



REQUEST FOR BID
RFB 2020-001
Addendum 2 Issued 3-11-2020

1 COVER SHEET

DATE: February 14, 2020
RFB NO.: 2020-001
DESCRIPTION: Portland Cement Concrete Pavement Repairs and Replacement, Mill and Overlay, Joint Re-Sealing, and Striping.
CLOSING DATE: March 18, 2020 at 3:00 PM local standard time, by our clock.
Deliver to 1700 Lincoln St., CO 80203 OR to simon.stachnik@plenarygroup.com and request a receipt confirmation. PRD is not responsible for complications due to size or other communication failures and late submissions will not be allowed.

GOODS OR SERVICES: US 36 Pavement Repairs

FOR ADDITIONAL INFO: Contact Simon Stachnik, 303-905-1340
simon.stachnik@plenarygroup.com or Christian Guevara, 303-667-9672 christian.guevara@plenarygroup.com

DOCUMENTS INCLUDED:

- 1.Request for Bid Cover Sheet
- 2.Instructions to Bidders
- 3.Bid Form
- 4.Bid Bond
- 5.Agreement
- 6.Notice of Award
- 7.Notice to Proceed
- 8.Change Order
- 9.Performance Bond
- 10.Payment Bond
- 11.Standard General Conditions
- 12.Supplemental Conditions
- 13.Technical Specifications
- 14.Scope of Work
- 15.Bid Schedule
- 16.Compliance with 8-17.5-101, C.R.S.
- 17.Contractors' Application for Payment
18. Plan Set
19. Special Provisions



If any of the documents listed above are missing from this package, they may be picked up at 1700 Lincoln Street, Suite 3000, Denver, CO 80203. Please contact Simon Stachnik or Christian Guevara via email or phone 2 days in advance of pick up.

The undersigned hereby affirms that (1) he/she is a duly authorized agent of the vendor, (2) he/she has read all terms and conditions and technical specifications which were made available in conjunction with this solicitation and fully understands and accepts them unless specific variations have been expressly listed in his/her offer, (3) that the offer is being submitted on behalf of the vendor in accordance with any terms and conditions set forth in this RFB 2020-001.

PRINT OR TYPE YOUR INFORMATION

Name of Company: _____ Fax: _____
Address: _____ City & State: _____ Zip: _____
Contact Person: _____ Title: _____ Phone: _____
Authorized Representative's Signature: _____ Phone: _____
Printed Name: _____ Title: _____ Date: _____
Email Address: _____

2 INSTRUCTIONS TO BIDDERS

Bidders will observe the following instructions. These instructions are supplementary to the Instructions contained in the “Request for Bids” to which each Bidder shall also give particular attention in preparing his Bid.

CONTRACT DOCUMENTS:

The following together comprise the Contract Documents and are hereby made a part and parcel thereof:

1. Request for Bid Cover Sheet
2. Instructions to Bidders
3. Bid Form
4. Bid Bond
5. Agreement
6. Notice of Award
7. Notice to Proceed
8. Change Order
9. Performance Bond
10. Payment Bond
11. Standard General Conditions of the Construction Contract
12. Supplemental Conditions
13. Technical Specifications
14. Scope of Work
15. Bid Schedule
16. Compliance with 8-17.5-101, C.R.S.
17. Contractor’s Application for Payment
18. Plan Set
19. Special Provisions

Wherever the word “Contract” appears, it shall be held to include all the foregoing.

No less than all of the parts of the Contract Documents shall constitute the formal Contract.

QUALIFICATIONS OF BIDDERS:

Each Bidder must be on CDOT’s Prequalified Contractor Listing. Each Bidder must submit the required information to demonstrate qualifications for the project with his or her proposal. In addition to this, each Bidder must be prepared to submit, within five days of Plenary Roads Denver’s (PRD) request, additional information such as proposed subcontractors, schedules, equipment, personnel, references, etc., that may be requested by PRD in order to evaluate the qualifications of bidders to perform the work.

EXAMINATION OF CONTRACT DOCUMENTS AND SITE:

Before submitting his or her bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize himself with local conditions that may in any manner affect performance of the work, (c) familiarize himself with federal, state, and local laws, ordinances, rules and regulations affecting performance of the work, (d) carefully correlate his observations with the requirements of the Contract Documents. A NON-MANDATORY PRE-BID SITE WALK is available on February 21, 2020 10:45 AM-11:45AM. Meet at the CDOT Maintenance Facility property at East 70th Ave and Pennsylvania St., Denver, CO. Contractors who wish to attend MUST RSVP via email to simon.stachnik@plenarygroup.com one (1) day in advance of the site walk date.

BID SECURITY:

The amount and type of Bid Security is stated in the Supplemental Conditions. The required security must be in the form of a certified or bank cashier's check made payable to PRD, or a bid bond issued by a surety licensed to conduct business in the state where the Project is located and named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Department. The Bid Security of the successful Bidder will be retained until he has executed the Agreement and furnished the required contract Security, whereupon it will be returned. If he fails to execute and deliver the Agreement and furnish the required Contract Security within ten days of the Notice of Award, PRD may annul the Notice of Award and the Bid Security of that Bidder will be forfeited. The Bid Security of any Bidder whom PRD believes to have a reasonable chance of receiving the award may be retained by PRD until the earlier of the seventh day after the executed Agreement is delivered by PRD to Contractor and the required Contract Security is furnished or the sixty-first day after the bid opening. Bid Security of other Bidders will be returned within seven days of bid opening.

CONTRACT TIME:

The number of days for the completion of Work (the Contract Time) is set forth in the Bid Documents and will be included in the executed Agreement/Purchase Order. Any provisions for liquidated damages are set forth in the Bid Form.

SUB-CONTRACTORS:

The Supplementary Conditions require the identity of sub-contractors and/or suppliers to be submitted to PRD in advance of the Notice of Award, the apparent successful Bidder, and any other Bidder so requested, will within five days after the day of the bid opening submit to PRD a list of all sub-contractors and suppliers. Such lists shall be accompanied by an experience

statement with pertinent information as to similar projects and other evidence of qualification for each such sub-contractor, person, and organization if requested by PRD. If PRD or the Bid Evaluation Committee after due investigation has reasonable objection to any proposed sub-contractor, other person or organization, he may before giving the Notice of Award request the apparent successful Bidder to submit an acceptable substitute without an increase in his Bid price. If the apparent successful Bidder declines to make any such substitution, PRD reserves the right to reject the bid without compensation to the apparent successful Bidder. Any sub-contractor, other person or organization so listed and to whom PRD or the Bid Evaluation Committee does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to PRD and the Bid Evaluation Committee.

Contractor shall not be required to employ any sub-contractor, other person or organization against whom he or she has reasonable objection.

BID SUBMITTALS:

The following documents must be provided in each submitted bid: Request for Bid Cover Sheet, Issued Addendum, a list of three references for similar projects, Bid Schedule, Proposed Project Schedule, and Bid Security. Bids shall be submitted at the time and place indicated in the Request for Bid and shall be included in an opaque sealed envelope, marked with the Project title and name and address of the Bidder and accompanied by the Bid Security and other required documents.

MODIFICATION AND WITHDRAWAL OF BIDS:

Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where proposals are to be submitted at any time prior to the opening of Bids.

RECEIVING OF BIDS:

Bids will be received as indicated in the Request for Bids.

BIDS TO REMAIN OPEN:

All Bids shall remain open for sixty calendar days after the day of the Bid opening, but PRD may, in its sole discretion, release any Bid and return the Bid Security prior to that date.

AWARD OF CONTRACT:

PRD reserves the right to reject any and all Bids and waive any and all informalities, and the right to disregard all nonconforming or conditional Bids or counter proposals.

In evaluating Bids, PRD shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and unit prices if requested in the Bid forms. PRD may consider the qualifications and experience of sub-contractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work as to which the identity of sub-contractors and other persons and organizations must be submitted as specified in the Supplementary Conditions. PRD may conduct such investigations as it deems necessary to establish the responsibility, qualifications and financial ability of the Bidders, proposed sub-contractors and other persons and organizations to do the Work in accordance with the Contract Documents to PRD's satisfaction within the prescribed time. PRD reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to PRD's satisfaction.

If a contract is to be awarded, it will be awarded by the method of award listed below.

If the contract is to be awarded, PRD will give the apparent responsive, responsible Bidder a Notice of Award within thirty days after the day the Proposal opening.

Simultaneously with delivery of the executed counterparts of the Agreement to PRD, the Bidder shall deliver to PRD the required Contract Security and Certificates of Insurance.

METHOD OF AWARD - BEST EVALUATIVE SCORE:

It is the intent of PRD to award this Contract to the Bidder who receives the highest score after review by PRD's Bid Evaluation Committee. For this Solicitation, the Evaluation Committee will score Bids based on the following criteria:

- Bid Schedule Pricing (Unit Pricing Cost Schedule)
- Similar CDOT Mill and Overlays, PCC Pavement Repairs, Joint Re-Sealing, and Striping experience
- References
- Safety Record
- Proposed Project Schedule
- Bid Security

PRD reserves the right to conduct negotiations with Bidders and to accept revisions of bids. During this negotiation period, PRD will not disclose any information derived from bids submitted, or from discussions with other Bidders. Once an award is made, the solicitation file and the proposals contained therein may become the public record.

BID EVALUATION COMMITTEE:

A bid evaluation committee will screen all bids. Bids will be evaluated based on the evaluation criteria as outlined in the Request for Bid. Through this process PRD will determine which bids are acceptable or unacceptable. PRD, in writing will notify participating firms whose bids are deemed unacceptable. Those firms offering bids deemed to be acceptable by PRD will be considered for award by the Bid Evaluation Committee. This committee may determine it necessary to require oral presentation/interviews with a short list of firms to ascertain acceptability of an offer. The committee may request clarifications to the bid from each of the Bidders at any time after the bid opening.



3 BID FORM

FOR: 2020-001 US 36 Pavement Repairs
(Project Name)

TO: Plenary Roads Denver, LLC
(Owner)

1700 Lincoln St. Suite 3000
(Address)

Denver Colorado 80203
(City) (State) (Zip)

GENTLEMEN:

The undersigned (hereafter called the Bidder), a _____
(Corporation, Partnership or Individual)

_____, organized and/or doing business under the laws of the

State of _____, hereby proposes and agrees to furnish all the necessary labor, materials, equipment, tools and services necessary for the completion of all work stipulated in, required by, and in accordance with, the proposed contract documents hereto attached and the plans and other documents referred to therein (as altered, amended or modified by all addenda thereto). All in accordance with the Drawings, Specifications and other Contract Documents prepared by HDR _____, for the sum as stated in the totals for the items proposed, plus any and all sums to be added and/or deducted resulting from all extra and/or omitted work in accordance with the requirements of the Supplemental Conditions, Technical Specifications and with the unit and/or lump sum prices stated in the items bid form attached hereto.

The undersigned has examined the location of the proposed work, the Drawings, Specifications and other Contract Documents and is familiar with the local conditions at the place where the work is to be performed.

The undersigned Proposer hereby agrees to commence work under this contract on or before a date specified in the "Notice to Proceed" and to fully complete the project within 150 consecutive calendar days thereafter.

The undersigned proposer further agrees to pay as liquidated damages, the sum of \$15,000.00 for each consecutive day thereafter as hereinafter provided in the Supplemental Conditions.

The undersigned Proposer hereby acknowledges receipt of any and all of the following Addenda:

Addendum No.

Dated

_____	_____
_____	_____
_____	_____
_____	_____



BID FORM (continued)

The bid guarantee, the performance and payment bond, time of completion and other requirements related to the bid shall be in accordance with either the Supplementary Conditions, Technical Specifications, Contract Documents or the items listed below:

OTHER REQUIREMENTS BY OWNER:

- The Bidder must submit a list of at similar projects as required in the specification and corresponding references.
- The Bidder must submit their OSHA EMR for the past 3 years.
- The Bidder must submit their proposed schedule showing Start **April 19, 2020**, all proposed working days, and completion date.

In the event this Bid is selected and a contract awarded to the undersigned, the following surety or sureties will sign the required Performance and Payment Bond:

_____	_____
_____	_____
_____	_____

The following proposed items form a part of the bid:

BID FORM (continued)

DATE _____

Signature:

If an Individual: _____doing

business as _____

If a Partnership: _____

By _____, member of Firm

If a Corporation: _____

By _____

Title _____

ATTEST: _____
Secretary

(CORPORATE SEAL)

Business Address of Proposer _____

If Bidder is a corporation, supply the following information:

State in which incorporated _____

Name and address of its:

President _____

Secretary _____



4 BID BOND

Know all men by these Presents, that we, the undersigned, _____
(Name of Contractor)
_____, as Principal and
(Address of Contractor)

_____, as Surety, are
(Name and address of Surety)

hereby held and firmly bound unto Plenary Roads Denver, LLC
(Name of Owner)

as OWNER in the penal sum of 5% of the total amount of the bid for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors, and assigns.

Signed, this _____ day of _____, 2020.

The Condition of the above obligation is such that whereas the Principal has submitted to Plenary Roads Denver, LLC a certain BID, attached hereto and hereby made a part hereof to enter a contract in writing for the 2020-001 US 36 Pavement Repairs.

NOW, THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal, shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performers of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by an extension of the time within which the OWNER may accept such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above

(Principal, Contractor)

(Surety)

BY: _____

IMPORTANT – Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.



5 AGREEMENT

THE AGREEMENT, made this _____ day of _____, 2020 by and between the **Plenary Roads Denver, LLC** herein called "OWNER" and _____, doing business as (an individual,) or (a partnership,) or (a corporation,) herein called "CONTRACTOR". WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of 2020-001 US 36 Pavement Repairs (the PROJECT).
2. The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the PROJECT described herein.
3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within 15 calendar days after the date of the NOTICE TO PROCEED and will complete the same within 150 calendar days, unless the period for the completion is extended otherwise by the CONTRACT DOCUMENTS.
4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of \$ _____, or as shown in the BID schedule.
5. The term "CONTRACT DOCUMENTS" means and includes the following:
 - Request for Proposal
 - Instructions to Proposers
 - Bid Form
 - Bid Bond
 - Agreement
 - Notice of Award
 - Notice to Proceed
 - Change Order
 - Performance Bond
 - Payment Bond
 - Standard General Conditions
 - Supplementary Conditions
 - Technical Specifications
 - Scope of Work
 - Bid Schedule
 - Addendum to Professional Services Agreement
 - Contractor's Application for Payment
 - Contractor's Application Progress Estimate
 - Contractor's Application Stored Material Summary
 - Plans
 - Specifications

SPECIFICATIONS prepared or issued by HDR dated November 7, 2019

ADDENDA:

No. _____ dated _____, 2020.
No. _____ dated _____, 2020.
No. _____ dated _____, 2020.



6. The OWNER will pay the CONTRACTOR in the manner and at such times as set forth in the Technical Specifications such amounts as required by the CONTRACT DOCUMENTS.
7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in three (3) counterparts, each of which shall be deemed an original on the date first above written.

(SEAL)

OWNER:

ATTEST:

Plenary Roads Denver, LLC

By _____

By _____



Name _____

Title _____

Name _____

Title _____

By _____

Name _____

Title _____

Address _____

Telephone: _____

(SEAL)

ATTEST:

By _____

Name _____

Title _____

CONTRACTOR:

By _____

Name _____

Title _____

Address _____

Telephone _____



6 NOTICE OF AWARD

To: (Contractor) _____
(Address) _____
(City, State, Zip) _____

Project Description: _____

The OWNER has considered the BID submitted by you for the above-described WORK in response to its Request for Bid dated February 14, 2020 and Instruction to Proposers.

You are hereby notified that your BID has been accepted for items in the amount of \$_____.

You are required by the Instructions to Proposers to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND and certificates of Insurance within ten (10) days from the date of this Notice, or said OWNER will be entitled to consider all your rights arising out of said OWNER'S acceptance of your PROPOSAL as null and void and your BID SECURITY will be forfeited immediately to said OWNER as an agreed of liquidated damages

Dated this _____ day of _____, 2020.

Plenary Roads Denver (Owner) By

Title _____

Address _____

Telephone _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

by _____,

this the _____ day of _____, 2020.

By _____

Title _____

Telephone _____



7 NOTICE TO PROCEED

To: (Contractor) _____ Date: _____, 2020
(Address) _____ Project: 2020-001
(City, State, Zip) _____

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 2020 on or after _____, 2020 and you are to complete the WORK within 150 consecutive calendar days thereafter. The date of completion of all WORK is September 16, 2020

Plenary Roads Denver,
LLC
(OWNER)

By _____
Title _____
Address _____

Telephone _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged

by _____,
(CONTRACTOR)

this the _____ day of _____, 2020.

By _____
Title _____
Telephone _____

8 CHANGE ORDER

Order No. _____

Date _____

Agreement Date _____

NAME OF PROJECT: _____

OWNER: _____

CONTRACTOR: _____

The following changes are hereby made to the CONTRACT DOCUMENTS:

Justification:

Change to CONTRACT PRICE:

Original CONTRACT PRICE: \$ _____

Current CONTRACT PRICE adjusted by previous CHANGE ORDER \$ _____

The CONTRACT PRICE due to this CHANGE ORDER will be (increased) (decreased) by

\$ _____

The New CONTRACT PRICE including this CHANGE ORDER will be \$ _____

Change to CONTRACT TIME:

The CONTRACT TIME will be (increased) (decreased) by _____ calendar days.

The date for completion of all work will be _____ (Date).

APPROVALS REQUIRED:

Approved by Resident Engineer: _____

Accepted by Contractor: _____

Accepted and Approved by Owner: _____

Federal Agency Approval (where applicable): _____



9 PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, herein called Principal, and
(corporation, partnership or individual)

(Name of Surety)

(Address of Surety)

duly organized and doing business under and by virtue of the laws of the State of _____, or registered to do business within the State of Colorado, and duly licensed for the purpose of making, guaranteeing, or becoming sole surety upon bonds or undertaking required or authorized by the State of Colorado, hereinafter called Surety, are held and firmly bound unto

Plenary Roads Denver, LLC
1700 Lincoln Street
Suite 3000
Denver, CO 80203

Herein called Owner in the penal sum of _____ Dollars
(\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents. THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 2020, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreement of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety and during the one-year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of such changes, extension of time, alteration or addition to the terms of the contract or to the work or to specifications.



PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this the ____ day of _____, 2020.

ATTEST/WITNESS

Principal (Contractor)

(Principal) Secretary

By _____

(SEAL)

(Address)

ATTEST/WITNESS:

(Surety)

(Surety) Secretary

By _____
Attorney-in-Fact

(SEAL)

(Address)



10 PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, herein called Principal, and
(corporation, partnership or individual)

(Name of Surety)

(Address of Surety)

duly organized and doing business under and by virtue of the laws of the State of _____, or registered to do business within the State of Colorado, and duly licensed for the purpose of making, guaranteeing, or becoming sole surety upon bonds or undertaking required or authorized by the State of Colorado, hereinafter called Surety, are held and firmly bound unto

Plenary Roads Denver, LLC
1700 Lincoln Street
Suite 3000
Denver, CO 80203

Herein called Owner in the penal sum of _____ Dollars
(\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents. THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 2020, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall promptly make payments to all persons, firms, subcontractors, and corporations furnishing material for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor performed in such work whether by sub-contractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of such changes, extension of time, alteration or addition to the terms of the contract or to the work or to specifications.



PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 2020.

ATTEST/WITNESS

Principal (Contractor)

(Principal) Secretary

By _____

(SEAL)

(Address)

ATTEST/WITNESS:

(Surety)

(Surety) Secretary

By _____
Attorney-in-Fact

(SEAL)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

Accompany this BOND with Attorney-in-Fact's authority from the Surety to execute the BOND, certified to include the date of the BOND.

11 GENERAL CONDITIONS

STANDARD GENERAL
CONDITIONS OF THE
CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

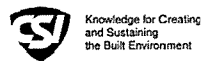
AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by



The Associated General Contractors of America



Construction Specifications Institute

Copyright ©2002

National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314

American Council of Engineering Companies
1015 15th Street, N.W., Washington, DC 20005

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

TABLE OF CONTENTS

	<u>Page</u>
ARTICLE 1 - DEFINITIONS AND TERMINOLOGY	27
1.01 <u>Defined Terms</u>	27
1.02 <u>Terminology</u>	29
ARTICLE 2 - PRELIMINARY MATTERS.....	30
2.01 <u>Delivery of Bonds and Evidence of Insurance</u>	30
2.02 <u>Copies of Documents</u>	30
2.03 <u>Commencement of Contract Times; Notice to Proceed</u>	30
2.04 <u>Starting the Work</u>	30
2.05 <u>Before Starting Construction</u>	30
2.06 <u>Preconstruction Conference</u>	31
2.07 <u>Initial Acceptance of Schedules</u>	31
ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE	31
3.01 <u>Intent</u>	31
3.02 <u>Reference Standards</u>	31
3.03 <u>Reporting and Resolving Discrepancies</u>	31
3.04 <u>Amending and Supplementing Contract Documents</u>	32
3.05 <u>Reuse of Documents</u>	32
3.06 <u>Electronic Data</u>	32
ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS	32
4.01 <u>Availability of Lands</u>	32
4.02 <u>Subsurface and Physical Conditions</u>	33
4.03 <u>Differing Subsurface or Physical Conditions</u>	33
4.04 <u>Underground Facilities</u>	34
4.05 <u>Reference Points</u>	34
4.06 <u>Hazardous Environmental Condition at Site</u>	35
ARTICLE 5 - BONDS AND INSURANCE	36
5.01 <u>Performance, Payment, and Other Bonds</u>	36
5.02 <u>Licensed Sureties and Insurers</u>	36
5.03 <u>Certificates of Insurance</u>	36
5.04 <u>Contractor 's Liability Insurance</u>	36
5.05 <u>Owner's Liability Insurance</u>	37
5.06 <u>Property Insurance</u>	37
5.07 <u>Waiver of Rights</u>	38
5.08 <u>Receipt and Application of Insurance Proceeds</u>	39
5.09 <u>Acceptance of Bonds and Insurance; Option to Replace</u>	39
5.10 <u>Partial Utilization, Acknowledgment of Property Insurer</u>	39
ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES	39
6.01 <u>Supervision and Superintendence</u>	39
6.02 <u>Labor; Working Hours</u>	39
6.03 <u>Services, Materials, and Equipment</u>	40
6.04 <u>Progress Schedule</u>	40
6.05 <u>Substitutes and "Or -Equals"</u>	40
6.06 <u>Concerning Subcontractors, Suppliers, and Others</u>	41
6.07 <u>Patent Fees and Royalties</u>	42
6.08 <u>Permits</u>	42
6.09 <u>Laws and Regulations</u>	43
6.10 <u>Taxes</u>	43
6.11 <u>Use of Site and Other Areas</u>	43
6.12 <u>Record Documents</u>	43
6.13 <u>Safety and Protection</u>	44
6.14 <u>Safety Representative</u>	44
6.15 <u>Hazard Communication Programs</u>	44
6.16 <u>Emergencies</u>	44

6.17	<u>Shop Drawings and Samples</u>	44
6.18	<u>Continuing the Work</u>	45
6.19	<u>Contractor's General Warranty and Guarantee</u>	46
6.20	<u>Indemnification</u>	46
6.21	<u>Delegation of Professional Design Services</u>	46
ARTICLE 7	<u>- OTHER WORK AT THE SITE</u>	47
7.01	<u>Related Work at Site</u>	47
7.02	<u>Coordination</u>	47
7.03	<u>Legal Relationships</u>	47
ARTICLE 8	<u>- OWNER'S RESPONSIBILITIES</u>	48
8.01	<u>Communications to Contractor</u>	48
8.02	<u>Replacement of Engineer</u>	48
8.03	<u>Furnish Data</u>	48
8.04	<u>Pay When Due</u>	48
8.05	<u>Lands and Easements; Reports and Tests</u>	48
8.06	<u>Insurance</u>	48
8.07	<u>Change Orders</u>	48
8.08	<u>Inspections, Tests, and Approvals</u>	48
8.09	<u>Limitations on Owner's Responsibilities</u>	48
8.10	<u>Undisclosed Hazardous Environmental Condition</u>	48
8.11	<u>Evidence of Financial Arrangements</u>	48
ARTICLE 9	<u>- ENGINEER'S STATUS DURING CONSTRUCTION</u>	48
9.01	<u>Owner's Representative</u>	48
9.02	<u>Visits to Site</u>	48
9.03	<u>Project Representative</u>	49
9.04	<u>Authorized Variations in Work</u>	49
9.05	<u>Rejecting Defective Work</u>	49
9.06	<u>Shop Drawings, Change Orders and Payments</u>	49
9.07	<u>Determinations for Unit Price Work</u>	49
9.08	<u>Decisions on Requirements of Contract Documents and Acceptability of Work</u>	49
9.09	<u>Limitations on Engineer's Authority and Responsibilities</u>	50
ARTICLE 10	<u>- CHANGES IN THE WORK; CLAIMS</u>	50
10.01	<u>Authorized Changes in the Work</u>	50
10.02	<u>Unauthorized Changes in the Work</u>	50
10.03	<u>Execution of Change Orders</u>	50
10.04	<u>Notification to Surety</u>	51
10.05	<u>Claims</u>	51
ARTICLE 11	<u>- COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK</u>	51
11.01	<u>Cost of the Work</u>	51
11.02	<u>Allowances</u>	53
11.03	<u>Unit Price Work</u>	53
ARTICLE 12	<u>- CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES</u>	54
12.01	<u>Change of Contract Price</u>	54
12.02	<u>Change of Contract Times</u>	54
12.03	<u>Delays</u>	54
ARTICLE 13	<u>- TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK</u>	55
13.01	<u>Notice of Defects</u>	55
13.02	<u>Access to Work</u>	55
13.03	<u>Tests and Inspections</u>	55
13.04	<u>Uncovering Work</u>	55
13.05	<u>Owner May Stop the Work</u>	56
13.06	<u>Correction or Removal of Defective Work</u>	56
13.07	<u>Correction Period</u>	56
13.08	<u>Acceptance of Defective Work</u>	57
13.09	<u>Owner May Correct Defective Work</u>	57
ARTICLE 14	<u>- PAYMENTS TO CONTRACTOR AND COMPLETION</u>	57
14.01	<u>Schedule of Values</u>	57
14.02	<u>Progress Payments</u>	57
14.03	<u>Contractor's Warranty of Title</u>	59
14.04	<u>Substantial Completion</u>	59

14.05	<i>Partial Utilization</i>	59
14.06	<i>Final Inspection</i>	60
14.07	<i>Final Payment</i>	60
14.08	<i>Final Completion Delayed</i>	61
14.09	<i>Waiver of Claims</i>	61
ARTICLE 15	SUSPENSION OF WORK AND TERMINATION	61
15.01	<i>Owner May Suspend Work</i>	61
15.02	<i>Owner May Terminate for Cause</i>	61
15.03	<i>Owner May Terminate For Convenience</i>	62
15.04	<i>Contractor May Stop Work or Terminate</i>	62
ARTICLE 16	DISPUTE RESOLUTION	62
16.01	<i>Methods and Procedures</i>	62
ARTICLE 17	MISCELLANEOUS	63
17.01	<i>Giving Notice</i>	63
17.02	<i>Computation of Times</i>	63
17.03	<i>Cumulative Remedies</i>	63
17.04	<i>Survival of Obligations</i>	63
17.05	<i>Controlling Law</i>	63
17.06	<i>Headings</i>	63

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. Intent of Certain Terms or Adjectives

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer's - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

A. Owner shall furnish to Contractor up to five printed or hard copy of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 Before Starting Construction

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 Preconstruction Conference

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 Initial Acceptance of Schedules

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefore.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the

Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 Reference Standards

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor

shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways: Engineer or Project Manager

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all

of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDI- TIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 Subsurface and Physical Conditions

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 Differing Subsurface or Physical Conditions

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior

written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 Hazardous Environmental Condition at Site

A. Reports and Drawings: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area

affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and

subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
4. claims for damages insured by reasonably available personal injury liability coverage which are sustained;

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 Owner's Liability Insurance

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 Property Insurance

Formatted: Not Highlight

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided

Formatted: Not Highlight

that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees,

Formatted: Not Highlight

agents, consultants and subcontractors of each and any of them.

