

Project Manual

City of Weldon Spring

Trail Improvements

Weldon Spring, Missouri

Cochran Project Number: M19-7755

April 28, 2020

Presented to:

City of Weldon Spring

Donald D. Lickliger, Mayor



Date

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State of Missouri

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Prevailing Wages

State

Request for Information Form

Technical Specifications

- Section 01000 Coordination and Site Conditions
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- Section 01200 Progress Schedules
- Section 01300 Product Shipment, Handling, Storage & Protection
- Section 01400 Contract Closeout
- Section 01500 Mobilization and Traffic Control
- Section 02000 Clearing, Grubbing & Stripping
- Section 02200 Removal of Improvements
- Section 02300 Earthwork
- Section 03900 Utility Adjustment
- Section 04000 Asphalt Pavement
- Section 05000 Portland Cement Concrete
- Section 05200 Joint Sealing
- Section 09000 Finish Grading Lawns

INVITATION FOR BIDS

Sealed bids for the City of Weldon Spring, Trail Improvements Project (hereinafter "Project") will be received by City of Weldon Spring, 5401 Independence Rd, Weldon Spring, Missouri 63304, until 2:00 p.m. CST, on May 21, 2020, where they will be publicly opened and read aloud.

The Scope of Work for trail improvements includes: installation of a 10 foot wide asphalt trail, ADA transition ramps, grading, removal of existing items, storm sewer installation and other incidental items and work described in the Project Manual or reasonably inferable therefrom to construct the referenced project. There are two alternates for this project providing for the trail width to be changed to 8 feet wide unless otherwise noted and complete removal of the white vinyl fence and footings along the entirety of Nancy Ln.

Bid packages will be available after 11:00 a.m. on April 30, 2020. Due to the current COVID-19 pandemic, plans will be available via email and may be obtained by contacting Melissa Sample with Cochran at Msample@cochraneng.com. Please note that in order to bid this project, the bidder **must** be listed on the bidders list and registered with Cochran prior to bidding. To be placed on the bidders list, please contact Melissa Sample per the above email address and request to be placed on the bidders list. If a hard copy set of plans is desired, the Contractor may arrange to pick up a hard copy set from the Wentzville office of Cochran located at 8 East Main St.; Wentzville, MO 63385, upon payment of a non-refundable fee of \$125.00 per set. For directions, please call 636-332-4574.

A non-mandatory but recommended prebid meeting will be held on May 14th at 2:00 p.m. at the City of Weldon Spring City Hall at 5401 Independence Rd., Weldon Spring, Missouri 63304.

A bid security in the amount of five percent (5%) of the bid amount must accompany each bid, in accordance with the Instructions to Bidders.

The City of Weldon Spring anticipates issuing notice of award and notice to proceed in mid to late summer of 2020.

Please note that Missouri's Prevailing Wage Law establishes a minimum wage rate for public works projects in Missouri valued over \$75,000. If the project is over \$75,000, the wage rates applicable to this project have been predetermined as required by law and are set forth in this specification.

Effective January 1, 2009, and pursuant to RSMo 285.530 (1), No business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri. The successful bidder must submit a sworn affidavit and documentation affirming the business entity's enrollment and participation in the federal work authorization program and that all of its employees working for the contracted services are not illegal immigrants.

Upon signing the contract, the successful contractor and any subcontractor performing the work shall provide a ten-hour Occupational Safety and Health Administration (OSHA) construction safety program for their on-site employees.

The City of Weldon Spring hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

THE CITY OF WELDON SPRING INTENDS TO AWARD THE CONTRACT TO THE MOST RESPONSIVE, RESPONSIBLE BIDDER SUBMITTING THE LOWEST BID. THE OWNER RESERVES THE RIGHT TO REJECT ANY AND ALL BIDS, AND TO WAIVE ANY IRREGULARITIES IN THE BEST INTEREST OF THE OWNER.

INSTRUCTIONS TO BIDDERS

ARTICLE 1

DEFINITIONS

1.1 **Bidding Documents** include the Invitation to Bid, Instructions to Bidders, the Bid Form and the proposed Contract Documents including any Addenda issued prior to receipt of Bids. The **Contract Documents** proposed for the Work consists of the Owner-Contractor Agreement, State Wage Determination, Non-Collusion Affidavit, Performance and Payment Bond, the Specifications, the Drawings, the Construction Schedule, all Addenda, and all Modifications.

1.2 All definitions set forth in the General Conditions of Owner-Contractor Agreement or in other Contract Documents are applicable to the Bidding Documents.

1.3 **Addenda** are written or graphic instruments issued prior to the execution of the Owner-Contractor Agreement, which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

1.4 A **Bid** is a complete and properly signed proposal to do the Work, or a designated portion thereof, for the sums stipulated therein, submitted in accordance with the Bidding Documents.

1.5 The **Base Bid** is the sum stated in the bid for which the bidder offers to perform the Work described in the Bidding Documents as the base to which work may be added or from which work may be deleted for sums stated in alternate bids.

1.6 An **Alternate Bid** is an amount stated in the bid to be considered in addition to the Base Bid if the corresponding Change in the Work, as described in the Bidding Documents, is accepted.

1.7 A **Unit Price** is an amount stated in the bid as a price per unit of measurement for materials or services as described in the Bidding Documents or in the proposed Contract Documents.

1.8 A **Bidder** is a person or entity who submits a bid.

1.9 A **Sub-Bidder** is a person or entity who submits a bid to a bidder for materials or labor for a portion of the Work.

ARTICLE 2

BIDDER'S REPRESENTATIONS

2.1 Each bidder by making his bid represents and warrants that:

2.1.1 He has read and understands the Bidding Documents and his bid is made in accordance therewith.

2.1.2 He has visited and carefully examined the site of the Work, and has familiarized himself with and satisfied himself of the following:

1. the nature and location of the Work;
2. the character, quality and quantity of materials to be encountered;
3. the character and quantity of equipment and facilities needed prior to and during performance of the Work;
4. the local conditions under which the Work is to be performed, including the availability of necessary labor;
5. the requirements for maintaining existing facilities in continuous service, if necessary or required.

2.1.3 He has correlated his examination and observations with the requirements of the proposed Contract Documents.

2.1.4 His bid is based upon the materials, products, systems and equipment required by the Bidding Documents.

ARTICLE 3

BIDDING DOCUMENTS

3.1 COPIES

3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Invitation to Bid in the number and for the deposit sum, if any, stated therein.

3.1.2 Each bidder shall use a complete set of Bidding Documents in preparing his bid.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

3.2.1 Bidders shall promptly notify the Owner in writing of any ambiguity, inconsistency or error which they may discover upon examination of the Bidding Documents or of the site and local conditions.

3.2.2 Bidders may request clarification or interpretation of the Bidding Documents by making a written request which shall reach the Owner at least seven (7) days prior to the date for receipt of bids.

3.2.3 Any interpretation, correction or change of the Bidding Documents will be made by Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding on the Owner, and bidders shall not rely upon such interpretations, corrections and changes.

3.2.4 If the Owner determines that clarification of the terms and conditions of the Bidding Documents is necessary, an Addendum will be made available to all bidders setting forth such clarification.

3.3 SUBSTITUTIONS

3.3.1 The materials, products, systems and equipment described in the Bidding Documents establish a minimum standard of required function, dimension, appearance and quality which must be met by any proposed substitution.

3.3.2 No substitution of the materials, products, systems and equipment described in the Bidding Documents will be considered prior to receipt of bids unless written request for approval has been received by the Owner at least ten (10) days prior to the date for receipt of bids. Each such request shall include the name of the material, product, system or equipment for which substitution will be made and a complete description of the proposed substitute including drawings, costs, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, products, systems or equipment or other work that incorporation of the substitute would require shall be included in each such request. The Owner, in its sole discretion, may approve or disapprove the proposed substitute.

3.3.3 If the Owner approves any proposed substitution prior to receipt of bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

3.3.4 No substitutions will be considered after the Contract is awarded unless specifically provided in the Contract Documents.

3.4 ADDENDA

3.4.1 Addenda will be mailed or delivered to all who are known by the Owner to have received a complete set of Bidding Documents.

3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

3.4.3 Prior to submitting his bid, each bidder shall ascertain that he has received all Addenda issued, and he shall acknowledge receipt of all such Addenda in his bid.

ARTICLE 4**BIDDING PROCEDURE****4.1 FORM AND STYLE OF BIDS**

4.1.1 Attached to the Contract Documents is a separate, complete set of Bid Forms to be signed and submitted as the Bidder's formal bid. To be considered, a bid shall be properly completed using these Bid Forms.

4.1.2 All blanks on the Bid Form shall be filled in by typewriter or manually in ink.

4.1.3 Where so indicated by the make-up of the Bid Form, dollar amounts shall be expressed in both words and figures and in case of discrepancy between the two, the amount written in words shall govern.

4.1.4 Any interlineation, alteration or erasure must be initialed by the signer of the bid.

4.1.5 Where two or more bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of his bid security, state his refusal to accept award of less than the combination of bids if he so stipulates. The Bidder shall make no additional stipulations on the Bid Form nor qualify his bid in any other manner.

4.1.6 Each copy of the bid shall include the legal name of the Bidder and a statement that the Bidder is a sole proprietor, a partnership, a corporation, or some other legal entity. Each copy shall be signed by the person or persons legally authorized to bind the bidder to a contract. A bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

4.1.7 The Owner shall not be responsible in any way for any costs or expenses related to the preparation or submission of any bid.

4.2 BID SECURITY

4.2.1 Each bid shall be accompanied by a certified check or bank draft on a responsible solvent Missouri bank, or a satisfactory bid bond executed by the bidder and an acceptable Surety company, naming the Owner as Obligee, in the amount of not less than five percent (5%) of the Base bid plus the greatest of the Alternate bids ("Bid Security"). If the bidder fails to enter into a Contract with the Owner on the terms stated in his bid, or fails to furnish Performance and Payment Bonds as required by the Contract Documents, the amount of the Bid Security shall be forfeited to the Owner as liquidated damages, not as a penalty.

4.2.2 The Owner will have the right to retain the Bid Security of bidders to whom an award is being considered until either, (a) the Owner-Contractor Agreement has been executed and the Performance and Payment Bonds have been furnished, (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected.

4.3 SUBMISSION OF BIDS

4.3.1 Bidders must complete and submit with their bids the "Anti-Collusion Statement" included with the Bid Form and 5% Bid Security. Bidders shall also complete and submit the following:

1. a designation of the Work, item by item, including the related dollar amount and total dollar amount, to be performed by the bidder with his own forces;
2. the proprietary names and the suppliers of principal items or systems of materials and equipment proposed for the Work;
3. "Subcontractor Approval Form" for each and every proposed Subcontractor, or other persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.
4. Non-Collusion Affidavit
5. Certification Regarding Affirmative Action
6. Notice to Bidders Regarding State Immigration Law

7. Worker Eligibility Verification Affidavit

8. E-Verify Program

4.3.2 All copies of the bid, the Bid Security and any other documents required to be submitted with the bid shall be enclosed in a sealed envelope identified "SEALED BID ENCLOSED" on the face thereof. The envelope shall be addressed and delivered to the Owner and shall be identified with the project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

4.3.3 Bids shall be deposited at the designated location prior to the time and date for receipt of bids indicated in the Invitation to Bid or any extension thereof made by an Addendum. Bids received after the time and date for receipt of bids will be returned unopened.

4.3.4 The bidder shall assume full responsibility for timely delivery at the location designated for receipt of bids.

4.4 MODIFICATION OR WITHDRAWAL OF BID

4.4.1 A bid may not be modified, withdrawn or cancelled by the bidder within sixty (60) days following the time and date designated for the receipt of bids, and each bidder so agrees in submitting his bid.

4.4.2 Prior to the time and date designated for receipt of bids, any bid submitted may be modified or withdrawn by notice to the party receiving bids at the place designated for receipt of bids. Such notice shall be in writing over the signature of the bidder.

4.4.3 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these Instructions to Bidders.

4.4.4 The amount of the Bid Security shall be in an amount sufficient for the bid as modified or resubmitted.

ARTICLE 5

CONSIDERATION OF BIDS

5.1 OPENING OF BIDS

5.1.1 Unless stated otherwise in the Invitation to Bid, the properly identified bids received on time will be opened publicly and will be read aloud.

5.2 REJECTION OF BIDS

5.2.1 The Owner shall have the right to reject any or all bids, to reject a bid not accompanied by the Bid Security or by other data required by the Bidding Documents, to reject a bid which is in any way incomplete or irregular, and to rebid the Work at a later date if all bids are rejected.

5.3 ACCEPTANCE OF BID (AWARD)

5.3.1 The Owner may make any investigation of a bidder as it deems necessary to determine that the bidder is responsible and properly qualified to perform the Work. Bidders shall furnish information regarding their qualifications upon the reasonable request of the Owner. The Owner reserves the right to reject any bid if the evidence submitted by, or other investigation of, the bidder fails to satisfy the Owner that, in the Owner's opinion, the bidder has the proper qualifications to perform the Work in accordance with the Contract.

5.3.2 It is the intent of the Owner to award the Contract to the lowest responsive, responsible bidder provided the bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available.

5.3.3 The Owner shall have the right to accept alternates and to determine the low bidder on the basis of the sum of the base bid and the alternates accepted. Alternates shall be accepted in the order established in the Bid Form Proposal.

ARTICLE 6**POST BID INFORMATION****6.1 SUBMITTALS**

6.1.1 The bidder will be required to establish, to the satisfaction of the Owner, the reliability and responsibility of the persons or entities proposed to furnish and perform the Work.

6.1.2 Prior to the award of the Contract, the Owner will notify the bidder in writing if the Owner, after due investigation, objects to any such person or entity proposed by the bidder pursuant to Subparagraph 4.3.1 above. If the Owner objects to any such proposed person or entity, the bidder may, at his option, (1) withdraw his bid, or (2) submit an acceptable substitute person or entity with no adjustment in his bid price.

6.1.3 Persons and entities proposed by the bidder and to whom the Owner has made no objection under the provisions of Subparagraph 6.1.2 must be used on the Work for which they were proposed and shall not be changed except with the prior written consent of the Owner.

ARTICLE 7**AWARD OF CONTRACT**

7.1 Following receipt, to the satisfaction of the Owner, of all information required under Paragraph 6.1 above, the Owner shall mail to the successful bidder the Notice of Award of the Contract.

7.2 Within five (5) working days from the date of receipt of the Notice of Award, the successful bidder shall execute and deliver to the Owner the Contract Documents, and shall furnish the Bonds required by Paragraph 8.1 below and the Certificates of Insurance required by Subparagraph 10.1.3 of the General Conditions. In the event the successful bidder fails to execute and deliver the Contract Documents, the Bonds and the Certificates of Insurance as aforesaid, the Owner may, at its option, consider the bidder in default and award the Contract to another bidder, in which case the Bid Security of the defaulting bidder shall be forfeited to the Owner as liquidated damages, and not as a penalty.

7.3 The Contract, when executed, shall be deemed to include the entire agreement between the parties thereto, and the Bidder shall not claim any modification thereof resulting from any claimed representation or promise made at any time prior thereto by any officer, agency or employee of the Owner or by any other person.

ARTICLE 8**PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND****8.1 BOND REQUIREMENTS**

8.1.1 The successful bidder shall furnish a Performance Bond in an amount equal to one hundred percent (100%) of the Contract Sum as security for the faithful performance of the Contract, and also a Labor and Material Payment Bond in an amount not less than one hundred percent (100%) of the Contract Sum as security for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this Contract. The Surety shall be a company licensed to do business in the State of Missouri and shall be acceptable to the Owner. The Performance Bond and the Labor and Material Payment Bond may be in one or in separate instruments, however if combined into one the amount shall be for two hundred percent (200%) of the Contract Sum.

8.2 TIME OF DELIVERY AND FORM OF BONDS

8.2.1 The bidder shall deliver the required bonds to the Owner not later than the date of execution of the Owner-Contractor Agreement, or if the Work is to be commenced prior thereto in response to a Letter of Intent, the bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished.

8.2.2 The bidder shall require the attorney-in-fact who executes the required bonds on behalf of the Surety to affix thereto a certified and current copy of his power of attorney.

ARTICLE 9

FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

9.1 FORM TO BE USED

9.1.1 Unless otherwise required in the Bidding Documents, the Owner-Contractor Agreement for the Work shall be in the form attached hereto.

(The remainder of this page is intentionally left blank.)

ARTICLE 10**BID FORM PROPOSAL**PROJECT NAME Trail ImprovementsBID TIME 2:00 p.m.PROJECT LOCATION Weldon Spring City Park & Wolfrum Rd, MissouriBID DATE May 21, 2020

BIDDER NAME _____

TO: City of Weldon Spring ("Owner")

In response to the Invitation for Bids for Project No. M19-7755, and in accordance with the Instructions to Bidders and other Bidding Documents, the undersigned Bidder declares that he has had an opportunity to examine the site of the Work and has carefully examined the Contract Documents therefore, including the Addenda identified below, and on the basis thereof, and being fully familiar with the local conditions affecting the Work, and upon written notice of award of contract, acknowledges and agrees to provide all labor, material, equipment, tools, management and supervision, safety and technical services, insurance, bonds and incidentals necessary or required for the faithful performance of the Contract Work in accordance with the above-referenced documents in a safe, timely and workmanlike manner for the following Base Bid Price:

BASE BID (excluding alternates): _____
(Amount in Words)

Dollars (\$ _____)

The Base Bid amount is more fully itemized as follows:

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE
1	Mobilization/Demobilization, Insurance and Bonding, etc.	L.S.	1		
2	Traffic Control	L.S.	1		
3	Removal of Improvements/Adjust to Grade	L.S.	1		
4	Sawcut	L.F.	409		
5	Clearing and Grubbing	Acres	1.75		
6	Clear/Trim/Remove Evergreens (Wolfrum Rd.)	L.S.	1		
7	Removal of Existing Trees (City Park)	E.A.	11		
8	Removal of Existing Saplings (City Park)	E.A.	7		
9	Unclassified Excavation (Cut)	C.Y.	1,060		
10	4" Thick Type 5 Base	S.Y.	2,776		
11	8" Thick Type 5 Base	S.Y.	377		
12	2.5" Thick Base Course Asphalt	S.Y.	3,153		
13	1.5" Thick BP-1 Asphalt	S.Y.	3,153		
14	Concrete Curb and Gutter	L.F.	187		
15	Concrete Ramp	S.Y.	71		
16	6" Concrete Vertical Curb	L.F.	32		
17	Concrete Approach	S.Y.	74		

18	Detectable Warning Devices	E.A.	5		
19	Retaining Wall	S.F.	423		
20	Black Aluminum Fence	L.F.	162		
21	12" RCP Storm Pipe	L.F.	63		
22	12" Storm FES	E.A.	3		
23	4" PVC SCH 40 Storm Pipe	L.F.	44		
24	PVC Dome Inlet Top Adjustment	E.A.	2		
25	Rip Rap	C.Y.	7		
26	Silt Fence	L.F.	1,866		
27	Seed and Mulch	Acres	1.10		
28	Landscape Restoration (Wolfrum Rd.)	L.S.	1		
29	Light Pole (Relocate Existing)	E.A.	1		
30	Contractor Furnished Survey Stakeout	L.S.	1		
31	Irrigation Restoration (Wolfrum Rd.)	L.S.	1		
32	Drain and Grade Existing Bog	L.S.	1		
33	Miscellaneous Striping	L.S.	1		
34	Permanent Signage	E.A.	8		
Total Base Bid					

Alternate No. 1: Typical Trail Width Revision

If Alternate No. 1 is accepted, the typical trail width will be revised to 8 feet wide, unless otherwise noted in plans.

This Alternate shall provide all necessary material, labor, tools and profit to replace line items 5, 6 and 7 in the base bid. (If accepted, Alternate No. 1 will replace all asphalt paving included in this project.)

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE
1 (Replace 10)	4" Thick Type 5 Base	S.Y.	2,235		
2 (Replace 11)	8" Thick Type 5 Base	S.Y.	312		
3 (Replace 12)	2.5" Thick Base Course Asphalt	S.Y.	2,547		
4 (Replace 13)	1.5" Thick BP-1 Asphalt	S.Y.	2,547		
Alternate No. 1 Bid					

Alternate No. 2: White Vinyl Fence Removal

Alternate No. 2 provides for the complete removal of the white vinyl fence, posts, gates, concrete footings, ect. along the entirety of the west side of Nancy Ln. (approx. 910' Contractor to field verify prior to bid)

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE
1	Removal of Existing White Vinly Fence	1	L.S.		
Alternate No. 2 Bid					

NOTE: This project will be awarded on the base bid PLUS any accepted alternates.

By submitting this Bid, the Bidder agrees to waive any claim it has or may have against the Owner or Engineer, and their respective employees, arising out of or in connection with the administration, evaluation or recommendation of any bid(s).

Addenda

The undersigned Bidder acknowledges the following Addenda, if any:

Addendum No.: _____ dated _____ pages _____

Addendum No.: _____ dated _____ pages _____

Acknowledgements

Bidder understands that Owner reserves the right to reject any and all bids and to waive any informality in the bidding.

The Bidder agrees that this Bid shall be valid and may not be withdrawn for a period of sixty (60) days after the scheduled closing time for receiving bids.

Within five (5) working days after receipt of written notice of award of contract, Bidder will execute and deliver to the Owner the formal Owner-Contractor Agreement included in the Bid Package, and deliver to the Owner the surety bond or bonds as required by the Contract Documents.

The Bid Security attached hereto, in the sum of _____ Dollars (\$_____) shall become the property of the Owner in the event that the Owner-Contractor Agreement and the Bond(s) are not executed and delivered to the Owner within the time set forth above, as liquidated damages (and not as a penalty) for the delay and additional expense to the Owner caused thereby.

(Signature)

(Print Name)

(Company Name)

(Address)

(Telephone Number)

(Seal - If bid by Corporation)

SUBCONTRACTOR APPROVAL FORM

This report must accompany and be part of the sealed Bid Proposal.

24. Name of Bidder: _____

25. Address Bidder: _____

City	State	Zip	Phone
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26. The above-named Bidder intends to subcontract for materials, services, supplies, specialty contractors, etc., in the following fashion:

<u>Names and Addresses of Subcontractor Which the Contractor Anticipates Utilizing</u>	<u>Nature of Participation</u>	<u>\$ Value of Subcontractor</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

A. Total of Above _____

B. Total Bid Amount _____

Subcontractor Utilization as a % of Total Bid Amount: $(A/B \times 100)$ _____

Name-Authorized Officer of Bidder

Signature-Office Bidder

Date

NON-COLLUSION AFFIDAVIT

STATE OF MISSOURI

COUNTY OF SAINT CHARLES

_____, being first duly sworn, deposes and says that he is _____ *(sole owner, partner, president, secretary, etc.) of _____, the party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization or corporation; that such bid is genuine and not collusive or sham; that said bidder had not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or any one else to put in a sham bid, or that anyone shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with any one to fix the bid price of said bidder or of any other bidder, or to fix any overhead, profit or cost element of such bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract or any one interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder had not, directly or indirectly, submitted his bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his general business.

SIGNED:

Title

Subscribed and sworn to before me this _____ day of _____, 20 _____.

Notary Public

Notary Seal

SUBCONTRACTOR CERTIFICATION REGARDING AFFIRMATIVE ACTION

Project: Weldon Spring Trail Improvements

Job No. M19-7755

County: Saint Charles

Certification Regarding Affirmative Action and Equal Opportunity: The bidder (prospective prime contractor) or proposed subcontractor certifies:

1. Affirmative Action Program: That it has developed and has on file at each of its establishments affirmative action programs pursuant to 41 CFR Part 60-2.
2. Equal Opportunity Clause: That it has participated in a previous contract or subcontract subject to the equal opportunity clause set forth in 41 CFR part 69-1.4 and executive order no. 11246.
3. Compliance Reports: That it has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs and his designate, or the Equal Employment Opportunity Commission, all reports due under the applicable filing requirements contained in 41 CFR Part 60-1.

If the test of the certification above is incorrect, the bidder or subcontractor making the certification shall correct it below:

NOTE: This certification applies to and must be executed by each bidder (prospective prime contractor) or proposed subcontractor if its proposed contract or subcontract on this project will equal or exceed \$10,000 or that contractor or subcontractor has contracts or subcontracts on federally assisted project in any 12-month period which have or can reasonably be expected to have, an aggregate total value exceeding \$10,000 41 CFR Part 60-1.5(a)(1). It is a duty and contract obligation of the prime contractor to insure that each of its subcontractors, which meet this criterion, executes and submits to the commission this certification also.

Company

By: _____

Title: _____

Date: _____

NOTICE TO BIDDERS REGARDING STATE IMMIGRATION LAW

Effective January 1, 2009 and pursuant to RSMo 285.530 (1), No business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

<http://oa.mo.gov/purch/vendorinfo/employ.pdf>
<http://www.moga.mo.gov/statutes/C200-299/2850000530.HTM>

Pursuant to 285.530 RSMo, the bidder must affirm its enrollment and participation in a federal work authorization program with respect to the employees proposed to work in connection with the services requested herein by:

- submitting a completed, notarized copy of WORKER ELIGIBILITY VERIFICATION AFFIDAVIT (attached),
- submitting a completed, notarized copy of the SIGNATURE AND IDENTITY OF BIDDER (attached) and,
- providing documentation affirming the bidder's enrollment and participation in a federal work authorization program (see below) with respect to the employees proposed to work in connection with the services requested herein.

E-Verify is an example of a federal work authorization program. Acceptable enrollment and participation documentation consists of completed copy of the E-Verify Memorandum of Understanding (MOU). For vendors that are not already enrolled and participating in a federal work authorization program, E-Verify is available at http://www.dhs.gov/xprevprot/programs/gc_1185221678150.shtm.

The contractor understands and agrees that by signing the RFB document or contract they certify that:

- The contractor shall only utilize personnel authorized to work in the United States in accordance with applicable federal and state laws. This includes but is not limited to the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) and INA Section 274A.
- If the contractor is found to be in violation of this requirement or the applicable state, federal and local laws and regulations, and if the State of Missouri has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States, the state shall have the right to cancel the contract immediately without penalty or recourse and suspend or debar the contractor from doing business with the state.
- The contractor agrees to fully cooperate with any audit or investigation from federal, state or local law enforcement agencies.
- The contractor shall maintain enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services included herein.

