineer.

Approved conduit either within an open bridge cell or attached to structures shall be rigid metal conduit (RMC). Where required for esthetic reasons RMC shall be painted to match the color of the existing bridge structure. Painting may require pre-treatment of the RMC and will be done at the direction of the Engineer.

For bridges over 1,000 feet in length, or as indicated on the project plans, intermediate junction boxes should be evenly spaced.

(K) Incorporation of Existing Conduit, Empty or Occupied:

Existing underground conduit to be incorporated into a new system shall be cleaned and blown out with compressed air.

Where cables are to be installed in conduit with existing cables or wires that will remain, the contractor shall disconnect, remove, reinstall, and reconnect the existing cables and wires as determined by the Engineer, to facilitate the installation of the new cable.

Two weeks prior to disconnecting any existing cables, the contractor shall submit a schedule, for approval by the Engineer, with the timeframes of when the existing cables are to be disconnected.

The contractor shall be responsible for any damage to the existing cables or wires caused by this operation. Existing wires and cables shall be considered in good condition unless the contractor demonstrates to the contrary to the Engineer, prior to commencing removal of any cable or conductor from the conduit(s).

No more than one week prior to installation of cable or conductors, all new and existing conduits in which cable or conductors are to be installed shall be cleared/cleaned by pulling through a metal-disc mandrel with a diameter of 90 percent of the conduit inside diameter for PVC conduit, or a ball mandrel with a diameter of 80 percent of the conduit inside diameter for HDPE. The conduit may be brushed or swabbed, if deemed necessary, prior to pulling the mandrel through the conduit.

Where indicated on the plans, the contractor shall remove and dispose of existing cables and/or conductors in existing conduits. Prior to their removal, all cables and/or conductors to be removed shall be identified and marked at all intermediate pull boxes. These cables and/or conductors shall be cut at all intermediate pull boxes before being removed. Conduits to remain empty for future use shall have a detectable pull tape installed.

Where multiple cables, conductors, and pull tape are required to be installed in the same conduit, all the materials shall be installed at the same time.

(L) Conduit Entering Pull Boxes:

Conduit entering pull boxes shall be installed in accordance with the details shown on the project plans and the ITS Standard Drawings.

Conduit ends shall be capped with conduit end cap or plug fittings until wiring or cabling is installed. When end caps or plugs are removed, all new conduit ends in pull boxes shall be provided with an approved conduit end bell, as shown in the ITS Standard Drawings. End bells shall be installed prior to the installation of the conductors or cables. Approved insulated grounding bushings shall be used on steel conduit ends.

(M) Cathodic Protection:

Prior to any trenching, the contractor shall verify the existence of any cathodic protection in all existing utilities and take all possible precautions to maintain existing cathodic protection.

(N) Conduit Reconditioning:

Conduit and innerduct reconditioning shall be completed prior to the start of work on any other items related to use of existing conduits and innerducts.

Method of Measurement:

Electrical conduit will be measured by the linear foot for each diameter size, regardless of method of installation; from center to center of pull boxes, from edge of foundation to center of pull box, from end of conduit to center of pull box or foundation, from end to end of conduit when no pull boxes are used. Rigid metal conduit measurement shall include vertical distance in addition to horizontal distance.

No measurement will be made for conduit that is below ground in vertical conduit stub-ups or field equipment cabinets.

No measurement for payment shall be made for cleaning out of existing conduit, or for the disconnecting, removing, reinstalling and reconnecting any existing cables or conductors in existing conduit into which new cable or conductors are to be installed, the cost being considered as included in the cost of the contract items.

No measurement or direct payment will be made for furnishing or installing detectable pull tape, the cost being considered as included in the cost of the contract items.

Basis of Payment:

The accepted quantities of electrical conduit, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, including warning tape, excavation, backfill, detectable pull tape, connectors, fittings, horizontal directional drilling, horizontal directional boring, removal of spoil, compaction of trenches and directional drilling/boring pits, restoration of the surface to existing condition, including concrete, pavement, decomposed granite and other landscaping items where appropriate, repair of irrigation facilities, locating of existing conduit when new is to be intercepted with existing, and all incidentals necessary to complete the work.

No direct payment will be made for rigid metal conduit bends or rigid non-metallic conduit bends at pull boxes, expansion fittings and coupling fittings, the cost being considered as included in the contract price for the conduit items.

ITEM 7320450 PULL BOX (NO. 7)(FMS STD FM-2.06):

Description:

The work under this item shall consist of furnishing and installing pull boxes for ITS elements, including restoration of the surface to existing condition, including but not limited to the replacement of concrete slabs, stabilizing concrete, decomposed granite, irrigation

and other landscaping items where appropriate, in accordance with the project plans and these project Special Provisions.

The contractor shall replace or adjust, as requested by the Engineer and based upon the inventory, existing pull box extensions, pull boxes, lids or any other work needed to remedy conditions of existing pull boxes within the project limits as called for on the project plans and in these Special Provisions.

Materials:

All pull boxes and lids shall conform to the applicable ITS Standard Drawings, project plans and these project Special Provisions.

Pull box lids shall bear the words "ADOT FMS" unless otherwise specified on the project plans and in the Special Provisions.

Markings shall be clearly defined and shall be placed parallel to the long side of the cover. Letters shall be a minimum of 1 inch in height. Letters shall be raised or recessed into the lid, but shall not be stenciled or painted.

All pull boxes shall have a locking mechanism approved by the Engineer.

No. 7 pull boxes shall be a precast, polymer concrete, fiberglass reinforced, pull box, conforming to the ITS Standard Drawings. A certificate of compliance, in accordance with Subsection 106.05 shall be supplied for structural capabilities and materials used in manufacture. Concrete pull boxes and lids shall not be used. Contractor shall submit test results to certify that the pull box sidewalls and lids remain intact when subjected to the loading conditions specified.

No. 7 pull boxes shall be 24 inches in depth, and consist of a single-piece box unit. Stacked units shall not be used unless otherwise specified on the project plans or in the Special Provisions. No. 7 pull box shall have pre-formed knockouts located in the short ends of the box.

Chipped, cracked or otherwise damaged pull boxes and lids will not be accepted.

Construction Requirements:

Construction Requirements shall conform to Section 732, unless otherwise specified in the ITS Standard Drawings, in the ITS Standard Drawings, on the project plans, or these Special Provisions.

Pull boxes shall be field located, and approved by the Engineer, to avoid drainage swales, maintenance vehicle pathways or repeating wheel loads.

The contractor shall be responsible for restoring the surrounding surface conditions back to their original condition.

Existing pull boxes shown on the project plans to be removed and/or replaced shall be removed and disposed of, away from the project site, by the contractor.

When a new pull box occupies the same location as an existing pull box, the existing bricks, stone sump and felt paper shall be replaced with new. In instances where an existing 12 inch depth pull box is replaced by a 24 inch depth pull box, the contractor shall adjust the existing conduits, as necessary, to allow the conduit to enter the bottom of the box in conformance with the ITS Standard Drawings, the project plans and these Special Provisions.

The compaction around pull boxes shall not cause the sides to deflect or any part of the box or lid to crack or become dented. The contractor shall replace any cracked, broken, chipped or damaged pull boxes or lids at no additional cost to the Department.

Locations where the project plans call for the installation of a new pull box by splicing of conduit, existing conduits shall be excavated and exposed, cut, and spliced with conduit entering pull boxes installed in accordance with the details shown on the project plans and the ITS Standard Drawings.

Conduit ends shall be capped with conduit end cap or plug fittings until wiring or cabling is installed. When end caps or plugs are removed, all new conduit ends in pull boxes shall be provided with an approved conduit end bell, as shown in the ITS Standard Drawings. End bells shall be installed prior to the installation of the conductors or cables. Approved insulated grounding bushings shall be used on steel conduit ends.

The contractor shall record drawing the GPS latitude and longitude coordinates, ± 5 feet, of each new and existing pull box and provide the Engineer with an electronic GIS file that contains such information.

Method of Measurement:

The No. 7 Pull Boxes (FMS STD FM-2.06) will be measured as a unit for each pull box, furnished and installed.

Basis of Payment:

The accepted quantities of No. 7 Pull Boxes (FMS STD FM-2.06), measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, including any excavating and backfilling and surface restoration necessary to complete the work.

The cost of removal and disposal of existing pull boxes where it is determined as necessary from the field inventory, the adjustment of existing conduits to allow proper entry into new pull boxes, shall be considered included in the unit price of the pull box item.

ITEM 7350030 LOOP DETECTOR FOR TRAFFIC SURVEILLANCE (6'X6'):

Description:

The work under this item includes furnishing and installing new detection, pre-formed and/or saw cut detector loops, associated loop slot sealant, loop splice kits, and loop detector surge protectors to form loop systems at designated locations as shown on the project plans.

All work shall conform to Section 735, unless otherwise specified in the ITS Standard Drawings, or the project plans and Special Provisions.

Materials:

Except as specified in Subsection 735-2.01(F), all materials shall be furnished by the contractor. The contractor shall submit a complete list of all required project material for approval.

Certificates of Compliance:

If requested by the Engineer, the contractor shall furnish certified reports that state that the loop wire fully complies with the requirements of these specifications. A statement shall be attached to the certified report indicating that the batches furnished were manufactured under the same conditions as the batches tested. All testing shall be accomplished by an independent testing laboratory approved by the Engineer. The contractor shall pay for all of the services of the testing laboratory, at no cost to the Department.

Loop Wire:

Loop detector wire for sawcut loops shall be No. 14 AWG, stranded, conductors in orange tube, conforming to IMSA 51-7, as shown on the ITS Standard Drawings.

Loop detector wire for pre-formed loops shall be No. 16 AWG, stranded, TFFN in orange PVC or polypropylene tubing, as shown on the ITS Standard Drawings.

Loop Slot Sealant:

The contractor shall furnish and install loop slot sealant, depending on the pavement surface to be sealed, conforming to the following requirements, to seal the loop slots and surface holes for the loop stub-out conduits. The contractor shall provide the expiration date of the material used, in the equipment submittal and review process.

Saw cut sealants shall be a flexible encapsulant intended for sealing and protecting vehicle detector loop wires installed in saw cuts.

(A) Two-Part Epoxy Filler Sealant:

Two-part epoxy joint filler sealant shall be a 100-percent solids, flexible, two-component, solvent free, epoxy resin/hardener system for use as a saw cut sealant in asphaltic concrete pavements and Portland cement concrete pavements.

Materials shall comply with the requirements of Subsection 1015-1 of the Specifications.

The epoxy system shall be specifically designed for the intended application according to the product literature provided by the manufacturer.

The epoxy system shall be of sufficient strength and hardness to withstand stress and abrasion from vehicular traffic, while remaining flexible enough to provide stress relief under thermal movement and protect the loop wire from moisture penetration. It shall also be moisture insensitive to allow effective application to damp pavements. No standing water is permitted on the surfaces to which the epoxy system is to be applied.

The epoxy system shall be designed to enable vehicular traffic to pass over properly filled saw cuts immediately after installation without tracking or stringing of the material.

Properly installed and cured epoxy systems shall exhibit resistance to the effects of weather, motor oils, gasoline, anti-freeze solution, brake fluid, deicing chemicals, and salt in such a manner that the performance of the vehicle detector loop wire is not adversely affected.

The epoxy system shall be designed for roadway installation when the surface temperature is a minimum of 40 degrees F and rising. The cured epoxy system shall be temperature stable and exhibit no degradation in performance throughout the ambient pavement temperature ranges experienced within the State of Arizona.

The components of the epoxy system shall have a minimum shelf life of 12 months in original unopened, undamaged containers, when stored in a cool dry environment, as recommended by the manufacturer.

The epoxy system shall meet the following requirements:

Property	Test Method	Requirements
Mixing Ratio; Part A to Part B	-	1 to 1 by volume
Viscosity, centipoises	ASTM D 2393-86	4000 to 8000
Pot Life, minutes	ASTM C 881	12 to 20
Cure Time, minutes	ASTM C 679	60 maximum, Tack Free
Hardness (Shore D)	ASTM D 2240	35 to 65
Tensile Elongation, percent	ASTM D 638	50 minimum
Water Absorption, percent (24 hrs)	ASTM D 570	1 maximum
3 percent Salt Water Absorption, percent (24 hrs)	-	0.03 to 0.20
Oil Absorption, percent (24 hrs)	ASTM D 471	0.01 to 0.02
Gasoline Absorption, percent (24 hrs)	-	0.05 to 0.90

(B) One-Part Elastomeric Sealant:

One-part elastomeric sealant may be used to seal saw cuts in Portland cement concrete pavement and lean concrete base.

The sealant shall provide compressive yield strength to withstand normal vehicular traffic as well as sufficient flexibility to withstand normal movement in concrete pavements, while protecting the loop wire from moisture penetration.

The encapsulant shall be a 1-part elastomeric compound requiring no mixing, measuring or application of heat prior to or during its installation.

The encapsulant shall, within its stated shelf life in original undamaged packaging, cure only in the presence of moisture. The rate of cure will, therefore, depend upon temperature and relative humidity at the time of installation. Cool dry weather will slow curing whereas warm, humid weather will accelerate curing.

The encapsulant shall be designed to enable vehicular traffic to pass over the properly filled saw cut immediately after installation without tracking or stringing of the material. The encapsulant shall form a surface skin allowing exposure to vehicular traffic within 30 minutes at 75 degrees F and completely cure to a tough, rubber-like consistency in two to seven days after installation.

Properly installed and cured encapsulant shall exhibit resistance to effects of weather, vehicular abrasion, motor oils, gasoline, anti-freeze solution, brake fluid, deicing chemicals and salt normally encountered, in such a manner that the performance of the vehicle detector loop wire is not adversely affected.

The cured encapsulant shall be temperature stable and exhibit no degradation in performance throughout the ambient pavement temperature ranges experienced within the State of Arizona.

The encapsulant shall exhibit minimal shrinkage during or after its installation, and in no manner affect the performance characteristics of the material.

The encapsulant shall be designed to permit clean-up of material and application equipment, prior to curing of the encapsulant, with a suitable non-flammable solvent. Should any encapsulant material be allowed to cure in the application nozzle, it shall be able to be pulled out as a solid plug.

The encapsulant shall have a minimum 12-month shelf life in undamaged original containers when stored in a cool, dry environment.

The encapsulant shall be designed for roadway installation when the surface temperature is between 40 and 140 degrees F.