5.08 Receipt and Application of Insurance Proceeds

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 Acceptance of Bonds and Insurance; Option to Replace

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 Partial Utilization, Acknowledgment of Property Insurer

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 Supervision and Superintendence

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

Formatted: Not Highlight

6.02 Labor; Working Hours

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday,

Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 Services, Materials, and Equipment

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 Progress Schedule

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 Substitutes and "Or-Equals"

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function,

appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests

for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

- a) perform adequately the functions and achieve the results called for by the general design,
- b) be similar in substance to that specified, and
- c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

- a) all variations of the proposed substitute item from that specified, and
- b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

A. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

B. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

C. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 Patent Fees and Royalties

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 Permits

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist

Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 Laws and Regulations

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in

good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until

such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 Safety Representative

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings and Samples

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:* Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 Delegation of Professional Design Services

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal

shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other

work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the

Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work

which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05.

The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 Limitations on Engineer's Authority and Responsibilities

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 Authorized Changes in the Work

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 Unauthorized Changes in the Work

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 Execution of Change Orders

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 Notification to Surety

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 Claims

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,
2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field

services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence

of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who

actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's

Formatted: Not Highlight

Formatted: Not Highlight

Formatted: Not Highlight

entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and
3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 Owner May Stop the Work

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 Correction or Removal of Defective Work

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or

arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 Correction Period

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed

and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 Owner May Correct Defective Work

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or

for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Schedule of Values

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 Progress Payments

A. Applications for Payments

1. On the 10th day of month (and not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment

shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications

1. Engineer will, within 5 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

Formatted: Not Highlight

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Twenty days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 Partial Utilization

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been

identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 Final Inspection

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 Final Payment

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the

provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 Final Completion Delayed

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 Owner May Terminate for Cause

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 Owner May Terminate For Convenience

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 Methods and Procedures

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American

Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.



12 SUPPLEMENTAL CONDITIONS

1. GENERAL DESCRIPTION OF WORK

Work under this contract shall include all labor, materials and equipment necessary to complete the work as specified in the attached plans, general notes, and documents for Plenary Roads Denver, LLC, in Denver, Colorado.

2. SCHEDULING OF WORK

At the pre-construction conference, the Notice to Proceed will be issued. The contractor shall submit a schedule showing the order in which the Contractor proposes to carry on the work including the estimated number of working days elapsed, when the several parts are to begin and the estimated number of calendar days required to complete the several parts. Said schedule shall be subject to the approval of PRD. Should PRD be of the opinion that, any schedule of operation as thus submitted is inadequate to secure the completion of the work in the time agreed upon or otherwise not in accordance with the specifications or the work is being inadequately or improperly prosecuted in any respect, PRD may demand that the Contractor submit a new schedule and improve or change the prosecution of the work in such a manner as to ensure proper and timely execution.

The project shall be completed within 40 calendar days from when the Notice of Award is issued. The Contractor shall use this time frame or one of less time to develop a detailed schedule.

3. MAINTENANCE AND GUARANTEE

The Contractor hereby guarantees that the entire work constructed by him under the contract will fully meet all requirements of the contract as to quality of workmanship and materials furnished by him. The Contractor hereby agrees to make at his own expense, any repairs or replacement caused by defects in materials or workmanship supplied by him that became evident within one year after the date of substantial completion. The Contractor shall restore to full compliance with the requirements of these specifications any part of the appurtenant works which, during the one-year period, is found to be deficient with respect to any provisions of the specifications. The Performance Bond, equal to 100% of the contract amount, shall remain in full force and effect through the guarantee period.

The Contractor shall make all repairs and replacements promptly upon notice by PRD, which shall be confirmed in writing. If the Contractor fails to make such repairs and replacements promptly, PRD may do the work and the Contractor and his surety shall be liable to PRD for the cost thereof.

4. SUBCONTRACTORS

The work shall be done under the personal supervision of the Contractor. No part of this contract or any interest therein shall be sub-let or transferred without the written consent of PRD. No such written consent shall in any way whatsoever release the Contractor from any obligation, either to PRD or the persons employed by the subcontractors. In all cases, the subcontractors are to be considered merely as foreman, employed by the Contractor, and with other foremen employees of the Contractor, are subject to discharge. If the Contractor shall desire to sublet any portion of the work performed under this contract, he shall make written application to PRD for permission to sublet. Such written application shall state the portion of the work to be so sublet, the name of the person to whom he proposes to sublet the work, the subcontractors experience with similar projects, and the equipment and/or materials the subcontractor will be using. PRD is not to be understood as in any way assenting to the subletting of any portion of the contract unless his assent thereto is given in writing. By subletting any portion of this contract without written consent, the Contractor shall forfeit all right to any estimate of payment for the work done by such subcontractor.

5. WORK BY OTHERS

Three other Contractors may be working within the same area as this project. The work performed in this contract shall be coordinated with the other work.

12 SUPPLEMENTAL CONDITIONS

1. GENERAL DESCRIPTION OF WORK

Work under this contract shall include all labor, materials and equipment necessary to complete the work as specified in the attached plans, general notes, and documents for Plenary Roads Denver, LLC, in Denver, Colorado.

2. SCHEDULING OF WORK

At the pre-construction conference, the Notice to Proceed will be issued. The contractor shall submit a schedule showing the order in which the Contractor proposes to carry on the work including the estimated number of working days elapsed, when the several parts are to begin and the estimated number of calendar days required to complete the several parts. Said schedule shall be subject to the approval of PRD. Should PRD be of the opinion that, any schedule of operation as thus submitted is inadequate to secure the completion of the work in the time agreed upon or otherwise not in accordance with the specifications or the work is being inadequately or improperly prosecuted in any respect, PRD may demand that the Contractor submit a new schedule and improve or change the prosecution of the work in such a manner as to ensure proper and timely execution.

The project shall be completed within 120 calendar days from when the Notice of Award is issued. The Contractor shall use this time frame or one of less time to develop a detailed schedule. The work is only to be performed during nights and weekends. Work on US36 shall be performed in accordance with the US 36 Lane Closure Strategy. Extended closures may be allowed if requested by the Contractor and approved by CDOT Region 1 Traffic.

3. MAINTENANCE AND GUARANTEE

The Contractor hereby guarantees that the entire work constructed by him under the contract will fully meet all requirements of the contract as to quality of workmanship and materials furnished by him. The Contractor hereby agrees to make at his own expense, any repairs or replacement caused by defects in materials or workmanship supplied by him that became evident within one year after the date of substantial completion. The Contractor shall restore to full compliance with the requirements of these specifications any part of the appurtenant works which, during the one-year period, is found to be deficient with respect to any provisions of the specifications. The Performance Bond, equal to 100% of the contract amount, shall remain in full force and effect through the guarantee period.

The Contractor shall make all repairs and replacements promptly upon notice by PRD, which shall be confirmed in writing. If the Contractor fails to make such repairs and replacements promptly, PRD may do the work and the Contractor and his surety shall be liable to PRD for the cost thereof.

4. SUBCONTRACTORS

The work shall be done under the personal supervision of the Contractor. No part of this contract or any interest therein shall be sub-let or transferred without the written consent of PRD. No such written consent shall in any way whatsoever release the Contractor from any obligation, either to PRD or the persons employed by the subcontractors. In all cases, the subcontractors are to be considered merely as foreman, employed by the Contractor, and with other foremen employees of the Contractor, are subject to discharge. If the Contractor shall desire to sublet any portion of the work performed under this contract, he shall make written application to PRD for permission to sublet. Such written application shall state the portion of the work to be so sublet, the name of the person to whom he proposes to sublet the work, the subcontractor's experience with similar projects, and the equipment and/or materials the subcontractor will be using. PRD is not to be understood as in any way assenting to the subletting of any portion of the contract unless his assent thereto is given in writing. By subletting any portion of this contract without written consent, the Contractor shall forfeit all right to any estimate of payment for the work done by such subcontractor.

5. WORK BY OTHERS

Other Contractors may be working within the Project Limits from time to time. The work performed in this contract shall be coordinated with the other work as they become known.

6. PRE-CONSTRUCTION CONFERENCE

Prior to the start of construction, a pre-construction conference will be held with the representative of PRD, HPTE &/or CDOT, and Contractor. Time and place of the conference will be determined by the Resident Engineer. The purpose of the conference will be to discuss the following items relating to the project:

- a. Progress reports.
- b. Scheduling of Project Work (i.e. work hours, weekday and weekend).
- c. Submittals.
- d. Fire Prevention and Safety Requirements.
- e. Procedures for Partial and Final Payments.
- f. Contractor's compliance with required environmental permits
- g. Coordination with Utility Companies.
- h. Special requirements of PRD.
- i. Identifying staging areas, and storage areas of materials

7. COMMUNICATIONS

1. All notices, demands, requests, instructions, approvals, proposals and claims must be in writing.
2. All minor changes must be approved by the Program Engineer.
3. Any notice to or demand upon the Contractor shall be sufficiently given if so delivered at the office of the Contractor stated on the Request for Proposal Cover sheet (or at such other office as the Contractor may from time to time designate). The notice shall be in a sealed, postage prepaid envelope or delivered with charges prepaid to any legal delivery company transmission in each case addressed to such office.
4. All papers required to be delivered to PRD shall, unless otherwise specified in writing to the Contractor, be delivered to the office of Plenary Group, 1700 Lincoln Ave. Suite 3000, Denver, CO. 80203, and any notice to or demand upon PRD shall be sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any legal delivery company for transmission to PRD at such address, or to such other representatives of PRD or to such other address as PRD may subsequently specify in writing to the Contractor for such purposes.
5. Any such notice shall be deemed to have been given as of the time of actual delivery of (in case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

8. MATERIALS

All materials employed in permanent construction shall be new, full weight, in first-class condition and suitable for space provided. All similar materials shall be of one manufacturer.

9. "OR EQUAL"

All materials and equipment specified herein are subject to an "OR EQUAL" provision. With each request, the Contractor shall submit supporting data, including but not limited to:

- a. Drawings and samples as appropriate, with a specific record of performance.
- b. Comparison of the qualities of the proposed item with that specified.
- c. Changes required in other elements of the work because of the substitution.
- d. Name, address, and telephone number of vendor who is supplying the proposed item.
- e. Manufacturer's literature regarding installation, operation, and maintenance, including schematics for electrical and hydraulic systems, lubrication requirements, and parts lists.
Describe the availability of maintenance service and warranties and state source of replacement materials.

10. STORAGE OF MATERIALS

Materials shall be so delivered, stored and handled as to assure the preservation of their quality and fitness for the work. Packaged materials shall be stored in original containers clearly identified with Manufacture's name, brand and model number. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located so as to facilitate their prompt inspection.

Private property shall not be used for material storage purposes without written permission of PRD. If requested by the Resident Engineer, copies of such written permission shall be furnished to him. All sites required for material shall be restored to their original condition by the Contractor at no additional expense to PRD. Unless Contractor storage areas are otherwise provided, materials shall be stored in public rights of way or easements as established.

The Contractor shall be responsible for protecting all materials from damage, vandalism or theft. Materials shall be stored in such a manner so as not to create a hazard to the public or adjoining property.

11. TESTING OF MATERIALS

1. All tests and inspections as required by codes, ordinances or for material certification and construction as noted in the specifications, shall be paid by the Contractor. PRD, CDOT, and Resident Engineer reserve the right to employ any testing certified company to perform a specific category of testing as may be noted herein. The costs of testing shall be paid by the Contractor and shall be included in the cost of the associated item of work as defined in the method of measurement and basis of payment noted in the specifications.

2. Tests shall be made by an independent testing laboratory and be acceptable to PRD and Resident Engineer. Except as otherwise provided, sampling of materials, testing methods and testing equipment shall be in accordance with the latest standard or tentative method of the referenced specification.

3. Tests and procedures to be performed by the Contractor shall conform to the requirements of technical specifications, the referenced specifications and as otherwise required by the Resident Engineer.

12. SALES AND USE TAX

Sales tax shall be included in the unit prices on the Bid Schedule. This project is RTD tax- exempt. The Prime Contractor must apply to the Colorado. Dept. of Revenue for a tax-exempt number using Form DR-172. The RTD tax-exempt number is 562563189. It will be the responsibility of the Contractor to include appropriate subcontractor and suppliers on the form.

13. INSURANCE

INDEMNIFICATION: The successful Contractor shall indemnify and hold PRD harmless from any and all claims, liabilities, losses and causes of action which may arise out of the fulfillment of the Vendor's contractual obligations as outlined in this Solicitation. The Contractor or its insurer(s) shall pay all claims and losses of any nature whatever in connection therewith, and shall defend all suits, in the name of PRD when applicable, and shall pay all costs and judgments which may issue thereon.

INSURANCE: The Contractor shall purchase and maintain at its own expense, insurance which is at least as broad, and with limits at no less than:

General Liability

Policy form:	Occurrence
Policy Aggregate	\$ 2,000,000
Products/completed operations aggregate	2,000,000
Each occurrence limit	1,000,000
Personal & advertising injury limit	1,000,000
Products/completed operations	
Defense outside of limits	
Per location / per project aggregate limit	



Blanket contractual
Liability, Independent
contractors Primary &
non-contributory
Include a Waiver of Subrogation in favor of PRD, HPTE, & CDOT.
All locations / operations (if not, show city job/location specifically)
Name PRD, HPTE, and CDOT as "Additional Insured"

Automobile Liability:

Combined single limit:..... \$ 1,000,000
Any auto (or Hired & Non-owned, if Contractor does
not have any owned or long term leased vehicles) include a Waiver of Subrogation in favor of
PRD, HPTE, and CDOT.
Primary & non-contributory
Pollution liability–Broadened coverage for autos (IF you carry any hazardous
cargo)
Name PRD, HPTE, and CDOT as "Additional Insured"

Workers' Compensation :

Workers Compensation benefits:	per Colorado Statute
Employers liability – limit per accident	\$ 1,000,000
Employers liability – limit per disease	1,000,000
Employers liability – disease aggregate	1,000,000

All contractors/subcontractors/employees who will be on CDOT property or job site must be covered
Show Waiver of Subrogation in favor of PRD, HPTE, and CDOT
Coverage must apply to workers in Colorado and other states if your employees are traveling in from outside of Colorado

Insurance companies providing the coverage's specified above must be authorized to do business under the laws of the State of Colorado and must be rated no less than "A-VIII" by A.M. Best Company. Issuance of a contract is contingent upon verification of all required coverage.

PRD will not purchase property insurance or a "builder's risk" policy as described in General Conditions Section 5.06.

14. UTILITIES AND UTILITY COORDINATION

Any electrical power needs of the Contractor, beyond what is on site, must be supplied by the Contractor.

The Contractor shall provide, at his expense, all necessary utilities required for his operations under the contract. The Contractor shall provide and maintain in good order such modern equipment and installations to perform the work in a safe and satisfactory manner.

The Contractor shall have the authority and responsibility for coordination of work with the utility companies, including CDOT owned utilities.

PRD will notify all utility companies, pipe line owners, or other parties affected, and have all necessary adjustments of the public or private utility fixtures, pipe lines, and other appurtenances within or adjacent to the limits of construction made as soon as practicable. Water lines, gas lines, wire lines, service connections, meter and valve boxes, light standards, cableways, signals, and all other utility facilities within the limits of the proposed construction are to be relocated or adjusted at the owner's expense unless otherwise provided in the Contract. The Contractor shall cooperate with the utility owners in their removal and relocation operations, so that progress is expedited, duplication of work is minimized and service interruptions are avoided. The Contract will indicate those utility items which are to be relocated or adjusted by the utility owner or which are to be relocated or adjusted by the Contractor.

The Contractor shall consider in the bid proposal all of the permanent and temporary utility facilities in their present or relocated positions as shown in the Contract and as revealed by site investigation. Utility delays due to changes which are the responsibility of the Contractor will be considered nonexcusable delays. The Contractor and the Engineer shall meet with the utility owners as often as necessary to coordinate and schedule relocations or adjustments. Additional compensation will not be allowed for foreseeable coordination, inconvenience, or damage sustained due to interference from the utility facilities or the removal or relocation operations as indicated in the Contract. Delays shall be dealt with in accordance with Article 12.03. If utility facilities or appurtenances are found that are neither identified in the Contract, nor revealed by site investigation, the Engineer will determine

whether adjustment or relocation of the utility is necessary. The Engineer will make arrangements with either the utility owner or the Contractor to accomplish necessary adjustments or relocations when not otherwise provided for in the Contract.

Extra work will be considered for payment in accordance with Article 10. Consideration for delays shall be in accordance with Article 12.03. Where the Contractor's operations are adjacent to properties of railroad, telegraph, telephone, power, or other utility companies, to which damage might result in considerable expense, loss, or inconvenience, work shall not commence until arrangements for the protection of the utilities have been made.

If water or utility services are interrupted, the Contractor shall promptly notify the owner and shall cooperate in the restoration of service. Repair work shall be continuous until the service is restored. Work shall not be undertaken around fire hydrants until provisions for continued service have been approved by the City fire authority.

15. PERMITS

The Contractor will obtain all permits required for this work.

16. ADVANCE NOTICE OF WORK

The Contractor shall contact the Resident Engineer a minimum of **24 hours** in advance of pouring concrete, backfilling, covering any piping, plumbing, electrical work, utility, or structure affected by the work. Such notice shall also apply to any inspection or testing requiring the presence of the Resident Engineer.

17. WORKMANSHIP

1. The Contractor shall employ only trained, competent and skillful workmen to perform the work. Whenever the Resident Engineer shall notify the Contractor in writing that, in his opinion, a workman on the job site is incompetent, disorderly or improperly performing the contract work, the Contractor shall forthwith remove such person and not employ such person on any part of the work without written consent of the Resident Engineer.

2. PRD or Resident Engineer may stop any work or any part of the work performed by the Contractor if the methods or conditions are such that unsatisfactory work might result, or if improper materials or workmanship are being used. The work shall not resume until remedial action is taken by the Contractor and approval for resumption of work is given by PRD or the Resident Engineer. Any period of work stoppage for improper work will not entitle the Contractor to additional compensation or an extension to the contract Time of Completion.

18. APPLICABLE SAFETY CODE AND SITE CONDITIONS

1. All work shall be in conformance with Applicable Safety Codes. Applicable safety Code shall mean the latest edition including and all amendments, revisions and additions thereto of the Federal Department of Labor, Occupational Safety and Health Administration's "Occupational Safety and Health Standards" and "Safety and Health Regulations for Construction", of the State of Colorado, Department of Labor and Employment, whichever is the more stringent for the applicable requirement.

2. Appropriate first aid facilities and supplies shall be kept at the work site, and the Contractor shall provide and maintain all measures as required by the State Industrial Commission.

3. The Contractor shall be solely responsible for safety on the project and shall designate a responsible member of his organization on the project whose duty shall be the prevention of accidents. This person shall have full authority to act on behalf of the Contractor.

19. CLEAN UP

No separate measurement or payment will be made for clean-up and dress-up of the construction site, or haul of materials from the project site. This work shall be considered incidental to the related item of work and any associated costs shall be the Contractor's responsibility.

1. The Contractor shall maintain a safe and clean work area. The Contractor shall remove all waste containers, pallets, trash and debris, etc., from the premises at regularly scheduled periods for the duration of the work, or at the direction of the Resident Engineer. At a minimum, all waste containers, pallets, trash and debris, etc. must be completely removed from the work areas prior to the lanes being reopened to traffic.

2. The Contractor shall provide a trash dumpster if necessary in a location approved by the Engineer and haul directly to a legally designated landfill as needed. Trash shall not be allowed to be stored on the work site and it shall be prevented from blowing onto adjoining properties, travel ways, and shoulders.

3. The project work site and all affected areas shall be dressed-up and finish graded to the satisfaction of the Resident Engineer prior to the final acceptance of the project. The project area shall be restored to same or better condition as before construction.

20. FINAL INSPECTION

1. When improvements contained in the Contract are substantially complete, the Contractor shall notify PRD or the Resident Engineer in writing that the work will be ready for inspection on a given date as stated in the notice. The notice should be given at least **five (5) calendar days** prior to the date stated for inspection.

2. The Resident Engineer will require a Pre-Final inspection of the completed work. For all the work items not in conformance with the contract documents, the Resident Engineer will provide the Contractor with a "Punch List" of work items to be completed or corrected by the Contractor.

3. Upon completion of any "Punch List" items required of the Contractor, the Contractor shall give notice to the Resident Engineer requesting a Final Inspection and acceptance of the project work. If after the Final Inspection, all contract work is acceptable to PRD and Resident Engineer, the Contractor may request final payment on the Contract.

Prior to final payment, PRD shall publish a "Notice of Final Payment" to guarantee that all parties to the contract, i.e., sub-contractors, suppliers, etc. have been paid. PRD may require that the Contractor provide additional information to substantiate payment to suppliers and sub-contractors.

21. LITIGATION

If any litigation from any claims, disputes or other matters in question arising out of or relating to this agreement, or the breach thereof, the successful party in the litigation shall be entitled to reasonable legal expenses as part of any judgment.

22. LIQUIDATED DAMAGES

Should the Contractor fail to complete the work, or any part thereof, in the time stipulated in the Agreement or within such extra time as may have been allowed for delays by extensions granted as provided in the Contract Documents, the Contractor shall reimburse the Owner for the additional expense and damage for each calendar day, that the Contract remains uncompleted after the Contract completion date. It is agreed that the amount of such additional expense and damage incurred by reason of failure to complete the work is the per diem rate stipulated on the Bid form. The said amounts are hereby agreed upon as liquidated damages for the loss to the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain.

It is expressly understood and agreed that this amount is not to be considered in the nature of a penalty, but as liquidated damages which have accrued against the Contractor; and the Owner is authorized to deduct the amount of such damages from any monies due the Contractor for work performed or material furnished under this Agreement; and the Contractor and his Sureties shall be liable for any excess.

The Contractor agrees to pay as liquidated damages, the sum of \$15,000.00 for each consecutive day thereafter as hereinafter provided in these Supplemental Conditions.

23. PAY ESTIMATES AND RETAINAGE

Partial payments will be made once each month as the work progresses, when the Contractor is performing satisfactorily under the Contract. Payments will be based upon progress estimates prepared by the Contractor and approved by the Engineer, of the value of work performed, materials placed in accordance with the Contract, and the value of the materials on hand. The amount of the progress estimate paid to the Contractor will be subject to the following:

- (a) Standard Amount Retained. PRD will make a deduction from the progress estimate in the amount considered necessary to protect the interests of PRD. The amount to be retained will be 10 percent of the



value of the completed work, exclusive of mobilization and payments for materials on hand. The amount retained will be in effect until such time as final payment is made, with the following exception which requires the Contractor's written request and consent of the Surety: Upon completion and acceptance of the project, after the project quantities are finalized, and the Contractor has submitted the necessary forms, the Engineer may make reduction in the amount retained.

(b) Subcontractor and Supplier Claims. In addition to a standard amount retained, PRD will withhold funds for all claims against the Contractor filed by subcontractors and suppliers, pursuant to Sections 38-26-107 and 24-91-103, CRS.

(d) No Payment. A partial payment will not be made when the total value of the work done since the last estimate amounts to less than \$500.

(e) Prompt Payment. The Contractor shall pay subcontractors and suppliers for all work which has been satisfactorily completed within seven calendar days after receiving payment for that work from PRD. For the purpose of this section only, work shall be considered satisfactorily complete when PRD has made payment for the work. The Contractor shall include in all subcontracts a provision that this requirement for prompt payment to subcontractors and suppliers must be included in all subcontracts at every tier. The Contractor shall ensure that all subcontractors and suppliers at every tier are promptly paid. If the Contractor fails to comply with this provision the Engineer will not authorize further progress estimates until the required payments have been made and the Contractor agrees to make payments as specified.

(f) Good Cause Exception. If the Contractor has "good cause" to delay or withhold a subcontractor's progress payment, the Contractor shall notify PRD and the subcontractor in writing within seven calendar days after receiving payment from PRD. The notification shall specify the amount being withheld and provide adequate justification for withholding the payment. The notice shall also clearly state what conditions the subcontractor must meet to receive payment. "Good cause" shall include but not be limited to the failure of the subcontractor to make timely submission of required paperwork

24. SITE CONDITIONS

The Contractor shall provide on-site sanitary facilities, safe working conditions and emergency medical aid for workmen on the project site. **Construction equipment, tools, materials and workmen's private vehicles** shall be located in areas designated by the Engineer. Construction related items **shall not** interfere with traffic, utilities, or access to private property.

The Contractor shall maintain the project site in a safe condition for the general public by the use of barricades, fencing, and traffic warning devices in accordance with the MUTCD. Construction materials on the construction site shall be stored and secured so as not to become a hazard or otherwise endanger the public or property.

The Contractor shall confine all material storage and construction activity to the limits established by PRD and Resident Engineer. The Contractor, Sub-Contractor and their workmen **shall not park equipment or vehicles outside of the established construction limits**. As required to confine the construction activity or as otherwise requested by the Resident Engineer, the Contractor may be required to install and maintain temporary construction fencing for the duration of the project work.

The Contractor shall protect all trees and shrubs in the vicinity of the contract work. Any damage or destruction of trees and shrubs will require replacement by the Contractor at no additional cost to PRD.

25. HOLIDAYS

The Contractor shall not work on legal holidays without permission from the Resident Engineer, and the Contractor shall be responsible for any additional costs incurred PRD due to such work.

26. EXTRA WORK

All extra work will be administered and paid in accordance with Section 109 of the Colorado Department of Transportation 2011 Specification Book.

For all planned work, the Contractor will be paid for the Unit Price established in the Bid Schedule and the field-measured quantities of work performed.

27. INSPECTION

PRD will provide inspection of the work. The Contractor shall not cover any work until inspected by the Resident Engineer or his representative.



28. OWNER SUPPLIED MATERIALS

None.

29. CONSTRUCTION ACCESS AND CONTRACTOR TRAILER

The Contractor shall access the site only from locations agreed to and coordinated with PRD or the Resident Engineer.

Contractor trailer is not required. If the Contractor desires, it must be at a site designated or approved by PRD. The Contractor shall be responsible for the security of the Contractor's storage area, Contractor's trailer and its contents including any record documents relating to the contract work.

30. RESPONSE TO QUESTIONS

Questions which arise during the Response preparation period regarding issues around this Solicitation, purchasing and/or award should be directed, in writing, email or U.S. mail, to Simon Stachnik, Plenary Roads Denver, LLC, 10525 W. 120th Ave., Broomfield, CO 80021 or simon.stachnik@plenarygroup.com. The contractor submitting the question shall be responsible for ensuring that the question is received by the Program Engineer no later than 3:00 PM Mountain March 6, 2020.

An agent of PRD who is authorized to act on behalf of PRD must make any official interpretation of this Solicitation. PRD shall not be responsible for interpretations offered by employees of PRD who are not agents of PRD's Bid Evaluation Committee.

31. RESIDENT ENGINEER, AGENT OF PRD, AND PROGRAM ENGINEER

Simon Stachnik will be the Program Engineer. Christian Guevara will be the Resident Engineer and Agent of PRD for this solicitation.

32. CONFLICTS WITHIN THE CONTRACT DOCUMENTS

The General Conditions, these Supplemental Conditions, the Plans, Technical Specifications and all supplementary documents are essential parts of the Contract, and a requirement occurring in one is as binding as occurring in all. They are intended to be complementary and to describe and provide for a complete work.

In case of a discrepancy, the order of precedence is as follows:

1. Any Addenda issued
2. The Technical Specifications
3. The Supplemental Conditions
4. The General Conditions
5. Shop Drawings
6. Contract Plans
7. Standard Plans

The Contractor shall not take advantage of any apparent error or omission in the Contract. If the Contractor discovers an error or omission, the Resident Engineer shall be immediately notified. The Resident Engineer will make corrections and interpretations as necessary to fulfill the intent of the Contract.

33. PROPOSAL DOCUMENTS AND DRAWINGS

Contractors will be provided with one set of drawings and proposal documents, if requested. 48-hour notice is required.