SIGNATURE AND IDENTITY OF BIDDER

The undersigned states that the correct LEGAL NAME and ADDRESS of (1) the individual Bidder, (2) each partner or joint venture (whether individuals or corporations, and whether doing business under a fictitious name), or (3) the corporation (with the state in which it is incorporated) are shown below; that (if not signing with the intention of binding himself to become the responsible and sole contractor) he is the agent of, and duly authorized in writing to sign for the Bidder or Bidders; and that he is signing and executing this (as indicated in the proper spaces below) as the proposal of a

() sole individual () partnership () joint venture
() corporation, incorporated under laws of state of _____

Dated _____

Name of individual, all partners, or joint ventures:	Address of each:
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

doing business under the name of:	Address of principal place of business in Missouri
_____	_____
(If using a fictitious name, show this name above in addition to legal names)	
_____	_____
(If a corporation, show its name above)	

ATTEST: (SEAL)

Secretary Title

NOTE: If the Bidder is doing business under a FICTITIOUS NAME, the Proposal shall be executed in the legal name of the individual, partners, joint ventures, or corporation, with the legal address shown, and REGISTRATION OF FICTITIOUS NAME filed with the Secretary of State, as required by Sections 417.200 to 417.230, RS Mo. If the Bidder is a CORPORATION NOT ORGANIZED UNDER THE LAWS OF MISSOURI, it shall procure a CERTIFICATE OF AUTHORITY TO DO BUSINESS IN MISSOURI, as required by Section 351.570 and following, RS Mo. A CERTIFIED COPY of such Registration of Fictitious Name or Certificate of Authority to do Business in Missouri shall be filed with the Missouri Highways and Transportation Commission, as required by the Standard specifications, Sec 102.6.6 and 102.6.7.

WORKER ELIGIBILITY VERIFICATION AFFIDAVIT

(for joint ventures, a separate affidavit is required for each business entity)

STATE OF _____)
) ss
COUNTY OF _____)

On this _____ day of _____, 20_____, before me appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be a person whose name is subscribed to this affidavit, who being by me duly sworn, deposed as follows:

My name is _____, and I am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 285.530, RSMo, to enter into any contract agreement with the state to perform any job, task, employment, labor, personal services, or any other activity for which compensation is provided, expected, or due, including but not limited to all activities conducted by business entities:

I am the _____ of _____, and I am duly authorized, directed, and/or empowered to act officially and properly on behalf of this business entity.

I hereby affirm and warrant that the aforementioned business entity is enrolled in a federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, and the aforementioned business entity shall participate in said program with respect to all employees working in connection to work under the within contract agreement. I have attached documentation to this affidavit to evidence enrollment/participation by the aforementioned business entity in a federal work authorization program, as required by Section 285.530, RSMo.

In addition, I hereby affirm and warrant that the aforementioned business entity does not and shall not knowingly employ, in connection to work under the within contract agreement, any alien who does not have the legal right or authorization under federal law to work in the United States, as defined in 8 U.S.C. § 1324a(h)(3).

I am aware and recognize that, unless certain contract and affidavit conditions are satisfied pursuant to Section 285.530, RSMo, the aforementioned business entity may be held liable under Sections 285.525 though 285.550, RSMo, for subcontractors that knowingly employ or continue to employ any unauthorized alien to work within the state of Missouri.

I acknowledge that I am signing this affidavit as a free act and deed of the aforementioned business entity and not under duress.

Affiant Signature

Subscribed and sworn to before me this _____ day of _____, 20_____.

Notary Public

My commission expires: _____



Company ID Number: _____

**THE E-VERIFY PROGRAM FOR EMPLOYMENT VERIFICATION
MEMORANDUM OF UNDERSTANDING**

ARTICLE I

PURPOSE AND AUTHORITY

This Memorandum of Understanding (MOU) sets forth the points of agreement between the Department of Homeland Security (DHS) and _____ (Employer) regarding the Employer's participation in the Employment Eligibility Verification Program (E-Verify). This MOU explains certain features of the E-Verify program and enumerates specific responsibilities of DHS, the Social Security Administration (SSA), and the Employer. E-Verify is a program that electronically confirms an employee's eligibility to work in the United States after completion of the Employment Eligibility Verification Form (Form I-9). For covered government contractors, E-Verify is used to verify the employment eligibility of all newly hired employees and all existing employees assigned to Federal contracts.

Authority for the E-Verify program is found in Title IV, Subtitle A, of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), Pub. L. 104-208, 110 Stat. 3009, as amended (8 U.S.C. § 1324a note). Authority for use of the E-Verify program by Federal contractors and subcontractors covered by the terms of Subpart 22.18, "Employment Eligibility Verification", of the Federal Acquisition Regulation (FAR) (hereinafter referred to in this MOU as a "Federal contractor") to verify the employment eligibility of certain employees working on Federal contracts is also found in Subpart 22.18 and in Executive Order 12989, as amended.

ARTICLE II

FUNCTIONS TO BE PERFORMED

A. RESPONSIBILITIES OF SSA

1. SSA agrees to provide the Employer with available information that allows the Employer to confirm the accuracy of Social Security Numbers provided by all employees verified under this MOU and the employment authorization of U.S. citizens.
2. SSA agrees to provide to the Employer appropriate assistance with operational problems that may arise during the Employer's participation in the E-Verify program. SSA agrees to provide the Employer with names, titles, addresses, and telephone numbers of SSA representatives to be contacted during the E-Verify process.
3. SSA agrees to safeguard the information provided by the Employer through the E-Verify program procedures, and to limit access to such information, as is appropriate by law, to individuals responsible for the verification of Social Security Numbers and for evaluation of the E-Verify program or such other persons or entities who may be authorized by SSA as governed by the Privacy Act (5 U.S.C. § 552a), the Social Security Act (42 U.S.C. 1306(a)), and SSA regulations (20 CFR Part 401).



Company ID Number: _____

4. SSA agrees to provide a means of automated verification that is designed (in conjunction with DHS's automated system if necessary) to provide confirmation or tentative nonconfirmation of U.S. citizens' employment eligibility within 3 Federal Government work days of the initial inquiry.

5. SSA agrees to provide a means of secondary verification (including updating SSA records as may be necessary) for employees who contest SSA tentative nonconfirmations that is designed to provide final confirmation or nonconfirmation of U.S. citizens' employment eligibility and accuracy of SSA records for both citizens and aliens within 10 Federal Government work days of the date of referral to SSA, unless SSA determines that more than 10 days may be necessary. In such cases, SSA will provide additional verification instructions.

B. RESPONSIBILITIES OF DHS

1. After SSA verifies the accuracy of SSA records for aliens through E-Verify, DHS agrees to provide the Employer access to selected data from DHS's database to enable the Employer to conduct, to the extent authorized by this MOU:

- Automated verification checks on alien employees by electronic means, and
- Photo verification checks (when available) on employees.

2. DHS agrees to provide to the Employer appropriate assistance with operational problems that may arise during the Employer's participation in the E-Verify program. DHS agrees to provide the Employer names, titles, addresses, and telephone numbers of DHS representatives to be contacted during the E-Verify process.

3. DHS agrees to provide to the Employer a manual (the E-Verify User Manual) containing instructions on E-Verify policies, procedures and requirements for both SSA and DHS, including restrictions on the use of E-Verify. DHS agrees to provide training materials on E-Verify.

4. DHS agrees to provide to the Employer a notice, which indicates the Employer's participation in the E-Verify program. DHS also agrees to provide to the Employer anti-discrimination notices issued by the Office of Special Counsel for Immigration-Related Unfair Employment Practices (OSC), Civil Rights Division, U.S. Department of Justice.

5. DHS agrees to issue the Employer a user identification number and password that permits the Employer to verify information provided by alien employees with DHS's database.

6. DHS agrees to safeguard the information provided to DHS by the Employer, and to limit access to such information to individuals responsible for the verification of alien employment eligibility and for evaluation of the E-Verify program, or to such other persons or entities as may be authorized by applicable law. Information will be used only to verify the accuracy of Social Security Numbers and employment eligibility, to enforce the Immigration and Nationality Act (INA) and Federal criminal laws, and to administer Federal contracting requirements.

7. DHS agrees to provide a means of automated verification that is designed (in conjunction with SSA verification procedures) to provide confirmation or tentative nonconfirmation of employees' employment eligibility within 3 Federal Government work days of the initial inquiry.



Company ID Number: _____

8. DHS agrees to provide a means of secondary verification (including updating DHS records as may be necessary) for employees who contest DHS tentative nonconfirmations and photo non-match tentative nonconfirmations that is designed to provide final confirmation or nonconfirmation of the employees' employment eligibility within 10 Federal Government work days of the date of referral to DHS, unless DHS determines that more than 10 days may be necessary. In such cases, DHS will provide additional verification instructions.

C. RESPONSIBILITIES OF THE EMPLOYER

1. The Employer agrees to display the notices supplied by DHS in a prominent place that is clearly visible to prospective employees and all employees who are to be verified through the system.

2. The Employer agrees to provide to the SSA and DHS the names, titles, addresses, and telephone numbers of the Employer representatives to be contacted regarding E-Verify.

3. The Employer agrees to become familiar with and comply with the most recent version of the E-Verify User Manual.

4. The Employer agrees that any Employer Representative who will perform employment verification queries will complete the E-Verify Tutorial before that individual initiates any queries.

A. The Employer agrees that all Employer representatives will take the refresher tutorials initiated by the E-Verify program as a condition of continued use of E-Verify, including any tutorials for Federal contractors if the Employer is a Federal contractor.

B. Failure to complete a refresher tutorial will prevent the Employer from continued use of the program.

5. The Employer agrees to comply with current Form I-9 procedures, with two exceptions:

- If an employee presents a "List B" identity document, the Employer agrees to only accept "List B" documents that contain a photo. (List B documents identified in 8 C.F.R. § 274a.2(b)(1)(B)) can be presented during the Form I-9 process to establish identity.) If an employee objects to the photo requirement for religious reasons, the Employer should contact E-Verify at 888-464-4218.
- If an employee presents a DHS Form I-551 (Permanent Resident Card) or Form I-766 (Employment Authorization Document) to complete the Form I-9, the Employer agrees to make a photocopy of the document and to retain the photocopy with the employee's Form I-9. The employer will use the photocopy to verify the photo and to assist DHS with its review of photo non-matches that are contested by employees. Note that employees retain the right to present any List A, or List B and List C, documentation to complete the Form I-9. DHS may in the future designate other documents that activate the photo screening tool.

6. The Employer understands that participation in E-Verify does not exempt the Employer from the responsibility to complete, retain, and make available for inspection Forms I-9 that relate to its employees, or from other requirements of applicable regulations or laws, including



Company ID Number: _____

the obligation to comply with the antidiscrimination requirements of section 274B of the INA with respect to Form I-9 procedures, except for the following modified requirements applicable by reason of the Employer's participation in E-Verify: (1) identity documents must have photos, as described in paragraph 5 above; (2) a rebuttable presumption is established that the Employer has not violated section 274A(a)(1)(A) of the Immigration and Nationality Act (INA) with respect to the hiring of any individual if it obtains confirmation of the identity and employment eligibility of the individual in compliance with the terms and conditions of E-Verify; (3) the Employer must notify DHS if it continues to employ any employee after receiving a final nonconfirmation, and is subject to a civil money penalty between \$550 and \$1,100 for each failure to notify DHS of continued employment following a final nonconfirmation; (4) the Employer is subject to a rebuttable presumption that it has knowingly employed an unauthorized alien in violation of section 274A(a)(1)(A) if the Employer continues to employ an employee after receiving a final nonconfirmation; and (5) no person or entity participating in E-Verify is civilly or criminally liable under any law for any action taken in good faith based on information provided through the confirmation system. DHS reserves the right to conduct Form I-9 compliance inspections during the course of E-Verify, as well as to conduct any other enforcement activity authorized by law.

7. The Employer agrees to initiate E-Verify verification procedures for new employees within 3 Employer business days after each employee has been hired (but after both sections 1 and 2 of the Form I-9 have been completed), and to complete as many (but only as many) steps of the E-Verify process as are necessary according to the E-Verify User Manual. The Employer is prohibited from initiating verification procedures before the employee has been hired and the Form I-9 completed. If the automated system to be queried is temporarily unavailable, the 3-day time period is extended until it is again operational in order to accommodate the Employer's attempting, in good faith, to make inquiries during the period of unavailability. In all cases, the Employer must use the SSA verification procedures first, and use DHS verification procedures and photo screening tool only after the SSA verification response has been given. Employers may initiate verification by notating the Form I-9 in circumstances where the employee has applied for a Social Security Number (SSN) from the SSA and is waiting to receive the SSN, provided that the Employer performs an E-Verify employment verification query using the employee's SSN as soon as the SSN becomes available.

8. The Employer agrees not to use E-Verify procedures for pre-employment screening of job applicants, in support of any unlawful employment practice, or for any other use not authorized by this MOU. Employers must use E-Verify for all new employees, unless an Employer is a Federal contractor that qualifies for the exceptions described in Article II.D.1.c. Except as provided in Article II.D, the Employer will not verify selectively and will not verify employees hired before the effective date of this MOU. The Employer understands that if the Employer uses E-Verify procedures for any purpose other than as authorized by this MOU, the Employer may be subject to appropriate legal action and termination of its access to SSA and DHS information pursuant to this MOU.

9. The Employer agrees to follow appropriate procedures (see Article III. below) regarding tentative nonconfirmations, including notifying employees of the finding, providing written referral instructions to employees, allowing employees to contest the finding, and not taking adverse action against employees if they choose to contest the finding. Further, when employees contest a tentative nonconfirmation based upon a photo non-match, the Employer is required to take affirmative steps (see Article III.B. below) to contact DHS with information necessary to resolve the challenge.



Company ID Number: _____

10. The Employer agrees not to take any adverse action against an employee based upon the employee's perceived employment eligibility status while SSA or DHS is processing the verification request unless the Employer obtains knowledge (as defined in 8 C.F.R. § 274a.1(l)) that the employee is not work authorized. The Employer understands that an initial inability of the SSA or DHS automated verification system to verify work authorization, a tentative nonconfirmation, a case in continuance (indicating the need for additional time for the government to resolve a case), or the finding of a photo non-match, does not establish, and should not be interpreted as evidence, that the employee is not work authorized. In any of the cases listed above, the employee must be provided a full and fair opportunity to contest the finding, and if he or she does so, the employee may not be terminated or suffer any adverse employment consequences based upon the employee's perceived employment eligibility status (including denying, reducing, or extending work hours, delaying or preventing training, requiring an employee to work in poorer conditions, refusing to assign the employee to a Federal contract or other assignment, or otherwise subjecting an employee to any assumption that he or she is unauthorized to work) until and unless secondary verification by SSA or DHS has been completed and a final nonconfirmation has been issued. If the employee does not choose to contest a tentative nonconfirmation or a photo non-match or if a secondary verification is completed and a final nonconfirmation is issued, then the Employer can find the employee is not work authorized and terminate the employee's employment. Employers or employees with questions about a final nonconfirmation may call E-Verify at 1-888-464-4218 or OSC at 1-800-255-8155 or 1-800-237-2515 (TDD).

11. The Employer agrees to comply with Title VII of the Civil Rights Act of 1964 and section 274B of the INA by not discriminating unlawfully against any individual in hiring, firing, or recruitment or referral practices because of his or her national origin or, in the case of a protected individual as defined in section 274B(a)(3) of the INA, because of his or her citizenship status. The Employer understands that such illegal practices can include selective verification or use of E-Verify except as provided in part D below, or discharging or refusing to hire employees because they appear or sound "foreign" or have received tentative nonconfirmations. The Employer further understands that any violation of the unfair immigration-related employment practices provisions in section 274B of the INA could subject the Employer to civil penalties, back pay awards, and other sanctions, and violations of Title VII could subject the Employer to back pay awards, compensatory and punitive damages. Violations of either section 274B of the INA or Title VII may also lead to the termination of its participation in E-Verify. If the Employer has any questions relating to the anti-discrimination provision, it should contact OSC at 1-800-255-8155 or 1-800-237-2515 (TDD).

12. The Employer agrees to record the case verification number on the employee's Form I-9 or to print the screen containing the case verification number and attach it to the employee's Form I-9.

13. The Employer agrees that it will use the information it receives from SSA or DHS pursuant to E-Verify and this MOU only to confirm the employment eligibility of employees as authorized by this MOU. The Employer agrees that it will safeguard this information, and means of access to it (such as PINS and passwords) to ensure that it is not used for any other purpose and as necessary to protect its confidentiality, including ensuring that it is not disseminated to any person other than employees of the Employer who are authorized to perform the Employer's responsibilities under this MOU, except for such dissemination as may be



Company ID Number: _____

authorized in advance by SSA or DHS for legitimate purposes.

14. The Employer acknowledges that the information which it receives from SSA is governed by the Privacy Act (5 U.S.C. § 552a(i)(1) and (3)) and the Social Security Act (42 U.S.C. 1306(a)), and that any person who obtains this information under false pretenses or uses it for any purpose other than as provided for in this MOU may be subject to criminal penalties.

15. The Employer agrees to cooperate with DHS and SSA in their compliance monitoring and evaluation of E-Verify, including by permitting DHS and SSA, upon reasonable notice, to review Forms I-9 and other employment records and to interview it and its employees regarding the Employer's use of E-Verify, and to respond in a timely and accurate manner to DHS requests for information relating to their participation in E-Verify.

D. RESPONSIBILITIES OF FEDERAL CONTRACTORS

1. The Employer understands that if it is a Federal contractor subject to the employment verification terms in Subpart 22.18 of the FAR it must verify the employment eligibility of any "employee assigned to the contract" (as defined in FAR 22.1801) in addition to verifying the employment eligibility of all other employees required to be verified under the FAR. Once an employee has been verified through E-Verify by the Employer, the Employer may not reverify the employee through E-Verify.

a. Federal contractors not enrolled at the time of contract award: An Employer that is not enrolled in E-Verify as a Federal contractor at the time of a contract award must enroll as a Federal contractor in the E-Verify program within 30 calendar days of contract award and, within 90 days of enrollment, begin to use E-Verify to initiate verification of employment eligibility of new hires of the Employer who are working in the United States, whether or not assigned to the contract. Once the Employer begins verifying new hires, such verification of new hires must be initiated within 3 business days after the date of hire. Once enrolled in E-Verify as a Federal contractor, the Employer must initiate verification of employees assigned to the contract within 90 calendar days after the date of enrollment or within 30 days of an employee's assignment to the contract, whichever date is later.

b. Federal contractors already enrolled at the time of a contract award: Employers enrolled in E-Verify as a Federal contractor for 90 days or more at the time of a contract award must use E-Verify to initiate verification of employment eligibility for new hires of the Employer who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire. If the Employer is enrolled in E-Verify as a Federal contractor for 90 calendar days or less at the time of contract award, the Employer must, within 90 days of enrollment, begin to use E-Verify to initiate verification of new hires of the contractor who are working in the United States, whether or not assigned to the contract. Such verification of new hires must be initiated within 3 business days after the date of hire. An Employer enrolled as a Federal contractor in E-Verify must initiate verification of each employee assigned to the contract within 90 calendar days after date of contract award or within 30 days after assignment to the contract, whichever is later.

c. Institutions of higher education, State, local and tribal governments and sureties: Federal contractors that are institutions of higher education (as defined at 20 U.S.C. 1001(a)), State or local governments, governments of Federally recognized Indian tribes, or sureties



Company ID Number: _____

performing under a takeover agreement entered into with a Federal agency pursuant to a performance bond may choose to only verify new and existing employees assigned to the Federal contract. Such Federal contractors may, however, elect to verify all new hires, and/or all existing employees hired after November 6, 1986. The provisions of Article II.D, paragraphs 1.a and 1.b of this MOU providing timeframes for initiating employment verification of employees assigned to a contract apply to such institutions of higher education, State, local and tribal governments, and sureties.

d. Verification of all employees: Upon enrollment, Employers who are Federal contractors may elect to verify employment eligibility of all existing employees working in the United States who were hired after November 6, 1986, instead of verifying only those employees assigned to a covered Federal contract. After enrollment, Employers must elect to do so only in the manner designated by DHS and initiate E-Verify verification of all existing employees within 180 days after the election.

e. Form I-9 procedures for Federal contractors: The Employer may use a previously completed Form I-9 as the basis for initiating E-Verify verification of an employee assigned to a contract as long as that Form I-9 is complete (including the SSN), complies with Article II.C.5, the employee's work authorization has not expired, and the Employer has reviewed the information reflected in the Form I-9 either in person or in communications with the employee to ensure that the employee's stated basis in section 1 of the Form I-9 for work authorization has not changed (including, but not limited to, a lawful permanent resident alien having become a naturalized U.S. citizen). If the Employer is unable to determine that the Form I-9 complies with Article II.C.5, if the employee's basis for work authorization as attested in section 1 has expired or changed, or if the Form I-9 contains no SSN or is otherwise incomplete, the Employer shall complete a new I-9 consistent with Article II.C.5, or update the previous I-9 to provide the necessary information. If section 1 of the Form I-9 is otherwise valid and up-to-date and the form otherwise complies with Article II.C.5, but reflects documentation (such as a U.S. passport or Form I-551) that expired subsequent to completion of the Form I-9, the Employer shall not require the production of additional documentation, or use the photo screening tool described in Article II.C.5, subject to any additional or superseding instructions that may be provided on this subject in the E-Verify User Manual. Nothing in this section shall be construed to require a second verification using E-Verify of any assigned employee who has previously been verified as a newly hired employee under this MOU, or to authorize verification of any existing employee by any Employer that is not a Federal contractor.

2. The Employer understands that if it is a Federal contractor, its compliance with this MOU is a performance requirement under the terms of the Federal contract or subcontract, and the Employer consents to the release of information relating to compliance with its verification responsibilities under this MOU to contracting officers or other officials authorized to review the Employer's compliance with Federal contracting requirements.

ARTICLE III

REFERRAL OF INDIVIDUALS TO SSA AND DHS

A. REFERRAL TO SSA



Company ID Number: _____

1. If the Employer receives a tentative nonconfirmation issued by SSA, the Employer must print the tentative nonconfirmation notice as directed by the automated system and provide it to the employee so that the employee may determine whether he or she will contest the tentative nonconfirmation.
2. The Employer will refer employees to SSA field offices only as directed by the automated system based on a tentative nonconfirmation, and only after the Employer records the case verification number, reviews the input to detect any transaction errors, and determines that the employee contests the tentative nonconfirmation. The Employer will transmit the Social Security Number to SSA for verification again if this review indicates a need to do so. The Employer will determine whether the employee contests the tentative nonconfirmation as soon as possible after the Employer receives it.
3. If the employee contests an SSA tentative nonconfirmation, the Employer will provide the employee with a system-generated referral letter and instruct the employee to visit an SSA office within 8 Federal Government work days. SSA will electronically transmit the result of the referral to the Employer within 10 Federal Government work days of the referral unless it determines that more than 10 days is necessary. The Employer agrees to check the E-Verify system regularly for case updates.
4. The Employer agrees not to ask the employee to obtain a printout from the Social Security Number database (the Numident) or other written verification of the Social Security Number from the SSA.

B. REFERRAL TO DHS

1. If the Employer receives a tentative nonconfirmation issued by DHS, the Employer must print the tentative nonconfirmation notice as directed by the automated system and provide it to the employee so that the employee may determine whether he or she will contest the tentative nonconfirmation.
2. If the Employer finds a photo non-match for an employee who provides a document for which the automated system has transmitted a photo, the employer must print the photo non-match tentative nonconfirmation notice as directed by the automated system and provide it to the employee so that the employee may determine whether he or she will contest the finding.
3. The Employer agrees to refer individuals to DHS only when the employee chooses to contest a tentative nonconfirmation received from DHS automated verification process or when the Employer issues a tentative nonconfirmation based upon a photo non-match. The Employer will determine whether the employee contests the tentative nonconfirmation as soon as possible after the Employer receives it.
4. If the employee contests a tentative nonconfirmation issued by DHS, the Employer will provide the employee with a referral letter and instruct the employee to contact DHS through its toll-free hotline (as found on the referral letter) within 8 Federal Government work days.
5. If the employee contests a tentative nonconfirmation based upon a photo non-match, the Employer will provide the employee with a referral letter to DHS. DHS will electronically transmit



Company ID Number: _____

the result of the referral to the Employer within 10 Federal Government work days of the referral unless it determines that more than 10 days is necessary. The Employer agrees to check the E-Verify system regularly for case updates.

6. The Employer agrees that if an employee contests a tentative nonconfirmation based upon a photo non-match, the Employer will send a copy of the employee's Form I-551 or Form I-766 to DHS for review by:

- Scanning and uploading the document, or
- Sending a photocopy of the document by an express mail account (furnished and paid for by DHS).

7. The Employer understands that if it cannot determine whether there is a photo match/non-match, the Employer is required to forward the employee's documentation to DHS by scanning and uploading, or by sending the document as described in the preceding paragraph, and resolving the case as specified by the Immigration Services Verifier at DHS who will determine the photo match or non-match.

ARTICLE IV

SERVICE PROVISIONS

SSA and DHS will not charge the Employer for verification services performed under this MOU. The Employer is responsible for providing equipment needed to make inquiries. To access the E-Verify System, an Employer will need a personal computer with Internet access.

ARTICLE V

PARTIES

A. This MOU is effective upon the signature of all parties, and shall continue in effect for as long as the SSA and DHS conduct the E-Verify program unless modified in writing by the mutual consent of all parties, or terminated by any party upon 30 days prior written notice to the others. Any and all system enhancements to the E-Verify program by DHS or SSA, including but not limited to the E-Verify checking against additional data sources and instituting new verification procedures, will be covered under this MOU and will not cause the need for a supplemental MOU that outlines these changes. DHS agrees to train employers on all changes made to E-Verify through the use of mandatory refresher tutorials and updates to the E-Verify User Manual. Even without changes to E-Verify, DHS reserves the right to require employers to take mandatory refresher tutorials. An Employer that is a Federal contractor may terminate this MOU when the Federal contract that requires its participation in E-Verify is terminated or completed. In such a circumstance, the Federal contractor must provide written notice to DHS. If an Employer that is a Federal contractor fails to provide such notice, that Employer will remain a participant in the E-Verify program, will remain bound by the terms of this MOU that apply to non-Federal contractor participants, and will be required to use the E-Verify procedures to verify the employment eligibility of all newly hired employees.