The encapsulant shall have the following physical properties in its uncured and cured states.

Uncured (Wet) Encapsulant		
Property	Requirement	Test Procedures

Weight	10.1 ± 0.3 pounds/gallon	A. Weight/Gallon
Total Solids by Weight	75 – 85 Percent	B. Determination of Non-Volatile Content
Viscosity	10,000 - 85,000 Centipoise	C. Dynamic Viscosity
Drying Time	Touch: 24 Hours, Maximum Complete: 30 Hours, Max.	D. Tack-Free Time

Cured Encapsulant		
Property	Requirement	Test Procedure
Hardness (Indentation)	65 – 85	E. Rex Hardness
Tensile Strength	500 Pounds per Square Inch, Minimum	F. Tensile & Elongation
Elongation	300 Percent, Minimum	

(C) Hot Applied Rubberized Sealant:

Hot applied rubberized sealant may be used to seal saw cuts in asphaltic concrete and in lean concrete base. It shall be suitable for use as a sealant for traffic loop saw cuts and be non-tracking under traffic. At application temperatures, the traffic loop sealant shall be a thin, free flowing fluid which penetrates saw cuts and self-levels permitting uniform application. The sealant shall be melted and applied to pavements using a pressure feed melter unit. Pour pot application is not acceptable. The sealant shall be a relatively stiff sealant but shall remain flexible at low pavement surface temperatures. The test results shall conform to the following specifications for the loop detector sealant.

Test	Specification
Penetration: 125 degrees F, 50g, 5s	50 maximum
Penetration: 77 degrees F, 100g, 5s	10 – 25
Softening Point:	210 degrees F minimum
Ductility: 77 degrees F	15 cm minimum
Mandrel Bend: 0 degrees F, 90o Arc, 10s, 3/4 inch diameter	Pass 2 of 3
Recommended Pour Temp:	380 degrees F
Safe Heating Temp:	420 degrees F
Brookfield Viscosity: 400 degrees F	7,500 centipoise max.
Unit Weight:	8.5 pounds per gallon

Coverage; 1/2 by 1/2 inch crack	11.0 pounds per 100 feet
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Construction Requirements:

Loop construction of saw cut and pre-formed loops shall conform to the ITS Standard Drawings and project plans, including loop numbering nomenclature.

The contractor shall furnish and install all necessary loop wire, hold down materials, loop slot sealant, saw slots, pre-formed loops (when applicable), stub-out conduit from saw slots to pull boxes, testing, and incidental materials necessary to complete the installation.

(A) Saw Cut Loops:

Prior to installing the loop wire or lead-in cable, the contractor shall cut the slots, drill the conduit holes, and complete the installation of associated conduit and pull boxes. The contractor shall use clean water to prevent blowing dust while cutting the slots. The contractor shall flush the slots, vacuum water out of slots and from roadway, and then blow the loop slots with oil free compressed air to dry them and free them from debris, taking necessary safety precautions. The slots shall be thoroughly cleaned to allow sealant to adhere to the sides of the slot.

Debris shall be disposed of in a manner approved by the Engineer. Any materials entering the storm drains from the area shall be removed at the contractor's expense.

The contractor shall install the loop wire in the slots without damage to the insulation. The contractor shall not splice the loop wire at any point, except to the lead-in cable in the pull box. Loop shall consist of one continuous piece of wire from the pull box, through the loop, and back to the pull box.

If the loop is installed in reinforced concrete, or is at least 2-inches below the roadway surface, four turns of the loop shall be required. The loop wire pair from the corner of the loop in the roadway to the pull box shall be twisted 3 times per foot. All required turns of loop wire shall be installed in the same slot.

Loop wires shall be a minimum of 1.5 inches below the pavement surface in new pavements, and a minimum of 2 inches below the pavement surface in existing pavements, measured from pavement surface to top of top loop wire tube.

The contractor shall solder splice the loop wire to its associated lead-in cable in the pull box, and shall watertight seal the splice. Solder used for splicing shall be resin core solder with 60 percent tin and 40 percent lead.

The contractor shall seal the slots with loop slot sealant. The contractor shall ensure that the slots are clean and dry with no residue remaining at the time of sealing. The contractor shall seal the conduit entrance at the curb, or in the roadway, with loop slot sealant. During the sealing operation, the ambient air temperature shall be within the application range specified by the sealant manufacturer. The sealant shall be installed in a manner that will fill

the slot to its full depth and will totally encapsulate the wire or cable, and as shown in the ITS Standard Drawings. The Contractor shall strike off and remove any excess sealant and remove it from the site.

(B) Pre-Formed Loops:

Pre-formed loops shall be installed in accordance with the ITS Standard Drawings, the project plans and Special Provisions.

All new preformed loops shall be labeled per the provisions stated above.

Loop Test Requirements:

As part of the Stand-Alone test, the contractor shall incrementally test the complete loop system in the presence of the Engineer. If the loop system fails any of the following tests, the contractor shall, at no expense to the Department, replace any defective splices, wire or cable and resplice and relabel, if necessary, the loop wire and lead-in cable. The loop system shall then be re-tested in the presence of the Engineer until subject loop passes the tests successfully.

The contractor shall perform the following tests on each loop in the pull box, in the presence of the Engineer, both before the sealant has been poured and after the sealant has hardened.

(1) Insulation Resistance to Ground Test:

The insulation resistance to ground for each detector loop shall be measured with a MegOhmmeter (Megger) connected between the loop wire and the nearest reliable electrical ground, such as a meter, metal pole or fire hydrant, or to a metal rod driven 3 feet into the ground between the roadway and the pull box. The insulation to ground shall not measure less than 100 MegOhms at 500 VDC.

(2) Series Resistance Test:

The series resistance of each 6' x 6' loop, measured by an Ohmmeter, shall be between 0.1 and 0.8 Ohms. The maximum resistance of the other loops shall not exceed 10 Ohms.

(3) Inductance Test:

The inductance of each loop will be measured with an inductance tester. The accepted inductance shall be in the range of 50 to 100 microHenries for a 3-turn 6' x 6' loop and 100 to 155 microHenries for a 4-turn 6' x 6' loop, and the test may add 22 microHenries per 100 feet of lead-in cable. The Contractor shall notify the Engineer of any unacceptable readings:

Method of Measurement:

The work of Loop Detector For Traffic Surveillance (6'X6') will be measured as a unit, by size, for each detector loop furnished, installed and passing required testing.

No additional measurement or payment will be made for testing of new loops, loop slot sealant, saw cutting, and all other components and work necessary to provide a complete functional loop detection system.

Stub-out conduit from saw slot to pull box shall be measured and paid under the applicable item number for Electrical Conduit.

Basis of Payment:

The accepted quantities of Loop Detector For Traffic Surveillance (6'X6'), measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place and successfully tested, including loop slot sealant, saw cutting, and all other components and incidentals necessary to complete the work.

ITEM 7350051 DETECTOR CARD:

Description:

The work under this item shall include, but is not limited to, furnishing all materials, tools, equipment, and labor necessary to furnish and install detector cards for controlling the operation of the ITS devices served by the cabinet, as shown in the ITS Standard Drawings or project plans and Special Provisions.

Materials:

The Model 222 Two-Channel Detector Card shall provide two loop-type vehicle detector channels for detecting vehicles and actuating the Model 2070 controllers. Each detector card shall conform to the requirements of the plans and to the following requirements:

Each card shall draw no more than 100 mA from the + 24 ± 6 VDC cabinet power supply and shall be insensitive to 700 mV RMS ripple on the incoming + 24 VDC line.

The detector card front panel shall be provided with a handle to facilitate insertion and removal.

All control switches, gain controls, and channel indicators shall be mounted on the front panel.

Each card shall have an indicator to provide visual indication of detection strength of each channel.

Each card output shall be an opto-isolated, open collector, NPN transistor and shall sink up to 50 mA at 30 VDC. The output shall be compatible with the controller unit's inputs.

Detector cards of the same type shall be interchangeable.

Detector cards shall be in full compliance with the environmental requirements of the most current NEMA standard, and shall meet the function, electrical, and performance requirements described herein.

All component parts and test points shall be clearly identified by permanent marking of circuit references on the printed circuit board.

The entire surface area of each circuit board shall be sealed to protect against moisture.

Each detector card shall include 2 complete detector channels. An open-circuited, short-circuited, or intermittently functioning loop system connected to 1 channel shall have no adverse effect on the operation of the other channel. Each channel shall contain an automatic means to eliminate crosstalk (mutual coupling) between large, very closely spaced adjacent loops connected to the same unit and a manual means to reduce crosstalk between units.

Each channel of the detector card shall automatically self-tune to any loop system inductance from 20 to 500 microHenries within one second after application or interruption of voltage. Each channel shall function properly with a loop detector surge protector installed on its associated loop system. The detector channel shall track changes in loop/system electrical characteristics as might reasonably be expected to occur in undamaged loops without producing false indications or changes in sensitivity. Each channel shall re-tune instantly and detect properly on a loop system following a momentary open condition. In the case of a broken (open) loop, each channel shall provide a continuous output and indication of the fault. The open loop indication shall not be resettable as long as the open circuit exists, except that it shall be capable of being defeated when the channel "OFF" or reset position is selected or by a change of mode or sensitivity settings.

Each detector channel shall be provided with an automatic loop test to verify the loop system's integrity. The test shall indicate a previous fault via the front panel indicator. With an intermittent open loop, the channel shall re-tune and resume detection upon reconnection of the loop system. The occurrence of the "open" loop condition shall be indicated by a unique display sequence on the affected channel's output indicator. The sequence shall consist of three display flashes lasting 50 ms in duration and spaced 100 ms apart. The sequence shall repeat once every second while the open loop condition is present on the affected channel.

Each detector card shall contain a remote reset circuit which, when activated by an external ground level signal (greater than 15 microseconds), shall cause all presence detections to be reset.

Each loop input channel shall be galvanically isolated, through the use of separate isolation-transformers, from each other and the internal circuitry of the detector.

Each channel shall include a mode switch to select "PRESENCE," "PULSE," and "OFF". OFF shall disable the output and indicator and shall disable the channel excitation circuit to assist in determining the offending channel when crosstalk is present.

Pulse mode shall provide a single 125 ± 25 ms output pulse in response to all types of licensed motor vehicles when traveling over a 6 foot x 6 foot rectangular loop at 10 mph and shall detect successive vehicles traveling over the same rectangular loop at speeds of 10 to 60 mph with a minimum 1 second headway. Pulse mode shall include a 2 second maximum re-phase time to allow detection of a licensed vehicle over unoccupied portions of the loop within 2 seconds after initiation of the output with a vehicle stopped on the loop system. Selection of pulse mode shall RESET (Clear) the presence indication on the associated channel.

When presence mode is selected, the detector channel shall output a pulse that is directly related to the duration that a vehicle is detected by the loop system. The time delay between a vehicle entering the loop detection zone or area and the occurrence of an output Vehicle Present condition shall be 4 ms or less and the time delay between the vehicle leaving a loop detection zone or area and the output turning OFF, Vehicle Absent condition shall be 20 ms or less. That is, for any negative inductance change Vehicle Present condition that exceeds the sensitivity threshold, the channel shall output a ground true logic level within 4 ms. When the inductance change is removed (Vehicle Absent condition), the output shall become an open circuit within 20 ms. The recovery time between output turn-off and the unit being ready to respond to presence of another vehicle shall be 100 ms or less.

Each channel shall be provided with a Multi-position sensitivity selector switch. The switch shall allow the selection of a range of sensitivity settings including a setting to ensure detection of all types of licensed motor vehicles (including motorcycles) without detecting moving or stopped vehicles 36 inches or more from the loop for each of the following loop configurations:

Three-turn Loops: Single 6 foot x 6 foot loop;
(each with 50 feet, 500 feet, and 1,000 feet of lead-in cable)

In presence mode, the detector channel shall have a sensitivity setting that allows the detector channel to detect a motorcycle and hold the output for at least four minutes when the motorcycle is parked over one loop of a series/parallel connected loop system having four 6 foot x 6 foot loops with 1,000 feet of lead-in. The detector channel shall hold the output for at least 15 minutes when the test is repeated using a standard automobile on the same loop system configuration.

Presence indicator lights and character displays shall have a 45 degree cone of visibility from an axis perpendicular to the front panel. They shall be readily visible at a radius of up to 4 feet within the cone of visibility when they are subjected to 9,000 foot-candles of white light (equivalent to bright sunlight) at 45 degree to the front panel.

Internal surge protection, provided on loop detector input terminals, shall:

Enable the detector to withstand the discharge of a 10 microFarad capacitor charged to \pm 1,000 Volts directly across the detector loop input pins with no loop load present.

Enable the detector to withstand the discharge of a 10 microFarad capacitor charged to \pm 2,000 Volts directly across either the detector input pins or from loop input pins to equipment ground. The detector input pins shall have a dummy resistive load attached equal to 5.0 Ohms for demonstration purposes.

Optically-isolated solid state output devices shall be rated to hold off 50 VDC at 20 mA ON current with a maximum 1.4-Volt drop across the output terminals. Isolation shall be at least 1,000 VAC RMS.

Each unit shall mate and be fully functional with the input file via a 44 terminal, double row, edge connector having terminal spacing of 0.156 inch.

Construction Requirements:

Detector cards shall be installed by the contractor in the appropriate slots in the control cabinet.

Any spare detector cards called for by the project documents, shall be left in the cabinet or turned over to the Department, as directed by the Engineer.

Testing:

For test purposes, a negative inductance change shall be maintained for a minimum of 100 ms and a maximum of 600 ms after it is applied. When the difference between the length of time that the inductance change is applied and the duration of the corresponding ground true output are averaged over 10 trials, the average difference (algebraic) shall not exceed 4 ms.

For test purposes, a negative inductance change shall be maintained for a duration between 100 and 600 ms.

To test for the Vehicle Presence condition: the delay time between when an inductance change is applied and the time it takes for the output to respond, averaged over 10 trials, shall not exceed 4 ms.

To test for the Vehicle Absence condition: the delay time between when an inductance change is removed and the time it takes for the output to respond, averaged over 10 trials, shall not exceed 4 ms.

To test the recovery time: the above 2 tests shall be repeated in sequence 10 times with a delay of not more than 100 ms between the beginning of each 2 stage sequence to determine if the output accurately responds to and records rapidly repeating stimuli.

