



# OZARK SPECIAL ROAD DISTRICT

905 N. Riverside Road  
Ozark, MO 65721

## CONTRACT DOCUMENTS

25<sup>TH</sup> STREET IMPROVEMENTS

STATE HIGHWAY CC TO WALK ON DRIVE

SPRING 2024

TO BID ON THIS PROJECT, ALL BIDDERS MUST CONTACT DERRICK ESTELL, AT TOTH AND ASSOCIATES, IN ORDER TO BE PLACED ON THE PLAN HOLDER LIST.

DERRICK ESTELL, P.E.  
[DESTELL@TOTHASSOCIATES.COM](mailto:DESTELL@TOTHASSOCIATES.COM)  
417.888.0645



1550 E. REPUBLIC ROAD  
SPRINGFIELD, MO 65804  
417.888.0645  
TOTHASSOCIATES.COM

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## INVITATION TO BID

Sealed bids for the construction of the *25<sup>th</sup> Street Improvements* project, located in Christian County adjacent to Ozark city limits along 25<sup>th</sup> Street from State Highway CC to Walk On Drive in Christian County, Missouri, will be received by *Ozark Special Road District* until **1:00 PM CST, Monday, April 1, 2024** at the Ozark Special Road District Road Barn located at 905 N. Riverside Road, Ozark, Missouri 65721. Bids received after 1:00 PM will be returned unopened. No bidder may withdraw his bid within 20 days after the actual date of the opening thereof.

Bids will be publicly opened and read aloud at 1:00 PM CST, Monday, April 1, 2024 in the Meeting Room at Ozark Special Road District Road Barn. Interested parties are invited to attend.

Bidder shall furnish an affidavit and documentation affirming their company is enrolled in and participates in E-verify and an affidavit stating the business does not knowingly employ illegal aliens.

The successful Bidder shall comply with certain insurance requirements as specified in the bid documents.

Ozark Special Road District reserves the right to reject any and all bids. The bid will be awarded to the lowest, responsive, responsible bidder.

Bidding documents may be obtained in electronic format from Toth and Associates, Inc., 1550 East Republic Road, Springfield, Missouri 65804, (417-888-0645). The bidder is responsible for printing the documents. **All bidders must be on the Engineer's plan holder list to be eligible to bid on this project.**

This project will be subject to Federal Davis Bacon Fair Labor Act Prevailing Wage Rates and Procedures. In addition, Missouri Prevailing Wage Laws, Rates and Procedures are also required, whichever is greater, as applicable.

### **Project Description:**

This project will consist of a base bid and a bid alternate. The base bid consists of the milling and overlay of asphaltic concrete pavement along 25<sup>th</sup> Street from State Highway CC to Walk On Drive, including the widening of the roadway to a uniform width of 22 feet with necessary full-depth pavement, excavation, and fill. The bid alternate consists of spot removal and replacement of failing subgrade, as identified in the Construction Drawings, and as evident from existing potholes and pavement failure. The project is located on the edge of Ozark city limits within Christian County, Missouri.

Questions regarding this information may be directed to:

Derrick J. Estell, P.E.  
Toth and Associates, Inc.  
1550 E. Republic Rd  
Springfield, Missouri 65804  
(417) 888-0645

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and Davis Bacon and/or State Prevailing wage rates to be paid under the contract, Segregated Facility, Section 109, and E.O. 11246. MBE, WBE, and Section 3-DBE bidders are encouraged to bid.

The Owner hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals 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, religion, creed, sex, age, ancestry or national origin in consideration for an award.

A certified cashier's check or a bid bond in the amount of 5% shall be submitted with each bid.

# INSTRUCTIONS TO BIDDERS

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## **ARTICLE 1 – DEFINED TERMS**

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued.

## **ARTICLE 2 – COPIES OF BIDDING DOCUMENTS**

- 2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents. Portions of paper Bidding and Contract Documents may be printed on both sides of a page.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.
- 2.04 All bidders must be on the Engineer's plan holder list to be eligible to bid on the project.

## **ARTICLE 3 – QUALIFICATIONS OF BIDDERS**

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within [10] days of Owner's request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:
- A. Evidence of Bidder's authority to do business in the state where the Project is located.
- B. Bidder's state or other contractor license number, if applicable.
- C. Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others."
- D. Other required information regarding qualifications
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

## **ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE**

- 4.01 *Site and Other Areas*
- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

#### 4.02 *Existing Site Conditions*

- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
1. The Supplementary Conditions identify (if any):
    - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
    - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
    - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
    - d. Technical Data contained in such reports and drawings.
  2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
  3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

#### 4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site. Site visits may be arranged by contacting the Owner at the number listed on the Cover Sheet of the project drawings.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any

obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.

- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

#### 4.04 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

#### 4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

#### 4.06 *Obligation of Bidder*

- A. Bidders are informed that pursuant to section 285.530, RSMo, as a condition of the award of any contract in excess of five thousand dollars (\$5,000), the successful bidder shall, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection to the contracted services. Successful bidders shall also sign an affidavit affirming that it does not knowingly employ any personal unauthorized alien in connection to the contracted services.

### **ARTICLE 5 – BIDDER'S REPRESENTATIONS**

5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports

and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;

- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

## **ARTICLE 6 – OMITTED**

## **ARTICLE 7 – INTERPRETATIONS AND ADDENDA**

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents. Addenda may be provided via email only, thus it is important to ensure that a correct email address is provided when obtaining the Bidding Documents.

## **ARTICLE 8 – BID SECURITY**

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to

execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.

- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 91 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.
- 8.05 Power of Attorney: Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

## **ARTICLE 9 – CONTRACT TIMES**

- 9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

## **ARTICLE 10 – LIQUIDATED DAMAGES**

- 10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

## **ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS**

- 11.01 Every request for substitution of materials or equipment shall be in writing addressed to the Engineer and to facilitate time for the Engineer's consideration must be received at least ten business days prior to the date fixed for the opening of bids. Requests for substitution of materials or equipment received less than ten business days prior to the date fixed for the opening of bids may or may not be considered. Any and all such approvals or disapprovals will be in the form of written addenda to the bidding documents. Failure of any Bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his/her bid as submitted.
- 11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder's sole risk.

## **ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS**

- 12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents (most commonly in the Specifications) to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.

- 12.03 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for all portions of the Work.

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

- 12.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

- 12.05 Subcontracts: The bidder is specifically advised that any person, or other party, to whom it is proposed to award a subcontract under this contract:

A. Must be acceptable to the owner after verification by the HUD Area Office of the current eligibility status; and

B. Must submit Certification by Proposed Subcontractor Regarding Equal Employment Opportunity and Affidavits regarding E-Verify. Approval of the proposed subcontract award cannot be given by the Owner unless and until the proposed subcontractor has submitted the Certifications and/or other evidence showing that it has fully complied with any reporting requirements to which it is or was subject. Although the bidder is not required to attach such Certifications by proposed subcontractors to his bid, the bidder is here advised of this requirement so that appropriate action can be taken to prevent subsequent delay in subcontract awards.

## **ARTICLE 13 – PREPARATION OF BID**

- 13.01 The Bid Form is included with the Bidding Documents.

A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown. The corporate seal shall be affixed and attested by the corporate secretary or an assistant corporate secretary.

- 13.03 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.04 A Bid by an individual shall show the Bidder's name and official address.
- 13.05 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 13.06 All names shall be printed in ink below the signatures.
- 13.07 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form. **The "Receipt of Addendum" forms sent out by the Engineer at the time Addenda is issued are not required to be submitted with the Bid; but must be on file with the Engineer as acknowledgment.**
- 13.08 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.09 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

#### **ARTICLE 14 – BASIS OF BID**

##### *14.01 Base Bid with Alternates*

- A. Bidders shall submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.
- B. In the comparison of Bids, any alternate may be added or subtracted in order to determine the low bidder.

##### *14.02 Unit Price*

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity" (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

##### *14.03 Allowances*

- A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

## **ARTICLE 15 – SUBMITTAL OF BID**

- 15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.
- 15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to **Ozark Special Road District, P.O. Box 688, Ozark, MO 65721.**
- 15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

## **ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID**

- 16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

## **ARTICLE 17 – OPENING OF BIDS**

- 17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

## **ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

## **ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT**

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any



provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.

19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.

19.03 Evaluation of Bids

A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum or alternate items.

19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

## **ARTICLE 20 – BONDS AND INSURANCE**

20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

## **ARTICLE 21 – SIGNING OF AGREEMENT**

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

## **ARTICLE 22 – SALES AND USE TAXES**

22.01 Owner is exempt from Missouri state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid. Refer to Paragraph 7.09 of the General Conditions for additional information.

## **ARTICLE 23 – PREVAILING WAGE RATES**

23.01 Wage Rates paid on construction work for this project shall be at least equal to the prevailing wage rates as determined by the Department of Labor and Industrial Relations of Missouri and the Davis Bacon Act, whichever is greater.

## **ARTICLE 24 – LAWS AND REGULATIONS**

24.01 The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

## **ARTICLE 25 – SAFETY STANDARDS AND ACCIDENT PREVENTION**

25.01 With respect to all work performed under this contract the contractor shall:

- A. Comply with the safety standards provisions of applicable laws, building and construction codes, and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of Title 29 of the Code of Federal Regulations, Section 1518 as published in the "Federal Register", Volume 36, No. 75, Saturday, April 17, 1971.
- B. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.
- C. Maintain at his office or other well-known place at the job site, all articles necessary for giving first aid to the injured, and shall make arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees), who may be injured on the job site. In no case shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.
- D. Bidders are informed that the Project is subject to the requirements of Section 292.675, RSMo, which requires all contractors or subcontractors doing work on the Project to provide, and require its on-site employees to complete, a ten (10) hour course in construction safety and health approved by the Occupational Safety and Health Administration ("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. The training must be completed within sixty (60) days of the date of work on the Project commences. On-site employees found on the worksite without the documentation of the required training shall have twenty (20) days to produce such documentation.

## **ARTICLE 26 – FEDERAL PARTICIPATION DISCLOSURE**

26.01 This project will be partially funded with Federal funds from the United States Department of Commerce, Economic Development Administration and therefore is subject to the Federal laws and regulations associated with that program.

## **ARTICLE 27 – LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT**

27.01 The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within 15 days after he received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

## BONDING AND INSURANCE REQUIREMENTS

The minimum requirements shall be as follows:

1. A bid guarantee from each bidder equivalent to five percent of the bid price. The bid guarantee shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.
2. A performance bond on the part of the contractor for 100 percent of the contract price. A performance bond is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.
3. A payment bond on the part of the contractor for 100 percent of the contract price, **IF CONTRACT PRICE EXCEEDS \$50,000.** A payment bond is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

**BID FORM**  
**25<sup>th</sup> Street Improvements**  
Ozark Special Road District

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**ARTICLE 1 – BID RECIPIENT**

1.01 This Bid is submitted to:

**Ozark Special Road District  
905 N. Riverside Road  
Ozark, Missouri 65721**

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS**

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

**ARTICLE 3 – BIDDER’S REPRESENTATIONS**

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all, if any: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-

related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### **ARTICLE 4 – BIDDER'S CERTIFICATION**

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
  - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

## **ARTICLE 5 – BASIS OF BID**

- 5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s): **SEE ATTACHED BID SCHEDULE**

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

## **ARTICLE 6 – TIME OF COMPLETION**

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

## **ARTICLE 7 – ATTACHMENTS TO THIS BID**

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Bid Schedule;
  - B. Required Bid security;
  - C. List of Proposed Subcontractors and Suppliers

## **ARTICLE 8 – DEFINED TERMS**

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

**THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK**

**ARTICLE 9 – BID SUBMITTAL**

BIDDER:

\_\_\_\_\_

By: \_\_\_\_\_  
[Signature]

[Printed name] \_\_\_\_\_  
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture,  
attach evidence of authority to sign.)

Attest: \_\_\_\_\_  
[Signature]

[Printed name] \_\_\_\_\_

Title: \_\_\_\_\_

Submittal Date: \_\_\_\_\_

Address for giving notices:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

Contact Name and e-mail  
address: \_\_\_\_\_  
\_\_\_\_\_

Bidder's License No.: \_\_\_\_\_  
(where applicable)



**BID SCHEDULE - BASE BID**  
**25TH STREET IMPROVEMENTS**  
**PAGE 1 OF 1**

<b>LINE</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>AMOUNT</b>
101	Mobilization, Demobilization, and Bonding	LS	1	\$ _____	\$ _____
102	Traffic Control	LS	1	\$ _____	\$ _____
103	Pavement Removal	SY	7,120	\$ _____	\$ _____
104	Aggregate Subbase Restabilization	CY	455	\$ _____	\$ _____
105	Concrete Subbase Restabilization	CY	130	\$ _____	\$ _____
106	Asphalt Pavement Overlay (BP-2)	CF	7,120	\$ _____	\$ _____
107	Pavement Markings	LF	8,300	\$ _____	\$ _____
108	Cleanup and Restoration	LS	1	\$ _____	\$ _____
109	Seed, Fertilize, & Mulch	AC	1	\$ _____	\$ _____
<b>TOTAL BASE BID CONSTRUCTION COST:</b>					\$ _____

**LIST OF PROPOSED SUBCONTRACTORS AND EQUIPMENT/MATERIAL SUPPLIERS**

List below each major branch of work and major equipment/material supplier category for this proposal and the subcontractor or supplier proposed for that portion of work. The bidder may be requested to change an unsatisfactory subcontractor or equipment/material supplier. The contractor is responsible for selecting or changing subcontractor or equipment/material supplier. The Owner or Engineer may indicate their concerns regarding any entity listed about which they have reason to believe that, due to past experience, poor performance may be expected.

It is the responsibility of any contractor soliciting bids or quotes from subcontractors to verify the eligibility of all subcontractors and equipment/material suppliers being proposed to perform the work. The Contractor has full responsibility for satisfactory execution of all work in accordance with the Contract Documents. Any change of proposed subcontractors or equipment/material suppliers shall be at no cost to the Owner, as the Contractor has full responsibility for execution of the Work.

**SUBCONTRACTOR/SUPLIER LIST**

No.	Branch of Work/Material Category	Subcontractor/Supplier Name	Subcontractor/Supplier Address
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

**BID BOND**

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

BID

Bid Due Date:

Description (*Project Name— Include Location*):

BOND

Bond

Number:

Date:

Penal sum \_\_\_\_\_

\$ \_\_\_\_\_

(Words)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

**BIDDER**

**SURETY**

(Seal

) (Seal)

\_\_\_\_\_  
Bidder's Name and Corporate Seal

\_\_\_\_\_  
Surety's Name and Corporate Seal

By:

\_\_\_\_\_  
Signature

By:

\_\_\_\_\_  
Signature (Attach Power of Attorney)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest:

\_\_\_\_\_  
Signature

Attest:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

*Note: Addresses are to be used for giving any required notice.  
Provide execution by any additional parties, such as joint venturers, if necessary.*

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
  - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
  - 3.2 All Bids are rejected by Owner, or
  - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located. **However, the exclusive venue for any legal action arising out of this agreement or the performance of services thereunder shall be the Circuit Court of Christian County, Missouri, and Bidder and Surety submits to the jurisdiction of said court.**
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

**AGREEMENT  
BETWEEN OWNER AND CONTRACTOR  
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)**

THIS AGREEMENT is by and between \_\_\_\_\_ Ozark Special Road District, Herein through Commissioner Chris Somers, hereinafter called "Owner" \_\_\_\_\_ and \_\_\_\_\_ ("Contractor").

Owner and Contractor hereby agree as follows:

**ARTICLE 1 – WORK**

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: The project will consist of a base bid and bid alternate. The base bid consists of the milling and overlay of asphaltic concrete pavement along 25<sup>th</sup> Street from State Highway CC to Walk On Drive, including the widening of the roadway to a uniform width of 22 feet, with necessary full-depth pavement, excavation, and fill. The bid alternate consists of spot removal and replacement of failing subgrade, as identified in the Construction Drawings, and as evident from existing potholes and pavement failure. The project is located on the edge of Ozark city limits within Christian County, Missouri.

**ARTICLE 2 – THE PROJECT**

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: The project will consist of a base bid and bid alternate. The base bid consists of the milling and overlay of asphaltic concrete pavement along 25<sup>th</sup> Street from State Highway CC to Walk On Drive, including the widening of the roadway to a uniform width of 22 feet, with necessary full-depth pavement, excavation, and fill. The bid alternate consists of spot removal and replacement of failing subgrade, as identified in the Construction Drawings, and as evident from existing potholes and pavement failure.

**ARTICLE 3 – ENGINEER**

3.01 The Project has been designed by Toth and Associates, Inc.  
3.02 The Owner has retained Toth and Associates, Inc. ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

**ARTICLE 4 – CONTRACT TIMES**

4.01 *Time of the Essence*  
A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.  
4.02 *Contract Times: Days*

- A. The Work will be substantially completed within **120** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **120** days after the date when the Contract Times commence to run.

#### 4.03 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
  - 1. **Substantial Completion and Readiness for Final Payment:** Contractor shall pay Owner **\$500** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion **and Readiness for Final Payment** until the Work is complete.

### **ARTICLE 5 – CONTRACT PRICE**

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

- A. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item):

#### **SEE ATTACHED BID SCHEDULE**

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

### **ARTICLE 6 – PAYMENT PROCEDURES**

#### 6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

#### 6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 30th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
  - 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of

payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract

- a. 95 percent of Work completed (with the balance being retainage).
  - b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

#### 6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06 **and in accordance with actual installed quantities at the contract unit prices.**

### ARTICLE 7 – INTEREST

7.01 All amounts not paid when due shall bear interest at the rate of 12 percent per annum.

### ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
  - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
  - D. If any, Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
  - E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, if any, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

- F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

## ARTICLE 9 – CONTRACT DOCUMENTS

### 9.01 Contents

- A. The Contract Documents consist of the following:
  - 1. This Agreement (pages 1 to 6, inclusive).
  - 2. Performance bond (pages 1 to 3, inclusive).
  - 3. Payment bond (pages 1 to 3, inclusive).
  - 4. General Conditions (pages 1 to 74, inclusive).
  - 5. Supplementary Conditions (**pages SC1 to SC4 and incorporated into C-700 Standard General Conditions by strikethrough and bold**).
  - 6. Specifications as listed in the table of contents of the Project Manual.
  - 7. Drawings (not attached but incorporated by reference) consisting of Base Bid Plan Set 14 sheets with each sheet bearing the following general title: Oak Street Stormwater Improvements.
  - 8. Addenda (numbers     to    , inclusive).
  - 9. Exhibits to this Agreement (enumerated as follows):
    - a. Contractor's Bid Schedule (pages 1 to 2, inclusive).
  - 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    - a. Notice of Award.
    - b. Notice to Proceed.
    - c. Change Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.



## ARTICLE 10 – MISCELLANEOUS

### 10.01 *Terms*

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

### 10.02 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

### 10.03 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

### 10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

### 10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
  1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
  2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
  4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on \_\_\_\_\_ (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

Ozark Special Road District

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

*(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest: \_\_\_\_\_

Attest: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Address for giving notices:

Address for giving notices:

Ozark Special Road District

905 N. Riverside Road

Ozark, Missouri 65721

License

No.: \_\_\_\_\_

*(where applicable)*

**NOTICE OF AWARD**

---

DATE OF ISSUANCE:

---

OWNER: Ozark Special Road District

---

ENGINEER: Toth and Associates, Inc.

ENGINEER'S PROJECT NO.: 97.001

---

PROJECT: 25<sup>th</sup> Street Improvements

CONTRACT NAME:

---

BIDDER:

---

BIDDER'S ADDRESS:

---

**TO BIDDER:**

You are notified that Owner has accepted your Bid dated **05/03/2024** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

25<sup>th</sup> Street Improvements – Base Bid

*[describe Work, alternates, or sections of Work awarded]*

The Contract Price of the awarded Contract is: \$

Four (4) unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

a set of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner four (4) counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security *[e.g., performance and payment bonds]* and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

---

Ozark Special Road District

Owner

By: \_\_\_\_\_

Authorized Signature

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Bidder Name

By: \_\_\_\_\_

Authorized Signature

\_\_\_\_\_  
Name and Title

Received On \_\_\_\_\_, 20\_\_

Copy: Engineer

**NOTICE TO PROCEED**

---

EFFECTIVE DATE OF CONTRACT:

---

OWNER: Ozark Special Road District

---

ENGINEER: Toth and Associates, Inc.

ENGINEER'S PROJECT NO.: 97.001

---

PROJECT: 25<sup>th</sup> Street Improvements

CONTRACT NAME:

---

CONTRACTOR:

---

**TO CONTRACTOR:**

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on [\_\_\_\_\_, 20\_\_]. *[see Paragraph 4.01 of the General Conditions]*

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, the date of readiness for final payment is \_\_\_\_\_ and the number of days to achieve readiness for final payment is \_\_\_\_\_.

Before starting any Work at the Site, Contractor must comply with the following:

*[Note any access limitations, security procedures, or other restrictions]*

---

ISSUED:

By: \_\_\_\_\_

Authorized Signature

---

Name and Title

Copy: Engineer

## PERFORMANCE BOND

CONTRACTOR (name and address):

SURETY (name and address of principal place of business):

OWNER (name and address):

### CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description (name and location):

### BOND

Bond Number:

Date (not earlier than the Effective Date of the Agreement of the Construction Contract):

Amount:

Modifications to this Bond Form:  None  See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

### CONTRACTOR AS PRINCIPAL

### SURETY

\_\_\_\_\_  
Contractor's Name and Corporate Seal (seal)

\_\_\_\_\_  
Surety's Name and Corporate Seal (seal)

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature (attach power of attorney)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

**Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.**

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment

bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in a court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. **However, the exclusive venue for any legal action arising out of this agreement or the performance of services thereunder shall be the Circuit Court of Howell County, Missouri, and Contractor and Surety submits to the jurisdiction of said court.** If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

#### 14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any

amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

## PAYMENT BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

### CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

### BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form:  None  See Paragraph 18

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Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

### CONTRACTOR AS PRINCIPAL

### SURETY

\_\_\_\_\_  
Contractor's Name and Corporate Seal *(seal)*

\_\_\_\_\_  
Surety's Name and Corporate Seal *(seal)*

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

**Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.**



1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
  - 5.1 Claimants who do not have a direct contract with the Contractor,
    - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
    - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
  - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
  - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
  - 7.2 Pay or arrange for payment of any undisputed amounts.
  - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the

subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable. **However, the exclusive venue for any legal action arising out of this agreement or the performance of services thereunder shall be the Circuit Court of Christian County, Missouri, and Contractor and Surety submits to the jurisdiction of said court.**

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

## 16. Definitions

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and

8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

## PREVAILING WAGE LAW

### Definitions.

290.210. As used in sections 290.210 to 290.340, unless the context indicates otherwise:

(1) "Adjacent county", any Missouri county of the third or fourth classification having a boundary that, at any point, touches any boundary of the locality for which the wage rate is being determined;

(2) "Collective bargaining agreement" means any written agreement or understanding between an employer or employer association and a labor organization or union which is the exclusive bargaining representative of the employer's or employer association's employees pursuant to the terms of the National Labor Relations Act and which agreement or understanding or predecessor agreement or understanding has been used to determine an occupational title wage rate;

(3) "Construction" includes construction, reconstruction, improvement, enlargement, alteration, painting and decorating, or major repair;

(4) "Department" means the department of labor and industrial relations;

(5) "Labor organization" or "union" means any entity which has been designated pursuant to the terms of the National Labor Relations Act as the exclusive bargaining representative of employees of employers engaged in the construction industry, which entity or affiliated entity has ever had a collective bargaining agreement which determined an occupational title wage rate;

(6) "Locality" means the county where the physical work upon public works is performed;

(7) "Maintenance work" means the repair, but not the replacement, of existing facilities when the size, type or extent of the existing facilities is not thereby changed or increased;

(8) "Prevailing hourly rate of wages" means the wages paid generally, in the locality in which the public works is being performed, to workmen engaged in work of a similar character including the basic hourly rate of pay and the amount of the rate of contributions irrevocably made to a fund, plan or program, and the amount of the rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing benefits to workmen and mechanics pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the workmen affected, for medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance, disability and sickness insurance, accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other federal or state law to provide any of the benefits; provided, that the obligation of a contractor or subcontractor to make payment in accordance with the prevailing wage determinations of the department, insofar as sections 290.210 to 290.340 are concerned, may be discharged by the making of payments in cash, by the making of irrevocable contributions by the assumption of an enforceable commitment to bear the costs of a plan or program as provided herein, or any combination thereof, where the

aggregate of such payments, contributions and costs is not less than the rate of pay plus the other amounts as provided herein;

(9) "Previous six annual wage order reporting periods" means the current annual wage order reporting period under consideration for wage rate determinations and the five immediately preceding annual wage order reporting periods\*;

(10) "Public body" means the state of Missouri or any officer, official, authority, board or commission of the state, or other political subdivision thereof, or any institution supported in whole or in part by public funds;

(11) "Public works" means all fixed works constructed for public use or benefit or paid for wholly or in part out of public funds. It also includes any work done directly by any public utility company when performed by it pursuant to the order of the public service commission or other public authority whether or not it be done under public supervision or direction or paid for wholly or in part out of public funds when let to contract by said utility. It does not include any work done for or by any drainage or levee district;

(12) "Workmen" means laborers, workmen and mechanics.

**Policy declared.**

290.220. It is hereby declared to be the policy of the state of Missouri that a wage of no less than the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed shall be paid to all workmen employed by or on behalf of any public body engaged in public works exclusive of maintenance work.

**Prevailing wage rates required on construction of public works.**

290.230. 1. Not less than the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed, and not less than the prevailing hourly rate of wages for legal holiday and overtime work, shall be paid to all workmen employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work. Only such workmen as are directly employed by contractors or subcontractors in actual construction work on the site of the building or construction job shall be deemed to be employed upon public works. Any such workman who agrees in writing to volunteer his or her labor without pay shall not be deemed to be employed upon public works, and shall not be entitled to the prevailing hourly rate of wages. For the purposes of this section, the term "workman who agrees in writing to volunteer his or her labor without pay" shall mean a workman who volunteers his or her labor without any promise of benefit or remuneration for such voluntary activity, and who is not a prisoner in any jail or prison facility and who is not performing community service pursuant to disposition of a criminal case against him, and is not otherwise employed for compensation at any time in the construction or maintenance work on the same public works for which the workman is a volunteer. Under no circumstances may an employer force, compel or otherwise intimidate an employee into performing work otherwise paid by a prevailing wage as a volunteer.

2. When the hauling of materials or equipment includes some phase of construction other than the mere transportation to the site of the construction, workmen engaged in this dual capacity shall be deemed employed directly on public works.

**Department of labor and industrial relations to enforce--make regulations.**

290.240. 1. The department shall inquire diligently as to any violation of sections 290.210 to 290.340, shall institute actions for penalties herein prescribed, and shall enforce generally the provisions of sections 290.210 to 290.340.

2. The department may establish rules and regulations for the purpose of carrying out the provisions of sections 290.210 to 290.340.