B. Notwithstanding Article V, part A of this MOU, DHS may terminate this MOU if deemed necessary because of the requirements of law or policy, or upon a determination by SSA or



Company ID Number: _____

DHS that there has been a breach of system integrity or security by the Employer, or a failure on the part of the Employer to comply with established procedures or legal requirements. The Employer understands that if it is a Federal contractor, termination of this MOU by any party for any reason may negatively affect its performance of its contractual responsibilities.

C. Some or all SSA and DHS responsibilities under this MOU may be performed by contractor(s), and SSA and DHS may adjust verification responsibilities between each other as they may determine necessary. By separate agreement with DHS, SSA has agreed to perform its responsibilities as described in this MOU.

D. Nothing in this MOU is intended, or should be construed, to create any right or benefit, substantive or procedural, enforceable at law by any third party against the United States, its agencies, officers, or employees, or against the Employer, its agents, officers, or employees.

E. Each party shall be solely responsible for defending any claim or action against it arising out of or related to E-Verify or this MOU, whether civil or criminal, and for any liability wherefrom, including (but not limited to) any dispute between the Employer and any other person or entity regarding the applicability of Section 403(d) of IIRIRA to any action taken or allegedly taken by the Employer.

F. The Employer understands that the fact of its participation in E-Verify is not confidential information and may be disclosed as authorized or required by law and DHS or SSA policy, including but not limited to, Congressional oversight, E-Verify publicity and media inquiries, determinations of compliance with Federal contractual requirements, and responses to inquiries under the Freedom of Information Act (FOIA).

G. The foregoing constitutes the full agreement on this subject between DHS and the Employer.

H. The individuals whose signatures appear below represent that they are authorized to enter into this MOU on behalf of the Employer and DHS respectively.

To be accepted as a participant in E-Verify, you should only sign the Employer's Section of the signature page. If you have any questions, contact E-Verify at 888-464-4218.

Employer

Name (Please Type or Print)	Title
Signature	Date

Department of Homeland Security – Verification Division

Name (Please Type or Print)	Title
Signature	Date



Company ID Number: _____

Information Required for the E-Verify Program

Information relating to your Company:

Company Name: _____

Company Facility Address: _____

Company Alternate Address: _____

County or Parish: _____

Employer Identification Number: _____

North American Industry Classification Systems Code: _____

Parent Company: _____

Number of Employees: _____

Number of Sites Verified for: _____

Are you verifying for more than 1 site? If yes, please provide the number of sites verified for in each State:

State	Number of sites	Site(s)



Company ID Number: _____

Information relating to the Program Administrator(s) for your Company on policy questions or operational problems:

Name: _____

Telephone Number: _____

Fax Number: _____

E-mail Address: _____

Name: _____

Telephone Number: _____

Fax Number: _____

E-mail Address: _____

INSTRUCTIONS FOR EXECUTING CONTRACT

The Contractor, in executing the Contract, shall follow the following requirements:

The Contractor and the Owner shall sign the Contract Documents in not less than triplicate.

If the Contractor is a corporation, the following certificate shall be executed:

"I, _____ certify that I am the _____ of the corporation named as Contractor herein above, that _____ who signed the foregoing Contract on behalf of the Contractor was then of said corporation; that said Contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers."

If the Contract is signed by the secretary of the corporation, the above certificate shall be executed by some other officer of the corporation under the corporate seal. In lieu of the foregoing certificate there may be attached to the Contract, copies of as much of the records of the corporation as will show the official character and authority of the officers signing, duly certified by the secretary or assistant secretary under the corporate seal to be true copies.

If the Contractor is a partnership, each partner shall sign the Contract. If the Contract is not signed by each partner, there shall be attached to the Contract a duly authenticated power of attorney evidencing the signer's ("signers") authority to sign such a Contract for and in behalf of the partnership.

If the Contractor is an individual, the trade name (if the Contractor is operating under a trade name) shall be indicated in the Contract and the Contract shall be signed by such individual. If signed by one other than the Contractor there shall be attached to the Contract a duly authenticated power of attorney evidencing the signer's authority to execute such Contract for and in behalf of the Contractor.

The full name and business address of the Contractor shall be inserted and the Contract shall be signed with his official signature. The name of the signing party or parties shall be typewritten or printed under all signatures to the Contract.

The Contract shall be deemed as having been awarded when formal Notice of Award shall have been duly served upon the intended awardee (i.e., the bidder with whom the Owner contemplates entering into a Contract) by some officer or agent of the Owner duly authorized to give such notice.

OWNER-CONTRACTOR AGREEMENT

This is an Agreement made and entered into the _____ day of _____, 2020, by and between **City of Weldon Spring** (hereinafter called the "Owner") and _____, a _____ with offices located at _____, (hereinafter called the "Contractor").

The project is identified as **Trail Improvement Project**, located at **Weldon Spring City Park & Wolfrum Rd**, Project No. **M19-7755**, (hereinafter called "Project")

The Engineer is Cochran, located at 8 E. Main St.; Wentzville, MO 63385 (hereinafter called the "Engineer").

WITNESSETH:

The Contractor and the Owner, for the consideration set forth herein, agree as follows:

ARTICLE I**The Contract Documents**

The Contract Documents include the Conditions of the Contract (General Conditions of Owner-Contractor Agreement, Supplementary Conditions and other Conditions), State Wage Determination, Non-Collusion Affidavit, Performance and Payment Bond, Drawings, Specifications, the Construction Schedule, all Addenda issued prior to the execution of this Contract, and all Modifications issued after execution of this Contract, which together with this Agreement form the Contract, and are all as fully a part of the Contract as if attached to this Agreement or repeated herein. All definitions set forth in the General Conditions of Owner-Contractor Agreement are applicable to this Agreement.

The Contract represents the entire and integrated agreement between the parties, and supersedes prior negotiations, representations and agreements, whether written or oral. An enumeration of the Contract Documents, other than Modifications, is set forth in Article X.

ARTICLE II**Scope of Work**

The Contractor, acting as an independent contractor, shall faithfully and fully perform the Work described in, and shall do everything required by, the Contract Documents or reasonably inferable therefrom, for the complete construction of the project. The Contractor represents and warrants that he has special skills which qualify him to perform the Work in accordance with the Contract and that he is free to perform all such Work and is not a party to any other agreement, written or oral, the performance of which would prevent or interfere with the performance, in whole or in part, of the Work.

ARTICLE III**Time of Completion**

(a) All time limits stated in the Contract Documents are of the essence. The Work to be performed under the Contract shall commence within seven (7) consecutive calendar days of the date of the written Notice to Proceed and shall be substantially completed within 120 consecutive calendar days from and including the date of said written Notice to Proceed, subject to adjustments of this Contract Time as provided in the Contract Documents.

(b) Contractor shall pay, as liquidated damages and not as a penalty, the sum of **\$500.00** for each consecutive calendar day after the Final Completion date that the Work has not been completed. The total amount so payable to the Owner as liquidated damages may be deducted from any sums due or to become due to Contractor from Owner.

ARTICLE IV

The Contract Sum and Payments

The Owner agrees to pay, and the Contractor agrees to accept, for the performance of the Contract, the sum of _____ (\$ _____), subject to additions and deductions as provided in the Contract Documents. Based upon proper Applications for Payment submitted by the Contractor to the Owner on or before the twentieth day of the month for Work performed, payment will be made in the form of progress payments as follows and as provided elsewhere in the Contract Documents:

(1) On or about the tenth day of each following month, ninety percent (90%) of the portion of the Contract Sum properly allocable to labor, materials and equipment incorporated into the Work, and ninety percent (90%) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site to be incorporated into the Work, through the period ending up to the twentieth day of the preceding month, less the aggregate of all previous progress payments;

(2) Final payment within 30 days after the Work is fully completed and accepted by the Owner and the Contract is fully performed.

ARTICLE V

Performance of the Work

(a) Within 10 days after being awarded the Contract, the Contractor shall prepare and submit for the Owner's approval, (1) a Construction Schedule for the Work in a Gantt Chart format, which Construction Schedule shall indicate the dates for starting and completing the various stages of construction. No Work will commence until the Contractor's Schedule is submitted and approved by the Owner.

(b) Completion of the Work in accordance with the time limits set forth in the Construction Schedule is an essential condition of the Contract.

(c) After commencement of the Work, and until final completion of the Work, the Contractor shall report to the Owner at such intervals as the Owner may reasonably direct, the actual progress of the Work compared to the Construction Schedule. If the Contractor falls behind the Construction Schedule for any reason, he shall promptly take, and cause his Subcontractors to take, such action as is necessary to remedy the delay, and shall submit promptly to the Owner for approval a supplementary schedule or progress chart demonstrating the manner in which the delay will be remedied; provided, however, that if the delay is excusable under Article VI hereof, the Contractor will not be required to take, or cause his Subcontractors to take, any action which would increase the overall cost of the Work (whether through overtime premium pay or otherwise), unless the Owner shall have agreed in writing to reimburse the Contractor for such increase in cost. Any increase in cost incurred in remedying a delay which is not excusable under Article VI hereof shall be borne by the Contractor.

ARTICLE VI**Delays Beyond Contractor's Control**

(a) If the Contractor fails to complete the Work in accordance with the Construction Schedule as a result of the act or neglect of the Owner, or by strikes, lockouts, fire or other similar causes beyond the Contractor's control, then, and to the extent of such delays, the Contractor shall not be required to pay liquidated damages to the Owner pursuant to Paragraph (b) of Article III hereof, provided the Contractor uses his best efforts to remedy the delay in the manner specified in Paragraph (c) of Article V hereof. If, as a result of any such cause beyond the Contractor's control, the delay in completion of the Work in accordance with the Construction Schedule is so great that it cannot be remedied in the aforesaid manner, or if the backlog of work is so great that it cannot be remedied without incurring additional cost which the Owner does not authorize, then the time of completion and the Construction Schedule shall be extended pursuant to a Change Order for the minimum period of delay occasioned by such cause. The period of delay and extension shall be determined by the Owner.

(b) Notwithstanding the foregoing Paragraph (a), no extension of time shall be granted for any delay the cause of which occurs more than seven (7) days before claim therefor is made in writing by the Contractor to the Owner, and no extension of time shall be granted if the Contractor could have avoided the need for such extension by the exercise of reasonable care and foresight. In the case of a continuing cause of delay, only one claim is necessary.

(c) Weather shall not constitute a cause for granting an extension of time.

(d) Except to the extent that a delay is caused by the Owner, the Contractor's sole remedy shall consist of his rights under this Article VI.

ARTICLE VII**Changes in the Work**

(a) The Owner may make changes within the general scope of the Contract by altering, adding to or deducting from the Work, the Contract Sum being adjusted accordingly. All such changes in the Work shall be executed under the conditions of the Contract. No extra work or change shall be made except pursuant to a Change Order from the Owner in accordance with the General Conditions. Any claim for an increase in the Contract Sum resulting from any such change in the Work shall be made by the Contractor in accordance with the General Conditions.

(b) If the requested change would result in a delay in the Construction Schedule, the provisions of Paragraph (c) of Article V and of Article VI hereof shall apply. If the requested change would result in a decrease in the time required to perform the Work, the completion date and the Construction Schedule shall be adjusted by agreement between the parties to reflect such decrease.

(c) Any adjustment in the Contract Sum for duly authorized extra work or change in the Work shall be determined based on the unit prices previously specified, to the extent such unit prices are applicable. To the extent such unit prices are not applicable, the adjustment in the Contract Sum shall, at the option of the Owner, be determined by an acceptable lump sum properly itemized and supported by sufficient substantiating data to permit evaluation, or by an acceptable cost plus percentage or fixed fee.

ARTICLE VIII**Termination by Owner**

(a) If the Contractor is adjudged a bankrupt, or if the Contractor makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of the Contractor's insolvency, or if the Contractor persistently or repeatedly fails, except in cases for which extension of time is provided, to make progress in accordance with the Construction Schedule, or if the Contractor fails to make prompt payment to Subcontractors for material or labor, or persistently disregards laws, ordinances or the instructions of the Owner, or otherwise breaches any provision of the Contract, the Owner may, without prejudice to any other right or remedy, by giving written notice to the Contractor and his Surety, terminate the Contract, take possession of the Work and of all materials and equipment thereon and finish the Work by whatever method the Owner may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Sum shall exceed the expenses of finishing the Work, including additional architectural, managerial and administrative expenses, such excess shall be paid to the Contractor. If such expenses shall exceed the unpaid balance of the Contract Sum, the Contractor shall pay the difference to the Owner promptly upon demand.

In the event of termination pursuant to this Paragraph, the Contractor, upon the request of the Owner, shall promptly

(i) assign to the Owner in the manner and to the extent directed by the Owner all right, title and interest of the Contractor under any subcontracts, purchase orders and construction equipment leases to which the Contractor is a party and which relate to the Work or to construction equipment required therefor, and

(ii) make available to the Owner, to the extent directed by the Owner, all construction equipment owned by the Contractor and employed in connection with the Work.

(b) Performance of the Work hereunder may be terminated by the Owner by giving three (3) days prior written notice to the Contractor if the Owner, in its sole discretion, decides to discontinue or suspend construction. In the event of such termination, as opposed to termination pursuant to Paragraph (a) of this Article VIII, the Contract Sum shall be reduced in an equitable manner by agreement between the parties. The Contractor will not be entitled to payment of profit on work not performed.

ARTICLE IX**Contractor's Liability Insurance**

The Contractor shall purchase and maintain in full force and effect the following insurance coverage with an insurance carrier acceptable to the Owner:

The policy shall be endorsed to cover the contractual liability of the Contractor under the General Conditions.

The Contractor and his Subcontractors shall procure and maintain during the life of this Agreement insurance of the types and minimum amounts as follows:

(a) Workers' Compensation in full compliance with statutory requirements of Federal and State of Missouri law and Employers' Liability coverage in the amount of \$2,000,000.

(b) Comprehensive General Liability and Bodily Injury

Including Death:	\$2,000,000 each person
	\$2,000,000 each occurrence

Property Damage:	\$2,000,000 each occurrence
	\$2,000,000 aggregate
(c) Comprehensive Automobile Liability, Bodily Injury	
Including Death:	\$2,000,000 each person
	\$2,000,000 each occurrence
Property Damage:	\$2,000,000 each accident
(d) Owner's Protective Bodily Injury	
Including Death:	\$2,000,000 each occurrence
Property Damage:	\$2,000,000 each occurrence
	\$2,000,000 aggregate

The Owner's Protective Policy shall name the Owner as the insured. Certificates evidencing such insurance shall be furnished the Owner prior to Contractor commencing the Work on this Project. The certificates must state, **"The City of Weldon Spring, the Engineer (M-Engineering, LLC dba Cochran), and their Officers and Employees, are included as an additional insured as required by written contract under the General Liability Policy with respect to work performed by the named insured on the above listed project."**

ARTICLE X

Enumeration of The Contract Documents

The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated as follows:

- (a) Owner-Contractor Agreement
- (b) General Conditions of the Owner-Contractor Agreement
- (c) Supplementary or other Conditions of the Contract as follows:
Job Special Provisions (if applicable)
- (d) The Specifications
- (e) Performance and Payment Bond
- (f) Construction Schedule
- (g) State Wage Determination
- (h) Non-Collusion Affidavit
- (i) Subcontractor Approval Form
- (j) The Addenda, if any, are as follows:
- (k) Other documents, if any, forming part of the Contract Documents are as follows: Bid Form Proposal
Project Manual
- (l) Plans for "Trail Improvements"

* In making out this form the title that is not applicable should be struck out. For example, if the Contractor is a corporation and this form is to be executed by its president, the words "sole owner, a partner, secretary, etc." should be struck out.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement:

City of Weldon Spring
Mayor

By _____

Print Name

(SEAL)

Attest: _____

Print Name

Date: _____

Title

By _____
Contractor

(SEAL)

Attest: _____

Date: _____

FORM OF CONTRACT PERFORMANCE – PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____, as Principal, and _____, as Surety, are held and firmly bound unto the City of Weldon Spring hereinafter called the "Owner," in the penal sum of _____ Dollars (\$_____) lawful money of the United States, well and truly to be paid unto the said Owner for the payment of which Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has by written agreement dated _____, entered into a Contract with the Owner for the construction of the work designated as Trail Improvements Project, in accordance with the Contract, which Contract is by this reference made a part hereof, and is hereinafter referred to as the "Contract."

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that if the Principal shall faithfully perform the Contract on its part, and satisfy all claims and demands incurred by the Principal in the performance of the Contract, and shall fully indemnify and save harmless the Owner from all cost and damage which the Owner may suffer by reason of the failure of the Principal to do so, and shall fully reimburse and repay to the Owner all costs, damages, and expenses which the Owner may incur in making good any default by the Principal including, but not limited to, any default based upon the failure of the Principal to fulfill its obligation to furnish maintenance, repairs or replacements for any period of time after the Work is completed as provided for in the Contract, and shall for use in the prosecution of the Work required by the Contract whether by Subcontract or otherwise, and shall pay all valid claims and demands whatsoever, and shall defend, indemnify and hold harmless the Owner and its agents against loss or expense from bodily injury, including death, or damage or destruction of property, including loss of use resulting therefrom, arising out of or resulting from the performance of the Work, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

The Owner may sue on this Bond, and any person furnishing material or performing labor, either as an individual or as a Subcontractor shall have the right to sue on this Bond in the name of the Owner for his use and benefit, all in accordance with the provisions of MO. Rev. Stat. SS 522.30, and any amendments thereto.

Whenever Principal shall be in default under the Contract, the Surety shall promptly remedy the default, or shall promptly, (1) complete the Contract in accordance with its terms and conditions, or (2) obtain bids for completing the Contract in accordance with its terms and conditions, and upon determination by the Owner of the lowest responsible bidder, arrange for a Contract between the Owner and such bidder, and made available as the Work progresses sufficient funds to pay the costs of completion, not exceeding the amount of this Bond.

It is hereby stipulated and agreed that any suit based upon any default of the Principal in fulfilling his obligation to furnish maintenance, repairs or replacements for any period of time after the Work is completed as provided for in the Contract, may be brought at any time up to one year after the expiration of the time specified in the Contract during which the Contractor has agreed to furnish such maintenance or make such repairs or replacements.

The successful bidder shall furnish a Performance Bond in an amount equal to one hundred percent (100%) of the Contract Sum as security for the faithful performance of the Contract, and also a Labor and Material Payment Bond in an amount not less than one hundred percent (100%) of the Contract Sum as security for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this Contract. The Surety shall be a company licensed to do business in the State of Missouri and shall be acceptable to the Owner. The Performance Bond and the Labor and Material Payment Bond may be in one or in separate instruments, however if combined into one the amount shall be for two hundred percent (200%) of the Contract

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration of addition to the terms of the Contract or to the Work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work or to the Specifications.

Signed and sealed this _____ day of _____, 20 _____.

In the presence of: _____ (SEAL)

(SEAL)

By: _____

By: _____

GENERAL CONDITIONS OF OWNER-CONTRACTOR AGREEMENT**ARTICLE 1****CONTRACT DOCUMENTS****1.1 DEFINITIONS**

1.1.1 The Contract Documents. The Contract Documents include the Owner-Contractor Agreement, General Conditions of the Owner-Contractor Agreement, State Wage Determination, Non-Collusion Affidavit, the Performance Payment Bond, the Drawings, the Specifications, the Construction Schedule, all Addenda and all Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, or (2) a written Change Order.

1.1.2 The Contract. The Contract Documents form the Contract. The Contract represents the entire and integrated Agreement between the parties hereto and supersedes all prior negotiations, representations or agreements, both written and oral, including the Bidding Documents. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.1.

1.1.3 The Work. The term Work means the construction and services required or reasonably inferable from the Contract Documents, and includes all labor necessary to complete the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in such construction.

1.1.4 The Project. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part.

1.1.5 Notice to Proceed. The written notice from the Owner notifying the Contractor of the date on or before which he is to begin execution of the Work.

1.2 EXECUTION, CORRELATION, INTENT AND INTERPRETATIONS

1.2.1 The Contract Documents shall be signed in not less than triplicate by the Owner and Contractor.

1.2.2 The Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. The intention of the Contract Documents is to include all labor, materials, equipment and other items as provided in Subparagraph 3.3 necessary for execution and completion of the Work. Words which have well-known technical or trade meanings are used herein in accordance with such recognized meanings.

1.2.4 In the event of any conflict or inconsistency in the Contract Documents, the better quality and quantity of Work, as determined by the Engineer, shall be provided without change in the Contract Sum.

1.3 COPIES FURNISHED AND OWNERSHIP

1.3.1 Unless otherwise provided in the Contract Documents, the Contractor will be furnished a maximum of three (3) copies, free of charge, of the Drawings and Specifications for the execution of the Work.

1.3.2 All Drawings, Specifications and copies thereof furnished by the Owner are and shall at all times remain property of the Owner. Such documents shall not be used on any other project.

ARTICLE 2**OWNER****2.1 DEFINITION**

2.1.1 The Owner is the person or organization identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term "Owner" means the Owner or its authorized representative.

2.2 OWNER'S RIGHT TO STOP THE WORK

2.2.1 If the Contractor fails to correct defective work, or fails to supply labor, materials or equipment in accordance with the Contract Documents, the Owner may order the Contractor to stop the work, or any portion thereof, until the cause for such order has been eliminated; however, the Owner's right to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any third party.

2.3 OWNER'S RIGHT TO CARRY OUT THE WORK

2.3.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, or fails to perform any provision of the Contract, the Owner may, after seven (7) days' written notice to the Contractor and without prejudice to any other remedy he may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner promptly upon request.

2.4 ENGINEER'S STATUS DURING CONSTRUCTION

2.4.1 The Engineer will be Owner's representative during the construction period.

2.4.2 Engineer will make periodic visits to the site to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. He shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.

2.4.3 Engineer will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents (in the form of Drawings or otherwise) as he may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If Contractor believes that a written clarification and interpretation entitles him to an increase in the Contract Price, he may make a claim in writing therefore.

2.4.4 Engineer will have authority to disapprove or reject Work which is "defective" (which term is hereinafter used to describe Work that is unsatisfactory, faulty or defective, or does not conform to the requirements of the Contract Documents or does not meet the requirements of any inspection or test or has been damaged prior to approval of final payment). He will also have authority to require special inspection or testing of the Work whether or not the Work is fabricated, installed or completed.

2.4.5 If Owner and Engineer agree, Engineer will furnish a Resident Project Representative and assistants to assist Engineer in carrying out his responsibilities at the site.

2.4.6 Neither Engineer's authority to act in the Contract Documents nor any decision made by him in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of Engineer to Contractor, any Subcontractor, any material man, fabricator, supplier or any of their agents or employees or any other person performing any of the Work.

2.4.7 Engineer will not be responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and he will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

2.4.8 Engineer will not be responsible for the acts or omissions of Contractor, or any Subcontractors, or any of his or their agents or employees, or any other persons at the site or otherwise performing any of the Work.

ARTICLE 3**CONTRACTOR****3.1 DEFINITION**

3.1.1 The Contractor is the person or organization identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term "Contractor" means the Contractor or his authorized representative.

3.2 SUPERVISION AND CONSTRUCTION PROCEDURES

3.2.1 The Contractor shall perform the Work in accordance with the Contract Documents, and shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work, and shall be solely responsible for job-site safety precautions, procedures and programs.

3.3 LABOR AND MATERIALS

3.3.1 Unless otherwise specifically noted, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.

3.3.2 The Contractor shall, at all times, enforce strict discipline and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him. If the Owner reasonably objects to any person employed by the Contractor, the employee shall be immediately dismissed.

3.3.3 The Contractor shall comply with, and is bound by, the provisions of Missouri law pertaining to the payment of wages on public works projects contained in MO.Rev.Stat. SS290.210 (2000) through 290.340 (2000), and any amendments thereto, including, but not limited to the following (if contract exceeds \$75,000.00):

1. In accordance with MO.Rev.Stat. S290.250 (2000), the Contractor shall not pay less than the prevailing hourly rate of wages specified by the Missouri Department of Labor and Industrial Relations Division of Labor Standards to all workers performing Work under the Contract.
2. In accordance with MO.Rev.Stat. S290.250 (2000), the Contractor shall forfeit as a penalty to the Owner ten dollars (\$10.00) for each worker employed for each calendar day, or portion thereof, such worker is paid less than the said stipulated rates for any Work done under the Contract, by him or by any Subcontractor under him and shall include provisions in all bonds guaranteeing the faithful performance of said prevailing hourly wage clause.
3. In accordance with MO.Rev.Stat. S290.265 (2000), the Contractor and each Subcontractor shall post a clearly legible statement of all prevailing hourly wage rates to be paid to all workers employed to complete the Work in a prominent and easily accessible place at the site of the Work and such notice shall remain posted during the full time that any workers shall be employed on the Work.
 - a. Certified payrolls shall also be submitted prior to final payment for all work completed by the Contractor or Subcontractors.
4. In accordance with MO.Rev.Stat. S290.290 (2000), before final payment is made an affidavit must be filed by the Contractor stating that he has fully complied with the prevailing wage law. Final payment shall not be due unless and until this affidavit is filed in proper form and order. (If applicable)

3.3.4 The Contractor shall comply with MO.Rev.Stat. SS290.550 (2000) through 290.580 (2000) regarding the utilization of Missouri laborers and laborers from nonrestrictive states for employment on Missouri public works projects, when the unemployment rate exceeds 5% for two consecutive months. The Contractor shall advise all of its subcontractors of this obligation prior to entering into any subcontract with them, and Contractor shall be liable for, and shall promptly reimburse Owner for, all fines, penalties or costs (including attorney's fees) imposed upon or incurred by Owner as a result of any failure of the Contractor any of its subcontractors to comply with this requirement.

3.3.5 The contractor and any subcontractor performing the work shall provide a ten-hour Occupational Safety and Health Administration (OSHA) construction safety program for their on-site employees which includes a course in construction safety and health approved by OSHA or a similar program approved by the Missouri Department of Labor and Industrial Relations which is at least as stringent as an approved OSHA program. All employees are required to complete the program within sixty (60) days of beginning work on such construction project. Any employee found on the worksite without documentation of the successful completion of such a course shall be afforded twenty (20) days to produce such documentation before being subject to removal from the project. If any employee fails to complete the program within sixty (60) days of the start of the project or within twenty (20) days of being found on the worksite without documentation, the contractor shall forfeit as a penalty to the City two thousand five hundred dollars (\$2,500) plus one hundred dollars (\$100) for each employee employed by the contractor or subcontractor, for each calendar day, or portion thereof, such employee is employed without the required training.