Method of Measurement:

The Detector Card will be measured as a unit, for each card furnished and installed.

Basis of Payment:

The accepted quantities of Detector Card, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work described and specified herein and on the project plans, complete in place.

ITEM 7350165 LOOP DETECTOR LEAD-IN CABLE:

Description:

The work under this item includes furnishing and installing new detector lead-in cables, to form loop systems and shall connect the loop systems to loop detector channels in control cabinets at designated locations as shown on the project plans.

All work shall conform to Section 735, unless otherwise specified in the ITS Standard Drawings, or the project plans and Special Provisions.

Materials:

Except as specified in Subsection 735-2.01(F), all materials shall be furnished by the contractor. The contractor shall submit a complete list of all required project material for approval.

Loop lead-in cable shall be No. 14 AWG, IMSA 50-2 cable with aluminum tape shield.

(A) Documentation:

The Contractor shall furnish a schematic diagram for each existing or new control cabinet to which loop systems are to be connected. The schematic diagram shall show the approximate location of each detector loop connected to the cabinet, the designation of the associated loop lead-in cable, the lead-in cable conductor pair serving the loop, the cabinet terminals to which the loop is proposed to be connected, and the function that the loop performs.

Schematic diagram shall be submitted to the Engineer for review and approval prior to terminating and connecting loop cables in any existing or new cabinets.

(B) Certificates of Compliance:

If requested by the Engineer, the contractor shall furnish certified reports that state that the lead-in cable fully complies with the requirements of these specifications for each cable being furnished. A statement shall be attached to the certified report indicating that the batches furnished were manufactured under the same conditions as the batches tested. All

testing shall be accomplished by an independent testing laboratory approved by the Engineer. The contractor shall pay for all of the services of the testing laboratory, at no cost to the Department.

(C) Loop Detector Surge Protectors:

Loop detector surge protectors shall be provided in each existing and new cabinet with new loop terminations. Loop detector surge protectors shall have three spade lugs for connection to a terminal strip, with 7/16-inch spacing, and conform to the following minimum performance requirements:

Peak Surge Current:

8 x 20 μ sec Differential Mode:	400 A
8 x 20 μ sec Common Mode:	1,000 A

Life Expectancy (Occurrences):

8 x 20 μ sec (200A):	500
10 x 700 μ sec (100A):	100

Response Time:

Less than 5 ns

Input Capacitance:

35 pF

Clamping Voltage (After Breakover):

150 V

Operating Temperature:

Up to 185 degrees Fahrenheit

Construction Requirements:

The contractor shall furnish and install all necessary lead-in cable, loop detector surge protectors, splice kits, solder, wire nuts, spade lugs, tape, wire ties, water-proofing, testing, and incidental materials necessary to complete the installation.

The contractor shall solder splice the loop wire to its associated lead-in cable in the pull box, and shall watertight seal the splice. Solder used for splicing shall be resin core solder with 60 percent tin and 40 percent lead.

The contractor shall install the lead-in cable between the control cabinet and the pull box adjacent to the loops at the roadside, and shall leave 5 feet of coiled slack in the pull box. The lead-in cables installed within the existing conduit duct bank shall utilize the conduit most suited for lead-in cables, subject to approval by the Engineer. Each lead-in cable shall be unspliced between the loop splice pull box and cabinet. One lead-in cable shall be provided, per loop, unless otherwise specified on the project plans and in the Special Provisions. All installed lead-in cables that are not immediately terminated (within 1 day) to the cabinet field panels shall have the unterminated ends waterproofed by a method approved by the Engineer.

The contractor shall furnish and install a label on each lead-in cable in the control cabinet and in the pull box where the loop is spliced to the lead-in cable. The legend of the label shall conform to the loop numbering nomenclature shown in the ITS Standard Drawings.

The legend shall be legible, weatherproof and shall indicate the location and lane of the associated loops. Methods of labeling shall be approved by the Engineer.

The spade lugs installed on the loop lead-in wire in cabinets shall be crimped and soldered.

The contractor shall connect the loop system to the associated loop detector channel in the control cabinet, per the wiring schematic approved by the Engineer, and shall tune the channel to operate properly and reliably with the loop system.

Inventory and Testing of Existing Loops:

The contractor shall physically locate, place identification labels, and establish the working order of each existing loop within the project limits specified to be tested and/or reused. The contractor shall submit loop testing forms and a list of loops where tests were not performed due to an existing damaged condition. The contractor shall not proceed with further work until the Engineer reviews and approves the loop test forms and list of damaged loop locations. The contractor shall test each detector loop to be used.

Testing of loops shall be conducted by cutting off existing splices to lead-in cables or cutting off existing waterproofed ends of loop wires, testing, and resplicing the ends of existing loop wires to existing lead-in cables or securing and waterproofing the ends of successfully tested loop wires for future termination to future installed lead-in cables. Loop wires shall not be tested by "skinning" or cutting the existing loop wire insulation and covering with electrical tape or applying waterproofing agents.

(1) Existing Loop Passes Test:

If the existing detector loop meets the test requirements, the contractor shall proceed to install the detector loop lead-in cable, splice the detector lead-in cable to the loop wire, terminate the detector lead-in cable in the proper equipment cabinet, and connect it with the associated detector channel.

(2) Existing Loop Fails Test or Non-Existent Loop:

If testing indicates that the existing detector loop is defective, the contractor shall replace the detector loop, as directed by the Engineer. If a replacement saw cut loop is designated to replace the failed existing loop, contractor shall install a new loop of the same size, conforming to the ITS Standard Drawings or project plans and Special Provisions.

If a single loop of a pair of detector loops (trap) is defective, the contractor shall replace both detector loops. The contractor shall offset the new loops in front of, or behind, the existing loop pair, and not cut immediately over the exact same placement footprint. The new detector loops shall not be placed within 6 feet of an existing operational loop.

The contractor shall verify that all designated lanes contain existing loop detectors, as shown on the project plans. The contractor shall saw cut new loops, of the proper configuration, in any lanes determined not have existing loops.

Test Requirements – New Loops:

As part of the Stand-Alone test, the contractor shall incrementally test the complete loop system in the presence of the Engineer. If the loop system fails any of the following tests, the contractor shall, at no expense to the Department, replace any defective splices, wire or cable and resplice and relabel, if necessary, the loop wire and lead-in cable. The loop system shall then be re-tested in the presence of the Engineer until subject loop passes the tests successfully.

(A) After Loop Installation:

The contractor shall perform the following tests on each loop in the pull box, in the presence of the Engineer, both before the sealant has been poured and after the sealant has hardened.

(1) Insulation Resistance to Ground Test:

The insulation resistance to ground for each detector loop shall be measured with a MegOhmeter (Megger) connected between the loop wire and the nearest reliable electrical ground, such as a meter, metal pole or fire hydrant, or to a metal rod driven 3 feet into the ground between the roadway and the pull box. The insulation to ground shall not measure less than 100 MegOhms at 500 VDC.

(2) Series Resistance Test:

The series resistance of each 6' x 6' loop, measured by an Ohmmeter, shall be between 0.1 and 0.8 Ohms. The maximum resistance of the other loops shall not exceed 10 Ohms.

(3) Inductance Test:

The inductance of each loop will be measured with an inductance tester. The accepted inductance shall be in the range of 50 to 100 microHenries for a 3-turn 6' x 6' loop and 100 to 155 microHenries for a 4-turn 6' x 6' loop, and the test may add 22 microHenries per 100 feet of lead-in cable. The contractor shall notify the Engineer of any unacceptable readings:

(B) After Lead-in Installation:

Tests shall be conducted in the equipment cabinet after all splices have been made but before final connection to the loop detector channel. The following tests shall be conducted for each detector loop:

(1) Test No. 1:

Utilizing a Megger, the contractor shall verify that the insulation resistance from each lead-in conductor to ground is at least 10 MegOhms to ground.

(2) Test No. 2:

Utilizing a loop inductance meter, the contractor shall verify that the inductance of the loop plus its lead-in cable is within the range of 50 to 490 microHenries.

(3) Tests No. 3 and No. 4:

The above Tests No. 1 and No. 2 shall be performed when the splice between the loop wire and the loop lead-in cable is dry. These same tests shall be performed a second time after the contractor has submerged this splice in water for 1 minute, minimum.

(4) Test No. 5:

After all preceding tests have been passed, the loop system shall be connected to the loop detector channel and the unit observed under normal working conditions. Failure of the loop to provide a count of vehicles within 1 percent of the observed volume of traffic during a 15 minute period, or 100 vehicles passing over the loop, whichever comes first, shall constitute failure of the test.

(C) Speed Test:

The contractor shall perform the following loop calibration test for each mainline lane:

- (1)** Set the trap distance of the loop detectors to 18 feet in the controller.
- (2)** Using a vehicle with a calibrated speedometer or using a certified radar gun approved by the Engineer, drive the vehicle past the detector station at a constant maximum safe and legal speed and record the Actual Vehicle Speed.
- (3)** Record the speed registered on the controller.
- (4)** Perform the following calculation:
New Trap Distance (ft) = Current Trap Distance (ft) X
(Actual Vehicle Speed [mph] / Controller Speed [mph])
- (5)** Set the trap distance in the controller to the Calculated Trap Distance determined in step (d).
- (6)** Repeat the previous steps after each change to the loop trap distance to demonstrate to the Engineer's satisfaction that the controller registers accurate speeds.
- (7)** Record the Calculated Trap Distance on data sheets for submittal to the Engineer, and on a table in the record drawing.

Method of Measurement:

The Loop Detector Lead-in Cable will be measured per linear foot of loop lead-in cable furnished and installed from center of pull box to center of pull box and center of pull box to center of equipment cabinet. Slack and/or coiling in the pull boxes will neither be measured or paid.

No additional measurement or payment will be made for inventory and testing of existing loops, testing of new loops, loop detector surge protectors, splicing to the lead-in cables, and all other components and work necessary to provide a complete functional loop detection system.

Basis of Payment:

The accepted quantities of Loop Detector Lead-in Cable, measured as provided, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place and successfully tested.

ITEM 7370452 MISCELLANEOUS ELECTRICAL (FACILITIES INVENTORY):

Description:

The work under this item shall include, but is not limited to, furnishing all tools, equipment, and labor necessary to conduct a comprehensive field inventory of the presence and status of existing items related to the loop detectors, including proofing of the routing and accessibility of conduits and pull boxes.

Construction Requirements:

At project initiation, the contractor shall coordinate with the Engineer to conduct a comprehensive field inventory that verifies and establishes existing conditions of all existing infrastructure such as occupied or empty conduit, existing pull boxes, existing in-use or not-in-use detection devices, existing cabinets and controllers, existing ramp meters and associated loop detectors.

The field inventory shall determine, confirm and document the locations and condition of existing infrastructure, identify conditions that may have changed during or since the design of the project, identify conditions not typically able to be completely investigated during a design function due to contractor/licensing limitations imposed on design engineers, and allow the contractor an opportunity to identify items and issues unanticipated in the project plans and Special Provisions that would consequently lead to modifications or additions, as well as protect both the Department and the contractor from dispute over the initial condition of items otherwise the responsibility of the contractor to replace or repair "at no cost to the Department", for elements damaged by the contractor during construction activities.

The contractor shall be accompanied by the Engineer, or his designee, to include both parties to be present for all inventory and discovery efforts. The development of a proposed

inventory plan shall be approved by the Engineer for assessment of conditions a minimum of 5 working days in advance.

The field inventory does NOT relieve the contractor of his obligations to review the project site prior to submitting bid for visible discrepancies, as described in Subsection 102.07.

Field inventory shall, at a minimum, include documentation of the existing locations, continuity, usability and conditions of existing conduits, pull boxes, detection devices, cabinets, load centers, conductors and cables, splice closures and related elements, and identify any that have existing damage, are missing or are otherwise contrary to the project plans and Special Provisions.

All conduits shall be blown out with compressed air, at a minimum, to determine continuity and if completely blocked.

All pull boxes shall be opened, photographed, and evaluated for usefulness in the context of the project plans and project intent for use. Broken or cracked lids, damaged and shifted boxes and contents shall be documented.

All cabinets should be investigated to determine feasibility of utilization for loop detectors.

The contractor shall document evidence by digital photographs or digital video, and compile a written report of the results of the inventory for submittal and review by the Engineer, correlating or pointing out differences between mutually observed field conditions and the project documents and items.

The Engineer shall determine the need, process and methodology of any necessary mitigations or changes resulting from the field inventory effort, in the context of the project intent.

This item shall include the cost of associated traffic control utilized for the field inventory.

Method of Measurement:

The Miscellaneous Work (Facilities Inventory) will be measured as a lump sum, inclusive of any traffic control, equipment, labor, coordination and documentation necessary to provide an acceptable comprehensive inventory of conditions.

Basis of Payment:

The accepted quantity of Miscellaneous Electrical (Facilities Inventory), measured as provided above, will be paid for at the contract lump sum price, which price shall be full compensation for the work, complete in place.

ITEM 7370455 MISCELLANEOUS ELECTRICAL (RECORD DRAWING):

Final Documentation

Final acceptance of electrical work in accordance with Subsection 105.20(B) of the Standard Specifications will not be made until the complete set of electrical record drawing plan sheets have been submitted and approved by the Engineer.

(A) Documentation:

Project documentation is subject to the approval of the Engineer prior to acceptance.

The contractor shall collect the record drawing coordinates using a GPS device with accuracy within 6.0 inches, using L1 L2 carrier and L1 code. The contractor shall provide the electronic files of the GPS survey to the ADOT Transportation Technology Group in both a raw (non-post-processed) file format and post-processed .csv file format compatible for import into Department GIS software. The contractor shall collect a minimum of 60 seconds of point logging information per field device to improve accuracy.

Record drawing documentation shall consist of the following documents and shall be submitted to the Engineer prior to project completion:

(1) Record drawings:

The contractor shall modify the plan sheets to reflect deviation in equipment location or requirements shown on the plans.

Whether or not modifications are made, the contractor shall provide GPS coordinates for each field element inventoried during the contractor's inspection of the existing ITS infrastructure. The construction record drawings shall also include station and offset to field devices, referenced from back of curb, edge of pavement, or other fixed landmark (barrier, guard rail, bridge wall, etc.), as approved by the Engineer.