**Prevailing wage, incorporation into contracts--failure to pay, penalty--complaints of violation, public body or prime contractor to withhold payment--determination of a violation, investigation required--employer's right to dispute--enforcement proceeding permitted, when.**

290.250. 1. Every public body authorized to contract for or construct public works before advertising for bids or undertaking such construction shall request the department to determine the prevailing rates of wages for workmen for the class or type of work called for by the public works, in the locality where the work is to be performed. The department shall determine the prevailing hourly rate of wages in the locality in which the work is to be performed for each type of workman required to execute the contemplated contract and such determination or schedule of the prevailing hourly rate of wages shall be attached to and made a part of the specifications for the work. The public body shall then specify in the resolution or ordinance and in the call for bids for the contract what is the prevailing hourly rate of wages in the locality for each type of workman needed to execute the contract and also the general prevailing rate for legal holiday and overtime work. It shall be mandatory upon the contractor to whom the contract is awarded and upon any subcontractor under him to pay not less than the specified rates to all workmen employed by them in the execution of the contract. The public body awarding the contract shall cause to be inserted in the contract a stipulation to the effect that not less than the prevailing hourly rate of wages shall be paid to all workmen performing work under the contract. The employer shall forfeit as a penalty to the state, county, city and county, city, town, district or other political subdivision on whose behalf the contract is made or awarded one hundred dollars for each workman employed, for each calendar day, or portion thereof, such workman is paid less than the said stipulated rates for any work done under said contract, by him or by any subcontractor under him, and the said public body awarding the contract shall cause to be inserted in the contract a stipulation to this effect. It shall be the duty of such public body awarding the contract, and its agents and officers, to take cognizance of all complaints of all violations of the provisions of sections 290.210 to 290.340 committed in the course of the execution of the contract, and, when making payments to the contractor becoming due under said contract, to withhold and retain therefrom all sums and amounts due and owing as a result of any violation of sections 290.210 to 290.340. It shall be lawful for any contractor to withhold from any subcontractor under him sufficient sums to cover any penalties withheld from him by the awarding body on account of said subcontractor's failure to comply with the terms of sections 290.210 to 290.340, and if payment has already been made to him, the contractor may recover from him the amount of the penalty in a suit at law.

2. In determining whether a violation of sections 290.210 to 290.340 has occurred, and whether the penalty under subsection 1 of this section shall be imposed, it shall be the duty of the department to investigate any claim of violation. Upon completing such investigation, the department shall notify the employer of its findings. If the department concludes that a violation of sections 290.210 to 290.340 has occurred and a penalty may be due, the department shall

notify the employer of such finding by providing a notice of penalty to the employer. Such penalty shall not be due until forty-five days after the date of the notice of the penalty.

3. The employer shall have the right to dispute such notice of penalty in writing to the department within forty-five days of the date of the notice. Upon receipt of this written notice of dispute, the department shall notify the employer of the right to resolve such dispute through arbitration. The state and the employer shall submit to an arbitration process to be established by the department by rule, and in conformance with the guidelines and rules of the American Arbitration Association or other arbitration process mutually agreed upon by the employer and the state. If at any time prior to the department pursuing an enforcement action to enforce the monetary penalty provisions of subsection 1 of this section against the employer, the employer pays the back wages as determined by either the department or the arbitrator, the department shall be precluded from initiating any enforcement action to impose the monetary penalty provisions of subsection 1 of this section.

4. If the employer fails to pay all wages due as determined by the arbitrator within forty-five days following the conclusion of the arbitration process, or if the employer fails to exercise the right to seek arbitration, the department may then pursue an enforcement action to enforce the monetary penalty provisions of subsection 1 of this section against the employer. If the court orders payment of the penalties as prescribed in subsection 1 of this section, the department shall be entitled to recover its actual cost of enforcement from such penalty amount.

5. Nothing in this section shall be interpreted as precluding an action for enforcement filed by an aggrieved employee as otherwise provided in law.

**Determination of hourly rate for heavy and highway construction work, when made, where filed, objections, hearing, determination.**

290.260. 1. The department, as it deems necessary, shall from time to time investigate and determine the prevailing hourly rate of wages for heavy and highway construction work in the localities. In doing so, the department shall accept and consider information regarding local wage rates that is submitted in either paper or electronic formats. A determination applicable to every locality to be contained in a general wage order shall be made annually on or before July first of each year for the Missouri state highways and transportation commission and shall remain in effect until superseded by a new general wage order. In determining prevailing rates, the department shall ascertain and consider the applicable wage rates established by collective bargaining agreements, if any, and the rates that are paid generally within the locality.

2. A certified copy of the determination so made shall be filed immediately with the secretary of state and with the department in Jefferson City. Copies shall be supplied by the department to all persons requesting them within ten days after the filing.

3. At any time within thirty days after the certified copies of the determinations have been filed with the secretary of state and the department, any person who is affected thereby may object in writing to the determination or the part thereof that he deems objectionable by filing a written notice with the department, stating the specific grounds of the objection.

4. Within thirty days of the receipt of the objection, the department shall set a date for a hearing on the objection. The date for the hearing shall be within sixty days of the receipt of the

objection. Written notice of the time and place of the hearing shall be given to the objectors at least ten days prior to the date set for the hearing.

5. The department at its discretion may hear each written objection separately or consolidate for hearing any two or more written objections. At the hearing the department shall first introduce in evidence the investigation it instituted and the other facts which were considered at the time of the original determination which formed the basis for its determination. The department, or the objector, or any interested party, thereafter may introduce any evidence that is material to the issues.

6. Within twenty days of the conclusion of the hearing, the department must rule on the written objection and make the final determination that it believes the evidence warrants. Immediately, the department shall file a certified copy of its final determination with the secretary of state and with the department and shall serve a copy of the final determination on all parties to the proceedings by personal service or by registered mail.

7. This final decision of the department of the prevailing wages in the locality is subject to review in accordance with the provisions of chapter 536. Any person affected, whether or not the person participated in the proceedings resulting in the final determination, may have the decision of the department reviewed. The filing of the final determination with the secretary of state shall be considered a service of the final determination on persons not participating in the administrative proceedings resulting in the final determination.

8. At any time before trial any person affected by the final determination of the department may intervene in the proceedings to review under chapter 536 and be made a party to the proceedings.

9. All proceedings in any court affecting a determination of the department under the provisions of sections 290.210 to 290.340 shall have priority in hearing and determination over all other civil proceedings pending in the court, except election contests.

**Determination of hourly rate by location and occupation title, when made, where filed--objections, hearings--final determination--notice to department by public body, when.**

290.262. 1. Except as otherwise provided in section 290.260, the department shall annually determine the prevailing hourly rate of wages in each locality for each separate occupational title. In doing so, the department shall accept and consider information regarding local wage rates that is submitted in either paper or electronic formats. A final determination applicable to every locality to be contained in an annual wage order shall be made annually on or before July first of each year and shall remain in effect until superseded by a new annual wage order or as otherwise provided in this section. The department shall, by March tenth of each year, make an initial determination for each occupational title within the locality.

2. The prevailing wage rate for an occupational title in a locality shall, with the exception of localities that are counties of the third and fourth classification and any county of the second classification with more than fifty-eight thousand but fewer than sixty-five thousand inhabitants, be the wage rate most commonly paid, as measured by the number of hours worked at each wage rate, for that occupational title within that locality. In determining such prevailing wage rates, the department shall ascertain and consider the applicable wage rates established by collective bargaining agreements, if any, when no wages were reported.

3. With respect only to localities that are counties of the third and fourth classification and any county of the second classification with more than fifty-eight thousand but fewer than sixty-five thousand inhabitants, the prevailing wage rate for an occupational title within such locality shall be determined in the following manner:

(1) The total number of hours worked that are not paid pursuant to a collective bargaining agreement for the time period in that occupational title in the locality and the total number of hours worked that are paid pursuant to a collective bargaining agreement for the time period in that occupational title in the locality shall be considered;

(2) If the total number of hours that are not paid pursuant to a collective bargaining agreement, in the aggregate, exceeds the total number of hours that are paid pursuant to such an agreement, in the aggregate, then the prevailing wage rate shall be the rate most commonly paid that is not paid pursuant to a collective bargaining agreement as measured by the number of hours worked at such rate for that occupational title within the locality;

(3) If the total number of hours that are paid pursuant to a collective bargaining agreement, in the aggregate, exceeds the total number of hours that are not paid pursuant to such an agreement, in the aggregate, then the prevailing wage rate shall be the rate most commonly paid that is paid pursuant to a collective bargaining agreement as measured by the number of hours worked at such rate for that occupational title within the locality;

(4) If no work within a particular occupational title has been performed in a locality at any wage rate, the prevailing wage rate for that occupational title in that locality shall be determined in the following manner:

(a) If wages were reported for an occupational title within a locality within the previous six annual wage order reporting periods and the prevailing wage rate was determined by a collective bargaining agreement by hours worked pursuant to such agreement in the most recent annual wage order reporting period where such wages were reported, then the wage rate paid pursuant to the current collective bargaining agreement shall be the prevailing rate for that occupational title within the locality;

(b) If wages were reported for an occupational title within a locality within the previous six annual wage order reporting periods and the prevailing wage rate was not determined by hours worked pursuant to a collective bargaining agreement in the most recent annual wage order reporting period where such wages were reported, then the wage rate paid in the most recent annual wage order reporting period when such wages were reported shall be the prevailing wage rate for that occupational title within the locality;

(c) If no wages were reported for an occupational title within a locality within the previous six annual wage order reporting periods, the department shall examine hours and wages reported in all adjacent Missouri counties during the same periods. The most recent reported wage rate in a given wage order period in the adjacent Missouri county with the most reported hours actually worked for that occupational title in the wage period during the previous six annual wage order reporting periods shall be used to determine the prevailing wage rate;

(d) If no wages were reported for an occupational title within any adjacent Missouri county within the previous six annual wage order reporting periods, then the rate paid pursuant to the current



collective bargaining agreement shall be the prevailing wage rate for that occupational title within the locality.

4. A certified copy of the initial determinations so made shall be filed immediately with the secretary of state and with the department in Jefferson City. Copies shall be supplied by the department to all persons requesting them within ten days after the filing.

5. At any time within thirty days after the certified copies of the determinations have been filed with the secretary of state and the department, any person who is affected thereby may object in writing to a determination or a part thereof that he deems objectionable by filing a written notice with the department, stating the specific grounds of the objection. If no objection is filed, the determination is final after thirty days.

6. After the receipt of the objection, the department shall set a date for a hearing on the objection. The date for the hearing shall be within sixty days of the receipt of the objection. Written notice of the time and place of the hearing shall be given to the objectors at least ten days prior to the date set for the hearing.

7. The department at its discretion may hear each written objection separately or consolidate for hearing any two or more written objections. At the hearing the department shall first introduce in evidence the investigation it instituted and the other facts which were considered at the time of the original determination which formed the basis for its determination. The department, or the objector, or any interested party, thereafter may introduce any evidence that is material to the issues.

8. Within twenty days of the conclusion of the hearing, the department shall rule on the written objection and make the final determination that it believes the evidence warrants. Immediately, the department shall file a certified copy of its final determination with the secretary of state and with the department and shall serve a copy of the final determination on all parties to the proceedings by personal service or by registered mail.

9. This final decision of the department of the prevailing wages in the locality for each occupational title is subject to review in accordance with the provisions of chapter 536. Any person affected, whether or not the person participated in the proceedings resulting in the final determination, may have the decision of the department reviewed. The filing of the final determination with the secretary of state shall be considered a service of the final determination on persons not participating in the administrative proceedings resulting in the final determination.

10. At any time before trial any person affected by the final determination of the department may intervene in the proceedings to review under chapter 536 and be made a party to the proceedings.

11. Any annual wage order made for a particular occupational title in a locality, that is based on the number of hours worked under a collective bargaining agreement, may be altered once each year, as provided in this subsection. The prevailing wage for each such occupational title may be adjusted on the anniversary date of any collective bargaining agreement which covers all persons in that particular occupational title in the locality in accordance with any annual incremental wage increases set in the collective bargaining agreement. If the prevailing wage for an occupational title is adjusted pursuant to this subsection, the employee's representative

or employer in regard to such collective bargaining agreement shall notify the department of this adjustment, including the effective date of the adjustment. The adjusted prevailing wage shall be in effect until the next final annual wage order is issued pursuant to this section. The wage rates for any particular job, contracted and commenced within sixty days of the contract date, which were set as a result of the annual or revised wage order, shall remain in effect for the duration of that particular job.

12. In addition to all other reporting requirements of sections 290.210 to 290.340, each public body which is awarding a contract for a public works project shall, prior to beginning of any work on such public works project, notify the department, on a form prescribed by the department, of the scope of the work to be done, the various types of craftsmen who will be needed on the project, and the date work will commence on the project.

**Hourly wage must equal or exceed federal minimum wage.**

290.263. The hourly wages to be paid as prescribed in section 290.250 to workmen upon public works shall not be less than the minimum wage specified under Section 6(a)(1) of the Fair Labor Standards Act of 1938, as amended.

**Wage rates posted, where.**

290.265. A clearly legible statement of all prevailing hourly wage rates to be paid to all workmen employed in order to execute the contract and employed on the construction of the public works shall be kept posted in a prominent and easily accessible place at the site thereof by each contractor and subcontractor engaged in the public works projects under the provisions of this law and such notice shall remain posted during the full time that any such workman shall be employed on the public works.

**Declaration as to prevailing wages final--maximum wages and hours not limited.**

290.270. The finding of the department ascertaining and declaring the prevailing hourly rate of wages shall be final for the locality, unless reviewed under the provisions of sections 290.210 to 290.340. Nothing in sections 290.210 to 290.340, however, shall be construed to prohibit the payment to any workman employed on any public work of more than the prevailing rate of wages. Nothing in sections 290.210 to 290.340 shall be construed to limit the hours of work which may be performed by any workman in any particular period of time.

**Administration of oaths--subpoenas--enforcement of subpoenas.**

290.280. The authorized representative of the department may administer oaths, take or cause to be taken the depositions of witnesses, and require by subpoena the attendance and testimony of witnesses and the production of all books, records, and other evidence relative to any matter under investigation or hearing. The subpoena shall be signed and issued by the department's authorized representative. In case of failure of any person to comply with any subpoena lawfully issued under this section, or on the refusal of any witness to produce evidence or to testify to any matter regarding which he may be lawfully interrogated, the authorized representative of the department may proceed to enforce obedience to the subpoenas in the manner provided by section 536.077 for administrative agencies. The authorized representative of the department shall have the power to certify to official acts.

**Contractor's payroll records, contents--affidavit of compliance required--signs on motor vehicles and equipment, requirements--temporary stationary sign, when--exception.**

290.290. 1. The contractor and each subcontractor engaged in any construction of public works shall keep full and accurate records clearly indicating the names, occupations and crafts of every workman employed by them in connection with the public work together with an accurate record of the number of hours worked by each workman and the actual wages paid therefor. The payroll records required to be so kept shall be open to inspection by any authorized representative of the contracting public body or of the department at any reasonable time and as often as may be necessary and such records shall not be destroyed or removed from the state for the period of one year following the completion of the public work in connection with which the records are made.

2. Each contractor and subcontractor shall file with the contracting public body upon completion of the public work and prior to final payment therefor an affidavit stating that he had fully complied with the provisions and requirements of this chapter, and no public body shall be authorized to make final payment until such affidavit is filed therewith in proper form and order.

3. Each contractor and subcontractor engaged in any construction of public works shall have its name, acceptable abbreviation or recognizable logo and the name of the city and state of the mailing address of the principal office of the company, on each motor vehicle and motorized self-propelled piece of equipment which is used in connection with such public works project during the time the contractor or subcontractor is engaged on such project. The sign shall be legible from a distance of twenty feet but the size of the lettering need not be larger than two inches. In cases where equipment is leased or where affixing a legible sign to the equipment is impractical, the contractor may place a temporary stationary sign, with the information required pursuant to this subsection, at the main entrance of the construction project in place of affixing the required information on the equipment so long as such sign is not in violation of any state or federal statute, rule or regulation. Motor vehicles which are required to have similar information affixed thereto pursuant to requirements of a regulatory agency of the state or federal government are exempt from the provisions of this subsection.

4. The provisions of subsection 3 of this section shall not apply to construction of public works for which the contract awarded is in the amount of two hundred fifty thousand dollars or less.

**Actions for prevailing wages by workman authorized.**

290.300. Any workman employed by the contractor or by any subcontractor under the contractor who shall be paid for his services in a sum less than the stipulated rates for work done under the contract, shall have a right of action for double whatever difference there may be between the amount so paid and the rates provided by the contract together with a reasonable attorney's fee to be determined by the court, and an action brought to recover same shall be deemed to be a suit for wages, and any and all judgments entered therein shall have the same force and effect as other judgments for wages.

**Rebates by workmen prohibited, exception.**

290.305. No person, firm or corporation shall violate the wage provisions of any contract contemplated in sections 290.210 to 290.340 or suffer or require any employee to work for less than the rate of wages so fixed, or violate any of the provisions contained in sections 290.210 to

290.340. Where workmen are employed and their rate of wages has been determined as provided in sections 290.210 to 290.340, no person, either for himself or any other person, shall request, demand or receive, either before or after such workman is engaged, that such workman pay back, return, donate, contribute, or give any part or all of said workman's wages, salary, or thing of value, to any person, upon the statement, representation, or understanding that failure to comply with such request or demand will prevent such workman from procuring or retaining employment, and no person shall, directly or indirectly, pay, request or authorize any other person to violate this section. This section does not apply to any agent or representative of a duly constituted labor organization acting in the collection of dues or assessments of such organization.

**Deductions from wages, agreement to be written, approval of public body required.**

290.315. All contractors and subcontractors required in sections 290.210 to 290.340 to pay not less than the prevailing rate of wages shall make full payment of such wages in legal tender, without any deduction for food, sleeping accommodations, transportation, use of small tools, or any other thing of any kind or description. This section does not apply where the employer and employee enter into an agreement in writing at the beginning of said term of employment covering deductions for food, sleeping accommodations, or other similar items, provided such agreement is submitted by the employer to the public body awarding the contract and the same is approved by such public body as fair and reasonable.

**Advertising for bids before prevailing wage is determined prohibited.**

290.320. No public body, officer, official, member, agent or representative authorized to contract for public works shall fail, before advertising for bids or contracting for such construction, to have the department determine the prevailing rates of wages of workmen for each class of work called for by the public works in the locality where the work is to be performed as provided in sections 290.210 to 290.340.

**Awarding contract or payment without prevailing wage determination prohibited.**

290.325. No public body, officer, official, member, agent or representative thereof authorized to contract for public works shall award a contract for the construction of such improvement or disburse any funds on account of the construction of such public improvement, unless such public body has first had the department determine the prevailing rates of wages of workmen for the class of work called for by such public works in the locality where the work is to be performed and such determination has been made a part of the specifications and contract for such public works.

**Convicted violators of sections 290.210 to 290.340 listed, effect of.**

290.330. The department after investigation, upon complaint or upon its own initiative, shall file with the secretary of state a list of the contractors and subcontractors who it finds have been prosecuted and convicted for violations of sections 290.210 to 290.340 and such contractor or subcontractor, or simulations thereof, shall be prohibited from contracting directly or indirectly with any public body for the construction of any public works or from performing any work on the same as a contractor or subcontractor for a period of one year from the date of the first conviction for such violation and for a period of three years from the date of each subsequent violation and conviction thereof. No public body shall award a contract for a public works to any

contractor or subcontractor, or simulation thereof, during the time that its name appears on said list. The filing of the notice of conviction with the secretary of state shall be notice to all public bodies and their officers, officials, members, agents and representatives.

**Notice of violation, failure to comply, attorney general shall sue, injunctive relief authorized.**

290.335. If it is found that a public body, contractor or subcontractor has not complied with any of the terms of sections 290.210 to 290.340, the department shall give notice of the precise violation in writing to such public body, contractor or subcontractor. Sufficient time may be allowed for compliance therewith as the department deems necessary. After the expiration of the time prescribed in said notice, the department may in writing inform the attorney general of the fact that such notice has been given and that the public body, contractor or subcontractor or the authorized representative or agent thereof to whom it was directed has not complied with such notice. Upon receipt thereof, the attorney general shall at the earliest possible time bring suit in the name of the state in the circuit court of the county in which such public body is located or where any such contractor or subcontractor is engaged in any public works to enjoin the award of such contract for a public works, or any further work or payments thereunder if the contract has been awarded, until the requirements of such notice are fully complied with. The court may issue a temporary restraining order with due notice to the defendant in such action. The plaintiff shall in any such injunctive action post an adequate bond to be set by the circuit judge. Upon final hearing thereof, if the court is satisfied that the requirements of the notice by the department to the defendant were not unreasonable or arbitrary, it shall issue an order enjoining the awarding of such contract for a public works, or any further work or payments thereunder if the contract has been awarded, until the notice is fully complied with. Such injunction shall continue operative until the court is satisfied that the requirements of such notice have been complied with and the court shall have and exercise with respect to the enforcement of such injunctions all the power in it in other similar cases. Both the plaintiff and defendant in such action have the same rights of appeal as are provided by law in other injunction proceedings.

**Penalty for violation.**

290.340. Any officer, official, member, agent or representative of any public body, contractor or subcontractor who willfully violates and omits to comply with any of the provisions and requirements of sections 290.210 to 290.340 shall be punished for each violation thereof by a fine not exceeding five hundred dollars, or by imprisonment not exceeding six months, or by both such fine and imprisonment. Each day such violation or omission continues shall constitute a separate offense as contemplated by this section.



**DIVISION OF  
LABOR  
STANDARDS**

MISSOURI DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS  
DIVISION OF LABOR STANDARDS

**AFFIDAVIT  
COMPLIANCE WITH THE PREVAILING WAGE LAW**

I, \_\_\_\_\_, upon being duly sworn upon my oath state that: (1) I am the  
*(Name)*  
\_\_\_\_\_ of \_\_\_\_\_; (2) all requirements of  
*(Title)* *(Name of Company)*  
§§ 290.210 to 290.340, RSMo, pertaining to the payment of wages to workers employed on public works projects  
have been fully satisfied with regard to this company's work on \_\_\_\_\_;  
*(Name of Project)*

(3) I have reviewed and am familiar with the prevailing wage rules in 8 CSR 30-3.010 to 8 CSR 30-3.060; (4) based upon my knowledge of these rules, including the occupational titles set out in 8 CSR 30-3.060, I have completed full and accurate records clearly indicating (a) the names, occupations, and crafts of every worker employed by this company in connection with this project together with an accurate record of the number of hours worked by each worker and the actual wages paid for each class or type of work performed, (b) the payroll deductions that have been made for each worker, and (c) the amounts paid to provide fringe benefits, if any, for each worker; (5) the amounts paid to provide fringe benefits, if any, were irrevocably paid to a trustee or to a third party pursuant to a fund, plan, or program on behalf of the workers; (6) these payroll records are kept and have been provided for inspection to the authorized representative of the contracting public body and will be available, as often as may be necessary, to such body and the Missouri Department of Labor and Industrial Relations; (7) such records shall not be destroyed or removed from the state for one year following the completion of this company's work on this project; (8) when in effect, the requirements of §§ 290.550 through 290.580, RSMo, pertaining to excessive unemployment were fully satisfied; and (9) there has been no exception to the full and complete compliance with the provisions and requirements of Annual Wage Order No. \_\_\_\_\_ Section \_\_\_\_\_ issued by the Missouri Division of Labor Standards and applicable to this project located in \_\_\_\_\_ County, Missouri, and completed on the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

The matters stated herein are true to the best of my information, knowledge, and belief. I acknowledge that the falsification of any information set out above may subject me to criminal prosecution pursuant to §§290.340, 570.090, 575.040, 575.050, or 575.060, RSMo.

\_\_\_\_\_  
Signature

Subscribed and sworn to me this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.  
My commission expires \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Receipt by Authorized Public Representative

# Missouri

## Division of Labor Standards

### WAGE AND HOUR SECTION



MICHAEL L. PARSON, Governor

# Annual Wage Order No. 30

Section 022  
**CHRISTIAN COUNTY**

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by \_\_\_\_\_

Todd Smith, Director  
Division of Labor Standards

Filed With Secretary of State: \_\_\_\_\_ **March 10, 2023**

Last Date Objections May Be Filed: **April 10, 2023**

Prepared by Missouri Department of Labor and Industrial Relations

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Asbestos Worker	\$21.50
Boilermaker	\$23.45*
Bricklayer	\$50.77
<b>Carpenter</b>	<b>\$46.73</b>
Lather	
Linoleum Layer	
Millwright	
Pile Driver	
Cement Mason	\$38.46
Plasterer	
Communications Technician	\$23.45*
Electrician (Inside Wireman)	\$44.82
Electrician Outside Lineman	\$23.45*
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Elevator Constructor	\$23.45*
Glazier	\$41.59
<b>Ironworker</b>	<b>\$64.66</b>
Laborer	\$39.11
General Laborer	
First Semi-Skilled	
Second Semi-Skilled	
Mason	\$23.45*
Marble Mason	
Marble Finisher	
Terrazzo Worker	
Terrazzo Finisher	
Tile Setter	
Tile Finisher	
Operating Engineer	\$45.20
Group I	
Group II	
Group III	
Group III-A	
Group IV	
Group V	
Painter	\$40.48
Plumber	\$50.29
Pipe Fitter	
Roofer	\$40.95
Sheet Metal Worker	\$48.35
Sprinkler Fitter	\$64.44
Truck Driver	\$23.45*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

\*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. The public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

\*\*The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title as defined in RSMO Section 290.210.



Heavy Construction Rates for  
CHRISTIAN County

Section 022

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Carpenter	\$23.45*
Millwright	
Pile Driver	
Electrician (Outside Lineman)	\$23.45*
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Laborer	\$43.50
General Laborer	
Skilled Laborer	
Operating Engineer	\$50.83
Group I	
Group II	
Group III	
Group IV	
Truck Driver	\$23.45*
Truck Control Service Driver	
Group I	
Group II	
Group III	
Group IV	

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate Sheet.

\*The Division of Labor Standards received fewer than 1,000 reportable hours for this occupational title. Public works contracting minimum wage is established for this occupational title using data provided by Missouri Economic Research and Information Center.

\*\*The Prevailing Hourly Rate includes any applicable fringe benefit amounts for each occupational title.

# OVERTIME and HOLIDAYS

## OVERTIME

For all work performed on a Sunday or a holiday, not less than twice (2x) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work.

For all overtime work performed, not less than one and one-half (1½) the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed or the public works contracting minimum wage, whichever is applicable, shall be paid to all workers employed by or on behalf of any public body engaged in the construction of public works, exclusive of maintenance work or contractual obligation. For purposes of this subdivision, "**overtime work**" shall include work that exceeds ten hours in one day and work in excess of forty hours in one calendar week; and

A thirty-minute lunch period on each calendar day shall be allowed for each worker on a public works project, provided that such time shall not be considered as time worked.

## HOLIDAYS

January first;  
The last Monday in May;  
July fourth;  
The first Monday in September;  
November eleventh;  
The fourth Thursday in November; and  
December twenty-fifth;

If any holiday falls on a Sunday, the following Monday shall be considered a holiday.