3.3.6 The Contractor shall execute and complete the Work in such a manner that avoids jurisdictional and other disputes among labor unions.

3.4 WARRANTY

3.4.1 Contractor warrants that it shall use sound construction principles and practices in the performance of the Work and that it shall apply to the Work a high degree of skill, care, judgment and supervision to assure that the Work is performed properly and in accordance with the Contract Documents. Contractor further warrants that the Work shall fulfill the terms of any special warranties established by the Specifications and that the Work shall be free from defects due to faulty materials, equipment or workmanship for **one year** from the date of Final Completion of the Project. If any defect exists in the Work within such period, Contractor shall promptly, upon notice from Owner, at Contractor's expense, make suitable repairs or replacements. If Contractor fails to make or commence such repairs or replacements as required above, Owner may make such repairs, and Contractor shall promptly reimburse Owner for its costs in making suitable repairs or replacements. In either case, Contractor shall also pay for any resulting damage to other property and work occasioned by Contractor's breach of any of the aforementioned warranties or guaranties.

3.4.2 The Contractor agrees to assign to the Owner at the time of final completion of the Work, all manufacturer's warranties relating to materials and labor used in the Work and further agrees to perform the Work so as to preserve all such warranties.

3.4.3 Owner's rights under Section 3.4 are in addition to all other rights or remedies which it may have under the Contract or at law or equity.

3.5 PERMITS, FEES AND NOTICES

3.5.1 The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the Work.

3.5.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the Work. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the Owner in writing and any necessary changes shall be adjusted by appropriate Modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations and without such notice to the Owner, the Contractor shall assume full responsibility thereof and shall bear all costs attributable thereto.

3.6 SUPERINTENDENT

3.6.1 The Contractor shall employ a competent superintendent who shall be in attendance at the Project site during performance of the Work. This person shall be a superintendent who will be responsible for the satisfactory progression of the Work and to ensure that all Work is being completed in accordance with the Drawings and Specifications. He is also to relay any conflicts or discrepancies that arise to the Owner's representative for resolution or interpretation. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor.

3.7 RESPONSIBILITY FOR THOSE PERFORMING THE WORK

3.7.1 The Contractor shall be responsible to the Owner for the acts and omissions of all his employees and all Subcontractors, their agents and employees and all other persons performing any of the Work under the Contract with the Contractor.

3.8 SPECIFICATIONS AT THE SITE

3.8.1 The Contractor shall maintain at the site for the Owner, one copy of all Specifications, Addenda, approved Shop Drawings, Change Orders and other Modifications, in good order and marked to record all changes made during construction.

3.9 CLEANING UP

3.9.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. The Contractor shall not "stockpile" any material on the jobsite and all excavated material shall be hauled off the site at the time of excavation. However, stockpiling of materials delivered and used on the same day will be allowed if all materials are in place or removed at the end of the day.

3.9.2 The Contractor is responsible for securing his own project storage site which shall not be located on Owner's property without prior written consent of the Owner. After completion of the Work the Contractor shall remove all remaining waste materials and rubbish from and about the Project as well as all tools, construction equipment, machinery and surplus materials, and shall clean all surfaces and leave the Work "broomclean" or its equivalent, except as otherwise specified.

3.10 INDEMNIFICATION

3.10.1 The Contractor shall indemnify and hold harmless the Owner and its agents and employees from and against any and all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from the performance of the Work, including, but not limited to, any such claim, damage, loss or expense that 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, except to the extent that such claims, damages or losses are caused by the negligent act or omission of the Owner.

3.10.2 In any and all claims against the Owner or any of its agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any one of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 3.10 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under Worker's Compensation acts, disability benefit acts or other employee benefit acts.

3.11 CASH ALLOWANCES

3.11.1 The Contractor acknowledges and agrees that the Contract Sum includes all cash allowances specified in the Contract Documents.

ARTICLE 4

SUBCONTRACTORS

4.1 DEFINITION

4.1.1 A Subcontractor is a person or organization who has a direct contract with the Contractor to perform any of the Work. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative.

4.1.2 Second Tier Subcontracting will not be permitted on this project. It is the Contractor's responsibility to ensure that his subcontractors do not, in turn, subcontract any portion of the work.

4.1.3 Nothing contained in the Contract Documents shall create any contractual relation between the Owner and any Subcontractor.

4.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

4.2.1 Unless otherwise specified in the Contract Documents or in the Instructions to Bidders, the Contractor shall submit a completed and signed Subcontractor Approval Form, along with other required Bid Documents, to the Owner. Contractor shall complete and submit a Supplemental Subcontractor Approval Form to the Owner in the

event of any substitution or addition of a Subcontractor by the Contractor. No work shall be performed by a Subcontractor until such Subcontractor has been approved by the Owner.

4.2.2 Prior to the award of the Contract, the Owner will notify the bidder in writing if the Owner, after due investigation, objects to any such person or entity proposed by the bidder pursuant to Subparagraph 4.2.1 above. If the Owner objects to any such proposed person or entity, the bidder may, at his option, (1) withdraw his bid, or (2) submit an acceptable substitute person or entity with no adjustment in his bid price.

4.2.3 Contractor shall not subcontract more than sixty-five percent (65%) of the total Contract cost.

4.2.4 The Owner reserves the right to reject a Subcontractor, if in the Owner's sole discretion, delays may result in the performance of work as a result of Subcontractor's other obligation. The Contractor shall be held responsible, in addition to the submission of the "Subcontractor Approval Form," to apprise the Owner of any additional work which a Subcontractor accrues throughout the duration of the project. This shall include work for the Owner under a different contract, or any other person or entity. If such said additional work shall detrimentally impact the progression of the Work under this Contract, the Owner retains the right to require the Contractor to submit a substitute Subcontractor for this work at no additional cost to the Owner.

4.2.5 The Contractor shall not contract with any Subcontractor or any person or organization (including those who are to furnish materials or equipment fabricated to a special design), for proposed proportions of the Work designated in the Contract Documents or in the Instruction to Bidders or, if none is so designated, with any Subcontractor proposed for the principal portions of the Work, who has been rejected by the Owner.

4.2.6 If the Owner requires a change of any proposed Subcontractor or person or organization during the execution of the Work approved under the present Contract, the Contract Sum shall be increased or decreased by the difference in cost resulting from such change and an appropriate Change Order shall be issued.

4.2.7 The Contractor shall not make any substitution for any proposed Subcontractor or person or organization that has not been accepted by the Owner prior to the Contract Award, unless the substitution is accepted by the Owner in writing prior to such substitution.

4.3 SUBCONTRACTUAL RELATIONS

4.3.1 All work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate written agreement between the Contractor and Subcontractor which shall contain provisions that:

1. require the Work to be performed in accordance with the requirements of the Contract Documents;
2. require submission to the Contractor of applications for payment under each Subcontract to which the Contractor is a party, in reasonable time to enable the Contractor to apply for payment in accordance with Article VIII hereof;
3. require that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to Subcontracted portions of the Work shall be submitted to the Contractor (via any Subcontractor) in sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like claims by the Contractor upon the Owner;
4. waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by the property insurance described in Paragraph 10.2, except such rights as they may have to the proceeds of such insurance held by the Owner as trustee under Paragraph 10.2;
5. obligate each Subcontractor specifically to consent to the provisions of this Paragraph 4.3; and
6. require the Subcontractor to indemnify and hold harmless the Owner against all claims, damages, losses, expenses and attorneys' fees arising out of or resulting from the performance of the Work by Subcontractor, and its agents and employees, except to the extent such claims, damages or losses are caused by the negligent act or omission of the Owner.

4.4 PAYMENTS TO SUBCONTRACTORS

4.4.1 The Contractor shall pay each Subcontractor upon receipt of payment from the Owner, an amount equal to the percentage of completion allowed to the Contractor on account of such Subcontractor's work, less the percentage retained from payments to the Contractor.

4.4.2 If the Owner withholds payment to the Contractor for any cause which is the fault of the Contractor and not the fault of a particular Subcontractor, the Contractor shall pay that Subcontractor on demand for its Work to the extent completed.

4.4.3 The Owner shall not have any obligation to pay or to see to the payment of any sum to any Subcontractor.

ARTICLE 5

SEPARATE CONTRACTS

5.1 OWNER'S RIGHT TO AWARD SEPARATE CONTRACTS

5.1.1 The Owner reserves the right to award other contracts on other terms and conditions in connection with other portions of the Project.

5.2 MUTUAL RESPONSIBILITY OF CONTRACTORS

5.2.1 The Contractor shall afford other contractors reasonable opportunity for the delivery and storage of their materials and equipment and the execution of their work, and shall properly connect and coordinate the Work with theirs.

5.2.2 If any part of the Work depends for proper execution or results upon the work of any other separate contractor, the Contractor shall inspect and promptly report to the Owner any apparent discrepancies or defects in such work that render it unsuitable for proper execution of the Work. Failure of the Contractor to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper to receive the Work, except as to defects which may develop in the other contractor's work after the execution of the Contractor's Work that could not have been discovered by the Contractor upon reasonable inspection.

5.2.3 If the Contractor causes damage to the Work or property of any other contractor on the project, and such separate contractor sues the Owner or initiates a legal proceeding on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor who shall defend such proceedings at his own expense, and if any judgment or award against the Owner arises therefrom the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorneys' fees and court costs which the Owner has incurred.

5.3 OWNER'S RIGHT TO CLEAN UP

5.3.1 If a dispute arises between the separate contractors as to their responsibility for cleaning up as required by Paragraph 3.9, the Owner may clean up and charge the cost thereof to the separate contractors.

ARTICLE 6

MISCELLANEOUS PROVISIONS

6.1 GOVERNING LAW

6.1.1 The Contract shall be governed by the laws of the State of Missouri.

6.2 SUCCESSORS AND ASSIGNS

6.2.1 The Owner and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract without the prior written consent of the other, nor shall the Contractor assign any sums due or to become due to him hereunder, without the prior written consent of the Owner.

6.3 NOTICES

6.3.1 Any notice to any party pursuant to or in relation to the Contract shall be in writing and shall be deemed to have been duly given when delivered in person to the individual or member of the firm or to an officer of the corporation for whom it was intended, or when deposited in the United States mail, registered or certified with postage prepaid addressed to the last business address known to the party giving the notice.

6.4 RIGHTS AND REMEDIES

6.4.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

6.5 ROYALTIES AND PATENTS

6.5.1 The Contractor shall pay all royalties and license fees payable on all designs, processes or products used in connection with the Work or incorporated therein, unless otherwise agreed upon by the Owner. The Contractor shall defend all suits or claims for infringement of any patent rights and shall indemnify and hold the Owner harmless from and against any loss on account thereof.

6.6 TESTS

6.6.1 The Contractor shall bear all costs of any inspections, tests, or approvals required under any laws, ordinances, rules, regulations or orders of any public authority having jurisdiction.

6.7 PERFORMANCE AND PAYMENT BONDS

6.7.1 The Contractor shall furnish the Performance Bond and the Payment Bond required in the Instructions to Bidders.

6.8 SHOP DRAWINGS AND SUBMITTALS

6.8.1 The Contractor shall submit to the Engineer, with such promptness as to cause no delay in the performance of the work, copies of design drawings, specifications, shop drawings, equipment details, installation, operating, and maintenance instructions, wiring diagrams, parts lists, etc. No purchasing, fabrication, erection, processing or shipping of the aforementioned material or equipment may begin until the drawings or details have been reviewed by the Engineer. Regardless of corrections made in or approval given to such shop drawings or equipment submittals by the Engineer, the Contractor will be responsible for the accuracy of such drawings and for their conformity to the Drawings and Specifications.

ARTICLE 7**TIME****7.1 DEFINITIONS**

7.1.1 The Contract Time is the period of time allotted in the Contract Documents for completion of the Work. Said Work shall include all punchlist items deemed necessary by the Owner. The date of completion of the Contract shall be the date when all work including Owner punchlist items have been approved in writing by the Owner.

7.1.2 The date of commencement of the Work is the date established in the written Notice to Proceed from the Owner to the Contractor.

7.1.3 The term "day" as used in the Contract Documents shall mean calendar day.

7.2 PROGRESS AND COMPLETION

7.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.

7.2.2 The Contractor shall begin the Work on the date of commencement provided in the Owner-Contractor Agreement. The Contractor shall carry the Work forward expeditiously with adequate forces and shall complete it within the Contract Time and in accordance with the Construction Schedule.

ARTICLE 8**PAYMENTS AND COMPLETION****8.1 CONTRACT SUM**

8.1.1 The Contract Sum is stated in the Owner-Contractor Agreement and is the total amount payable by the Owner to the Contractor for the performance of the Work.

8.2 APPLICATION FOR PAYMENT

8.2.1 By 12:00 P.M. on or before the twentieth of the month, upon substantial completion of various stages of the Work, and upon final completion of the Work, the Contractor shall submit to the Owner an itemized Application for Payment pursuant to the Owner-Contractor Agreement on such forms and supported by such data substantiating the Contractor's right to payment as the Owner may require.

8.2.2 If payments are to be made on account of materials or equipment to be incorporated into the Work and delivered and suitably stored at the site, such payments shall be conditioned upon submission by the Contractor of bills of sale or such other documents satisfactory to the Owner to establish the Owner's title to such materials or equipment or to otherwise protect the Owner's interest.

8.2.3 The Contractor warrants and guarantees that title to all Work, materials and equipment covered by an Application for Payment, whether incorporated into the Work or not, will pass to the Owner upon the receipt of such payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances (hereinafter referred to as "liens").

8.3 PAYMENT

8.3.1 If the Contractor has made Application for Payment as above, the Owner will, in accordance with the Owner-Contractor Agreement, make payment to the Contractor for such amount as it determines to be properly due pursuant to the Contractor's Application for Payment, or state in writing the Owner's reasons for withholding all or any portion of such payment.

8.3.2 No progress payment, nor any partial or entire use or occupancy of the Work by the Owner, shall constitute an acceptance of any Work not completed in accordance with the Contract Documents.

8.4 COMPLETION AND FINAL PAYMENT

8.4.1 Upon receipt of written notice from the Contractor that the Work is fully completed and ready for final inspection and acceptance, and upon receipt of a final Application for Payment, the Owner will promptly make such inspection and, when the Owner finds the Work acceptable under the Contract Documents and the Contract fully performed, the Owner will make final payment to the Contractor in accordance with the Owner-Contractor Agreement.

8.4.2 The final payment shall not become due until the Contractor submits to the Owner (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness incurred in connection with the execution and completion of the Work for which the Owner or its property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of the Surety, if any, to final payment, (3) an affidavit stating the Contractor has fully complied with the provisions and requirements of the Prevailing Wage Law, Section 290.210 through 290.340 as amended by MO.Rev.Stat. 1969, and (4) if required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner indemnifying the Owner against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all moneys that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

8.4.3 The acceptance of final payment shall constitute a waiver of all claims by the Contractor, except those previously made in writing and still unsettled.

ARTICLE 9**PROTECTION OF PERSONS AND PROPERTY****9.1 SAFETY PRECAUTIONS AND PROGRAMS**

9.1.1 The Contractor shall initiate, maintain and supervise safety precautions and programs in connection with the performance of the Work.

9.2 SAFETY OF PERSONS AND PROPERTY

9.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

1. all employees on the Work and all other persons who may be affected thereby;
2. all the Work, all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors; and
3. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

9.2.2 The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority having jurisdiction over the safety of persons or property to protect them from damage, injury or loss. The Contractor shall erect and maintain all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Owner and users of adjacent utilities. The Contractor shall provide signs, barrels, or any other safety devices which the Owner deems necessary for public safety. No additional payment will be made and this work shall be considered incidental to the Contract. The Owner will place safety devices as it deems necessary if the Contractor fails to provide the required items within 24 hours of notification. The Contract Sum shall be reduced by the cost of these devices.

9.2.3 When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

9.2.4 All damage or loss to any property caused in whole or in part by the Contractor, any Subcontractor, or any Sub-subcontractor, or anyone directly or indirectly employed by anyone for whose acts they may be liable, shall be remedied by the Contractor. The Owner shall document any complaint by any person regarding damage or loss to property caused by Contractor by requesting such complainant to complete a Damage Claim Form. A copy of the Damage Claim Form shall be submitted by the Owner to the Contractor and the Contractor shall correct the problem, repair such damage or otherwise compensate the complainant or file a claim for such damage with Contractor's insurance company within ten (10) days of the receipt of the Damage Claim Form from the Owner. If the Owner shall have a legitimate basis for believing that such claim is valid, the Owner shall have the option to withhold payment of funds until (i) such damages are repaired; or (ii) the Owner has been provided with evidence that the Contractor has made restitution to the complainant.

9.2.5 The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Owner.

ARTICLE 10**INSURANCE****10.1 CONTRACTOR'S LIABILITY INSURANCE**

10.1.1 The Contractor shall purchase and maintain such insurance required in the Owner-Contractor Agreement to protect him from claims which may arise out of or result from the Contractor's operations under the Contract, whether

such operations be by himself or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

10.1.2 The insurance shall be written for not less than any limits of liability specified in the Owner-Contractor Agreement, or required by law, whichever is greater, and shall include contractual liability insurance as applicable to the Contractor's obligations under Paragraph 3.10.

10.1.3 Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. Certificate of Insurance must state: "**The City of Weldon Spring, the Engineer (M-Engineering, LLC dba Cochran) and their Officers and Employees, are included as an additional insured as required by written contract under the General Liability Policy with respect to work performed by the named insured on the above listed project.**" These Certificates shall contain a provision that coverage afforded under the policies will not be cancelled until at least fifteen days prior written notice has been given to the Owner.

10.2 PROPERTY INSURANCE

10.2.1 Unless otherwise provided, the Contractor shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work and shall insure against the perils of fire, extended coverage, vandalism and malicious mischief.

10.2.2 The Contractor shall purchase and maintain such machinery insurance as may be required by the Contract Documents or by law. This insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work.

10.2.3 Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the work. Certificates of Insurance must state on the certificate: "**The City of Weldon Spring, the Engineer (M-Engineering, LLC dba Cochran) and their Officers and Employees, are included as an additional insured as required by written contract under the General Liability Policy with respect to work performed by the named insured on the above listed project.**" These Certificates shall contain a provision that coverage afforded under the policies will not be cancelled until at least fifteen days' prior written notice has been given to the Owner.

10.2.4 Any loss insured by property insurance maintained by the Owner shall be adjusted with the Owner and made payable to the Owner as trustee for the insured, as their interests may appear, subject to the requirements of any applicable mortgage clause.

10.2.5 The Owner and Contractor waive all rights against each other for damages caused by fire or other perils to the extent covered by insurance provided under this Paragraph 10.2 and the Contract Documents, Owner-Contractor Agreement, except such rights as they may have to the proceeds of such insurance held by the Owner as trustee. The Contractor shall require similar waivers by Sub-contractors and Sub-subcontractors in accordance with Subparagraph 4.3.1.

ARTICLE 11

REQUEST FOR INFORMATION

11.1 GENERAL

11.1.1 Request for Information Submittal

1. The Contractor shall submit requests for information for conditions requiring clarification of the Contract Documents utilizing the RFI form provided by the Engineer included in the bid documents. The Engineer will not respond to requests for information unless this format is utilized and all appropriate information is provided. Faxed or emailed RFIs are acceptable.
2. Do not use Request for Information process during bidding phase. For questions during bidding phase, refer to Invitation to Bid issued by the Engineer or Owner.
 - A. Subcontractors, manufacturers, and suppliers shall submit request for additional information and clarification to the prime Contractor. The Contractor shall then submit to the Engineer as provided in this section.

- B. Contractor shall contact the Engineer, as applicable, with requests for additional information or clarification. The Engineer will not accept requests for information or clarification submitted directly from subcontractors, manufacturers, or suppliers.
- C. The Engineer will provide a response to Contractor within three (3) working days of receipt of the RFI submitted per this section.
- D. The Engineer response shall not be considered as a Change Order or Change Directive, nor does it authorize changes in the Contract Sum or Contract Time.

ARTICLE 12

CHANGES IN THE WORK

12.1 CHANGE ORDERS

12.1.1 The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, with the Contract Sum and the Construction Schedule being adjusted in accordance with the Owner-Contractor Agreement. All such changes in the Work shall be authorized by Change Order, and shall be executed and performed under the applicable conditions of the Contract Documents.

12.1.2 A Change Order is a written order to the Contractor signed by the Owner, issued after the execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Construction Schedule. The Contract Sum and the Contract Time may be changed only by Change Order. The Contractor shall receive no compensation or extension of time for performing any additional or extra work unless Contractor receives a written Change Order or other written direction signed by the Owner before performing such work.

12.1.3 The cost or credit to the Owner resulting from a change in the Work shall be determined in accordance with the Owner-Contractor Agreement.

12.2 MINOR CHANGES IN THE WORK

12.2.1 The Owner shall have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or the Construction Schedule and not inconsistent with the intent of the Contract Documents. Such changes may be effected by written Field Order or by other written order. Such changes shall be binding on the Owner and the Contractor.

12.3 CLAIMS AND DISPUTES

12.3.1 If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the Owner written notice thereof within seven (7) days after the occurrence of the event-giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the Work. No such claim shall be valid unless so made. If the Owner and the Contractor cannot agree on the amount of the adjustment in the Contract Sum, it shall be determined in accordance with Paragraph 12.3.5. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

12.3.2 The Contractor shall carry on the Work and adhere to the Construction Schedule pending all disputes or disagreements with the Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements. The Owner agrees to pay the Contractor, in accordance with the Contract Documents, for Work performed that is not subject to dispute or disagreement.

12.3.3 If conditions are encountered at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, then the Contractor shall give written notice thereof to the Owner before the conditions are disturbed and in no event later than seven (7) days after first observance of the conditions. The Owner will promptly investigate such conditions and, if they differ materially from those indicated in the Contract Documents and cause an increase or decrease in the Contractor's cost of or time required for performance of the Work, will adjust the Contract Sum or the Contract Time, or both. If the Owner and the Contractor cannot agree on the amount of the adjustment to the Contract Sum or the Contract Time, it shall be determined in accordance with Paragraph 12.3.5.

12.3.4 If the Contractor wishes to make a claim for an increase in the Contract Time, he shall give the Owner written notice thereof within seven (7) days after the occurrence of the event-giving rise to such claim. Adjustment to the Contract Time shall be in accordance with Article VI of the Owner-Contractor Agreement.

12.3.5

1. All claims, counterclaims, disputes and other matters in question between the parties hereto arising out of or relating to this Agreement or the breach thereof will be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. This Agreement to arbitrate and any other agreement or consent to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction. The location of the arbitration will be **Saint Charles County, Missouri**.
2. Notice of demand for arbitration must be filed in writing with the other party to this Agreement and with the American Arbitration Association. The demand must be made within a reasonable time after the claim, dispute or other matter in questions has arisen. In no event may the demand for arbitration be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations.
3. No arbitration arising out or related to this Agreement shall include, by joinder, consolidation or other manner, any person not a party to this Agreement.
4. The award rendered by the arbitrators will be final, judgment may be entered upon it in any court having jurisdiction thereof, and will not be subject to modification or appeal except to the extent permitted by Sections 10 and 11 of the Federal Arbitration Act (9 U. S. C. Sections 10 and 11).
5. Unless otherwise agreed in writing, Contractor shall carry on the Work and maintain its progress during any arbitration proceedings, and the Owner shall continue to make payments to Contractor in accordance with this Agreement. This Paragraph 11.3.5 shall survive completion or termination of this Agreement.
6. Prior to the exercise of any rights or remedies described in this Paragraph, Owner and Contractor agree that if any claim or dispute arising out of this Agreement or the breach cannot be settled through direct discussions, they agree to first endeavor to settle the claim or dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association then in effect.

ARTICLE 13

UNCOVERING AND CORRECTION OF WORK

13.1 UNCOVERING OF WORK

13.1.1 If any Work should be covered contrary to the request of the Owner, it must, if required by the Owner, be uncovered for his observation and replaced, at the Contractor's expense.

13.1.2 If any Work has been covered which the Owner has not specifically requested to observe prior to being covered, the Owner may request to see such Work and it shall be uncovered by the Contractor. If such Work is found to be in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such costs.

13.2 CORRECTION OF WORK

13.2.1 The Contractor shall promptly correct all Work rejected by the Owner as defective or as failing to conform to the Contract Documents, whether observed before or after substantial completion of the Work, and whether or not fabricated, installed or completed. The Contractor shall bear all cost of correcting such rejected Work.

13.2.2 All such defective or non-conforming Work under Subparagraphs 13.2.1 shall be removed from the site if necessary, and the Work shall be corrected to comply with the Contract Documents without additional cost to the Owner.

13.2.3 The Contractor shall bear the cost of making good all work of separate contractors destroyed or damaged by such removal or correction.

13.2.4 If the Contractor fails to correct such defective or non-conforming Work, the Owner may correct it in accordance with Paragraph 2.3.

13.3 ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK

12.3.1 If the Owner prefers to accept defective or non-conforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the Contract Sum or, if the amount is determined after final payment, it shall be paid by the Contractor.

ARTICLE 14

SPECIAL PROVISIONS

14.1 PRECONSTRUCTION CONFERENCE

14.1.1 A preconstruction conference may be held prior to the issuance of a Notice to Proceed with the Work. This meeting will be attended by the Contractor, the Owner, and the Owner's representative. The meeting date will be established after the taking of bids and at a time convenient to all parties.

14.2 SEQUENCE OF WORK

14.2.1 A schedule of the Contractor's Work shall be submitted to the Owner for approval as required under Article V of the Owner-Contractor Agreement. It shall contain a listing of the order in which the Contract items will be constructed and the approximate dates for starting and finishing each Contract item.

14.2.2 The Contractor shall furnish the Owner his proposed sequence and schedule for the completion of all Work for their review and approval prior to the time of the preconstruction conference. The Owner shall have the right to specify the order of construction as deemed necessary.

14.3 CONSTRUCTION LIMITS

14.3.1 The construction limits consist of the property for the project site, easements and areas defined on the plans. The Contractor shall limit his operation accordingly.

14.4 ALTERED QUANTITIES

14.4.1 The Owner reserves the right to make changes in plan details which may vary the accepted quantities from those shown on the Bid Form.