The following attributes for each device shall be documented:

Mainline Detection:

- Approximate milepost of leading edge of loop
- Loop Size
- Route
- Direction
- Distance from roadway edge to center of loop

Pull Boxes:

- Approximate milepost & offset
- Plan Sheet Number
- Pull box ID from Plan sheet (if applicable to project)
- Pull box Size (No. 7, No. 7 with extension, No. 7 ITS, No. 9, etc.)

- Conduit Quantity & Sizes
- Route
- Direction
- New and existing pull boxes where conductors are existing or have been installed shall indicate approximate milepost and offset from edge of roadway. The distance from pull box to pull box (along conduit runs containing new or existing conductors), and/or from pull box to foundation shall be dimensioned.

Conduit:

- New and existing conduit inventoried or used in the project shall be dimensioned from edge of roadway, starting and ending approximate milepost, and length indicated.
- Conduits should be dimensioned from pull box showing length and direction.

Changes to a typical installation detail or special detail in the Project Plans (i.e. Conduit Installation Special Details) shall be documented in the record drawings.

Manifests shall reflect changes made, such as cable, conduit, or pull box size changes, changes to the existing pull box type used and approximate mile post, existing pull box size, PAD removals, signing changes, etc.

The final document submitted by the contractor shall be a complete set of plan sheets, including sheets added by Addendum or Change Order. The contractor shall furnish two sets of drawings on electronic media in ADOT standard format, and two 11 inch x 17 inch printed copies.

(2) Cabinet and Rack Wiring Diagrams:

In addition to the diagram stored in the field cabinet, a wiring diagram shall be provided for each type of cabinet, equipment rack, and junction box containing wire terminals identified by location. The wiring diagram shall depict actual, installed conditions. If the diagrams are in manual form, six manuals shall be provided for each distinct cabinet and equipment rack. Drawings shall be furnished on electronic media in PDF format with two printed copies. Separate drawings and copies shall be provided for each distinct type of cabinet, rack, and junction box. If the same diagram serves more than one location, it shall be labeled with all appropriate locations and a copy provided for each location. If a set of drawings is provided, each depicting more than one location, a separate drawing on electronic media in PDF format with two printed copies shall be included that shows a cross-index by location and drawing.

(B) Documentation Format:

Except for standard bound manuals, documentation shall be bound in loose-leaf 3-ring binders, grouped logically with printed label tabs. No documentation shall be smaller than letter-size. The contractor shall furnish one copy on electronic media in ADOT standard format, and two printed copies.

The contractor shall provide a separate drawing of the cabinet wiring diagram for each control cabinet, labeled with the location name and number, even though some of the cabinets may be wired identically. Drawings shall be standard half size (unless otherwise approved by the Engineer in each instance). Drawings larger than letter size and smaller than half size shall be printed on a standard half size sheet, formatted to be located in the lower right-hand corner of the sheet.

One printed copy of each cabinet wiring diagram applicable to each control cabinet or equipment rack shall be provided in a weatherproof holder mounted within each control cabinet or equipment rack for easy access.

Method of Measurement:

The Miscellaneous Work (Record Drawing) will be measured as a lump sum, inclusive of all materials, tools, equipment, and labor necessary to document and deliver record drawings.

Basis of Payment:

The accepted quantity of Miscellaneous Work (Record Drawing), measured as provided above, will be paid at the contract lump sum price, which price shall be full compensation for the work, including all labor and materials required to prepare and deliver the record drawing documentation.

(901MOBE, 09/18/12)

SECTION 901 MOBILIZATION:

901-5 Basis of Payment: of the Standard Specifications is revised to read:

Payment for mobilization, measured as provided above, will be made at the contract lump sum price, which shall be full compensation for supplying and furnishing all materials, facilities and services and performing all the work involved as specified herein.

Partial payments under this item will be made in accordance with the following provisions. Reference herein to the adjusted contract shall mean the original contract amount exclusive of mobilization:

The first payment of the lump sum price for mobilization will be paid after the Preconstruction Conference provided that all submissions required under Subsection 108.03 are submitted by the contractor at the Preconstruction Conference to the satisfaction of the Engineer. The amount paid for the first partial payment will be in accordance with Table 901-1.

The second payment of the lump sum price for mobilization will be made when the Engineer has determined that a significant amount of equipment has been mobilized

to the project site which will be used to perform portions of the contract work. The amount paid for the second partial payment will be in accordance with Table 901-1.

The third payment of the lump sum price for mobilization will be made on the first estimate following completion of five percent of the adjusted contract. Such percentage determination will not include partial payments for material on hand. The amount paid for the third payment will be in accordance with Table 901-1.

The fourth payment of the lump sum price for mobilization will be made on the first estimate following completion of 10 percent of the adjusted contract. Such percentage determination will not include partial payments for material on hand. The amount paid for the fourth payment will be in accordance with Table 901-1.

The total sum of all payment shall not exceed the original contract lump sum price for mobilization, regardless of the fact that the contractor may have, for any reason, shut down its work on the project or moved its equipment away from the project and back again.

TABLE 901-1 AMOUNT ALLOWED FOR MOBILIZATION DURING THE LIFE OF THE CONTRACT		
Contract Amount: \$	% Of Contract	Basis Of Payment
0 - 5,000,000	12% *	25% of the lump sum price for mobilization or 3% of the original contract amount, whichever is less.
5,000,000 +	10% *	25% of the lump sum price for mobilization or 2.5% of the original contract amount, whichever is less.
* If the price bid for mobilization exceeds this percentage, any excess will be paid to the contractor upon completion of the contract.		

The adjustment provisions in Section 104 and the retention of funds provisions in Section 109 shall not apply to the item of mobilization.

When other contract items are adjusted as provided in Section 104, and if the costs applicable to such items of work include mobilization costs, such mobilization costs will be considered as recovered by the contractor in the lump sum price paid for mobilization, and will be excluded from consideration in determining compensation under Section 104.

When mobilization is not included as a contract item, full compensation for any necessary mobilization required will be considered as included in the prices paid for the various contract items involved and no additional compensation will be made.

(923CBOJT, 04/14/15)

ITEM 9230002 - CONTRACTOR BASED ON-THE-JOB TRAINING:

1.0 Description:

1.01 Purpose:

The contractor shall provide on-the-job training (OJT) aimed at moving minorities, women, economically disadvantaged, and veteran trainees into journey-level positions in various types of construction trades or job classifications through a contractor-based OJT program. The contractor-based approach assigns contractors annual training goals for a specific number of trainees and hours. The contractor is provided the flexibility to meet the annual trainee and training hour goals on any transportation projects in the United States throughout the year, rather than on a project-by-project basis. Contractors may include ADOT and non-ADOT projects as long as more than 40 percent of the training hours are completed on ADOT projects.

Training of minorities and women toward journey-level status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority, women, economically disadvantaged, and veteran trainees to the extent that such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that it has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

1.02 Program Summary:

The Department has established a Contractor Based On-The-Job Training Pilot Program for a one year period from July 1, 2015 to June 30, 2016. All successful bidders will automatically be placed in the Pilot Program beginning on July 1, 2015. Standard OJT requirements associated with individual projects will no longer be applied at the project level for new projects. OJT requirements will be applicable on an annual basis for each contractor performing work on ADOT projects. During the OJT Pilot Program each contractor meeting the threshold described in Subsection 1.04 of this Training Special Provision will be required to provide training for **one trainee** for a minimum of **1000 hours**. The 1000 hours may be completed by one or more trainees; if a trainee reaches program completion before completion of the 1000 hours then an additional enrolled_trainee may be used to complete the remaining training hours. For example, if a trainee reaches program completion after 700 hours, the contractor is required to provide an additional 300 hours of training to an enrolled trainee in order to meet its annual OJT goal.

Contractors may also assign OJT Trainees to be trained by subcontractors on any project with ADOT approval. However, the contractor will only receive credit towards its annual goal for hours earned by its own OJT Trainees. The contractor's OJT Trainees must be employed by the contractor and be enrolled in an approved training program as described in Subsection 2.01 of this Training Special Provision.

Hours earned by a subcontractor's OJT Trainees on a project will be credited to that subcontractor's annual training goal and the contractor shall reimburse the subcontractor in accordance with Subsection 2.02 of this Training Special Provision.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey-level status or in which they have been employed at journey-level status. The contractor shall satisfy this requirement by including appropriate questions in the employment application or by other suitable means. Regardless of the method used, the contractor's records shall document the findings in each case.

The trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journey-level status individuals in the various classifications. The ratio of apprentices and OJT Trainees to journey persons shall not be greater than permitted by the terms of the approved training program being utilized. When a specific ratio is not provided, the ratio of apprentices and OJT Trainees to journey persons expected to be on the contractor's work force during normal operations shall fall between 1:10 and 1:4, pursuant to 23 CFR 230.111(c)(10).

1.03 Definitions:

"OJT Trainee" herein refers to (a) a minority, female, veteran or economically disadvantaged individual enrolled in either a State of Arizona registered apprenticeship program or ADOT's OJT program and (b) any other individual ADOT approves for enrollment in such an apprenticeship or OJT program and for credit toward the OJT Goals.

"Program Completion" herein refers to the point in time when a trainee in the ADOT OJT Program has completed the required number of levels and hours of training within a calendar year for a designated craft classification or a registered Apprenticeship program, or has achieved journey-level status.

"Journey-Level Status" applies to a person who has completed a registered apprenticeship program or is an experienced worker, not a trainee, and is fully qualified and able to perform all of the duties of a specific trade without supervision.

"Economically Disadvantaged Persons" applies to a person who:

- Receives, or is a member of a family and/or household, which receives cash payments under a Federal, State, or local income-based public assistance program.
- Is a member of a family and/or household that receives (or has been determined within the 6-month period prior to registration for the program involved to be eligible to receive) Food Stamps/EBT card under the Food Stamp Act of 1977.
- Is a foster child on behalf of whom State or local government payments are made.
- Does not have a high school diploma or GED.
- Is from a family whose total annual household income is below the federal poverty limits. See Appendix A of the OJT Guidelines and Procedures document found at <http://azdot.gov/business/business-engagement-and-compliance/on-the-job-training-program/ojt-contract-compliance>.

1.04 Annual Training Goal:

During the OJT Pilot Program, each contractor that was awarded ADOT federally funded construction contracts, as a prime contractor, for \$2,000,000 or more between October 1, 2013 and September 30, 2014 will be assigned an annual OJT goal to train a minimum of one trainee for a minimum of 1000 hours. The trainee shall receive training in the same construction trade or job classification from July 1, 2015 to June 30, 2016 with the aim of eventually achieving journey-level status. If the contractor is not awarded an ADOT federally funded contract during the pilot program period, they will not be required to meet the assigned annual OJT goal.

If a contracting firm is not assigned an annual OJT goal, it is not required to provide on-the-job training on ADOT projects regardless of whether OJT hours are included in the project bid schedule. If the contractor chooses to provide training to a registered OJT trainee on an ADOT federal-aid project although they do not meet the above criteria, the contractor will be reimbursed as described in Subsection 2.02 of this Training Special Provision.

The contractor shall make every possible effort to provide additional trainees with training and shall see that all trainees are afforded every opportunity to participate in as much training as is practically possible to provide. Contractors will not be required to meet OJT goals on individual contracts, but must meet the assigned annual training goal for the assigned number of OJT Trainees and hours by the end of the year.

Since not every OJT Trainee that enrolls in the program will complete the program, the contractor is encouraged to enroll sufficient numbers of OJT Trainees (well beyond the number of its annual training goal) to help ensure that it will meet its annual OJT goal if some OJT Trainees drop out of the program during the year. The contractor must carefully screen, hire, and support trainees that are likely to meet or exceed the 1000 hours of OJT during the calendar year, eventually earn journey-level status, and be retained as part of its workforce.

2.0 Requirements:

2.01 Approved Training Programs:

For this Contractor-Based OJT Program, the ADOT Business Engagement & Compliance Office (BECO) will only recognize two types of contractor based training programs. The programs are:

- The Department's OJT Program as approved by FHWA and described at <http://azdot.gov/business/business-engagement-and-compliance/on-the-job-training-program/ojt-contract-compliance> or
- Registered Apprenticeship and OJT programs registered with the Bureau of Apprenticeship, U.S. Department of Labor and/or the State of Arizona.

Contractors must use one or both of these programs. The contractor shall indicate which OJT program it is using for each trainee on his/her Trainee Enrollment form. It is the intention of these provisions that training be provided in the construction crafts rather than

for office support positions. Some off-site training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

All training programs shall be administered in a manner consistent with the equal employment obligations of federal-aid highway construction contracts. The Department reserves the right to request documentation that the contractor's training program fulfills these obligations. Contractors shall ensure that each trainee does not exceed the maximum number of training hours required for the completion of the selected training program unless prior approval is received from the Engineer.

2.02 Reimbursement:

The contractor will be reimbursed \$3.00 per hour of training provided to a trainee on an ADOT federal-aid project up to the maximum number of hours approved for reimbursement on the project and shown in the project bid schedule. Reimbursement will not be made for a trainee's hours that exceed the maximum number of training hours required for the completion of his/her training program. In addition, the contractor will not be reimbursed for hours in excess of the maximum training hours shown on the project bid schedule unless written approval is received in advance from the Engineer.

The maximum number of hours approved for reimbursement on each ADOT federal-aid contract will be calculated by the Department, based on the engineer's estimate for the project and the contract time.

The trainee will be paid the appropriate trainee Davis-Bacon wage rates for training classifications/crafts on federally-funded projects. The contractor shall compensate OJT Trainees according to pay levels and percentages outlined in the ADOT Training Program Manual found at <http://azdot.gov/business/business-engagement-and-compliance/on-the-job-training-program/ojt-contract-compliance>.

Contractors shall reimburse subcontractors for the subcontractor's trainees on ADOT federally funded projects at least 75-percent of the amount paid to the contractor by the Department per training hour.

2.03 Submittals:

The contractor shall complete and submit the following to BECO:

- OJT Program Trainee Enrollment Form for approval for each proposed minority, female, veteran, economically disadvantaged, and other OJT Trainee throughout the year as each individual is hired. The form shall be submitted to BECO within the first week of hire if working on an ADOT project. If the contractor is working on an ADOT project, the form shall also be submitted to the Engineer.

In addition, if the contractor is working on an ADOT construction project, the contractor shall submit the OJT Program Trainee Enrollment Forms of all current trainees to the Engineer at the Preconstruction Conference.