34. REFERENCES FOR SIMILAR PROJECTS

All proposers must submit a list of at least three (3) references that they have provided for similar type of projects. If reference list is not submitted at time of proposal, then their proposal will be considered as non-responsive.

35. MAINTENANCE OF TRAFFIC

Traffic Control Plans shall be in accordance with the MUTCD and designed by a certified Traffic Control Supervisor. Except for short closures (5 minutes or less), the Contractor shall keep the road open to all traffic in accordance with the Traffic Control Plan during the progress of the work. The Contractor shall also provide and maintain in a safe condition temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, residences, garages, and farms. The road and the intersections of the access points shall be maintained in a manner that will safely and adequately accommodate traffic.

The Contractor must submit Lane Closure Reports before noon on Thursday showing the forecasted closures for the next week.

The Contractor shall not store materials or equipment nor park vehicles on the roadway except in designated areas.

The Contractor shall not have materials or equipment in the traffic lanes open to traffic at any time unless directed.

Portions of the roadway that are not included in the contract work will be maintained by PRD or CDOT. The Contractor shall be responsible for maintaining all work that is included in the Contract, and maintaining approaches, crossings, intersections, and other features as may be necessary to accommodate traffic without direct compensation, except as provided in the Contract.

During any suspension ordered by the Resident Engineer, the Contractor shall open to traffic the portions of the project as directed. Prior to allowing traffic on the project, the Contractor shall prepare the roadbed so that it will safely and adequately accommodate traffic. During the suspension period, the maintenance of the roadway will be the responsibility of PRD. However, when the suspension is the result of a failure by the Contractor, all costs for maintenance of traffic during the suspension period shall be borne by the Contractor. When the suspension is lifted, the Contractor shall renew any work or replace materials lost or damaged on the project and shall remove, as directed, work or materials used during the suspension. The Contractor shall complete the project as though the prosecution of the work had been continuous and without interference.

If the Resident Engineer directs special maintenance for the benefit of the traveling public, that is not included in the Contract, the Contractor will be paid in accordance with Article 11.03 when contract unit prices exist, or as extra work, in accordance with Article 10.01 when no contract unit prices exist.

36. BONDING REQUIREMENTS

1. The successful Contractor must provide a Performance Bond and Payment Bond, equal to 100% of the contract amount. The Performance Bond shall remain in full force and effect through the guarantee period.
2. Each proposal must be accompanied by a bid bond, or certified check, in the amount of 5% of the total amount of the bid. The Proposal Guarantees accompanying the three lowest proposals may be held until the contract is awarded provided this period does not exceed 60 calendar days. The Proposal Guarantees accompanying the other proposals will be returned promptly after the bid prices have been compared.

13 TECHNICAL SPECIFICATIONS

INTRODUCTION TO THE TECHNICAL SPECIFICATIONS:

The Technical Specifications shall apply to the various items of work described in the Contract. Within this Technical Specification PRD hereby incorporates Division 100 through Division 700 of the most current edition of the State of Colorado Department of Transportation, "Standard Specifications for Road and Bridge Construction". When the following terms are used, they shall mean respectively:

State or Department	Local Public Agency
Program Engineer	Simon Stachnik, P.R.D.
Resident Engineer	Christian Guevara, PRD.
Project Engineer	As Designated by R.E.
Inspector	PRD and/or CDOT
Owner	Plenary Roads Denver, LLC
Laboratory	TBD

The Bid Sheet includes references to the State of Colorado Department of Transportation, "Standard Specifications for Road and Bridge Construction". The edition of this document current at the time of the executed agreement shall be the standard of construction for methods and materials, unless otherwise modified below.

Basis of Payment for each item shall be as assigned in the Bid Sheet.

Applicable Safety Code: Shall mean the latest editions including and all amendments, revisions and additions thereto of the Federal Department of Labor, Occupational Safety and Health Administration's "Occupational Safety and Health Standards" and "Safety and Health Regulations for Construction, or The State of Colorado, Department of Labor and Employment, Colorado Occupational Safety and Health Act, whichever is the more stringent for the applicable requirement.

These Specifications: Where used in the text of the Technical Specifications items shall mean the Technical Specifications of this Contract.

Bid Proposal Items: Payment will only be made for items in the Bid Schedule. Other items may be included in the specifications, but payment for items not listed in the Bid Proposal will be included in the cost of other items of work.

Abbreviations: The following abbreviations of the names of agencies promulgating referenced specifications are used herein:

AAMA	Architectural Aluminum Manufacturers Association
AASHTO	American Association of State Highway Transportation Officials
ACI	American Concrete Institute
AGA	American Gas Association
AGC	American General Contractors
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMA	Air Moving and Conditioning Association
ANSI	American National Standards Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASA	American Standard Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society

AWWA	American Water Works Association
CDOT	Colorado Department of Transportation
FMHA	Farmers Home Administration
JIC	Joint Industrial Council
IPCEA	Insulated Power Cable Engineers Association
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NSF	National Sanitation Foundation
OSHA	Occupational Safety and Health Act
RICS	Roofing Inspection and Consulting Service
SSPC	Steel Structures Painting Council
UBC	Uniform Building Code
UL	Underwriter's Laboratory
USAS	United States of America Standard
U.S. EPA	United States Environmental Protection Agency

The following abbreviations may be found in the Specifications:

A.C.	Alternate current
AWG	American Wire Gage
B.M.	Bench Mark
CAB	Crushed Aggregate Base
C-C	Center to Center
C&G	Curb and Gutter
CDOT	Colorado Department of Transportation
CIP	Cast Iron Pipe
CMOS	Ceramic Metal Oxide Silica
CMP	Corrugated Metal Pipe
Conc.	Concrete
DIP	Ductile Iron Pipe
D.C.	Direct Current
EMT	Electrical Metal Tubing
F.H.	Fire Hydrant
G.V.	Gate Valve
HOA	Hand-Off-Automatic
hp	Horsepower
HTH	Calcium Hypochlorite
I/O	Input/Output
kw	Kilowatt
LB	Pound
LED	Light Emitting Diode
Max.	Maximum
MCC	Motor Control Center
Min.	Minimum
OD	Outside Diameter
PID	Proportional Integral Derivative
PROM	Programmable Read Only Memory
PSI	Pounds per square inch
PVC	Polyvinyl Chloride
RAM	Random Access Memory
SCH	Schedule
SDR	Size Dimension Ratio
SPDT	Single Pole Double Throw

14 SCOPE OF WORK

DESCRIPTION

Work under this contract shall include all labor, materials and equipment necessary to install the work as specified in the attached plans, general notes, and documents for Plenary Roads Denver, in Denver, Colorado.

15 BID SCHEDULE PLENARY ROADS DENVER RFB 2020-001

BID SCHEDULE FOR US36 PAVEMENT REPAIRS

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	CONTRACTORS UNIT PRICE	TOTAL PRICE
202-00210	REMOVAL OF CONCRETE PAVEMENT	5,612	SY	\$ -	\$ -
202-00240	REMOVAL OF ASPHALT MAT (PLANING)	30,382	SY	\$ -	\$ -
202-00250	REMOVAL OF PAVEMENT MARKING	6,519	SF	\$ -	\$ -
208-00002	EROSION LOG (12 INCH)	900	LF	\$ -	\$ -
208-00035	AGGREGATE BAG	900	LF	\$ -	\$ -
208-00045	CONCRETE WASHOUT STRUCTURE	3	EACH	\$ -	\$ -
208-00051	STORM DRAIN INLET PROTECTION (TYPE 1)	12	LF	\$ -	\$ -
208-00052	STORM DRAIN INLET PROTECTION (TYPE 2)	60	LF	\$ -	\$ -
208-00106	SWEEPING (SEDIMENT REMOVAL)	12	HOURL	\$ -	\$ -
208-00107	REMOVAL OF TRASH	12	HOURL	\$ -	\$ -
403-09221	STONE MATRIX ASPHALT (FIBERS)(ASPHALT)	3,511	TON	\$ -	\$ -
411-10255	EMULSIFIED ASPHALT (SLOW-SETTING)	1,599	GAL	\$ -	\$ -
412-00190	CONCRETE PAVEMENT (PATCHING)	504	SY	\$ -	\$ -
412-01020	CONCRETE PAVEMENT (10 INCH) (FAST TRACK)	575	SY	\$ -	\$ -
412-01220	CONCRETE PAVEMENT (12 INCH) (FAST TRACK)	5,037	SY	\$ -	\$ -
412-14000	SAWING AND SEALING CONCRETE PAVEMENT JOINTS (0" - less than or equal to 3/8")	89,879	LF	\$ -	\$ -
412-14XX1	SAWING AND SEALING CONCRETE PAVEMENT JOINTS (<3/8" - less than or equal to 3/4")	89,879	LF	\$ -	\$ -
412-14XX2	SAWING AND SEALING CONCRETE PAVEMENT JOINTS (<3/4" - less than or equal to 1")	89,879	LF	\$ -	\$ -
412-14XX3	SAWING AND SEALING CONCRETE PAVEMENT JOINTS (<1" - less than or equal to 1.5")	89,879	LF	\$ -	\$ -
412-15000	ROUTING AND SEALING CONCRETE PAVEMENT CRACKS	4,574	LF	\$ -	\$ -
626-00000	MOBILIZATION	1	L S	\$ -	\$ -
627-00005	EPOXY PAVEMENT MARKING	570	GAL	\$ -	\$ -
630-00000	FLAGGING	300	HOURL	\$ -	\$ -
630-00007	TRAFFIC CONTROL INSPECTION	30	DAY	\$ -	\$ -
630-00012	TRAFFIC CONTROL MANAGEMENT	75	DAY	\$ -	\$ -
630-80001	FLASHING BEACON (PORTABLE)	6	EACH	\$ -	\$ -
630-80335	BARRICADE (TYPE 3 M-A) (TEMPORARY)	3	EACH	\$ -	\$ -
630-80341	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	20	EACH	\$ -	\$ -
630-80342	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	23	EACH	\$ -	\$ -
630-80343	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE C)	20	EACH	\$ -	\$ -
630-80355	PORTABLE MESSAGE SIGN PANEL	4	EACH	\$ -	\$ -
630-80358	ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL (C TYPE)	2	EACH	\$ -	\$ -
630-80360	DRUM CHANNELIZING DEVICE	70	EACH	\$ -	\$ -
630-80363	DRUM CHANNELIZING DEVICE (WITH LIGHT) (FLASHING)	2	EACH	\$ -	\$ -
630-80380	TRAFFIC CONE	200	EACH	\$ -	\$ -
630-80380	MOBILE ATTENUATOR	55	DAY	\$ -	\$ -

CONSTRUCTION SUBTOTAL				\$ -
-----------------------	--	--	--	------

FORCE ACCOUNTS					
700-70010	F/A MINOR CONTRACT REVISIONS	1	FA	\$ 20,000.00	\$ 20,000.00
700-70012	F/A ASPHALT PAVEMENT INCENTIVE	1	FA	\$ 20,000.00	\$ 20,000.00
700-70013	F/A CONCRETE PAVEMENT INCENTIVE	1	FA	\$ 20,000.00	\$ 20,000.00
700-70016	F/A FUEL COST ADJUSTMENT	1	FA	\$ 5,000.00	\$ 5,000.00
700-70019	F/A ASPHALT CEMENT COST ADJUSTMENT FOR HMA AND SMA	1	FA	\$ 10,000.00	\$ 10,000.00
700-70025	F/A QUALITY INCENTIVE PAYMENTS	1	FA	\$ 20,000.00	\$ 20,000.00
700-70031	F/A INTERIM SURFACE REPAIR	1	FA	\$ 20,000.00	\$ 20,000.00
700-70111	PROJECT FIRST PROGRAM	1	FA	\$ 2,000.00	\$ 2,000.00
700-70380	F/A EROSION CONTROL	1	FA	\$ 10,000.00	\$ 10,000.00

FORCE ACCOUNT SUBTOTAL				\$ 127,000.00
------------------------	--	--	--	---------------

TOTAL COMBINED BID AMOUNT				
---------------------------	--	--	--	--

BIDDING _____ TOTAL DAYS TO COMPLTE THE WORK AS SPECIFIED IN THE
ATTACHED PLANS, GENERAL NOTES, AND DOCUMENTS

SUBMITTED BY:

Name _____

ADDRESS _____

City _____ State _____ Zip _____

Corporate Seal

Firm Name * _____

Signature _____

Title _____

Phone (_____) _____ - _____

* Insert " Corporation, Partnership " etc.

Address the envelope as follows:

Plenary Roads Denver, LLC
1700 Lincoln St. Suite 3000
Denver, CO 80203

RFB 2020-001

16 Compliance with 8-17.5-101, C.R.S.

Plenary Roads Denver, LLC

Work By Illegal Aliens Prohibited. Pursuant to Section 8-17.5-101, C.R.S., *et. seq.*, as amended, Contractor warrants, represents, acknowledges, agrees and certifies that:

1. Contractor does not knowingly employ or contract with an illegal alien who will perform work under this agreement. Contractor shall not knowingly enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien who will perform work under this Agreement.
2. Contractor will participate in the electronic employment verification program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended, and jointly administered by the Department of Homeland Security and the Social Security Administration, or its successor program (hereinafter, "E-Verify Program") or will participate in the "Department Program" as established in §8-17.5-102(5)(c), C.R.S., as amended, in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement.
3. Contractor has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this agreement through participation in the E-Verify Program or the Department Program.
4. Contractor shall not use either the E-Verify Program or the Department Program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.
5. If Contractor obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Contractor shall be required to:
 - (a) notify the subcontractor and Owner within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
 - (b) terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to this subparagraph the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.
6. If Contractor participates in the Department Program, Contractor shall provide a notarized written affirmation to Owner that Contractor has, as required by the Department Program, examined the legal work status of employees hired to perform work under this Agreement and shall comply with all other requirements of the Department Program. (A sample contract affirmation may be obtained at: <http://www.coworkforce.com/lab/pcs/default.asp>)
7. Contractor shall comply with any reasonable request by the Colorado Department of Labor and Employment ("Department") made in the course of an investigation that the Department is undertaking pursuant to its legal authority.
8. Nothing in this document shall be construed as requiring Contractor to violate any terms of participation in the E-Verify Program.
9. If Contractor violates this document, PRD may terminate this Agreement for breach of contract. If this Agreement is so terminated, Contractor shall be liable for actual and consequential damages to PRD arising out of said violation.

CONTRACTOR

DATE: _____

BY: _____

17 CONTRACTOR'S APPLICATION FOR PAYMENT

To Owner:

Plenary Roads Denver

Mr. Simon Stachnik

Project Manager, Project Delivery

1700 Lincoln Ave. Suite 3000

Denver, CO 80203

Project:

US 36 PAVEMENT REPAIRS

Job NO. 2020-001

Application No:

Period To:

Contract Date:

From Contractor:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet, AIA Document G703, is attached.

1.

ORIGINAL CONTRACT SUM

\$

-

2.

Net change by Change Orders

\$

-

3.

CONTRACT SUM TO DATE (line 1 +/- 2)

\$

-

4.

TOTAL COMPLETED & STORED TO DATE

\$

-

(Column G on G703)

5.

RETAINAGE:

a. 5% of Completed Work

\$

-

(Column D+E on G703)

b. 5% of Stored Material

\$

-

Total Retainage (line 5a + 5b or

Total in Column 1 of G703)

\$

-

6.

TOTAL EARNED LESS RETAINAGE

\$

-

(line 4 less line 5 Total)

7.

LESS PREVIOUS CERTIFICATES FOR PAYMENT

(line 6 from prior Certificate)

\$

-

8.

CURRENT PAYMENT DUE

\$

-

9.

BALANCE TO FINISH, INCLUDING RETAINAGE

(line 3 less line 6)

\$

-

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

All Contract Work herein represented in this invoice has been checked and/oer inspected for conformances with:

A) In accordance with the Quality Management Plan, as documented by the quality assurance statements, certifications, representations, and tests required therein, the Contract Work, including that of designers, subcontractors, suppliers, and fabricators has been checked and/or inspected by the Contractor's quality program staff and the Work, expect as specifically noted, generally conforms to the requirements of the Contract Documents.

B) The Quality Management Plan, and all of the measures and procedures therein, are functioning properly and are being followed.

C) All safety critical work, in conformance with the Project Safety Management Plan, has been reviewed and, if required, sealed by the Professional Engineer of responsible charge before the construction begins.

By:

Owner:

Plenary Roads Denver

Date:

By:

CONTRACTOR:

Date:

By:

Quality Control Manger

Date:

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by owner	\$ -	\$ -
Total approved this month	\$ -	\$ -
TOTALS	\$ -	\$ -
NET CHANGES by Change Order	\$ -	

CONTINUATION SHEET

AIA DOCUMENT G703

Page x of xPages

AIA Document G702, APPLICATION AND CERTIFICATE FOR PAYMENT, containing Contractor's signed Certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NUMBER: _____
APPLICATION DATE: _____
PERIOD TO: _____

[illegible]

AIA Document G702, APPLICATION AND CERTIFICATE FOR PAYMENT, containing Contractor's signed Certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NUMBER: 0
APPLICATION DATE: 00-Jan-00
PERIOD TO: 00-Jan-00
CONTRACT NO. :

A	B	C	D	E	F	G		H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMP. AND STORED TO DATE (D+E+F)	% (G÷C)	BALANCE TO FINISH (C-G)	RETAINAGE
			FROM PREVIOUS APP. (D + E)	THIS PERIOD					
B	Change Orders								
1	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
2	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
3	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
4	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
5	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
6	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
7	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
8	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
9	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
10	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
11	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
12	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
13	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
14	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
15	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
16	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
17	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
18	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
19	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
20	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
21	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
22	0.00	\$ -	\$ -	\$ -		\$ -	#DIV/0!	\$ -	\$ -
	CHANGE ORDER SUBTOTAL	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -
***	TOTALS	\$ -	\$ -	\$ -	\$ -	\$ -	#DIV/0!	\$ -	\$ -

18 PLAN SET

EMARSH 11:14:05 PM p:\v\pwhdruscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Spt\6.0_CAD_BIM\6.2_WIP\Drawings\Title Sheet

Oversight / NHS

FHWA REGION VIII OVERSIGHT?

☐ NO ☐ YES

NATIONAL HIGHWAY SYSTEM?

☐ NO ☒ YES

PLENARY ROADS DENVER, LLC

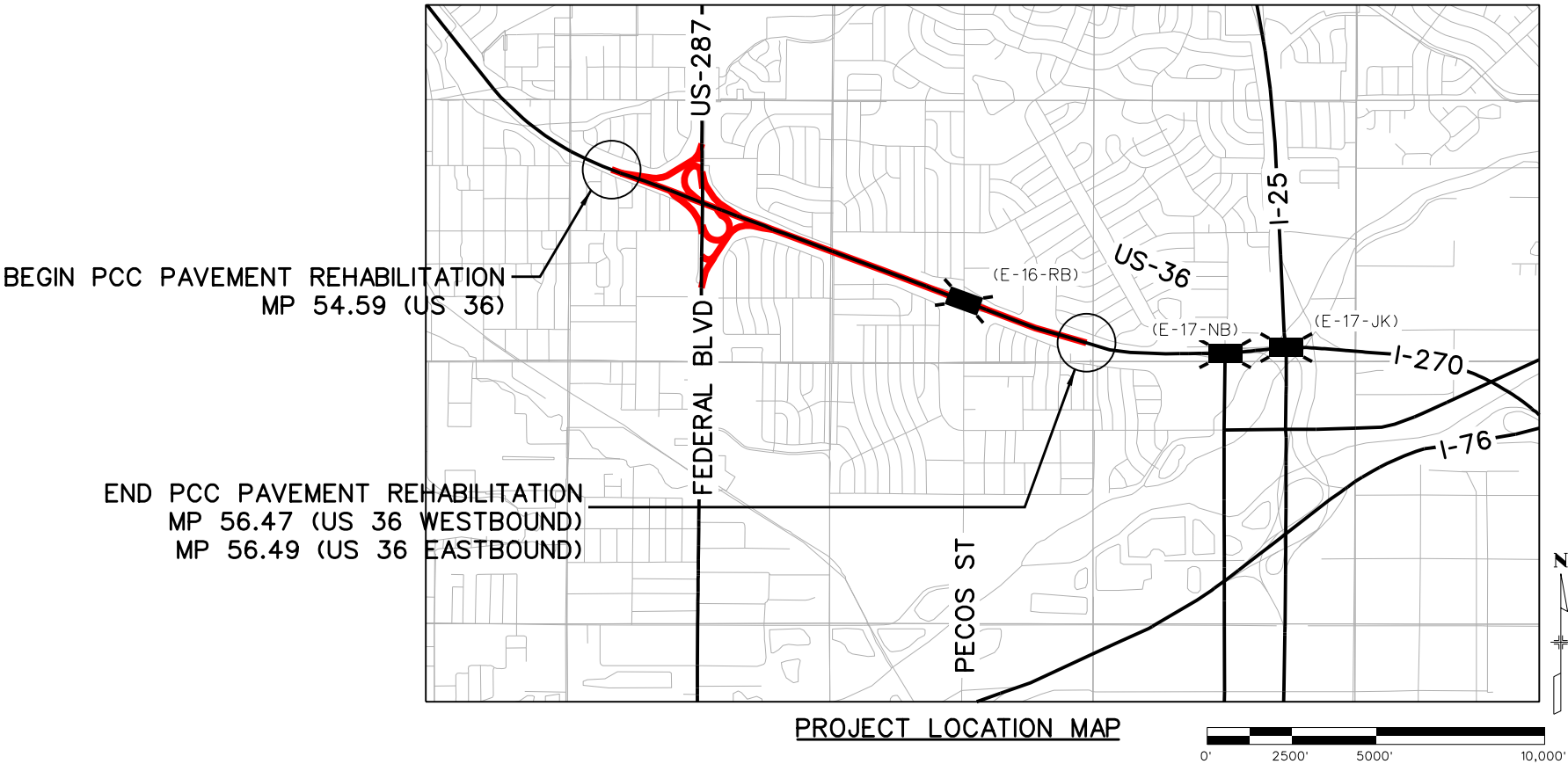
HIGHWAY CONSTRUCTION BID PLANS OF PROPOSED

PROJECT NO. 2019-001

STATE HIGHWAY NO. 36

DENVER COUNTY AND ADAMS COUNTY

US 36 YEAR 1 WORKS - PAVEMENTS



SHEET NO.	INDEX OF SHEETS
US36-01	TITLE SHEET
US36-02	STANDARD PLANS LIST
US36-03	GENERAL NOTES
US36-04 TO 05	TYPICAL SECTIONS
US36-06 TO 07	SUMMARY OF APPROXIMATE QUANTITIES
US36-08	REMOVAL TABULATION
US36-08A	SURFACING TABULATION
US36-09	MOT GENERAL NOTES AND TABULATION
US36-10	PAVEMENT MARKING TABULATION
US36-11 TO 14	SWMP GENERAL NOTES
US36-15	EROSION CONTROL DETAIL
US36-16	TABLE OF LOCATION OF CONCRETE PAVEMENT REPAIRS
US36-17	PLAN SHEET MP 54.59-MP 54.82
US36-18	PLAN SHEET MP 54.82-MP 55.11
US36-19	PLAN SHEET MP 55.11-MP 55.38
US36-20	PLAN SHEET MP 55.38-MP 55.66
US36-21	PLAN SHEET MP 55.66-MP 55.95
US36-22	PLAN SHEET MP 55.95-MP 56.23
US36-23	PLAN SHEET MP 56.23-MP 56.49
US36-24	PLAN SHEET US 36 WB TO FEDERAL BLVD
US36-25	PLAN SHEET US 36 EB TO FEDERAL BLVD

Print Date: 11/6/2019

File Name: Title Sheet

Horiz. Scale: Vert. Scale: As Noted

Unit:

1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202
Phone: 303-764-1520 FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC

1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed

No Revisions:

Revised:

Void:

US 36 PAVEMENT WORKS
SMA AND PCC PAVEMENT
TITLE SHEET

Designer: E. MARSH Structure:

Detailer: B. HAN Numbers:

Sheet Subset: TITLE Subset Sheets: 1 of 1

Project No./Code

2019-001

Sheet: US36-01

EMARSH 8:09:58 AM pw:\p\whdruscen0\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6_0_CAD_BIM\6.2_WIP\Drawings\M&S_Standard_Plans_List_Index