14.4.2 The Contractor shall accept, as payment in full, payment at the original Contract unit bid prices for the accepted quantities of work done. No allowance will be made for any increase expense or loss of expected profit suffered by the Contractor resulting directly from such altered quantities or indirectly from expenses derived by handling small quantities of materials or performing operations within restricted areas. No allowance shall be made for any increased expense or loss of expected profit suffered because of the anticipated use of specific equipment which was not used.

14.5 ADDITIONS TO CONTRACT

14.5.1 Unit prices in this Contract may be used to negotiate a Change Order for additional work involving similar projects.

14.6 PURCHASE OF MATERIALS AND EQUIPMENT

14.6.1 Sales to contractors who purchase construction materials and supplies to fulfill their contracts for exempt organizations are not subject to sales tax provided the exempt organizations furnish a copy of their current Exemption Letter and a project Exemption Certificate to the contractor authorizing the purchases for the project. The exempt organization may monitor all supplies purchased, used, and consumed in fulfilling the project.

14.6.2 A project Exemption Certificate shall include, but may not be limited to, the following:

1. The exempt entity's name, address, Missouri Tax Identification Number and signature of authorized representative of the exempt entity;
2. The project location, description and unique identification number;
3. Date the Contract is entered into;
4. The estimated project completion date; and
5. The certificate expiration date.

14.6.3 Contractors must provide a copy of the exempt organization's Exemption Letter and the project Exemption Certificate to suppliers when purchasing materials and supplies to be consumed in the project.

14.6.4 Contractors are not exempt from sales tax on the purchase of machinery, equipment or tools used in fulfilling these contracts.

14.6.5 Suppliers shall render to the Contractor invoices bearing the name of the exempt organization and the project identification number. These invoices must be retained by the purchasing Contractor for a period of five (5) years.

14.6.6 Contractors must file a sales tax return for all excess resalable materials and supplies which are not returned to the supplier. This return must be filed and paid not later than the due date of the Contractor's sales tax return following the month in which the contractor determines that the materials were not used in the project.

14.6.7 An exempt organization that fails to revise the project Exemption Certificate expiration date as necessary to complete any Work required by the Contract will be liable for any sales tax due as determined by an audit of the Contractor.

14.7 TESTING

14.7.1 Materials Testing and Inspection Service: Owner may employ and pay for a qualified independent materials and geotechnical testing laboratory to perform testing and inspection service during construction operations. Contractor shall coordinate all Work and cooperate to allow for testing procedures as required by the Owner.

14.8 TECHNICAL SPECIFICATIONS

14.8.1 Where the term "Standard Specifications" is used, this is a reference to the technical specifications provided in the contract documents.

14.9 SURVEY

14.9.1 The Contractor shall be responsible for providing all necessary survey and staking required for the project.

14.10 AS-BUILTS

14.10.1 Required for all storm sewer on the project.

JOB SPECIAL PROVISIONS**A. GENERAL**

1. All material and work specified under this Contract shall be paid for as outlined and bid in the Bid Proposal. Work for each item shall include the furnishing and installation of all materials required for the completed workable project including excavation and providing all necessary barricades and traffic control to complete the project as outlined in the Plans and Specifications.

B. MEASUREMENT AND PAYMENT

1. MEASUREMENT OF QUANTITIES. All materials and items to be paid for on the basis of measurement shall be measured and determined by the Engineer in accordance with the Drawings and Specifications, or as authorized by the Owner. No direct measurement will be made unless an error is suspected.
2. Work or materials involved in lump sum payments will not be measured, but will be paid as described in the Project Drawings and Specifications.
3. LIMITATION ON PAY QUANTITIES. Quantities of materials wasted or disposed of in a manner not called for under the Contract, including rejected loads of material not unloaded from vehicles, material rejected after it has been placed, material placed outside of pay lines and material remaining on hand after completion of the work, will not be paid for and will not be included in the final pay quantities. No compensation will be allowed for disposing of rejected or excess material.
4. SCOPE OF PAYMENT. The Contractor shall accept the compensation as herein provided in full payment for furnishing all materials, labor, services, supervision, tools and equipment necessary to complete the Work; and for performing all Work contemplated and embraced under the contract; and for loss or damage arising from the nature of the Work or from the action of the elements, except as herein before provided; or from any unforeseen difficulties which may be encountered during the execution of the Work until the acceptance by the Owner; and for all risks of every description connected with the execution of the Work; and for all expenses incurred in consequent of the suspension or discontinuance of the Work as herein specified; and for completing the Work according to the Drawings and Specifications. The payment of any estimate or of any retained percentage shall not relieve the Contractor of any obligation to replace or to make good any defective Work or material.

C. ALTERED QUANTITIES

1. The Owner reserves the right to make changes in plan details which may vary the accepted quantities from those shown on the Itemized Bid Form.
2. The Contractor shall accept, as payment in full, payment at the original Contract unit bid prices for the accepted quantities of work done. No allowance will be made for any increase expense or loss of expected profit suffered by the Contractor resulting directly from such altered quantities or indirectly from expenses derived by handling small quantities of materials or performing operations within restricted areas. No allowance shall be made for any increased expense or loss of expected profit suffered because of the anticipated use of specific equipment which was not used.

D. CONTRACTORS DAILY WORK SCHEDULE

1. In all cases, the Contractor shall notify the Engineer sufficiently in advance of operations, in order to provide for suitable inspection of the preparation work performed by the Contractor. In no case shall the Contractor be permitted to begin operations without prior approval by the Engineer.
2. The Engineer shall be notified as soon as practical of any postponement due to weather, material or other circumstances.
3. Work hours will be 7:00 a.m. through 7:00 p.m., Monday through Friday.
4. The contractor shall submit the entire and completed project construction schedule to the Engineer one week prior to the pre-construction meeting. The schedule will specifically identify the order of the work, and will be used as a tool to communicate the order and phasing of construction activities with the residents, property owners, and business owners in the area.

E. STREET CUTS LANE CLOSURES

1. Temporary lane closures will be allowed during construction operations for curb and gutter installation, trail installation, and striping.
2. The Contractor will be required to provide a minimum of two competent flagmen during excavation, installation, and backfilling of open street cuts. Channelizers will be required along the street cut. One lane of roadway, with two-way traffic, shall be maintained at all times during street cut activities. See sheet DE-3 for detail of appropriate signage types and locations.

F. RELOCATIONS AND ADJUSTMENTS TO GRADE

1. Contractor shall relocate all existing signs, planters, mailboxes, and private lights as necessary for the construction of the improvements. New locations shall be as directed by the engineer. See the removal of improvements section in the specifications.
2. Contractor shall adjust to grade all utilities necessary to bring the utility to the grade of the new pavement. See the utility adjustment section of the specifications.

G. REMOVAL OF IMPROVEMENTS

1. The Contractor shall furnish all labor, equipment and materials to complete the removal of all needed existing items as shown on the plans, outlined in Specification Section 2000 or as encountered during the project.
2. It is anticipated the contractor will need to remove curbs for ADA accessible ramps, various plantings and shrubs, trim treeline and any other existing trees within the trail limits and remove all other items encountered for construction of the trail.
3. All labor, materials, and equipment used in the execution of this pay item will be paid for at the contract unit price of lump sum.

H. ASPHALT TRAIL

1. Contractor shall install 1.5" BP-1 Asphalt on 2.5" of Base Course Asphalt. The asphalt pavement shall be installed in 2 lifts. See detail on sheet DE-1.

I. DETECTABLE WARNING DEVICE

1. The Contractor shall install new detectable warning devices between the new sidewalk and existing road, in accordance to the detail on sheet DE-2 and DE-3. Payment for this work shall be at the unit price as herein indicated. This work includes furnishing and placing all materials, furnishing equipment, labor, tools and incidentals necessary to complete these items.

J. RETAINING WALL

1. The retaining wall for this project shall be a modular block retaining wall system. The retaining wall shall include design by a professional engineer for either the Contractor or the wall supplier. The item shall include all necessary material, labor, and equipment required to provide the wall according to the plans, including, wall blocks, cap blocks, wall foundation, wall reinforcement material, backfill, drainage system, etc. This item shall be paid for on a per square foot of exposed wall face and does not include the buried block, foundation, and other necessary items in the per square foot price of the wall.

K. ALTERNATE NO. 1 – 8 FOOT TRAIL WIDTH

1. If Alternate No. 1 is accepted the typical trail width will be reduced to 8 feet wide unless otherwise noted in plans.

L. UTILITY CONFLICTS

1. The contractor must call the appropriate utility company at least 48 hours before any excavation to request exact field location of utilities. Location, relocation and connection for the utilities shall be coordinated with the utility companies
2. In the event that it is determined that there is a previously unknown conflict with an existing Utility, the Contractor shall immediately stop work at that location and notify the City and/or Utility.
3. The Contractor will be required to coordinate with the conflicting Utility as necessary to remedy the conflict.
4. No direct payment will be given for the coordination beyond that which is already provided for with existing unit cost bid items; however, the Contractor will be given additional calendar days based on the duration of time that it takes the Utility Company to relocate their facilities.

M. DUST CONTROL

1. The Contractor shall take all reasonable precautions to avoid the creation of excessive dust as a result of construction operations. Should excessive dust result from the Contractor's operations, or complaints regarding dust be received from private property owners, the Contractor will be required to take immediate corrective action to alleviate and resolve the dust concern. Should any private property be damaged by excessive dust as a result of the Contractor's operations, the damage shall be repaired at the Contractor's expense. No direct payment will be made to the Contractor for any reason of their compliance with this provision.

N. PORTABLE TOILET FACILITIES

1. The Contractor shall furnish and maintain an adequate number of portable restroom facilities of his employees for the duration of the project.

O. RIGHT OF WAY CLEARANCE

1. The right-of-way and temporary construction easements for the project are obtained have been cleared for the use of this project. The right-of-way and temporary construction easements shown on the plans are the working limits of the project. All work to complete the construction of the project shall be completed within the obtained right-of-way and temporary construction easements.

P. CONSTRUCTION SIGNAGE

1. The construction signage for the project shall be provided according to the details on the plans and shall meet current MUTCD standards. All signs shall have a retro reflectorized background and sheeting per the current MUTCD standards. This item shall be paid for on a per each basis and shall include all necessary materials required to provide and install the signs.

Q. TRAFFIC CONTROL

1. The Contractor shall provide traffic control per sheet TC-1 and TC-2 of the plans. This traffic control shall be provided for the duration of the project and shall include all necessary material, labor, flaggers, and equipment required to sufficiently provide the traffic control per the plans to ensure a safe project for vehicular travelers, pedestrians, and workers.

R. CLEANING UP

1. The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. The Contractor shall not "stockpile" any material on the job site.
2. At the end of each work day the Contractor shall remove all remaining waste materials from and about the project as well as all tools, construction equipment, machinery and surplus materials, and shall clean all surfaces (streets, sidewalks, curbs, tree boxes, private property, and cars) and leave the job site "broomclean" or its equivalent. **Failure to comply with this section will result in an immediate Stop Work order.**

S. MOBILIZATION

1. The Contractor shall be paid for the lump sum amount bid for mobilization in accordance with Section 1500 of the Technical Specifications section.

T. COORDINATION WITH PUBLIC SERVICES

1. The Contractor will be responsible to notify: a) school district, b) ambulance district, c) fire and police, d) the City's Trash Hauler and e) the United States Postal Service of the construction sequence and schedule. The Contractor shall coordinate trash collection for the residents during construction activities.

U. DRAIN AND GRADE EXISTING BOG

1. The Contractor shall furnish all labor, equipment, materials and tools necessary to ensure appropriate drainage of the existing bog and grade the existing bog per the construction documents.
2. Payment shall be at the unit price herein indicated. This price shall be full compensation for the execution of the pay items indicated including all material, furnishing equipment, labor, tools, and incidentals necessary to complete these items.

V. PERMANENT SIGNAGE

1. The Contractor shall furnish all labor, equipment, materials and tools necessary to install permanent signage. All signage shall meet MUTCD standards at a minimum.
2. Payment shall be at the unit price herein indicated. This price shall be full compensation for the execution of the pay items indicated including all material, furnishing equipment, labor, tools, and incidentals necessary to complete these items.

W. IRRIGATION RESTORATION

1. The Contractor shall furnish all labor, equipment, materials and tools necessary to ensure all disturbed existing irrigation lines are repaired or re-installed. Locate and avoid existing irrigation lines as possible.
2. Payment shall be at the unit price herein indicated. This price shall be full compensation for the execution of the pay items indicated including all material, furnishing equipment, labor, tools, and incidentals necessary to complete these items.

X. CONTRACTOR FURNISHED STAKEOUT

1. The Contractor shall furnish all labor, equipment, materials and tools necessary to perform staking of survey points.
2. Payment shall be at the unit price herein indicated. This price shall be full compensation for the execution of the pay items indicated including all material, furnishing equipment, labor, tools, and incidentals necessary to complete these items.

Y. LIGHT POLE (RELOCATE EXISTING)

1. The Contractor shall furnish all labor, equipment, materials and tools necessary to relocate an existing light pole. Locate all existing utilities prior to excavation of the new location.
2. Payment shall be at the unit price herein indicated. This price shall be full compensation for the execution of the pay items indicated including all material, furnishing equipment, labor, tools, and incidentals necessary to complete these items.

Z. LANDSCAPE RESTORATION

1. The Contractor shall furnish all labor, equipment, materials and tools necessary to provide landscape restoration. All landscaping should match previous landscaping, unless approved otherwise.

2. Payment shall be at the unit price herein indicated. This price shall be full compensation for the execution of the pay items indicated including all material, furnishing equipment, labor, tools, and incidentals necessary to complete these items.

AA. BLACK ALUMINUM FENCE

1. The Contractor shall furnish all labor, equipment, materials and tools necessary to install black aluminum fence.
2. Payment shall be at the unit price herein indicated. This price shall be full compensation for the execution of the pay items indicated including all material, furnishing equipment, labor, tools, and incidentals necessary to complete these items.

BB. STORAGE OF EQUIPMENT

1. Equipment and materials shall be stored at locations as directed and approved by the Engineer.

CC. INCIDENTAL ITEMS

1. All items not listed above shall be considered incidental to the contract.
2. Contractor to provide all work and materials necessary to render the site complete.

STATE PREVAILING WAGES



CONSTRUCTION REQUEST FOR INFORMATION

RFI #:	
PROJECT:	
SUBMITTED DATE:	
SUBMITTED BY:	
INFORMATION REQUESTED:	
ATTACHMENTS:	

RESPONSE DATE:	
RESPONSE FROM:	
RESPONSE:	
ATTACHMENTS:	

END OF CONSTRUCTION RFI

SECTION 1000 - COORDINATION AND SITE CONDITIONS1. GENERAL

- A. Requirements for coordinating and sequencing the work under the Contract and requirements regarding existing site conditions.

2. SITE CONDITIONS

A. Information on Site Conditions:

1. General: Information obtained by the Owner regarding site conditions, topography and subsurface information obtained by the Engineer's investigation of surface and subsurface conditions, shall be considered part of the Contract Documents. Neither the Engineer nor the Owner assumes any responsibility for its accuracy or completeness or for the Contractor's interpretation of such information.

B. Existing Utilities and Facilities:

1. Location:

- a. Known utilities and facilities adjacent to or within the work area. Contractor's request for additional compensation or Contract time resulting from encountering utilities will be considered incidental to the contract. Excessive delays that affect the "critical path" of project scheduling shall be considered for contract time extensions and additional compensation. This decision shall be made by the Owner.
- b. Contractor shall exercise reasonable care to verify locations of utilities and facilities and to determine the presence of those. Immediate and adjacent areas where excavations are to be made shall be thoroughly checked by visual examination for indications of underground facilities, and also checked with electronic metal and pipe detection equipment. Where there is reasonable cause to verify the presence or absence of an underground facility, make exploratory excavations prior to proceeding with major excavation in the area.
- c. Contractor shall call 1-800-344-7483 (Missouri One Call) for location of underground utilities prior to beginning any excavation work on this project.

2. Preconstruction Survey and Monitoring:

- a. After the Contract is awarded and before starting the work, the Contractor shall perform a preconstruction survey of the site. Make a thorough examination, providing color photographs, and a color video in a format approved by the Owner and Engineer of all existing buildings, structures and other improvements which might be damaged by the Contractor's operations. The examination shall be made jointly by representatives of the Contractor, the Owner and the Engineer. The scope of the examination and photographs shall include cracks in structures, settlement, leakage, and similar conditions. The Contractor shall be responsible for all documentation, including videocassettes, photos, etc.
- b. Records of all observations shall be prepared in triplicate by the Contractor. Two copies of each document and photograph and one copy of the video shall be provided to the Engineer.
- c. The above records and photographs are intended for use as evidence in ascertaining the extent of any damage, which may occur as a result of the Contractor's operations and are for the protection of the Contractor and the Owner. The records will provide a means of determining whether and to what extent damage may have occurred as a result of the Contractor's operations. The records will also be utilized to guide the restoration phase of this project.

3. Contractor's Responsibilities:

- a. Contractor shall call 1-800-344-7483 (Missouri One Call) for location of underground utilities prior to beginning work on this project.

- b. Where Contractor's operations could cause damage or inconvenience to railway, telegraph, telephone, television, power, oil, gas, water, sewer, or irrigation systems, the Contractor shall make arrangements necessary for the protection of these utilities and services. Replace existing utilities removed or damaged during construction, unless otherwise provided for in these Contract Documents.
 - c. Notify utility offices that are affected by construction operations at least 72 hours in advance. Under no circumstances expose any utility without first obtaining permission from the appropriate agency. Once permission has been granted, locate, expose, and provide temporary support for the utilities.
 - d. Contractor shall be solely and directly responsible to Owner and operator of such properties for damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of injuries or damage which may result from construction operations under this Contract.
 - e. Neither Owner nor its officers or agents shall be responsible to Contractor for damages as a result of Contractor's failure to protect utilities encountered in the work.
 - f. In event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental damage due to construction operations, promptly notify the proper authority. Cooperate with said authority in restoration as promptly as possible and pay for repair. Prevent interruption of utility service unless granted by the utility owner.
- C. Interfering Structures:
1. Take necessary precautions to prevent damage to existing structures whether on the surface, aboveground, or underground.
 2. Protect existing structures from damage, whether or not they lie within limits of easements obtained by the Owner. Where existing fences, gates, barns, sheds, buildings, or other structure must be removed to properly carry out work, or are damaged during the work, restore them to original condition and to the satisfaction of property Owner.
 3. Contractor may remove and replace in equal or better than original condition, to the Owner's satisfaction, small structures such as fences, and signposts that interfere with Contractor's operations, with the prior notification and approval of the Owner.

3. PROJECT MEETINGS

- A. Progress Meetings: Engineer will schedule regular progress meetings to review work progress, schedules, and other matters needing discussion and resolution.
- B. Coordination Meetings: The Engineer will conduct coordination meetings between the Contractor, Owner, and the Engineer for the purposes of discussing and resolving various project elements requiring interface or coordination with the Owner's treatment.
- C. Time of Work: No work shall be done between 7:00 p.m. and 7:00 a.m., or on Sundays or legal holidays, without prior approval of the Owner. However, maintenance or emergency work during these hours may be done without prior permission.
- D. Overtime Notice: If Contractor for convenience should desire to carry on work at night or outside regular hours, submit written notice to the Engineer and allow ample time for satisfactory arrangements to be made for inspecting work in progress. No additional compensation will be provided.

4. PAYMENT

- A. General:
 1. Payment for work in this section will be considered as incidental to the contract.
 2. Any extension of contract time that may be granted by the Owner will not of itself constitute a claim for additional payment for work under this section.

END SECTION 1000

SECTION 1100 - SUBMITTALS1. GENERAL

- A. Requirements and procedures necessary for scheduling, preparation, and submission of submittals.
- B. Individual specifications sections in these Contract Documents contain additional and special submittal requirements.

2. SUBMITTAL PROCEDURES

- A. Owner reserves the right to modify the procedures and requirements for submittals, as necessary to accomplish the specific purpose of each submittal. Direct inquires to Engineer regarding the procedure, purpose, or extent of any submittal.
- B. Review, acceptance, or approval of substitutions, schedules, shop drawings, lists of materials, and procedures submitted or requested by Contractor shall not add to the Contract amount, and additional costs, which may result therefrom, shall be solely the obligation of Contractor.
- C. Owner is not precluded, by virtue of review, acceptance, or approval, from obtaining a credit for construction savings resulting from allowed concessions in the work or materials therefore.
- D. Owner is not responsible to provide engineering or other services to protect Contractor from additional costs accruing from such approvals.
- E. The Contractor shall submit four (4) copies or an electronic submittal of all technical shop drawings unless otherwise indicated.

3. ADMINISTRATIVE SUBMITTALS

- A. Provide administrative submittals required by the Instructions to Bidders, General Conditions, Job Special Provisions, and as may be specifically required in other parts of the Contract Documents.

4. SHOP DRAWINGS

A. General:

- 1. Shop drawings, as defined herein, consist of all drawings, diagrams, illustrations, schedules, and other data which are specifically prepared by or for the Contractor to illustrate some portion of the work; and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams, and other information prepared by a manufacturer and submitted by Contractor to illustrate material or equipment for distinct portions of the work. The Contractor shall submit, as applicable, the following for all prefabricated or manufactured structural, mechanical, electrical, plumbing, process systems, and equipment:
 - a. Shop drawings or equipment drawings, including dimensions, size and location of connections to other work, and weight of equipment.
 - b. Catalog information and cuts.
 - c. Complete manufacturer's specifications, including materials description and paint system.
 - d. Suggested spare parts list with current price information.
 - e. List of special tools required for checking, testing, parts replacement, and maintenance (special tools are those which have been specifically designed or adapted for use on parts of the equipment, and which are not customarily and routinely carried by maintenance mechanics).
 - f. List of special tools furnished with the equipment.
 - g. List of materials and supplies furnished with the equipment.

- h. Requirements for storage and protection prior to installation.
 - i. Requirements for installation and recommended installation procedures.
 - j. List of all spare parts and tools that shall be provided to the Owner.
2. Submittal of incomplete or unchecked shop drawings will not be acceptable. Shop drawing submittals, which do not clearly show Contractor's review stamp or specific written indication of Contractor review will be returned to Contractor for resubmission.
 3. Shop drawing submittals processed by Engineer do not become Contract Documents and are not Change Orders; the purpose of shop drawing review is to establish a reporting procedure and is intended for Contractor's convenience in organizing the work and to permit Engineer to monitor Contractor's progress and understanding of the design.
 4. Delays caused by the need for resubmittal shall not constitute basis for claim.
 5. Each submittal will receive up to two reviews by the Engineer at no cost to the Contractor. If a given submittal fails to reach a completed status (reviewed and marked "No Exceptions Taken" or "Make Corrections Noted") on the second submittal, the Contractor shall have the costs associated with further reviews by the Engineer deducted from the contract amount. These costs will be computed based on the Engineer's actual direct labor costs, indirect labor costs, plus profit.
 6. Sequentially number the transmittal forms; resubmittals to have original number with an alphabetic suffix.
 7. Identify project, Contractor, specification section number, pertinent drawing sheet and detail number(s), products, units and assemblies, and the system or equipment identification or tag number as shown.
 8. Apply Contractor's stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with requirements of the Contract Documents.
 9. Transmit submittals in accordance with finalized schedule of submittals, and deliver to:

Cochran
8 East Main Street
Wentzville, Missouri 63385
 10. Provide space for Engineer review stamp.
 11. Revise and resubmit submittals as required; identify all changes made since previous submittal.
 12. Submittals will be acted upon by Engineer and transmitted to Contractor not later than 10 working days after receipt by Engineer.
 13. When shop drawings have been reviewed by Engineer, two copies will be returned to Contractor appropriately annotated. When required by the Engineer's review comments, correct and resubmit the shop drawings in the same manner and quantity as specified for the original submittal.
 14. If major changes or corrections are necessary, shop drawings may be rejected and one set will be returned to Contractor with general direction on the requirements of a reviewable submittal.

6. SAMPLES AND TEST SPECIMENS

- A. Where required in the specifications, and as determined necessary by Engineer, submit test specimens or samples of materials, appliances, and fittings to be used or offered for use in connection with the work. Include information as to their sources, prepay cartage charges, and submit such quantities and sizes for proper examination and tests to establish the quality or equality thereof, as applicable.
- B. Submit samples and test specimens in ample time to enable Engineer to make tests or examinations necessary, without delay to the work.

- C. Submit additional samples required by Engineer to ensure equality with the original approved sample and/or for determination of specification compliance.
- D. Tests required by the specifications to be performed by an independent laboratory shall be made by a laboratory licensed or certified in accordance with state statutes.
 - 1. Submit certified test results of specified tests in duplicate to Engineer.
- E. Samples and laboratory services shall be at the expense of Contractor and included in the prices bid for the associated work.
- F. Approved sample items (fixtures, hardware, etc.) may be incorporated into the work upon approval and when no longer needed by Engineer for reference.

G. QUALITY CONTROL SUBMITTALS

- A. Manufacturers' Certificate(s): Where Manufacturers' Certificate(s) are required in the specifications, the manufacturer shall provide certification stating the following:
 - 1. The product or system has been installed in accordance with the manufacturer's recommendations.
 - 2. The product or system has been inspected by a manufacturer's authorized representative.
 - 3. Applicable safety equipment has been properly installed.
 - 4. Proper electrical and mechanical connections have been made.
 - 5. Proper adjustments have been made and the product or system is ready for functional testing and operation.
- B. Certification and Compliance:
 - 1. Where specified, furnish certification of compliance for products specified to a recognized standard or code prior to the use of such products in the work.
 - a. Engineer may permit use of certain materials or assemblies prior to sampling and testing if accompanied by a certification of compliance.
 - b. Certifications shall be signed by the manufacturer of the product; state that the components involved comply in all respects with the requirements of the specifications.
 - c. Furnish certification of compliance with each lot delivered to the jobsite and clearly identify the lot so certified.
 - 2. Products used on the basis of a certification of compliance may be sampled and tested at any time. The fact that a product is used on the basis of a certification of compliance shall not relieve Contractor of responsibility for incorporating products in the work, which conforms to requirements of the Contract Documents. Products not conforming to such requirements will be subject to rejection whether in-place or not.
 - 3. Engineer reserves the right to refuse permission for use of products on the basis of a certification of compliance.

7. CONSTRUCTION PHOTOGRAPHS

- A. The Owner and/or his authorized agents will take construction progress photographs as the work progresses. The Contractor will be advised of the Owner's schedule and may accompany the Owner's photographer. One copy of the construction progress photographs will be provided to the Contractor upon request. The Owner/Engineer reserves all rights to take other photographs and videotapes of the construction work.