- Contractors shall enter trainee hours worked on ADOT construction projects on a weekly basis into the web-based Labor Compliance System, LCPtracker. Trainee hours not entered into LCPtracker by the 15th of each month for the preceding month will be considered delinquent. Trainee hours on non-ADOT contracts shall be entered into LCPtracker on a monthly basis.
- OJT Monthly Progress Report Form shall be submitted for each month by the 15th of the following month.
- OJT Monthly Trainee Progress Report Form shall be submitted for each trainee for each month by the 15th of the following month.
- OJT Trainee Termination/Completion Form when an OJT Trainee completes 1000 or more hours in the same construction trade or job classification within a calendar year, achieves journey-level status, terminates employment with the contractor, or withdraws from the OJT program.
- OJT Annual Summary Report Form by July 15, 2016 for the Pilot Program as described in Subsection 4.02 of this Training Special Provision.

The contractor's June monthly reports and uploads into LCPtracker submitted after July 31st will not be accepted or considered towards goal attainment for the previous calendar year.

All forms and Guidelines and Procedures for the Contractor-Based OJT program are available online at <http://azdot.gov/business/business-engagement-and-compliance/on-the-job-training-program/ojt-contract-compliance>.

The contractor shall retain the training records for all OJT Trainees for a period of five years following the completion of the trainee's work on contracts documenting his performance under this Training Special Provision. Such records shall be available at reasonable times and places for inspection or review by ADOT and the Federal Highway Administration.

The contractor is required to meet the assigned annual OJT goal if they are awarded federally funded ADOT construction contract(s) during the year. In anticipation of obtaining an ADOT contract, contractors are encouraged to begin registering trainees with the Department using the OJT Program Trainee Enrollment Form at the beginning of the year. In order to count training hours toward the goal, the trainee must be registered with the Department and their hours must be entered monthly into the LCPtracker system as described in this specification.

2.04 OJT Liaison:

The contractor shall designate an OJT Liaison that shall be responsible for monitoring and administering its OJT Program and monitoring the trainees' progress. The OJT Liaison shall serve as the point of contact for the Department regarding information, documentation, and conflict resolution relating to the contractor's OJT program. The contractor shall furnish each trainee a copy of the Training Program, monthly reports that reflect their training hours

accumulated to date and other documentation related to the training program. The contractor shall further make every reasonable effort to provide training that develops the skills outlined in the training program. The contractor shall furnish each trainee, upon successful completion of their training program, a certificate showing the type and length of training satisfactorily completed.

2.05 Training Hours:

Credit towards the contractor's annual training goal shall be earned as follows:

- Credit will be allowed towards the contractor's annual goal for the year in which the trainee entered training.
- Credit will be allowed for each trainee employed on a project, pending official enrollment, for all documented hours completed.
- Credit will be allowed for a terminated trainee if the contractor demonstrated a good faith effort to meet the goal and the trainee completed more than 90 percent of the training hours required for the year.

Credit will not be allowed when the contractor fails to provide the required training or does not make a satisfactory good faith effort to meet the requirements of the program.

2.06 Program Completion:

A trainee will be considered to have completed the program once the trainee completes the required number of levels and hours of training for the same craft or classification within a year, completes a registered apprenticeship program, or achieves journey-level status as determined by the contractor. Once a trainee completes a specific training level for a classification, the contractor will not be permitted to resubmit that trainee for enrollment or reimbursed at that same level, unless approved in advance by the Engineer.

Upon completion of the program, the contractor shall notify BECO so that a Certificate of Completion can be issued to the trainee showing the type and length of training satisfactorily completed.

3.0 Good Faith Efforts:

Whenever a contractor requests ADOT approval of someone other than a minority, economically disadvantaged individual, woman, or veteran for credit towards its annual training goal, the contractor shall submit documented evidence of its Good Faith Efforts to fill that trainee position with a minority, female, veteran, or economically disadvantaged individual. Documentation of Good Faith Efforts shall be made by completing and submitting the Good Faith Effort form and supporting documentation to BECO.

Good Faith Efforts are those efforts designed to achieve equal opportunity through positive, proactive, and continuous result-oriented measures (23 CFR 230.409(g)(4)). Good Faith Efforts should be made as trainee hiring opportunities arise. More information on Good

Faith Efforts is available in the *OJT Guidelines and Procedures* document available on BECO's website.

4.0 ADOT Program Monitoring:

4.01 Site Visits:

BECO may conduct periodic site visits to a contractor's worksite to review OJT Program compliance, as part of a FHWA required Contractor Compliance Program Review process. The site reviews may include, among other activities, interview of trainees, the contractor, and its employees. The contractor shall cooperate in the review and make its employees available. The contractor's OJT Liaison shall be available to meet with BECO staff as well as be available to respond to periodic emails and phone calls from BECO to check on the progress of OJT Trainees. BECO will make every effort to ensure minimal disruption to a contractor's work.

4.02 Determination of Compliance:

An OJT Annual Summary Report Form for the previous 12 months (July 1, 2015 to June 30, 2016) shall be submitted to BECO by July 15, 2016 for the Pilot Program. The report shall provide an accurate account of all trainee hours; identifying each trainee by name, ethnicity, and gender and identifying each project and/or contract, listing the contracting agency, whether they are ADOT projects/contracts, whether they are federally funded projects/contracts, and the trainee hours attributed thereto. The report shall include written explanation and documentation of Good Faith Efforts, if the contractor fails to meet its goal.

BECO will review the contractor's OJT Monthly and Annual Reports and Good Faith Effort documentation. BECO will determine whether the contractor has met the assigned annual training goal or made a good faith effort to do so. BECO will communicate its decisions in writing to the contractor.

If a contractor has neither attained its goal nor submitted adequate Good Faith Efforts documentation, ADOT will issue a Show Cause Notice outlining its findings of non-compliance. Within 30 days of receiving the Show Cause Notice, the contractor may submit a written response to the Show Cause Notice providing argument and evidence in opposition to the Department's findings of non-compliance.

If a contractor fails to submit a written response to the Show Cause Notice within the specified period or the written response to the Show Cause Notice does not cause ADOT to change its findings of non-compliance, ADOT will issue its Final Notice to the Contractor regarding the non-compliance.

ITEM 9240011 FORCE ACCOUNT WORK (PULL BOX AND CONDUIT RECONDITIONING):

Description:

The contractor shall replace or adjust, as requested by the Engineer and based upon the inventory, extensions, pull boxes, lids or any other work needed to remedy conditions

of existing pull boxes, loop detectors, or miscellaneous FMS elements within the project limits.

The contractor shall replace or adjust, as requested by the Engineer and based upon the inventory, all conduit sweeps in pull boxes, conduit orientation and alignment, unusable conduit, or bell ends or fittings within the project limits.

The contractor shall replace, as requested by the Engineer, all damaged existing conductors in the existing conduit that is to be utilized to run the new loop lead-in cable to the new loop detectors within the project limits.

Materials:

The contractor shall meet the requirements of Section 732-2, for conduit, pull boxes, and conductors except as modified by these Special Provisions.

Construction Requirements:

(A) Pull Box Reconditioning

The field inventory completed by the contractor shall include locating and documenting damaged pull boxes within the project limits. Pull box reconditioning shall be completed prior to the start of work on any other work affecting the use of any pull box slated to be reconditioned. The contractor shall recondition the pull boxes as indicated on the project plans and in the Special Provisions and as directed by the Engineer, in response to the type and extent of damage identified.

(B) Conduit Reconditioning

The inventory completed by the contractor shall include locating and documenting damaged areas within existing conduit by utilizing either a fish-tape or fiberglass rod. The contractor shall provide record drawing information to the Department for conduits that are found to be different than indicated on the Plans. The contractor shall pull a metal-disk or metal-ball mandrel, with a diameter that is 90 percent of the conduits' inner diameter (80 percent for HDPE conduit), through all existing empty and contractor installed conduits.

Prior to identifying conduit as damaged, the contractor shall verify that the conduit has not become compacted with soil. Where fiber optic cable and copper conductors do not exist, the contractor may use pressurized air, or other means, to clean the conduit.

Conduit reconditioning shall be completed prior to the start of work on conductor installation.

(C) Conductors

The inventory completed by the contractor shall include locating and documenting all existing conductors within the existing conduit to be utilized for loop lead-in cable installation for this project. The contractor shall remove the existing conductors prior to the installation of the loop lead-in cables. The contractor may reuse existing conductors in good working

condition as approved by the Engineer. Conductors that are determined to be damaged in their existing condition prior to their removal at the direction of the Engineer shall be replaced with new and the contractor shall install the new conductors related to all existing FMS components. The contractor shall ensure all existing FMS components are fully operational after reinstallation. Testing of existing loops where those loop conductors are disconnected shall conform to the requirements in Item 7350165.

Method of Measurement:

The work of Pull Box and Conduit Reconditioning will be measured as a complete unit of work.

Conductors damaged as a result of this project, as determined by the Engineer, shall be replaced at the contractor's expense at no cost to the Department.

Basis of Payment:

The accepted quantity of Pull Box and Conduit Reconditioning, measured as provided above, will be paid for upon complete submittal to and approval by the Engineer in accordance with the requirements of Section 109.04 (D) – Force Account of the Standard Specifications.

ITEM 9240012 FORCE ACCOUNT WORK (EQUIPMENT RECONDITIONING):

Description:

The contractor shall change, adjust, replace or add, as requested by the Engineer and based upon the inventory, any equipment in existing cabinets, node buildings, or the ADOT Traffic Operations Center (TOC) as necessary to provide a fully functioning system.

Materials:

The contractor shall meet the requirements of the Standard Specifications except as modified by these Special Provisions.

Construction Requirements:

The field inventory completed by the contractor shall include locating and documenting any equipment in existing cabinets, node buildings, or the ADOT TOC that may need to be changed, adjusted, replaced, or added as necessary to ensure all existing or new FMS components within the project limits are fully operational.

Method of Measurement:

The work of Equipment Reconditioning will be measured as a complete unit of work.

Basis of Payment:

The accepted quantity of Equipment Reconditioning, measured as provided above, will be paid for upon complete submittal to and approval by the Engineer in accordance with the requirements of Section 109.04 (D) – Force Account of the Standard Specifications.

ITEM 9240119 MISCELLANEOUS WORK (RELOCATE PASSIVE ACOUSTIC DETECTOR):

Description:

The work under this item shall consist of relocating the existing passive acoustic detector (PAD) that is over the left lanes on the existing DMS support structure at the I-10 Eastbound at 19th Avenue location.

Construction Requirements:

The existing PAD that is over the left lanes of Interstate 10 on the DMS support structure at 19th Avenue shall be relocated onto the same DMS support structure 12 feet toward the freeway centerline/median and kept at the same height and position on the structure. Appropriate angling of the PAD in its relocated position shall be as directed and approved by the Engineer.

The existing PAD cable shall be removed between the existing PAD and the control cabinet and new detector cable, per manufacturer specifications, shall be installed. The existing rigid metal conduit housing the PAD cable on the support structure shall be extended to the new PAD location using new rigid metal conduit of the same diameter, which conduit shall meet the requirements of Section 732-2 for conduit. The contractor may reuse the existing PAD support brackets, fasteners, and/or hardware in the new location if they remain in good working order.

The contractor shall ensure all PADs on this DMS support structure are fully operational after relocation and reinstallation.

No additional measurement or payment shall be made for the new rigid metal conduit, new PAD cabling, or any required miscellaneous brackets, hardware or fasteners required to successfully reattach the PAD to the DMS support structure and provide a functioning PAD at this location.

Method of Measurement:

The Miscellaneous Work (Relocate Passive Acoustic Detector) will be measured as a single unit, inclusive of all materials, tools, equipment, and labor necessary to relocate the PAD identified on the plans and in this special provision.

Basis of Payment:

The accepted quantity of Miscellaneous Work (Relocate Passive Acoustic Detector), measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place.

(1001MATL, 12/14/09)

SECTION 1001 MATERIAL SOURCES: of the Standard Specifications is revised to read:

1001-1 Description:

The work under this section shall consist of the procuring of borrow, topsoil, subbase and base materials, mineral aggregates for concrete structures, surfacing, and landscape plating, from sources either designated on the project plans or in the Special Provisions or from other sources.

1001-2 General:

The contractor shall determine for itself the type of equipment and work required to produce a material meeting the specifications.

Sites from which material has been removed shall, upon completion of the work, be left in a neat and presentable condition. Where practicable, borrow pits, gravel pits, and quarry sites shall be located so that they will not be visible from the highway.

The contractor shall provide an Environmental Analysis, as specified in Subsection 104.12, for any source proposed for use regardless of whether an approved Environmental Analysis exists for the site.

In accordance with Subsection 104.12, the contractor may incorporate an existing Environmental Analysis approved after January 1, 1999, provided that the analysis is updated as necessary to be in compliance with current regulations and with the contractor's planned activities.

It shall be the responsibility of the contractor to conduct any necessary investigations, explorations, and research, on-site and otherwise, before and after submitting the bid proposal, to satisfy itself that the specified quantity and/or quality of material exists in any proposed material source.

The Department makes no representation regarding quality or quantity of materials in any source.

1001-2.01 Material Sources in Flood Plains:

Any material source located in a flood plain and proposed for use on the project shall be reviewed by the appropriate agency having flood plain management jurisdiction for the area in which the proposed source is located. The contractor shall obtain a letter from the

governing flood plain agency addressed to the Engineer, certifying that the location of the proposed source conforms to the requirements of the floodplain management agency.

Contractors seeking a flood plain material source are cautioned that Section 404 of the Clean Water Act may prevent use of the source unless an appropriate permit is first obtained from the U.S. Army Corps of Engineers.

Except for surplus material from agency-administered flood control management projects, borrow material shall not be obtained from any area situated in the 100-year flood plain of any stream or watercourse, and located within one mile upstream and two miles downstream of any highway structure or surfaced roadway crossing. Surplus material from agency-administered flood control management projects may be used as borrow material only if the contractor submits written evidence to the Engineer that the flood control agency project was fully designed and funded prior to the date of advertisement for bids on the Department project.

Material sources in flood plains located on Native American Indian Reservations will be considered for use based on an individual analysis. The analysis shall include a review of applicable land use plans, flood plain management plans, environmental plans, applicable laws and regulations pertaining to Indian Reservations, and an engineering analysis of the effects on any highway facility or structure. The contractor shall obtain from the Native American Tribal Council all permits, licenses, and approvals and present to the Department for review. The Department will review each request on a case by case basis.