PLAN NUMBER	NEW OR REVISED	M STANDARD TITLE	PAGE NUMBER	PLAN NUMBER	NEW OR REVISED	M STANDARD TITLE	PAGE NUMBER	PLAN NUMBER	NEW OR REVISED	S STANDARD TITLE	PAGE NUMBER
M-100-1		STANDARD SYMBOLS (3 SHEETS).....	1-3	M-606-1		MIDWEST GUARDRAIL SYSTEM TYPE 3 W-BEAM 31 INCHES (19 SHEETS)	79-97	S-612-1		DELINEATOR INSTALLATIONS (8 SHEETS)	171-178
M-100-2		ACRONYMS AND ABBREVIATIONS (4 SHEETS)	4-7	M-606-13		GUARDRAIL TYPE 7 F-SHAPE BARRIER (4 SHEETS)	98-101	S-613-1	<input type="checkbox"/>	ROADWAY LIGHTING (8 SHEETS)	179-186
M-203-1		APPROACH ROADS.....	8	M-606-14		PRECAST TYPE 7 CONCRETE BARRIER (3 SHEETS).....	102-104	S-614-1		GROUND SIGN PLACEMENT (2 SHEETS).....	187-188
M-203-2		DITCH TYPES	9	M-606-15		GUARDRAIL TYPE 9 SINGLE SLOPE BARRIER	105-115 (11 SHEETS)	S-614-2		CLASS I SIGNS	189
M-203-11		SUPERELEVATION CROWNED AND DIVIDED HIGHWAYS (3 SHEETS)	10-12					S-614-3		CLASS II SIGNS	190
M-203-12		SUPERELEVATION STREETS (2 SHEETS).....	13-14	M-607-1		WIRE FENCES AND GATES (3 SHEETS)	116-118	S-614-4		CLASS III SIGNS (3 SHEETS)	191-193
M-206-1		EXCAVATION AND BACKFILL FOR STRUCTURES (2 SHEETS)	15-16	M-607-2		CHAIN LINK FENCE (3 SHEETS)	119-121	S-614-5		BREAK-AWAY SIGN SUPPORT DETAILS FOR CLASS III SIGNS (2 SHEETS)	194-195
M-206-2		EXCAVATION AND BACKFILL FOR BRIDGES (2 SHEETS)	17-18	M-607-3		BARRIER FENCE	122	S-614-6		CONCRETE FOOTINGS AND SIGN ISLANDS FOR CLASS III SIGNS (2 SHEETS)	196-197
M-208-1		TEMPORARY EROSION CONTROL (11 SHEETS)	19-29	M-607-4		DEER FENCE, GATES, AND GAME RAMPS (5 SHEETS).....	123-127				
M-210-1		MAILBOX SUPPORTS (2 SHEETS)	30-31	M-607-10		PICKET SNOW FENCE	128	S-614-8		TUBULAR STEEL SIGN SUPPORT DETAILS (7 SHEETS)	198-204
M-214-1		NURSERY STOCK DETAILS	32	M-607-15		ROAD CLOSURE GATE (9 SHEETS).....	129-137	S-614-9		PEDESTRIAN PUSH BUTTON POST ASSEMBLY (2 SHEETS).....	205-206
M-216-1		SOIL RETENTION COVERING (2 SHEETS)	33-34	M-608-1		CURB RAMPS (10 SHEETS).....	138-147	S-614-10		MARKER ASSEMBLY INSTALLATIONS	207
M-412-1		CONCRETE PAVEMENT JOINTS (5 SHEETS).....	35-39	M-609-1		CURBS, GUTTERS, AND SIDEWALKS (4 SHEETS)	148-151	S-614-11		MILEPOST SIGN DETAIL FOR HIGH SNOW AREAS	208
M-510-1		STRUCTURAL PLATE PIPE H-20 LOADING	40	M-611-1		CATTLE GUARD (2 SHEETS).....	152-153	S-614-12		STRUCTURE NUMBER INSTALLATION (2 SHEETS)	209-210
M-601-1		SINGLE CONCRETE BOX CULVERT (CAST-IN-PLACE)	41-42 (2 SHEETS)	M-611-2		DEER GUARD (2 SHEETS).....	154-155	S-614-14		FLASHING BEACON AND SIGN INSTALLATIONS (4 SHEETS) .	211-214
M-601-2		DOUBLE CONCRETE BOX CULVERT (CAST-IN-PLACE).....	43-44 (2 SHEETS)	M-614-1		RUMBLE STRIPS (3 SHEETS).....	156-158	S-614-20		TYPICAL POLE MOUNT SIGN INSTALLATIONS	215
M-601-3		TRIPLE CONCRETE BOX CULVERT (CAST-IN-PLACE)	45-46 (2 SHEETS)	M-614-2		SAND BARREL ARRAYS (2 SHEETS).....	159-160	S-614-21		CONCRETE BARRIER SIGN POST INSTALLATIONS	216-217 (2 SHEETS)
M-601-10		HEADWALL FOR PIPES	47	M-615-1		EMBANKMENT PROTECTOR TYPE 3	161	S-614-22		TYPICAL MULTI-SIGN INSTALLATIONS	218
M-601-11		TYPE "S" SADDLE HEADWALLS FOR PIPE	48	M-615-2		EMBANKMENT PROTECTOR TYPE 5	162	S-614-40		TYPICAL TRAFFIC SIGNAL 30'-75' DOUBLE MAST ARMS 65'-75' SINGLE MAST ARMS (5 SHEETS)	219-223
M-601-12		HEADWALLS AND PIPE OUTLET PAVING	49	M-616-1		INVERTED SIPHON	163	S-614-40A		ALTERNATIVE TRAFFIC SIGNAL 25'-55' SINGLE MAST ARMS (4 SHEETS)	224-227
M-601-20		WINGWALLS FOR PIPE OR BOX CULVERTS (2 SHEETS) ...	50-51	M-620-1		FIELD LABORATORY CLASS 1	164	S-614-41		TEMPORARY SPAN WIRE SIGNALS (13 SHEETS)	228-240
M-603-1		METAL PIPE (4 SHEETS).....	52-55	M-620-2		FIELD LABORATORY CLASS 2 (2 SHEETS)	165-166	S-614-42		CABINET FOUNDATION DETAIL (4 SHEETS).....	241-244
M-603-2		REINFORCED CONCRETE PIPE	56	M-620-11		FIELD OFFICE CLASS 1	167	S-614-43		TRAFFIC LOOP AND MISCELLANEOUS SIGNAL DETAILS (8 SHEETS)	245-252
M-603-3		PRECAST CONCRETE BOX CULVERT.....	57	M-620-12		FIELD OFFICE CLASS 2	168				
M-603-4		CORRUGATED POLYETHYLENE PIPE (AASHTO M294).....	58	M-629-1		SURVEY MONUMENTS (2 SHEETS).....	169-170				
		AND POLYPROPYLENE PIPE (AASHTO M330)						S-614-44		PEDESTAL POLE SIGNALS (2 SHEETS).....	253-254
M-603-5		POLYVINYL CHLORIDE (PVC) PIPE (AASHTO M304)	59					S-614-50		STATIC SIGN MONOTUBE STRUCTURES (12 SHEETS)	255-266
M-603-6		STEEL REINFORCED POLYETHYLENE RIBBED PIPE (AASHTO MP 20)	60					S-614-60		DYNAMIC SIGN MONOTUBE STRUCTURES (14 SHEETS)	267-280
M-603-10		CONCRETE AND METAL END SECTIONS	61					S-627-1		PAVEMENT MARKINGS (9 SHEETS).....	281-289
M-603-12	<input type="checkbox"/>	TRAVERSABLE END SECTIONS AND SAFETY GRATES.....	62-64 (3 SHEETS)					S-630-1		TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION (24 SHEETS)	290-313
M-604-10		INLET, TYPE C	65					S-630-2		BARRICADES, DRUMS, CONCRETE BARRIERS (TEMP) AND VERTICAL PANELS	314
M-604-11		INLET, TYPE D	66					S-630-3		FLASHING BEACON (PORTABLE) DETAILS	315
M-604-12		CURB INLET TYPE R (2 SHEETS).....	67-68					S-630-4		STEEL SIGN SUPPORT (TEMPORARY) INSTALLATION DETAILS (2 SHEETS)	316-317
M-604-13		CONCRETE INLET TYPE 13	69					S-630-5		PORTABLE RUMBLE STRIPS (TEMPORARY) (2 SHEETS)	318-319
M-604-20		MANHOLES (3 SHEETS).....	70-72					S-630-6		EMERGENCY PULL-OFF AREA (TEMPORARY).....	320
M-604-25		VANE GRATE INLET (5 SHEETS).....	73-77					S-630-7		ROLLING ROADBLOCKS FOR TRAFFIC CONTROL	321-323 (3 SHEETS)
M-605-1		SUBSURFACE DRAINS	78								

COLORADO
DEPARTMENT OF TRANSPORTATION
M&S STANDARDS PLANS LIST
July 31, 2019
Revised on July 31, 2019

ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED AND REVISED, APPLY TO THIS PROJECT WHEN USED BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.

NEW OR REVISED STANDARD PLAN SHEETS APPLICABLE TO THIS PROJECT, INDICATED BY A MARKED BOX ☐, WILL BE ATTACHED TO THE PLANS.

Print Date: 11/5/2019		<div>0000</div>	Sheet Revisions			<div>Plenary Roads</div> <div>1700 Lincoln Street, Suite 3000 Denver, Colorado 80203 Phone: 303-803-9452 FAX: 303-803-9453</div>	As Constructed		US36 PAVEMENT WORKS SMA AND PCC PAVEMENT STANDARD PLANS LIST			Project No./Code		
File Name: M&S Standard Plans List Index			Date:	Comments	Init.		No Revisions:		Designer: E. MARSH Detailer: B. HAN		Structure Numbers		2019-001	
Horiz. Scale: 1:1 Vert. Scale: As Noted			-	-	-		Revised:						Sheet: US36-02	
Unit:			-	-	-		Void:		Sheet Subset: STD PLANS		Subset Sheets: 1 of 1			
<div>HDR</div> <div>1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 FAX: 303-860-7139</div>			-	-	-									


EMARSH 12:58:30 PM pw:\pwwdrscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Spt\6.0_CAD_BIM\6.2_WIP\Drawings\General Notes

- FOR PRELIMINARY PLAN QUANTITIES OF PAVEMENT MATERIAL, THE FOLLOWING RATES OF APPLICATION WERE USED:
 - AGGREGATE BASE COURSE (CLASS 6).....133 LBS./CU.FT.
 - STONE MATRIX ASPHALT (SMA).....110 LBS./SQ.YD./INCH
 - TACK COAT EMULSIFIED ASPHALT (SLOW SETTING).....0.05 GAL./SQ.YD./INCH (DILUTED)
- A TACK COAT OF EMULSIFIED ASPHALT (SLOW SETTING) IS TO BE APPLIED TO IMPROVE BOND AT THE FOLLOWING LOCATIONS:
 - BEFORE PLACING NEW PAVEMENT OVER EXISTING PAVEMENT
 - ALONG THE FACE OF ALL MANHOLES, ADJACENT EXISTING PAVEMENT, AND OTHER SURFACES AGAINST ASPHALT WILL BE PLACED
- DILUTED EMULSIFIED ASPHALT FOR THE TACK COAT SHALL CONSIST OF 1PART WATER AND 1PART EMULSIFIED ASPHALT. RATES OF APPLICATION SHALL BE DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION. TACK COAT SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
- ANY LAYER OF STONE MATRIX ASPHALT PAVEMENT THAT IS TO HAVE A SUCCEEDING LAYER PLACED THEREON SHALL BE COMPLETED FULL WIDTH BEFORE SUCCEEDING LAYER IS PLACED.
- THE CONTRACTOR MAY USE AN EXPOSED LONGITUDINAL JOINT FOR A MAXIMUM OF ONE DAY. THE JOINT WILL CONSIST OF A VERTICAL FACE 1INCH DEEP AND AT THE BOTTOM OF A VERTICAL FACE, A 3:1 SLOPE TO THE EXISTING PAVEMENT (OR SUBGRADE). THE MAXIMUM DEPTH OF THE 3:1 SLOPE SHALL BE 2 INCHES. AT THE END OF THE DAY, PLACEMENT OF THE HMA ON THE ADJACENT LANE IS REQUIRED.
- THE FOLLOWING SHALL BE FURNISHED WITH EACH BITUMINOUS PAVER:
 - A SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH
 - A SHORT SKI OR SHOE
 - 6 INCH SHOE IS REQUIRED
- WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED. LOCATIONS SHALL BE AS ORDERED BY THE ENGINEER AND WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE WORK.
- ALL MATERIAL GENERATED WITHIN THE PROJECT LIMITS SHALL BE REMOVED FROM THE PROJECT SITE AT NO COST TO THE PROJECT UNLESS SPECIFIED IN THE PLANS.
- THE CONTRACTOR SHALL REPAIR OR REPLACE AT THE CONTRACTOR'S EXPENSE ANY EXISTING SIGNS DAMAGED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE DURING THE WORK. ANY REWORK OF MATERIAL DUE TO LACK OF THIS MAINTENANCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- REMOVAL OF TEMPORARY PAVEMENT MARKINGS WILL NOT BE PAID FOR SEPARATE BUT SHALL BE INCLUDED IN THE WORK.
- REMOVAL OF PAVEMENT MARKINGS WITHIN THE MILL AND OVERLAY WILL NOT BE PAID FOR SEPARATELY.
- TRAFFIC WILL USE THE PRESENT ROADWAY DURING CONSTRUCTION.
- THE PLANS DO NOT SHOW UTILITY LOCATIONS. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITIES FOR UTILITIES NOT SHOWN. CONTRACTOR TO VERIFY EXACT LOCATIONS OF EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND AVOID SAME.

- ALL WORK TO BE COMPLETED DURING NIGHT AND WEEKENDS AND SHALL FOLLOW THE COLORADO DEPARTMENT OF TRANSPORTATION REGION 1 LANE CLOSURE STRATEGY (FIFTH EDITION, 2019)
- THE ROADWAY IS CLASSIFIED AS URBAN.
- THE PAVEMENT SMOOTHNESS CATEGORY FOR THE PROJECT SHALL BE CATEGORY I.
PCC PAVEMENT (PANELS) - HRI WILL BE 135 (INCHES/MILES).
HMA PAVEMENT OVERLAY - HRI WILL BE 135 (INCHES/MILES).
FOR PCC PAVEMENT THE STRAIGHT EDGE METHOD SHALL BE UTILIZED.
- PRIOR TO PLACING BITUMINOUS PAVEMENT, SWEEPING OF DIRT AND GRAVEL FROM THE EXISTING MAT SHALL BE COMPLETED. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE WORK.
- WHERE CUTTING OF ASPHALT PAVEMENT IS REQUIRED THE CUTTING SHALL BE DONE TO THE NEAT WORK LINE WITH A SAW OR CUTTING WHEEL AS APPROVED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
- THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. CONSTRUCTION ACTIVITIES IN ADDITION TO NORMAL CONSTRUCTION PROCEDURE SHALL INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER, AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS.
- PERMANENT STRIPING: THE CONTRACTOR SHALL MAP EXISTING STRIPING THROUGH PROJECT LIMITS PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL PROVIDE FINAL STRIPING THROUGH PROJECT LIMITS TO MATCH THE ORIGINAL STRIPING PRIOR TO PROJECT COMPLETION UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- TEMPORARY STRIPING: DURING SMA PAVING OPERATIONS, TEMPORARY PAVEMENT MARKINGS PROVIDED AND PLACED BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH STANDARD S-630-1. TEMPORARY PAVEMENT MARKING WILL BE PLACED AND IN FULL COMPLIANCE AT THE END OF EACH WORKING DAY UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- WORK PERFORMED MUST BE CONSISTENT WITH THAT DETAILED IN THE STORM WATER MANAGEMENT PLAN.
- PLENARY WILL PROVIDE A STAGING AREA ON THE NW QUADRANT OF US-36 AND FEDERAL BLVD. CONTRACTOR TO RESTORE STAGING AREA TO EQUAL OR BETTER THAN EXISTING CONDITIONS. CONTRACTOR MUST KEEP EQUIPMENT AND STOCKPILES OUTSIDE OF THE CLEAR ZONE (25- FEET FROM TRAVELED WAY).

PCCP REPLACE/REHABILITATION

- REFER TO M&S STANDARDS SECTION M-412 FOR CONCRETE PANEL AND JOINT CONSTRUCTION.
- FULL DEPTH SAW CUTS MUST BE MADE AROUND THE ENTIRE PERIMETER OF THE DISTRESSED CONCRETE AREA THAT WILL BE REMOVED.
- DRILL AND PLACE DOWELS IN EXISTING CONCRETE PANELS PER 412.13(a).
- STRUCTURE EXCAVATION TO BE INCLUDED IN THE WORK AND WILL NOT BE PAID FOR SEPARATELY.
- CLASS P CONCRETE FOR PORTLAND CEMENT PAVEMENT SHALL REACH A COMPRESSIVE STRENGTH OF 3,000 PSI BEFORE BEING OPENED TO TRAFFIC.

Print Date: 11/6/2019		
File Name: General Notes		
Horiz. Scale: 1:1		Vert. Scale: As Noted
Unit:		
	1670 BROADWAY, SUITE 3400	DENVER, COLORADO 80202
	Phone: 303-764-1520	FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC

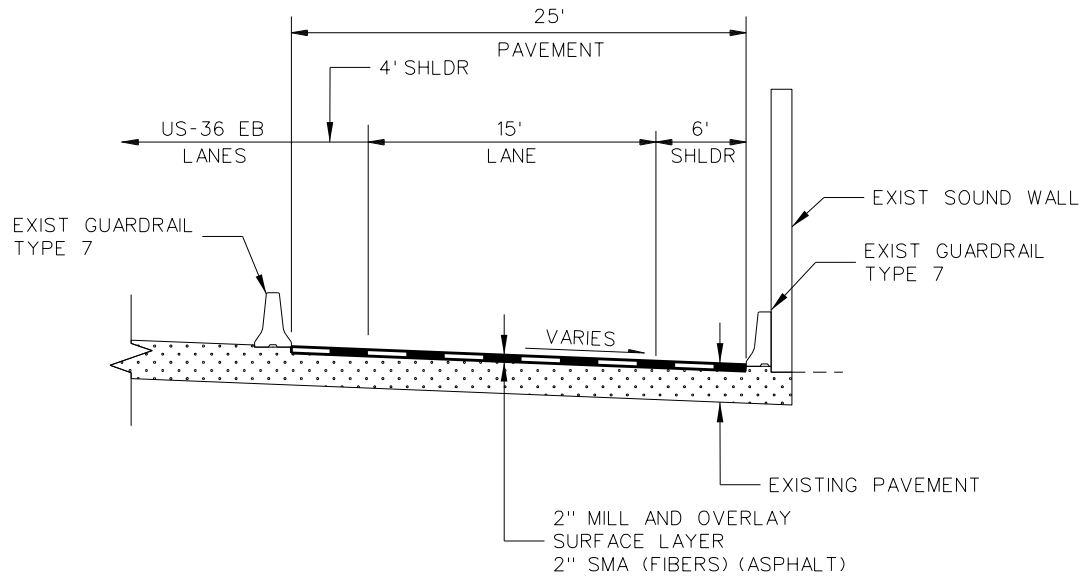


1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed	US36 PAVEMENT WORKS SMA AND PCC PAVEMENT GENERAL NOTES			Project No./Code
No Revisions:				2019-001
Revised:	Designer: E. MARSH	Structure Numbers		Sheet: US36-03
	Detailer: B. HAN			
Void:	Sheet Subset: GEN NOTES	Subset Sheets:	1 of 1	

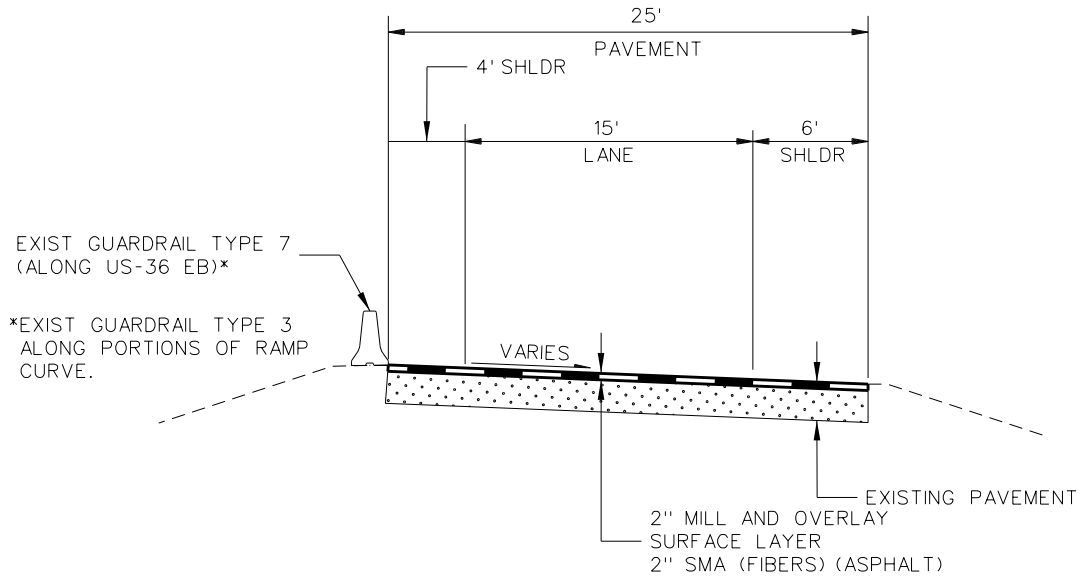


Know what's below.
Call before you dig.



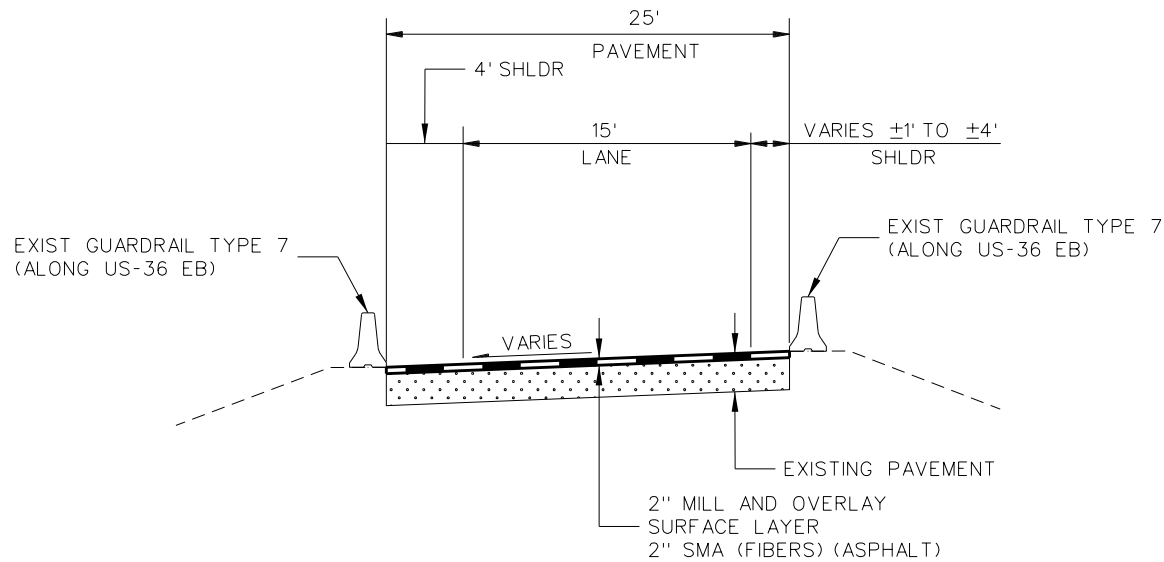
US-36 EB OFF-RAMP TO FEDERAL BLVD - A
(SEE PLAN VIEW FOR MILL/OVERLAY LIMITS)

N.T.S.
(LOOKING IN TRAVEL DIRECTION OF TRAFFIC OFF RAMP)



US-36 EB OFF RAMP TO FEDERAL BLVD - B
(SEE PLAN VIEW FOR MILL/OVERLAY LIMITS)


N.T.S.
(LOOKING IN TRAVEL DIRECTION OF TRAFFIC ON RAMP)



FEDERAL BLVD ON-RAMP TO US-36 WB
(SEE PLAN VIEW FOR MILL/OVERLAY LIMITS)

N.T.S.
(LOOKING IN TRAVEL DIRECTION OF TRAFFIC ON RAMP)

EMARSH 8/10/05 AM pw:\pwwindruscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sp\N6.0_CAD_BIM\6.2_WIP\Drawings\Typical Sections 01

Print Date: 11/5/2019
File Name: Typical Sections 01
Horiz. Scale: 1:10 Vert. Scale: As Noted
Unit:
 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC



1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed

No Revisions:

Revised:

Void:

US 36 PAVEMENT WORKS
SMA AND PCC PAVEMENT
TYPICAL SECTIONS

Designer: E. MARSH

Detailer: B. HAN

Sheet Subset: TYPICALS

Structure

Numbers

Subset Sheets:

1 of 2

Project No./Code

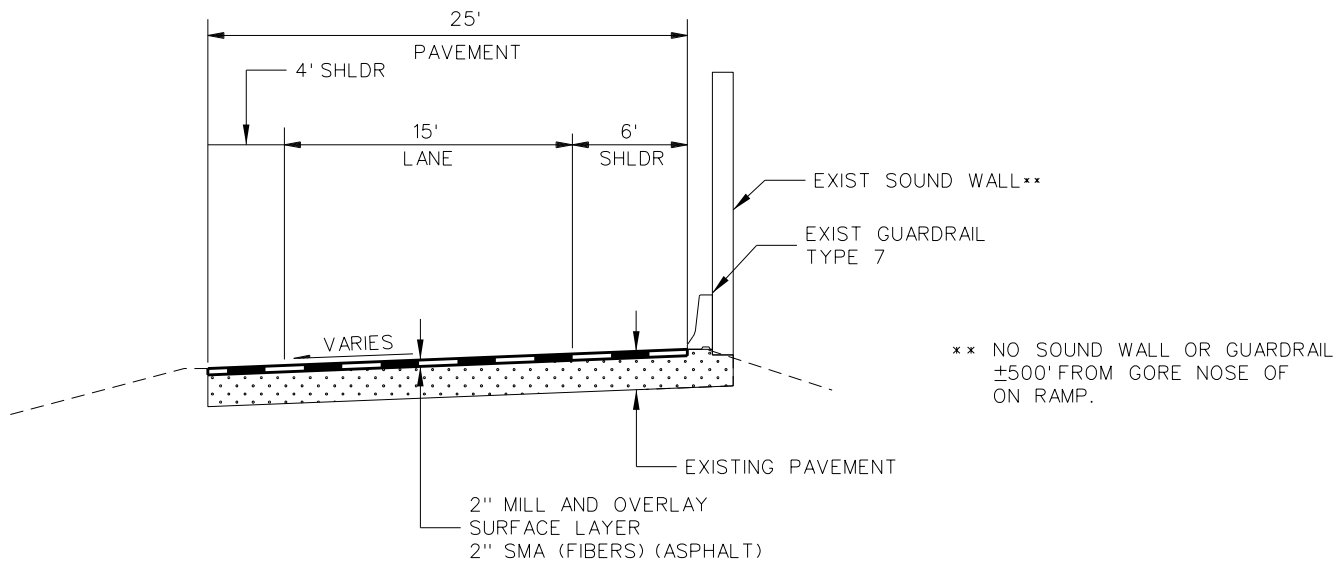
2019-001

Sheet:

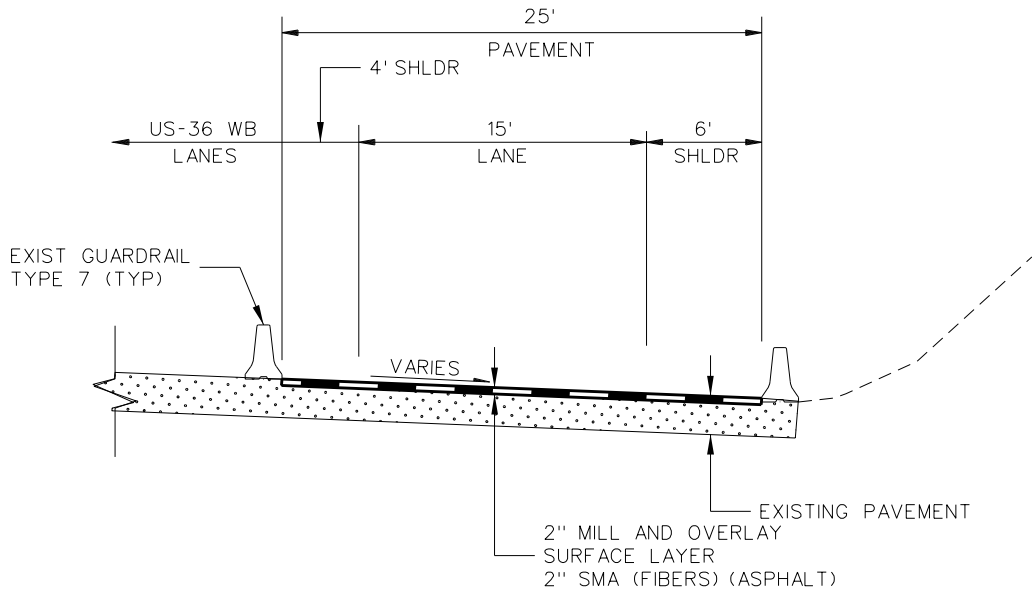
US36-04



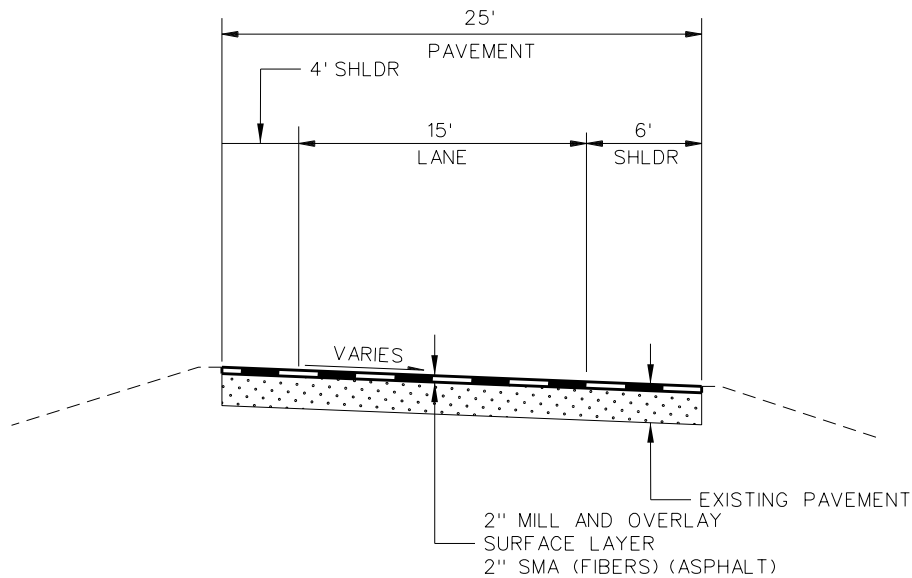
Know what's below.
Call before you dig.