8. PAYMENT

A. General:

1. Payment for work in this section will be considered as incidental to the contract.
2. Any extension of contract time that may be granted by the Owner will not of itself constitute a claim for additional payment for work under this section.

END SECTION 1100

SECTION 1200 - PROGRESS SCHEDULES1. GENERAL

- A. Detailed scheduling requirements and procedures including preparation and overall schedule.
- B. Preconstruction conference requirements.
- C. Monthly progress report requirements.

2. SUBMITTALS

- A. Submit the following items as specified in this section:
 - 1. Overall schedule
 - 2. Network diagrams
 - 3. Progress reports

3. PROGRESS OF THE WORK

- A. General:
 - 1. Execute work with such progress as necessary to prevent delay to the overall completion of the project.
 - 2. Execute work at such times and on such parts of the project, and with such forces, materials, and equipment, to assure completion in the time established by the Contract.

4. PRECONSTRUCTION CONFERENCE

- A. A preconstruction conference shall be held as soon as possible after the award of the Contract but before the Notice to Proceed. Contractor shall meet with Owner and Engineer for discussion of scheduling requirements, procedures for handling shop drawings and other submittals, processing application for payment, and establishing a working understanding among the parties. The conference shall be held at the jobsite or at a location selected by the Owner. The conference shall be attended by:
 - 1. Contractor's office representative.
 - 2. Contractor's general superintendent.
 - 3. Subcontractor's representative whom Contractor may desire or Engineer may request to attend.
 - 4. Engineer's representative.
 - 5. Owner's representative.

5. OVERALL SCHEDULE

- A. General:
 - 1. Contractor shall prepare and submit, within 10 days after the award of Contract, an Overall Schedule comprised of all construction operations in connection with the Contract.
 - 2. Overall Schedule shall indicate the sequence of work, by phase and by station, and the time of starting and completion of each activity. Activities shall include, but not be limited to, the following items as they pertain to the Contract.
 - a. Each subcontractor's items of work.
 - b. Shop drawing submittal from Contractor, checking and coordination, submittal to the Engineer, review, and return to Contractor.

- c. Material and equipment order, manufacture, delivery, installation, and checkout.
 - d. Move in and site preparation.
 - e. Backfilling, grading, seeding, paving, etc.
 - f. Final cleaning.
 - g. Allowable for inclement weather.
3. The Overall Schedule shall show all stipulated milestone dates, constraints, substantial completion and final completion dates.
- B. Network Diagram:
1. The Contractor shall submit a time-scaled network diagram as part of the Overall Schedule. Draw or print the network diagram on reproducible paper, not larger than 24 inches by 36 inches, and show the sequence and interdependence of activities required for complete performance of all items of work.
 2. Produce a legible and accurate diagram. Group activities related to a specific physical area of the project for ease of understanding and simplification. Label each activity with a complete description as well as estimated duration in working days.
 3. Activity durations shall be not less than 1 day or more than 30 working days, unless otherwise approved by the Engineer, except for Engineer's submittal review and material and equipment fabrication/delivery.
 4. Indicate critical path of activities on the network diagram.
 5. Contractor(s) shall not be permitted to sequester shared float through such strategies as extending duration estimates to consume available float time, extensive crew/resource sequencing, etc.
- C. Schedule Reports:
1. Prepare schedule listings of the information in the network diagram in tabular format, sorted according to:
 - a. Early-start, within responsibility.
 - b. Early-start.
 - c. Activity number sequence.
 - d. Activity number sequence with predecessor and successor activity.
 2. Schedule listings shall show activity numbers, description, responsibility, total duration in workdays, percent complete, early-start date, late-start date, early-finish date, and total float for each activity in the network diagram.
 3. Overall Schedule and subsequent revisions shall reflect actual progress of the project to within 5 working days prior to submittal. The Contractor shall sign and submit three copies of the initial Overall Schedule and each revision.
 4. If initial submittal or a subsequent revision does not meet the requirements specified, Contractor shall revise the Overall Schedule and resubmit until it is acceptable to the Engineer. Failure to submit and adequately update the Overall Schedule, including network diagram and schedule reports, will be considered cause for withholding partial payments otherwise due under the Contract.
- D. Progress Reports:
1. Once each month on a date mutually agreed upon by the Contractor, Owner and Engineer, a jobsite progress meeting will be held at which time the schedule will be reviewed. Immediately prior to the

meeting, Contractor shall obtain the necessary information to update the Overall Schedule to reflect progress to date. Furnish sufficient copies of the updated schedule at the meeting for review.

2. In updating the schedule, progress will be reviewed:
 - a. To identify those activities started and completed during the previous period.
 - b. For remaining duration, from the date of update, required to complete each activity started but not completed.
 - c. For review of remaining durations for selected activities not yet started.
 - d. For addition of Change Orders and proposed sequencing changes to the network diagram and schedule listings.
3. At least once each month, and utilizing data accumulated during the previous joint Owner-Engineer-Contractor reviews, the Contractor shall revise the network diagram and the Overall Schedule and generate updated schedule reports. Also, revise and submit the network diagram and schedule reports when one of the following conditions occur:
 - a. Delay in completion of a work item or sequence of work items causes an estimated extension of project completion by 15 or more working days.
 - b. Delays in submittals, deliveries, or work stoppages are encountered which require replanning rescheduling of work.
 - c. Schedule no longer represents actual prosecution and progress of work.
4. Whenever revised scheduling documents are submitted, they shall be accompanied by a written Narrative Report which shall:
 - a. Describe amount of progress since the last revision in terms of activities started, continuing, and completed.
 - b. Describe problem areas, current and anticipated delay factors, and their estimated impact on performance of other activities and completion dates.
 - c. Explain corrective action taken or proposed.

E. Correcting Delays:

1. If at any time during the project the Contractor fails to complete an activity by its latest scheduled completion date, which late completion will impact the end date of the work part of the Contract completion date, submit within 7 calendar days plans to reorganize the work force to return to the current schedule.
2. The Owner may require Contractor to add construction forces, as well as increase working hours, if operations fall behind schedule at any time.
3. Addition of equipment or construction forces, increasing working hours, or other method, manner, or procedure to return to the contractually required completion date will not be justification for Contract modification.
4. Contractor shall plan, schedule, and coordinate construction operations and activities in a manner that will facilitate progress of work.

6. PAYMENT

A. General:

1. Payment for work in this Section will be considered incidental to the contract.
2. Any extension of contract time that may be granted by the Owner will not of itself constitute a claim for

additional payment for work under this section.

END SECTION 1200

SECTION 1300 - PRODUCT SHIPMENT, HANDLING, STORAGE & PROTECTION1. GENERAL

- A. Requirements and procedures for work necessary for shipment handling, storage, and protection of material and equipment products.

2. SUBMITTALS

- A. Contractor shall submit the following:

1. Assembly instructions for parts shipped unassembled.
2. Manufacturer's instructions for unloading, handling, storage, and protection prior to installation, with each shipment of each product type.
3. Copy of manufacturer's notice of shipment for products critical to project schedule.
4. Statements of new products delivered each week.
5. Documentation of products in storage, submitted with each progress payment request.

3. PREPARATION FOR SHIPMENT

- A. Package or crate products to provide protection from damage during shipping, handling, and storage.

1. Mark or tag outside of each package or crate to indicate its purchase order number, bill of lading number, contents by name, name of project and Contractor, equipment number, and approximate weight.

- B. Mark spare parts and special tools to identify the associated products by name, equipment, and part number. Package parts for protection against damage from the elements during shipping, handling, and storage. Ship in boxes or containers marked to indicate the contents and as stated above. Deliver spare parts and special tools before the associated equipment is scheduled for the initial test run.

- C. Where specified for specific product, factory test results shall be reviewed and accepted before such product is shipped.

4. RECEIVING, INSPECTION, AND UNLOADING

- A. Contractor shall record the receipt of products at the jobsite.

- B. Upon receipt of products at the jobsite, Contractor shall inspect for completeness and evidence of damage during shipment.

1. Owner or Engineer and manufacturer's representative may be present for inspection.
2. Should there appear to be damage, notify the Engineer immediately and inform the manufacturers and the transportation company.
3. Expedite replacement of damaged, incomplete, or lost items.

- C. After completion of inspection, unload products in accordance with manufacturer's instructions for unloading, or as specified. Do not unload damaged or incomplete products to be returned to manufacturer for replacement, except as necessary to expedite return shipment.

5. HANDLING, STORAGE, AND MAINTENANCE

- A. Handle products in accordance with the manufacturer's written recommendations, and in a manner to prevent damage.

- B. Store products prior to installation as recommended by the manufacturer.

1. Store items subject to damage by the elements, vandalism, or theft in secure buildings.
 2. Provide environmentally controlled storage facilities for items requiring environmental control for protection.
 - C. Provide manufacturer's recommended maintenance during storage, installation, and until products are accepted for use by Owner.
6. PAYMENT
- A. General:
 1. Payment for work in this section will be considered as incidental to the contract.
 2. Any extension of contract time that may be granted by the Owner will not of itself constitute a claim for additional payment for work under this section.

END SECTION 1300

SECTION 1400 - CONTRACT CLOSEOUT1. GENERAL

- A. Procedures to be followed in closing out the Contract.

2. FINAL SUBMITTALS

- A. No Contract will be finalized until all of the following have been submitted as required in Section 1100, SUBMITTALS:
1. Prevailing Wage Affidavits from Prime Contractor and all Subcontractors. (If applicable)
 2. Affidavit regarding settlement of claims from Prime Contractor and all Subcontractors.
 3. Release from Bonding Companies. (If applicable)
 4. Final shop drawings. (If applicable)
 5. Record drawings. (If applicable)
 6. Manufacturer's certification of proper installation.
 7. Material certification for each item provided stating that it meets the requirements of the Specifications.
- B. No Contract will be finalized until all guarantees, bonds, certifications, licenses, and affidavits required for work or equipment as specified are satisfactorily filed with the Engineer and Owner.

3. RELEASE OF LIENS OR CLAIMS

- A. No Contract will be finalized until satisfactory evidence of release of liens has been submitted to Owner as required by the General Conditions.

4. EXECUTION

- A. FINAL CLEANING. At completion of work and immediately prior to final inspection, clean entire project according to the following provisions:
1. Clean, sweep, wash, and polish work and equipment provided under the Contract, including finishes. Leave the structures and site in a complete and finished condition to the satisfaction of the Engineer.
 2. Should Contractor not remove rubbish or debris or not clean the facilities and site as specified above, the Owner reserves the right to have final cleaning done at the sole expense of the Contractor.
- B. The Contractor shall:
1. Employ experienced workers or professional cleaners for final cleaning.
 2. Conduct final inspection of exposed interior and exterior surfaces and of concealed spaces.
 3. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from exposed interior and exterior finished surfaces; polish surfaces designed to shine finish.
 4. Repair, patch, and touch up marred surfaces to specified finish, and match adjacent surfaces.
 5. Broom clean paved surfaces; rake clean other surfaces.
 6. Remove from the Owner's property temporary structures and materials, equipment, and appurtenances not required as part of, or appurtenant to, the completed work.
 7. Leave watercourses, gutters, and ditches open and in condition satisfactory to Engineer.

5. FINAL INSPECTION

- A. After final cleaning and upon written notice from Contractor that the work is completed, Engineer will make

preliminary inspection with the Owner and Contractor present. Upon completion of preliminary inspection, Engineer will notify Contractor in writing of particulars in which the completed work is defective or incomplete.

- B. Upon receiving written notice from Engineer, Contractor shall immediately undertake work required to remedy defects and complete the work to the satisfaction of Engineer.
- C. After the items as listed in Engineer's written notice are corrected or completed, inform Engineer in writing that required work has been completed. Upon receipt of this notice, Engineer, in the presence of Owner and Contractor, will make final inspection of the project.

6. PAYMENT

A. General:

- 1. Payment for work in this section will be considered as incidental to the contract.
- 2. Any extension of contract time that may be granted by the Owner will not of itself constitute a claim for additional payment for work under this section.

END SECTION 1400

SECTION 1500 – MOBILIZATION AND TRAFFIC CONTROL**1. MOBILIZATION**

Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of all offices, buildings, and other facilities necessary for work on the project except as provided in the contract as separate pay items; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various items on the project site.

A. GENERAL

1. **QUALITY ASSURANCE.** The Engineer shall have the right to reject construction tools, equipment, materials, and supplies that are, in their opinion, unsafe, improper, or inadequate. The Contractor shall bring rejected tools, equipment, materials, and supplies to acceptable conditions or remove them from the project site.
2. **DELIVERY.** Delivery to the project site of construction tools, equipment, materials, and supplies shall be accomplished in conformance with local governing regulations.

B. EXECUTION

1. Provide personnel, construction tools, equipment, materials, and supplies that will facilitate the timely execution of the work. Upon completion of the work, remove construction tools, apparatus, equipment, unused materials and supplies, plants, and personnel from the project site.

2. TRAFFIC CONTROL

A. Traffic control shall consist of furnishing, installing, relocating, maintaining and removing, temporary or permanent traffic control devices in accordance with the contract and as directed by the Engineer. Traffic control shall be the responsibility of the Contractor and shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).

B. Safety Requirements.

1. All workers within highway right of way who are exposed to traffic or construction equipment shall wear high-visibility safety apparel meeting Class 2 or Class 3 requirements of ANSI/ISEA 107-2004 publication entitled, "American National Standard for High-Visibility Safety Apparel and Headwear".
2. All traffic control devices shall be in accordance with the MUTCD and any applicable safety and design codes.
3. The Contractor shall: (a) Designate a trained person at the project level who has the primary responsibility, with sufficient authority, for implementing the traffic management plan and other safety and mobility aspects of the project. The name of that person and a 24-hour contact number for that person shall be provided to the Engineer at the pre-construction meeting. (b) Ensure all Contractor personnel are trained in traffic control to a level commensurate with their responsibilities. (c) Advise the Engineer, as required, at least two working days before any work requiring a lane closure begins and 14 calendar days prior to the imposition of height, width and weight restrictions. (d) Perform quality control of work zones to promote consistency and ensure compliance with contract documents, policies and guidelines.

C. Construction Requirements.

1. Performance and operational aspects of the devices shall be in accordance with the latest editions of the MUTCD and the Missouri Quality Standards for Temporary Traffic Control Devices.

2. All traffic control devices shall be removed as soon as practical when the devices are no longer needed. When work is suspended for short periods of time, traffic control devices that are no longer appropriate shall be turned away from traffic, removed or covered. All temporary traffic control devices shall be removed after the completion of construction and shall remain the property of the Contractor unless specified otherwise. All permanent traffic control devices that are in conflict with temporary traffic control devices shall be covered or removed as shown on the plans or as directed by the Engineer. Upon completion of the work, all permanent traffic control devices to remain in place shall be restored to original condition.
3. All sign covers shall meet the requirements of the MoDOT Quality Standards for Temporary Traffic Control Devices.
4. If the Engineer determines the need for additional traffic control devices, the Contractor will be notified in writing to provide the additional devices at no cost to the project.
5. As soon as possible after observing a traffic control deficiency, the Engineer will report the deficiency to the Contractor, either verbally or in writing. After receiving notification, if the Contractor does not make corrections within 24 hours, suspension of the work may occur. Regardless of the severity of the deficiency, corrections shall be made as soon as possible to maintain a quality work zone.
6. The Contractor shall provide written notice to the Engineer of any pedestrian or vehicular accident when physical evidence or other information suggests an accident has occurred in the work zone. The Contractor shall obtain and provide to the Engineer copies of law enforcement accident reports for any accidents in the work zone.

3. TEMPORARY TRAFFIC CONTROL DEVICES

- A. Scope. This specification covers material to be used for temporary traffic control devices.
- B. General Requirements. All temporary traffic control devices shall be manufactured as shown on the plans and as specified, in accordance with MUTCD requirements and shall be NCHRP 350 compliant. All temporary traffic control devices shall exhibit good workmanship and shall be free of objectionable marks or defects that affect appearance or serviceability.
- C. Channelizers and Tubular Markers. All channelizers and tubular markers shall be manufactured from a non-metallic material, pigmented and molded of a Highway Orange color throughout and stabilized against fading by ultraviolet or other light rays by the incorporation of adequate inhibitors. Drum-like channelizers shall be closed-top. Slim-line channelizers will be acceptable for use on the project.
- D. Signs.
 1. Rigid Signs.
 - (a) Sign Substrate. All signs shall be fabricated of substrate designed to provide satisfactory structural rigidity.
 - (b) Sign Sheeting. All signs shall have a retroreflectorized background. Sheeting shall be applied to the sign substrate in accordance with the manufacturer's recommendations and the surface shall be free of air bubbles, wrinkles or other blemishes as determined by the Engineer.
 2. Roll-up Signs.
 - (a) Sign Substrate. Sign and overlay blanks shall consist of fluorescent orange microprismatic retroreflective sheeting sealed to a heavy-duty coated fabric or vinyl material.

4. MEASUREMENT AND PAYMENT

- A. Mobilization: Partial payments will be allowed on the payment estimates as follows:

1. When 5 percent or more of the original contract amount is earned, 25 percent.
 2. When 10 percent or more of the original contract amount is earned, an additional 25 percent.
 3. When 25 percent or more of the original contract amount is earned, an additional 25 percent.
 4. When 50 percent or more of the original contract amount is earned, the final payment.
 5. Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the contract.
- B. Traffic Control shall be required but considered incidental to the contract.
- C. Any traffic control items, other than those listed in the bid form, necessary to meet the standards of the MUTCD shall be considered incidental to the contract. No direct payment shall be made for additional traffic control items.
- D. Any extension of contract time that may be granted by the Owner will not of itself constitute a claim for additional payment for work under this section.

END SECTION 1500

SECTION 2000 – CLEARING, GRUBBING AND STRIPPING**1. GENERAL**

- A. This section covers the work necessary to removal all interfering or objectionable material from the designated areas of work as shown on the drawings or designated in the specifications.
- B. This work shall also include the preservation from injury or defacement of all vegetation and existing objects designated to remain, as shown or as specified herein.
- C. Review with the Engineer the location, limits, and methods to be used prior to commencing the work under this section.
- D. Provide all equipment and materials, suitable and in adequate quantity, required to accomplish the work as specified herein.

2. DEFINITIONS

- A. Clearing: Clearing shall consist of cutting, removing, and disposing of trees, snags, stumps, shrubs, brush, limbs, and other vegetative growth, and shall be performed in such a manner as to remove all evidence of their presence from the surface and shall be inclusive of sticks and branches greater than 2 inches in diameter or thickness.
- B. Grubbing: Grubbing shall consist of the removal and disposal of wood or root matter up to 18" below the ground surface remaining after clearing and shall include stumps, trunks, roots or root systems greater than 2 inches in diameter or thickness.
- C. Stripping: Stripping shall include the removal and disposal of all organic sod, topsoil, grass and grass roots, and other objectionable material remaining after clearing and grubbing from the areas designated to be stripped. The exact depth of stripping will be adjusted to minimize the amount of topsoil in the strippings.
- D. Disposal: The contractor shall dispose of all trees, stumps, brush, roots and all other objectionable matter removed in the clearing grubbing and stripping process. Open burning will not be allowed.

3. MEASUREMENT

- A. Final measurement of Clearing, Grubbing and Stripping will be based on the field established plan quantity except for authorized changes during construction. The revision or correction will be computed and added to or deducted from the contract quantity. Measurement of the Clearing, Grubbing and Stripping complete will be made to the nearest 0.1 acre.

4. PAYMENT

- A. Payment shall be at the unit price per acre of clearing, grubbing and stripping performed. This price shall be full compensation for all equipment, labor and materials required to perform the work specified herein. If no unit price is included in the contract, the work required to complete the contract, or as directed by the Owner, or its Representative, will be considered incidental to the work and no direct payment for the work will be made. Any work as described in this section that is performed outside of the limits shown in the drawings is considered incidental and must be approved by the Owner, or its Representative prior to starting the work.

END SECTION 2000

SECTION 2200 – REMOVAL OF IMPROVEMENTS

1. DESCRIPTION

- A. This section covers the preparation of existing pavement surfaces for removal of existing pavement and other miscellaneous items. This work shall consist of the removal and disposal of all existing improvements from the project limits of any construction area, except improvements designated or permitted to remain in place or to be removed under other items of work. Removal of improvements shall include, but not be limited to, removing (whether designated for removal or for the preparation for new improvements), or movement if appropriate, of all pavement, surfacing and base courses, rubbish, debris, etc., from existing improvements. The plans may not show a complete list of all items to be removed. There may be an undetermined number of abandoned utilities, or other improvements encountered. The contractor shall determine the extent of the work to be performed under this item. No additional payment will be made for items not shown on the plans that require removal.

2. GENERAL

- A. Disposal of Material: All improvements not designated to remain shall be removed or disposed of by the Contractor as required. The work may involve the generation of excess material, which may be solid waste under the definitions of the MDNR Solid Waste Management Program. The Contractor shall dispose of solid waste in accordance with the Missouri Solid Waste Management Law and implementing regulations, 10 CSR 80.
1. Regulated solid waste, including waste tires, shall be handled, transported and disposed of in accordance with applicable regulations. Documentary proof of proper transport and disposal of this waste, including transport forms, disposal forms, scale tickets, cancelled checks and receipts, shall be provided to MDNR and to the Engineer prior to acceptance of and payment for the work.
 2. Material designated for use elsewhere shall not be removed from the project. Open burning will not be allowed.
- B. Damaged Items: Any item damaged by the Contractor's operations that is designated to remain in place, to be used elsewhere, or to be used by the public or an adjoining property Owner, shall be repaired or replaced at the Contractor's expense, in a manner satisfactory to the Engineer.
- C. Dust and Emissions Control: All operations during demolition and removal shall be adequately controlled to prevent dust and visible emissions, unless otherwise approved by the Engineer. All measures taken shall be provided by the Contractor at the Contractor's expense unless specified otherwise.

3. REMOVAL OF IMPROVEMENTS

- A. Pavements: Removal of pavement, curb, gutter, and other similar improvements, and where a portion of such improvements are to be left in place, shall be to an existing joint. If an existing joint is not present, the contractor shall sawcut full depth to ensure a smooth transition. Sufficient removal shall be made to provide for proper grades and connections in the new work regardless of removal limits shown on the plans. All subgrade material will be restored as required with compacted material.

All saw cuts shall be a full depth saw cut completely through the pavement, unless otherwise stated or allowed by the Engineer, and shall be considered incidental to the contract.

1. Removal of asphalt material shall consist of breaking up and disposing of the material in areas furnished at the contractor's expense. The existing pavement to be removed shall be freed from the pavement to remain by saw cutting. The pavement inside the full depth saw cut shall be broken by methods suitable to the Contractor and approved by the Engineer.
 2. The Contractor's removal operation shall not cause damage to utilities, drainage structures, or sprinkler systems. Any damage shall be repaired by the Contractor at no expense to the Owner.
- C. Backfill: All trenches, holes and pits resulting from the removal of improvements, contaminated material, soil, tanks and piping shall be backfilled and graded to shape and finish disturbed areas. Material shall be placed in the same manner and compacted. This shall be done in such a manner as to ensure proper drainage.

1. Backfill material may consist of previously stockpiled uncontaminated clay soil or may be obtained from project area if approved by the Engineer. Only approved material free of trees, stumps, rubbish and any other deleterious material shall be used in the construction of backfills. Rock, broken concrete or other solid material shall not be placed in fill areas. No slope shall be steeper than 3:1, unless otherwise specified. In the event there is insufficient material in the immediate vicinity, the contractor shall provide material, at the contractor's expense, from a source obtained by the contractor and approved by the Engineer.

D. Hazardous Material:

1. The contractor may encounter small quantities of hazardous material as defined by MDNR. This material shall be recycled or disposed of in a manner that maintains the material's qualifications as "small quantities" in accordance with MDNR regulations.
2. In the event the contractor encounters what is reasonably suspected to be large quantities of hazardous material, the contractor shall immediately cease work and notify the Engineer in accordance with the contract requirements. If the Engineer determines the suspect material is not hazardous or does not constitute a large quantity of hazardous material, the contractor will be notified to continue the work. If the Engineer determines the suspect material is hazardous or constitutes a large quantity of hazardous material, the Engineer may require the contractor to perform work necessary to abate the hazardous material.

4. METHOD OF MEASUREMENT

- A. Removal of Improvements. This work will not be measured for payment, but will be considered a lump sum unit. The work will include the removal of all items, regardless of whether the items are shown on the plans or encountered during construction.

5. PAYMENT

- A. These prices shall be full compensation for the execution of the pay items indicated including all material, equipment, labor and incidentals necessary to complete these items, including disposal off site.
- B. Removal of Improvements. Accepted work will be paid for at the contract lump sum price. If no lump sum price is included in the contract, the work required to complete the contract, or as directed by the Engineer, will be considered incidental to the work and no direct payment for the removal will be made.

END SECTION 2200

SECTION 2300 - EARTHWORK1. GENERAL

- A. This section covers the work necessary for all earthwork, including but not limited to; any cut or fill required, subgrade preparation, subgrade repair, and disposal of all excess and waste materials.

2. DEFINITIONS

- A. Relative Compaction: The ratio, in percent, of the as-compacted field dry density to the laboratory maximum dry density as determined by ASTM D 1557 (Modified Proctor). Corrections for oversize material may be applied to either the as-compacted field dry density or the maximum dry density, as determined by the Engineer.
- B. Optimum Moisture Content: Determined by the ASTM standard specified to determine the maximum dry density for relative compaction. Field moisture content shall be determined on the basis of the fraction passing the 3/4-inch sieve.
- C. Well-Graded: A mixture of particle sizes that has no specific concentration or lack thereof of one or more sizes. Well-graded does not define any numerical value that must be placed on the coefficient of uniformity, coefficient of curvature, or other specific grain size distribution parameters. Well-graded is used to define a material type that, when compacted, produces a strong and relatively incompressible soil mass free from detrimental voids.
- D. Gradation Test: Unless otherwise specified herein, determine the percent of material by weight passing the No. 200 sieve in accordance with ASTM D1140, then determine the particle size distribution of the portion of material retained on the No. 200 sieve in accordance with ASTM D422.
- E. Liquid Limit and Plastic Limit: As determined by ASTM D4318.
- F. Influence Area: The area within planes sloped downward and outward at an angle of 60 degrees from the horizontal from (a) 1 foot outside the outermost edge at the base of foundations or slabs; or (b) 1 foot outside the outermost edge at the surface of roadways or shoulder; or (c) 0.5 foot outside the exterior edge at the spring line of pipes and culverts.
- G. Borrow: Material excavated on the site or taken from designated borrow areas on or near the site.
- H. Selected Backfill Material: Material available on site that the Engineer determines to be suitable for a specific use.
- I. Imported Material: Material obtained by the Contractor from sources off the site.
- J. Embankment: The fill material required to raise the existing grade in areas other than under structures.