1001-2.02 Information Available:

The Department's Materials Group maintains a listing of materials sources for which a completed Environmental Analysis is available and the landowner has allowed the source to be placed on the list. In addition, Materials Group maintains files for those sites for which the Department holds an easement, license, permit, lease, or other right, as well as a General Plan of Operation and Restoration. The contractor may contact the Materials Group at (602) 712-7231 for information and may review the files located at 1221 N. 21st Avenue, Phoenix, Arizona 85009-3740.

Contractors are advised that an agency having jurisdiction over the source, such as the Forest Service, Bureau of Land Management, Bureau of Reclamation, the State Land Department, etc., or the owner, as a condition to the use of the source, may have imposed certain obligations. The contractor who uses such a source shall assume full contractual responsibility for any and all of these obligations imposed either by the agency having jurisdiction or by the owner. Contractors considering such a source shall make themselves fully aware of any and all requirements imposed by the Department and the landowners.

The contractor may propose the use of these or other sources, provided that all requirements of the specifications have been met.

It shall be the responsibility of the contractor to comply with the provisions of the Environmental Analysis and with current laws, rules, and regulations.

The Department makes no representation regarding quality or quantity of materials in any source.

It shall be the responsibility of the contractor to conduct any necessary investigations, explorations and research, on-site and otherwise, to satisfy itself that the specified quantity and/or quality of material exists in any material source.

1001-2.03 Usage of Materials:

Approval of the use of any source shall be limited to the specific contract and purpose for which the use of the source was obtained.

1001-2.04 Royalty Charges:

If the Engineer approves a source for which the Department holds an easement, license, permit, lease, or other right with the landowner or controlling agency that includes requirements for the payment of royalties, the amount of the royalty charges and the name and address of the party to whom royalties are to be paid will be available from the Materials Group, 1221 N. 21st Avenue, Phoenix, Arizona 85009-3740.

Prior to the time of final payment, the contractor shall furnish the Engineer with evidence that all royalty charges have been paid. Such evidence shall consist of a waiver, release, or other written acknowledgement from the owner that all of the contractor's obligations to the owner have been met. In the event that royalty charges have not been paid, the Department reserves the right to make such payment and to deduct the amount of such payment from monies due the contractor.

The final billing and payment for material extracted from sources under the jurisdiction of the State Land Department will include a small administrative charge based on the total amount of royalties due for materials removed.

Upon receipt of the final billing from the Department of Transportation, the contractor shall mail a check, payable to the State Land Department, addressed as follows:

Arizona Department of Transportation
Field Reports Section
206 South 17th Avenue
Phoenix, Arizona 85007

1001-2.05 Performance Bonds:

If sources are under the jurisdiction of either the State Land Department or the Bureau of Land Management, the contractor shall secure a performance bond. A fully executed copy of the bond shall be furnished to the Engineer along with evidence that a fully executed copy has been sent to the State Land Department or the Bureau of Land Management.

The form of the Performance Bond will be available from the Materials Group, 1221 N. 21st Avenue, Phoenix, Arizona 85009-3740. For pits under the jurisdiction of the Bureau of Land Management, the surety shall be a company listed under "Surety Companies Acceptable on Federal Bonds." This list is published annually as of July 1 in the Federal Register.

Performance bonds shall be conditioned upon the compliance with the requirements of the State Land Department and the Bureau of Land Management and the requirements of the specifications for the clearing of pit sites, the removal of material and the cleaning up of pit sites.

Copies of fully executed performance bonds shall be mailed as follows:

State Land Commission
State Land Department
1624 West Adams Street
Phoenix, Arizona 85007

Bureau of Land Management
Manager, Land Office
222 North Central Avenue
Phoenix, Arizona 85004

1001-2.06 Sampling and Testing:

The results of any sampling and testing accomplished by the Department will be available from the Materials Group, 1221 N. 21st Avenue, Phoenix, Arizona 85009-3740.

1001- 2.07 Plan of Operation and Restoration:

The contractor shall determine whether the Department holds an easement, license, permit, lease or other right, for any proposed material source. For such sites, a project-specific Plan of Operation and Restoration will be required. The contractor shall obtain a copy of the related document and the Department's General Plan of Operation and Restoration for the proposed site from the Materials Group. The contractor shall prepare and submit to the Engineer a project-specific Plan of Operation and Restoration which shall follow the format of the Department's General Plan of Operation and Restoration, and shall take into account the requirements of the Environmental Analysis, as well as any restrictions placed on the use of the source by the landowner or agency.

The proposed source will not be approved without an approved project-specific Plan of Operation and Restoration. Approval of the contractor's project-specific plan does not constitute approval of the use of the source.

The contractor shall identify and provide a person in charge of the operation. That person shall maintain copies onsite of the Department's General Plan of Operation and Restoration, the contractor's approved project-specific Plan of Operation and Restoration, the current Environmental Analysis, and the license and permits issued to the Department by the landowner or agency.

1001-3 Proposed Source:

1001-3.01 Approval Requirements:

(A) General:

The contractor shall promptly advise the Engineer as to the source that it proposes to use.

The contractor acknowledges that all the conditions set forth in this subsection shall be met prior to the source being approved for use.

Other than sampling and testing, the requirements of this subsection shall be completed prior to initiation of any activities that disturb the existing conditions at the proposed source.

The contractor further acknowledges that no additional compensation will be made on account of any delays in preparing or modifying the Environmental Analysis, obtaining approval for the use of a source, or the failure to obtain approval of a source. An extension of contract time may be granted only in accordance with Subsections 104.12 or 1001-3.01(B)(4).

Regulatory changes, specification changes, or other reasons may preclude the approval of a materials source. The contractor acknowledges that the Department may refuse to approve a material source even if the Department had approved the source for other projects.

If all of the requirements for approval of a materials source have been accomplished for the project, and the Engineer has approved the source for use on the project and, subsequent to that approval, the Environmental Analysis is rescinded, the contractor may request a revision to the contract in accordance with Subsection 104.02 and 108.08. In reviewing the contractor's request, the Department will take into account the following factors. Additional factors may be considered.

- (1) Whether the contractor was in compliance with the requirements of the Environmental Analysis and, if applicable, the site-specific Plan of Operations and Restoration.
- (2) Whether the reasons for rescinding the approval were reasonably foreseeable.
- (3) Whether the action taken was the result of regulatory changes.
- (4) Whether deficiencies unrelated to the Environmental Analysis may have rendered the source unacceptable.
- (5) Whether rescinding the approval was the sole cause of any impact to controlling activities on the project.

(B) Specific Conditions For Approval:

The use of a source will require written approval by the Engineer. No approval will be given until the contractor has complied with the following conditions:

- (1) The contractor has submitted an Environmental Analysis, as specified in Subsection 104.12, of the source proposed for use and the Department has

reviewed the analysis and satisfied itself that the use of such source will not have an adverse social, economic or environmental impact. The requirements of Subsection 1001-3.01 shall be completed prior to initiation of any activities that disturb the existing conditions at the proposed source, except for exploring test areas as specified in Subsection 1001-3.02.

- (2) The contractor has furnished the Engineer with evidence that he has secured the rights to the source, including ingress and egress.
- (3) The Department has determined that the material from the proposed source not only meets the requirements, but is also compatible with the established project design criteria developed by the ADOT Materials Group and based on the soil support value of the embankment; and the sampling and testing as herein specified has been satisfactorily completed.
- (4) The contractor has furnished a fully executed copy of the Performance Bond as specified in Subsection 1001-2.05.
- (5) When required, the contractor has submitted, and the Department has approved, the site-specific plan of operations and restoration as specified in Subsection 1001-2.07.

The contractor shall also notify the Arizona Department of Agriculture, in accordance with the Arizona Native Plant Law, at least 30 days prior to any clearing operations of less than 40 acres on private land, 60 days prior to clearing operations of 40 or more acres on private land, and 60 days prior to any clearing of state land, regardless of size. If the Engineer is convinced that the contractor has made every effort to comply with the provisions of the Arizona Native Plant Law in contacting the Department of Agriculture, the Engineer will increase the number of contract days by the amount of time required for action by the Department of Agriculture. The increase will not exceed 45 calendar days and will be concurrent with any increase allowed for the preparation of the Environmental Analysis.

(C) Historical and Cultural Resources:

If the Department determines that the proposed use will have major adverse impact on cultural or historic resources, the Department will not allow the use of the source.

(D) Permit from Navajo Nation:

For projects located on the Navajo Reservation, the Navajo Nation has adopted a permitting system for any sources, regardless of whether on or off the Navajo reservation, which are to supply material for projects located within its boundaries. No material source will be approved until the contractor submits a copy of the permit from the Navajo Nation allowing materials from the proposed source to be used on the project. For information concerning the permit, the contractor shall contact the Navajo Nation Historic Preservation Office.

1001-3.02 Testing Requirements:

The contractor shall furnish equipment and personnel and shall obtain representative samples of the material under the supervision of the Engineer. At the option of the contractor, the material shall be tested by either the Department or by a testing laboratory approved by the Department. The cost of all sampling and testing done for the purpose of attaining approval of any source, including the cost of supervision by the Engineer, shall be borne by the contractor.

If testing is performed by a testing laboratory, the contractor shall arrange for the samples to be delivered to the testing laboratory. Tests shall be performed using appropriate test procedures referred to in the sections of the specifications in which the specific material requirements are described.

The contractor shall make the arrangements necessary to see that the testing laboratory submits the results of the tests to ADOT Materials Group. The contractor shall submit to ADOT Materials Group sufficient quantity of material from the samples taken so that ADOT Materials Group may test the materials, at the Department's expense, and verify the results.

Exploratory sampling and testing activities conducted prior to the Department's approval shall be limited so as to cause the minimum amount of vegetation removal and surface disturbance required to obtain representative samples. The contractor shall not produce material, mobilize crushing equipment or clear a worksite prior to approval of the Environmental Analysis.

The contractor may request an exemption from the testing requirements specified in this subsection upon presentation of evidence to the satisfaction of the Engineer that the material that will be produced on the project is sufficiently similar to material that has been previously acceptable to the Department on projects with similar materials specifications.

No approval of the source shall be assumed, nor will it be made, until the Department has determined that the material meets the specified requirements.

The contract time will not be adjusted because of any time required by either the contractor or the Department to sample and test the material and to determine the quality of the material.

1001-4 Special Access:

The contractor may make a request to the Engineer to approve special access to a controlled access highway if special access is not shown on the project plans.

The request by the contractor shall be accompanied by an Environmental Analysis and by documents which specify the point(s) of access, the acquisition of right-of-way, the manner in which access will be attained, the traffic control plan, and crossovers, along with all other appropriate data which will allow the Engineer to evaluate its request. If the request is approved, a supplemental agreement shall be entered into.

All costs associated with the special access requested by the contractor shall be borne by the contractor, including, but not limited to, cattle guards, fences, gates and restoration work.

When access is not being utilized, gates shall be closed and locked. Upon completion of all operations, the area within the right-of-way that has been disturbed shall be restored to the condition existing prior to the contractor's operations.

The decision by the Engineer to deny a request by the contractor will be considered to be final.

1001-5 Operations at Source:

1001-5.01 General Requirements:

The contractor shall conduct its operations in such a manner as to preserve available materials in excess of project requirements.

The contractor shall notify the Engineer in advance of operations at the source. Notice shall be given before and after clearing and grubbing, and before and after cleaning up.

1001-5.02 Clearing and Grubbing:

Before beginning stripping, the contractor shall clear and grub the source as necessary to prevent the contamination of materials to be used in the work. Clearing and grubbing shall be in accordance with the requirements of Section 201, except that the resulting surface need not be leveled and vegetable matter need not be separated from any overburden which the Engineer determines to be unsuitable for any future use and which is to be wasted. Clearing and grubbing shall be limited to the area expected to be excavated and areas used for processing and stockpiling.

In the disposal of all tree trunks, stumps, brush, limbs, roots, vegetation and other debris removed, the contractor shall comply with the requirements of the Arizona Revised Statutes Title 49 Chapter 3 – Air Quality; and with the Arizona Administrative Code Title 18 Chapter 2 – Department of Environmental Quality – Air Pollution Control.

Burning will be permitted only after the contractor has obtained a permit from the Arizona Department of Environmental Quality, and from any other Federal, State, County or City Agency that may be involved.

When stripping is required, overburden shall be removed to the extent necessary to remove all undesirable materials and shall, at all times, be kept stripped at least five feet beyond the working face of the area being excavated.

The contractor shall comply with the requirements of the landowner or agency having jurisdiction over the land.

1001-5.03 Extraction of Materials:

Materials shall be removed from the source in a workmanlike manner and, when required, in accordance with the contractor's project-specific Plan of Operation and Restoration. In order to produce acceptable material in the amount and gradation required, it may be necessary for the contractor to do any or all of the following, along with any other similar operations usually associated with the extraction, processing and production of the particular material being produced:

- Move materials from one area to another.
- Perform additional screening.
- Remove, wash and waste material.
- Blend materials.
- Revise crushing methods.
- Remove deleterious materials such as clay balls, roots and sticks.

If the Engineer determines that the material in a source is stratified, all material except borrow shall be removed for the full depth in such a manner as to produce a uniform blend of the material. Placing the material from different areas and depths into a surge pile and removing material from the surge pile by cutting through the pile will be acceptable provided that a uniformly blended material is obtained.

Material sources located in drainage channels such as washes, riverbeds, etc., may experience seasonal variations in the depth of ground water. In order to produce the quantity of material estimated to be available, the contractor may be required to work below the water table.

1001-6 Fences and Cattle Guards:

Where the haul roads to material sources cross existing fence lines in areas where there is livestock of any kind, temporary cattle guards shall be installed by the contractor at each crossing.

The livestock operator or owner shall be contacted prior to the beginning of any operations and effective measures shall be taken and means provided by the contractor to prevent livestock from straying.

In operations where conditions will exist that are dangerous to livestock of any kind, temporary cattle guards and fence shall be installed around the pit area by the contractor to protect livestock.

Temporary cattle guards and fence installed by the contractor shall be removed and existing fence disturbed shall be replaced or reconstructed and all fence shall be left in as good condition as it was prior to the beginning of work.