**Contractor's Application for Payment No.** \_\_\_\_\_

Application Period:	Application Date:
To (Owner):	From (Contractor):
Project:	Contract:
Owner's Contract No.:	Contractor's Project No.:
	Engineer's Project No.:

**Application For Payment  
Change Order Summary**

Approved Change Orders			1. ORIGINAL CONTRACT PRICE.....	\$ _____
Number	Additions	Deductions	2. Net change by Change Orders.....	\$ _____
			3. Current Contract Price (Line 1 ± 2).....	\$ _____
			4. TOTAL COMPLETED AND STORED TO DATE (Column F total on Progress Estimates).....	\$ _____
			5. RETAINAGE:	
			a.    X       _____ Work Completed.....	\$ _____
			b.    X       _____ Stored Material.....	\$ _____
			c. Total Retainage (Line 5.a + Line 5.b).....	\$ _____
			6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c).....	\$ _____
			7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	\$ _____
			8. AMOUNT DUE THIS APPLICATION.....	\$ _____
			9. BALANCE TO FINISH, PLUS RETAINAGE (Column G total on Progress Estimates + Line 5.c above).....	\$ _____
TOTALS				
NET CHANGE BY CHANGE ORDERS				

**Contractor's Certification**

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

---

**Contractor Signature**

By: \_\_\_\_\_ Date: \_\_\_\_\_

Payment of:       \$ \_\_\_\_\_  
(Line 8 or other - attach explanation of the other amount)

is recommended by: \_\_\_\_\_ (Engineer) \_\_\_\_\_ (Date)

is approved by: \_\_\_\_\_ (Owner) \_\_\_\_\_ (Date)

**Progress Estimate - Lump Sum Work**

**Contractor's Application**

For (Contract):					Application Number:			
Application Period:					Application Date:			
			Work Completed		E	F		G
A		B	C	D	Materials Presently Stored (not in C or D)	Total Completed and Stored to Date (C + D + E)	% (F / B)	Balance to Finish (B - F)
Specification Section No.	Description	Scheduled Value (\$)	From Previous Application (C+D)	This Period				
<b>Totals</b>								

**Progress Estimate - Unit Price Work**

**Contractor's Application**

For (Contract):						Application Number:					
Application Period:						Application Date:					
A					B	C	D	E		F	
Item		Contract Information				Estimated Quantity Installed	Value of Work Installed to Date	Materials Presently Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F / B)	Balance to Finish (B - F)
Bid Item No.	Description	Item Quantity	Units	Unit Price	Total Value of Item (\$)						
<b>Totals</b>											

# Stored Material Summary

# Contractor's Application

For (Contract):								Application Number:			
Application Period:								Application Date:			
Bid Item No.	A Supplier Invoice No.	B Submittal No. (with Specification Section No.)	Storage Location	C Description of Materials or Equipment Stored	D Stored Previously		E Amount Stored this Month (\$)	Subtotal Amount Completed and Stored to Date (D + E)	F Incorporated in Work		G Materials Remaining in Storage (\$) (D + E - F)
					Date Placed into Storage (Month/Year)	Amount (\$)			Date (Month/Year)	Amount (\$)	
				<b>Totals</b>							

# REQUEST FOR INTERPRETATION

25<sup>th</sup> Street Improvements – Ozark Special Road District

---

RFI NO. \_\_\_\_\_

ENGINEER: Toth and Associates, Inc.

CONTRACTOR: \_\_\_\_\_

---

THIS REQUEST BY: \_\_\_\_\_  
(Name of the Contractor's Representative)

REFERENCE: DIVISION \_\_\_\_\_ SECTION \_\_\_\_\_ PLAN SHEET NO. \_\_\_\_\_

## DESCRIPTION ON INTERPRETATION

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ATTACHMENTS: \_\_\_\_\_

---

INTERPRETATION BY: \_\_\_\_\_ DATE: \_\_\_\_\_

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ATTACHMENTS: \_\_\_\_\_

---

**CAUTION:** THE GENERAL CONDITIONS SPECIFY THAT IF THE CONTRACTOR BELIEVES AN INTERPRETATION OR CLARIFICATION JUSTIFIES AN INCREASE IN CONTRACT PRICE OR CONTRACT TIME, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING BEFORE PROCEEDING WITH THE WORK INVOLVED. FURTHER, IF THE CONTRACTOR IS AUTHORIZED BY THE ENGINEER TO PROCEED WITH WORK INVOLVED BEFORE FULL AGREEMENT IS REACHED ON WHETHER ANY INCREASES ARE DUE AT ALL, OR IF ANY DETERMINED TO BE DUE, ON THE EXTENT OF ANY SUCH INCREASES, THE CONTRACTOR SHALL FURNISH TO THE ENGINEER ACTUAL COST RECORDS, ON A DAILY BASIS.

---

CC: \_\_\_\_\_





**Work Change Directive No. \_\_\_\_\_**

Date of Issuance:

Effective Date:

Owner: Ozark Special Road District

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer: Toth and Associates, Inc.

Engineer's Project No.:

Project:

Contract Name:

Contractor is directed to proceed promptly with the following change(s):

Description:

Attachments: *[List documents supporting change]*

**Purpose for Work Change Directive:**

Directive to proceed promptly with the Work described herein, prior to agreeing to changes on Contract Price and Contract Time, is issued due to: *[check one or both of the following]*

Non-agreement on pricing of proposed change.

Necessity to proceed for schedule or other Project reasons.

**Estimated Change in Contract Price and Contract Times (non-binding, preliminary):**

Contract Price \$ [increase] [decrease].

Contract Time days [increase] [decrease].

**Basis of estimated change in Contract Price:**

Lump Sum

Unit Price

Cost of the Work

Other

RECOMMENDED:

AUTHORIZED BY:

RECEIVED:

By:

Engineer (Authorized Signature)

By:

Owner (Authorized Signature)

By:

Contractor (Authorized Signature)

Title:

Title:

Title:

Date

Date:

Date:

## CHANGE ORDER

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

Change Order No. \_\_\_\_\_

County Christian

Project CE 97 001

Job No. \_\_\_\_\_

Contractor

You are hereby directed to make the following changes from the contract

\*\*\*\*\*

1. Description and reason for change (attach supplemental sheets if required):

2. Estimate of cost of work affected by this change order:

A	B	C	D	E	F	G	H	I
Est. Line No.	Contract Item No.	Item Description	Units	Units Previously Provided For	Units to be Constructed	Units Increased or Decreased	Contract or Agreed Unit Price	Amount of Increase or Decrease
<b>Total</b>								

3. Settlement for cost of the above change to be made at Contract Unit Prices except as noted:

1. CONTRACT AMOUNT	\$	-
2. INCREASE THIS ORDER	\$	-
3. INCREASE PREVIOUS	\$	-
4. TOTAL INCREASE TO DATE	\$	-
5. TOTAL	\$	-

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

This Change Order, when executed, constitutes a modification to the Contract and all provisions of the Contract, except as modified above and by any previous Change Orders, shall apply thereto:

**Engineer Approval:**

Toth and Associates, Inc.

By (Print): \_\_\_\_\_

Signature: \_\_\_\_\_

Date \_\_\_\_\_

**Contractor Approval:**

\_\_\_\_\_

By (Print): \_\_\_\_\_

Signature: \_\_\_\_\_

Date \_\_\_\_\_

**Owner Approval:**

Ozark Special Road District

By (Print): \_\_\_\_\_

Signature: \_\_\_\_\_

Date \_\_\_\_\_

**LIEN WAIVER**

DATE \_\_\_\_\_

TO \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Re: *25<sup>th</sup> Street Improvements*

Dear Sir:

I certify that I have paid in full for all materials purchased and all labor employed in the performance of this contract, and that there are no claims against me as an employer under this contract on account of injuries sustained by workmen employed by me thereunder. I hereby release you from any claims arising by virtue of this contract.

I am attaching form "Release by Claimants", signed by all persons from whom I have purchased materials and by all persons employed in connection with my contract with the above named owner.

\_\_\_\_\_  
Contractor

**RELEASE BY CLAIMANTS**

DATE \_\_\_\_\_

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

WHEREAS, we the undersigned \_\_\_\_\_ has (have) been employed by \_\_\_\_\_ to furnish \_\_\_\_\_ for the construction project known as \_\_\_\_\_.

NOW, THEREFORE, know ye, that I (we) the undersigned for and in consideration of the sum of (words) \_\_\_\_\_ (Numbers) \$\_\_\_\_\_ and other good and valuable considerations, the receipt whereof is hereby acknowledged do hereby waive and release any and all lien, and claim, or right to lien, on said construction project and premises under the statutes of the State of \_\_\_\_\_ relating to Mechanic's Liens, on account of labor, or materials, or both, furnished by the undersigned to or on account of the said \_\_\_\_\_ for said construction project and premises.

Given under our hands and seals this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Signature

WITNESS:  
\_\_\_\_\_

My Commission Expires: \_\_\_\_\_



This form is to be completed and given to your contractor.

<b>Exempt Entity and Project Information</b>	Name of Exempt Entity Issuing the Certificate		Missouri Tax Exemption Number			
	Address		City		State	ZIP Code
	E-mail Address					
	Project Number	Project Begin Date (MM/DD/YYYY) ____/____/____		Estimated Project End Date (MM/DD/YYYY) ____/____/____		
	Description of Project					
	Project Location			Certificate Expiration Date (MM/DD/YYYY) ____/____/____		
	Provide a signed copy of this certificate, along with a copy of the exempt entity's Missouri Sales and Use Tax Exemption Letter to each contractor or subcontractor who will be purchasing tangible personal property for use in this project. It is the responsibility of the exempt entity to ensure the validity of the information on the certificate. The exempt entity must issue a new certificate if any of the information changes.					
Signature of Authorized Exempt Entity		Printed Name of Authorized Exempt Entity		Date (MM/DD/YYYY) ____/____/____		

<b>Contractor</b>	The Missouri exempt entity named above hereby authorizes the purchase, without sales tax, of tangible personal property to be incorporated or consumed in the construction project identified herein and no other, pursuant to <a href="#">Section 144.062, RSMo</a> . Under penalties of perjury, I declare that the above information and any attached supplement is true, complete, and correct.					
	Name of Purchasing Contractor		Signature of Contractor		Date (MM/DD/YYYY) ____/____/____	
	Address		City		State	ZIP Code

<b>Subcontractor</b>	Contractors - Present this to your supplier in order to purchase the necessary materials tax exempt. Complete the Subcontractor portion if extending the certificate to your subcontractor. The contractor must sign the form in the space provided below.					
	Name of Purchasing Subcontractor					
	Address		City		State	ZIP Code
	Signature of Contractor		Contractor's Printed Name		Date (MM/DD/YYYY) ____/____/____	

Form 5060 (Revised 11-2019)

Taxation Division  
P.O Box 358  
Jefferson City, MO 65105-0358

Phone: (573) 751-2836  
Fax: (573) 522-1666  
E-mail: [salestaxexemptions@dor.mo.gov](mailto:salestaxexemptions@dor.mo.gov)

Visit <http://dor.mo.gov/business/sales/sales-use-exemptions.php> for additional information.



## CERTIFICATE OF COMPLETION

---

Owner: Ozark Special Road District	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: Toth and Associates Inc.	Engineer's Project No.: 97.001.038
Project: 25 <sup>th</sup> Street Overlay	Contract Name: 25 <sup>th</sup> Street Overlay

---

**This [preliminary] [final] Certificate of Substantial Completion applies to:**

- All Work  The following specified portions of the Work:

---

### Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

Amendments to Owner's responsibilities:  None  
 As follows

Amendments to Contractor's responsibilities:  None  
 As follows:

The following documents are attached to and made a part of this Certificate: *[punch list; others]*

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

---

EXECUTED BY ENGINEER:	RECEIVED:	RECEIVED:
By: _____ (Authorized signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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## ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
  2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
  3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  5. *Bidder*—An individual or entity that submits a Bid to Owner.
  6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
  7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
  8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
  9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
  10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer

has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.



48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

## 1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
    - a. does not conform to the Contract Documents; or
    - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
    - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
  2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
  4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2 – PRELIMINARY MATTERS**

### **2.01 *Delivery of Bonds and Evidence of Insurance***

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

### **2.02 *Copies of Documents***

- A. Owner shall furnish to Contractor three printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

### **2.03 *Before Starting Construction***

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
  1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
  2. a preliminary Schedule of Submittals; and

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

#### 2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

#### 2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
  1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
  2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
  3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

#### 2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

### **ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE**

#### **3.01 *Intent***

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

#### **3.02 *Reference Standards***

- A. Standards Specifications, Codes, Laws and Regulations
  - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
  - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

#### **3.03 *Reporting and Resolving Discrepancies***

- A. *Reporting Discrepancies:*
  - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict,

error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
  - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
  - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

### 3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
  - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
  - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

## **ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK**

### 4.01 *Commencement of Contract Times; Notice to Proceed*

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

### 4.02 *Starting the Work*

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

### 4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

### 4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
  - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

#### 4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
  2. abnormal weather conditions;
  3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
  4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

**ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part



by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

#### 5.03 *Subsurface and Physical Conditions*

- A. **No reports of explorations or tests of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.**

#### 5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
  - 1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
  - 2. is of such a nature as to require a change in the Drawings or Specifications; or
  - 3. differs materially from that shown or indicated in the Contract Documents; or
  - 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
    - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
    - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
    - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
  2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
    - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
    - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
    - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
  3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
  4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

#### 5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such

Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
  2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
    - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
    - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
    - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
    - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
  - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
  - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
  - d. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
  3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. **No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.**
- B. **Not Used.**
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.H shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

## ARTICLE 6 – BONDS AND INSURANCE

### 6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in **and on** the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

### 6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
  - 1. **Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the project is located, (b) is certified or authorized as**

**a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.**

- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

### 6.03 Contractor's Insurance

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
  2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
  3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
  4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
  2. claims for damages insured by reasonably available personal injury liability coverage.
  3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
    - a. Such insurance shall be maintained for three years after final payment.
    - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
  2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
  3. Broad form property damage coverage.
  4. Severability of interest.
  5. Underground, explosion, and collapse coverage.
  6. Personal injury coverage.
  7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
  8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.



- D. *Automobile liability*: Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- ~~F. *Contractor's pollution liability insurance*: Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.~~
- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
1. include at least the specific coverages provided in this Article.
  2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
  3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
  4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.

5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.
- K. **The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:**

**1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:**

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>
Jones Act coverage, if applicable:	
Bodily injury by accident, each accident	\$ <u>1,000,000.00</u>
Bodily injury by disease, aggregate	\$ <u>2,000,000.00</u>
Employer's Liability:	
Bodily injury, each accident	\$ <u>1,000,000.00</u>
Bodily injury by disease, each employee	\$ <u>1,000,000.00</u>
Bodily injury/disease aggregate	\$ <u>2,000,000.00</u>
For work performed in monopolistic states, stop-gap liability coverage shall be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	\$ <u>Not Applicable</u>
Foreign voluntary worker compensation	<u>Statutory</u>

**2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:**

General Aggregate	\$ <u>2,000,000.00</u>
Products - Completed Operations Aggregate	\$ <u>2,000,000.00</u>
Personal and Advertising Injury	\$ <u>1,000,000.00</u>
Each Occurrence (Bodily Injury and Property Damage)	\$ <u>1,000,000.00</u>

**3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:**

**Combined Single Limit of** **\$ 1,000,000.00**

**4. Excess or Umbrella Liability:**

**Per Occurrence** **\$ 2,000,000.00**

**General Aggregate** **\$ 2,000,000.00**

**5. Contractor's Pollution Liability:**

**Each Occurrence** **\$ Not Applicable**

**General Aggregate** **\$ Not Applicable**

**If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract**

**6. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following: Not Applicable**

**7. Contractor's Professional Liability:**

**Each Claim** **\$ Not Applicable**

**Annual Aggregate** **\$ Not Applicable**

**8. [Here list additional types and amounts of insurance that may be required by Owner.]**

**6.04 Owner's Liability Insurance**

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

**6.05 Property Insurance**

- A. **Builder's Risk:** Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
  - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding

Supplementary Conditions, the parties required to be insured shall collectively be referred to as “insureds.”

2. be written on a builder’s risk “all risk” policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder’s risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
6. extend to cover damage or loss to insured property while in transit.
7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder’s risk insurance.
8. allow for the waiver of the insurer’s subrogation rights, as set forth below.
9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
10. not include a co-insurance clause.
11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
12. include performance/hot testing and start-up.
13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.

- B. *Notice of Cancellation or Change*: All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles*: The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance*: If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

#### 6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
  2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

#### 6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

### **ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES**

#### 7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely

responsible for the means, methods, techniques, sequences, and procedures of construction.

- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

#### 7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday **observed by the Owner**. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.
- C. **Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15. However, the Contractor and Owner may agree to compensate for overtime pay, if Contractor is responsible, by a reasonable set-off against payments due.**

#### 7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

#### 7.04 *"Or Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function,

appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or “or equal” item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an “or equal” item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
  - a. in the exercise of reasonable judgment Engineer determines that:
    - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
    - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
    - 3) it has a proven record of performance and availability of responsive service; and
    - 4) it is not objectionable to Owner.
  - b. Contractor certifies that, if approved and incorporated into the Work:
    - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
    - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor’s Expense:* Contractor shall provide all data in support of any proposed “or equal” item at Contractor’s expense.
- C. *Engineer’s Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each “or-equal” request. Engineer may require Contractor to furnish additional data about the proposed “or-equal” item. Engineer will be the sole judge of acceptability. No “or-equal” item will be ordered, furnished, installed, or utilized until Engineer’s review is complete and Engineer determines that the proposed item is an “or-equal”, which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer’s Determination:* Neither approval nor denial of an “or-equal” request shall result in any change in Contract Price. The Engineer’s denial of an “or-equal” request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.



## 7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
  2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
  3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
    - a. shall certify that the proposed substitute item will:
      - 1) perform adequately the functions and achieve the results called for by the general design,
      - 2) be similar in substance to that specified, and
      - 3) be suited to the same use as that specified.
    - b. will state:
      - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
      - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
      - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
    - c. will identify:
      - 1) all variations of the proposed substitute item from that specified, and
      - 2) available engineering, sales, maintenance, repair, and replacement services.
    - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute

item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

#### 7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an

acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.

- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
  - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
  - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

#### 7.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by

others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

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

#### 7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

#### 7.09 *Taxes*

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

#### 7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not

limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

#### 7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

#### 7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
  - 1. all persons on the Site or who may be affected by the Work;
  - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

#### 7.13 *Safety Representative*

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

#### 7.14 *Hazard Communication Programs*

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

#### 7.15 *Emergencies*

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

## 7.16 *Shop Drawings, Samples, and Other Submittals*

### A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
  - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
  - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
  - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

### B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

#### 1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

#### 2. *Samples:*

- a. Contractor shall submit the number of Samples required in the Specifications.
- b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and

approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop



Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

#### 7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
  1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
  2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
  1. observations by Engineer;
  2. recommendation by Engineer or payment by Owner of any progress or final payment;
  3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
  4. use or occupancy of the Work or any part thereof by Owner;
  5. any review and approval of a Shop Drawing or Sample submittal;
  6. the issuance of a notice of acceptability by Engineer;
  7. any inspection, test, or approval by others; or
  8. any correction of defective Work by Owner.
- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

#### 7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance

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

- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
  - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
  - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

#### 7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except

design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.

- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

## **ARTICLE 8 – OTHER WORK AT THE SITE**

### **8.01 *Other Work***

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

### **8.02 *Coordination***

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
  - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
  - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
  - 3. the extent of such authority and responsibilities.

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

### 8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.
- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

## ARTICLE 9 – OWNER’S RESPONSIBILITIES

### 9.01 *Communications to Contractor*

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

### 9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer’s status under the Contract Documents shall be that of the former Engineer.

### 9.03 *Furnish Data*

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

### 9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

### 9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner’s duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner’s duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner’s identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

### 9.06 *Insurance*

- A. Owner’s responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

### 9.07 *Change Orders*

- A. Owner’s responsibilities with respect to Change Orders are set forth in Article 11.

### 9.08 *Inspections, Tests, and Approvals*

- A. Owner’s responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

### 9.09 *Limitations on Owner’s Responsibilities*

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

### 9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner’s responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

**ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION**

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.**
- 1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.**
  - 2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.**
  - 3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.**
  - 4. Liaison:**
    - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.**
    - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.**
    - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.**
  - 5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.**
  - 6. Shop Drawings and Samples:**
    - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.**
    - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.**
    - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.**
  - 7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.**
  - 8. Review of Work and Rejection of Defective Work:**
    - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.**
    - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design**

concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

9. **Inspections, Tests, and System Start-ups:**
  - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
  - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
10. **Records:**
  - a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
  - b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
  - c. Maintain records for use in preparing Project documentation.
11. **Reports:**
  - a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
  - b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
  - c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.
12. **Payment Requests:** Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
13. **Certificates, Operation and Maintenance Manuals:** During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to



**Engineer for review and forwarding to Owner prior to payment for that part of the Work.**

**14. Completion:**

- a. **Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.**
- b. **Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.**
- c. **Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.**

**C. The RPR shall not:**

1. **Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).**
2. **Exceed limitations of Engineer's authority as set forth in the Contract Documents.**
3. **Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.**
4. **Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.**
5. **Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.**
6. **Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.**
7. **Accept Shop Drawing or Sample submittals from anyone other than Contractor.**
8. **Authorize Owner to occupy the Project in whole or in part.**

**10.04 *Rejecting Defective Work***

- A. Engineer has the authority to reject Work in accordance with Article 14.

**10.05 *Shop Drawings, Change Orders and Payments***

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

**10.06 *Determinations for Unit Price Work***

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

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

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

**ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK**

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
  - 1. *Change Orders:*
    - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must

be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.

- b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.
  3. *Field Orders:* Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

#### 11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

#### 11.03 *Unauthorized Changes in the Work*

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

as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

#### 11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
  - 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
  - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
  - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
  - 1. a mutually acceptable fixed fee; or
  - 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
    - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
    - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
    - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
    - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

#### 11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

#### 11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.
  - 1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
  - 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
  - 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

### 11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
  - 1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
  - 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
  - 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
  - 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

### 11.08 *Notification to Surety*

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

## **ARTICLE 12 – CLAIMS**

### 12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
  - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
  - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
  - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of

Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
  - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
  - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.
  - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval:* If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim:* If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results:* If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

## **ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

### **13.01 Cost of the Work**

- A. *Purposes for Determination of Cost of the Work:* The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
  - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
  - 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined

on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
  2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
  3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
  4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
  5. Supplemental costs including the following:
    - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
    - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.



- c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
  - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
  - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
  - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
  - g. The cost of utilities, fuel, and sanitary facilities at the Site.
  - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
  - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
  - 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
  - 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
  - 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee*: When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.
- E. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

### 13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
  1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
  2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

### 13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual

conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.

- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
  2. there is no corresponding adjustment with respect to any other item of Work; and
  3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

#### **ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

##### **14.01 Access to Work**

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

##### **14.02 Tests, Inspections, and Approvals**

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
  2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
  3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

#### 14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

#### 14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's

evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

#### 14.05 *Uncovering Work*

- A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
  - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
  - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

#### 14.06 *Owner May Stop the Work*

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

#### 14.07 *Owner May Correct Defective Work*

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

- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

## **ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD**

### **15.01 *Progress Payments***

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
  - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
  - 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
  - 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
  - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
  - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
  - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
  - a. to supervise, direct, or control the Work, or
  - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
  - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
  - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
  - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
  - a. the Work is defective, requiring correction or replacement;
  - b. the Contract Price has been reduced by Change Orders;
  - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
  - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

1. **Thirty** days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner:*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
  - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
  - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
  - c. Contractor has failed to provide and maintain required bonds or insurance;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
  - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
  - f. the Work is defective, requiring correction or replacement;
  - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - h. the Contract Price has been reduced by Change Orders;
  - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;



- j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
  - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
  - l. there are other items entitling Owner to a set off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
  3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

#### 15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

#### 15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver

to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

#### 15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
  - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
  - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
  - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
  - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

#### 15.05 *Final Inspection*

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

#### 15.06 *Final Payment*

##### A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents;
  - b. consent of the surety, if any, to final payment;
  - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
  - d. a list of all disputes that Contractor believes are unsettled; and
  - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

##### B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in

Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

- C. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due*: Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

#### 15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

#### 15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. correct the defective repairs to the Site or such other adjacent areas;
  - 2. correct such defective Work;
  - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
  - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not

limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).

- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

## **ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION**

### **16.01 *Owner May Suspend Work***

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

### **16.02 *Owner May Terminate for Cause***

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
  - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
  - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
  - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
  - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
  - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
  - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take

possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

#### 16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
  - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
  - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

#### 16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then

Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

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

## ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

### 17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
  2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
  2. agree with the other party to submit the dispute to another dispute resolution process; or
  3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction. **However, the exclusive venue for any legal action between Owner and Contractor arising out of this agreement or the performance of services thereunder shall be the Circuit Court of Howell County, Missouri, and Contractor submits to the jurisdiction of said court.**

### 17.02 *Attorneys' Fees*

- A. **For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.**

## ARTICLE 18 – MISCELLANEOUS

### 18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
  - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
  - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

### 18.02 *Computation of Times*

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

### 18.03 *Cumulative Remedies*

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

### 18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

### 18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

### 18.06 *Survival of Obligations*

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

### 18.07 *Controlling Law*

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

### 18.08 *Headings*

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



## **SUPPLEMENTARY CONDITIONS**

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

### **SC-1. DEFINITIONS.**

The terms used in these Supplementary Conditions, which are defined in the General Conditions and not amended by these Supplementary Conditions, have the meanings assigned to them in the General Conditions.

### **SC-2. RETAINAGE.**

Owner shall retain from each progress payment an amount equal to five (5) percent of the estimated value of the Work completed until final completion and acceptance of all work covered by the Contract documents.

### **SC-3. CONTRACT TIME**

The contract time is for 170 calendar days. The contract time will not be extended due to normal weather conditions such as rain, snow, etc. which could be reasonably expected to occur within any 170 calendar day period at the project location.

### **SC-4. SUBSTITUTES OR "OR-EQUAL" ITEMS.**

Requests for review of substitute items of material and equipment will not be accepted by Engineer from anyone other than Contractor. If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall make written application to Engineer following procedures outlined in General Conditions.

### **SC-5. CITIZEN CLAIMS**

In the event that a citizen makes a claim against the Contractor, then the Contractor shall do the following:

- A. Investigate a claim when notified by a citizen or the Owner.
- B. Within five (5) days after completing the investigation, the Contractor shall notify the person making the claim in writing that the Contractor is approving or denying the claim or a part thereof. The Owner shall receive a copy of the claim and notification.
- C. Claim shall not be denied for frivolous reasons.
- D. In the event the Owner determines after notifications by a citizen that the Contractor has failed to comply with the above provisions, the Owner may, at its discretion, withhold payment to the Contractor until the provisions set forth above are complied with.

### **SC-6. REQUEST FOR INTERPRETATION**

Contractor shall promptly report in writing to Engineer any perceived conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected hereby. Requests for interpretation (RFI) shall be

submitted on form attached to Contract Documents. Owner and Engineer shall not be held liable for any costs associated with delay in Work affected. Contractor shall allow 7 business days from Engineer's receipt of the RFI for Engineer's interpretation.

#### **SC-7. DUE DILIGENCE**

Prior to the submission of the Proposal, the Bidder shall make and shall be deemed to have made a careful examination of the site of the project and of the Plans, Specifications, Construction Drawings, and forms of Contractor's Proposal and Contractor's Bond, and shall review the location and nature of the proposed construction, the transportation facilities, the kind and character of soil and terrain to be encountered, the kind of facilities required before and during the construction of the project, general local conditions, environmental and historic preservation considerations, and all other matters that may affect the cost and time of completion of the project. Bidder will be required to comply with all federal, state, and local laws, rules, and regulations applicable to its performance, including those pertaining to the licensing of contractors.