3. SUBMITTALS

- A. Submittals shall be made in accordance with the General Conditions, Section 1100 of the Technical Specifications, and the requirements of this section.
- B. Provide the following submittals:
1. Certification, test results, source, and sample for all imported material.
 2. Catalog and manufacturer's data sheets for compaction equipment.
 3. Certification and mill certificates for geotextile.
 4. Copies of permits obtained for excavation, hauling, etc., that are required by state and local governing authorities.

4. IMPORTED MATERIAL ACCEPTANCE

A. All imported materials specified in this section are subject to the following requirements:

1. Certification that the material conforms to the Specification requirements shall be submitted to the Engineer for approval at least 21 calendar days before the material is required for use. All material samples shall be furnished by the Contractor at the Contractor's sole expense. Samples shall be representative and be clearly marked to show the source of the material and the intended use on the project. Sampling of the material source shall be done by the Contractor in accordance with ASTM D75. Notify the Engineer at least 24 hours prior to sampling. The Engineer may, at the Engineer's option, observe the sampling procedure. Tentative acceptance of the material source shall be based on an inspection of the source by the Engineer and/or the certified test results submitted by the Contractor to the Engineer, at the Engineer's discretion. No imported materials shall be delivered to the site until the proposed source and materials tests have been tentatively accepted in writing by the Engineer. Final acceptance will be based on tests made on samples of material taken from the completed and compacted course. The completed course is defined as a course or layer that is ready for the next layer or the next phase of construction. Testing for final acceptance shall be performed by the Engineer.
2. Gradation tests shall be performed by the Engineer at the Engineers discretion.
3. If tests conducted by the Engineer indicate that the material does not meet Specification requirements, material placement will be terminated until corrective measures are taken. Material, which does not conform to the Specification requirements and is placed in the work shall be removed and replaced at the Contractor's sole expense.

5. SHORING, SHEETING, BRACING, AND SLOPING

A. Install and maintain shoring, sheeting, bracing, and sloping necessary to support the sides of the excavation, to keep and to prevent any movement, which may damage adjacent pavements, utilities, or structures, damage or delay the work, or endanger life and health. Install and maintain shoring, sheeting, bracing, and sloping as required by OSHA and other applicable governmental regulations and agencies.

6. EXCAVATION SAFETY

A. The Contractor shall be solely responsible for making all excavations in a safe manner. Provide appropriate measures to retain excavation side slopes and prevent rock falls to ensure that persons working in or near the excavation are protected.

7. CODES, ORDINANCES, AND STATUTES

A. Contractors shall familiarize themselves with, and comply with, all applicable codes, ordinances, statutes, and bear sole responsibility for the penalties imposed for noncompliance.

8. TOLERANCES

A. All material limits shall be constructed within a tolerance of 0.1 foot except where dimensions or grades are shown or specified as minimum. All grading shall be performed to maintain slopes and drainage as shown. No reverse slopes will be permitted.

9. PRODUCTS

A. Provide all labor, materials, and equipment necessary to accomplish the work specified in this section.

10. EXCAVATION

A. Complete all excavation regardless of the type, nature, or condition of the materials encountered. The Contractor shall make his own estimate of the kind and extent of the various materials to be excavated in order to accomplish the work.

11. EARTH FILL

A. Earth fill shall be clayey or silty sand material free from clay clods, roots, organic matter, peat, debris, rocks

larger than 3 inches, and other deleterious materials. Earthwork shall contain 15 to 40 percent by weight passing the No. 200 sieve. Soil materials shall comply with ASTM D 287 soil classification groups GW, GP, GM, SM, SW, and SP. Select earthwork from onsite excavations or provide imported material of equivalent quality, if required to accomplish the work.

12. GRANULAR FILL

- A. Imported granular material, naturally or artificially graded mixture of natural or crushed gravel, well graded from coarse to fine, free from clay lumps, roots, or organic material, maximum size 2 inches with a minimum of 8 percent by weight passing the No. 200 sieve.

13. SAND

- A. Imported natural sand or sand produced from crushed gravel or crushed rock, free from clay and organic material, maximum size 1/4 inch, with 95 percent passing a No. 4 sieve, and a maximum of 8 percent by weight passing the No. 200 sieve.

14. TOPSOIL

- A. Provide topsoil as specified in Section 9000, FINISH GRADING AND LAWNS.

15. WATER FOR COMPACTION

- A. Furnish as required.

16. COMPACTION EQUIPMENT

- A. Compaction equipment shall be of suitable type and adequate to obtain the densities specified, and shall provide satisfactory breakdown of materials to form a dense fill.
- B. Compaction equipment shall be operated in strict accordance with the manufacturer's instructions and recommendations. Equipment shall be maintained in such condition that it will deliver the manufacturer's rated compactive effort. If inadequate densities are obtained, larger and/or different types of additional equipment shall be provided by the Contractor. Hand-operated equipment shall be capable of achieving the specified densities.

17. MOISTURE CONTROL EQUIPMENT

- A. Equipment for applying water shall be of a type and quality adequate for the work, shall not leak, and shall be equipped with a distributor bar or other approved device to assure uniform application. Equipment for mixing and drying out material shall consist of blades, discs, or other approved equipment.

18. DEWATERING

- A. Prevent surface water and subsurface or groundwater from flowing into excavations and from flooding project site and surrounding area.
 - 1. Do not allow water to accumulate in excavations. Remove water to prevent soil changes detrimental to stability of subgrades. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
- B. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rainwater and water removed from excavations to collecting or runoff areas. Do not use trench excavations as temporary drainage ditches.
- C. Water removal from excavation shall be disposed of according to local, State, and Federal requirements. Obtain the necessary permits and meet water quality requirements for total suspended solids, oil, grease, BOD, COD, and other limits listed on the permits from local, State, and Federal agencies.

19. STORAGE OF EXCAVATED MATERIALS

- A. Dispose of excess excavated soil material and materials not acceptable for use as backfill or fill off of the

site immediately unless otherwise authorized by the Engineer.

20. LIMITS OF EXCAVATION

- A. Excavate to depths and widths, as shown. Allow for forms, working space, granular backfill, structural base, earth fill and finish topsoil as shown or required. Do not carry excavations deeper than the elevation shown. Excavation carried below the grade lines shown or established by the Engineer shall be replaced with the same fill material as specified for the overlying fill or backfill, and compacted as required for such overlying fill or backfill. Where the overlying area is not to receive fill or backfill, replace the overexcavated material and compact to a density not less than that of the underlying ground. Cuts below grade shall be corrected by similarly cutting adjoining areas and creating a smooth transition. Correct all overexcavated areas at the Contractor's sole expense.
- B. Excavation widths beyond those shown shall be minimized. The Contractor shall design and use sloping, sheeting, and bracing as necessary to protect existing structures from damage.

21. BACKFILL AND FILL

- A. General: Place soil material in layers to required subgrade elevations, listed below, using materials specified in this Section.
 - 1. Under pavements, use subbase material.
 - 2. Under piping, use granular drainage materials for bedding for correction of unauthorized excavation.
 - 3. Backfill trenches with granular drainage material.
- B. Backfill excavations under new pavement and in trenches as promptly as work permits, but not until inspection, testing, and approval of construction below grade have been performed and recorded.

22. PLACEMENT AND COMPACTION

- A. Ground Surface Preparation: Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills.
- B. Place backfill and fill materials in layers not more than 6 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- C. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. Compact each layer to required percentage of maximum dry density or relative dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
- D. Percentage of Maximum Density Requirements: Compact soil to not less than the following percentages of maximum density, in accordance with ASTM D 698 (Standard Proctor Test):
 - 1. Under pavements, compact each layer of backfill or fill material at 95 percent maximum density.
 - 2. Under lawn or unpaved areas, compact top 6 inches of subgrade and each layer of backfill or fill material at 95 percent maximum density.
- E. Moisture Control: Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade or layer of soil material. Apply water in minimum quantity as necessary to prevent free water from appearing on surface during or subsequent to compaction operations.
 - 1. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.

23. GRADING

- A. General: Uniformly grade areas within limits of grading under this section, including adjacent transition

areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated, or between such points and existing grades.

B. Finish surfaces free from irregular surface changes and as follows:

1. Lawn or Unpaved Areas: Finish areas to receive topsoil to within not more than 0.10 foot above or below required subgrade elevations.
2. Pavements: Shape surface of areas under pavement to line, grade, and cross-section, with finish surface not more than ½ inch above or below required subgrade elevation.

24. FIELD QUALITY CONTROL

A. Quality Control Testing during Construction: The Engineer shall perform field quality control during construction at his/her discretion.

1. Field density tests shall be performed by the nuclear method in accordance with ASTM D 2922.
2. If field tests are performed using nuclear methods, make calibration checks of both density and moisture gages at beginning of work, on each different type of material encountered, and at intervals as directed by the Engineer.

B. Paved Areas: Perform at least one field density test of subgrade for every 2,000 sq. ft. of paved area, but in no case fewer than three (3) tests per daily operation. In each compacted fill layer, perform one field density test for every 2,000 sq. ft. of paved area, but in no case fewer than five (5) tests per daily operation.

C. If in opinion of Engineer, based on testing service reports and inspection, subgrade or fills that have been placed are below specified density, perform additional compaction and testing until specified density is obtained.

25. DISPOSAL OF EXCESS AND WASTE MATERIALS

A. Removal from Owner's Property: Remove waste materials, including unacceptable excavated material, trash, and debris, and dispose of it off Owner's property.

26. SUBGRADE

A. In advance of setting line and grade stakes, all depressions or ruts, which contain water, shall be drained. The grade shall then be bladed and dragged to remove inequalities and scarified as necessary to secure a uniform surface.

B. Excavation: Excavate and shape the subgrade to line, grade and cross section shown on the drawings.

C. Embankment:

1. Place embankment in lifts not to exceed 9 inches in compacted thickness.
2. Each lift shall be sprinkled with water or aerated and dried, as required, to obtain the optimum moisture required for the specified compaction.
3. Compact each lift to 95 percent relative compaction before placing the next lift of embankment material.
4. Construct the embankment to the line, grade and cross section shown on the drawings.

D. Completed Subgrade

1. The completed bottom surface of the excavations and top surface of the embankment shall be defined as the subgrade.
2. The subgrade shall be sprinkled with water or aerated and dried, as required, to obtain the optimum moisture required for the specified compaction.

3. Roll the subgrade until the top 6 inches is compacted to 95 percent relative compaction.
- E. The finished subgrade shall be within a tolerance of ± 0.1 foot of the grade and cross section shown, and shall be smooth and free from irregularities and at the specified density.
- F. The subgrade shall be considered to extend over the full width of the base course. Compaction shall extend 1 foot beyond the edge of paving, curb, or form.

27. PROTECTION OF SUBGRADE

- A. After preparing the subgrade as above specified, all unnecessary traffic shall be kept off. Should it be found necessary to haul over the prepared subgrade, the Contractor shall drag and roll the traveled way as frequently as may be necessary to remove ruts, cuts, and breaks in the surface. All cuts, ruts, and breaks in the surface of the subgrade that are not removed by the above operations shall be raked and hand tampered. All equipment used for transporting materials over the prepared subgrade shall be equipped with pneumatic tires.
- B. Continued use of sections of prepared subgrade for hauling, so as to cut up or deform it from the true cross section, will not be permitted. The Contractor shall protect the prepared subgrade from traffic.
- C. The Contractor will be required, at the Contractor's sole expense, to plank the subgrade before hauling materials or equipment over it.
- D. The subgrade shall be maintained in the finished condition until the first succeeding course is placed.

28. METHOD OF MEASUREMENT

- A. Unclassified Excavation. This quantity measured shall be the number of cubic yards of excavated material.

29. PAYMENT

- A. If there is no quantity shown in the bidding schedule, the work covered by this section shall be considered as a subsidiary obligation of the Contractor covered under the other contract items. Only accepted work will be measured.
- B. Unclassified Excavation. Payment for this work shall be at the unit bid price as herein indicated. This work includes furnishing and placing all materials, furnishing equipment, labor, tools and incidentals necessary to complete these items.

END OF SECTION 2300

SECTION 3900 – UTILITY ADJUSTMENT1. GENERAL

- A. Utility Adjustment. This work shall consist of minor adjustment to manhole covers, meter covers, water systems, utility boxes, cable boxes, inlets/sills and similar items as necessary to bring the utility to the grade of the improvements as shown on the plans.

2. EXECUTION

A. UTILITY ADJUSTMENT

1. It shall be the Contractors responsibility to perform, or coordinate, the necessary adjustments to all utilities affected by the work, regardless of the Owner. This work must be performed in a timely manner and delays to the work caused by entities other than the Engineer or Owner will not be cause for additional time to complete the Contract.
2. Existing frames and covers shall be salvaged and reused if possible. New manhole steps shall be provided as necessary. New adjusting rings (adapters) shall be provided if necessary.
3. The Owner of the Utility must be made aware of the work and necessary adjustments prior to commencement of the work. The Contractor will contact the Owner to discuss any adjustments to be performed.
4. Any adjustment performed by the Contractor must meet any standards, specifications or permitting requirements as required by the Owner or Governing Entity involved.

3. MEASUREMENT

- A. Storm and Sanitary Sewer Structure Extension/Adjustment. The quantity measured shall be the number of structure adjustments.

4. PAYMENT

- A. Storm and Sanitary Sewer Structure Extension/Adjustment. Payment for this work will be per each utility adjusted per the unit price in the contract. This work includes furnishing and placing of all materials, labor, and tools required for said task.

END SECTION 3900

SECTION 4000 – ASPHALT PAVEMENT1. GENERAL

- A. This Section includes: Construction of an asphaltic concrete pavement. The asphaltic concrete shall be as specified in the latest version of the "Missouri Standard Specifications for Highway Construction."

2. DESCRIPTION OF WORK

- A. Extent of asphalt paving work is shown on drawings.

3. SUBMITTALS

- A. Material Certificates: Provide copies of materials certificates signed by material producer and Contractor certifying that each material item complies with, or exceed, specified requirements.

4. SITE CONDITIONS

- A. Construct asphalt pavement when atmospheric temperature is above 45°F (7°C), and when base is dry and above freezing.
- B. Grade Control: Establish and maintain required lines and elevations.

5. MATERIALS

- A. General: Use materials as specified in the Plans.
- B. Coarse Aggregate: Sound, durable rock meeting the requirements of the Missouri Standard Specifications for Highway Construction.
- C. Fine Aggregate: Fine, granular material meeting the requirements of the Missouri Standard Specifications for Highway Construction.
- D. Mineral Filler: Rock or slag dust, hydraulic cement, or other inert material complying with the requirements of the Missouri Standard Specifications for Highway Construction.
- E. Asphalt Binder shall be homogenous and free from water, and shall not, on heating, foam below the specified minimum flash point. It shall be prepared by refining crude petroleum by suitable methods. It shall conform to the requirements of the Missouri Standard Specifications for Highway Construction.
- F. Blotter Aggregate: Washed concrete sand.

6. ASPHALT AGGREGATE MIXTURE

- A. Provide plant-mixed, hot-laid Type BP-1 or Bituminous Base asphalt aggregate mixture complying with the Missouri Standard Specifications for Highway Construction and as specified on the plans.

7. PLACING MIX

- A. General: Place asphalt pavement mixture on dry, prepared surface, spread and strike-off. Spread mixture at minimum temperature of 225°F (107°C). Place only when both air temperature and surface temperature are above 45°F. Place inaccessible and small areas by hand. Place each course to required grade, cross-section, and compacted thickness.
- B. The mixture shall be spread only upon a clean and dry surface, and only when weather conditions are suitable.
- C. Paver Placing: Place in strips not less than 9' wide, unless otherwise acceptable to Resident Engineer. The intent is to avoid cold longitudinal joints on the surface course. If Contractor does not pave adjacent to the previous strip, the Contractor will be required to sawcut the longitudinal joint to create a vertical edge. Prior to the adjacent asphalt mat the Contractor shall clean the vertical edge and apply tack coat. This work shall be considered incidental to the contract.

- D. Hot Joints: prior to the first pavement strip's temperature dropping below 200 degrees Fahrenheit, the second strip will be required to be laid alongside the first pavement strip. This will create a hot joint, the density on both sides of the joint will be compacted together to form a solid bond. The intent is to avoid cold longitudinal joints; this includes longitudinal and transverse butt joints.
- E. Butt Joints: Saw cutting cold transverse butt joints will be required. All saw cuts will be incidental to the contract.

8. ROLLING

- A. General: Begin rolling when mixture will bear roller weight without excessive displacement.
- B. Compact mixture with hot hand tampers or vibrating plate compactors approved by the Engineer in areas inaccessible to rollers.
- C. Rolling: While mixture is hot with a pneumatic tire oscillating-type roller developing at least 80 pounds per square inch contact pressure for all wheels. Continue rolling until mixture has been thoroughly compacted.
- D. Finish Rolling: Perform finish rolling while mixture is still warm enough for removal of roller marks with not less than a ten ton, two or three wheel tandem-type roller. Continue rolling until roller marks are eliminated and pavement has attained maximum density.
- E. The Contractor shall complete all Rolling activities prior to the asphalt mixture cooling below 185 degrees Fahrenheit.
- F. Patching: Remove and replace pavement areas mixed with foreign materials and defective areas. Cut-out such areas and fill with fresh, hot asphalt pavement mixture. Compact by rolling to maximum surface density and smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.

9. FIELD QUALITY CONTROL

- A. General: Test in-place asphalt pavement courses for compliance with requirements for thickness and surface smoothness. Repair or remove and replace unacceptable pavement as directed by Engineer.

10. THICKNESS

- A. In-place compacted thickness will not be acceptable if exceeding the following allowable variation from required thickness:
 - 1. Surface Course: 1.5" nominal thickness, or as otherwise indicated on the plans, with a variance of no more than 1/4", plus or minus, 1-3/4" to 2-1/4".
 - 2. Base Course: 2.5" nominal thickness, or as otherwise indicated on the plans, with a variance of no more than 1/4", plus or minus, 2-3/4" to 3-1/4".

11. MEASUREMENT

- A. Asphalt Pavement: The quantity measured shall be the number of S.Y. of asphalt pavement in place and approved by the Engineer.

12. PAYMENT

- A. Payment shall be at the square yard prices provided in the bid form for completed and accepted work. These prices shall be full compensation for the execution of pay items indicated including all material, furnishing equipment, labor, tools and incidentals necessary to complete these items.
- B. If there is no quantity shown in the bidding schedule, the work covered by this section shall be considered as a subsidiary obligation of the Contractor covered under the other contract items. Only accepted work will be measured.

End of Section 4000

SECTION 5000 - PORTLAND CEMENT CONCRETE**1. GENERAL**

- A. This Section includes the installation of curb ramps, curb and gutter, and curb sections. The Work shall be accomplished in accordance with these Specifications and the applicable drawings.

2. SUMMARY

- A. The extent of Portland Cement Concrete paving is shown on drawings.
- B. Concrete and related materials are specified herein.

3. SUBMITTALS

- A. Provide samples, manufacturer's product data, test reports, and materials' certifications as required in referenced sections for concrete and joint fillers and sealers.

4. FORMS

- A. Steel, 2-inch dimensional wood or other suitable material of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal may be utilized. Use straight forms, free of distortion and defects.
 - 1. Use flexible spring steel forms or laminated boards to form radius bends as required.
 - 2. Form material for the face of the curb shall not have any horizontal joints closer than 7 inches from the top of the curb.
 - 3. Provide stakes and bracing materials as required to hold forms securely in place.
 - 4. Tops of forms shall not depart from grade line more than 1/8 inch when checked with a 10-foot straightedge. Alignment of straight sections shall not vary more than 1/8 inch in 10 feet.
- B. Coat forms with a nonstaining form release agent that will not discolor or deface surface of concrete.

5. CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, Type I.
 - 1. Use one brand of cement throughout project, unless otherwise acceptable to Engineer.
 - 2. Normal Weight Aggregates: ASTM C 33, and as herein specified. Provide aggregates from a single source. Do not use fine or coarse aggregates containing spall-causing or other deleterious substances. Aggregates shall be "Meramec Sand and Gravel".
 - 3. Lightweight Aggregates: ASTM C 330.
- B. Water: Potable.
- C. Pozzolanic Admixtures: Pozzolanic admixtures or fly ash may not be used or substituted for other elements in the concrete mix.
- D. Air-Entraining Admixtures: Air-entraining admixtures shall meet the requirements of ASTM C 260 and shall be added to the mixer in the amount necessary to produce the specified air content. The air-entrainment agent and the water reducer admixture shall be compatible.
- E. Water-Reducing Admixtures: Only if approved by the Engineer; water-reducing, set-controlling admixtures shall meet the requirements of ASTM C 494, Type A, water-reducing or Type D, water-reducing and retarding admixtures, and shall be added at the mixer separately from air-entraining admixtures in accordance with the manufacturer's printed instructions.

- F. Grout: The grout mixture can be any commercially made product for highway patching made of an epoxy base. The grout shall be compatible with concrete and steel and capable of binding the dowel with the concrete. The matrix may be extended with hard durable aggregate following the manufacturer's recommendations. The grout shall be discarded after 45 minutes and shall not be retempered. The minimum strength shall be equal to the strength of the concrete pavement. Samples of the grout shall be submitted to the Engineer before grouting begins. Grout shall have a minimum strength of 4,000 psi in 28 days.
- G. Liquid-Membrane Forming and Sealing Curing Compound: Comply with ASTM C 309, Type I, Class A unless otherwise specified by the Engineer. Moisture loss no more than 0.055 gr./sq. cm. when applied at 150 sq. ft./gal. Only white-pigmented compound may be used.
- H. Joint Fillers: All expansion joints shall be "non-gassing".
 - 1. Exposed curb and gutter joints shall be sealed with Crafcro "Asphalt Rubber Plus" or approved equal. Comply with ASTM 1190.
 - 2. Expansion joint filler shall be 1/2-inch thick, preformed and nongassing. It shall be Homex Plus expansion joint material or approved equal.

6. CONCRETE RAMP

A. CONCRETE MIX, DESIGN, AND TESTING

- 1. Design mix to produce normal-weight concrete consisting of Portland cement, aggregate, water-reducing or set retarding admixture, air-entraining admixture, and water to produce the following properties:
 - a) Compressive Strength: 4,000 psi, minimum at 28 days, unless otherwise indicated.
 - b) Air Content: 5-1/2 percent \pm 1-1/2 percent.

B. SURFACE PREPARATION

- 1. Bring the areas on which sidewalks are to be constructed to required grade and compact by sprinkling and rolling or mechanical tamping. As depressions occur, refill with suitable material and recompact until the surface is at the proper grade. The top 6 inches of the subgrade shall be compacted to 95 percent of relative compaction. Remove loose material from compacted subbase surface immediately before placing aggregate base.
- 2. Aggregate Base
 - a) The material to be used in the aggregate base shall be Type 5 Aggregate, unless otherwise approved by the Owner.
 - b) Aggregate shall be placed on the subgrade in a layer of uniform thickness 4 inches in compacted depth. The aggregate shall be handled and spread in a manner that will prevent segregation of sizes.
 - c) The aggregate base shall be cleaned of loose and foreign matter.
 - d) The aggregate shall be compacted to not less than 95 percent of the maximum laboratory density as determined by the Standard Proctor Test AASHTO T-99 (ASTM D-698).
 - e) Top surface of the compacted aggregate base course shall be finished by blading or with automated equipment specially designed for the purpose and compacted using vibratory compaction plates.
 - f) Surfaces of the completed granular base shall not deviate more than 1/4 inch when tested with a 4 foot straightedge. The completed compacted thickness of any course shall be within plus or minus 1/2 inch of indicated thickness, and the average thickness shall not be less than the design thickness indicated.

- g) Do not order concrete until the Engineer has approved the compacted subbase and inspected all forms.

C. FORM CONSTRUCTION

1. Concrete ramps shall be installed at the width specified in the drawings and shall be four (4") inches thick, with expansion joints between the existing pavement and proposed ramp.
2. Extend expansion joint fillers the full width and depth of the joint.
3. Set forms to required grades and lines, braced and secured. Forms shall remain in place at least 24 hours after concrete placement.
4. Clean forms after each use and coat with form release agent as required to ensure separation from concrete without damage.

D. CONCRETE PLACEMENT

1. Do not place concrete until subbase and forms have been checked by the Engineer for line and grade. Moisten subbase, if required, to provide a uniform dampened condition at time concrete is placed.
2. Place concrete by methods that prevent segregation of mix. Consolidate concrete along face of forms and adjacent to transverse joints with vibrator. Use only square-faced shovels for hand spreading and consolidation.
3. If applicable, match existing texture and finish of pavement being replaced.
4. Mixing and concreting operations shall be discontinued when a descending ambient temperature away from artificial heat reaches 40 degrees Fahrenheit and not resumed until an ascending ambient temperature away from artificial heat reaches 35 degrees Fahrenheit. Concrete shall not be placed on subgrade with a temperature less than 35 degrees Fahrenheit. Concrete temperature shall not drop below 65 degrees Fahrenheit for a period of no less than 6 days after placement. Concrete exposed to melting snow during daytime and freezing during nighttime shall be protected from freezing until strength of at least 3500-psi has been attained.
5. If approval has been granted for the Contractor to place the concrete while the ambient temperature is at or lower than 40 degrees Fahrenheit, the Contractor shall take precautionary measures to prevent damage by freezing, such as heating mixing water, heating aggregates, or applying heat directly to the contents of the mixer. Aggregates shall not be heated higher than 150 degrees Fahrenheit, and the temperature of the aggregates and mixing water combined shall be not higher than 100 degrees Fahrenheit, when the cement is added. Unless otherwise authorized, the temperature of the mixed concrete when heating is employed shall not be less than 50 degrees Fahrenheit and not more than 80 degrees Fahrenheit at the time of placement. Cement or fine aggregate containing lumps or crusts of hardened material or frost shall not be used. Concrete shall not be placed upon a frozen subgrade.