1001-7 Cleaning Up:

All overburden and other undesirable materials removed and all piles of waste materials resulting from operations in the source shall be handled in accordance with the

requirements of the landowner or agency having jurisdiction over the land, the Environmental Analysis, the project-specific Plan of Operation and Restoration, if applicable, and all laws, rules and regulations. All debris shall be removed and disposed of and, if directed, all open test holes shall be filled. Unless otherwise required, the sides of sources shall be sloped and smoothed so that livestock can enter and leave the excavated area safely. Unless otherwise required, all haul roads shall be obliterated and, as far as practicable, the ground left in as good condition as it was prior to hauling.

1001-8 Method of Measurement and Basis of Payment:

Except as may be otherwise specifically provided for in this section or elsewhere, no measurement or direct payment will be made for any costs involved in the procuring of materials. Such costs shall be considered as included in the cost of contract items.

(1007REFS, 11/05/13)

SECTION 1007 - RETROREFLECTIVE SHEETING:

1007-1 General Requirements: the last two sentences of the first paragraph of the Standard Specifications are revised to read:

Sheeting shall conform to criteria listed in the most current version of ASTM D 4956 for the applicable type and class, unless otherwise specified.

1007-2 Material Types: of the Standard Specifications is revised to read:

Sheeting for permanent warning signs, regulatory signs, and overhead-mounted guide signs, including all sign legends and borders, shall be ASTM Type XI.

Sheeting for all warning signs with yellow backgrounds shall be Type XI fluorescent retroreflective yellow.

Sheeting for information signs, ground-mounted guide signs, and marker signs, including all sign legends and borders, shall be ASTM Type IX or XI.

Sheeting for permanent object markers and delineators on a rigid substrate with yellow backgrounds, including guardrail end treatments, guardrail markers, rigid delineators, and impact attenuators, shall be Type XI fluorescent retroreflective yellow.

Sheeting for permanent object markers and delineators on a rigid substrate in colors other than yellow, including guardrail end treatments, guardrail markers, rigid delineators, and impact attenuators, shall be ASTM Type IX or XI.

Sheeting for object markers and delineators on a flexible or plastic substrate, including flexible delineators and sand barrels, shall be ASTM Type VIII, IX or XI.

For temporary regulatory and guide signs on a rigid substrate with fluorescent retroreflective orange sheeting, ASTM sheeting Types VIII, IX, or XI shall be used.

For temporary regulatory and guide signs on a rigid substrate in colors other than fluorescent retroreflective orange, ASTM sheeting Types IV, VIII, IX, or XI shall be used.

For retroreflective orange temporary signs on a flexible or roll-up substrate, ASTM Type VI sheeting shall be used.

All temporary signs (rigid, flexible, or roll-up) with orange backgrounds shall use fluorescent retroreflective orange sheeting, except that non-reflective sign materials may be used for temporary signs where the signs will be clearly visible under available natural light.

For barricades and other temporary channelizing devices, ASTM sheeting Types IV, VIII, IX, or XI shall be used.

Sheeting for Adopt-A-Highway signs shall be ASTM Type I, IV, or XI.

Logo signs shall be ASTM Type I, IX, or XI.

When more than one sheeting type is allowed, the contractor may use any of the types listed, provided that materials used for a particular application shall be of the same ASTM type, manufacturer, and product for all signs of the same type in the project.

Opaque films used with sheeting shall be acrylic type films.
Direct-applied and demountable black characters shall be non-reflective.

1007-3 **Visual Appearance, Luminance and Color Requirements:** of the Standard Specifications is revised to read:

Except as specified herein, the color of the sheeting, ink or film shall conform to the ADOT Manual of Approved Signs, the Manual on Uniform Traffic Control Devices (MUTCD), and the plans.

All sheeting, inks and film used shall be uniformly colored so there is no visual variation in their appearance on the same sign or from sign to sign of the same colors.

Standard colors specified for sheeting, processing inks, and films shall, as applicable, match visually and be within the color tolerance limits required by Highway Tolerance Charts issued by the Federal Highway Administration. Additionally, for the retroreflective sheeting, unless otherwise noted, the Luminance Factor (Daytime Luminance) and Color Specification Limits (Daytime) shall conform to the applicable requirements of ASTM D 4956.

In addition to the luminance and color requirements, fluorescent orange sheeting and fluorescent yellow sheeting shall have the capacity to effectively fluoresce outdoors under low light conditions. For all applications requiring fluorescent orange sheeting or fluorescent yellow sheeting, the contractor shall provide a letter to the Engineer from the manufacturer certifying that the sheeting to be used is fluorescent.

1007-6 Adhesive: the first paragraph of the Standard Specifications is revised to read:

Reflective sheeting and film adhesives shall be Class I as specified in ASTM D 4956 and as modified herein.

1007-6 Adhesive: the third paragraph of the Standard Specifications is hereby deleted:

1007-8 Durability Requirements: the second and third paragraphs of the Standard Specifications are revised to read:

Sheeting shall be weather-tested as specified above in Subsection 1007-7. Sheeting weather-testing periods and durability ratings shall be as specified in Table 1007-8. In all cases, the related inks and films shall be tested along with the respective sheeting, and shall be subject to the same durability requirements as the sheeting.

TABLE 1007-8			
ASTM Sheeting Type	Color	Weather-testing period, months	Durability rating, years
XI	Fluorescent yellow	42	7
XI	Fluorescent orange	18	3
XI	All other colors	60	10
IX	Fluorescent orange	18	3
IX	All other colors	60	10
VIII	Fluorescent orange	18	3
VIII	All other colors	30	5
VI	Fluorescent orange	18	3
IV	All colors	30	5
I	All colors	30	5

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more — as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-L.L.L., "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
EXECUTIVE ORDER 11246, July 1, 1978

(Revised November 3, 1980)

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. "Employer Identification Number" means the Federal Social Security Number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d. "Minority" includes:

(i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

(ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

(iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership or participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown plan. Each Contractor or Subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each

construction trade in which it has employees in the covered area

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications. Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such site or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or women sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on the job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations: by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and

Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

Revised 04-15-81

female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm

debarred from Government Contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as an limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

Title VI/Non-Discrimination Assurances

APPENDIX A

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, the *Federal Highway Administration*, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performance by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the *Federal Highway Administration* to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the *Federal Highway Administration*, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the *Federal Highway Administration* may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with request to any subcontract or procurement as the Recipient or the *Federal Highway Administration* may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Title VI/Non-Discrimination Assurances**APPENDIX E**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1687 *et seq.*).

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(EXECUTIVE ORDER 11246)

JULY 1, 1978 (Revised November 3, 1980)

(Revised April 15, 1981)

1. The bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

	Minority	Female
Tucson and balance of Pima County	24.1	6.9
Cochise, Graham, Greenlee and Santa Cruz Counties	27.0	6.9
Phoenix and balance of Maricopa County	15.8	6.9
Apache, Coconino, Gila, Mohave, Navajo, Pinal, Yavapai and Yuma Counties	19.6	6.9

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in all areas where he has Federal or federally assisted work.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3 (a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

EQUAL EMPLOYMENT OPPORTUNITY
COMPLIANCE REPORTS

(Project, Training and Annual)

Federal-Aid Projects

February 1, 1977; Revised July 1, 1978; Revised November 3, 1980
Revised April 15, 1981; Revised September 7, 1983
Revised October 15, 1998; Revised August, 1, 2005;
Revised March 1, 2015

ANNUAL REPORT:

For each contract in the amount of \$10,000 or more, and for each subcontract, regardless of tier not including material suppliers, in the amount of \$10,000 or more, the contractor and each subcontractor regardless of tier shall submit an annual Equal Employment Opportunity (EEO) Report containing all the information required on Form FHWA-1391. Contractors and subcontractors are required to submit the required information through the LCPtracker system, a labor compliance software monitoring certified payroll and prevailing wage.

The staffing figures to be reported should represent the project workforce on board in all or any part of the last payroll period preceding the end of July.

The report shall be submitted no later than September 1.

machine (Moto paver driver), small self-propelled compactor (with blade-backfill, ditch operation), straw blower, tractor (wheel type), tripper, tugger (single drum), welding machine, winch truck

GROUP 2:

ALL COUNTIES INCLUDING MARICOPA: Aggregate Plant, Asphalt plant Mixer, Bee Gee, Boring Machine, Concrete Pump, Concrete Mechanical Tamping-Spreading Finishing Machine, Concrete Batch Plant, Concrete Mixer (paving & mobile), Elevating Grader (except as otherwise classified), Field Equipment Serviceman, Locomotive Engineer (including Dinky 20 tons & over), Moto-Paver, Oiler-Driver, Operating Engineer Rigger, Power Jumbo Form Setter, Road Oil Mixing Machine, Self-Propelled Compactor (with blade-grade operation), Slip Form (power driven lifting device for concrete forms), Soil Cement Road Mixing Machine, Pipe-Wrapping & Cleaning Machine (stationary or traveling), Surface Heater & Planer, Trenching Machine, Tugger (2 or more drums).

MARICOPA COUNTY ONLY: Backhoe < 1 cu yd, Motor Grader (rough), Scraper (pneumatic tired), Roller (all types asphalt), Screed, Skip Loader (all types 3<6 cu yd), Tractor (dozer, pusher-all).

GROUP 3:

ALL COUNTIES INCLUDING MARICOPA: Auto Grade Machine, Barge, Boring Machine (including Mole, Badger & similar type directional/horizontal), Crane (crawler & pneumatic 15>100 tons), Crawler type Tractor with boom attachment & slope bar, Derrick, Gradall, Heavy Duty Mechanic-Welder, Helicopter Hoist or Pilot, Highline Cableway, Mechanical Hoist, Mucking Machine, Overhead Crane, Pile Driver Engineer (portable, stationary or skid), Power Driven Ditch Lining or Ditch Trimming Machine, Remote Control Earth Moving Machine, Slip Form Paving Machine (including Gunnert, Zimmerman & similar types), Tower Crane or similar type.

MARICOPA COUNTY ONLY: Backhoe<10 cu yd, Clamshell < 10 cu yd, Concrete Pump (truck mounted with boom only), Dragline <10 cu yd, Grade Checker, Motor Grader (finish-any type power blade), Shovel < 10 cu yd.

GROUP 4: Backhoe 10 cu yd and over, Clamshell 10 cu yd and over, Crane (pneumatic or crawler 100 tons & over), Dragline 10 cu yd and over, Shovel 10 cu yd and over.

All Operators, Oilers, and Motor Crane Drivers on equipment with Booms, except concrete pumping truck booms, including Jibs, shall receive \$0.01 per hour per foot over 80 ft in addition to regular rate of pay

Premium pay for performing hazardous waste removal \$0.50 per hour over base rate.

COCONINO, MARICOPA, MOHAVE, YAVAPAI & YUMA COUNTIES

	Rates	Fringes
Ironworker, Rebar.....	\$ 26.00	21.77

- Zone 1: 0 to 50 miles from City Hall in Phoenix or Tucson
- Zone 2: 050 to 100 miles - Add \$4.00
- Zone 3: 100 to 150 miles - Add \$5.00
- Zone 4: 150 miles & over - Add \$6.50

 * LABO0383-002 06/01/2015

	Rates	Fringes
Laborers:		
Group 1.....	\$ 16.49	4.95
Group 2.....	\$ 17.39	4.95
Group 3.....	\$ 18.09	4.95
Group 4.....	\$ 19.03	4.95
Group 5.....	\$ 19.89	4.95

LABORERS CLASSIFICATIONS:

GROUP 1: All Counties: Chipper, Rip Rap Stoneman. Pinal County Only: General/Cleanup Laborer. Maricopa County Only: Flagger.

GROUP 2: Asphalt Laborer (Shoveling-excluding Asphalt Raker or Ironer), Bander, Cement Mason Tender, Concrete Mucker, Cutting Torch Operator, Fine Grader, Guinea Chaser, Power Type Concrete Buggy

GROUP 3: Chain Saw, Concrete Small Tools, Concrete Vibrating Machine, Cribber & Shorer (except tunnel), Hydraulic Jacks and similar tools, Operator and Tender of Pneumatic and Electric Tools (not herein separately classified), Pipe Caulker and Back-Up Man-Pipeline, Pipe Wrapper, Pneumatic Gopher, Pre-Cast Manhole Erector, Rigger and Signal Man-Pipeline

GROUP 4: Air and Water Washout Nozzleman; Bio-Filter, Pressman, Installer, Operator; Scaffold Laborer; Chuck Tender; Concrete Cutting Torch; Gunite; Hand-Guided Trencher; Jackhammer and/or Pavement Breaker; Scaler (using boson's chair or safety belt); Tamper (mechanical all types).

GROUP 5: AC Dumpman, Asbestos Abatement, Asphalt Raker II, Drill Doctor/Air Tool Repairman, Hazardous Waste Removal, Lead Abatement, Lead Pipeman, Process Piping Installer, Scaler (Driller), Pest Technician/Weed Control, Scissor Lift, Hydro Mobile Scaffold Builder.

 * PAIN0086-001 04/01/2014

Rates	Fringes
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PAINTER

PAINTER (Yavapai County only), SAND BLASTER/WATER BLASTER (all Counties).....\$ 19.50 4.85

ZONE PAY: More than 100 miles from Old Phoenix Courthouse \$3.50 additional per hour.