#### **SC-8. MISCELLANEOUS**

##### **A. Small Business Act**

Prior to awarding subcontracts, prime contractors must take the following affirmative steps in accordance with Section 129 of Public Law 100-590, Small Business Administration Reauthorization and Amendment Act of 1988:

1. Placing Small Business in Rural Area's (SBRA) on solicitation lists;
2. Ensuring that SBRA's are solicited whenever they are potential sources;
3. Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by SBRA's;
4. Establishing delivery schedules, where the requirements of work will permit, which would encourage participation by SBRA's;
5. Utilizing the services of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce, as appropriate.

##### **B. Missouri Products**

In accordance with Chapter 71.140, Missouri Revised Statutes 1986, preference shall be given to Missouri products.

##### **C. Missouri Firms**

Pursuant to Section 34.076 RSMo, 1986 Cumulative Supplements, a preference shall be given to those persons doing business as Missouri firms, corporation, or individuals, or which maintain Missouri offices or places of business, where the quality of performance promised is equal or better and the price quoted is the same or less. In addition, in order for a nondomiciliary bidder to be successful, his bid must be that same percentage lower than a domiciliary Missouri Bidder's bid, as would be required for a Missouri bidder to successfully bid in the nondomiciliary's state.

##### **D. Historical/Archaeological**

If, during the course of construction, evidence of deposits of historical or archaeological interest is found, the Contractor shall cease operations affecting the find and shall notify the Owner, who shall notify the Missouri Department of Natural Resources and Director, Division of Parks and Historic Preservation, P.O. Box 176, 205 Jefferson Street, Jefferson City, Missouri 65102, Telephone: (573) 751-2479. No further disturbance of the deposits shall ensue until the Contractor has been notified by

the Owner that he may proceed. The owner will issue a notice to proceed only after the State official has surveyed the find and made a determination of value and effect and submitted such determination to the Missouri Department of Natural Resources and the Owner. Compensation to the Contractor, if any, for lost time or changes in construction to avoid the find shall be determined in accordance with changed conditions or change order provisions of the specifications.

E. Protest Provisions Any protest shall be handled in accordance with 40 CFR, Part 36.11 and 36.12 which follows:

- (11) Grantees and subgrantees alone will be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to source evaluation, protests, disputes, and claims. These standards do not relieve the grantee or subgrantee of any contractual responsibilities under its contracts. Federal agencies will not substitute their judgment for that of the grantee or subgrantee unless the matter is primarily a Federal concern. Violations of law will be referred to the local, State, or Federal authority having proper jurisdiction.
- (12) Grantees and subgrantees will have protest procedures to handle and resolve disputes relating to their procurements and shall in all instances disclose information regarding the protest to the awarding agency. A protestor must exhaust all administrative remedies with the grantee and subgrantee before pursuing a protest with the Federal agency.

Reviews of protest by the Federal agency will be limited to:

- (i) Violations of Federal law or regulations and the standards of this section (violations of State or local law will be under the jurisdiction of State or local authorities) and
- (ii) Violations of the grantee's or subgrantee's protest procedures for failure to review a complaint or protest. Protests received by the Federal agency other than those specified above will be referred to the grantee subgrantee.

F. Right of Entry

It is required that right of entry to the project site, and access to records, be provided for the Department of Natural Resources and other state pollution control agencies, so they may have access to the work wherever it is in preparation or progress. Proper certification must be provided for access and inspections.

G. Reporting Requirements

The Contractor will disclose any and all information and reports pertaining to the contract as requested by the funding agencies as specified by 40 CFR 31.36(i)(7).

H. Energy Policy and Conservation Act

All parties to this contract must be in compliance with the Energy Policy and Conservation Act in accordance with 40 CFR 31.36(i)(13).

I. Late Payment Clause

If Owner fails to make payment thirty (30) days after receipt of the Contractor's Application for Payment, in addition to other remedies available to the Contractor, then shall be added to each such payment interest in accordance with Section 34.057 RSMo. (Supp. 1991).

#### J. Testing

The specifications call for testing to be performed on various items of work, including but not limited to compaction and concrete testing. Unless otherwise indicated, all such testing shall be performed by an approved testing laboratory retained as outlined in the specifications, and provided by owner.

#### K. Clean Air Act

The parties to the contract must comply with the Clean Air Act (42 U.S.C. 7506).

#### L. Progress Updates and Schedules

Contractor is to provide Engineer updated schedules on a monthly basis, until substantial completion has been reached. Substantial completion is defined as that time wherein the facility is ready to safely impound water to the design normal pool level. Monthly schedule updates that indicate Contractor is behind schedule shall include a schedule recovery plan as a narrative submittal.

#### M. Temporary Diversion Plan

Contractor is responsible for temporary diversion structures. Contractor shall submit Temporary Diversion Plan for approval by the Engineer. All planned structures must be approved by Engineer.

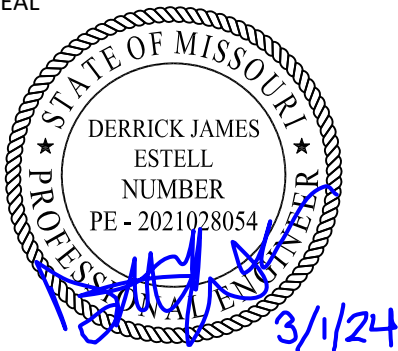
**25TH STREET IMPROVEMENTS for  
OZARK SPECIAL ROAD DISTRICT  
CHRISTIAN COUNTY, MISSOURI**

**REGISTRANTS**

The personal seal of each shown Engineer shall be the legal equivalent of his signature whenever and wherever used, and the owner of the seal shall authenticate this sheet and the specification sections pertaining to this sheet. Responsibility shall be disclaimed for all other plans, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part or parts of this project.

Those sections each discipline is responsible for shall be as listed alongside seal of same.

SEAL



**CIVIL ENGINEER OF RECORD**

Toth & Associates, Inc.  
1550 East Republic Road  
Springfield, Missouri 65804  
417-888-0645  
Missouri State Certificate of Authority # 2004004242

Sections: 024113, 311000, 312300, 312500, 321100, 321216,  
321373, 321723, 329200

Derrick James Estell, Civil Engineer  
MO# PE-2021028054

**25<sup>TH</sup> STREET IMPROVEMENTS for  
OZARK SPECIAL ROAD DISTRICT  
CHRISTIAN COUNTY, MISSOURI**

**SECTION 024113 - SITE DEMOLITION**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. Section includes: removal of existing buildings, equipment pads, foundations, paving, curb and gutter, underground tanks, pipes and utilities, fences, and other site items as required by the project drawings.

**1.2 SUBMITTALS**

- A. Obtain necessary permits required for demolition and submit copies to the Owner before beginning site demolition work.

**1.3 PROTECTION**

- A. Protection of Existing Work: Before beginning cutting or other site demolition work, carefully survey the existing work and examine the project drawings and specifications to determine the extent of the work. Take necessary precautions to ensure against damage to existing work to remain in place, to be reused, or to remain the property of the Owner. Repair or replace damage to work at no additional cost to the Owner. Carefully coordinate the work of this section with other work and construct and maintain shoring, bracing and supports, as required. Ensure that structural elements are not overloaded. Increase structural support or add new supports, as required as a result of cutting, removal, or demolition of work performed.
- B. Benchmarks, Property Markers, and Iron Pins: The Contractor shall maintain all benchmarks, monuments, property markers, iron pins and other reference points during site clearing operations. In the event that any of the above mentioned are disturbed or destroyed during any construction activities the Contractor shall replace them, as directed by the Owner, at the Contractor's expense.
- C. Existing Utilities:
  - 1. Follow rules and regulations of the authorities having jurisdiction for the respective utilities in execution of the work under this section.
  - 2. Active Utilities Shown on Project Drawings: Protect from damage and remove or relocate only as indicated or specified. Take special precautions not to damage utility lines, manholes, or other structures. Correct any damage to utilities or structures to original or better condition at no additional cost to the Owner.
  - 3. Active Utilities Not Shown on Project Drawings: When any functioning underground utilities are uncovered during the work which are not shown on the project drawings, promptly notify the Owner in writing. Protect or relocate in accordance with written instructions of the Owner. The Contractor shall exercise caution during all phases of the work, as all utilities may not be shown on the Project Drawings. A utilities' omission from the Project Drawings will not relieve the Contractor of their responsibility to correct any damage to said utility at no additional cost to the Owner.

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CHRISTIAN COUNTY, MISSOURI**

4. Inactive and Abandoned Utilities: Remove, plug, or cap in the absence of specific requirements. Plug or cap utility lines at least five feet outside of new building walls or as required by local regulations.
- D. Adjacent Properties: Protect adjacent properties during site demolition operations. Site demolition shall be limited to Owner's property. The Contractor shall also protect existing structures on adjacent properties; including but not limited to fences, utility lines, manholes, catch basins, valve boxes, poles, guys and other appurtenances. Damage done to structures on adjacent properties shall be the Contractor's responsibility to repair, at no additional cost to the Owner.

**PART 2 – PRODUCTS (Not Applicable)**

**PART 3 – EXECUTION**

**3.1 DEMOLITION**

- A. Structures: Demolish existing structures by breaking these materials into smaller pieces for transport. The use of explosives is not permitted.
- B. Utilities: Remove or abandon in place existing utilities as indicated on the project drawings. Disconnect utility services, with related meters and equipment, employing appropriate utility company. When utility lines are encountered that are not indicated on the project drawing, notify the Owner.
- C. Sidewalks, driveways, curb and gutter, drainage structures and similar obstructions permitted to be removed shall be cut in straight lines or removed to the nearest construction joint if located within five feet of the edge of the excavation. In no case shall the joint or line of cut be less than one foot outside the edge of excavation.

**3.2 RELOCATION AND RETURN OF MATERIAL OR EQUIPMENT**

- A. Carefully dismantle, in manner to avoid damage, all materials and equipment specified or indicated to be relocated or returned to the Owner.
- B. Store materials and equipment to be reused in a manner to avoid corrosion, staining, breakage, or damage.
- C. Material or equipment specified or indicated to be relocated or returned to the Owner and damage due to Contractor's negligence shall be repaired or replaced as directed by Owner.

**3.3 DISPOSITION OF MATERIALS**

- A. Dispose of demolished materials off of the project site unless otherwise notified by the Owner. Transport materials in a manner that will prevent spillage on streets and adjacent areas. Dispose of materials in a manner acceptable to the regulatory agency having jurisdiction.

**3.4 PROTECTION OF EXISTING TREES**

- A. Protect trees to remain in the manner described in Section 31 10 00 Site Clearing.

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- B. Provide tree protection measures prior to beginning of demolition and maintain throughout the work period.

**3.5 BACKFILLING AND COMPACTION**

- A. Backfill holes and depressions resulting from site demolition in the manner described in Section 31 23 00 Excavation and Fill.

**END OF SECTION 024113**



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OZARK SPECIAL ROAD DISTRICT  
CHRISTIAN COUNTY, MISSOURI**

**SECTION 311000 - SITE CLEARING**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. Section includes: clearing and grubbing the site of undesirable material such as grass, shrubs, trees, other plant life, and debris in preparation for grading activities.
- B. Related Sections include the following:
  - 1. Division 01 Section "Temporary Facilities and Controls" for temporary utilities, temporary construction and support facilities, temporary security and protection facilities, and temporary erosion and sedimentation control procedures.
  - 2. Division 01 Section "Execution" for verifying utility locations and for recording field measurements.
  - 3. Division 02 Section "Site Demolition."
  - 4. Division 31 Section "Excavation and Fill."

**1.2 DEFINITIONS**

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 1 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.
- B. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

**1.3 MATERIAL OWNERSHIP**

- A. Except for stripped topsoil or other materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

**1.4 EXISTING CONDITIONS**

- A. Site conditions, as depicted on the project drawings, are shown based on available information. The Contractor shall visit the site to familiarize themselves with the existing conditions and verify existing conditions as depicted on the project drawings. The Contractor shall notify the Owner or the Owner's Representative of any discrepancy between plan and field conditions and shall assume full responsibility for conditions encountered.

**1.5 PROTECTION**

- A. Adjacent Properties: Protect adjacent properties during site clearing operations. Site clearing shall be limited to Owner's property; any clearing which takes place outside of the Owner's property shall be the Contractor's responsibility to repair, at no additional cost to the Owner.

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The Contractor shall also protect existing structures on adjacent properties; including by not limited to fences, utility lines, manholes, catch basins, valve boxes, poles, guys and other appurtenances. Damage done to structures on adjacent properties shall be the Contractor's responsibility to repair, at no additional cost to the Owner.

- B. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- C. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

**PART 2 – PRODUCTS (Not Applicable)**

**PART 3 – EXECUTION**

**3.1 CLEARING AND GRUBBING**

- A. Clearing shall consist of: cutting, removing, and disposing of trees, snags, stumps, shrubs, brush, limbs, and other vegetative growth; clearing shall also include the preservation of trees, shrubs, and vegetative growth, which are not designated to be removed.
- B. Grubbing shall consist of the removal and disposal of wood or root matter below the ground surface remaining after clearing and shall include stumps, trunks, roots, or root systems greater than two inches in diameter to a depth of two feet below the natural ground surface.
- C. All surface vegetation, trees, stumps, roots, and other protruding objects shall be cleared and grubbed, including required mowing. Undisturbed and sound stumps and nonperishable solid objects located more than two feet below subgrade and slope embankments may remain in place. When authorized, stumps and nonperishable solid objects that are located more than one foot below the ground line may remain if they are located outside the construction limits of excavation and embankment areas.
- D. Depressions and cavities resulting from removal of obstructions shall be backfilled and compacted with suitable material as outlined in the project drawings, specifications, and/or Geotechnical Engineering Report, unless further excavation or earthwork is indicated.
- E. Disposal of material and debris shall be done under applicable Federal, State, County, and City laws, ordinances, and regulations.
- F. Stumps and large timbers shall be removed from the site and legally disposed of by the Contractor.

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- G. Tree Removal: In general, do not remove existing trees, whether shown on the project drawings or not, that are not in any way of the work or any future installation. Before proceeding with actual clearing operations, identify by an appropriate and clearly recognizable marker trees specifically intended to be preserved. Notify the Owner in writing when trees to remain have been marked; do not remove any trees until the Owner has approved proposed tree protection and planned removal.
- H. Coordination: Complete clearing of the site before topsoil stripping operations are begun. Do not leave loose sticks, roots, branches, or any other debris on the site. Avoid mixture of foreign matter with the topsoil.

**3.2 PROTECTION OF EXISTING TREES**

- A. Throughout construction, properly protect existing trees and vegetation, which are to remain, to be relocated, or which overhang the property line.
- B. Do not cut low hanging branches on trees to be saved, unless approved by the Owner. Cut branches which must be cut to eliminate obstructions. Immediately and properly trim any cuts, or accidental injuries to the bark or trunk, and properly trim and paint with a protective tree wound and sealing compound.
- C. Permit no stripping of topsoil, cutting or filling, dumping of materials, storage of materials or equipment of any kind, or use by personnel for any activities, whether on or off duty, within the drip line of trees to remain.

END OF SECTION 311000

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SECTION 312300 - EXCAVATION AND FILL

PART 1 – GENERAL

1. SUMMARY

- A. Section includes, but is not limited to, excavation, filling, compacting, and grading in the areas shown on the project drawings to obtain the required subgrade surface properly prepared to receive rock surfacing, pavements, walks, building floor slabs, utilities, drainage structures, or topsoil.
- B. Section includes the spreading of topsoil in sufficient quantities to backfill islands, medians, roadway shoulders, and open graded areas.
- C. Related Sections include the following:
  - 1. Division 01 Section "Unit Prices" for unit-price rock excavation and authorized additional excavation provisions.
  - 2. Division 01 Section "Temporary Facilities and Controls" for temporary controls, utilities, and support facilities.
  - 3. Division 31 Section "Erosion and Sedimentation Controls" for temporary erosion and sedimentation control measures.
  - 4. Division 31 Section "Turf Base and Drainage" for turf base preparation.
  - 5. Division 32 Section "Turf and Grasses."

2. DEFINITIONS

- A. Backfill: Soil materials placed over bedding to fill a trench or used to fill and excavation.
- B. Base Course: Layer placed between the subgrade and paving.
- C. Bedding: Aggregate materials placed over the excavated subgrade in a trench before laying pipe and placed beside and over pipe in a trench; including haunches to support sides of pipe.
- D. Borrow: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Drainage Course: Layer supporting slab-on-grade used to minimize capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations.
  - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect/Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.

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2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated dimensions without direction of Engineer. Unauthorized excavation, as well as remedial work directed by Architect/Engineer, shall be at the Contractor's expense.

G. Fill: Soil materials used to raise existing grades.

H. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material  $\frac{3}{4}$  cu. yd. or more in volume that exceed a standard penetration resistance of 100 blows/2 inches when tested by an independent testing agency, according to ASTM D 1586.

I. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made, stationary features above or below the ground surface.

J. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below base, drainage course, or topsoil materials.

K. Utilities include on-site, underground pipes, conduits, ducts, and cables.

**3. SUBMITTALS**

A. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated.

1. Classification according to ASTM D 2487 of each on-site or borrow soil material proposed for fill and backfill.
2. Laboratory compaction curve according to ASTM D 698 for each on-site or borrow soil material proposed for fill and backfill.

B. Material Certifications: Gradations from manufacturer for subbase, base, engineered fill, bedding, drainage fill, and/or filler material as necessary.

**4. QUALITY ASSURANCE**

A. Standards:

1. American Society of Testing and Materials (ASTM):

D 698 - Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft)

D 1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

D 1557 - Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup>(2,700 kN-m/m<sup>3</sup>))

D 2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method

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- D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
  - D 2937 - Standard Test Method for Density of Soil in Place by the Drive Cylinder Method
  - D 4253 - Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
  - D 4718 - Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles
2. American Association of State Highway and Transportation Officials Standard Method of Test (AASHTO):
- T-96 - Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact by the Los Angeles Machine.
  - T-99 - The Moisture-Density Relations of Soils Using a 2.5 kG (5.5 lb) Rammer and a 305 mm (12 in) Drop.
  - T104 - Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate Test.

**B. Testing:**

1. If needed per the Owner's sole judgment, a qualified geotechnical testing agency shall be retained to perform all required field and laboratory soil testing necessary to demonstrate compliance with this specification as outlined below in Field Quality Control.
2. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548.

**PART 2 – PRODUCTS**

**2.1 SOIL MATERIALS**

- A. General: Provide borrow soil materials when sufficient quantities of satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: As defined by the Geotechnical Engineering Report. In the absence of a Geotechnical Engineering Report the following shall be considered satisfactory soils: ASTM D 2487 soil classification groups GW, GP, GM, SW, SP, and SM, or a combination of these group symbols, free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: As defined by the Geotechnical Engineering Report. In the absence of a Geotechnical Engineering Report the following shall be considered unsatisfactory soils: ASTM D 2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT, or a combination of these group symbols. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Backfill and Fill: Satisfactory soil materials.

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- E. Base: Aggregate for base shall be essentially limestone or dolomite. The aggregate shall not contain more than 15 percent deleterious rock and shale. Sand may be added only for the purpose of reducing the plasticity index of the fraction passing the No. 40 sieve in the finished product. Any sand, silt and clay and any deleterious rock and shale shall be uniformly distributed throughout the material. The fraction passing the No. 40 sieve shall have a maximum plasticity index of six (6). The aggregate shall be in accordance with the following gradation requirements: 100 percent passing the 1 inch sieve, 60-90 percent passing the 1/2 inch sieve, 35-60 percent passing the No. 4 sieve, and 10-35 percent passing the No. 30 sieve.
- F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2 inch sieve and not more than 12 percent passing a No. 200 sieve.
- G. Bedding: Embedment for ordinary trench conditions is compacted, dense graded, clean, manufactured and processed aggregates described as angular crushed stone, crushed rock, crushed gravel, or crushed stone/sand mixtures containing little or no fines with 100 percent passing a 1 inch sieve, 55-90 percent passing a 1/2 inch sieve, 8-40 percent passing a No. 4 sieve, 0-15 percent passing a No. 10 sieve, and 0-4 percent passing a No. 200 sieve.
- H. Drainage Fill: Washed, narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate Size 57; with 100 percent passing a 1-1/2 inch sieve, and 0-5 percent passing a No. 8 sieve.
- I. Filler Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1 inch sieve and 0-5 percent passing a No. 4 sieve.
- J. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.
- K. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of four (4) percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.

**2.2 SOIL STABILIZATION MATERIALS**

- ~~A. Typical Materials: Code L, Quicklime, Cement, Fly ash~~
- B. Shot Rock: Mixture of crushed or blasted stone. Gradation can vary with maximum stone diameter 6-inches or less.
- C. Clay Cap: Lean Clay (CL) with a liquid limit of less than 50. Material shall be submitted to a qualified testing agency for evaluation prior to use.

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2.3 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
  - 1. Red: Electric.
  - 2. Yellow: Gas, oil, steam, and dangerous materials.
  - 3. Orange: Telephone and other communications.
  - 4. Blue: Water systems.
  - 5. Green: Sewer systems.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 2 Section "Site Demolition" and Division 31 Section "Site Clearing."
- C. Protect subgrades and foundations soils against freezing temperatures or frost. Provide protective insulating materials as necessary.
- D. Provide erosion control measures as specified in Section 312500 Erosion and Sedimentation Controls.

3.2 TOPSOIL STRIPPING

- A. Remove topsoil from areas within limits of excavation, trenching, borrow and areas designed to receive embankment or compacted fill.
- B. Scrape areas clean of all brush, grass, weeds, roots, and other unsuitable materials before stripping topsoil.
- C. Strip topsoil to a minimum depth of 6 inches, and to a sufficient depth to remove excessive roots in heavy vegetation or brush areas and as required to segregate topsoil.



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- D. Stockpile topsoil reasonably free of subsoil, debris, and stones larger than 2 inch diameter. Place stockpile such that it does not interfere with construction operations and existing facilities. Proper drainage of the stockpile shall be maintained. The stockpile shall be protected by erosion control BMPs to prevent sedimentation during runoff. Cover to prevent windblown dust.
- E. The Contractor should anticipate that any topsoil stripped from the site and not required to complete site improvements is to be hauled off site and disposed of. However, the Owner retains the right to retain any topsoil prior to removal.

**3.3 EXCAVATION, GENERAL**

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
  - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
  - 2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
    - a. 24 inches outside of concrete forms other than at footings.
    - b. 12 inches outside of concrete forms at footings.
    - c. 6 inches outside of minimum required dimensions of concrete cast against grade.
    - d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
    - e. 6 inches beneath bottom of concrete slabs on grade.
    - f. 6 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.
- B. Classified Excavation: Excavate to subgrade elevations. Material to be excavated will be classified as earth and rock. Do not excavate rock until it has been classified and cross sectioned by Architect. The Contract Sum will be adjusted for rock excavation according to unit prices included in the Contract Documents. Changes in the Contract time may be authorized for rock excavation.
  - 1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.
    - a. Intermittent drilling; blasting, if permitted; ram hammering; or ripping of material not classified as rock excavation is earth excavation.
  - 2. Rock excavation includes removal and disposal of rock. Remove rock to lines and subgrade elevations indicated to permit installation of permanent construction without exceeding the following dimensions:

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- a. 24 inches outside of concrete forms other than at footings.
- b. 12 inches outside of concrete forms at footings.
- c. 6 inches outside of minimum required dimensions of concrete cast against grade.
- d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
- e. 6 inches beneath bottom of concrete slabs on grade.
- f. 6 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.

**3.4 EXCAVATION FOR STRUCTURES**

- A. Excavate area adequate to permit erection and removal of forms.
- B. Trim to neat lines where concrete is to deposited against earth.
- C. Excavate by hand in areas where space and access will not permit use of machines.
- D. Restore bottom of excavation to proper elevations in areas over excavated as follows:
  1. For structures supported by piles or caissons, with compacted embankment.
  2. For structures supported by concrete footings or mats, with concrete.
- E. Excavate rock, where encountered, to a distance of at least three (3) feet away from outside of structure walls. Bench additional rock excavation required for stability during construction to maintain vertical cuts. Perform such additional excavation and furnish any additional backfill subsequently required at no extra cost to Owner.

**3.5 EXCAVATION FOR WALKS AND PAVEMENTS**

- A. Excavate surfaces under walks and pavements to indicated cross sections, elevations, and grades.

**3.6 EXCAVATION FOR UTILITY TRENCHES**

- A. Excavate trenches to indicated gradients, lines, depths, and elevations. Excavate trenches to allow installation of top of pipe below the frost line.
- B. Do not open more trench in advance of pipe laying than is necessary to expedite the work. One block or 400 feet (whichever is shorter) shall be the maximum length of open trench permitted on any line under construction.
- C. Excavate trenches to uniform widths to provide a working clearance on each side of the pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than the top of pipe or conduit unless otherwise indicated.

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- D. Excavate trenches six (6) inches deeper than bottom of pipe elevation to allow for bedding. Hand excavate for bell of pipe if applicable
- E. Trench bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.

**3.7 DEWATERING**

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding the Project site and surrounding areas.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
  - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavations as temporary drainage ditches.
  - 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.
  - 3. Discharge removed water to approved drains or channels. Contractor shall obtain State or local permits for discharge if such are required. Water discharge into streams shall be free of silt or other objectionable materials. Discharge water so that the work in progress and other properties are not damaged. Do not interfere unduly with the use of streets, alleys, private drives, or entrances.
  - 4. Remove unsuitable, excessively wet materials and replace with approved material.

**3.8 SUBGRADE PREPARATION**

- A. Excavate or place embankment as required to construct subgrades to elevations and grades indicated.
- B. Remove all unsuitable material and replace with approved embankment material. Perform all wetting, drying, shaping, and compacting required to prepare a suitable subgrade.
- C. Roughen subgrade for embankment by discing or scarifying and wet or dry the top 6 inches as required to ensure bond with embankment.
- D. Extend subgrade the full width of surfaced areas plus one foot.
- E. Compact the top 12 inches of subgrades for traffic areas and slabs on grade to 95 percent of maximum density (ASTM D 698).
- F. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by the Architect/Engineer, without additional compensation.

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- G. Proof-roll subgrade after moisture conditioning and compaction to identify soft or disturbed areas. Do not proof-roll wet or saturated subgrades. Proof-rolling will conform with the following:
  - 1. Use a fully loaded tandem axle dump truck or equipment providing an equivalent loading of not less than 20 tons for proof-rolling.
  - 2. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction.
  - 3. Limit vehicle speed to 3 mph.
  - 4. Undercut and replace soft areas, identified by proof-rolling, with approved fill material.

**3.9 EMBANKMENT**

- A. Place embankment to the contours and elevations indicated in the project drawings. Place embankment material in lifts not exceeding eight (8) inches, uncompacted depth.
- B. When rocks larger than four (4) inches are present, they shall be scattered and thoroughly consolidated with sufficient compacted soil to completely fill all voids between rocks. Exclude rocks larger than one half the depth of the lift from the top two (2) feet of the embankment.
- C. Uniformly moisten or aerate each lift before compaction to within two (2) percent optimum moisture content. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by two (2) percent and is too wet to compact to specified density.
- D. Embankment shall be compacted to 95 percent of maximum density at optimum moisture content as determined by ASTM D 698.