FEDERAL BLVD ON-RAMP TO US-36 EB
(SEE PLAN VIEW FOR MILL/OVERLAY LIMITS)
N.T.S.
(LOOKING IN TRAVEL DIRECTION OF TRAFFIC ON RAMP)




US-36 WB OFF RAMP TO FEDERAL BLVD - A
(SEE PLAN VIEW FOR MILL/OVERLAY LIMITS)
N.T.S.
(LOOKING IN TRAVEL DIRECTION OF TRAFFIC ON RAMP)



US-36 WB OFF RAMP TO FEDERAL BLVD - B
(SEE PLAN VIEW FOR MILL/OVERLAY LIMITS)
N.T.S.
(LOOKING IN TRAVEL DIRECTION OF TRAFFIC ON RAMP)

EMARSH 12:45:49 PM pwr:\pwrdrusen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6.0_CAD_BIM\6.2_WP\Drawings\Typical Sections 02

Print Date: 11/5/2019
File Name: Typical Sections 02
Horiz. Scale: 1:10 Vert. Scale: As Noted
Unit:
 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC

 **Plenary Roads**

1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed		US 36 PAVEMENT WORKS SMA AND PCC PAVEMENT TYPICAL SECTIONS		Project No./Code
No Revisions:		Designer: E. MARSH	Structure Numbers	2019-001
Revised:		Detailer: B. HAN		
Void:		Sheet Subset: TYPICALS	Subset Sheets: 2 of 2	Sheet: US36-05

EMARSH 12:38:39 PM pwr:\pwr\druscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6.0_CAD_BIM\6.2_WIP\Drawings\SOAQ_Sheet 1


INDEX			ITEM NO.	CONTRACT ITEM	UNITS	ROADWAY		PROJECT TOTALS	
BOOK	PAGE	SHEET				PLAN	AS CONST.	PLAN	AS. CONST.
			202-00210	REMOVAL OF CONCRETE PAVEMENT	SY	5,344		5,344	
			202-00240	REMOVAL OF ASPHALT MAT (PLANING)	SY	30,382		30,382	
			202-00250	REMOVAL OF PAVEMENT MARKING	SF	6,519		6,519	
			208-00002	EROSION LOG (12 INCH)	LF	900		900	
			208-00035	AGGREGATE BAG	LF	900		900	
			208-00045	CONCRETE WASHOUT STRUCTURE	EACH	3		3	
			208-00051	STORM DRAIN INLET PROTECTION (TYPE 1)	LF	12		12	
			208-00052	STORM DRAIN INLET PROTECTION (TYPE 2)	LF	60		60	
			208-00106	SWEEPING (SEDIMENT REMOVAL)	HOURL	12		12	
			208-00107	REMOVAL OF TRASH	HOURL	12		12	
			403-09221	STONE MATRIX ASPHALT (FIBERS)(ASPHALT)	TON	3,511		3,511	
			411-10255	EMULSIFIED ASPHALT (SLOW-SETTING)	GAL	1,599		1,599	
			412-00190	CONCRETE PAVEMENT (PATCHING)	SY	504		504	
			412-01020	CONCRETE PAVEMENT (10 INCH) (FAST TRACK)	SY	575		575	
			412-01220	CONCRETE PAVEMENT (12 INCH) (FAST TRACK)	SY	5,037		5,037	
			412-14000	SAWING AND SEALING CONCRETE PAVEMENT JOINTS (ALL SIZES)	LF	351,517		351,517	
			412-15000	ROUTING AND SEALING CONCRETE PAVEMENT CRACKS	LF	4,574		4,574	
			626-00000	MOBILIZATION	LS	1		1	
			627-00005	EPOXY PAVEMENT MARKING	GAL	516		516	

Print Date: 11/5/2019

File Name: SOAQ_Sheet 1

Horiz. Scale: 1:1 Vert. Scale: As Noted

Unit:



1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202
Phone: 303-764-1520 FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC



1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed	US36 PAVEMENT WORKS SMA AND PCC PAVEMENT SUMMARY OF APPROX QUANTITIES			Project No./Code
No Revisions:	Designer: E. MARSH	Structure		2019-001
Revised:	Detailer: B. HAN	Numbers		
Void:	Sheet Subset: SOAQ	Subset Sheets: 1 of 2		Sheet: US36-06

EMARSH 8:10:15 AM pw:\pwwdruscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6.0_CAD_BIM\6.2_WIP\Drawings\20062DES_US-36_Concrete_SOAQ_2


INDEX			ITEM NO.	CONTRACT ITEM	UNITS	ROADWAY		PROJECT TOTALS	
BOOK	PAGE	SHEET				PLAN	AS CONST.	PLAN	AS. CONST.
			630-00000	FLAGGING	HOURL	300		300	
			630-00007	TRAFFIC CONTROL INSPECTION	DAY	15		15	
			630-00012	TRAFFIC CONTROL MANAGEMENT	DAY	40		40	
			630-80001	FLASHING BEACON (PORTABLE)	EACH	6		6	
			630-80335	BARRICADE (TYPE 3 M-A) (TEMPORARY)	EACH	3		3	
			630-80341	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	EACH	20		20	
			630-80342	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	EACH	23		23	
			630-80343	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE C)	EACH	20		20	
			630-80355	PORTABLE MESSAGE SIGN PANEL	EACH	4		4	
			630-80358	ADVANCEWARNING FLASHING OR SEQUENCING ARROW PANEL (C TYPE)	EACH	1		1	
			630-80360	DRUM CHANNELIZING DEVICE	EACH	70		70	
			630-80363	DRUM CHANNELIZING DEVICE (WITH LIGHT) (FLASHING)	EACH	2		2	
			630-80380	TRAFFIC CONE	EACH	200		200	
			630-85041	MOBILE ATTENUATOR	DAY	43		43	
FORCE ACCOUNTS									
			700-70010	F/A MINOR CONTRACT REVISIONS	FA	1		1	
			700-70012	F/A ASPHALT PAVEMENT INCENTIVE	FA	1		1	
			700-70013	F/A CONCRETE PAVEMENT INCENTIVE	FA	1		1	
			700-70016	F/A FUEL COST ADJUSTMENT	FA	1		1	
			700-70019	F/A ASPHALT CEMENT COST ADJUSTMENT FOR HMA AND SMA	FA	1		1	
			700-70025	F/A QUALITY INCENTIVE PAYMENT	FA	1		1	
			700-70031	F/A INTERIM SURFACE REPAIR	FA	1		1	
			700-70111	PROJECT FIRST PROGRAM	FA	1		1	
			700-70380	F/A EROSION CONTROL	FA	1		1	

Print Date: 11/5/2019

File Name: 20062DES_US-36_Concrete_SOAQ_2

Horiz. Scale: 1:1 Vert. Scale: As Noted


Unit:

1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202
Phone: 303-764-1520 FAX: 303-860-7139

0000

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC

1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed

No Revisions:

Revised:

Void:

US36 PAVEMENT WORKS
SMA AND PCC PAVEMENT
SUMMARY OF APPROX QUANTITIES

Designer: E. MARSH
Detailer: B. HAN
Sheet Subset: SOAQ

Structure Numbers
Subset Sheets: 2 of 2

Project No./Code

2019-001

Sheet: US36-07

EMARSH 12/22/2019 3:36 PM c:\pwr\druscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6.0_CAD_BIM\6.2_WIP\Drawings\20062DES_US-36_Concrete_Tab_Removals

TABULATION OF REMOVALS							
LOCATION	202-00210 REMOVAL OF CONCRETE PAVEMENT*		202-00240 REMOVAL OF ASPHALT MAT (PLANING)		202-00250 REMOVAL OF PAVEMENT MARKING		REMARKS
	SY		SY		SF		
	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	
US-36 WB							
FEDERAL BLVD WB ON-RAMP GORE	10		-		-		
FEDERAL BLVD	80		-		-		
FEDERAL BLVD WB OFF-RAMP GORE	146		-		-		
PECOS ST WB ON-RAMP GORE	120		-		-		
PECOS ST WEST APPROACH	50		-		-		
PECOS ST BRIDGE	-		-		-		
PECOS ST EAST APPROACH	10		-		-		
PECOS ST WB OFF-RAMP GORE	420		-		-		
			-		-		
US-36 EB							
FEDERAL BLVD EB OFF-RAMP GORE	40		-		-		
FEDERAL BLVD	30		-		-		
FEDERAL BLVD EB ON-RAMP GORE	2,630		-		-		
PECOS ST EB OFF-RAMP GORE	80		-		-		
PECOS ST WEST APPROACH	20		-		-		
PECOS ST BRIDGE	520		-		-		
PECOS ST EAST APPROACH	1,120		-		-		
PECOS ST EB ON-RAMP GORE	68		-		-		
US-36/FEDERAL BLVD. ON/OFF RAMPS							
FEDERAL BLVD. TO US-36 WB ON-RAMP	-		3,750		690		
US-36 EB TO SB FEDERAL BLVD. OFF-RAMP	-		3,827		647		
US-36 EB TO NB FEDERAL BLVD. OFF-RAMP	-		6,443		1,501		
FEDERAL BLVD. TO US-36 EB ON-RAMP	-		4,183		829		
US-36 WB TO SB FEDERAL BLVD. OFF-RAMP	-		6,806		1,798		
US-36 WB TO NB FEDERAL BLVD. OFF-RAMP	-		5,372		1,052		
TOTALS	7328		30,382		6,519		
*PCCP REPLACEMENT/REHABILITATION QUANTITIES DETERMINED BY PLENARY GROUP							

Print Date: 11/5/2019	<div>0000</div>	Sheet Revisions		
File Name: 20062DES_US-36_Concrete_Tab_Removals		Date:	Comments	Init.
Horiz. Scale: 1:1 Vert. Scale: As Noted				
Unit:				
<div><div>HDR</div><div>1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 FAX: 303-860-7139</div></div>				

Plenary Roads

1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed	US36 PAVEMENT WORKS SMA AND PCC PAVEMENT REMOVALS TAB			Project No./Code
No Revisions:				2019-001
Revised:	Designer: E. MARSH	Structure Numbers		
	Detailer: B. HAN			
Void:	Sheet Subset: TABS	Subset Sheets: 1 of 1	Sheet:	US36-08

EMARSH 1108:49 PM pw:\pwwndrscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Spp\N6.0_CAD_BIM\6.2_WIP\Drawings\20062DES_US-36_Concrete_Tab_Surfaceing.dgn

TABULATION OF SURFACING																				
LOCATION	403-09210 STONE MATRIX ASPHALT (FIBERS) (ASPHALT)		411-10255 EMULSIFIED ASPHALT (SLOW SETTING)		412-00190 CONCRETE PAVEMENT (PATCHING)*		412-01020 CONCRETE PAVEMENT (10 INCH) (FAST TRACK)*		412-01220 CONCRETE PAVEMENT (12 INCH) (FAST TRACK)*		412-14000 SAWING & SEALING CONCRETE PAVEMENT JOINTS*		412-14XX1 SAWING & SEALING CONCRETE PAVEMENT JOINTS*		412-14XX2 SAWING & SEALING CONCRETE PAVEMENT JOINTS*		412-14XX3 SAWING & SEALING CONCRETE PAVEMENT JOINTS*		412-15000 ROUTING & SEALING CONCRETE PAVEMENT CRACKS*	
	TON		GAL		SY		SY		SY		LF		LF		LF		LF		LF	
	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.	PLAN	AS CONST.
US-36 WB	-		-		328						59,626		59,626		59,626		59,626		3,104	
FEDERAL BLVD WB ON-RAMP GORE							1		9											
FEDERAL BLVD							20		60											
FEDERAL BLVD WB OFF-RAMP GORE							15		131											
PECOS ST WB ON-RAMP GORE							12		108											
PECOS ST WEST APPROACH							5		45											
PECOS ST BRIDGE							-		-											
PECOS ST EAST APPROACH							1		9											
PECOS ST WB OFF-RAMP GORE							42		378											
US-36 EB	-		-		176						28,253		28,253		28,253		28,253		1,471	
FEDERAL BLVD EB OFF-RAMP GORE							4		36											
FEDERAL BLVD							3		27											
FEDERAL BLVD EB ON-RAMP GORE							263		2,367											
PECOS ST EB OFF-RAMP GORE							8		72											
PECOS ST WEST APPROACH							2		18											
PECOS ST BRIDGE							52		468											
PECOS ST EAST APPROACH							112		1,008											
PECOS ST EB ON-RAMP GORE							7		61											
US-36/FEDERAL BLVD. ON/OFF RAMPS																				
FEDERAL BLVD. TO US-36 WB ON-RAMP	413		188		-				-		-		-		-		-		-	
US-36 EB TO SB FEDERAL BLVD. OFF-RAMP	421		192		-				-		-		-		-		-		-	
US-36 EB TO NB FEDERAL BLVD. OFF-RAMP	709		323		-				-		-		-		-		-		-	
FEDERAL BLVD. TO US-36 EB ON-RAMP	461		210		-				-		-		-		-		-		-	
US-36 WB TO SB FEDERAL BLVD. OFF-RAMP	749		341		-				-		-		-		-		-		-	
US-36 WB TO NB FEDERAL BLVD. OFF-RAMP	591		269		-				-		-		-		-		-		-	
SUBTOTALS	3,344		1,523		504		547		4797		87,879		87,879		87,879		87,879		4,574	
IRREGULARITIES - ADD 5%	167		76				28		240											
TOTALS	3,511		1,599		504		575		5037		87,879		87,879		87,879		87,879		4,574	
					*PCCP REPLACEMENT/REHABILITATION QUANTITIES DETERMINED BY PLENARY GROUP. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR TO WALK PROJECT WITH PLENARY ROADS TO DETERMINE JOINT WIDTHS.															

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC

Plenary Roads

1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed	US36 PAVEMENT WORKS SMA AND PCC PAVEMENT SURFACING TAB			Project No./Code
No Revisions:				2019-001
Revised:	Designer: E. MARSH	Structure Numbers		
	Detailer: B. HAN			
Void:	Sheet Subset: TABS	Subset Sheets: 1 of 1		Sheet: US36-08A



Know what's below.
Call before you dig.

SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL SIGNS

SIGN CODE	LEGEND	DIMENSIONS	CONSTRUCTION TRAFFIC SIGN (EACH)		
			PANEL SIZE		
			A	B	C
R2-1(35)	"SPEED/LIMIT/35"	48" x 60"			4
R2-1(45)	"SPEED/LIMIT/45"	48" x 60"			4
R2-1(55)	"SPEED/LIMIT/55"	48" x 60"			4
R2-6P	"FINES/DOUBLE"	36" x 36"	4		
R52-6a	"BEGIN/FINES/DOUBLE/IN WORK/ZONE"	48" x 60"			4
R52-6b	"END/FINES/DOUBLE/IN WORK/ZONE"	48" x 60"			4
W4-2L	LEFT LANE CLOSED SYMBOL	48" x 48"		2	
W4-2R	RIGHT LANE CLOSED SYMBOL	48" x 48"		2	
W5-1	"ROAD/NARROWS"	48" x 48"		1	
W20-1	"ROAD/WORK/(DIST.)"	48" x 48"		4	
W20-5L	"LEFT/LANE/CLOSED/AHEAD"	48" x 48"		2	
W20-5R	"RIGHT/LANE/CLOSED/AHEAD"	48" x 48"		2	
W20-5aL	"LEFT/TWO LANES/CLOSED/1/2 MILE"	48" x 48"		2	
W20-5aR	"RIGHT/TWO LANES/CLOSED/1/2 MILE"	48" x 48"		2	
W21-5aL	"LEFT/SHOULDER/CLOSED"	48" x 48"		1	
W21-5aR	"RIGHT/SHOULDER/CLOSED"	48" x 48"		1	
G20-5P	"WORK/ZONE"	36" x 30"	16		
G20-10	"XYZ/CONSTRUCTORS/THANK YOU/..."	48" x 48"		2	
G20-11	"ROAD WORK/DATE-DATE/FOR INFORMATION/..."	48" x 48"		2	
SIGN TOTALS			20	23	20

CONSTRUCTION TRAFFIC CONTROL DEVICES

ITEM NUMBER	DESCRIPTION	SIZE	UNIT	QUANTITY
630-00000	FLAGGING		HOURL	300
630-00007	TRAFFIC CONTROL INSPECTION		DAY	15
630-00012	TRAFFIC CONTROL MANAGEMENT		DAY	40
630-80001	FLASHING BEACON (PORTABLE)		EACH	6
630-80335	BARRICADE (TYPE 3M-A) (TEMP)		EACH	3
630-80341	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)		EACH	20
630-80342	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)		EACH	23
630-80343	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE C)		EACH	20
630-80355	PORTABLE MESSAGE SIGN PANEL		EACH	4
630-80358	ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL (C TYPE)		EACH	1
630-80360	DRUM CHANNELIZING DEVICE		EACH	70
630-80363	DRUM CHANNELIZING DEVICE (WITH LIGHT) (FLASHING)		EACH	2
630-80380	TRAFFIC CONE	36"	EACH	200
630-85041	MOBILE ATTENUATOR		DAY	43

NOTES:

1. PAY ITEMS WERE DETERMINED BASED ON CDOT M&S STANDARD S-630-1 AS FOLLOWS:
A. SHOULDER CLOSURES = CASE NO. 11
B. SINGLE LEFT-LANE CLOSURES = CASE NO. 5
C. DOUBLE LEFT-LANE CLOSURES = CASE NO. 7
D. SINGLE RIGHT-LANE CLOSURES = CASE NO. 8
E. DOUBLE RIGHT-LANE CLOSURES = CASE NO. 6
2. QUANTITIES WERE ESTIMATED BASED ON THE ESTIMATED DURATION OF 50 WORKING DAYS.

Print Date: 11/5/2019

File Name: MOT Tabs

Horiz. Scale: 1:1.00011 Vert. Scale: As Noted

Unit:

0000

0000

0000

Sheet Revisions

Date:	Comments	Init.

Plenary Roads Denver, LLC

1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed

No Revisions:

Revised:

Void:

US 36 PAVEMENT WORKS
MOT GENERAL NOTES/TABLUTION

Designer:	J. SEYER	Structure	
Detailer:	J. SEYER	Numbers	
Sheet Subset:	TRAFFIC	Subset Sheets:	1 of 1

Project No./Code

2019-001

Sheet: US36-09

1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202

Phone: 303-764-1520 FAX: 303-860-7139

EMARSH 8:10:26 AM pw:\pwwhndrscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6.0.0_CAD_BIM\6.2_WIP Drawings\MOT Tabs



Know what's below.
Call before you dig.

TABULATION OF PAVEMENT MARKING

TABULATION OF PAVEMENT MARKING							
STATION	LOCATION	PAVEMENT MARKING LINES					REMARKS
		EDGE		LANE		CHANNELIZING	
		WHITE SOLID 4 INCH	YELLOW SOLID 4 INCH	WHITE BROKEN 4 INCH	WHITE DOTTED 8 INCH	WHITE SOLID 8 INCH	
		LF	LF	LF	LF	LF	
US 36 Mainline							
01+00 TO 112+46	US 36 EB	11,300	11,300	16,600	2,100	13,854	
111+41 TO 01+00	US 36 WB	13,200	11,200	23,800	4,000	18,395	
US 36 Ramps							
01+00 TO 12+67	Federal EB Off	1,300	1,300			250	
01+00 TO 20+59	Federal EB Loop	2,100	2,100				
01+00 TO 12+67	Federal EB On	1,300	1,300		250	50	
01+00 TO 16+90	Federal WB Off	1,700	1,700			400	
01+00 TO 25+34	Federal WB Loop	2,600	2,600				
01+00 TO 12+14	Federal WB On	1,300	1,300				
01+00 TO 06+34	Pecos EB Off	700	700			150	
01+00 TO 05+81	Pecos EB On	600	600	320	350		
01+00 TO 04+75	Pecos WB Off	500	500			150	
01+00 TO 06+86	Pecos WB On	700	700		250	100	
PAY QUANTITY CALCULATIONS							
TOTAL LINEAR FEET		37,300	35,300	10,180	2,317	33,350	
TOTAL SQUARE FEET		12,433	11,767	3,393	1,544	22,233	
EPOXY PAVEMENT MARKING (GAL.)		125	118	34	16	223	

SUMMARY

YELLOW EPOXY (GAL)	118
WHITE EPOXY (GAL)	398

NOTES:


1. THE CONTRACTOR SHALL MAP EXISTING STRIPING THROUGH PROJECT LIMITS PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL PROVIDE FINAL STRIPING THROUGH THE PROJECT LIMITS TO MATCH THE ORIGINAL STRIPING PRIOR TO PROJECT COMPLETION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
2. PAVEMENT MARKING QUANTITIES WERE DERIVED FROM AERIALS.

Print Date: 11/5/2019

File Name: Striping Tabs

Horiz. Scale: 1:1.00011 Vert. Scale: As Noted


Unit:



1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202
Phone: 303-764-1520 FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC



1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed	US 36 PAVEMENT WORKS PAVEMENT MARKING TABLUATION			Project No./Code
No Revisions:				2019-001
Revised:	Designer: J. SEYER	Structure Numbers		
	Detailer: J. SEYER			
Void:	Sheet Subset: TRAFFIC	Subset Sheets: 1 of 1		Sheet: US36-10

EMARSH 8:10:29 AM pw:\pwwindruscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement\Bid_Sppt\6.0.0_CAD_BIM\6.2_WIP\Drawings\Striping Tabs

EMARSH 8:10:33 AM pw:\pwwndrscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6.0_CAD_BIM\6.2_WIP\Drawings\SWMP_General Notes

1. SITE DESCRIPTION

- A. **PROJECT SITE LOCATION:** The project is located along US-36 from MP 54.59, west of Federal Blvd., to MP 56.49, east of Pecos St. and also includes the US-36 entrance and exit ramps at Federal Blvd.
- B. **PROJECT SITE DESCRIPTION:** This US-36 project includes the repair and replacement of concrete pavement panels along the US-36 corridor, and the mill and overlay of the HMA pavement along the US-36 entrance and exit ramps at Federal Blvd. The Contractor shall determine construction sequencing.
- C. **ACRES OF DISTURBANCE:**
1. Total area of construction site (LOC AREA): _____ acres

2. Total area of proposed disturbance (LDA): _____ acres

3. Total area of seeding: _____0_____ acres
- E. **EXISTING SOIL DATA:** Soils in the project area include loam, clay loam, sandy clay loam, silty clay, and clay. Likelihood of erosion for these soils ranges from slight to moderate. Soils are typically Hydrologic Group C and D loams or clay loams with slow infiltration rates and moderate to high runoff potential.
- F. **EXISTING VEGETATION, INCLUDING PERCENT COVER:**
It is advised that transects be completed prior to construction, as a quality control for post construction revegetation assessment. At a minimum describe the quality of the existing vegetation.
- A survey including general description of existing vegetation shall be conducted by the SWMP Administrator for Construction prior to any ground disturbance on the project. The SWMP Administrator shall photo-document existing vegetation where all work will be occurring.
- Pre-Construction Date of survey: _____ %Density: _____
Description of existing vegetation: _____
Map or table showing transect locations in SWMP Notebook: _____
- Post-Construction Date of survey: _____ %Density: _____
Description of existing vegetation: _____
Map or table showing transect locations in SWMP Notebook: _____
- G. **POTENTIAL POLLUTANTS SOURCES:** See First Construction Activities under Potential Pollutant Sources. The SWMP Administrator for Construction shall prepare a list of all potential pollutants and their locations in accordance with subsection 107.25.
- H. **RECEIVING WATER:**
1. Outfall locations: Existing CDOT storm networks along US-36 and Federal Blvd.

2. Names of immediate receiving water(s) on site: Existing CDOT storm networks along US-36 and Federal Blvd, and two extended detention basins.

3. Ultimate receiving water(s): Lower Clear Creek to South Platte River

4. Horizontal distance to nearest ultimate receiving water from project: 4000 feet

5. Description of all stream crossings located within the Construction Site Boundary: None

I. NON-STORMWATER DISCHARGES:

Discharge Description	Location (Site Map #)	Method Statement (Location)
Dewatering*		
Concrete Saw Water		

ALLOWABLE: Refer to CDPHE Low Risk Discharge Guidance Document of Uncontaminated Groundwater to Land.
<https://www.colorado.gov/pacific/sites/default/files/WQ%20LOW%20RISK%20GW.pdf>

*If ground water does not meet water quality standards for receiving water a separate CDPs Dewatering Permit shall be obtained by the Contractor from CDPHE in accordance with subsections 107.02 and 107.25.

2. STORMWATER MANAGEMENT CONTROLS FIRST CONSTRUCTION ACTIVITIES

THE CONTRACTOR SHALL PERFORM THE FOLLOWING:

- A. **POTENTIAL POLLUTANT SOURCES**
1. Evaluate, identify and describe all potential sources of pollutants at the site in accordance with subsection 107.25 and place any BMPs/Control Measures required to contain potential pollutants.
- B. **OFFSITE DRAINAGE (RUN ON WATER)**
1. Place BMPs/Control Measures to address run-on water in accordance with subsection 208.03.
- C. **CONSTRUCTION DEWATERING:**
1. Obtain a dewatering permit from CDPHE if conditions of their low risk guidance for Discharges of Uncontaminated Groundwater to Land are not met; see subsection 107.25(b) 8.
- D. **VEHICLE TRACKING PAD**
1. BMPs/Control Measures shall be implemented in accordance with subsection 208.04.
- E. **PERIMETER CONTROL**
1. Perimeter control shall be established as the first item on the SWMP to prevent the potential for pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters.
2. Perimeter control may consist of vegetation buffers, berms, silt fence, erosion logs, existing landforms, or other BMPs/Control Measures as approved.
3. Perimeter control shall be in accordance with subsection 208.04.

3. SWMP ADMINISTRATOR:

A. SWMP ADMINISTRATOR FOR DESIGN:

Name/Title	Contact Information
Liz Staten, PE Hydrologic/Hydraulic Engineer	(719) 272-8800 Elizabeth.Staten@hdrinc.com

B. **SWMP ADMINISTRATOR FOR CONSTRUCTION:** (As defined in Subsection 208) The Contractor shall designate a SWMP Administrator for Construction upon ownership of the SWMP. The SWMP Administrator shall become the owner/operator and assume responsibility for all design changes to the SWMP implementation and maintenance in accordance to 208.03. The SWMP Administrator shall be responsible for implementing, maintaining and revising SWMP, including the title and contact information. The activities and responsibilities of the SWMP Administrator shall address all aspects of the projects SWMP. (Update the information below for each new SWMP Administrator) (Copy of TECS Certification must also be included in the SWMP Notebook.) **The SWMP Administration for construction is not a separate pay item but is included in the cost of the work.**

Name/Title	Contact Information	Certification #	Start Date	Engineer Approval

4. DURING CONSTRUCTION

The SWMP should be considered a "living document" that is continuously reviewed and modified. During construction, the following items shall be added, updated, or amended as needed by the Contractor in accordance with Section 208


- A. **MATERIALS HANDLING AND SPILL PREVENTION:** prior to construction commencing the Contractor shall submit a Spill Prevention, Control and Countermeasure Plan, see subsection 208.06. Materials handling shall be in accordance with subsection 208.06.
- B. **STOCKPILE MANAGEMENT:** shall be done in accordance with subsection 107.25 and 208.07

Print Date: 11/5/2019

File Name: SWMP_GeneralNotes

Horiz. Scale: 1:1 Vert. Scale: As Noted

Unit:



1670 BROADWAY, SUITE 3400
DENVER, COLORADO 80202
Phone: 303-764-1520 FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC



1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed

No Revisions:

Revised:

Void:

US-36 PAVEMENT WORKS
SMA AND PCC PAVEMENT
SWMP GENERAL NOTES

Designer: E. STATEN

Detailer: A. VANCE

Sheet Subset: SWMP

Structure Numbers

Subset Sheets: 1 of 4

Project No./Code

2019-001

Sheet: US36-11

EMARSH 8:10:37 AM pw:\pwhdruscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6.0_CAD_BIM\6.2_WIP\Drawings\20062DES_US-36_Concrete_SWMP02

- C. CONCRETE WASHOUT: Concrete wash out water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.05.
- D. SAW CUTTING: shall be done in accordance with subsection 107.25, 208.04, 208.05
- E. STREET SWEEPING: shall be done in accordance with subsection 208.04

5. BMP/CONTROL MEASURE MAINTENANCE

- A. Maintenance shall be in accordance with subsection 208.04 (f).

6. INTERIM AND PERMANENT STABILIZATON

8. NARRATIVES:

- A. ADDITIONAL BMPS/CONTROL MEASURES AND NARRATIVES:

BMP/Control Measure details and narratives not covered by the SWMP or Standard Plan M-208, M-216 shall be added to the SWMP notebook by the SWMP Administrator.