E. CONCRETE FINISHING

All edges and joints shall be finished with an edging tool having a radius of 1/4 inch.

1. Expansion Joints
 - h) Transverse expansion joints, 1/2-inch thick, shall be installed at a maximum 15-foot interval along sidewalks and where ends of sidewalks abutting buildings, walls, steps, other rigid structures, poles, other protrusions through the sidewalk, or other sidewalks.
 - i) Transverse expansion joints in sidewalks running parallel and adjacent to concrete curb and gutters shall be installed to match the expansion joint in the curb.
 - j) Install 1/2-inch thick expansion joints between sidewalks running parallel and adjacent to

buildings, walks, other rigid structures, or the back of curb and gutter.

2. Contraction Joints
 - a) Transverse contraction joints shall be 1/4 inches wide by 1-inch deep weakened plane joints. They shall be straight and at right angles to the surface of the sidewalks.
 - b) Transverse contraction joints in sidewalks running parallel and adjacent to concrete curb and gutters shall be installed to match the contraction joints location in the curb.
3. Broom the surface with a fine-hair broom at right angles to the length of the sidewalk and tool at all edges, joints, and markings as shown on the drawings. Mark the sidewalks transversely as shown on the drawings with a jointing tool. All sidewalks shall have a magnesium float finish prior to brooming. The Contractor shall prepare a sample of the broom finish for approval by the Engineer prior to the placement of any sidewalks.
4. Contractor shall erect barricades to protect the new concrete sidewalk from traffic. Any markings in the sidewalk of any sort shall be removed or the defective sidewalk removed and replaced by the Contractor at his cost as directed by the Engineer.
5. Do not remove forms for 24 hours after concrete has been placed. After form removal, clean ends of joints and point-up any minor honeycombed areas. Remove and replace areas or sections with major defects, as directed by the Engineer.

F. CURING

1. Protect and cure finished concrete paving using white pigmented membrane-forming curing and sealing compound applied at a minimum of one gallon per 150 square feet or approved moist-curing methods. Apply per manufacturer's recommendations.
2. Protect pavement from rain by an approved means during the curing process.

7. CONCRETE CURB AND GUTTER

A. CONCRETE MIX, DESIGN, AND TESTING

1. Design mix to produce normal-weight concrete consisting of Portland cement, aggregate, water-reducing or set retarding admixture, air-entraining admixture, and water to produce the following properties:
 - a) Compressive Strength: 4,000 psi, minimum at 28 days, unless otherwise indicated.
 - b) Air Content: 5-1/2 percent \pm 1-1/2 percent.

B. SURFACE PREPARATION

1. Bring the areas on which curb and gutter or retaining wall is to be constructed to required grade and compact by sprinkling and rolling or mechanical tamping. The top 6 inches of the subgrade shall be compacted to 95 percent of relative compaction. Remove loose material from compacted subbase surface immediately before placing aggregate base.
2. Aggregate Base
 - c) The material to be used in the aggregate base shall be Type 5 Aggregate, unless otherwise approved by the Owner.
 - d) Aggregate shall be placed on the subgrade in a layer of uniform thickness 4 inches in compacted depth. The aggregate shall be handled and spread in a manner that will prevent segregation of sizes.
 - e) The aggregate base shall be cleaned of loose and foreign matter.

- f) The aggregate shall be compacted to not less than 95 percent of the maximum laboratory density as determined by the Standard Proctor Test AASHTO T-99 (ASTM D-698).
- g) Do not order concrete until the Engineer has approved the compacted subbase and inspected all forms.

C. FORM CONSTRUCTION

1. Construct curb to line and grade shown or established by the Engineer. Curb with or without form liners, shall conform to the details shown on the drawings.
2. Set forms to required grades and lines, braced and secured. Install forms to allow continuous progress of work and so that forms can remain in place at least 24 hours after concrete placement.
3. Clean forms after each use and coat with form release agent as required to ensure separation from concrete without damage.

D. CONCRETE PLACEMENT

1. Do not place concrete until subbase and forms have been checked by the Engineer for line and grade. Moisten subbase, if required, to provide a uniform dampened condition at time concrete is placed.
2. Place concrete by methods that prevent segregation of mix. Consolidate concrete along face of forms and adjacent to transverse joints with vibrator. Use only square-faced shovels for hand spreading and consolidation.
3. Mixing and concreting operations shall be discontinued when a descending ambient temperature away from artificial heat reaches 40 degrees Fahrenheit and not resumed until an ascending ambient temperature away from artificial heat reaches 35 degrees Fahrenheit. Concrete shall not be placed on subgrade with a temperature less than 35 degrees Fahrenheit. Concrete temperature shall not drop below 65 degrees Fahrenheit for a period of no less than 6 days after placement. Concrete exposed to melting snow during daytime and freezing during nighttime shall be protected from freezing until strength of at least 3500-psi has been attained.
4. If approval has been granted for the Contractor to place the concrete while the ambient temperature is at or lower than 40 degrees Fahrenheit, the Contractor shall take precautionary measures to prevent damage by freezing, such as heating mixing water, heating aggregates, or applying heat directly to the contents of the mixer. Aggregates shall not be heated higher than 150 degrees Fahrenheit, and the temperature of the aggregates and mixing water combined shall be not higher than 100 degrees Fahrenheit, when the cement is added. Unless otherwise authorized, the temperature of the mixed concrete when heating is employed shall not be less than 50 degrees Fahrenheit and not more than 80 degrees Fahrenheit at the time of placement. Cement or fine aggregate containing lumps or crusts of hardened material or frost shall not be used. Concrete shall not be placed upon a frozen subgrade.

E. CONCRETE FINISHING

1. Place 1/2-inch thick preformed asphalt-impregnated expansion joints at intervals not exceeding 45 feet and at the beginning and end of curved portions of the curb, also at connections to existing curbs.
2. All edges and joints shall be finished with an edging tool having a radius of ¼ inch.
3. Place contraction joints in the curb at intervals not exceeding 15 feet. Contraction joints shall be of the open joint type and shall be provided by inserting a thin, oiled steel sheet vertically in the fresh concrete to force coarse aggregate away from the joint. This steel sheet shall be inserted the full depth of the curb.
4. After initial set has occurred in the concrete and prior to removing the front curb form, the steel sheet shall be removed with a sawing motion. Finish top of curb with a steel trowel and finish edging with a steel edging tool.

5. As soon as the concrete has set sufficiently to support its own weight, remove the front curb form and finish all exposed surfaces. Finish formed face by rubbing with a burlap sack or similar device that will produce a uniformly textured surface, free of form marks, honeycomb, and other defects.
6. All defective concrete shall be removed and replaced at the Contractor's sole expense. Upon completion of the finishing, apply an approved curing compound to exposed surfaces of the curb. If an approved moist curing method is approved, curing shall continue for a minimum of 5 days.
7. Upon completion of the curing period, but not before 7 days has elapsed since pouring the concrete, backfill the curb with earth, free from rocks 2 inches and larger and other foreign material. Tamp backfill firmly in place.
8. Finished curb shall present a uniform appearance for both grade and alignment. Remove any section of curb showing abrupt changes in alignment or grade, or that is more than 1/4 inches away from its location as staked, and construct new curb in its place at the Contractor's sole expense.

F. CURING

1. Protect and cure finished concrete using white pigmented membrane-forming curing and sealing compound applied at a minimum of one gallon per 150 square feet or approved moist-curing methods. Apply per manufacturer's recommendations.
2. Protect concrete from rain by an approved means during the curing process.

8. DETECTABLE WARNING DEVICE

A. DESCRIPTION OF WORK

The work shall consist of all labor, tools, equipment and services necessary to satisfactorily complete the installation of detectable/tactile warning surfaces, to comply with ADA guidelines.

B. MATERIALS

Detectable warning devices, as manufactured by Arcis Corporation, or preapproved equal, shall be used. Samples shall be provide to the Owner to determine the color to be used. See the plans for further details on location and size of detectable warning devices.

C. INSTALLATION

Cast in Place Installation

1. Thickness of concrete under detectable warning devices shall be increased 1". Prepare a well drained and properly compacted sub-grade. Leave no puddling, standing water, ice, frost, or mud. Consult contract documents for information on sub-grade and compaction details.
2. Position forms for proper grade, slopes and uniform slab thickness. Consult contract documents for details on reinforcement and joint placement to control cracking.
3. Concrete shall be poured and finished to the proper grade and slope prior to detectable warning devices placement.
4. Consult contract documents for details on areas to receive detectable warning devices. Place detectable warning devices, or approved equal, at bottom of curb ramps and other blended transitions. Detectable warning devices must have visual contrast with adjacent walking surfaces. Install across full width of ramp a minimum 24" in depth and set back 8" from bottom of curb. Provide adequate drainage to prevent the accumulation of water and debris on or at the bottom of ramp.
5. Recess areas to receive detectable warning devices so the device is a finish grade before initial concrete set and level base with wood float to leave an open surface.

6. Pre-dampen back of detectable warning devices, or approved equal, with potable water.
7. Install detectable warning devices immediately in fresh concrete and lightly tap detectable warning devices to grade using a rubber mallet to insure bond and 100% surface contact with square edges of panels butted tightly together. Base of truncated dome should be flush with adjacent surfaces to permit proper drainage and eliminate tripping hazard between surfaces. Tolerance between detectable warning devices and surrounding surfaces is 1/16" maximum. Immediately after placement re-check slope and elevation for proper grade.
8. Place contraction joints at all corners of the detectable warning device to edge of sidewalk.
9. In environments subject to freeze thaw conditions, leave a 3/16" caulk joint between panels and seal with single component polyurethane sealant.
10. Finish surrounding concrete flush with detectable warning devices. Edge around detectable warning devices with 1/8" radius edger and finish in accordance with project specifications.
11. Clean concrete residue off detectable warning devices with a damp hydra sponge to ensure a clean appearance.
12. Fresh concrete surrounding detectable warning devices should be cured in accordance with ACI 308. Use curing compound meeting ASTM C 309. Completely protect detectable warning devices while spraying curing compound.
13. All cutting of detectable warning devices required shall be considered incidental.

D. CLEANING

1. Remove all unused material, tools, and equipment. Dispose of properly.
2. If the detectable/tactile surface requires, clean the panels in accordance with manufacturer's cleaning and maintenance guide.

E. PROTECTION

Protect the detectable warning device surface from traffic until desired strength is achieved or until acceptance of the work.

9. MEASUREMENT

- A. Concrete Ramp: The quantity measured shall be the number of square yards of concrete approach in place, completed and accepted.
- B. Concrete Curb and Gutter: The quantity measured shall be the number of square yards of concrete curb and gutter in place, completed and accepted.
- C. Detectable Warning Devices: The quantity measured shall be per each detectable warning device in place, completed and accepted.
- D. Granular Base (4" or 8"): The quantity measured shall be the number of square yards of granular base in place, completed and accepted.

10. PAYMENT

- A. These prices shall be full compensation for the execution of the pay items indicated including all material, equipment, labor and incidentals necessary to complete these items.
- B. Concrete Ramp: Payment shall be at the unit price per square yard of concrete placed which shall be full compensation for furnishing and placing all materials, including all dowels, joint material for new joints, saw cutting, finishing and curing.
- C. Concrete Curb and Gutter: Payment shall be at the unit price per square yard of concrete placed,

including sealing of joints, and accepted by the Engineer and shall be full compensation for furnishing and placing all materials, including all dowels, joint material for new joints, saw cutting, finishing and curing.

- D. Detectable Warning Devices. Payment shall be at the unit price per each detectable warning device placed regardless of the number of panels installed for each ramp and shall be full compensation for furnishing and placing all materials, including any protection necessary.
- E. Granular Base (4" or 8"). Payment shall be at the unit price per square yard of granular base placed which shall be full compensation for furnishing and placing all materials, including all dowels, joint material for new joints, saw cutting, finishing and curing.
- F. All saw cutting shall be considered incidental to the construction.
- G. All reinforcing steel work, including the drilling and grouting of dowels, shall be considered incidental to the construction.
- H. Drilling and testing of cores to determine if concrete is defective will be considered incidental to the contract with no additional compensation made. Filling of the core hole as stated in Repairs and Protections of this Section will also be considered incidental to the contract.
- I. Final cleanup of the surfaces will be considered incidental to the contract.

END OF SECTION 5000

SECTION 5200 - JOINT SEALING

1. GENERAL

A. This section covers the preparation and sealing of joints in the concrete pavement and curb and gutter.

2. MATERIALS

A. Joint Sealant: ASTM D 1190 Crafcoc "Asphalt Rubber Plus," or approved equal.

B. Emulsified Asphalt and Aggregate: The aggregate shall consist of limestone, volcanic ash, sand or other material that will cure to form a hard substance. The combined gradation shall be as follows:

<u>Sieve Size</u>	<u>Percent Passing</u>
No. 4	100
No. 8	90 - 100
No. 16	65 - 90
No. 30	40 - 60
No. 50	25 - 42
No. 100	15 - 30
No. 200	10 - 20

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the Engineer.

C. The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume.

3. EQUIPMENT

A. Joint Cleaning Equipment: The following equipment may be used for cleaning the joints and shall consist of, but not be limited to, the following items:

1. Concrete Saw: The concrete saw shall be a self-propelled power saw with diamond or abrasive blades designed for sawing hardened concrete, to re-face, widen or deepen existing joints without damaging the sides, bottoms or top edges. Blades may be single for gage blades with one or more blades mounted in tandem for fast cutting. All blades shall be of the proper hardness for the concrete being sawed. If at any time it is demonstrated that abrasive type blades will not cut a smooth and even vertical face of specified width and depth, the Contractor shall then furnish and use diamond blades at no extra cost to the Owner. The saw shall be adequately powered and capable of cutting to the specified width and depth with not more than two passes of the saw through the joints.
2. Sandblasting: Sandblasting equipment shall be standard commercial type capable of effectively "scaling-off" any foreign material which may prevent proper bond of the new sealer. The compressor used for sandblasting shall provide air at a pressure of not less than 90 psig and a minimum volume of 150 cubic feet of air per minute at the nozzle.
3. Air Compressor: The air compressor will be portable and capable of blowing out sand and other objectionable materials from the joints. This equipment will meet the same capacity requirements as specified above for the compressor for the sandblasting equipment. The compressor will be equipped with sufficient hose and adequate capacity and nozzles of proper size and shape for the type and size joint to be cleaned.
4. Vacuum Sweeper: The vacuum pickup sweeper shall be self-propelled and shall be capable of completely removing all loose material, concrete slurry from the joints after sawing, and debris from the pavement surface. A sweeper of adequate capacity or a sufficient number of sweepers shall be provided to maintain the work area.

4. APPLICATION EQUIPMENT FOR HOT POURED SEALER

- A. Applicators used for heating and installing the sealing materials shall be of the mobile type and shall be equipped with a double-wall agitator-type kettle (double boiler units) with suitable oil toe extruding device with nozzle or nozzles shaped for insertion in the joints and cracks to be filled, positive temperature devices for controlling the temperature of oil bath and sealer, and a recording thermometer for recording the temperature of the sealer. The applicator unit shall be designed so that the sealer may circulate in the inner kettle when not in use and shall be capable of completely filling the joint with the sealer without formation of voids or entrapped air. The applicator wand shall be insulated all the way to the nozzle and shall be maintained in a satisfactory working condition.

All joints and cracks within the existing pavement limits specified to remain shall be cleaned and sealed upon completion of the milling process. Joints and cracks determined by the Engineer to be in satisfactory condition shall not be milled or sealed.

5. JOINT PREPARATION

- A. All joints and cracks will be thoroughly cleaned of all foreign material by sandblasting and other equipment specified but not limited thereto. Cleaning procedures that cause excessive spalling along joints, as determined by the Engineer, will be rejected. Changes in method of cleaning or equipment utilized will be made by the Contractor as required to eliminate spalling. Sandblasting will proceed until the joint surfaces and edges are clean and have etched surfaces. Sandblasting of curb and gutter section shall be for the full width of gutter and continuous length. The joint shall be completely free of dust, dirt, joint sealer, and any other material that might prevent bonding of the new sealer. New curb and curb and gutter shall be routed or sawed to contain sealer. Cracks and joints in pavement to be overlaid shall be cleaned by sandblasting/wire wheel. Cracks and joints over 1-1/2 inch deep may be filled to within 1-1/2 inch of the surface with a suitable non-gassing backer rod material subject to approval of the Engineer.
- B. After the sandblasting operation and immediately before the sealer is placed, the joints will be thoroughly blown out by means of an air jet supplied by an air compressor meeting the requirements previously specified. Debris pick-up and disposal will be a continuous process during cleaning operations, and the pavement surface will be thoroughly cleaned immediately prior to sealing operations. This will be accomplished with a vacuum sweeper supplemented with hand brooms and tools, as required. All debris will be disposed of by the Contractor at his expense.

6. JOINT SEALING

- A. Sealer shall be placed in dry joints and cracks only. Sealer shall be applied in a continuous steady flow and shall be filled to a depth of no greater than 1/8 inch from the surface. Special care shall be expressed to ensure sealer is placed into the joint or crack reservoir and not over-poured. Areas over-poured will be removed and re-poured at no additional expense to the Owner.

7. PAYMENT

- A. Joint Sealing: No direct measurement shall be made for sealing of joints and cracks. This work shall be considered incidental and a subsidiary obligation of the Contractor.

END SECTION 5200

SECTION 9000 - FINISH GRADING AND LAWNS

1. GENERAL

- A. This section covers the work necessary for the finish grading and lawn establishment, complete, including furnishing and delivery of material, seed and mulch, and maintenance of lawns.
- B. Drawings and general provisions of the contract, including General Conditions and Job Special Provisions apply to this section.
- C. All areas disturbed by the Contractor's operations shall be restored by seed and mulch.

2. TOPSOIL

- A. Selected topsoil stripped at the site, properly stored and protected, free from roots, sticks, hard clay, and stones, which will not pass through a 1-inch square opening. Remove existing grass before topsoil is excavated. Provide imported topsoil if required to accomplish the work.

3. IMPORTED TOPSOIL

- A. Imported topsoil shall be a natural, friable soil, representative of productive soils in the vicinity. It shall be obtained from well-drained areas, free from admixture of subsoil and foreign matter, and objects larger than 2 inches in diameter, toxic substances, and any other deleterious material which may be harmful to plant growth and be a hindrance to grading, planting, and maintenance operations.
- B. Topsoil shall meet, or shall be improved to meet, the following mechanical requirements by adding sand and/or peat or manure and incorporating into the topsoil:

COMPONENT	MAX. PERCENTAGE
Sand	65 percent
Silt	50 percent
Clay	25 percent

- C. Topsoil shall be pulverized prior to being brought to the jobsite. It shall be pulverized to a size of 3/8 inches in diameter as the largest cross section.

4. PH CONTROL

- A. The following amendments shall be included in soils where required by the soils analysis tests:
 - 1. Soil sulfur
 - 2. Commercially packaged gypsum
 - 3. Ground dolomitic limestone

5. LIME

- A. Ground dolomitic limestone not less than 85 percent total carbonates and magnesium, ground so that 50 percent passes 100-mesh sieve and 90 percent 20-mesh sieve. Coarser material will be acceptable provided the specified rates of application are increased proportionately on the basis of quantities passing the 100-mesh sieve.

6. FERTILIZER

- A. Commercial Fertilizer: A complete plant food containing 6 percent nitrogen, 24 percent available phosphoric acid, and 24 percent potash, at a rate of 50 lbs./5,000 sq. ft., conforming to applicable state fertilizer laws, availability of plant nutrients conforming to standards of the Association of Official Agricultural Chemists (AOAC), uniform in composition, dry, free-flowing, and delivered in original, unopened containers bearing manufacturer's guaranteed analysis.

- B. Superphosphate: Ammonium phosphate (16-20-0) containing 1.4 percent sulphur; granular, dry, free-flowing delivered in original bags.

7. TEXTURAL SOIL AMENDMENTS

- A. Peat: A natural residue formed by decomposition of reeds, sedges, or mosses from freshwater site, free from lumps, roots, and stones, absorbing at least four times its dry weight of water, organic matter not less than 90 percent on a dry weight basis. The maximum moisture content at time of delivery shall be 65 percent by weight.
- B. Manure: Well rotted, unleached stable or cattle manure, reasonably free from weed seed and refuse, containing no chemicals or materials harmful to plant life; not less than 4 months nor more than 2 years old. Sawdust or shavings shall not exceed 50 percent content.
- C. Sand: As specified in Section 2300, EARTHWORK.

8. SEED

- A. Seed Mixture:
 - 20% Adventure Fescue
 - 20% Jaguar II Fescue
 - 20% Olympic Fescue
 - 20% Arid Fescue
 - 20% Regal Perennial

Apply at the rate of 350 pounds per acre.

Seed shall be labeled in accordance with U. S. Department of Agriculture Rules and Regulations under the Federal Seed Act. All seed shall be furnished in sealed standard containers unless exception is granted in writing by the Owner's Representative. Seed, which has become wet, moldy or otherwise damaged in transit or in storage, will not be acceptable.

9. MULCH

- A. Straw Mulch: Threshed straw of oats, wheat, or rye, free from seed of obnoxious weeds.

10. CHEMICAL SOILS TESTS

- A. Have chemical analysis of topsoil performed by the County of State Soil Testing Service to determine lime and fertilizer requirements. Testing frequency shall be one test per 200 cubic yards of used topsoil.
- B. Submit one copy of the fertilizer and liming recommendation report to the Engineer within 5 calendar days of commencement of spreading topsoil.

11. MECHANICAL SOILS TEST

- A. Have gradation test, as specified in Section 2300, EARTHWORK, performed on the topsoil by a qualified, commercial soils testing laboratory to determine conformance to specified physical properties.
- B. Submit one copy of the test results to the Engineer within 5 calendar days of commencement of spreading topsoil.

12. PROJECT SCHEDULE

- A. Within 20 calendar days of the date specified for commencement of work, submit to the Engineer a proposed time schedule indicating dates for beginning and completion of the following operations:
 - 1. Delivery and source of materials.
 - 2. Preparation of sod/seed bed.
 - 3. Placing sod/seed.
 - 4. Maintenance.

13. CONSTRUCTION METHODS

- A. Preparation of Subgrade. After rough grading is completed and before topsoil is spread, thoroughly scarify ground to a minimum depth of 8 inches with a toothed ripping machine by running in two directions at right angles over the entire surface to be planted.
- B. Spreading of Topsoil. Spread topsoil and textural soil amendments, if required based on the results of the gradation test, over the prepared rough grade using a rubber-tired tractor with grader blade or equivalent not weighing more than 3-1/2 tons. Spread materials to make a finished thickness of a minimum of 4 inches.
- C. Liming and Fertilizing
1. Apply lime uniformly with a mechanical spreader to the entire area for grass at the rate determined from soil test.
 2. Apply commercial fertilizer uniformly with a mechanical spreader at a rate of 50 pounds per 5,000 square feet, or at rate determined from soil test.
- D. Finish Grading
1. Thoroughly mix the applied materials to a depth of 4 inches by running a rototiller over the entire area in two directions at right angles.
 2. Rake the top soiled area to a uniform grade so that all areas drain, as indicated on the grading plan.
 3. Lightly compact with a cultipacker before placing sod.
 4. Remove all trash and stones exceeding 1 inch in diameter from area to a depth of 2 inches prior to preparation and placing seed and mulch.
- E. Seeding
1. No seeding shall be done except in favorable weather conditions during the planting seasons as follows:

Spring Planting Season:	March 1 through May 15
Fall Planting Season:	August 15 through October 1
 2. The seed shall be uniformly distributed over the designated areas. All areas disturbed by the Contractor's operations shall be restored.
 3. A method of sowing using mechanical power-drawn drills or seeders shall be employed, unless otherwise approved by the Engineer.
 4. Care shall be taken to ensure that successive seeded strips shall overlap.
 5. Half the seed shall be sown with the sower moving in one direction, and the remainder of the seed shall be sown with the sower moving at right angles to the first sowing.
 6. The seed shall be covered to an average depth of 1/2-inch by means of a brush harrow, spike-tooth harrow, chain harrow, cultipacker, or other approved device.
- F. Mulching
1. Mulch all areas by spreading a uniform light cover of straw mulch over the seeded area at a rate of 3-1/2 tons per acre no later than the day after seeding has been performed.
 2. Mulch all areas with a slope steeper than 20 percent by placing jute netting in strips paralleling the slope to completely cover newly seeded areas. Pin mulch to ground with 6-inch long wire staples at 5-foot intervals immediately after seeding.
 3. Mulch all areas with a slope steeper than 25 percent with a uniform cover of straw at the rate of 2-1/2 tons per acre not later than 2 days after seeding has been performed and tackify by applying tackifier at

rate of 50 lbs. of tackifier per acre mixed with a minimum of 1,600 gallons of water per acre.

G. Protection

1. Protect newly seeded areas from pedestrian traffic by erecting a fence on 2-inch by 2-inch posts 4 feet high spaced 10 feet on center and strung with a single strand of No. 12-gauge wire marked with cloth strips at 3-foot intervals between posts.

14. GUARANTEE

- A. If, at the end of the 8-week lawn maintenance period, a satisfactory stand of lawn has not been produced, the Contractor shall renovate and re-seed the lawn according to the original treatment or unsatisfactory portions thereof immediately. If it is not accepted, a complete restoration will be required during the planting season meeting all of the requirements specified under CONSTRUCTION METHODS.
- B. A satisfactory stand is defined as a lawn grass or section of lawn of 2,000 square feet or larger that has:
 1. No bare spots larger than 3 square feet.
 2. Not more than 10 percent of total area with bare spots larger than 1 square foot.
 3. Not more than 15 percent of total area with bare spots larger than 6 inches square.

15. INSPECTION FOR ACCEPTANCE

- A. Eight weeks after the start of maintenance on the last section of completed lawn, and on written notice from the Contractor, the Engineer will, within 15 days of such written notice, make an inspection to determine if a satisfactory stand has been produced. If a satisfactory stand has not been established, another inspection will be made after written notice from the Contractor that the lawn grass is ready for inspection following the next growing season.

16. PAYMENT

- A. Payment shall be at the unit prices as herein indicated. These prices shall be full compensation for the execution of pay items indicated including all material, furnishing equipment, labor, tools and incidentals necessary to complete these items.
- B. Seed and Mulch. Payment shall be at the unit price per acre of seed and mulch placed. This price shall be full compensation for all backfilling and finish grading to assure positive drainage and placement of seed and mulch.

END SECTION 9000