**3.10 BACKFILL**

- A. Place and compact backfill in excavations promptly, but not before completing the following:
  - 1. Construction below finish grade including, where applicable, subdrainage, damp-proofing, waterproofing, and perimeter insulation.
  - 2. Surveying locations of underground utilities for Record Documents.
  - 3. Testing and inspecting underground utilities.
  - 4. Removing concrete formwork.
  - 5. Removing trash and debris.
  - 6. Removing temporary shoring and bracing, and sheeting.
  - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

**3.11 UTILITY TRENCH BACKFILL**

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- A. Place and compact initial bedding on trench bottoms and where indicated. Shape bedding to provide continuous support for bells, joints, and barrels of pipes and for joints fittings, and bodies of conduits.
- B. Backfill trenches excavated under footings and within 18 inches of bottom of footings; fill with concrete to elevation of bottom of footings.
- C. Place and compact bedding materials, to a minimum height of 6 inches over the utility pipe or conduit.
- D. Carefully compact material under pipe haunches and bring bedding evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of utility system.
- E. Coordinate backfilling with utility testing.
- F. Fill voids with approved backfill materials while shoring and bracing, and as sheeting is removed.
- G. For areas not under pavement, place and compact final backfill of satisfactory soil material to final subgrade.
- H. No rock greater than one (1) foot, measured in any direction, shall be placed within two (2) feet of the top of a pipe in any backfill. No rocks greater than one (1) foot will be allowed in the backfill above service line terminations, tees, or wyes.
- I. For areas under pavement, place and compact final backfill using bedding material to final subgrade.
- J. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavement and slabs.

**3.12 SOIL FILL**

- A. Disk, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations with satisfactory soil material.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

**3.13 SOIL MOISTURE CONTROL**

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 0 to 4 percent of optimum moisture content.

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1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

**3.14 COMPACTION OF SOIL BACKFILLS AND FILLS**

- A. Place backfill and fill soil materials in layers not more than 8 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.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D698:
  1. Under pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
  2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 95 percent.
  3. Under lawn or unpaved areas, scarify and compact each layer of backfill or fill soil material at 90 percent. Do not compact top 12 inches.
  4. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent.
  5. Moisture content at the time of placement shall be maintained between 0 and +4 percent of optimum moisture.

**3.15 GRADING**

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
  1. Provide a smooth transition between adjacent existing grades and new grades.
  2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
  1. Lawn or Unpaved Areas: Plus or minus 0.1 feet.
  2. Walks: Plus or minus 1 inch.
  3. Pavements: Plus or minus 1/2 inch.

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- C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

**3.12 SUBSURFACE DRAINAGE**

- A. Subsurface Drain: Place a layer of drainage fabric around perimeter of drainage trench as indicated. Place a six (6) inch course filter material on drainage fabric to support drainage pipe. Encase drainage pipe in a minimum of 12 inches of filter material and wrap in drainage fabric, overlapping sides and ends at least six (6) inches. Compact each course of filter material to 95 percent of maximum dry unit weight according to ASTM D 698.
- B. Drainage Backfill: Place and compact filter material over subsurface drain, in width indicated, to within 12 inches of final subgrade. Overlay drainage backfill with one layer of drainage fabric, overlapping sides and ends at least six (6) inches. Compact each course of filter material to 95 percent of maximum dry density according to ASTM D 698. Place and compact impervious fill material over drainage backfill to final subgrade.

**3.13 BASE COURSE**

- A. Under pavements and walks, place base course on prepared subgrade and as follows:
  - 1. Place base course material over compacted subgrade.
  - 2. Compact base courses at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.
  - 3. Shape base to required crown elevations and cross-slope grades.
  - 4. When thickness of compacted base course is six (6) inches or less, place materials in a single layer.
  - 5. When thickness of compacted base course exceeds six (6) inches, place materials in equal layers, with no layer more than six (6) inches thick or less than three (3) inches thick when compacted.
- B. Pavement Shoulders: Place shoulders along edges of base course to prevent lateral movement. Construct shoulders, at least 12 inches wide, of satisfactory soil materials and compact simultaneously with each base layer to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

**3.14 DRAINAGE COURSE**

- A. Under slabs-on-grade, place drainage course on prepared subgrade and as follows:
  - 1. Install subdrainage geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
  - 2. Compact drainage course to required cross sections and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

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3. When compacted thickness of drainage course is six (6) inches or less, place materials in a single layer.
4. When compacted thickness of drainage course exceeds six (6) inches, place materials in equal layers, with no layer more than six (6) inches or less than three (3) inches thick when compacted.

**3.15 TOPSOIL PLACEMENT**

- A. Prior to the start of finish grading, the soil shall be fine graded. The grade shall be smooth without high spots or low spots and shall be free of construction debris. The site shall be weed free and ready for finish grading.
- B. Place topsoil on all disturbed areas not scheduled to receive permanent surfacing.
- C. Clear areas to receive topsoil of vegetation heavy enough to interfere with proper grading and tillage operations.
- D. Clear surfaces of all stones or other objects larger than 3 inches in thickness or diameter, all roots, brush, wire, grade stakes, or other objectionable material.
- E. Loosen subgrade by discing or scarifying to a depth of 2 inches wherever compacted by traffic or other causes to permit bonding of the topsoil to the subgrade.
- F. Distribute topsoil over required areas without compaction other than that obtained with spreading equipment.
- G. Place not less than four (4) inches of top soil over areas to receive topsoil.
- H. Shape cuts, fills, and embankments to contours indicated in project drawings.
- I. Grade to match contours of adjacent areas and permit good natural drainage.
- J. Grade a gentle mound over trenches.
- K. After spreading topsoil, clear surface of stones or other objects larger than two (2) inches in thickness or diameter and of objects that might interfere with planting and maintenance operations.

**3.16 FIELD QUALITY CONTROL**

- A. Owner shall engage geotechnical engineer to perform field quality control testing. Contractor shall allow geotechnical testing agency to inspect and test subgrades and each embankment, fill, or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.



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- B. At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Engineer.
- C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at a minimum at the following locations and frequencies:
  - 1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2,000 sq. ft. or less of paved area or building slab, but in no case fewer than three (3) tests.
  - 2. Foundation Wall Backfill: At each compacted backfill layer, at least one test for each 100 feet or less of wall length, but no fewer than two (2) tests.
  - 3. Trench Backfill: At each compacted initial and final backfill layer, at least one test for each 150 feet or less of trench length, but no fewer than two (2) tests.
- D. When testing agency reports that subgrades, fills, embankments, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

**3.17 MAINTENANCE AND REPAIR**

- A. Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Settling or erosion shall be filled, repaired and grades reestablished to elevations and slopes indicated.
- C. Correction of Settlement:
  - 1. Settlement of embankments, backfill, or trenches occurring within the one-year correction period after Final Acceptance shall indicate defective work and shall be promptly corrected.
  - 2. Contractor shall correct settlement and damages arising from or attributable to the settlement.
  - 3. Make repairs within thirty (30) days from and after due notification by Owner of embankment or backfill settlement and resulting damage.
  - 4. Make own arrangements for access to the site for purposes of correction and maintenance of corrected areas.

**3.18 DISPOSAL**

- A. Remove surplus soil and waste material, including unsatisfactory soil, trash and debris and legally dispose of it off Owner's property.

**3.19 BLASTING**

- A. Blasting will not be permitted on this project.

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END OF SECTION 312300

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**SECTION 312500 - EROSION AND SEDIMENTATION CONTROLS**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. Section includes: temporary and permanent management practices as shown on the project drawings, and indicated in the Storm Water Pollution Prevention Plan (SWPPP), and as directed by the Owner during the life of the Contract to control erosion, storm water runoff, and sedimentation.
- B. Coordinate temporary erosion control provisions with permanent erosion control features to assure economical, effective, and continuous erosion, sedimentation, and pollution control throughout the construction and stabilization period.
- C. Management practices required are not limited to the measures shown on the project drawings and indicated on the SWPPP. Provide additional practices necessitated by actual conditions and methods.
- D. Silt and pollution leaving the site and any effects of the release are the sole and total responsibility of the Contractor as Primary, Secondary, or Tertiary Permittee or Operator.
- E. Provide Subcontractors with a copy of the Erosion Control Plan and the SWPPP. Post notices requiring Subcontractors to review and comply with the Erosion Control Plan and the SWPPP.

**1.2 RELATED DOCUMENTS**

- A. Conform to the Federal Clean Water Act, as well as the State clean water and erosion control regulations, and the rules and regulations promulgated to each of these Acts.

**1.3 DEFINITIONS**

- A. This partial list of definitions is provided for the Contractor's convenience only. Obtain copies of the reference documents and learn appropriate terms required to fully implement the Erosion Control Plan and SWPPP.
- B. Terms Defined:
  - 1. Best Management Practices (BMPs): Schedules of activities, prohibitions or practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State and/or the United States of America. BMPs include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
  - 2. General Contractor: The operator of the common development or site.

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3. Nephelometric Turbidity Unit (NTU): A numerical unit of measure based upon photometric analytical techniques for measuring the light scattered by fine particles of a substance in suspension.
4. NPDES: National Pollution Discharge Elimination System.
5. Operator: The entity that has the primary day-to-day operational control of those activities at the facility necessary to ensure compliance with Erosion Control Plan and SWPPP requirements and permit conditions.
6. Primary Permittee: The Owner and the operator of a tract of land for a common development, or of a stand-alone facility that is not part of a common development; or a utility company when it is the only entity conducting a construction activity on a piece of property.
7. Qualified Personnel: A person who has successfully completed an erosion and sediment control short course eligible for continuing education units, or an equivalent course approved by EPD and the State Soil and Water Conservation Commission.
8. Sediment: Solid material, both organic and inorganic, that is in suspension, is being transported, or has been moved from its site of origin by, wind, water, ice, or gravity as a product of erosion.
9. Waters of the State: Rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the state which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

**1.4 QUALITY ASSURANCE CRITERIA**

- A. Project Review: Prior to the preconstruction conference, the Contractor shall review in detail the Erosion Control Plan and the SWPPP.
- B. Preconstruction Conference: At the preconstruction conference submit for acceptance a detailed schedule for accomplishment of temporary and permanent erosion control work and installation of BMPs, for clearing and grubbing, grading, construction, paving, and other project activities. Submit for acceptance a proposed method of erosion control for haul roads and borrow pits and a plan for disposal of waste material. Do not begin work until the erosion control schedules and methods of operations have been accepted by the Owner.
- C. Provide qualified personnel to supervise provision and maintenance of management practices.

**PART 2 – PRODUCTS**

**2.1 MATERIALS**

- A. Silt Fence
  1. Filter Fabrics: Use filter fabric composed of strong, rot-proof synthetic fibers formed into a fabric of either woven or non-woven type. Use fabric free of any treatment or coating

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which might significantly alter its physical properties. Use fabric containing stabilizers or inhibitors to make the filaments resistant to deterioration resulting from exposure to sunlight or heat. Use a pervious sheet of synthetic fibers oriented into a stable network so that the fibers retain their relative position with respect to each other. Finish the edges of the fabric to prevent the outer yarn from pulling away from the fabric. Use fabric free of defects or flaws which significantly affect its physical and/or filtering properties. Use fabric with a minimum width of 36 inches. Sew or bond sheets of fabric together. No deviation from any physical requirements will be permitted due to the presence of the seam.

2. Woven Wire Fence: Wire fence fabric at least 32 inches high, with at least 6 horizontal wires. Vertical wires spaced 6 inches apart. Top and bottom wires at least 10 gage. Other wires at least 14 gage.
3. Posts: Straight steel posts, 1.33 pounds per linear foot min., 5 feet long, at 4 feet max. o.c., 1-3/4 inches wide, which have projections for fastening the wire to the fence.
4. Wire staples: Wire No. 9 staple at least 1 ½ inches long.

**B. Silt Socks**

1. Silt Sock shall be SiltSoxx® by Filtrexx® or approved equal.

**C. Mats and Blankets**

1. Jute or Hemp Mat: Woven, 76 to 80 warpings per 4 foot width, 39 to 43 weftings per 3 foot length, 0.9 pounds per square yard minimum, 1.5 pounds per square yard maximum.
2. Excelsior Blanket: 80% of fibers 6" min. length, smolder resistant, photo-degradable plastic mesh, maximum 1-1/2 x 3 inches, ¼ inch min. thickness, 0.8 pounds per square yard.
3. Coconut Fiber Blanket: 100% coconut, ¼" min. thickness, 48" min. width, 0.5 pounds per square yard, photo-degradable plastic mesh 5/8" x 5/8" maximum.
4. Wood Fiber Blanket: Free of germination inhibitors, photo-degradable plastic mesh, 5/8" x ¾" max. spacing, 0.35 pounds per square yard minimum dry weight.

**D. Polymers**

1. Anionic polyacrylamide soil binding agents, environmentally benign, 0.05% monomer by weight.

**PART 3 – EXECUTION**

**3.1 GENERAL REQUIREMENTS**

- A. Install BMPs in accordance with the Erosion Control Plan and SWPPP.
- B. Maintain BMPs throughout construction and until the site is finally stabilized.
- C. Implement or assist the Owner with implementation of the SWPPP.

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- D. Submit reports as required by the local jurisdiction, state, and federal government.
- E. Retain records as required by local, state, and federal authorities.
- F. Submit or assist the Owner with submittals of applicable permits and termination of permits.

**3.2 SCHEDULE**

- A. Temporary construction entrance(s), silt fences, straw bale dikes, or other initial sediment controls shown on the project drawings must be installed prior to any other work.
- B. Sediment basins must be installed within 10 calendar days after construction begins or as soon as 2 or more acres are disturbed, whichever comes first.

**3.3 METHODS**

- A. Several methods of controlling dust and other pollutants include, but are not limited to, the following:
  - 1. Exposing the minimum area of erodible earth.
  - 2. Applying temporary mulch with or without seeding.
  - 3. Using water sprinkler trucks.
  - 4. Using covered haul trucks.
  - 5. Using dust palliatives or penetration asphalt on haul roads.
  - 6. Using plastic sheet coverings.
  - 7. Using gravel.

**3.4 AUTHORITY OF ENGINEER**

- A. The Engineer has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, and borrow and fill operations.

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- B. The Engineer has the authority to direct the Contractor to provide immediate permanent or temporary erosion control measures to minimize loss of soil due to erosion and contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment.

**3.5 CONSTRUCTION**

- A. Prior to clearing and grubbing operations for the project. Contractor shall identify all areas where the potential for loss of soil due to erosion exists, and shall line the downhill side of the construction site within these areas with straw bales or silt fences to minimize eroded materials from leaving the site. These shall be maintained throughout the construction period and removed when the permanent ground covering is established.
- B. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the accepted schedule. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available.
- C. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.
- D. When erosion is likely to be a problem, clearing and grubbing operations should be scheduled and performed so that grading operations and permanent erosion control features can follow immediately thereafter if the project conditions permit; otherwise, temporary erosion control measures may be required between successive construction stages.
- E. The Contractor will limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current in accordance with the accepted schedule. If disturbance occurs outside scheduled areas or anticipated work zones, or if weather conditions delay permanent control measures, temporary erosion control measures shall be taken immediately.

**3.6 MAINTENANCE**

- A. Maintain temporary management practices until no longer needed or permanent management practices are provided and the site is stabilized. Remove temporary materials.
- B. In the event that temporary management practices are required due to negligence, carelessness, or failure to provide permanent management practices as a part of work as scheduled, provide at no cost to the Owner.

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- C. When silt deposited in sediment basins occupies more than 30% of the basin capacity, remove the silt. Remove the silt from the site unless otherwise permitted by the Owner. Restore the basin to the conditions and grades as shown on the Drawings.

END OF SECTION 312500



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**SECTION 321100 - CAST-IN-PLACE CONCRETE FOR SITEWORK**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. Section includes: cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes for the following:
  - 1. Roads, parking lots, sidewalks, curbs and gutters, etc.
  - 2. Sanitary Structures, Wet Wells, Valve Vaults, Meter Pits, etc.

**1.2 RELATED SECTIONS**

- A. Division 31 Section “Excavation and Fill”

**1.3 REFERENCES**

- A. American Concrete Institute:

- 1. ACI 301                Specifications for Structural Concrete
- 2. ACI 304R            Guide for Measuring, Mixing, Transporting, and Placing Concrete.
- 3. ACI 305R            Hot Weather Concreting
- 4. ACI 306R            Cold Weather Concreting
- 5. ACI 306.1          Standard Specification for Cold Weather Concreting
- 6. ACI 308             Standard Practice for Curing Concrete
- 7. ACI 347             Guide to Formwork for Concrete

- B. American Society for Testing & Materials:

- 1. ASTM B 221        Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
- 2. ASTM C 33         Concrete Aggregate
- 3. ASTM C 94         Ready-Mixed Concrete
- 4. ASTM C 150        Portland Cement
- 5. ASTM C 260        Air Entraining Admixtures for Concrete
- 6. ASTM C 494        Chemicals Admixtures for Concrete
- 7. ASTM C 595M      Blended Hydraulic Cements (Metric)
- 8. ASTM C 1017      Chemical Admixtures for Use in Producing Flowing Concrete
- 9. ASTM C 1107      Packaged Dry, Hydraulic Cement Grout (Nonshrink)
- 10. ASTM D 994       Performed Expansion Joint Filler for Concrete
- 11. ASTM D 1190      Concrete Joint Sealer, Hot-Poured Elastic Type
- 12. ASTM D 1751      Preformed Expansion Joint Filler for Concrete Paving
- 13. ASTM D 1752      Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving

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**1.4 SUBMITTALS**

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
- C. Shop Drawings: Steel Reinforcement Shop Drawings, placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
- D. Mill Certificates: Steel producer's certificates of mill analysis, tensile, and bend tests for reinforcing steel, when requested.
- E. Construction Joint Layout: Submit a Joint Plan, showing type and location, no smaller than the scale of the project drawings. Joint Details, including dowels, where appropriate. Sealer manufacturer's information.
- F. Material Certificates: For each of the following, signed by manufacturers:
  - 1. Cementitious Materials
  - 2. Admixtures
  - 3. Form materials and form-release agents.
  - 4. Steel reinforcement and accessories
  - 5. Fiber reinforcement
  - 6. Joint-filler strips
  - 7. Waterstops
  - 8. Repair Materials
- G. Contractor should be aware that other submittal requirements (i.e. shop drawings) are contained in other applicable sections of these specifications.

**1.5 QUALITY ASSURANCE**

- A. Installer Qualifications: a qualified installer who employs on the project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.
- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
  - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities.

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- C. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction and qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
  - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician Grade 1, according to ACI CP-1 or an equivalent certification program.
  - 2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician – Grade I. Testing Agency laboratory supervisor shall be and ACI-certified Concrete Laboratory Testing Technician – Grade II.
- D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from a single manufacturer.
- E. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

**1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver reinforcement to the job site bundled, tagged and marked. Use metal tags indicating bar size, lengths, and other information corresponding to markings shown on shop drawings.
- B. Store reinforcement at the job site in a manner to prevent damage and accumulation of dirt and excessive rust.
- C. Handle reinforcement in such a way to prevent bending and damage.

**PART 2 – PRODUCTS**

**2.1 FORM-FACING MATERIALS**

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
  - 1. Plywood, metal, or other approved materials.
  - 2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and High-density overlay, Class 1 or better.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- C. Forms for Cylindrical Columns, Pedestals, and Supports: Metal, glass-fiber-reinforced plastic, paper, or fiber tubes that will produce surfaces with gradual or abrupt irregularities not exceeding specified formwork surface class. Provide units with sufficient wall thickness to resist concrete loads without detrimental deformation.
- D. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch, minimum.

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- E. Rustication Strips: Wood, metal, PVC, or rubber strips, kerfed for ease of form removal.
- F. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
  - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.
- G. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
  - 1. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.
  - 2. Furnish ties that, when removed, will leave holes no larger than 1 inch in diameter in concrete surface.
  - 3. Furnish ties with integral water-barrier plates to walls indicated to receive damp-proofing or water-proofing.

**2.2 STEEL REINFORCEMENT**

- A. Reinforcing Bars: Comply with ASTM A 305, Deformed Bars. Conforming to ASTM 615, Grade 60, or ASTM 706, Grade 60 as indicated on the project drawings.
- B. Steel Bar Mats: ASTM A 184, fabricated from ASTM A 615, Grade 60, deformed bars, assembled with clips.
- C. Plain Steel Wire: ASTM A 82, as drawn.
- D. Plain Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from as-drawn steel wire into flat sheets.
- E. Deformed Steel Welded Wire Reinforcement: ASTM A 497, flat sheet.

**2.3 REINFORCEMENT ACCESSORIES**

- A. Joint Dowel Bars: ASTM A 615, grade 60, plain steel bars, cut true to length with ends square and free of burrs.
- B. Supports for Reinforcement: Bolster, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than the concrete as follows:

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1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless steel bar supports.

**2.4 MATERIALS**

**A. Cementitious Materials:**

1. Cement shall be a standard brand Portland cement which shall conform to ASTM C 150. Type I cement with Fly Ash conforming to ASTM C 618, Class F.
2. Use cement of the same type, brand, and source throughout the project.

**B. Water: ASTM C 94/C 94M and potable.**

**C. Fine Aggregate:**

1. Fine Aggregate shall consist of natural sand, manufactured sand, or a combination thereof. The gradation requirements of fine aggregate shall be as follows: 100 percent passing the 3/8 inch sieve, 95-100 percent passing the No. 4 sieve, 40-80 percent passing the No. 16 sieve, 5-30 percent passing the No. 50 sieve, and 0-10 percent passing the No. 100 sieve.
2. Fine Aggregate shall conform to the requirements of ASTM C 33 with respect to deleterious substances, soundness, and abrasion.

**D. Course Aggregate:**

1. Course Aggregate shall consist of crushed stone or crushed gravel of uniform quality. The gradation requirements of course aggregate shall be as follows: 100 percent passing the 1 inch sieve, 90-100 percent passing the 3/4 inch sieve, 40-60 percent passing the 1/2 inch sieve, 10-30 percent passing the 3/8 inch sieve, and 0-5 percent passing the No. 4 sieve.
2. Course Aggregate shall conform to the requirements of ASTM C 33 with respect to deleterious substances, soundness, and abrasion.

**E. Admixtures:**

1. Air-Entraining Admixture: ASTM C 260.
2. Chemical:
  - a. ASTM C 494 Type A – Water Reducing
  - b. ASTM C 494 Type B – Retarding
  - c. ASTM C 494 Type C – Accelerating
  - d. ASTM C 494 Type D – Water Reducing and Retarding
  - e. ASTM C 494 Type E – Water Reducing and Accelerating
  - f. ASTM C 494 Type F – Water Reducing, High Range
  - g. ASTM C 494 Type G – Water Reducing, High Range and Retarding

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3. Plasticizing: ASTM C 1017.
4. Use only admixtures that have been tested and accepted in mix designs and with Engineer's approval.
5. Comply with ACI 212.1 R "Admixture for Concrete" and ACI 212.2R-81 "Guide for Use of Admixture in Concrete."

**F. Waterstops**

1. Flexible Rubber Waterstops: CE CRD-C 513, for embedding in concrete to prevent passage of fluids through joints. Factory fabricate corners, intersections, and directional changes.
  - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - i. Greenstreak.
    - ii. Williams Products, Inc.
  - b. Profile: Flat dumbbell without center bulb.
  - c. Dimensions: 4 inches by 3/16 inch thick, non-tapered.

**G. Curing Materials:**

1. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete. Subject to compliance with requirements, available products that may be incorporated into the work include, but are not limited to, the following:
  - a. Axim Italcementi Group, Inc.; CATEXOL CimFilm.
  - b. BASF Construction Chemicals - Building Systems; Confilm.
  - c. ChemMasters; SprayFilm.
  - d. Conspec by Dayton Superior; Aquafilm.
  - e. Dayton Superior Corporation; Sure Film (J-74).
  - f. Edoco by Dayton Superior; BurkeFilm.
  - g. Euclid Chemical Company (The), an RPM company; Eucobar.
  - h. Kaufman Products, Inc.; Vapor-Aid.
  - i. Lambert Corporation; LAMBCO Skin.
  - j. L&M Construction Chemicals, Inc.; E-CON.
  - k. Meadows, W. R., Inc.; EVAPRE.
  - l. Metalcrete Industries; Waterhold.
  - m. Nox-Crete Products Group; MONOFILM.
  - n. Sika Corporation; SikaFilm.
  - o. SpecChem, LLC; Spec Film.

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- p. Symons by Dayton Superior; Finishing Aid.
  - q. TK Products, Division of Sierra Corporation; TK-2120 TRI-FILM.
  - r. Unitex; PRO-FILM.
  - s. Vexcon Chemicals, Inc.; Certi-Vex Envio Set.
2. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.
3. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
4. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating. Subject to compliance with requirements, available products that may be incorporated into the work include, but are not limited to, the following:
- a. Anti-Hydro International, Inc.; AH Curing Compound #2 DR WB.
  - b. BASF Construction Chemicals - Building Systems; Kure 200.
  - c. ChemMasters; Safe-Cure Clear.
  - d. Conspec by Dayton Superior; W.B. Resin Cure.
  - e. Dayton Superior Corporation; Day-Chem Rez Cure (J-11-W).
  - f. Edoco by Dayton Superior; Res X Cure WB.
  - g. Euclid Chemical Company (The), an RPM company; Kurez W VOX; TAMMSCURE WB 30C.
  - h. Kaufman Products, Inc.; Thinfilm 420.
  - i. Lambert Corporation; AQUA KURE - CLEAR.
  - j. L&M Construction Chemicals, Inc.; L&M Cure R.
  - k. Meadows, W. R., Inc.; 1100-CLEAR.
  - l. Nox-Crete Products Group; Resin Cure E.
  - m. Right Pointe; Clear Water Resin.
  - n. SpecChem, LLC; Spec Rez Clear.
  - o. Symons by Dayton Superior; Resi-Chem Clear.
  - p. TK Products, Division of Sierra Corporation; TK-2519 DC WB.
  - q. Vexcon Chemicals, Inc.; Certi-Vex Enviocure 100.
- H. Expansion and Isolation Joint Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.
- I. Contractor Joint Sealing Compound shall be one of the following:

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1. Cold pour polymer fortified crack fill material generally conforming with ASTM D 1190.
2. Hot pour polymer rubber asphalt sealer meeting the requirements of ASTM D 3405. A certification will be required from the Contractor certifying that the joint sealer meets this specification.

J. Accessories:

1. Vapor Retarder: 10-mil thick clear polyethylene film/mildew resistant, type recommended for below grade application. Overlap (8 inch min.) and watertight-seal all joints.
2. Non-Shrink Grout: CDC-C 588, factory premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,000 psi in 48 hours and 7,000 psi in 28 days.
3. Non-Shrink Grout, Non-Metallic Grout: Factory premixed grout conforming to CRD-C-621-80, "Corps of Engineers Specification for Non-Shrink Grout."
  - a. Acceptable Manufacturers:  
EUCO NS, The Euclid Chemical Company  
SonogROUT, Sonneborn-Contech  
Masterflow 713, Master Builders  
DuragROUT, L & M Construction Chemical Co.