BMP Matrix:

1. M-Standards have been included along with standard BMP narratives. If a Non-Standard BMP will be used or the standard narrative does not apply, the SWMP Administrator shall write a Non-Standard BMP narrative, place an "X" in the column and complete a Non-Standard BMP Specification and Narrative for the SWMP notebook.
2. The SWMP Administrator for Construction shall place an "X" in the column In Use on Site when the BMP/Control Measure has been installed.
3. Place an "X" in the column BMP/Control Measure to be located by SWMP Administrator for Construction if the SWMP Administrator shall locate the BMP/Control Measure during construction. These BMP/Control Measures are not currently located on SWMP Plans but are anticipated to be used during construction (i.e. Vehicle Tracking Pad, Batch Plants, etc.). The SWMP Administrator for Construction shall locate these prior to or during construction and reflect on SWMP Map.
4. Place an "X" in the column Initial Construction if the BMP/Control Measure is to be installed prior to construction activity.

STRUCTURAL BMPs/Control Measures that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to:

APPLICATION, BMP/CONTROL MEASURE	NARRATIVE	M-STANDARD or "X" for NON-STANDARD	IN USE ON SITE	BMP/CONTROL MEASURE TO BE LOCATED BY SWMP ADMINISTRATOR	BMP/CONTROL MEASURE IMPLEMENTATION PHASE		
					INITIAL CONSTRUCTION ACTIVITY (CONTROL MEASURE INSTALLED PRE- CONSTRUCTION)	INTERIM CONSTRUCTION ACTIVITIES	PERMANENT STABILIZATION
PROTECTION OF EXISTING WETLANDS <i>Fence (plastic) and erosion logs</i>	Fence (plastic) shall be placed in combination with erosion logs to prevent encroachment of construction traffic and sediment into state waters prior to start of construction disturbances. Fence (plastic) shall be placed adjacent to the wetlands; erosion logs shall be placed between the plastic fence and disturbance area. Logs shall be placed to direct flows away from or filter water running into wetlands from disturbance areas.			X			
PROTECTION OF EXISTING TREES/LANDSCAPING <i>Fence (plastic)</i>	Fence (plastic) shall be used in areas indicated in the plans to prevent encroachment of construction traffic and sediment for the protection of mature trees and/or existing landscaping prior to start of construction disturbances.			X			
CHECK DAM/DITCH CHECK <i>Erosion log, silt berm, silt dike, rock check dam</i>	Placed in ditches immediately upon completion of ditch grading to reduce velocity of runoff in ditch. For existing ditches, place prior to start of construction disturbances.	M-208		X	X	X	
Storm Drain Inlet Protection In Paved Roadways (Type 1, 2 and 3 as shown on M-208-1, sheet 5 of 11)	Manufactured storm drain inlet protection placed prior to construction disturbances as detailed in M-208-1, to protect existing inlets or immediately upon completion of new inlets to prevent sediment from entering the inlet throughout construction.	M-208		X	X	X	
Storm Drain Inlet Protection In Native Seed Areas (M-604 Standard Inlets Type C and D)	Erosion logs or aggregate bags placed around inlet grate to prevent sediment from entering inlet. Place prior to construction disturbances to protect existing inlets or immediately upon completion of new inlets.	M-208		X	X	X	
CULVERT INLET/OUTLET PROTECTION <i>Erosion logs, aggregate bags</i>	Placed at mouth of culvert inlets and over top of culvert at inlet and outlet where disturbance may be occurring adjacent to pipe to prevent sediment laden water from entering pipe or drainage. Place prior to start of construction disturbances.	M-208		X	X	X	

Print Date: 11/5/2019

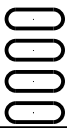
File Name: 20062DES_US-36_Concrete_SWMP02

Horiz. Scale: 1:1 Vert. Scale: As Noted

Unit:



1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202
Phone: 303-764-1520 FAX: 303-860-7139



Sheet Revisions

Date:	Comments	Init.

Plenary Roads Denver, LLC



1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed

No Revisions:

Revised:

Void:

US-36 PAVEMENT WORKS
SMA AND PCC PAVEMENT
SWMP GENERAL NOTES

Designer: E. STATEN

Detailer: A. VANCE

Sheet Subset: SWMP

Structure

Numbers

Subset Sheets: 2 of 4

Project No./Code

2019-001

Sheet: US36-12

EMARSH 8:10:40 AM pw:\pwhdrscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppl\6.0_CAD_BIM\6.2_WIP\Drawings\20062DES_US_36_Concrete_SWMP03

TYPE C, TYPE D AND TYPE 13 PROTECTION <i>Erosion logs, aggregate bags, erosion bales</i>	Placed around inlet grate or slope and ditch paving to prevent sediment from entering inlet. Place prior to start of construction disturbances.	M-208		X	X	X	
TOE OF FILL PROTECTION <i>Erosion logs, temporary berm, silt fence, topsoil windrow*</i>	Place prior to slope/embankment work to capture sediment and protect and delineate undisturbed areas. *Can be used to stockpile topsoil for salvage.	M-208		X	X	X	
PERIMETER CONTROL <i>Erosion logs, silt fence, temporary berm, topsoil windrow*</i>	Placed prior to construction commencing to address potential run-on water from off site, and to divert around disturbed area. *Can be used to stockpile topsoil for salvage.	M-208		X	X	X	
SEDIMENT CONTROL/ SLOPE CONTROL <i>Silt fence, erosion logs</i>	Placed on the contour of a slope to contain and slow down construction runoff. Place prior to start of construction disturbances.	M-208		X	X	X	
OUTLET PROTECTION <i>Riprap, or approved other</i>	Material placed as energy dissipater to prevent erosion at outlet structure.	M-601-12		X	X	X	
CONCRETE WASHOUT <i>In-ground or fabricated</i>	Construction control, used for waste management of concrete and concrete equipment cleaning. Place prior to start of concrete activities.	M-208		X	X	X	
SWEEPING	Source control, used to remove sediment tracked onto paved surfaces and to prevent sediment from entering drainage system. Sweep daily and at the end of the construction shift as needed. Kick brooms shall not be permitted.				X	X	
DEWATERING <i>(Contractor is responsible for obtaining a permit from CDPHE)</i>	Shall be done in such a manner to prevent potential pollutants from entering state waters.	X					
OTHER							

NON-STRUCTURAL BMPs/Control Measures that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to:
Erosion control devices are used to limit the amount of soil loss on site. Sediment control devices are designed to capture sediment on the project site. Construction controls are BMPs/Control Measures related to construction access and staging. BMP/Control Measure locations are indicated on the SWMP Site Map.
* Use of vegetative buffer strip requirements. The CDPHE Water Quality Control Division Technical Memorandum dated August 27, 2015 clarifies the requirements for utilization of existing vegetation as a buffer type of sediment control measure, while maintaining compliance with the CDPs permit for Stormwater Discharges Associated with Construction Activity – CDPs Permit No. COR0300000. In general, the division does not recommend that vegetated buffers be implemented as a sediment removal control measure for runoff from disturbed areas at construction sites, unless implemented as a “finishing” component of a treatment train comprised of additional, adequate up-gradient control measures. The entire memorandum can be found at: <https://www.colorado.gov/pacific/sites/default/files/Vegetative%20Buffer%20Memo.pdf>


APPLICATION, BMP/CONTROL MEASURE	NARRATIVE	M-STANDARD or “X”for NON-STANDARD	IN USE ON SITE	BMP/CONTROL MEASURE TO BE LOCATED BY SWMP ADMINISTRATOR	BMP/CONTROL MEASURE IMPLEMENTATION PHASE		
					INITIAL CONSTRUCTION ACTIVITY (CONTROL MEASURE INSTALLED PRE-CONSTRUCTION)	INTERIM CONSTRUCTION ACTIVITIES	PERMANENT STABILIZATION
* VEGETATIVE BUFFER STRIP <i>Fence (plastic)</i>	Filter sediment laden runoff from disturbance area. Area to be identified on SWMP prior to construction starting.	X					
GRADING APPLICATIONS (LANDFORM)	Existing or created landforms may be used as a BMP/Control Measure if they prevent sediment from entering or leaving the disturbance area. If a landform directs flow of water to a concentrated outfall point, the outfall point shall be protected to prevent erosion. Area to be identified on SWMP prior to construction starting.	M-208		X			
SEEDING PERMANENT (NATIVE)	Final Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.						
SOIL RETENTION BLANKET (SRB)	Final Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.	M-216					
OTHER							

Print Date: 11/5/2019

File Name: 20062DES_US-36_Concrete_SWMP03

Horiz. Scale: 1:1 Vert. Scale: As Noted


Unit:



1670 BROADWAY, SUITE 3400
DENVER, COLORADO 80202
Phone: 303-764-1520 FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC



1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed

No Revisions:

Revised:

Void:

US-36 PAVEMENT WORKS
SMA AND PCC PAVEMENT
SWMP GENERAL NOTES

Designer: E. STATEN
Detailer: A. VANCE
Sheet Subset: SWMP

Structure Numbers
Subset Sheets: 3 of 4

Project No./Code

2019-001

Sheet: US36-13

EMARSH 8:10:46 AM p:\1\p\windruscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement\Bid_Spp\N6.0_0_CAD_BIM\6.2_WIP\Drawings\20062DES_US-36_Concrete_SWMP04

9. TABULATION OF STORMWATER QUANTITIES

- A. BMP/Control Measure maintenance shall be included in the cost of the BMP/Control Measure.
- B. It is estimated that 0 hours of labor, blading, dozing, combination loader, and/or backhoe may be required for miscellaneous erosion control work as directed by the Engineer
- C. Establishment of seeded areas is not anticipated and shall be included in the price of the work. This shall include mowing, weed control, reseeding/mulch/tackifier.

Pay Item	Description	Pay Unit	Initial Const.	Interim Const.	Permanent Stabilization	*Total Quantity
208-00002	Erosion Log Type 1 (12 inch)	LF		900		
208-00035	Aggregate Bag	LF		900		

Pay Item	Description	Pay Unit	Initial Const.	Interim Const.	Permanent Stabilization	*Total Quantity
208-00046	Pre-fabricated Concrete Washout Structure	Each		3		
208-00051	Storm Drain Inlet Protection (Type I)	LF		12		
208-00056	Storm Drain Inlet Protection (Type III)	Each		60		
208-00106	Sweeping (Sediment Removal)	Hour		12		
208-00107	Removal of Trash	Hour		12		

*It is anticipated that additional BMPs/Control Measures and BMP/Control Measure quantities not shown on the SWMP Site Maps shall be required on the project for unforeseen conditions and replacement of items that are beyond their useful service life, see subsection 208.03 and 208.04. **Quantities for all BMPs/Control Measures shown above are estimated, and have been increased for unforeseen conditions and normal BMP/Control Measure life expectancy.** Quantities shall be adjusted according to the conditions encountered in the field as directed and approved by the Engineer. Payment shall be for the actual work completed and material used.

10. BIOLOGIC IMPACTS and DEWATERING

- A. ENVIRONMENTAL IMPACTS:
1. Wetland Impacts: Refer to other environmental permits in accordance with subsection 107.02 and the permits contained in the SWMP Notebook.
2. Stream Impacts: Refer to other environmental permits in accordance with subsection 107.02 and the permits contained in the SWMP Notebook.
3. Threatened and Endangered Species: No species are anticipated to be impacted by the project
4. DEWATERING: Dewatering: Refer to other environmental permits in accordance with subsection 107.02 and the permits contained in the SWMP Notebook.

11. Notes


1. Erosion Control Management (or SWMP Administrator for Construction or Erosion Control Inspector) is included in the cost of the work.

Print Date: 11/5/2019

File Name: 20062DES_US-36_Concrete_SWMP04

Horiz. Scale: 1:1 Vert. Scale: As Noted

Unit:

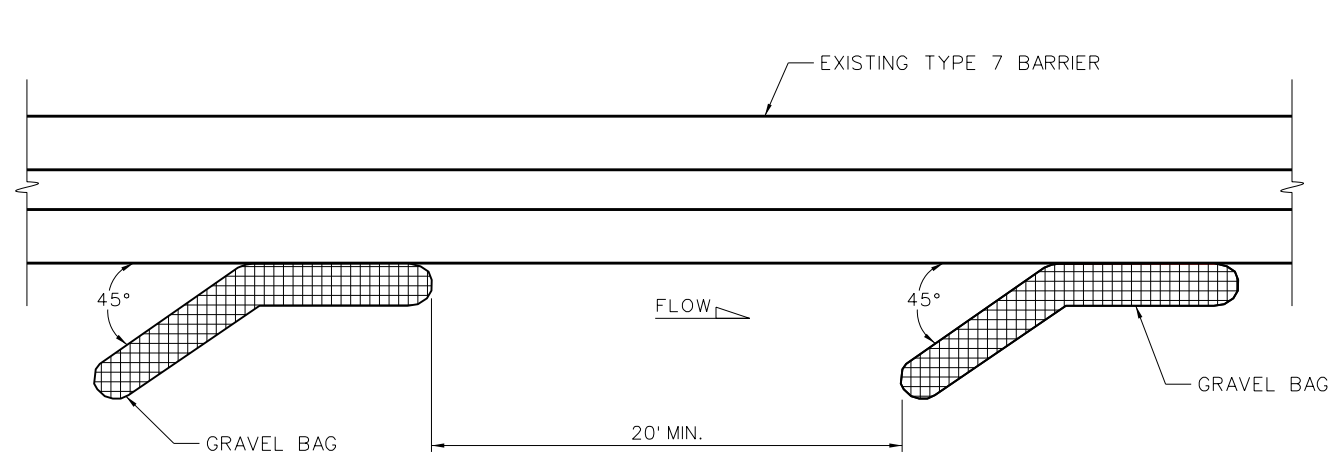
1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202
Phone: 303-764-1520 FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC

1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

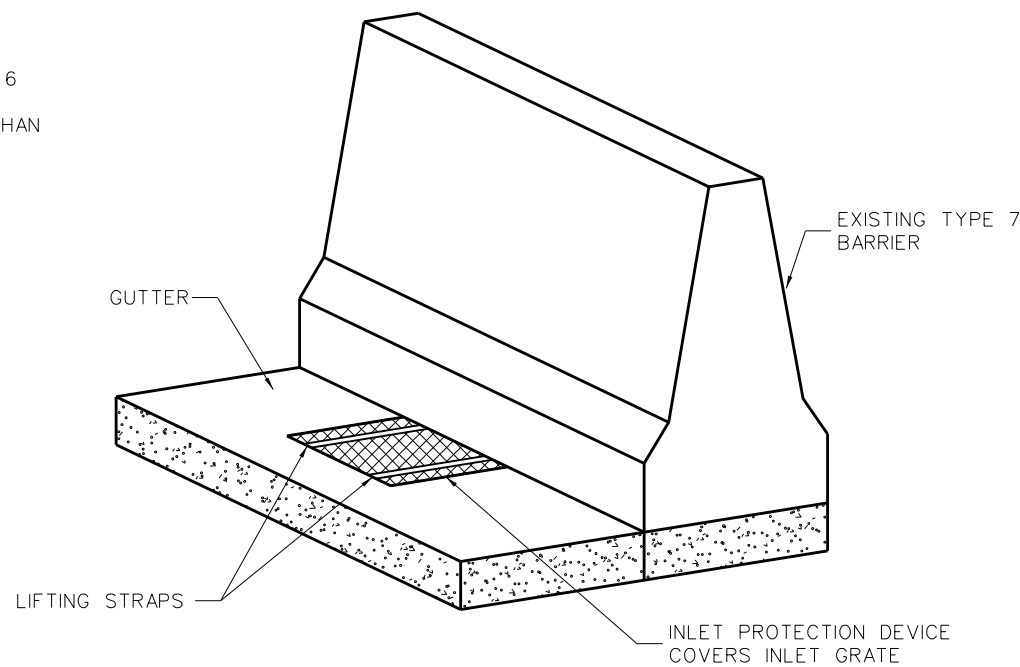
As Constructed	US-36 PAVEMENT WORKS SMA AND PCC PAVEMENT SWMP GENERAL NOTES		Project No./Code
No Revisions:			2019-001
Revised:	Designer: E. STATEN	Structure Numbers	
	Detailer: A. VANCE		
Void:	Sheet Subset: SWMP	Subset Sheets: 4 of 4	Sheet: US36-14



PLAN VIEW FOR MULTIPLE GRAVEL BAGS
GRAVEL BAG CHECK
 N.T.S.

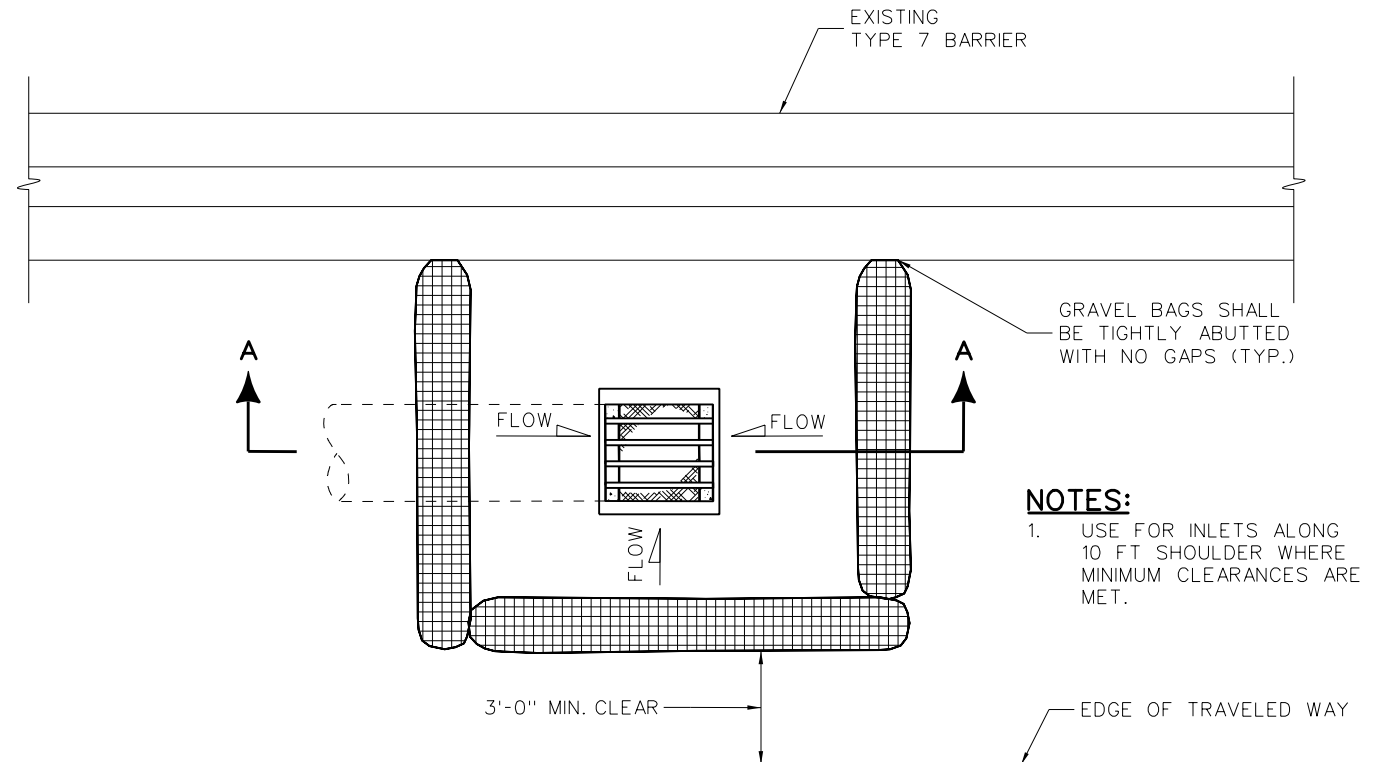
- NOTES:**
1. PLACE THREE GRAVEL BAGS AT DOWNSTREAM ENDS OF PROJECT.

- NOTES:**
1. USE FOR INLETS ALONG 6 FT SHOULDER, OR FOR LOCATIONS WITH LESS THAN 3 FEET OF CLEARANCE FROM THE EDGE OF TRAVELED WAY TO THE EDGE OF GRAVEL BAG.



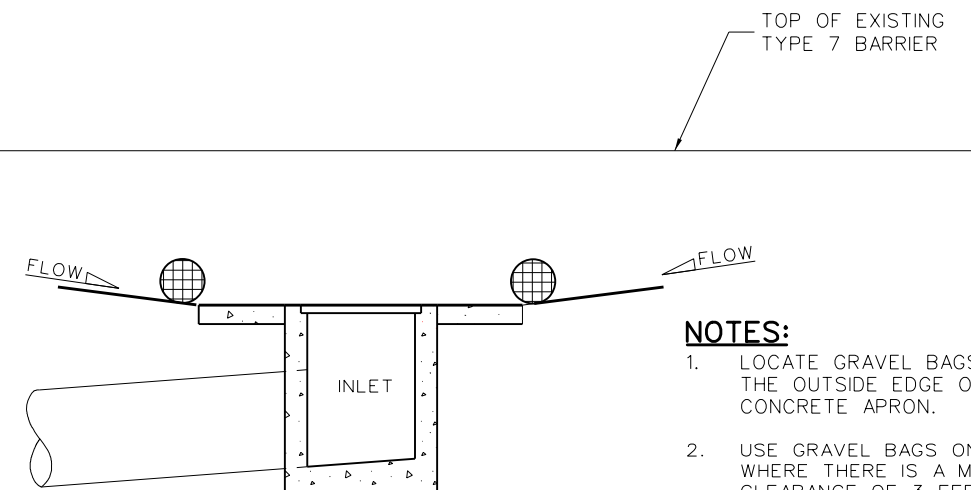
ISOMETRIC VIEW
STORM DRAIN INLET PROTECTION (TYPE III)
OPTION B
 N.T.S.

- NOTES:**
1. CONTRACTOR TO INSPECT DURING RAIN EVENTS TO REDUCE FLOODING ON TRAVELED WAY.



PLAN VIEW
 N.T.S.

- NOTES:**
1. USE FOR INLETS ALONG 10 FT SHOULDER WHERE MINIMUM CLEARANCES ARE MET.



SECTION A-A
GRAVEL BAG FILTER AT DROP INLET
 N.T.S.

- NOTES:**
1. LOCATE GRAVEL BAGS AT THE OUTSIDE EDGE OF THE CONCRETE APRON.
 2. USE GRAVEL BAGS ONLY WHERE THERE IS A MINIMUM CLEARANCE OF 3 FEET FROM THE EDGE OF TRAVELED WAY TO THE EDGE OF GRAVEL BAG.

Print Date: 11/5/2019		Sheet Revisions		
File Name: Erosion ControlDetail		Date:	Comments	Init.
Horiz. Scale: 1:10 Vert. Scale: As Noted				
Unit:				
1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 FAX: 303-860-7139				

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC

Plenary Roads

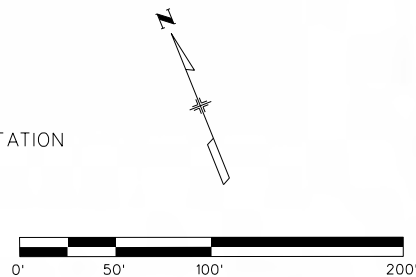
1700 Lincoln Street, Suite 3000
 Denver, Colorado 80203
 Phone: 303-803-9452
 FAX: 303-803-9453

As Constructed
No Revisions:
Revised:
Void:

US-36 PAVEMENT WORKS SMA AND PCC PAVEMENT EROSION CONTROL DETAIL			
Designer:	E. STATEN	Structure Numbers	
Detailer:	A. VANCE		
Sheet Subset:	EROSION	Subset Sheets:	1 of 1

Project No./Code
2019-001
Sheet: US36-15

	HMA MILL AND OVERLAY
	PCC PAVEMENT REHABILITATION



APPLEBLOSSOM LN

FEDERAL BLVD WB ON-RAMP
(SEE SHEET US36-08 FOR INFORMATION)

US 36 WB OFF-RAMP TO SB FEDERAL BLVD
(SEE SHEET US36-08 FOR INFORMATION)

MP XX.XX
BEGIN PCCP REPAIRS

US-36 WB

MP 54.6

MP 54.7

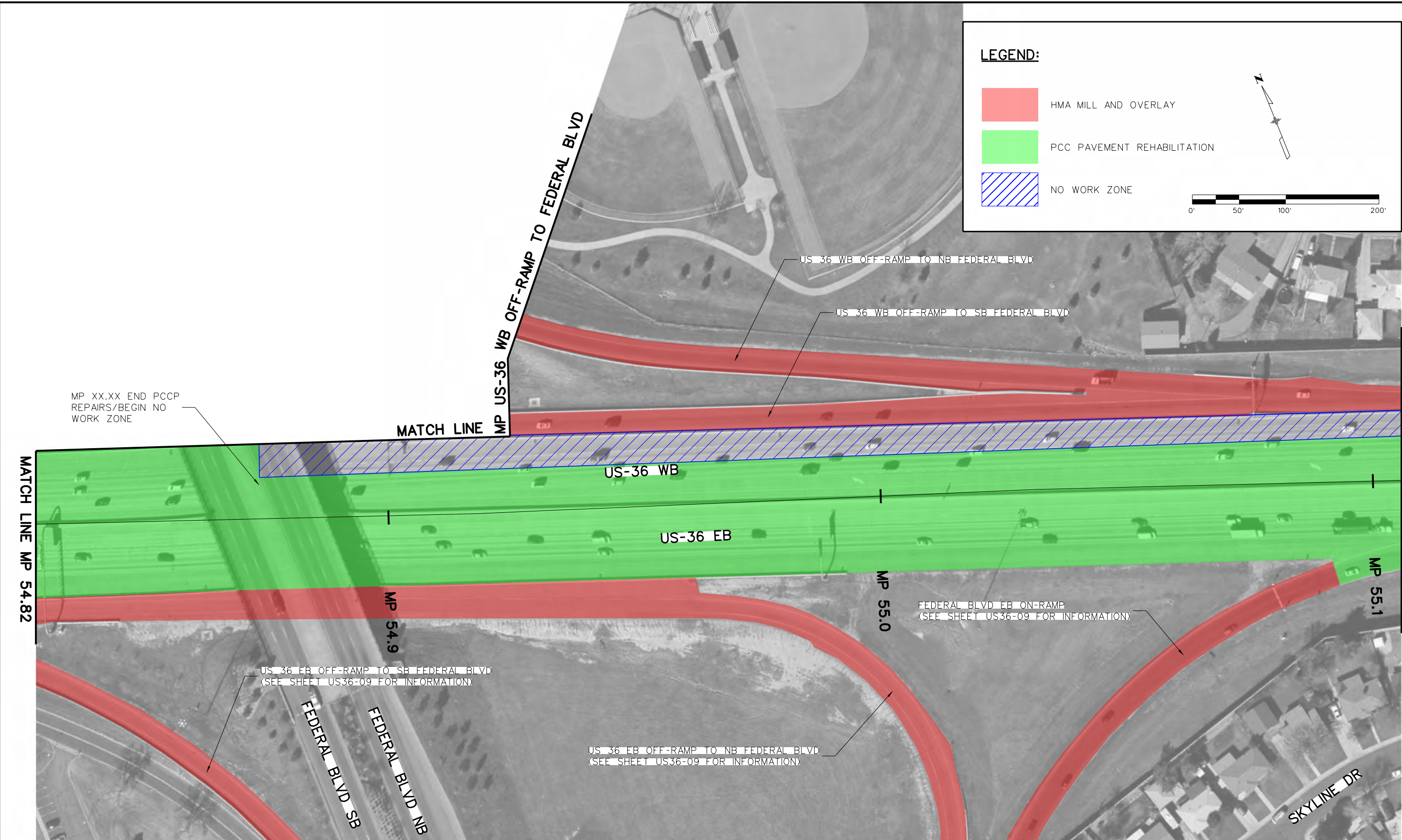
N TURNPIKE DR


MP 54.8

MATCH LINE MP 54.82

Print Date: 11/5/2019		<div><div></div><div></div><div></div><div></div><div></div></div>	Sheet Revisions			<div><div></div><div>Plenary Roads</div></div> <div>Plenary Roads Denver, LLC</div> <div>1700 Lincoln Street, Suite 3000 Denver, Colorado 80203 Phone: 303-803-9452 FAX: 303-803-9453</div>	As Constructed		US 36 PAVEMENT WORKS SMA AND PCC PAVEMENT			Project No./Code	
File Name: 20062DES_US-36_Concrete_Plan01			Date:	Comments	Init.		No Revisions:		PLAN SHEET MP 54.59 - MP 54.82			2019-001	
Horiz. Scale: 1:100 Vert. Scale: As Noted							Revised:		Designer:	E. MARSH	Structure		
Unit:							Void:		Detailer:	E. MARSH	Numbers		
<div><div><div></div></div><div>1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 FAX: 303-860-7139</div></div>									Sheet Subset:		PLAN	Subset Sheets:	1 of 9