SUAZ2009-001 04/20/2009

	Rates	Fringes
CEMENT MASON.....	\$ 19.28	3.99
ELECTRICIAN.....	\$ 22.84	6.48
IRONWORKER (Rebar)		
Pima County.....	\$ 23.17	14.83
Pinal County.....	\$ 20.27	8.35
LABORER		
Asphalt Raker.....	\$ 15.49	3.49
Compaction Tool Operator.....	\$ 14.59	2.91
Concrete Worker.....	\$ 13.55	3.20
Concrete/Asphalt Saw.....	\$ 13.95	2.58
Driller-Core, diamond, wagon, air track.....	\$ 16.94	3.12
Dumpman Spotter.....	\$ 14.99	3.16
Fence Builder.....	\$ 13.28	2.99
Flagger		
Coconino, Mohave, Pima, Pinal, Yavapai & Yuma.....	\$ 12.35	1.59
Formsetter.....	\$ 16.09	3.97
General/Cleanup Laborer		
Coconino, Maricopa, Mohave, Pima, Yavapai & Yuma.....	\$ 14.54	3.49
Grade Setter (Pipeline).....	\$ 17.83	5.45
Guard Rail Installer.....	\$ 13.28	2.99
Landscape Laborer.....	\$ 11.39	
Landscape Sprinkler Installer.....	\$ 15.27	
Pipelayer.....	\$ 14.81	2.96
Powderman, Hydrasonic.....	\$ 16.39	2.58
OPERATOR: Power Equipment		
Asphalt Laydown Machine.....	\$ 21.19	6.05
Backhoe < 1 cu yd		
Coconino, Mohave, Pima, Pinal, Yavapai & Yuma.....	\$ 17.37	3.85
Backhoe < 10 cu yd		
Coconino, Mohave, Pima, Pinal, Yavapai & Yuma.....	\$ 18.72	3.59
Clamshell < 10 cu yd		
Coconino, Mohave, Pima, Pinal, Yavapai & Yuma.....	\$ 18.72	3.59
Concrete Pump (Truck Mounted with boom only)		
Coconino, Mohave, Pima,		

Pinal, Yavapai & Yuma.....\$	19.92	7.10
Crane (under 15 tons).....\$	21.35	7.36
Dragline (up to 10 cu yd)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....\$	18.72	3.59
Drilling Machine		
(including Water Wells).....\$	20.58	5.65
Grade Checker		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....\$	16.04	3.68
Hydrographic Seeder.....\$	15.88	7.67
Mass Excavator.....\$	20.97	4.28
Milling Machine/Rotomill....\$	21.42	7.45
Motor Grader (Finish-any		
type power blade)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....\$	21.92	4.66
Motor Grader (Rough)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....\$	20.07	4.13
Oiler.....\$	18.15	8.24
Power Sweeper.....\$	16.76	4.44
Roller (all types Asphalt)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....\$	18.27	3.99
Roller (excluding asphalt)..\$	15.65	3.32
Scraper (pneumatic tired)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....\$	17.69	3.45
Screed		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....\$	17.54	3.72
Shovel < 10 cu yd		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....\$	18.72	3.59
Skip Loader (all types <3		
cu yd).....\$	18.28	5.30
Skip Loader (all types 3 <		
6 cu yd)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....\$	18.64	4.86
Skip Loader (all types 6 <		
10 cu yd).....\$	20.15	4.52
Tractor (dozer, pusher -		
all)		
Coconino, Mohave, Pima,		
Pinal, Yavapai & Yuma.....\$	17.26	2.65

PAINTER

Coconino, Maricopa,		
Mohave, Pima, Pinal & Yuma..\$	15.57	3.92

TRUCK DRIVER

2 or 3 Axle Dump or		
Flatrack.....\$	16.27	3.30
5 Axle Dump or Flatrack.....\$	13.97	2.89
6 Axle Dump or Flatrack (<		
16 cu yd).....\$	17.79	6.42
Belly Dump.....\$	14.67	
Oil Tanker Bootman.....\$	22.03	

Self-Propelled Street Sweeper.....	\$ 13.11	5.48
Water Truck 2500 < 3900 gallons.....	\$ 18.14	4.55
Water Truck 3900 gallons and over.....	\$ 15.92	3.33
Water Truck under 2500 gallons.....	\$ 15.94	4.16

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that

classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

ARIZONA DEPARTMENT OF TRANSPORTATION
 INTERMODAL TRANSPORTATION DIVISION
 CONTRACTS AND SPECIFICATIONS SECTION

BID SCHEDULE

CONTRACT # 2016002

TRACS No.	Project No.	Item	County	District	Gross Length	Net Length	Prepared By:
888 MA H880901C	888-A-(225)T	41315	MARICOPA	PHOENIX		0	Mowery-Racz Thomas

Highway Termini	Location	Work Description
• MARICOPA COUNTY	• VARIOUS LOCATIONS	• PASSIVE ACOUSTIC DETECTORS REPLACEMENT PROJECT

BID SCHEDULE

888 MA H880901C

Item No.	Item Description	Unit	Quantity	Unit Price	Extended Amount
2020053	REMOVE (PASSIVE ACOUSTIC DETECTORS)	EACH	133		
2020054	REMOVE (CONCRETE FOUNDATION)	EACH	48		
2020155	REMOVE (PASSIVE ACUSTIC DETECTOR POLE)	EACH	51		
6070038	SLIP BASE (SQUARE TUBE POST)	EACH	4		
6070055	SIGN POST (PERFORATED) (2 1/2 S)	L.FT.	9		
6070057	SIGN POST (PERFORATED) (2 1/2 T)	L.FT.	87		
6070060	FOUNDATION FOR SIGN POST (CONCRETE)	EACH	7		
6080110	REMOVE AND REINSTALL SIGN	EACH	4		
7016029	PORTABLE SIGN STANDS-BARRIER MOUNTED	EACH-DAY	784		
7016030	BARRICADE (TYPE II, VERT.PANEL, TUBULAR MARKER)	EACH-DAY	39,396		
7016031	BARRICADE (TYPE III, HIGH LEVEL FLAG TREES)	EACH-DAY	408		
7016032	PORTABLE SIGN STANDS (RIGID)	EACH-DAY	200		
7016033	PORTABLE SIGN STANDS (SPRING TYPE)	EACH-DAY	1,627		
7016035	WARNING LIGHTS (TYPE A)	EACH-DAY	1,498		
7016037	WARNING LIGHTS (TYPE C)	EACH-DAY	27,000		

BID SCHEDULE

888 MA H880901C

Item No.	Item Description	Unit	Quantity	Unit Price	Extended Amount
7016050	TRUCK MOUNTED ATTENUATOR	EACH-DAY	560		
7016051	TEMPORARY SIGN (LESS THAN 10 S.F.)	EACH-DAY	2,256		
7016052	TEMPORARY SIGN (10 S.F. OR MORE)	EACH-DAY	1,652		
7016061	FLASHING ARROW PANEL	EACH-DAY	293		
7016067	CHANGEABLE MESSAGE BOARD (CONTRACTOR FURNISHED)	EACH-DAY	1,560		
7016078	FLAGGING SERVICES (LOCAL ENFORCEMENT OFFICER)	HOUR	352		
7016080	FLAGGING SERVICES (DPS)	HOUR	768	\$65.26	\$50,119.68
7320050	ELECTRICAL CONDUIT (2") (PVC)	L.FT.	752		
7320070	ELECTRICAL CONDUIT (3") (PVC)	L.FT.	32		
7320150	ELECTRICAL CONDUIT (3") (RIGID METAL)	L.FT.	91		
7320291	ELECTRICAL CONDUIT (HDPE)(DIRECTIONAL DRILL)	L.FT.	290		
7320450	PULL BOX (NO. 7) (FMS STD FM-2.06)	EACH	5		
7350030	LOOP DETECTOR FOR TRAFFIC SURVEILLANCE (6' x 6')	EACH	642		
7350051	DETECTOR CARD	EACH	321		
7350165	LOOP DETECTOR LEAD-IN CABLE	L.FT.	288,820		

BID SCHEDULE

888 MA H880901C

Item No.	Item Description	Unit	Quantity	Unit Price	Extended Amount
7370452	MISCELLANEOUS ELECTRICAL (FACILITIES INVENTORY)	L.SUM	1		
7370455	MISCELLANEOUS ELECTRICAL (RECORD DRAWINGS)	L.SUM	1		
9010001	MOBILIZATION	L.SUM	1		
9240011	FORCE ACCOUNT WORK (PULL BOX AND CONDUIT RECONDITIONING)	L.SUM	1	\$120,000.00	\$120,000.00
9240012	FORCE ACCOUNT WORK (EQUIPMENT RECONDITIONING)	L.SUM	1	\$10,000.00	\$10,000.00
9240050	MISCELLANEOUS WORK (RELOCATE PASSIVE ACOUSTIC DETECTOR)	L.SUM	1		

BID TOTAL :

PROPOSAL

TO THE ARIZONA DEPARTMENT OF TRANSPORTATION:

Gentlemen:

The following Proposal is made for constructing project

888 MA 000 H880901C CM-888-A(225)T
MARICOPA COUNTY
(Various Locations)

in the State of Arizona.

The following Proposal is made on behalf of _____

and no others.

(NAME OF COMPANY, FIRM, OR CORPORATION)

The undersigned hereby certifies that (s)he has been duly authorized to submit a proposal on behalf of the company, firm, or corporation mentioned above; and further certifies, pursuant to Subsection 112(c) of Title 23, United States Code and Title 44, Chapter 10, Article 1 of the Arizona Revised Statutes, that neither (s)he nor anyone associated with the company, firm, or corporation mentioned above has, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such project and furthermore that no member or employee of the Arizona Department of Transportation is personally or financially interested, directly or indirectly, in the Proposal, or in any purchase or sale of any materials or supplies for the work to which it relates, or in any portion of the profits thereof.

The undersigned certifies that the approved Plans, Standard Specifications, Special Provisions and forms of Contract and Bond authorized by the Arizona Department of Transportation and constituting essential parts of this proposal, have been carefully examined, and also that the site of the work has been personally inspected. The undersigned declares that the amount and nature of the work to be done is understood and that at no time will misunderstanding of the Plans, Specifications, Special Provisions, or conditions to be overcome, be plead. On the basis of Plans, Specifications, Special Provisions, and the forms of Contract and Bond proposed for use, the undersigned proposes to furnish all the necessary equipment, materials, machinery, tools, apparatus, and other means of construction, and labor to do all the work in the manner specified, and to accept, as full compensation therefor, the sum of the various products obtained by multiplying each unit price, herein bid for the work or materials, by the quantity thereof actually incorporated in the complete project, as determined by the State Engineer. The undersigned understands that the quantities mentioned herein are approximate only and are subject to increase or decrease and hereby proposes to perform all quantities of work as either increased or decreased, in accordance with the provisions of the Specifications, at the unit price bid in the Bidding Schedule.

The undersigned further proposes to perform all extra work that may be required on the basis provided in the Specifications and to give such work personal attention and to secure economical performance.

The undersigned further proposes to execute the Contract Agreement and furnish satisfactory Bond within ten calendar days from the date of Notice of Award, time being of the essence. The undersigned further proposes to begin work as specified in the contract attached hereto, and to complete the work on or before expiration of the contract time as defined in the Specifications, and maintain at all times a Payment Bond and a Performance Bond, approved by the State Engineer, in an amount equal to one hundred (100) percent of the total bid. These bonds shall serve not only to guarantee the completion of the work on the part of the undersigned, but also to guarantee the excellence of both workmanship and material and the payment of all obligations incurred, until the work is finally accepted and the provisions of the Plans, Standard Specifications and Special Provisions fulfilled.

12-5901 R03/11

Proposal
Sheet 1 of 2

A Proposal Guaranty in the amount and character named in the Advertisement for Bids is enclosed, which Proposal Guaranty is submitted as a guaranty of the good faith of the bidder, and that the bidder will enter into written contract, as provided, to do the work, if successful in securing the award thereof, and it is hereby agreed that if at any time other than as provided in the Proposal there should be failure on the part of the undersigned to execute the Contract and furnish satisfactory Bond as herein provided, the State of Arizona, in either of such events, shall be entitled and is hereby given the right to retain the said Proposal Guaranty as liquidated damages.

If by a Corporation:

(Seal)

Corporate Name: _____

Corporate Mailing Address: _____ Zip Code: _____

Incorporated under the laws of the State of: _____

By (Signature): _____ Date: _____

President: _____

Secretary: _____

Treasurer: _____

If by a Firm or Partnership:

Firm or Partnership Mailing Name: _____

Firm or Partnership Address: _____

By (Signature): _____ Date: _____

Name and Address of Each Member: _____

If by an Individual:

Signature: _____ Date: _____

Mailing Address: _____

ARIZONA DEPARTMENT OF TRANSPORTATION
SURETY (BID) BOND
(Penalty of this bond must not be less than 10% of the bid amount)



KNOW ALL MEN BY THESE PRESENTS, THAT _____

as Principal, hereinafter called the Principal, and _____

a corporation duly organized under the laws of the state of _____ hereinafter called the Surety, holding a certificate of authority to transact surety business in this State issued by the Director of the Department of Insurance, are held and firmly bound unto the Arizona Department of Transportation, as Obligee, hereinafter called the Obligee, in the sum of Ten Percent (10%) of the amount of the bid of Principal, submitted by Principal to the Arizona Department of Transportation for the work described below, for the payment of which sum well and truly to be made, the said Principal and the said Surety bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is herewith submitting its proposal for TRACS/Project No.

888 MA 000 H880901C CM-888-A(225)T
MARICOPA COUNTY
(Various Locations)

NOW THEREFORE, if the Obligee, acting by and through its Transportation board, shall accept the proposal of the Principal and the Principal shall enter into contract with the Obligee in accordance with the terms of such proposal, and give such bonds and certificates of insurance as may be specified in the contract documents with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter into such contract and give such bonds and certificates of insurance, if the Principal shall pay to the Obligee the difference not to exceed the penalty of the bond between the amount specified in the proposal and such larger amount for which the obligee may in good faith contract with another party to perform the work covered by the proposal then this obligation is void. Otherwise it remains in full force and effect.

IN WITNESS WHEREOF, we hereunto set our hands and seals:

Principal

By

Title

Surety

By Attorney-in-Fact

Address Attorney-in-Fact

Subscribed and sworn before me
this _____ day of _____, 20 _____.

My Commission expires: _____

**CERTIFICATION WITH REGARD TO THE PERFORMANCE OF
PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE
EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS
APRIL, 1969**

The bidder _____, proposed subcontractor _____, hereby certifies that he has _____, has not _____, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that he has _____, has not _____, filed with the Joint Reporting committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

(Company)

By: _____

(Title)

Date: _____

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7b (1),) and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5 (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Information concerning Standard Form 100 (EEO-1) is available from:

Joint Reporting Committee
P.O. Box 19100
Washington, D.C. 20036-9100

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

888 MA 000 H880901C CM-888-A(225)T
MARICOPA COUNTY
(Various Locations)

R7/03

**CERTIFICATION WITH RESPECT TO THE
RECEIPT OF ADDENDA**

In the submission of a bid and by the signing of the Proposal, this will certify that the following numbered addenda issued on this project have been brought to my personal attention and furthermore that I understand and agree that those will be made a part of the Contract.

Addendum No. _____, _____, _____, _____, _____

PRINT NAME OF CONTRACTOR

SIGNATURE

TITLE

DATE

888 MA 000 H880901C CM-888-A(225)T
MARICOPA COUNTY
(Various Locations)