**2.5 CONCRETE MIXTURES, GENERAL**

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
- B. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
- C. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than Portland cement in concrete as follows: Fly Ash: 20 percent.
- D. Limit water-soluble, chloride-ion content in hardened concrete to 0.06 percent by weight of cement.
- E. Use admixtures according to manufacturer's written specifications.

**2.6 CONCRETE MIXTURES**

- A. Roads, Parking Lots, Sidewalks, Curbs & Gutters:
  1. Minimum Compressive Strength: 4,000 psi at 28 days.
  2. Maximum Water-Cementitious Material Ratio: 0.45.
  3. Slump Limit: 4 inches plus or minus 1 inch.



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4. Air Content: Between 5 and 7 percent at point of delivery.

B. Sanitary Structures, Wet Wells, Valve Vaults, Meter Pits, etc.:

1. Minimum Compressive Strength: 4,000 psi at 28 days.
2. Maximum Water-Cementitious Material Ratio: 0.44.
3. Slump Limit: 4 inches plus or minus 1 inch.
4. Air Content: Between 5 and 7 percent at point of delivery.

2.7 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

1. When air temperature is between 85 and 90 degrees F (29.4 and 32.2 degrees C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 degrees F (32.2 degrees C), reducing mixing and delivery time to 60 minutes.

- B. Project-Site Mixing: Measure, batch, and mix concrete materials according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum type batch machine mixer.

1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd.
3. Provide batch ticket for each batch discharged and used in the work, indicating project identification name and number, date, mixture type, mixture time, quantity, and amount of water added. Record approximate location of final deposit in the project.

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**PART 3 – EXECUTION**

**3.1 FORMWORK**

- A. Design, erect, shore, brace, and maintain framework according to ACI 301 and ACI 347.
- B. Limit concrete surface irregularities, the maximum deviation of the top surface of any section shall not exceed one-eighth (1/8) inch, or the inside face not more than one-fourth (1/4) inch from planned alignment.
- C. Construct forms tight enough to prevent loss of concrete mortar. Retighten forms and bracing before placing concrete, as required, to prevent concrete mortar leaks and maintain proper alignment.
- D. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.
- E. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- F. Forms shall have a depth equal to greater than the prescribed edge thickness of the pavement slab. The minimum length of each section of form used shall be ten (10) feet. Each section or form shall be uniform and free from undesirable bends or warps.
- G. Every ten (10) foot length of form shall have at least three (3) form braces which shall be spaced at intervals of not more than five (5) feet, having the end brace not more than six (6) inches from the end of the form. Approved flexible forms shall be used for construction where the radius is 150 feet or less.

**3.2 REMOVING AND REUSING FORMS**

- A. General: Formwork may be removed after concrete has achieved at least 70 percent of its 28-day design compressive strength. Concrete has to be hard enough to not be damaged by form removal operations and curing and protection operations as outlined below.
- B. Clean and repair surfaces of forms to be reused in the work. Split, frayed, delaminated, or otherwise damaged from-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.
- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Engineer.

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**3.3 VAPOR RETARDERS & BARRIERS**

- A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.
  - 1. Lap joints 6 inches and fully seal with manufacturer's recommended tape.
  - 2. Tape around all penetrations & lap edges up over top of foundation wall a min. of 4".
- B. Bituminous Vapor Retarders: Place, protect, and repair bituminous vapor retarder according to manufacturer's written instructions.

**3.4 STEEL REINFORCEMENT**

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. In case of fabricating errors, do not rebend or straighten reinforcement in a manner that will injure or weaken the material.
- F. The maximum angle bar that is intended to be straight may be bent or offset shall be at a slope of 6:1, longitudinal to transverse dimension.
- G. If clearances for reinforcing require hooks shorter than standard hooks, fabricator shall be responsible for providing shorter hooks, as required to meet ACI requirements.
- H. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheets widths to prevent continuous laps in either direction. Lace overlaps with wire.

**3.5 CONCRETE PLACEMENT, GENERAL**

- A. Before placing concrete, verify that installation of formwork, reinforcement, embedded items, and subgrade preparation are complete and that required inspections and tests have been performed.
- B. Do not add water to concrete during delivery, at project site, or during placement operations unless approved by the Engineer.

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- C. Before test sampling and placing concrete, water may be added at the project site, subject to the limitations of ACI 301.
  
- D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
  - 1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
  - 2. Maintain reinforcement in position on chairs during concrete placement.
  - 3. Screed pavement surfaces with a straightedge and strike off to correct elevations.
  - 4. Slope surfaces as required in project drawings.
  - 5. Limit durations of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
  
- E. Cold-Weather Placement: Comply with ACI 306.1 and as follows:
  - 1. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
  - 2. When average high and low temperature is expected to fall below 40 degrees F (4.4 degrees C) for three consecutive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
  - 3. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
  - 4. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
  
- F. Hot-Weather Placement: Comply with ACI 301 and as follows:
  - 1. Maintain concrete temperature below 90 degrees F (32.2 degrees C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provide water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete in Contractor's option.
  - 2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.
  
- G. No concrete shall be placed around manholes or other structures until they have been adjusted to the required grade and alignment.

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3.6 INSTALLATION TOLERANCES

- A. Surface Smoothness for Field Event Surfaces shall fall within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
  - 1. 1/8 inch max in any direction, checked with a 10 foot straight edge

3.7 JOINTS

- A. General: : Construct expansion, weakened –plane (contraction), and construction joints true to line with face perpendicular to surface of concrete. Construct transverse joints at right angles to the centerline, unless otherwise indicated.
- B. Weakened Plane (Contraction) Joints: Provide weakened plane (contraction) joints, sectioning concrete into areas as shown on drawings or as indicated below. Construct weakened –plane joints for a depth equal to at least 1/4" wide x 1/4 of concrete thick–ness, as follows:
  - 1. Tooled Joints: Form weakened plane joints in fresh concrete by grooving top portion with a recommended cutting tool and finishing edges with a jointer.
  - 2. Sawed Joints: Sawed joint WILL NOT BE ALLOWED.
  - 3. Inserts: Use embedded strips of metal or sealed wood to form weakened-plane joints. Set strips into plastic concrete and carefully remove strips after concrete has hardened.
  - 4. Unless indicated otherwise on the drawings. Weakened-plane joints shall be placed at maximum 5 ft. intervals each direction and located to conform to bay spacing wherever possible, or as shown on drawings.
- C. Construction Joints: Place construction joints at end of placements and at locations where placement operations are stopped for more than ½ hour, except where such placements terminate at expansion joints.
  - 1. Construct joints as shown or, if not shown, use standard metal keyway-section forms.
  - 2. Pinned Joints:
    - a. Expansion joints, joints between new and existing (old) concrete shall be suitably pinned together prevent vertical misalignment.
    - b. Joints between sidewalks and building or canopy slabs shall be suitably pinned together to prevent vertical misalignment.
  - 3. Provide preformed galvanized steel keyway-section forms or bulkhead forms with keys, unless indicated otherwise. Embed keys at least 1-1/2 inches into concrete.
  - 4. Continue reinforcement across construction joints unless indicated otherwise. Do not continue reinforcement through sides of strip paving unless indicated.
  - 5. Provide tie bars at sides of paving strips where indicated.
  - 6. Use bonding agent on existing concrete surfaces that will be joined with fresh concrete.
- D. Expansion Joints: Use ASTM D 1751, non-extruding premoulded joint filler, 3/4" thick, composed of fiberboard impregnated with asphalt, for expansion joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks, and other fixed objects, unless otherwise indicated.

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- E. Expansion Joints: At ramps and walks, use ASTM D 1751, non-extruding premoulded material, ½" thick, unless otherwise noted, composed of fiberboard impregnated with asphalt.
- F. Locate expansion joints at intervals not greater than 50' unless indicated otherwise.
- G. Extend joint fillers full width and depth of joint, not less than ½ inch or more than 1 inch below finished surface where joint sealer is indicated. If no joint sealer, place top of joint filler flush with finished concrete surface.
- H. Furnish joint fillers in one piece lengths for full width being placed wherever possible. Where more than one length is required, lace or clip joint filler sections together.
- I. Protect top edge of joint filler during concrete placement with a metal cap or other temporary material. Remove protection after concrete has been placed on both sides of joint.
- J. Fillers and Sealants: Comply with requirements of applicable Division 7 sections for preparation of joints, materials, installation, and performance.

**3.8 FINISHING**

- A. Mechanical Finishing Machine Method:
  - 1. The concrete shall be struck off at such a height that after consolidation and final finishing it shall be at the elevations as shown on project drawings.
  - 2. A depth of excess concrete shall be carried in front of the strike off screed for the full width of the slab, whenever the screed is being used to strike off the pavement.
  - 3. The finishing machine shall be provided with a screed, which will consolidate the concrete by pressure.
  - 4. The concrete shall be brought to a true and even surface, free from rock pockets, with the fewest possible number of passes of the machine.
  - 5. The edges of the screeds along the curb line may be notched out to allow for sufficient concrete to form the integral curb.
  - 6. Hand finishing tools shall be kept available for use in case the finishing machine breaks down.
- B. Hand Finishing Method:
  - 1. The concrete shall be struck off and consolidated by a vibrating screed or other approved equipment to the elevations shown on the project drawings.
  - 2. When the forward motion of the vibrating screed is stopped, the vibrator shall be shut off and not be allowed to idle in the concrete.
  - 3. Internal mechanical vibration shall be used alongside all formed surfaces.
  - 4. Vibration operation shall be completed prior to final hand finishing.
- C. Floating, Straightening, and Edging:

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1. After concrete has been struck off and consolidated, it shall be further smoothed by means of a wood or aluminum float at least five (5) feet wide with a handle long enough to reach the entire width of the slab being placed.
2. The float shall be operated so as to remove any excess water and laitance, as well as surface irregularities. After floating operation, the pavement surface should be within the specific tolerances.
3. While concrete is still plastic, the pavement surface shall be tested for smoothness with a ten (10) foot straight edge swung from handles three (3) feet longer than one half the width of the pavement.
4. The straight edge shall be placed on the surface parallel to the centerline of the pavement and at not more than five (5) foot intervals transversely. After each test, the straight edge shall be moved forward one half its length and the operation continued.
5. When irregularities are discovered, they shall be corrected by adding or removing concrete.
6. All disturbed areas shall be again floated with the wooded float and again straight edged.
7. The pavement shall have no depression in which water will stand.
8. Before final finishing is completed and before concrete has taken its initial set, the edges of the pavement shall be carefully finished with an edger of the radius shown on the project drawings.

D. Final Surface Finish:

1. A broom finish shall be used as the final finishing method. A hard bristle broom shall be used, which shall be kept clean and used in such a manner as to provide a uniform texture surface.
2. The final surface of the concrete pavement shall have a uniform gritty texture, free from excessive roughness and true to the grades and cross sections shown on the project drawings.
3. The Engineer may require changes in the final finishing procedure as required to produce the desired final surface texture.

3.9 PROTECTING AND CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Begin curing immediately after finishing concrete as soon as marring of the concrete will not occur.

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D. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven (7) days with the following materials:
  - a. Water.
  - b. Continuous water-fog spray.
  - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12 inch lap over adjacent absorptive covers.
2. Moisture-Retaining Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tap or adhesive. Cure for not less than seven (7) days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three (3) hours after initial application. Maintain continuity of coating and repair damage during curing period.
  - a. Removal: after curing period had elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.
4. Curing and Sealing Compound: Apply uniformly to pavement indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three (3) hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

**3.10 FIELD QUALITY CONTROL**

- A. Testing and Inspection: Engage a qualified testing and inspection agency to perform field tests and inspections and prepare test reports.
- B. Inspections:
  1. Steel reinforcement placement. Contact the Engineer a minimum of 24 hours prior to the placement of concrete for his approval and observation of the placement of all reinforcing.
  2. Verification of use of required design mixture.
  3. Concrete placement, including conveying and depositing.
  4. Curing procedures and maintenance of curing temperature.
  5. Verification of concrete strength.
- C. Concrete Tests: Testing of composite samples of fresh concrete shall be obtained according to ASTM C 172 and as follows:



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1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mixture placed each day.
  - a. When frequency of testing will provide fewer than five (5) compressive strength tests for each concrete mixture, testing shall be conducted from at least five (5) randomly selected batches or from each batch if fewer than five are used.
2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231, pressure method, for normal-weight concrete, one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
4. Concrete Temperature: ASTM C 1064/C 1064M; one hourly test when air temperature is 40 degrees F (4.4 degrees C) and below or when air temperature is 80 degrees F (26.7 degrees C) or above; and one test for each composite sample.
5. Compressive-Strength Testing: ASTM C 39/C 39M.
  - a. Test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
  - b. A compressive-strength test result shall be the average compressive strength from a set of two specimens obtained from the same composite sample and tested at the age indicated.
6. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test values falls below specified compressive strength by more than 500 psi.
7. Test results shall be reported, in writing, to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain project identification name and number, date of concrete placement, name of concrete testing and inspection agency, location of concrete batch in work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, an type of break for both 7 and 28-day tests.
8. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by the Engineer, but will not be used as sole basis for approval or rejection of concrete.
9. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by the Engineer.
10. Additional testing and inspection, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
11. Correct deficiencies in the work that test reports and inspections indicate do not comply with the Contract Documents.

END OF SECTION 321100

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**SECTION 321216 - ASPHALT PAVING**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. Section includes: requirements and specifications for the construction of asphalt paving surfaces as shown on the Project Drawings.
- B. The work includes providing paving base and final subgrade preparation and fine grading normally incidental to paving operations.

**1.2 SUMMARY**

- A. This Section includes:
  - 1. Cold milling of existing hot-mix asphalt pavement.
  - 2. Hot-mix asphalt patching.
  - 3. Hot-mix asphalt paving.
  - 4. Hot-mix asphalt paving overlay.
  - 5. Asphalt surface treatments.
  - 6. Imprinted asphalt.
- B. Related Sections:
  - 1. See Section 312300 Excavation and Fill for subgrade preparation and base course specifications.

**1.3 DEFINITIONS**

- A. Refer to ASTM D 8-11, Standard Terminology Relating to Materials for Roads and Pavements for definitions of applicable terms.

**1.4 SUBMITTALS**

- A. Product Data: For each type of product indicated, include technical data and tested physical and performance properties.
  - 1. Job Mix Designs: Certification, by authorities having jurisdiction, of approval of each job mix design proposed for the work.
  - 2. Job Mix Designs: For each job mix proposed for the work.
- B. Samples for Verification: For the following products, in manufacturer's standard sizes unless otherwise indicated.
  - 1. Each paving fabric, 12 inches by 12 inches (300 mm by 300 mm) minimum.
  - 2. Each type and color of preformed traffic calming device.
  - 3. Each pattern and color of imprinted asphalt and precut marking material.
- C. Qualification Data: For qualified manufacturer.
- D. Material Certifications: For each paving material from manufacturer.

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- E. Material Test Reports: For each paving material.

**1.5 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: A paving mix manufacturer registered with and approved by the Department of Transportation (DOT) of the state in which the project is located.
- B. Installer Qualifications: Imprinted asphalt manufacturer's authorized installer who is trained and approved for installation of imprinted asphalt.
- C. Testing Agency Qualifications: Qualified according to ASTM D 3666 for testing indicated.
- D. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of the DOT of the state in which the project is located for asphalt paving work; with the following exceptions:
  - 1. Measurement and Payment provisions and safety program submittals included in DOT standard specifications do not apply to this Section.
- E. Pre-installation Conference: Contractor shall conduct a pre-installation conference at the project site to review methods and procedures related to hot-mix asphalt paving including but not limited to the following:
  - 1. Review proposed sources of paving materials, including capabilities and location of plant that will manufacture hot-mix asphalt.
  - 2. Review condition of subgrade and preparatory work.
  - 3. Review requirements for protecting paving work, including restriction of traffic during installation period and for remainder of construction period.
  - 4. Review and finalize construction schedule and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.

**1.6 PROJECT CONDITIONS**

- A. Do not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure or if the following conditions are not met:
  - 1. Prime Coat: Minimum surface temperature of 40 degrees F (4.4 degrees C).
  - 2. Tack Coat: Minimum surface temperature of 40 degrees F (4.4 degrees C).
  - 3. Slurry Coat: Comply with weather limitations in ASTM D 3910.
  - 4. Asphalt Base Course: Minimum surface temperature of 35 degrees F (1.7 degrees C) and rising at time of placement.
  - 5. Asphalt Surface Course: Minimum surface temperature of 40 degrees F (4.4 degrees C) and rising at time of placement.
- B. Imprinted Asphalt Paving: Proceed with coating imprinted asphalt pavement only when air temperature is at least 50 degrees F (10 degrees C) and rising and is not expected to drop below 50 degrees F (10 degrees C) within eight (8) hours of coating application. Proceed only if no precipitation is expected within two (2) hours of final coating layer application.

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**PART 2 – PRODUCTS**

**2.1 AGGREGATE MATERIALS**

- A. General: Use materials and gradations that have performed satisfactorily in previous installations.
- B. Coarse Aggregate: All coarse aggregate shall consist of sound, durable rock, free from cemented lumps or objectionable coatings. The percentage of deleterious substances shall not exceed the values found in Missouri Department of Transportation (MoDOT) Section 1004.2.1. Coarse aggregate shall meet all requirements as outlined in MoDOT Section 1004.
- C. Fine Aggregate: Fine aggregate for asphalt paving shall be a fine, granular material passing the 3/8 inch sieve, naturally produced by the disintegration of rock of a siliceous nature and/or manufactured by the mechanical reduction of sound durable rock in accordance with MoDOT Sections 1002.2.1.2 and 1002.2.2. Fine aggregate shall meet all requirements as outlined in MoDOT 1002.3.
- D. Mineral Filler: Shall be in accordance with AASHTO M 17.

**2.2 ASPHALT MATERIALS**

- A. Asphalt Binder: AASHTO M 320 or AASHTO MP 1a, PG 85-100.
- B. Asphalt Cement: ASTM D 3381 for viscosity graded material.
- C. Prime Coat: Asphalt emulsion prime coat complying with the requirements of MoDOT Sections 408 and 1015.
- D. Tack Coat: AASHTO M 140 emulsified asphalt, or AASHTO M 208 cationic emulsified asphalt, slow setting, diluted in water, of suitable grade and consistency for application. Grade SS-1 for SS-1H.
- E. Fog Seal: AASHTO M 140 emulsified asphalt, or AASHTO M 208 cationic emulsified asphalt, slow setting, factory diluted in water, of suitable grade and consistency for application.
- F. Water: Potable
- G. Undersealing Asphalt: ASTM D 3141, pumping consistency.

**2.3 AUXILIARY MATERIALS**

- A. Herbicide: Commercial chemical for weed control, registered by the EPA. Provide granular, liquid, or wettable powder form.
- B. Sand: AASHTO M 29, Grade No. 2 or 3.
- C. Paving Geotextile: AASHTO M 288, nonwoven polypropylene; resistant to chemical attack, rot, and mildew; and specifically designed for paving applications.
- D. Joint Sealant: ASTM D 6690 Type II hot-applied, single-component, polymer-modified bituminous sealant.

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**2.4 MIXES**

- A. Hot-Mix asphalt: Dense, hot laid, hot mix asphalt plant mixes approved by MoDOT.
  - 1. Base Course: MoDOT Plant Mix Bituminous Base per MoDOT Specification Section 401.
  - 2. Surface Course: As specified on the project drawings, MoDOT Plant Mix Bituminous Pavement BP-1 or BP-2 per MoDOT Specification Section 401.
- B. Emulsified Asphalt Slurry: ASTM D 3910, Grade SS-1 or SS-1H.
- C. Use of cutback material is NOT allowed without written approval of the Engineer. If after 48 hours the asphalt is excessively soft or showing signs of alligatoring or cracking, movement or marking from vehicular traffic, then paving shall be removed and replace as directed by Engineer.

**PART 3 – EXECUTION**

**3.1 EXAMINATION**

- A. Verify that subgrade is dry and in suitable condition to begin paving.
- B. Proof-roll subgrade per Section 31 23 00 Excavation and Fill.
- C. Proceed with paving only after unsatisfactory conditions identified by proof-rolling have been corrected.
- D. Verify that utilities, traffic loop detectors, and other items requiring a cut and installation beneath the asphalt surface have been completed and that asphalt surface has been repaired flush with adjacent asphalt prior to beginning installation of imprinted asphalt.

**3.2 COLD MILLING**

- A. Clean existing pavement surface of loose and deleterious material immediately before cold milling. Remove existing asphalt pavement by cold milling to grades and cross sections indicated.
  - 1. Mill to a depth of 1-1/2 inches (38 mm).
  - 2. Mill to a uniform finished surface free of excessive gouges, groves, and ridges.
  - 3. Control rate of milling to prevent tearing of existing asphalt course.
  - 4. Repair or replace curbs, manholes, and other construction damaged during cold milling.
  - 5. Excavate and trim unbound aggregate base course, if encountered, and keep material separate from milled hot-mix asphalt.
  - 6. Transport milled hot-mix asphalt to asphalt recycling facility.
  - 7. Keep milled pavement surface free of loose material and dust.

**3.3 PATCHING**

- A. Hot-mix asphalt pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound aggregate base course to form new subgrade.
- B. Portland cement concrete pavement: Break cracked slabs and roll as required to reset concrete pieces firmly.

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1. Pump hot undersealing asphalt under rocking slab until slab is stabilized or, if necessary, crack slab into pieces and roll to reseal pieces firmly.
  2. Remove disintegrated or badly cracked pavement. Excavate rectangular or trapezoidal patches, extending into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Recompact existing unbound aggregate base course to form new subgrade.
- C. Tack Coat: Apply uniformly to vertical surfaces abutting or projecting into new, hot mix asphalt paving at a rate of 0.05 to 0.15 gal/sq. yd. (0.2 to 0.7 L/sq. m).
1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
  2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- D. Patching: Fill excavated pavements with hot-mix asphalt base mix for full thickness of patch and, while still hot, compact flush with adjacent surface.
- E. Patching: Partially fill excavated pavements with hot-mix asphalt base mix and, while still hot, compact. Cover asphalt base course with compacted, hot-mix asphalt surface course finished flush with adjacent surfaces.

#### 3.4 REPAIRS

- A. Leveling Course: Install and compact leveling course consisting of hot-mix asphalt surface course to level sags and fill depressions deeper than 1 inch (25 mm) in existing pavements.
1. Install leveling wedges in compacted lifts not exceeding 3 inches (75 mm) thick.
- B. Crack and Joint Filling: Remove existing joint filler material from cracks or joints to a depth of 1/2 inch (12 mm).
1. Clean cracks and joints in existing hot-mix asphalt pavement.
  2. Use emulsified asphalt slurry to seal cracks and joints less than 1/4 inch (6 mm) wide. Fill flush with surface of existing pavement and remove excess.
  3. Use hot applied joint sealant to seal cracks and joints more than 1/4 inch (6 mm) wide. Fill flush with surface of existing pavement and remove excess.

#### 3.5 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
- B. Herbicide Treatment: Apply herbicide according to manufacturer's recommended rates and written application instructions. Apply dry, prepared subgrade or surface of compacted aggregate base before applying paving materials. Mix herbicide with prime coat if formulated by manufacturer for that purpose.
- C. Prime Coat: Apply uniformly over surface of compacted unbound aggregate base course at a rate of 0.15 to 0.50 gal./sq. yd. (0.7 to 2.3 L/sq. m). Apply enough material to penetrate and seal but not flood surface. Allow prime coat to cure.

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1. If prime coat is not entirely absorbed within 24 hours after application, spread sand over surface to blot excess asphalt. Use enough sand to prevent pickup under traffic. Remove loose sand by sweeping before pavement is placed and after volatiles have evaporated.
  2. Protected primed substrate from damage until ready to receive paving.
- D. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal/sq. yd. (0.2 to 0.74 L/sq. m).
1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
  2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

**3.6 PAVING GEOTEXTILE INSTALLATION**

- A. Apply tack coat uniformly to existing pavement surfaces at a rate of 0.20 to 0.30 gal./sq. yd. (0.8 to 1.2 L/sq. m).
- B. Place paving geotextile promptly according to manufacturer's written instructions. Broom or roll geotextile smooth and free of wrinkles and folds. Overlap longitudinal joints 4 inches (100 mm) and transverse joints 6 inches (150 mm).
  1. Protect paving geotextile from traffic and other damage and place hot-mix asphalt paving overlay the same day.

**3.7 HOT-MIX ASPHALT PLACING**

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness with compacted.
  1. Place hot-mix asphalt base course in number of lifts and thicknesses indicated.
  2. Place hot-mix asphalt surface course in single lift.
  3. Spread mix at a minimum temperature of 250 degrees F (121 degrees C).
  4. Begin applying mix along centerline of crown for crowned sections and on high side of one way slopes unless otherwise indicated.
  5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt paving mat.
- B. Place paving in consecutive strips not less than 10 feet (3 m) wide unless infill edge strips of a lesser width are required.
  1. After first strip has been placed and rolled, succeeding strips and extend rolling to overlap previous strips. Complete a section of asphalt base course before placing asphalt surface course.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

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**3.8 JOINTS**

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
  - 1. Clean contact surfaces and apply tack coats to joints.
  - 2. Offset longitudinal joints, in successive courses, a minimum of 6 inches (150 mm).
  - 3. Offset transverse joints, in successive courses, a minimum of 24 inches (600 mm),
  - 4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."
  - 5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.
  - 6. Compact asphalt at joints to a density within 2 percent of specified course density.

**3.9 COMPACTION**

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory plate compactors in areas inaccessible rollers.
  - 1. Complete compaction before mix temperature cools to 185 degrees F (85 degrees C).
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
  - 1. Average Density: 96 percent of reference laboratory density according to AASHTO T 245, but not less than 94 percent nor greater than 100 percent.
  - 2. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to properly alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.



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- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

**3.10 INSTALLATION TOLERANCES**

- A. Pavement Thicknesses: Compact each course to produce the thickness indicated on the project drawings within the following tolerances:
  - 1. Base Course: Plus or minus 1/2 inch (13 mm).
  - 2. Surface Course: Plus 1/4 inch (6 mm), no minus.
- B. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10 foot (3 m) straightedge applied transversely or longitudinally to paved areas:
  - 1. Base Course: 1/4 inch (6 mm).
  - 2. Surface Course: 1/8 inch (3 mm).
  - 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch (6 mm).
- C. Traffic Calming Devices: Compact and form asphalt to produce the contour indicated and within a tolerance of plus or minus 1/8 inch (3 mm) of height indicated above pavement surface.

**3.11 SURFACE TREATMENTS**

- A. Fog Seals: Apply fog seal at a rate of 0.10 to 0.15 gal./sq. yd. (0.45 to 0.7 L/sq. m) to existing asphalt pavement and allow curing. With fine sand, lightly dust areas receiving excess fog seal.
- B. Slurry Seals: Apply slurry coat in a uniform thickness according to ASTM D 3910 and allow curing. Roll slurry seal to remove ridges and provide a uniform, smooth surface.