EMARSH 8:11:09 AM p:\w\h\druscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6.0_CAD_BM\6.2_WIP\Drawings\20062DES_US-36_Concrete_Plan02.dgn



Print Date: 11/5/2019	
File Name: 20062DES_US-36_Concrete_Plan02.dgn	
Horiz. Scale: 1:100	Vert. Scale: As Noted
Unit:	
 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 FAX: 303-860-7139	

0000	Sheet Revisions		
	Date:	Comments	Init.

Plenary Roads Denver, LLC



1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed
No Revisions:
Revised:
Void:

US 36 PAVEMENT WORKS SMA AND PCC PAVEMENT PLAN SHEET MP 54.82 - MP 55.11			
Designer:	E. MARSH	Structure	
Detailer:	E. MARSH	Numbers	
Sheet Subset:	PLAN	Subset Sheets:	2 of 9

Project No./Code
2019-001
Sheet: US36-18

EMARSH 8:11:15 AM pw:\pwwhndrscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6.0_CAD_BIM\6.2_WIP\Drawings\20062DES_US-36_Concrete_Plan03.dgn

MATCH LINE MP 55.11




MATCH LINE MP 55.38

LEGEND:

- HMA MILL AND OVERLAY
- PCC PAVEMENT REHABILITATION
- NO WORK ZONE

0' 50' 100' 200'

North Arrow

Print Date: 11/5/2019		<div>0000</div>	Sheet Revisions			<div> Plenary Roads</div> <div>Plenary Roads Denver, LLC</div> <div>1700 Lincoln Street, Suite 3000 Denver, Colorado 80203 Phone: 303-803-9452 FAX: 303-803-9453</div>	As Constructed		US 36 PAVEMENT WORKS SMA AND PCC PAVEMENT PLAN SHEET MP 55.11 - MP 55.38			Project No./Code	
File Name: 20062DES_US-36_Concrete_Plan03.dgn			Date:	Comments	Init.		No Revisions:					2019-001	
Horiz. Scale: 1:100 Vert. Scale: As Noted			-		-		Revised:		Designer: E. MARSH		Structure		
Unit:			-		-		Void:		Detailer: E. MARSH		Numbers		
<div> 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 FAX: 303-860-7139</div>			-		-				Sheet Subset: PLAN		Subset Sheets: 3 of 9	Sheet: US36-19	

EMARSH 8/11/22 AM pwr:\pwr\druscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bid_Sppt\6.0_CAD_BIM\6.2_WIP\Drawings\20062DES_US-36_Concrete_Plan04.dgn

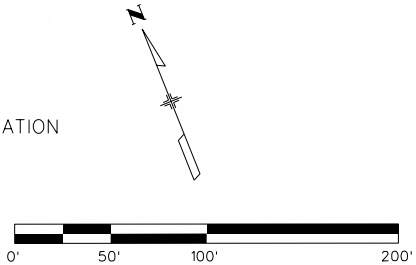
MATCH LINE MP 55.38




MATCH LINE MP 55.66

LEGEND:

- HMA MILL AND OVERLAY
- PCC PAVEMENT REHABILITATION



Print Date: 11/5/2019
File Name: 20062DES_US-36_Concrete_Plan04.dgn
Horiz. Scale: 1:100 Vert. Scale: As Noted
Unit:
 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

Plenary Roads Denver, LLC

 **Plenary**
Roads

1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed	US 36 PAVEMENT WORKS SMA AND PCC PAVEMENT PLAN SHEET MP 55.38 - MP 55.66			Project No./Code
No Revisions:				2019-001
Revised:	Designer: E. MARSH	Structure Numbers		
Void:	Detailer: E. MARSH	Subset Sheets: 4 of 9		
	Sheet Subset: PLAN			Sheet: US36-20

EMARSH 8:11:34 AM p:\v\p\w\druscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bld_Sppt\6.2_WIP\Drawings\20062DES_US-36_Concrete_Plan05.dgn

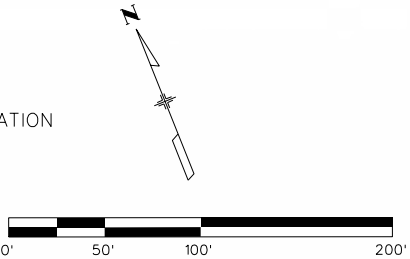
MATCH LINE MP 55.66




MATCH LINE MP 55.95

LEGEND:

- HMA MILL AND OVERLAY
- PCC PAVEMENT REHABILITATION



Print Date: 11/5/2019		
File Name: 20062DES_US-36_Concrete_Plan05.dgn		
Horiz. Scale: 1:100		Vert. Scale: As Noted
Unit:		
	1670 BROADWAY, SUITE 3400	DENVER, COLORADO 80202
	Phone: 303-764-1520	FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

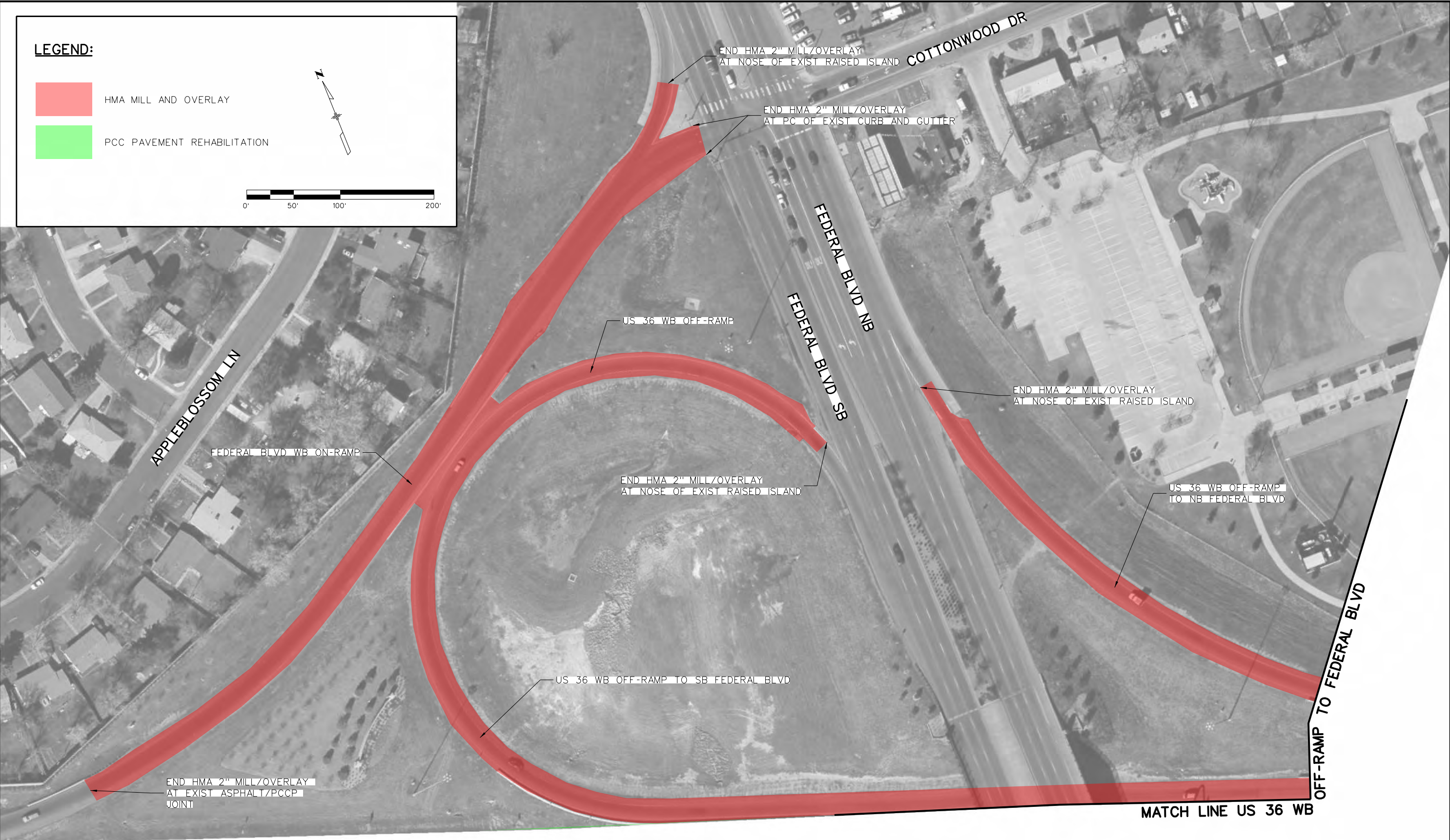
Plenary Roads Denver, LLC




1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed	US 36 PAVEMENT WORKS SMA AND PCC PAVEMENT PLAN SHEET MP 55.66 - MP 55.95			Project No./Code
No Revisions:	Designer: E. MARSH			2019-001
Revised:	Detailer: E. MARSH			
Void:	Sheet Subset: PLAN			
	Structure Numbers			
	Subset Sheets: 5 of 9			Sheet: US36-21

EMARSH 8/11/19 5:57 AM pwr:\pwr\druscen01\HDR_US_Central_01\Documents\Plenary_Group\Plenary_US36_Pavement_Bld_Sppl\6.0_CAD_BIM\6.2_WIP\Drawings\20062DES_US-36_Concrete_Plan08.dgn



Print Date: 11/5/2019
File Name: 20062DES_US-36_Concrete_Plan08.dgn
Horiz. Scale: 1:100 Vert. Scale: As Noted
Unit:
 1670 BROADWAY, SUITE 3400 DENVER, COLORADO 80202 Phone: 303-764-1520 FAX: 303-860-7139

Sheet Revisions		
Date:	Comments	Init.

**Plenary Roads**

1700 Lincoln Street, Suite 3000
Denver, Colorado 80203
Phone: 303-803-9452
FAX: 303-803-9453

As Constructed		US 36 PAVEMENT WORKS SMA AND PCC PAVEMENT PLAN SHEET US 36 WB TO FEDERAL			Project No./Code
No Revisions:		Designer: E. MARSH	Structure		2019-001
Revised:		Detailer: E. MARSH	Numbers		
Void:		Sheet Subset: PLAN	Subset Sheets: 8 of 9		Sheet: US36-24

19 SPECIAL PROVISIONS

PLENARY ROADS DENVER, LLC
SPECIAL PROVISIONS
US 36 YEAR 1 WORKS - PAVEMENTS

The 2019 Standard Specifications for Road and Bridge Construction controls construction of this project. The following special provisions supplement or modify the Standard Specifications and take precedence over the Standard Specifications and plans.

PROJECT SPECIAL PROVISIONS

	<u>Date</u>	<u>Page No.</u>
Index Pages	(November 7, 2019)	1-2
Notice to Bidders	(November 7, 2019)	3
Commencement and Completion of Work	(November 7, 2019)	4
Revision of Section 102 – Project Plans and Other Data	(November 7, 2019)	5
Revision of Section 107 – Performance of Safety Critical Work	(November 7, 2019)	6-7
Revision of Section 107 – Worker Safety	(November 7, 2019)	8
Revision of Section 202 – Removal of Asphalt Mat (Planing)	(November 7, 2019)	9-11
Revision of Section 202 and 412 – Removal and Replacement of Concrete Pavement	(November 7, 2019)	12-13
Revision of Section 304 – Aggregate Base Course	(November 7, 2019)	14
Revision of Sections 401 and 703 – Stone Matrix Asphalt Pavement	(November 7, 2019)	15-16
Revision of Section 403 – Stone Matrix Asphalt Pavement	(November 7, 2019)	17-20
Revision of Section 403 – Hot Mix Asphalt Ticket Collection	(November 7, 2019)	271
Revision of Section 408 – Joint and Crack Sealant	(November 7, 2019)	22-23
Revision of Section 630 – Portable Message Sign Panel	(November 7, 2019)	24-25
Revision of Section 630 – Traffic Channelizing Device (With Light) (Flashing)	(November 7, 2019)	26
Traffic Control Plan – General	(November 7, 2019)	27-28
Force Account items	(November 7, 2019)	29-30

STANDARD SPECIAL PROVISIONS

	<u>Date</u>	<u>#Pages</u>
Revision of Section 103 – Colorado Resident Bid Preference	(October 1, 2019)	1
Revision of Section 103 – Escrow of Proposal Documentation	(October 1, 2019)	2
Revision of Section 106 - Buy America Requirements Non-Federal Aid	(October 1, 2019)	1
Revision of Section 106 - Country of Origin	(October 1, 2019)	1
Revision of Sections 107 and 208 – Water Quality Control, Under One Acre of Disturbance	(October 1, 2019)	4
Revision of Section 109 – Prompt Payment (Local Agency)	(October 1, 2019)	2
Revision of Section 703 - Aggregate for Bases (RAP Allowed)	(October 1, 2019)	1
Project First Program	(October 1, 2019)	2

NOTICE TO BIDDERS

The proposal guaranty shall be a certified check, cashier's check, or bid bond in the amount of 5 percent of the Contractor's total bid.

Pursuant to subsections 102.04 and 102.05, it is recommended that bidders on this project review the work site and plan details with an authorized Plenary representative. Prospective bidders shall contact one of the following listed authorized Plenary representatives at least 12 hours in advance of the time they wish to go over the project.

Program Engineer -	Simon Stachnik Office Phone: (303) 803-9454
Resident Engineer -	Christian Guevara Office Phone: (303) 803-9453
Project Engineer -	As designated by the Resident Engineer

The above referenced individuals are the only representatives of the Plenary with authority to provide any information, clarification, or interpretation regarding the plans, specifications, and any other contract documents or requirements. Questions received from bidders along with Plenary responses will be posted on the Plenary web site listed below as they become available.

<http://www.plenaryroadsdenver.com>

If the bidder has a question or requests clarification that involves the bidder's innovative or proprietary means and methods, phasing, scheduling, or other aspects of construction of the project, the Project Engineer will direct the bidder to contact the Resident Engineer directly to address the question or clarification. The Resident Engineer will keep the bidder's innovation confidential and will not share this information with other bidders.

The Resident Engineer will determine whether questions are innovative or proprietary in nature. If the Resident Engineer determines that a question does not warrant confidentiality, the bidder may withdraw the question. If the bidder withdraws the question, the Resident Engineer will not answer the question and the question will not be documented on the Plenary web site. If the bidder does not withdraw the question, the question will be answered, and both the question and Plenary answer will be posted on the web site. If the Resident Engineer agrees that a question warrants confidentiality, the Resident Engineer will answer the question, and keep both question and answer confidential. Plenary will keep a record of both question and answer in their confidential file.

All questions shall be directed to the Plenary contacts listed above no later than 7:00 A.M. Monday of the week of bid opening. Final questions and answers will be posted no later than Tuesday morning of bid opening week.

Questions and answers shall be used for reference only and shall not be considered part of the Contract.

COMMENCEMENT AND COMPLETION OF WORK

The Contractor shall commence work under the Contract on or before the 15th calendar day following Contract execution or the 30th day following the date of award, whichever comes later, unless such time for beginning the work is changed by the Resident Engineer in the "Notice to Proceed." The Contractor shall complete all work 150 calendar days in accordance with the "Notice to Proceed."

Subsection 108.08 shall include the following:

Time will not be charged during the months of December, January, February or March. This time is defined as free time and work may continue if conditions permit.

REVISION OF SECTION 102
PROJECT PLANS AND OTHER DATA

Section 102 of the Standard Specifications is hereby revised for this project as follows:

Subsection 102.05 shall include the following:

The following information will be available for review in the Plenary Roads Denver, LLC offices located at 10525 W. 120th Ave., Broomfield, CO 80021 until the date set for opening of bids:

Plans and Specifications

Plenary will provide an area where Contractors can review any available information. The material is also available for purchase from Plenary for \$25.00 (Twenty Five Dollars and no cents)

After the proposals have been opened, the low responsible bidder may obtain from Plenary Roads Denver, LLC offices located at 1700 Lincoln, Suite 3000 Denver, CO 80203 at no cost 5 (Five) sets of plans and special provisions for the project. Additional sets of plans and other available data may be purchased on a cash sale basis from Plenary Roads Denver, LLC at current reproduction prices. Subcontractors and suppliers may obtain plans and other data from the successful bidder or they may purchase copies on a cash sale basis from Plenary Roads Denver, LLC at current reproduction prices.

REVISION OF SECTION 107
PERFORMANCE OF SAFETY CRITICAL WORK

Section 107 of the Standard Specifications is hereby revised as follows:

Add subsection 107.061 immediately following subsection 107.06 as follows:

107.061 Performance of Safety Critical Work. The following work elements are considered safety critical work for this project:

- (1) Removal of Concrete and Asphalt pavement adjacent to the travelled way
- (2) Adjusting Drainage inlets and Manholes adjacent to the travelled way

The Contractor shall submit, for record purposes only, an initial detailed construction plan that addresses safe construction of each of the safety critical elements. When the specifications already require an erection plan, a bridge removal plan, or a removal of portion of bridge plan, it shall be included as a part of this plan. The detailed construction plan shall be submitted two weeks prior to the safety critical element conference described below. The construction plan shall be stamped "Approved for Construction" and signed by the Contractor. The construction plan will not be approved by the Engineer.

The Construction Plan shall include the following:

- (1) Safety Critical Element for which the plan is being prepared and submitted.
- (2) Contractor or subcontractor responsible for the plan preparation and the work.
- (3) Schedule, procedures, equipment, and sequence of operations, that comply with the working hour limitations
- (4) Additional actions that will be taken to ensure that the work will be performed safely.
- (5) Names and qualifications of workers who will be in responsible charge of the work:
 - A. Years of experience performing similar work
 - B. Training taken in performing similar work
 - C. Certifications earned in performing similar work
- (6) The construction plan shall address how the Contractor will handle contingencies such as:
 - A. Unplanned events (storms, traffic accidents, etc.)
 - B. Work that cannot be completed in time for the roadway to be reopened to traffic
 - C. Replacement of workers who don't perform the work safely
 - D. Equipment failure
 - E. Other potential difficulties inherent in the type of work being performed
- (7) Name and qualifications of Contractor's person designated to determine and notify the Engineer in writing when it is safe to open a route to traffic after it has been closed for safety critical work.

A safety critical element conference shall be held two weeks prior to beginning construction on each safety critical element. The Engineer, the Contractor, the safety critical element subcontractors, and the Contractor's Engineer shall attend the conference. Required pre-erection conferences or bridge removal conferences may be included as a part of this conference.

After the safety critical element conference, and prior to beginning work on the safety critical element, the Contractor shall submit a final construction plan to the Engineer for record purposes only. The final construction plan shall be stamped "Approved for Construction" and signed by the Contractor.

(2)

REVISION OF SECTION 107

PERFORMANCE OF SAFETY CRITICAL WORK

The Contractor shall perform safety critical work only when the Engineer is on the project site. The Contractor's Engineer shall be on site to inspect and provide written approval of safety critical work for which he provided signed and sealed construction details. Unless otherwise directed or approved, the Contractor's Engineer need not be on site during the actual performance of safety critical work, but shall be present to conduct inspection for written approval of the safety critical work.

When ordered by the Engineer, the Contractor shall immediately stop safety critical work that is being performed in an unsafe manner or will result in an unsafe situation for the traveling public. Prior to stopping work, the Contractor shall make the situation safe for work stoppage. The Contractor shall submit an acceptable plan to correct the unsafe process before the Engineer will authorize resumption of the work.

When ordered by the Engineer, the Contractor shall remove workers from the project that are performing the safety critical work in a manner that creates an unsafe situation for the public in accordance with subsection 108.06.

Should an unplanned event occur or the safety critical operation deviate from the submitted plan, the Contractor shall immediately cease operations on the safety critical element, except for performing any work necessary to ensure worksite safety, and provide proper protection of the work and the traveling public. If the Contractor intends to modify the submitted plan, he shall submit a revised plan to the Engineer prior to resuming operations.

All costs associated with the preparation and implementation of each safety critical element construction plan will not be measured and paid for separately, but shall be included in the work.

Nothing in the section shall be construed to relieve the Contractor from ultimate liability for unsafe or negligent acts or to be a waiver of the Colorado Governmental Immunity Act on behalf of the Department and Plenary Roads, LLC.

REVISION OF SECTION 107
WORKER SAFETY

Section 107 of the Standard Specifications is hereby revised for this project as follows:

Subsection 107.06 shall include the following:

If the Contractor is ordered to cease operations due to violations of a noise ordinance as a result of equipment back up alarms, the Contractor shall take whatever actions are necessary to comply with the ordinance and continue work on the project. This includes the option of using an observer in lieu of using the equipment back up alarms as allowed by 29 CFR 1926.601(b) (4) (II) of the OSHA Safety and Health Standards. Should the Contractor fail to mitigate the noise ordinance violation, the Contractor shall be deemed to have waived any right to a claim as a result of work suspension or being required to perform the work at times not specified in the Contract.

If the Contractor uses an observer in lieu of back up alarms, the Contractor shall follow all of the OSHA requirements regarding the use of observers.

All costs incidental to the foregoing requirements shall be included in the original contract prices for the project.

REVISION OF SECTION 202
REMOVAL OF ASPHALT MAT (PLANING)

Section 202 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 202.09, and replace it with the following:

202.09 Removal of Asphalt Mat (Planing). Prior to beginning planing operations, the Contractor shall submit a planing plan and a Process Control Plan (PCP) for approval by the Engineer. The planing plan shall include at a minimum:

- (1) The number, types and sizes of planers to be used.
- (2) The width and location of each planing pass.
- (3) The number and types of brooms to be used and their locations with respect to the planers.
- (4) The proposed method for planing and wedging around existing structures such as manholes, valve boxes, and inlets.
- (5) The longitudinal and transverse typical sections for tie-ins at the end of the day.
- (6) If requested by the Engineer, a plan sheet showing the milling passes.

The PCP shall include as a minimum:

- (1) The schedule for replacing the cutting teeth.
- (2) The daily preventive maintenance schedule and checklist.
- (3) Proposed use of automatic grade controls.
- (4) The surface testing schedule for smoothness.
- (5) The process for filling distressed areas.
- (6) The schedule for testing macrotexture of the milled surface.
- (7) Corrective procedures if the milled surface does not meet the minimum macrotexture specification.
- (8) Corrective procedures if the milled surface does not meet the minimum transverse or longitudinal surface finish when measured with a 10 foot straightedge.

The Contractor shall not start the planing operation until the hot mix asphalt (HMA) mix design has been approved and a Form 43 has been signed by the Engineer.

The existing pavement shall be milled to the cross-slope as shown on the plans, and shall have a surface finish that does not vary longitudinally or transversely more than $\frac{3}{8}$ inch from a 10 foot straightedge. A 10 foot straightedge shall be supplied by the Contractor.

All milled surfaces shall be broomed with a pick-up broom, unless otherwise specified, before being opened to traffic. A sufficient number of brooms shall be used immediately after planing to remove all milled material remaining in the roadway.

(2)
REVISION OF SECTION 202
REMOVAL OF ASPHALT MAT (PLANING)

If the Contractor fails to adequately clean the roadway, work shall cease until the Engineer has approved the Contractor's revised written proposal to adequately clean the roadway.

The milled surface shall have a macrotexture equal to or less than 0.170 inches for single-lift overlays and 0.215 inches for multiple-lift overlays as tested in accordance with CP 77. Milled surfaces that do not meet these criteria shall require corrective action in accordance with the PCP. The Contractor shall be responsible for testing the macrotexture of the milled surface at the location directed by the Engineer in accordance with CP 77 at a stratified random frequency of one test per 10,000 square yards or a minimum of once per work day.

At the completion of each day's work, longitudinal vertical edges greater than 1 inch shall be tapered. No transverse vertical edges will be allowed. Longitudinal milled surface tie-ins to existing pavement shall be tapered to not less than a 3:1 slope, transverse milled surface tie-ins to existing pavement shall be tapered to not less than a 50:1 slope. Transverse tapered joints may be tapered with the planing machine, a temporary asphalt ramp, or other methods approved by the Engineer. No longitudinal joint between the milled and existing surfaces shall fall between 1 to 5 feet of any lane line.

If the transverse joint is tapered with a temporary asphalt ramp, the milled surface at the joint shall be constructed as a butt joint the full depth of the lift of asphalt to be placed on the milled surface. The Contractor shall be responsible for maintaining this asphalt ramp until all corresponding HMA is placed. All work associated with this joint will not be paid for separately, but shall be included in the cost of planing.

If the transverse joint is tapered with a planing machine, a butt joint shall be cut into the taper the full depth of the lift of asphalt to be placed on the milled surface prior to commencement of resurfacing. All work associated with this joint will not be paid for separately, but shall be included in the cost of planing.

Other approved transverse joint tapers shall be maintained at the expense of the Contractor, and at a minimum shall incorporate a butt joint the full depth of the lift of asphalt to be placed on the milled surface prior to commencement of resurfacing.

Distressed or irregular areas identified in the planed surface by the Engineer shall be patched.

The roadway shall be left in a safe and usable condition at the end of each work day. The Contractor shall take appropriate measures to ensure that the milled surface does not trap or hold water. All required pavement markings removed by the planing shall be restored before the roadway is opened to traffic.

(3)
REVISION OF SECTION 202
REMOVAL OF ASPHALT MAT (PLANING)

All milled surfaces to be overlaid with HMA shall be covered with new asphalt within 7 working days. All areas on this project that are not overlaid within the specified working days will be assessed a lane rental fee of \$12,000 per occurrence for each day or fraction thereof and any required surface repairs shall be paid for by the Contractor.

All planing shall be completed full width and parallel to the travel lanes before resurfacing commences unless otherwise directed by the Engineer.

All material generated by the planing operation shall become the property of the Contractor unless otherwise noted in the Contract.

Each planer shall conform to the following:

The planer shall have sufficient power, traction and stability to maintain an accurate depth of cut. The propulsion and guidance system of the planer shall be maintained in such condition that the planer may be operated to straight and true lines.

The planer shall be capable of operating with automatic grade controls (contact or non-contact) on both sides of the machine using a 30 foot averaging system or other approved grade control systems. The use of such controls shall be described in the Contractor's PCP.

The planer shall be capable of picking up the removed material in a single operation. A self-loading conveyor shall be an integral part of the planer. Windrows will not be allowed.

Subsection 202.12 shall include the following:

Macrotexture testing, macrotexture corrective actions, planers, brooms, and all other work necessary to complete the item, Removal of Asphalt Mat (Planing), will not be measured and paid for separately, but shall be included in the work.

REVISION OF SECTIONS 202 AND 412
REMOVAL AND REPLACEMENT OF CONCRETE PAVEMENT

Sections 202 and 412 of the Standard Specifications are hereby revised for this project as follows:

In Subsection 202.02 delete the sixth paragraph and replace with the following:

The areas of concrete pavement to be removed shall be isolated in both the longitudinal and transverse directions by the double saw cut method of sawing in accordance with FHWA's publication entitled "Guide for Full-Depth Repairs". Sawing shall be accomplished with the use of a diamond blade saw or approved equivalent. Sawing of the concrete pavement shall be done to a true line, with a vertical face, unless otherwise specified. Sawing shall be full depth and shall go through the existing tie-bars and dowel bars, leaving free vertical edges at the limits of the removal.