**3.12 FIELD QUALITY CONTROL**

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.
- C. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.
- D. In-Place Density: Testing agency will take samples of uncompacted paving mixtures and compacted pavement according to AASHTO T 168.
  - 1. Reference maximum theoretical density will be determined by averaging results from four (4) samples of hot-mix asphalt paving mixture delivered daily to site, prepared according to ASTM D 2041, and compacted according to job mix specifications.
  - 2. In-place density of compacted pavement will be determined by testing core samples according to ASTM D 1188 or ASTM D 2726.
  - 3. One core sample will be taken for every 1,000 sq. yd. (836 sq. m) or less of installed pavement, with no fewer than three (3) cores taken.

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4. Field density of in-place compacted pavement may also be determined by nuclear method according to ASTM D 2650 and correlated with ASTM D 1188 or ASTM D 2726.
- E. Replace and compact hot-mix asphalt where core tests were taken.
- F. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

**3.13 DISPOSAL**

- A. Except for material indicated to be recycled, remove excavated materials from project site and legally dispose of them in an EPA approved landfill.
- B. Do not allow milled materials to accumulate on-site.

**END OF SECTION 321216**

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SECTION 321373 - CONCRETE PAVING JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
  - 1. Cold-applied joint sealants.
- B. Related Sections:
  - 1. Division 07 Section "Joint Sealants" for sealing nontraffic and traffic joints in locations not specified in this Section.
  - 2. Division 32 Section "Asphalt Paving" for constructing joints between concrete and asphalt pavement.
  - 3. Division 32 Section "Concrete Paving" for constructing joints in concrete pavement.

1.3 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- C. Pavement-Joint-Sealant Schedule: Include the following information:
  - 1. Joint-sealant application, joint location, and designation.
  - 2. Joint-sealant manufacturer and product name.
  - 3. Joint-sealant formulation.
  - 4. Joint-sealant color.
- D. Qualification Data: For qualified Installer.
- E. Product Certificates: For each type of joint sealant and accessory, from manufacturer.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for joint sealants.
- G. Preconstruction Compatibility and Adhesion Test Reports: From joint-sealant manufacturer, indicating the following:

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1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility with and adhesion to joint sealants.
2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

**1.4 QUALITY ASSURANCE**

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain each type of joint sealant from single source from single manufacturer.
- C. Product Testing: Test joint sealants using a qualified testing agency.
  1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.

**1.5 PROJECT CONDITIONS**

- A. Do not proceed with installation of joint sealants under the following conditions:
  1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F (5 deg C).
  2. When joint substrates are wet.
  3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

- A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

**2.2 COLD-APPLIED JOINT SEALANTS**

- A. Single-Component, Nonsag, Silicone Joint Sealant for Concrete: ASTM D 5893, Type NS.
  1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Crafco Inc., an ERGON company; RoadSaver Silicone.
    - b. Dow Corning Corporation; 888.
    - c. Pecora Corporation; 301 NS.

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- B. Single-Component, Self-Leveling, Silicone Joint Sealant for Concrete: ASTM D 5893, Type SL.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Crafcro Inc., an ERGON company; RoadSaver Silicone SL.
    - b. Dow Corning Corporation; 890-SL.
    - c. Pecora Corporation; 300 SL.
- C. Multicomponent, Pourable, Traffic-Grade, Urethane Joint Sealant for Concrete: ASTM C 920, Type M, Grade P, Class 25, for Use T.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Pecora Corporation; Urexpam NR-200.

**2.3 JOINT-SEALANT BACKER MATERIALS**

- A. General: Provide joint-sealant backer materials that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by joint-sealant manufacturer based on field experience and laboratory testing.
- B. Round Backer Rods for Cold- and Hot-Applied Joint Sealants: ASTM D 5249, Type 1, of diameter and density required to control sealant depth and prevent bottom-side adhesion of sealant.
- C. Round Backer Rods for Cold-Applied Joint Sealants: ASTM D 5249, Type 3, of diameter and density required to control joint-sealant depth and prevent bottom-side adhesion of sealant.
- D. Backer Strips for Cold- and Hot-Applied Joint Sealants: ASTM D 5249; Type 2; of thickness and width required to control joint-sealant depth, prevent bottom-side adhesion of sealant, and fill remainder of joint opening under sealant.

**2.4 PRIMERS**

- A. Primers: Product recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

**PART 3 - EXECUTION**

**3.1 EXAMINATION**

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

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**3.2 PREPARATION**

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
- B. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

**3.3 INSTALLATION OF JOINT SEALANTS**

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.
- B. Joint-Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install joint-sealant backings of kind indicated to support joint sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not leave gaps between ends of joint-sealant backings.
  - 2. Do not stretch, twist, puncture, or tear joint-sealant backings.
  - 3. Remove absorbent joint-sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install joint sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place joint sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses in each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Joint Sealants: Immediately after joint-sealant application and before skinning or curing begins, tool sealants according to the following requirements to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint:
  - 1. Remove excess joint sealant from surfaces adjacent to joints.
  - 2. Use tooling agents that are approved in writing by joint-sealant manufacturer and that do not discolor sealants or adjacent surfaces.
- F. Provide joint configuration to comply with joint-sealant manufacturer's written instructions unless otherwise indicated.

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**3.4 CLEANING**

- A. Clean off excess joint sealant or sealant smears adjacent to joints as the Work progresses, by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

**3.5 PROTECTION**

- A. Protect joint sealants, during and after curing period, from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately and replace with joint sealant so installations in repaired areas are indistinguishable from the original work.

**3.6 PAVEMENT-JOINT-SEALANT SCHEDULE**

- A. Joint-Sealant Application: Joints within cement concrete pavement.
  - 1. Joint Location:
    - a. Expansion and isolation joints in cast-in-place concrete pavement.
    - b. Contraction joints in cast-in-place concrete slabs.
    - c. Other joints as indicated.
  - 2. Silicone Joint Sealant for Concrete: Single component, self-leveling.
  - 3. Urethane Joint Sealant for Concrete: Multicomponent, pourable, traffic-grade.
  - 4. Joint-Sealant Color: As selected by Architect from manufacturer's full range
- B. Joint-Sealant Application: Joints between cement concrete and asphalt pavement.
  - 1. Joint Location:
    - a. Joints between concrete and asphalt pavement.
    - b. Joints between concrete curbs and asphalt pavement.
    - c. Other joints as indicated.
  - 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

END OF SECTION 321373

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**SECTION 321723 - PAVEMENT MARKINGS**

**PART 1 – GENERAL**

**1.1 SCOPE OF WORK**

- A. Provide labor, material, and equipment necessary installation of pavement markings as shown on the Project Drawings.
- B. Provide labor, material, and equipment necessary for the removal of existing pavement markings as shown to be removed on the Project Drawings.

**1.2 SUBMITTALS**

- A. Manufacturer's Certificates and Data certifying that the paint, thermoplastic, and/or glass beads conform to the requirements specified.
- B. Shop Drawings: Indicate pavement markings, lane separations, and defined parking spaces. Indicate, with international symbol of accessibility, spaces allocated for people with disabilities.

**1.3 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver pavement marking materials to project site in original packages with seals unbroken and bearing manufacturer's labels containing brand name and type of material, date of manufacture, and directions for storage.
- B. Store pavement marking materials in a clean, dry, protected location within temperature range required by manufacturer. Protect stored materials from direct sunlight.

**PART 2 – PRODUCTS**

**2.1 PAINT MATERIALS**

Contractor shall use the following paint products or their approved equal:

- A. MARK086700 White Cold Weather Traffic Marking Paint:  
Supplier Part: 60524CO0298-2  
Manufacturer: Ennis-Flint, Inc.  
Manufacturer Part: 985351
- B. MGS086705 Yellow Cold Weather Traffic Marking Paint  
Supplier Part: 60524CO0298-3  
Manufacturer: Ennis-Flint, Inc.  
Manufacturer Part: 985352



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2.2 THERMOPLASTIC MATERIALS

- A. Thermoplastic materials shall conform to MoDOT Specification Section 620.

PART 3 – EXECUTION

3.1 PAINT INSTALLATION

- A. Allow new pavement surfaces to cure for a period of not less than 14 days before application of marking materials.
- B. Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 40 degrees F (4.4 degrees C) for oil-based materials; 55 degrees F (12.8 degrees C) for water based materials; and not exceeding 95 degrees F (35 degrees C) for either.
- C. Do not apply pavement marking paint until layout, colors, and placement have been verified with the Engineer.
- D. Sweep and clean surface to eliminate loose material and dust.
- E. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils (0.4 mm).
- F. Broadcast glass beads uniformly into wet pavement markings at a rate of 6 lb./gal. (0.72 kg/L).

3.2 THERMOPLASTIC INSTALLATION

- A. Proceed with pavement marking only on clean, dry surfaces and at a minimum pavement surface temperature of 60 degrees F (15.6 degrees C) and a minimum ambient temperature of 50 degrees F (10 degrees C).
- B. A primer shall be applied to bituminous surfaces over 2 months old and all concrete surfaces. Primer is not required on new bituminous surfaces unless recommend by the thermoplastic manufacturer. Primer shall be applied and cured in accordance with the recommendations of the thermoplastic manufacturer.
- C. Temperature of the thermoplastic at the time of application shall be 400 – 425 degrees F (204.4 – 232.2 degrees C).
- D. Furnished markings shall have well defined edges and be free of waviness.

3.3 PROTECTION

- A. Conduct operations in such a manner that necessary traffic can move without hindrance.

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- B. Protect newly painted markings so that, insofar as possible, the tires of passing vehicles will not pick up paint.

**3.4 REMOVAL OF MARKINGS**

- A. Preformed removable tape shall be removed by hand methods.
- B. Paint shall be removed from Portland cement concrete pavement by a high pressure water blast method, or a low pressure water and sand blast method, or a steel shot blast method.
- C. Paint shall be removed from bituminous pavement by either a low pressure water and sand blast method or by a steel shot blast method.
- D. Paint shall be removed without damaging the surface or texture and without leaving an image which might mislead traffic.
- E. High pressure water blast methods shall not exceed 10,000 psi.
- F. Low pressure water and sand blast methods shall not exceed 3,000 psi.

END OF SECTION 321723

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SECTION 329200 - TURF AND GRASSES

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes: installation of the lawns and native grasses, and guarantee/warranty as shown on the project drawings and as specified herein.
- B. Related Sections:
  - 1. Section 312300 Excavation and Fill contains Topsoil requirements.
  - 2. Section 312500 Erosion and Sedimentation Controls contains Erosion Control Blanket requirements.

1.2 GENERAL CONDITIONS

- A. All scaled dimensions are approximate. Check and verify all site dimensions and receive Engineer's approval prior to proceeding with work under this section.
- B. Coordinate installation of all sodding and seeding with Engineer, General Contractor and Irrigation Contractor, if applicable, to avoid interference with other construction.
- C. Keep the premises clean and free of excess equipment, materials and debris incidental to work.
- D. Protect work and work of others at all times in performance of work, Contractor shall be responsible for any damage to irrigation lines during construction
- E. Carefully note all finish grades before commencing work. Restore any finish grade changed during the course of this work to original or intended grades.
- F. All disturbed areas shall be hydroseeded except for sodded areas, surfaced areas and solid rock. Disturbed areas outside of authorized construction limits shall be hydroseeded, or sodded at the Contractor's expense.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Engage and experienced installer who has a minimum of ten years of experience in the sod and seeding industry and native grass industry. Installer shall have completed seeding work similar in material (size and quantity), design and extent to that indicated for this project and with a record of successful established seeded lawns and native grasses. Installer shall provide references of similar project size within the last five years.
- B. Testing Agency Qualifications: To qualify for acceptance, an independent testing agency must demonstrate to Engineer's satisfaction, based on evaluation of agency-submitted criteria

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conforming to ASTM E 699, that it has the experience and capability to satisfactorily conduct the testing indicated without delaying the work.

- C. Topsoil Analysis: Furnish a soil analysis made by a qualified and approved independent soil-testing agency stating percentages of organic matter, inorganic matter (silt, clay, and sand) deleterious material, pH, and mineral and plant-nutrient content of topsoil.
  - 1. Report suitability of topsoil for growth of applicable planting material. State recommended quantities of nitrogen, phosphorus and potash nutrients and any limestone, aluminum sulfate or other soil amendments to be added to produce satisfactory topsoil.
- D. The Contractor or his authorized representative shall be on site at the time of each site inspection or review. If contractor requests a site inspection or review and the site is not found to be in an acceptable condition to hold the review, the hourly fees of the personnel called for the site visit shall be paid by the Contractor.

**1.4 SUBMITTALS**

- A. Sod: The Contractor shall furnish to the Engineer a certification of the seed mixture of the sod, identifying sod source, including name and telephone number of supplier.
- B. Seed: The Contractor shall furnish to the Engineer that dealer's guaranteed statement of the composition of the mixture and the percentage of purity and germination of each variety for approval, prior to seeding.
- C. Organic Compost: The Contractor shall submit to the Engineer a certificate signed by the manufacturer of the organic compost certifying that the compost used during the seeding process complies with specified requirements.
- D. Certification and mix composition of all seed and sod including seed and sod sources and rate of application, and name of supplier.
- E. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, name and address of Engineers and Owners, and other information.
- F. Material test reports from qualified and approved independent testing agency indicating and interpreting test results relative to compliance of the following materials with requirements indicated.
  - 1. Analysis of existing surface soil.
  - 2. Analysis of imported topsoil.
- G. Sodding and seeding schedule(s) indicating anticipated dates and locations for work to be completed.

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- H. Maintenance instructions recommending procedures to be established by Owner for maintenance of landscaping during an entire year. Submit before expiration of required maintenance periods.

**1.5 DELIVERY, STORAGE AND HANDLING**

- A. All sod must be delivered to the job within twenty-four hours after being cut. Sod shall not be permitted to dry out or rot before installation.
- B. Seed shall be delivered to the site in bags sealed by vendor, bearing bags tags for seed analysis and date of testing. Contractor shall keep all bag tags on file for the Engineer verification of seed type, quality, and quantity. All seed shall be stored in a manner which does not impair the quality and effectiveness of the seed.
- C. Sod: Harvest, deliver, store and handle sod according to the requirements of the American Sod Producers Association's (ASPA) specifications for Turf Grass Sod Materials and Transplanting/Installing.

**1.6 PROJECT CONDITIONS**

- A. Utilities: Determine location of above grade and underground utilities and perform work in a manner that will avoid damage. Hand excavate, as required. Maintain grade stakes until parties concerned mutually agree upon removal.
- B. Excavation: When conditions detrimental to seeding and sod establishment are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Engineer before proceeding.
- C. Finish grading shall be done in preparation for seeding. Any weed growth shall be removed prior to seeding.

**1.7 GUARANTEE**

- A. General Guarantee: The Contractor shall guarantee the production of a close stand of the specified grass, acceptable to the Owner. All repairs, reseeding and resodding are to be done as part of the Contract and at no additional cost to Owner.

**PART 2 – PRODUCTS**

**2.1 SODDING MATERIALS**

- A. Turfgrass Sod: Approved Number 1 Quality/Premium, including limitations on thatch, weeds, diseases, nematodes, and insects, complying with TPI's "Specification for Turfgrass Sod Materials" in its "Guideline Specification to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture, strongly rooted, and capable of vigorous growth and development when planted.

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- B. Turfgrass Species: Sod of grass species shall match existing sod found on site unless none is present, in which case sod of grass species as follows, with not less than 95 percent germination not less than 85 percent pure seed, and not more than 0.5 percent weed seed:
1. Full Sun: Kentucky bluegrass (*Poa pratensis*), a minimum of three cultivars.
  2. Sun and Partial Shade: Proportioned by weight as follows:
    - a. 50 percent Kentucky bluegrass (*Poa pratensis*).
    - b. 30 percent chewings red fescue (*Festuca rubra* variety).
    - c. 10 percent perennial ryegrass (*Lolium perenne*).
    - d. 10 percent redtop (*Agrostis alba*).
  3. Shade: Proportioned by weight as follows:
    - a. 50 percent chewings red fescue (*Festuca rubra* variety).
    - b. 35 percent rough bluegrass (*Poa trivialis*).
    - c. 15 percent redtop (*Agrostis alba*).

**2.2 SEEDING MATERIALS**

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology: Rules for Testing Seeds" for purity and germination.
- B. Lawn Seed Species: Seed of grass species shall match existing grass found on site unless none is present, in which case seed of grass species as follows, with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed:
1. Full Sun: Bermudagrass (*Cynodon dactylon*)
  2. Full Sun: Kentucky bluegrass (*Poa pratensis*), a minimum of three cultivars.
  3. Sun and Partial Shade: Proportioned by weight as follows:
    - a. 50 percent Kentucky bluegrass (*Poa pratensis*).
    - b. 30 percent chewings red fescue (*Festuca rubra* variety).
    - c. 10 percent perennial ryegrass (*Lolium perenne*).
    - d. 10 percent redtop (*Agrostis alba*).
  4. Shade: Proportioned by weight as follows:
    - a. 50 percent chewings red fescue (*Festuca rubra* variety).
    - b. 35 percent rough bluegrass (*Poa trivialis*).
    - c. 15 percent redtop (*Agrostis alba*).
- C. Meadow Seed Species: Fresh clean, dry, new seed, mixed species as follows:
1. 20 percent Fescue
  2. 15 percent Little Bluestem
  3. 15 percent Side Oats Gramma
  4. 10 percent Broom Sedge
  5. 10 percent Purple Prairie Clover
  6. 10 percent Annual Rye
  7. 10 percent Perennial Ryegrass
  8. 5 percent Orchard Grass
  9. 5 percent Timothy

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**D. Organic Compost:**

1. All ingredients shall be known and fully disclosed.
2. Compost shall contain no human sludge or yard waste.
3. At least 99% of all nitrogen in compost shall be in organic form.
4. The Carbon: Nitrogen Ratio of the compost shall be less than 30:1 to eliminate Nitrogen starvation.
5. Compost shall have a pH level between 6.0 and 7.5.
6. Compost shall have moisture content no greater than 40%.
7. Compost shall be registered as a fertilizer in the state of Missouri.
8. Contractor shall submit an analysis and sample of the compost to the Owner's Representative for review and approval prior to installation.

**E. Mulches:**

1. Straw Mulch: Provide air-dried, clean, mildew and seed free, salt hay or threshed straw of wheat, rye, oats or barley.
2. Fiber Mulch: Biodegradable dyed-wood cellulose-fiber mulch, non-toxic, free of plant growth inhibitors or germination inhibitors, with maximum moisture content of 15 percent and a pH of 4.5 to 6.5.
3. Asphalt Emulsion Tackifier: Asphalt emulsion ASTM 0977, Grade SS-inhibitors.
4. Nonasphaltic Tackifier; Colloidal tackifier (Stay-Soil) recommended by fiber-mulch manufacturer for slurry application, non-toxic and free of plant growth inhibitors or germination inhibitors.

**PART 3 – EXECUTION**

**3.1 PREPARATION**

**A. Sod Bed Preparation:**

1. Grade lawn and grass areas to a smooth, even surface with loose, uniformly fine texture. Roll and rake, remove ridges and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future. Remove trash, debris, stones larger than 1/2 inch in any dimension and other objects that may interfere with planting or maintenance operations.
2. Moisten prepared lawn areas before planting when soil is dry, Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

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**B. Seed Bed Preparation:**

1. Repair any eroded areas and make minor grading adjustments to provide good drainage and to meet grade at all walks and paved surfaces.
2. Clean seed bed surface of all stones larger than 1/2 inch in diameter and all of existing vegetation, roots, brush, wire, grade stakes, and any other deleterious materials.
3. Using a rear tine tiller or other approved tiller uniformly combine a 2-inch layer of organic compost into existing soil. Drag lawn areas with approved equipment to insure a smooth surface to all lawn areas.
4. For areas that will be seeded, pre-treat existing lawn with herbicide and reapply to kill off remaining vegetation, if present, prior to seeding.

**3.2 INSTALLATION**

**A. Sodding New Lawns:**

1. Lay sod within 24 hours of stripping. Do not lay sod if dormant or if ground is frozen.
2. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to sub-grade or sod during installation. Tamp and roll lightly to ensure contact with sub-grade, eliminate air pockets and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
3. Lay sod across angle of slopes exceeding 3:1.
4. Anchor sod on slopes exceeding 6:1 with wood pegs spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.
5. Saturate sod with fine water spray within 2 hours of planting. During first week, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches (38 mm) below the sod.
6. Upon completion of the above work, the surface of the sodded areas shall coincide with the finished grade, shall be flush with other seeded or turfed areas, and shall meet the established grade adjacent to any paved areas. Care should be taken in sodding to preserve the finish grade elevations, so that there will be no depressions or uneven places in the surface of the sodded turf areas.

**B. Seeding New Lawns:**

1. Apply seed mixture simultaneously with application of organic top dressing layer at a rate of 8 lbs. per 1,000 sf.
2. Top dressing with seed shall be applied in a uniform 1/2 inch layer over lawn areas. In areas of existing lawns use a slit seeding method to apply appropriate seed mix.
3. Keep organic top dressing and seed out of plant beds and off of walks, structures and areas not to be seeded.
4. Protect seeded slopes exceeding 4:1 against erosion with erosion-control blankets installed and stapled according to manufacturer's recommendations.



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5. Protect seeded slopes exceeding 6:1 against erosion with jute or coil-fiber erosion control mesh installed and stapled according to manufacturer's recommendations.
  6. Protect seeded areas with slopes less than 6:1 against erosion by spreading straw mulch after completion of seeding operations. Spread uniformly at a minimum rate of 2 tons per acre to form a continuous blanket 1-1/2 inches loose depth over seeded areas. Spread by hand, blower or other suitable equipment.
    - a. Anchor straw mulch by crimping into topsoil by suitable mechanical equipment.
    - b. Anchor straw mulch by spraying with asphalt-emulsion tackifier at the rate of 10 to 13 gal. per 1000 sq.ft. Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas.
- C. Hydroseeding:
1. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application
  2. Mix slurry with asphalt-emulsion tackifier.
  3. Apply slurry uniformly to all areas to be seeded in a one-step process. Apply mulch as a minimum rate of 1500-lb/acre dry weight but less than the rate required to obtain specified seed-sowing rate.
- D. Reseeding:
1. Bare Patches or washouts due to heavy rains, prior to establishment and acceptance of the new turf, shall be regraded as needed, reseeded and watered, as often as necessary at Contractor's expense.

**3.3 LAWN MAINTENANCE**

- A. The maintenance of the lawns shall begin immediately after seeding and sodding and continue until Final Acceptance, but not less than 30 calendar days. The sodded turf area shall be watered daily for the next 10 days after installation to keep soil moist. Then reduce watering to 2 to 3 days per week until turf is well established. Any sod not surviving the first month shall be replaced with new sod from the same source.
- B. The maintenance of the seeded turf shall be the Contractor's responsibility until the new grass is 4 inches high and thick enough to receive its first mowing by the Owner and for a minimum of 30 days. The Contractor shall protect and restore seeded areas by watering, fertilizing, removing weeds, and reseeded as necessary, to ensure a uniform stand of established grass until Final Acceptance of the seed lawn by the Owner's Representative.
- C. Mowing of sod lawn is the responsibility of the Contractor until Final Acceptance. The first mowing will not be attempted until the lawn is 4 inches high and thick enough to receive its first mowing. Mow to a height of 3" returning clippings to the lawn. Never mow off more than 1/3 of the grass leaves.

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- D. Control growth of weeds. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.
  
- E. Use fertilizer that will provide actual nitrogen of at least 1 lb. per 1,000 sq. ft. to lawn areas.

**3.4 SATISFACTORY LAWNS**

- A. Satisfactory Seeded Lawn: At end of Contractor's warranty period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
  
- B. Satisfactory Sodded Lawns: At end of Contractor's warranty period, a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, open joints, bare areas, and surface irregularities.
  
- C. Reestablish lawns that do not comply with the above requirements and continue to maintenance until lawns are satisfactory.

**3.5 PROTECTION**

- A. Protection of seeded and sodded areas shall begin immediately after the Contractor completes the seeding and sodding work. Contractor shall protect newly graded, seeded and sodded areas from erosion, damage due to landscaping operations, operations by other contractors and trades and trespassers. Contractor shall repair all damaged areas prior to final acceptance.

END OF SECTION 329200

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CHRISTIAN COUNTY, MISSOURI**

**SECTION 321723 - PAVEMENT MARKINGS**

**PART 1 – GENERAL**

**1.1 SCOPE OF WORK**

- A. Provide labor, material, and equipment necessary installation of pavement markings as shown on the Project Drawings.
- B. Provide labor, material, and equipment necessary for the removal of existing pavement markings as shown to be removed on the Project Drawings.

**1.2 SUBMITTALS**

- A. Manufacturer's Certificates and Data certifying that the paint, thermoplastic, and/or glass beads conform to the requirements specified.
- B. Shop Drawings: Indicate pavement markings, lane separations, and defined parking spaces. Indicate, with international symbol of accessibility, spaces allocated for people with disabilities.

**1.3 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver pavement marking materials to project site in original packages with seals unbroken and bearing manufacturer's labels containing brand name and type of material, date of manufacture, and directions for storage.
- B. Store pavement marking materials in a clean, dry, protected location within temperature range required by manufacturer. Protect stored materials from direct sunlight.

**PART 2 – PRODUCTS**

**2.1 PAINT MATERIALS**

Contractor shall use the following paint products or their approved equal:

- A. MARK086700 White Cold Weather Traffic Marking Paint:  
Supplier Part: 60524CO0298-2  
Manufacturer: Ennis-Flint, Inc.  
Manufacturer Part: 985351
- B. MGS086705 Yellow Cold Weather Traffic Marking Paint  
Supplier Part: 60524CO0298-3  
Manufacturer: Ennis-Flint, Inc.  
Manufacturer Part: 985352

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**2.2 THERMOPLASTIC MATERIALS**

- A. Thermoplastic materials shall conform to MoDOT Specification Section 620.

**PART 3 – EXECUTION**

**3.1 PAINT INSTALLATION**

- A. Allow new pavement surfaces to cure for a period of not less than 14 days before application of marking materials.
- B. Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 40 degrees F (4.4 degrees C) for oil-based materials; 55 degrees F (12.8 degrees C) for water based materials; and not exceeding 95 degrees F (35 degrees C) for either.
- C. Do not apply pavement marking paint until layout, colors, and placement have been verified with the Engineer.
- D. Sweep and clean surface to eliminate loose material and dust.
- E. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils (0.4 mm).
- F. Broadcast glass beads uniformly into wet pavement markings at a rate of 6 lb./gal. (0.72 kg/L).

**3.2 THERMOPLASTIC INSTALLATION**

- A. Proceed with pavement marking only on clean, dry surfaces and at a minimum pavement surface temperature of 60 degrees F (15.6 degrees C) and a minimum ambient temperature of 50 degrees F (10 degrees C).
- B. A primer shall be applied to bituminous surfaces over 2 months old and all concrete surfaces. Primer is not required on new bituminous surfaces unless recommend by the thermoplastic manufacturer. Primer shall be applied and cured in accordance with the recommendations of the thermoplastic manufacturer.
- C. Temperature of the thermoplastic at the time of application shall be 400 – 425 degrees F (204.4 – 232.2 degrees C).
- D. Furnished markings shall have well defined edges and be free of waviness.

**3.3 PROTECTION**

- A. Conduct operations in such a manner that necessary traffic can move without hindrance.

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- B. Protect newly painted markings so that, insofar as possible, the tires of passing vehicles will not pick up paint.