After sawing has been completed, the deteriorated concrete shall be lifted vertically from its position unless otherwise approved by the Engineer. Pavement breakers or jackhammers shall be used in the removal process where lifting is not possible. All loose materials shall be removed from the repair area. Removed concrete slabs and excavated soils shall become the property of the Contractor and shall be disposed of in accordance with subsection 202.07.

After concrete pavement is removed, the underlying material will be evaluated by the Engineer. Unsuitable material shall be removed in accordance with subsection 206.03 and replaced with aggregate base course♦ of the class and depth specified in the Contract.

The subsequent aggregate base course shall be placed with moisture and density control in accordance Section 304.

Subsection 202.11 shall include the following:

Removal of concrete pavement will be measured by the square yard, completed to the required depth, and accepted.

Subsection 202.12 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Removal of Concrete Pavement	Square Yard

Payment for Removal of Concrete Pavement will be full compensation for all work and materials required to complete the item, including sawing, removing, and disposal of the concrete pavement.

(2)
REVISION OF SECTIONS 202 AND 412
REMOVAL AND REPLACEMENT OF CONCRETE PAVEMENT

Structure excavation for removal of unsuitable material will be measured and paid for in accordance with subsection 206.07.

Aggregate base course will be measured and paid for in accordance with Section 304.

Subsection 412.13 shall include the following:

Dowel bars and tie bars for replaced concrete pavement shall be placed in accordance with Standard Plan M-412-1 unless otherwise directed by the Engineer. To anchor dowel bars and tie bars, holes shall be drilled into the sawed face of the existing slab, perpendicular to the joints. All alignments shall be measured and verified prior to the placement of concrete. Dowel baskets shall be used for joints in repair areas that exceed more than one panel replacement.

Compressed air shall be used to remove dirt and debris from all drilled holes. After cleaning and prior to bar insertion, epoxy grout shall be discharged to the back of the hole to force the grout forward. Sufficient epoxy grout shall be injected into the back of the hole in order to cover the bar over the entire length of embedment. Each bar shall be twisted a minimum of one full turn during insertion.

Subsection 412.17 shall include the following:

The smoothness of the replaced concrete shall be tested in accordance with subsection 105.08(a)2.

In subsection 412.23, first paragraph, delete the first sentence and replace it with the following:

The quantities of Concrete Pavement, Concrete Pavement (Patching), and Placed Concrete Pavement to be paid for under these items will be the number of square yards completed and accepted.

Subsection 412.24 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Concrete Pavement (Patching)	Square Yard

Payment for Concrete Pavement (Patching) will be full compensation for all work and material required to place and finish the replacement concrete pavement in accordance with the Contract.

REVISION OF SECTION 304
AGGREGATE BASE COURSE

Section 304 of the Standard Specifications is hereby revised for this project as follows:

Subsection 304.02 shall include the following:

Materials for the base course shall be Aggregate Base Course (Class **6**) as shown in subsection 703.03

The aggregate base course (Class 6) must meet the gradation requirements and have a resistance value of at least 78 and when tested by the Hveem Stabilometer method.

REVISION OF SECTIONS 401 AND 703
STONE MATRIX ASPHALT PAVEMENT

Sections 401 and 703 of the Standard Specifications are hereby revised for this project as follows:

Subsection 401.02 shall include the following:

Recycled Asphalt Pavement (RAP) shall not be used in Stone Matrix Asphalt (SMA) mix.

Subsection 401.09 shall include the following:

Each SMA load shall be completely covered and securely fastened with a full tarp.

Subsection 401.16 shall include the following:

The SMA mixture shall be transported and placed on the roadway without drain-down or flushing. All flushed areas behind the paver shall be removed immediately upon discovery. If more than 50 square feet of flushed SMA pavement is ordered removed and replaced in any continuous 500 linear feet of paver width laydown, operations shall be discontinued until the source of the flushing has been found and corrected. The Engineer will designate the depth and area of all flushed areas requiring removal and replacement. All costs associated with the removal and replacement of the flushed areas shall be at the Contractor's expense.

Subsection 401.17 shall include the following:

Rollers shall not be used in a vibratory mode on SMA unless they are first used successfully in the demonstration control strip specified in subsection 403.03. Pneumatic wheel rollers shall not be used on SMA mix.

Stone Matrix Asphalt Pavement shall be placed and compacted in accordance with the temperatures listed in subsection 401.07 as revised for this project.

The relative compaction for all SMA mixtures will be measured from roadway cores in accordance with CP 44, Method B (Rapid Test) or Method C (CoreDry Test), unless the SMA mixture is being placed on a structure (bridge deck) in which case the Engineer may specify that nuclear gauge measurements be used.

When cores are used, the Contractor shall provide all labor and equipment for the coring operation and filling the core holes. When nuclear density gauges are used, the tests will be performed in accordance with CP 81 and CP 82.

In-place density for SMA shall be 93 to 97 percent of the SMA daily maximum specific gravity as measured according to CP 51.

(2)
REVISION OF SECTIONS 401 AND 703
STONE MATRIX ASPHALT PAVEMENT

Subsection 401.22 shall include the following:

Acceptance, testing, and pay factors for SMA shall be in accordance with subsections 105.05 and 106.05 as revised for this project for Hot Mix Asphalt. The specifications for gradation acceptance shall be applied for all SMA placed on the project.

Subsection 703.06 shall include the following:

Mineral filler for the Stone Matrix Asphalt pavement shall be limestone dust and shall meet the requirements of Table 703-8 and Table 703-9:

REVISION OF SECTION 403
STONE MATRIX ASPHALT PAVEMENT

Section 403 of the Standard Specifications is hereby revised for this project as follows:

Subsection 403.01 shall include the following:

This work includes placing a Stone Matrix Asphalt (SMA) pavement as shown on the plans.

Subsection 403.02 shall include the following:

The SMA gradation for this project shall be ½ inch.

Mixture design and field control testing of SMA shall be performed using either the SuperPave (CPL 5115, 100 Gyrations) or the Marshall Method (AASHTO T245, 50 Blow).

A minimum of two weeks prior to the proposed use of any Stone Matrix Asphalt pavement on the project, a pre-paving conference will be conducted. At that time, the Contractor shall submit to the Engineer, a mix design meeting the appropriate specification requirements for one of the following:

The SuperPave SMA mix design shall conform to the requirements of Table 403-1a:

Table 403-1a

Property	Test Method	Value for SMA
Air Voids, percent at: N(Design)	CPL 5115	3.0 – 4.0
Lab compaction (Revolutions) N(Design)	CPL 5115	100
Accelerated Moisture Susceptibility, tensile strength Ratio, (Lottman), minimum	CPL 5109, Method B	70
Minimum Dry Split Tensile Strength, psi	CPL 5109, Method B	30
Grade of Asphalt Cement		PG 76-28
Voids in the Mineral Aggregate (VMA) %, minimum	CP 48	17
Draindown at Production Temperature	AASHTO T305	0.3 maximum
% VCA ¹ _{MIX}	AASHTO R 46	Less than VCA _{DRC} ²
<p>Note: The current version of CPL 5115 is available from Plenary</p> <p>Note: Copies of AASHTO R 46 and M 325 can be obtained from the Plenary</p> <p>Note: ¹Voids in the Coarse Aggregate</p> <p>Note: ²Dry-rodged condition</p>		

(2)
REVISION OF SECTION 403
STONE MATRIX ASPHALT PAVEMENT

Form 43 will establish construction targets for asphalt cement and all mix properties at air voids up to 1.0 percent below the mix design optimum. Plenary will establish the production asphalt cement and volumetric targets based on the Contractor's mix design and the relationships shown between the Stone Matrix Asphalt mixture volumetric properties and asphalt cement contents on the Form 429. Plenary may select a different AC content other than the one shown at optimum on the Contractor's mix design in order to establish the production targets as contained on the Form 43. Historically, Air Voids adjustments typically result in asphalt cement increases from 0.1 to 0.5 percent. Contractors bidding the project should anticipate this change and factor it into their unit price bid. The Marshall SMA mix design shall conform to the following:

Mix Properties	Value
Stability, Marshall Compactor	1400 lbs., min
% Voids in Total Mix	3 – 4%
VMA (% Voids in the Mineral Aggregate)	17 min.
Lottman, CPL 5109, Method B	70% min
Dry Tensile Strength, (CPL 5109)	30 psi, min.

Regardless of mix design method, a minimum of 1 percent hydrated lime by weight of the combined aggregate shall be added to the aggregate for all Stone Matrix Asphalt.

The SMA Mix design must be approved by the Engineer before any pavement is placed on the project. In addition, the Contractor shall provide field control testing during production of the SMA mix and for the demonstration control strip. The Contractor shall perform the following tests and provide the results to the Engineer during production:

If a SuperPave SMA mix design is used, the Contractor shall perform the following tests and provide the results to the Engineer during production:

Superpave Mix Property	Frequency
Draindown (AASHTO T 305)	1/1000 tons or fraction thereof
Percent Voids in the total mix @ $N_{(design)}$	1/1000 tons or fraction thereof
VMA (Percent Voids in the Mineral Aggregate) @ $N_{(design)}$	1/1000 tons or fraction thereof
Lottman, CPL 5109, Method B	1/5000 tons or fraction thereof
Dry Tensile Strength, CPL 5109	1/5000 tons or fraction thereof
Percent AC & Aggregate Gradation CP 5120	1/1000 tons or fraction thereof

(3)
REVISION OF SECTION 403
STONE MATRIX ASPHALT PAVEMENT

If a Marshall SMA mix design is used, the Contractor shall perform the following tests and provide the results to the Engineer during production:

Marshall Mix Property	Frequency
Draindown (AASHTO T 305)	1/1000 tons or fraction thereof
Stability (Marshall)	1/1000 tons or fraction thereof
Percent Voids in the total mix	1/1000 tons or fraction thereof
VMA (Percent Voids in the Mineral Aggregate)	1/1000 tons or fraction thereof
Lottman, CPL 5109, Method B	1/5000 tons or fraction thereof
Dry Tensile Strength, CPL 5109	1/5000 tons or fraction thereof
Percent AC & Aggregate Gradation CP 5120	1/1000 tons or fraction thereof

Subsection 403.03 shall include the following:

The mineral filler for SMA shall be stored in a separate silo and added automatically in the correct proportion. The mineral filler addition equipment shall be electronically or mechanically interlocked to the aggregate feed sensors so that the proper amount of mineral filler is added whenever SMA is produced.

The SMA mineral filler shall be added at the same point the asphalt cement is added to the aggregate.

Tack coat between the existing pavement and Stone Matrix Asphalt pavement shall be placed at a rate between 0.03 and 0.05 gallons per square yard.

Before proceeding with SMA placement, the Contractor shall demonstrate the ability to produce and place a satisfactory mix in a Demonstration Control Strip (DCS). The Contractor will coordinate with the Engineer on the proposed location of the DCS. The DCS shall consist of a minimum quantity of 500 tons placed in one lane, full width. Within the last 200 tons of SMA placed in the DCS, the Contractor and Plenary shall determine properties (VMA, Voids, in-place density, AC content, gradation, and Marshall Stability, if required) of the project produced SMA mix used in the DCS and provide the results to the Engineer. The Contractor may proceed with full production if all mixture properties are within the specified tolerances.

To determine the in-place density and roller pattern, one core shall be taken at three random locations within the last 200 tons of the DCS. The Engineer will determine the coring locations using a stratified random sampling process. The cores shall be immediately submitted to the Engineer and will be used for determining acceptance of the DCS. Densities of the random samples will be determined by cores according to CP 44. Coring shall be 4

REVISION OF SECTION 403
STONE MATRIX ASPHALT PAVEMENT

performed by the Contractor under Plenary observation. Coring will not be measured and paid for separately but shall be included in the work.

The DCS will be designated as a separate process. Payment for the DCS will be made in accordance with Subsection 105.05, Conformity to the Contract of Hot Mix Asphalt.

Subsection 403.04 shall include the following:

Stone Matrix Asphalt will be measured by the actual number of tons that are completed and accepted.

Subsection 403.05 shall include the following:

Pay Item	Pay Unit
Stone Matrix Asphalt	Ton

Mix design, furnishing, hauling, preparing, and placing all materials, including aggregates, asphalt cement, limestone dust, alternate mineral filler, hydrated lime, tack coat, and approved demonstration control strip; labor, equipment tools, setting of lines and guides where specified, and all other work and materials necessary to complete the item will not be paid for separately but shall be included in the unit bid price. Any change to the submitted mix design optimum asphalt cement content to establish production targets on the Form 43 will not be measured and paid for separately, but shall be included in the work. No additional compensation will be considered or paid for any additional asphalt cement, plant modifications and additional personnel required to produce the HMA as a result in a change to the mix design asphalt cement content. Historically, typical asphalt cement increases reflected on the Form 43 are from 0.1 to 0.5 percent. However, the Contractor should anticipate the AC increases typical of his mixes. Contractors bidding the project should anticipate this change and factor it

REVISION OF SECTION 403
HOT MIX ASPHALT TICKET COLLECTION

Section 403 of the Standard Specifications is hereby revised for this project as follows:

Subsection 403.05 shall include the following:

The Contractor shall collect the scale ticket on each load when it is delivered to the project site, and ensure that the information required in subsection 109.01 is shown on each ticket:.

The scale tickets shall be available on site for Plenary personnel to inspect.

Each day the Contractor shall provide to the Engineer envelopes which contain the previous day's signed tickets and the following:

1. On each envelope: Project number, date of paving, type of material, daily total and cumulative total.
2. One of the following:
 - A. Two adding machine tape tabulations of the weight tickets with corresponding totals run and signed by different persons,
 - B. One signed adding machine tape tabulation of the weight tickets that has been checked and signed by a second person,
 - C. Signed check tape of computer scale tickets that have a cumulative total. These scale tickets must be consecutive and without voids adjustments.
3. A listing of any overweight loads on the envelope, including ticket numbers and amount over legal limit.
4. A comparison of the actual yield for each day's placement to the theoretical yield. Theoretical yield shall be based on the actual area paved, the planned thickness, and the actual density of the mixture being placed. Any variance greater than +2.5% shall be indicated on the envelope and a written explanation included.

The Contractor shall provide a vehicle identification sheet that contains the following information for each vehicle:

- (1) Vehicle number
- (2) Length
- (3) Tare weight
- (4) Number of axles
- (5) Distance between extreme axles
- (6) All other information required to determine legal weight.
- (7) Legal weight limit.

**REVISION OF SECTION 408
JOINT AND CRACK SEALANT**

Section 408 of the Standard Specifications is hereby revised for this project as follows:

Subsection 408.01 shall include the following:

DESCRIPTION

408.01 This work shall consist of sealing joints between hot mix asphalt surfacing and portland cement concrete pavement.

Subsection 408.02 shall include the following:

MATERIALS

408.02 Rubber-asphalt joint filler shall be a blend of new or reclaimed synthetic or natural rubber, paving grade asphalt cement, and other additives. The joint sealing material shall be submitted to Plenary's Materials and Tests Laboratory for approval.

The blend, when heated in accordance with the supplier's instructions, shall produce an easily applied, flexible, and adhesive compound that will effectively seal joints between portland cement concrete and the hot mix asphalt under typical Colorado climatic conditions.

The joint filler shall contain no solvents, shall not be self-leveling, and shall cure upon cooling to a consistency that will not be tracked by traffic.

The joint filler shall be suitable for melting and application with a conventional melter-aplicator unit.

- (a) The safe heating temperature is the highest temperature to which the joint filler can be heated and still conform to all requirements of this specification.
- (b) A maximum of 11°C higher than the manufacturer's minimum recommended application temperature is considered the safe heating temperature.
- (c) For testing purposes, the pouring temperature for specimen preparation is the safe heating temperature recommended by the manufacturer.
- (d) Laboratory testing may begin only after the testing agency has received the safe heating temperature. All containers must maintain their safe heating temperature when in use.
- (e) The joint filler shall meet the following requirements:
 - (1) Softening Point: Minimum temperature of 65.5°C.
 - (2) Cone Penetration: At $25 \pm 0.1^\circ\text{C}$, using a 150 g for 5 s, shall not exceed 70 units. At $4 \pm 0.1^\circ\text{C}$, using 200 g for 60 s, the minimum shall be 15 units.
 - (3) Resilience: At $25 \pm 0.1^\circ\text{C}$, resilience shall be at least 30 percent recovery.

-2-

REVISION OF SECTION 408 JOINT AND CRACK SEALANT

- (4) Asphalt Compatibility: There shall be no failure in adhesion, nor formation of an oily exudate at the interface between the joint filler and the asphaltic concrete specimen, nor softening or other deleterious effects on the asphaltic concrete or joint filler when tested at 60°C for 72 hours.

If granulated rubber is used, it shall not contain wire, fabric, or other contaminating materials.

Acceptance of the manufactured material will be based on a Certificate of Compliance for each lot or batch furnished by the supplier. The Certificate of Compliance shall state the type of rubber used and that material is in compliance with these Specifications. Random samples may be tested to verify compliance with these Specifications.

The rubber-asphalt joint filler shall be packaged in meltable (149°C) polyethylene bags contained in cardboard boxes. Each cardboard box shall contain two 11 kg packages of the rubber-asphalt joint filler. The net mass shall be 22 kg per box. The use of metal staples or fasteners of any kind will be prohibited for closing the lids of the boxes. Tape or other like material is acceptable. Boxed material shall be furnished on pallets with an approximate mass of 900 kg. Pallets shall be covered with clear plastic and banded.

The concrete to asphalt joint sealant shall meet requirements in ASTM D 5078.

Subsection 408.03 shall include the following:

CONSTRUCTION REQUIREMENTS

408.03 The Contractor shall prepare and construct the joint between the concrete pavement and asphaltic concrete to the dimensions of the typical sections shown in the plans. The full depth of the cut shall be cleaned by routing or any other method which results in a clean cut.

The Contractor shall apply sealant in accordance with the sealant manufacturer's recommended procedures.

Subsection 408.04 shall include the following:

METHOD OF MEASUREMENT

408.04 Joint and Crack Sealant will not be measured and paid for separately, but will be included in the work.

Subsection 408.05 shall include the following:

BASIS OF PAYMENT

408.05 The accepted quantities of Joint and Crack Sealant will be not be paid for separately, but will be included in the work.

REVISION OF SECTION 630
PORTABLE MESSAGE SIGN PANEL

Section 630 of the Standard Specifications is hereby revised for this project as follows:

Subsection 630.01 shall include the following:

This work includes furnishing, operating, and maintaining a portable message sign panel.

Add subsection 630.031 immediately following subsection 630.03 as follows:

630.031 Portable Message Sign Panel. Portable message sign panel shall be furnished as a device fully self-contained on a portable trailer, capable of being licensed for normal highway travel, and shall include leveling and stabilization jacks. The panel shall display a minimum of three - eight character lines. The panel shall be a dot-matrix type with an LED legend on a flat black background. LED signs shall have a pre-default message that activates before a power failure. The sign shall be solar powered with independent back-up battery power. The sign shall be capable of 360 degrees rotation and shall be able to be elevated to a height of at least five feet above the ground measured at the bottom of the sign. The sign shall be visible from one-half mile under both day and night conditions. The message shall be legible from a minimum of 750 feet. The sign shall automatically adjust its light source to meet the legibility requirements during the hours of darkness. The sign enclosure shall be weather tight and provide a clear polycarbonate front cover.

Solar powered message signs shall be capable of operating continuously for 10 days without any sun. All instrumentation and controls shall be contained in a lockable enclosure. The sign shall be capable of changing and displaying sign messages and other sign features such as flash rates, moving arrows, etc.

Each sign shall also conform to the following:

- (1) In addition to the onboard solar power operation with battery back-up, each sign shall be capable of operating on a hard wire, 100-110 VAC, external power source.
- (2) All electrical wiring, including connectors and switch controls necessary to enable all required sign functions shall be provided with each sign.
- (3) Each sign shall be furnished with an operating and parts manual, wiring diagrams, and trouble-shooting guide.
- (4) The portable message sign shall be capable of maintaining all required operations under Colorado mountain-winter weather conditions.
- (5) Each sign shall be furnished with an attached license plate and mounting bracket.
- (6) Each sign shall be wired with a 7-prong male electric plug for the brake light wiring system.

(2)
REVISION OF SECTION 630
PORTABLE MESSAGE SIGN PANEL

Subsection 630.13 shall include the following:

The portable message sign panel shall be on the project site at least 7 Calendar days prior to the start of active roadway construction. Maintenance, storage, operation, relocation to different sites during the project, and all repairs of portable message sign panels shall be the responsibility of the Contractor.

Subsection 630.15 shall include the following:

Portable message sign panels will be measured one of the two following ways:

- (1) By the actual number of days each portable message sign is used on the project as approved by the Engineer.
- (2) By the maximum number of approved units in use on the project at any one time.

Subsection 630.16 shall include the following:

Pay Item	Pay Unit
Portable Message Sign Panel	Day
Portable Message Sign Panel	Each

REVISION OF SECTION 630
TRAFFIC CONE & DRUM CHANNELIZING DEVICE

Section 630 of the Standard Specifications is hereby revised for this project as follows:

In Subsection 630.05, second paragraph, the reflectorized material shall be AP 1000 Polyester (Reflexite Corp.), 3M Type III, Transparent (Reflexite Corp.), or 2010 Vinyl Cone Collar (Reflexite Corp.). Any other material is not acceptable unless its brightness is equivalent or greater than the types named.

Subsection 630.16 shall include the following:

PAY ITEM	PAY UNIT
Drum Channelizing Device (With Light) (Flashing)	Each

TRAFFIC CONTROL PLAN - GENERAL

The key elements of the Contractor's method of handling traffic (MHT) are outlined in subsection 630.09.

The components of the Traffic Control Plan (TCP) for this project are included in the following:

- (1) Subsection 104.04 and Section 630 of the specifications.
- (2) Latest revised Standard Plan S-630-1(12/7/2009), Traffic Controls for Highway Construction and Standard Plan S-630-2.
- (3) Schedule of Construction Traffic Control Devices.

Special Traffic Control Plan requirements for this project are as follows:

For construction impacting US 36:

The Contractor's work shall be limited to;

Contractor must maintain one (1) lane of traffic at all times between the hours of 8:00 p.m. and 5:00 a.m. during the duration of the project with the following exceptions;

The Contractor shall maintain traffic while performing the work in accordance with the plans, and these Specifications.

- (1) One traffic lane shall be maintained at all times along the managed lanes within the project area throughout the duration of this project, except as permitted above in the Commencement and Completion of Work section of the project special specifications. The Contractor's MHT submittals shall include information regarding construction access from the US 36 mainline lanes or ramps to construction areas.
- (2) The Contractor shall install construction traffic control devices where they do not block or impede other existing traffic control devices. The Contractor is restricted from storing any materials, construction traffic control devices, signs, etc. along mainline US 36.
- (3) Construction equipment used on this project shall meet the same minimum exhaust requirements as those specified by the manufacturer of the equipment.
- (4) The Contractor and subcontractors shall equip their construction vehicles with flashing amber lights. Equipment to be used at night shall also be equipped with flashing amber lights. Flashing amber lights on vehicles and equipment shall be visible from all directions.
- (5) The Contractor shall maintain access to all lanes at all times unless otherwise directed by the Engineer. Parking areas temporarily disturbed by construction activities shall be restored to a useable condition during non-working hours.
- (6) Whenever the Contractor removes, obliterates, or overlays any pavement markings, he /she shall replace them on a daily basis prior to opening the affected areas to traffic. All temporary pavement markings shall fully comply with the Standard Specifications and Special Provisions.
- (7) The Contractor shall not have construction equipment or materials in the lanes open to traffic any time unless directed by the Engineer.

TRAFFIC CONTROL PLAN - GENERAL

- (8) All personal vehicle and construction equipment parking is prohibited where it conflicts with safety, access, or the flow of traffic. Landscaped areas and roadway shoulders shall be kept clear of parking and storage of all personal and construction equipment except where approved by the Engineer.
- (9) No work that interferes with traffic will be allowed on holidays or any day of a three-day or four-day weekend that includes a holiday. Holidays on which this restriction applies consist of those holidays recognized by the State of Colorado as listed in CDOT Standard Specifications, subsection 101.36.
- (10) All lane closures shall be subject to the approval of the Engineer. Request for each closure shall be made at least 24 hours in advance of the time the lane closure is to be implemented. Lane closures will not be allowed to remain unless being utilized in continuum for the intended purpose for which they were set up.
- (11) During non-working hours, the roadways shall be restored to safe travel conditions for the free flow of traffic. Any maintenance required restoring the roadways to this condition, including the pavement patching and grading, shall be done prior to opening the areas to traffic or completing work for the day.
- (12) The Contractor shall clean the roadway of all construction debris before opening it to traffic.
- (13) All flagging stations used at night shall be illuminated with floodlights. Street, highway lights and "high mast lighting" may be used for flagging station illumination when approved by the Engineer. Floodlights shall be located and directed so as not to interfere with the sight of any motorists, and the cost is to be included in the work.
- (14) Prior to removal and resetting of any sign the Contractor and Engineer shall prepare an inventory. Any signs damaged due to the Contractor's operations shall be replaced in kind or repaired by the Contractor at no additional cost to the project. All sign replacements and repairs shall be approved by the Engineer.

The Contractor shall be responsible for any physical or environmental impacts associated with the action. All costs incidental to the foregoing requirements shall be included in the original contract prices for the project.

FORCE ACCOUNT ITEMS

DESCRIPTION

This special provision contains the Plenary's estimate for force account items included in the Contract. The estimated amounts marked with an asterisk will be added to the total bid to determine the amount of the performance and payment bonds. Force Account work shall be performed as directed by the Engineer.

BASIS OF PAYMENT

Payment will be made in accordance with subsection 109.04. Payment will constitute full compensation for all work necessary to complete the item.

Force account work valued at \$5,000 or less, that must be performed by a licensed journeyman in order to comply with federal, state, or local codes, may be paid for after receipt of an itemized statement endorsed by the Contractor.

<u>Force Account Item</u>	<u>Quantity</u>	Estimated <u>Amount</u>
F/A 01 Minor Contract Revisions	F.A.	\$ 20,000*
F/A 02 Asphalt Pavement Incentive	F.A.	\$ 20,000
F/A 03 Concrete Pavement Incentive	F.A.	\$ 20,000
F/A 04 Fuel Cost Adjustment	F.A.	\$ 5,000
F/A 05 Asphalt Cement Cost Adjustment for HMA and SMA	F.A.	\$ 20,000
F/A 06 Quality Incentive Payment	F.A.	\$ 20,000
F/A 07 Erosion Control	F.A.	\$ 10,000*
F/A 08 Project First Program	F.A.	\$ 2,000
F/A 09 Interim Surface Repair	F.A.	\$ 20,000*

Descriptions:

F/A 01 Minor Contract Revisions – Consists of minor work authorized and approved by the Engineer, which is not included in the contract plans or specifications, and is necessary to accomplish the scope of work of this contract.

F/A 02 Asphalt Pavement Incentive - Made in accordance with Project Specifications.

F/A 03 Concrete Pavement Incentive- Made in accordance with Project Specifications.

F/A 04 Fuel Cost Adjustment - Made in accordance with Project Specifications

F/A 05 Asphalt Cement Cost Adjustment for HMA and SMA- Made in accordance with Project Specifications.

F/A 06 Quality Incentive Payment – Quality Incentive will be made in accordance with Revision of Section 105 and 105 – Conformity to the Contract of Portland Cement Concrete Pavement and with Standard Special Provisions Revision of Sections 105 & 106 Conformity to the Contract of Hot Mix Asphalt (<5,000 tons)

F/A 07 Erosion Control – Supplemental erosion control measures suggested by the Erosion Control Supervisor, but not provided for in the contract plans or specifications. All items shall be approved by the Engineer prior to installation or they will be at no cost to the project.

F/A 08 Project First Program – Cost of participating in a Project First Program between the Contractor and the Plenary in accordance with the Standard Special Provision.

F/A 09 Interim Surface Repair - This work consists of placing and compacting a machine scratch course in locations as directed by the Engineer. The machine scratch course may be used once the Contractor meets all the specification requirements for the Revision of Section 202, Removal of Asphalt Mat (Planing) and irregularities such as, but not limited to, delamination and raveling exceeding 10 percent within any ½ mile segment that are encountered prior to the specified time of the overlay.