**3.4 REMOVAL OF MARKINGS**

- A. Preformed removable tape shall be removed by hand methods.
- B. Paint shall be removed from Portland cement concrete pavement by a high pressure water blast method, or a low pressure water and sand blast method, or a steel shot blast method.
- C. Paint shall be removed from bituminous pavement by either a low pressure water and sand blast method or by a steel shot blast method.
- D. Paint shall be removed without damaging the surface or texture and without leaving an image which might mislead traffic.
- E. High pressure water blast methods shall not exceed 10,000 psi.
- F. Low pressure water and sand blast methods shall not exceed 3,000 psi.

END OF SECTION 321723

# 25TH STREET IMPROVEMENT PLANS FOR OZARK SPECIAL ROAD DISTRICT

CHRISTIAN COUNTY, MISSOURI

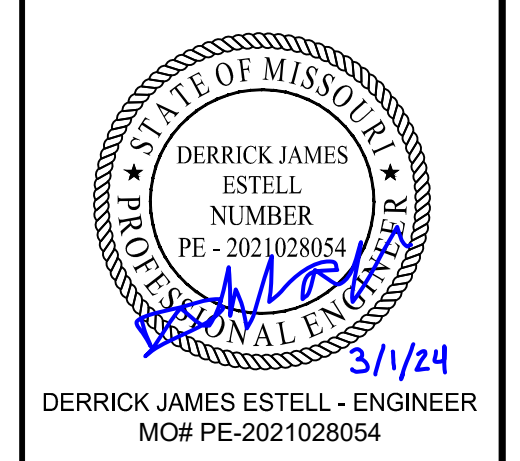


**OVERALL MAP**  
SCALE: 1" = 150'

**SHEET INDEX**

SHEET TITLE	NUMBER
COVER SHEET	001
GENERAL NOTES	002
25th STREET STA 0+00 TO 14+00 - RESURFACING PLAN	003
25th STREET STA 14+00 TO 27+39.53 - RESURFACING PLAN	004
DETAIL SHEET	005

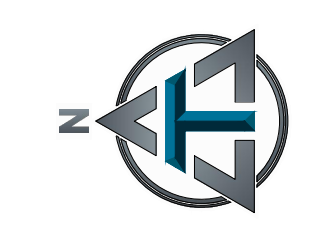
DATE	REVISION	#



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DERRICK JAMES ESTELL  
DUE DATE: 3/01/2024  
SCALE: AS SHOWN  
*Graphic scale may change due to printing reproduction.*

**25TH STREET ROADWAY IMPROVEMENTS**  
OZARK SPECIAL ROAD DISTRICT  
CHRISTIAN COUNTY, MISSOURI  
COVER SHEET



**MISSOURI**  
ONE CALL SYSTEM  
Call or Click  
Before You Dig!  
**1-800-DIG-RITE**  
or **811**  
mo1call.com



**LEGENDS**

**ABBREVIATIONS**

BC	BACK OF CURB	HDPE	HIGH DENSITY POLYETHYLENE
CC	STANDARD CATCH CURB	INV	INVERT
CL	CENTER LINE	LF	LINEAR FEET
CMP	CORRUGATED METAL PIPE	MC	MOUNTABLE CURB
EP	EDGE OF PAVEMENT	R/W	RIGHT-OF-WAY
EX EP	EDGE OF EXISTING PAVEMENT	RCP	REINFORCED CONCRETE PIPE
EC	EDGE OF CONCRETE	SC	SPILL CURB
EX EC	EDGE OF EXISTING CONCRETE	TB	TOP OF BASE ROCK
ES	EDGE OF SHOULDER	TC	TOP OF CURB
EX ES	EDGE OF EXISTING SHOULDER	TG	TOP OF GROUND
FES	FLARED END SECTION	TP	TOP OF PAVEMENT
FL	FLOW LINE	TS	TOP OF SIDEWALK
GT	GUTTER INVERT	TW	TOP OF WALL
GY	GUY WIRE	SCL	SAW CUT LINE

**SYMBOLS**

	MARKER STONE
	RIGHT OF WAY MARKER
	IRON PIN FOUND
	IRON PIN SET
	CUT CROSS
	CONTROL POINT
	BENCHMARK
	SANITARY SEWER MANHOLE
	STORM SEWER INLET
	TELEPHONE MANHOLE
	POWER POLE
	GUY ANCHOR
	LIGHT POLE
	TELEPHONE RISER
	GAS VALVE

	GAS METER
	WATER VALVE
	WATER METER
	FIRE HYDRANT
	IRRIGATION VALVE
	WELL
	MAIL BOX
	POST
	CLEANOUT
	SIGN
	AIR CONDITIONING UNIT
	SHRUB
	DECIDUOUS TREE
	CONIFEROUS TREE

**LINETYPES**

	PROPERTY LINE		TELEPHONE LINE
	RIGHT OF WAY LINE		FIBER OPTIC LINE
	SANITARY SEWER LINE		CABLE TELEVISION
	SANITARY SEWER FORCE MAIN		CHAIN LINK FENCE
	STORM SEWER LINE		BARBED WIRE FENCE
	IRRIGATION WATER LINE		WOOD FENCE
	FLOW LINE		EXISTING MAJOR CONTOUR
	OVERHEAD ELECTRIC LINE		EXISTING MINOR CONTOUR
	UNDERGROUND ELECTRIC LINE		PROPOSED MAJOR CONTOUR
	GAS LINE		PROPOSED MINOR CONTOUR
	WATER LINE		SILT FENCE / SILT SOCK
	COMMUNICATIONS LINE		TREE LINE

**GENERAL NOTES**

- THE GENERAL NOTES ON THE DRAWINGS ARE INTENDED TO SUPPLEMENT THE GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS. WHEN THE NOTES ON THE DRAWINGS CONFLICT WITH THE TECHNICAL REQUIREMENTS OUTLINED IN THE SPECIFICATIONS, THE MORE STRINGENT CRITERIA WILL GOVERN.
- ALL REFERENCES TO "OWNER" IN THESE GENERAL NOTES, AND THROUGHOUT THIS SET OF PLANS SHALL BE MEANT TO REFER TO THE CITY OF SPRINGFIELD UNLESS OTHERWISE SPECIFIED.
- ALL REFERENCES TO "ENGINEER" IN THESE GENERAL NOTES, AND THROUGHOUT THIS PLAN SET SHALL BE MEANT TO REFER TO TOTH & ASSOCIATES, INC. UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL HAVE, AT A MINIMUM, ONE (1) SIGNED COPY OF THE PLANS AND ONE (1) SIGNED COPY OF THE APPROPRIATE CONSTRUCTION STANDARDS AND SPECIFICATIONS ON THE JOB SITE AT ALL TIMES.
- IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING ADEQUATE TRAFFIC CONTROL AND SAFETY OF PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING HOURS.
- CONSTRUCTION OBSERVATION:
  - THE DUTY OF THE ENGINEER OR OWNER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.
  - ALL MATERIALS AND WORKMANSHIP ASSOCIATED WITH THIS PROJECT SHALL BE SUBJECT TO OBSERVATION BY THE OWNER AND THEIR ENGINEER. THE OWNER RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE PLANS AND TECHNICAL SPECIFICATIONS.
  - ALL MATERIALS AND WORKMANSHIP ASSOCIATED WITH OSRD RIGHT OF WAY SHALL BE SUBJECT TO OBSERVATION BY OSRD. OSRD RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE PLANS AND TECHNICAL SPECIFICATIONS.
  - ALL MATERIALS AND WORKMANSHIP ASSOCIATED WITH STATE HIGHWAYS SHALL BE SUBJECT TO OBSERVATION BY THE MISSOURI DEPARTMENT OF TRANSPORTATION (MODOOT). MODOOT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE PLANS AND TECHNICAL SPECIFICATIONS.
- ALL WORK REQUIRED IN THE CONTRACT DOCUMENTS WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR UNLESS IT IS SPECIFICALLY NOTED AS ANOTHER PARTY'S RESPONSIBILITY. CONTRACTOR WILL ONLY BE PAID FOR THE PAYMENT ITEMS LISTED ON THE BID FORM AND DESCRIBED IN THE MEASUREMENT FOR PAYMENT SPECIFICATION UNLESS SPECIFICALLY CALLED OUT AS A LEGITIMATE CHANGE ORDER ITEM. ANY WORK NOT LISTED AS A PAYMENT ITEM ON THE BID FORM AND DESCRIBED IN THE MEASUREMENT FOR PAYMENT SPECIFICATION SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT COST AND WILL NOT BE PAID FOR SEPARATELY.
- ENVIRONMENTAL CONTAMINATION:
  - SUBSURFACE AND SOIL INVESTIGATIONS HAVE NOT BEEN CONDUCTED TO IDENTIFY POTENTIAL ENVIRONMENTAL POLLUTANTS OR CONTAMINANTS. IF, DURING CONSTRUCTION, THE CONTRACTOR ENCOUNTERS ANY ENVIRONMENTAL POLLUTANTS, HAZARDOUS SUBSTANCES, CONTAMINATED PRODUCTS, BYPRODUCTS, SAMPLES OR ANY OTHER POTENTIAL OR UNIDENTIFIABLE POLLUTANTS, THE CONTRACTOR SHALL STOP WORK AND IMMEDIATELY NOTIFY THE OWNER AND ENGINEER.
  - ENVIRONMENTAL POLLUTANTS, HAZARDOUS SUBSTANCES, CONTAMINATED PRODUCTS OR UNIDENTIFIABLE POLLUTANTS SHALL NOT BE CONSIDERED TYPICAL WASTE MATERIALS AND SHALL BE HANDLED IN A MANNER REGULATED UNDER APPLICABLE ENVIRONMENTAL LAWS.
  - UNLESS A SPECIFIC CONTAMINATED AREA AND REMEDIATION PROCEDURE IS CALLED OUT IN THE DOCUMENTS, THE COST OF ANY UNFORESEEN CONTAMINATION WILL BE COVERED BY AN APPROVED CHANGE ORDER.
- CONTRACTOR IS RESPONSIBLE TO PROVIDE INDIVIDUAL PROPERTY OWNERS A MINIMUM OF 48 HOURS ADVANCE NOTICE PRIOR TO STARTING CONSTRUCTION ON OWNER'S PROPERTY.
- CONTRACTOR TO CONTACT OSRD (417-581-1632) IF ENCOUNTERING ANY EXPOSED TREE ROOTS LARGER THAN 2" IN DIAMETER.
- THESE PLANS REPRESENT A DESIGN THAT, BASED ON SURVEY INFORMATION, SHOULD COMPLY WITH ADAPROWAG REQUIREMENTS. MINOR DIFFERENCES IN ACTUAL PHYSICAL CONDITIONS IN THE FIELD COULD RESULT IN MINOR ADJUSTMENTS TO THE PLAN IN ORDER TO CONFORM TO ADAPROWAG REQUIREMENTS FOR SLOPES AND GRADE. THE CONTRACTOR SHALL BE FAMILIAR WITH ADAPROWAG REQUIREMENTS AND VERIFY LAYOUT IS IN COMPLIANCE BEFORE MAJOR REMOVALS AND/OR PLACEMENT OF IMPROVEMENTS AS APPLICABLE. ANY QUESTIONS, CONCERNS, OR ISSUES SHOULD BE BROUGHT TO THE ATTENTION OF THE CITY IF THEY ARISE FOR ACCEPTANCE OF LAYOUT AND/OR REMOVALS. CONTRACTOR WILL BE RESPONSIBLE FOR FINAL PRODUCT IN COMPLIANCE WITH ADA REQUIREMENTS. IF EXISTING FIELD CONDITIONS, SUCH AS ROAD SLOPE, PREVENT COMPLIANCE WITH ADAPROWAG REQUIREMENTS, THE CONTRACTOR SHALL CONTACT OSRD ADA COMPLIANCE OFFICER FOR COORDINATION WITH MODOOT FOR VARIANCE ALLOWANCE.

**CONSTRUCTION NOTES**

- THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL UTILITIES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL MISSOURI ONE CALL AT 1-800-344-7483 AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES. DURING CONSTRUCTION CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES WHERE CONFLICTS MIGHT OCCUR WITH PROPOSED UTILITIES OR GRADING ACTIVITIES. IF A CONFLICT BECOMES APPARENT THE CONTRACTOR SHALL CONTACT ENGINEER FOR DIRECTION PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL NOTIFY ALL THOSE UTILITY COMPANIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION BEING PERFORMED.
- EXISTING UNDERGROUND UTILITIES IN THE VICINITY OF THE WORK TO BE DONE ARE INDICATED ON THE PLANS ONLY TO THE EXTENT SUCH INFORMATION HAS BEEN MADE AVAILABLE OR DISCOVERED BY THE ENGINEER IN PREPARATION OF THE PLANS. THERE IS NO GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES, INCLUDING SERVICE CONNECTIONS, IN ADVANCE OF CONSTRUCTION ACTIVITIES BY CONTACTING THE OWNERS THEREOF AND BY PROSPECTING THE CONTRACTOR SHALL IMMEDIATELY INFORM THE OWNER AND ENGINEER IN WRITING OF ANY DISCREPANCIES WITH THE PLAN INFORMATION. ALL DAMAGE TO EXISTING UTILITIES, INCLUDING SERVICE CONNECTIONS, SHALL BE REPAIRED BY AND AT THE EXPENSE OF THE CONTRACTOR.
- THE EXISTING ABOVE GRADE FEATURES AND EXISTING BURIED UTILITIES SHOWN THROUGHOUT THESE PLANS ARE SHOWN FOR GENERAL HORIZONTAL LAYOUT LOCATION AND ORIENTATION. THE PLAN LOCATION OF THE EXISTING ABOVE GRADE FEATURES AND EXISTING BURIED UTILITIES MAY VARY FROM THE ACTUAL FIELD LOCATION.
- CONTRACTOR SHALL LIMIT HIS WORK AREA TO RIGHT-OF-WAYS, PERPETUAL EASEMENTS AND TEMPORARY CONSTRUCTION EASEMENTS FOR THE PROJECT. CONTRACTOR SHALL OBTAIN ANY ADDITIONAL TEMPORARY CONSTRUCTION EASEMENTS THAT HE DEEMS NECESSARY FOR CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. ANY WORK PERFORMED OUTSIDE OF THE RIGHT-OF-WAYS, PERPETUAL EASEMENTS AND TEMPORARY CONSTRUCTION EASEMENTS SHALL BE A PRIVATE AGREEMENT BETWEEN THE CONTRACTOR AND THE INDIVIDUAL PROPERTY OWNER AND THE OWNER SHALL NOT BE PARTY TO SAID AGREEMENT.
- THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES FROM DAMAGE DURING CONSTRUCTION OF THE PROJECT. IF ANY DAMAGES TO ADJACENT PROPERTIES OCCUR, IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- ANY DEVIATIONS FROM REQUIREMENTS OF THE PROJECT PLANS AND SPECIFICATIONS PROPOSED BY PRIVATE AGREEMENTS BETWEEN CONTRACTOR AND INDIVIDUAL PROPERTY OWNERS, MUST BE DOCUMENTED IN WRITING AND APPROVED BY THE OWNER AND INDIVIDUAL PROPERTY OWNER AFFECTED.
- CONTRACTOR SHALL COMPLY WITH THE MISSOURI OVERHEAD POWERLINE SAFETY ACT; THIS STATUTE MAKES IT ILLEGAL FOR AN UNAUTHORIZED PERSON OR ENTITY TO WORK OR BRING EQUIPMENT WITHIN 10 FEET OF A HIGH VOLTAGE LINE THAT HAS NOT BEEN COVERED OR DE-ENERGIZED. THE PURPOSE OF THE MISSOURI OVERHEAD POWERLINE SAFETY ACT IS TO ENSURE THE SAFETY OF THE PUBLIC WHEN WORKING AROUND OVERHEAD POWER LINES.
  - IF CONTRACTOR NEEDS LINE COVER WHEN WORKING NEAR OVERHEAD FACILITIES, THEY SHALL CONTACT LIBERTY (@ 417-763-9466) 10 DAYS AHEAD OF THE DATE THAT LINE COVER IS REQUIRED.
  - IF EXCAVATION IS REQUIRED NEAR EXISTING LIBERTY POWER POLE OR ANCHORS, CONTRACTOR TO CONTACT LIBERTY (@417-763-9466) AT LEAST TWO BUSINESS DAYS PRIOR TO EXCAVATION, TO DETERMINE POLE SUPPORT REQUIREMENTS (IF ANY) AND TO SCHEDULE THE WORK ACCORDINGLY. LIBERTY WILL NEED TRUCK ACCESSIBILITY TO SUPPORT POLE(S).
  - CATCH BASINS, INLETS, CURBS AND ALL OTHER APPURTENANCES SHALL BE ADEQUATELY COVERED AND PROTECTED PRIOR TO APPLICATION OF CONCRETE MATERIALS. NO EARTH OR CONCRETE MATERIALS SHALL BE ALLOWED TO ENTER ANY STORM DRAINAGE SYSTEM. SUITABLE CONTAINMENT PROVISIONS SHALL BE EMPLOYED TO PREVENT SURFACE RUNOFF OF CONCRETE MATERIALS.
  - EXISTING WATER METERS, WATER VALVES, AND GAS VALVES IN THE WORK AREA MUST HAVE THEIR RIM ELEVATION ADJUSTED TO MATCH FINISHED GRADE. THE CONTRACTOR MUST PROTECT WATER METERS, WATER VALVES, AND GAS VALVES FROM DAMAGE DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR MUST COVER AND PROTECT THE WATER METERS, WATER VALVES, AND GAS VALVES PRIOR TO INSTALLATION OF CONCRETE MATERIALS.

**USE OF CONSTRUCTION DOCUMENTS**

- PROJECT PLANS AND TECHNICAL SPECIFICATIONS ARE PROVIDED AS A SERVICE. PROJECT PLANS AND TECHNICAL SPECIFICATIONS ARE NOT INTENDED FOR USE ON OTHER PROJECTS AT THIS SITE OR OTHER SITES WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
- DRAWING REPRODUCTION AND SCALING MAY ALTER THE INDICATED GRAPHIC SCALES.

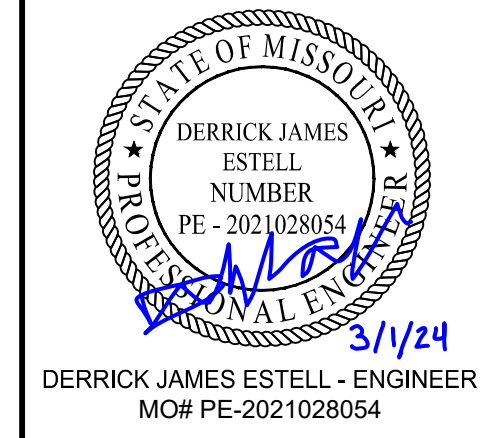
**TRAFFIC CONTROL NOTES:**

THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN THAT CONFORMS TO THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATIONS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES - LATEST EDITION" FOR REVIEW AND APPROVAL BY THE ENGINEER AND OWNER PRIOR TO CONSTRUCTION. THE PLAN SHALL PROVIDE CONTINUOUS ACCESS TO ALL RESIDENTS AND BUSINESSES DURING CONSTRUCTION AND SHALL NOT CLOSE ANY STREET WITHOUT THE PRIOR CONSENT OF THE GOVERNING BODY WITH JURISDICTION OVER THE STREET. MINIMUM REQUIREMENTS FOR CONSISTENCY OF TRAFFIC CONTROL PLANS GENERALLY CAN BE FOUND FOR SOME SITUATIONS IN THIS PLAN SET AND BY CONTACTING TOTH AND ASSOCIATES (@417-689-0649).

- THE CONTRACTOR SHALL PERFORM HIS WORK IN ACCORDANCE WITH THE APPROVED TRAFFIC CONTROL PLAN. THE TRAFFIC CONTROL PLAN WILL BE UPDATED BY CONTRACTOR AS NECESSARY DURING CONSTRUCTION AND UPDATES MUST BE APPROVED BY THE ENGINEER AND OWNER.
- FORTY-EIGHT (48) HOURS PRIOR TO ANY APPROVED ROAD CLOSURES THE CONTRACTOR SHALL NOTIFY THE FIRE, POLICE AND AMBULANCE DEPARTMENTS, SCHOOL DISTRICTS AND THE POST OFFICE. CONTRACTOR SHALL TAKE STEPS TO ENSURE ACCESS FOR EMERGENCY VEHICLES AND RESIDENTS AFFECTED BY CONSTRUCTION THROUGHOUT THE COURSE OF CONSTRUCTION.
- ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
- CONTRACTOR SHALL SUBMIT PROPOSED TRAFFIC CONTROL PLAN FOR WORK WITHIN MODOOT RIGHT OF WAY TO MODOOT FOR APPROVAL AND PERMITTING PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOSSES AND POTENTIAL DELAYS ASSOCIATED WITH OBTAINING THE REQUIRED PERMITS FOR WORK WITHIN MODOOT RIGHT OF WAY. A COPY OF THE PERMITS SHALL BE PROVIDED TO THE CITY ONCE RECEIVED FROM MODOOT AND PRIOR TO PERFORMING THE WORK ON MODOOT RW.
- THE TRAFFIC CONTROL REQUIREMENTS SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS ONLY AND DO NOT ATTEMPT TO ADDRESS IN DEPTH THE VARIETY OF SITUATIONS THAT MAY OCCUR ONCE CONSTRUCTION HAS STARTED. IN NO WAY DO THE REQUIREMENTS SHOWN ON THESE PLANS RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR SELECTION OF THE PROPER TRAFFIC CONTROL DEVICES AND IMPLEMENTATION PROCEDURES THAT WILL ASSURE THE SAFETY OF MOTORISTS, PEDESTRIANS, AND WORKERS AT ALL TIMES. ANY ADDITIONAL QUANTITIES OF TRAFFIC CONTROL DEVICES NECESSARY TO COMPLETE THE CONTRACT OR AS ORDERED BY THE ENGINEER SHALL BE INCLUDED IN THE CONTRACT LUMP SUM BID PRICE FOR TRAFFIC CONTROL.
- ALL WORK IMPACTING TRAFFIC ON MODOOT ROUTES SHALL BE DONE BETWEEN THE HOURS OF 7PM AND 6AM. ALL LANE DROPS ON MODOOT ROUTES SHALL BE DONE BETWEEN THE HOURS OF 7PM AND 6AM.

**SEDIMENT & EROSION CONTROL NOTES**

- THE EROSION CONTROL PLAN SHOWS THE LOCATION AND DETAILS FOR PRIMARY EROSION CONTROLS TO BE CONSTRUCTED. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING EROSION AND DISCHARGE OF SEDIMENT FROM THE SITE AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE NECESSARY MEASURES DURING ALL PHASES OF HIS OPERATIONS REGARDLESS OF WHETHER THEY ARE SPECIFICALLY NOTED ON THE EROSION CONTROL PLAN AND SHALL MAINTAIN AND REPLACE CONTROLS AS NECESSARY DURING THE COURSE OF HIS OPERATIONS.
- INITIAL SEDIMENT CONTROLS SHOWN ON THE EROSION CONTROL PLAN MUST BE INSTALLED PRIOR TO ANY OTHER WORK.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO KEEP ROCK, MUD AND OTHER DEBRIS CAUSED BY CONSTRUCTION EQUIPMENT OFF OF STREETS THROUGHOUT THE DAY AND AT THE END OF THE DAY.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST DURING CONSTRUCTION AND SHALL WATER CONSTRUCTION AREAS WHENEVER CONDITIONS WARRANT.
- THE CONTRACTOR IS RESPONSIBLE FOR CLEANING SILT FROM STORM DRAINS, INLETS, CULVERTS, ETC. PRIOR TO APPROVAL OF CONSTRUCTION.
- ALL DISTURBED AREAS NOT RECEIVING OTHER PERMANENT STABILIZATION SUCH AS PAVEMENT, ROOFS, SOD AND ETC. SHALL BE SEEDED AND MULCHED, AS PER THE PROJECT SPECIFICATIONS BEFORE TEMPORARY SEDIMENT CONTROLS CAN BE REMOVED AND PRIOR TO FINAL APPROVAL OF CONSTRUCTION.
- IF APPLICABLE THE CONTRACTOR SHALL CONFORM TO ALL REQUIREMENTS AS PUT FORTH IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE CONSIDERED AS A STARTING POINT FOR SEDIMENT AND EROSION CONTROLS AND THE CONTRACTOR WILL BE RESPONSIBLE FOR REVISING AND UPDATING EROSION CONTROLS AS SITE CONDITIONS CHANGE.
- THE CONTRACTOR MAY BE REQUIRED TO MAINTAIN EROSION CONTROL MEASURES AS NECESSARY OR AS REQUESTED BY THE CITY.



DATE	3/1/2024
BY	JTM
CHECKED BY	MSM
APPROVED BY	DUE
DATE	3/01/2024
SCALE	AS SHOWN

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 MISSOURI PROFESSIONAL ENGINEER  
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**25TH STREET ROADWAY IMPROVEMENTS**  
 OZARK SPECIAL ROAD DISTRICT  
 CHRISTIAN COUNTY, MISSOURI  
**GENERAL NOTES**





25th STREET - STA 0+00.00 TO STA 5+00.00



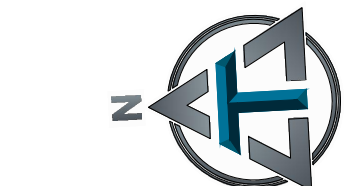
25th STREET - STA 5+00.00 TO STA 13+00.00

HATCH LEGEND:

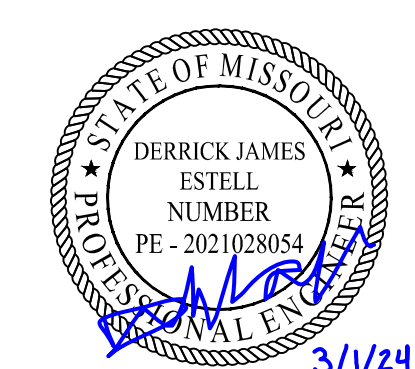
- [Hatched Pattern] = RESURFACE 2.5" SP125C (PG70-22).
- [Hatched Pattern] = FAILED SUBGRADE RESTORATION.

KEY NOTES:

- ① INSTALL ASPHALT TRANSITION PER DETAIL, SHEET 005.
- ② CONTRACTOR TO REPAIR FAILING SUBGRADE PRIOR TO MILL AND OVERLAY PER DETAIL, SHEET 005. FAILING SUBGRADE LOCATIONS ARE AN APPROXIMATION. CONTRACTOR TO FIELD VERIFY FAILING SUBGRADE LOCATIONS AND EXTENTS. TYPICAL.
- ③ CONTRACTOR TO ENSURE SMOOTH TRANSITION TO EXISTING ROADWAY SURFACE.



NOTE: DRAWING REPRODUCTION AND SCALING MAY CHANGE THE INDICATED GRAPHIC SCALES  
H. SCALE: 1" = 30'



DERRICK JAMES ESTELL - ENGINEER  
MO# PE-2021028054

BY	DATE	DESCRIPTION
JTM	3/01/2024	AS SHOWN
MSM		GRAPHIC SCALE MAY CHANGE DUE TO PRINTING
DUE		
DATE		

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25TH STREET ROADWAY IMPROVEMENTS

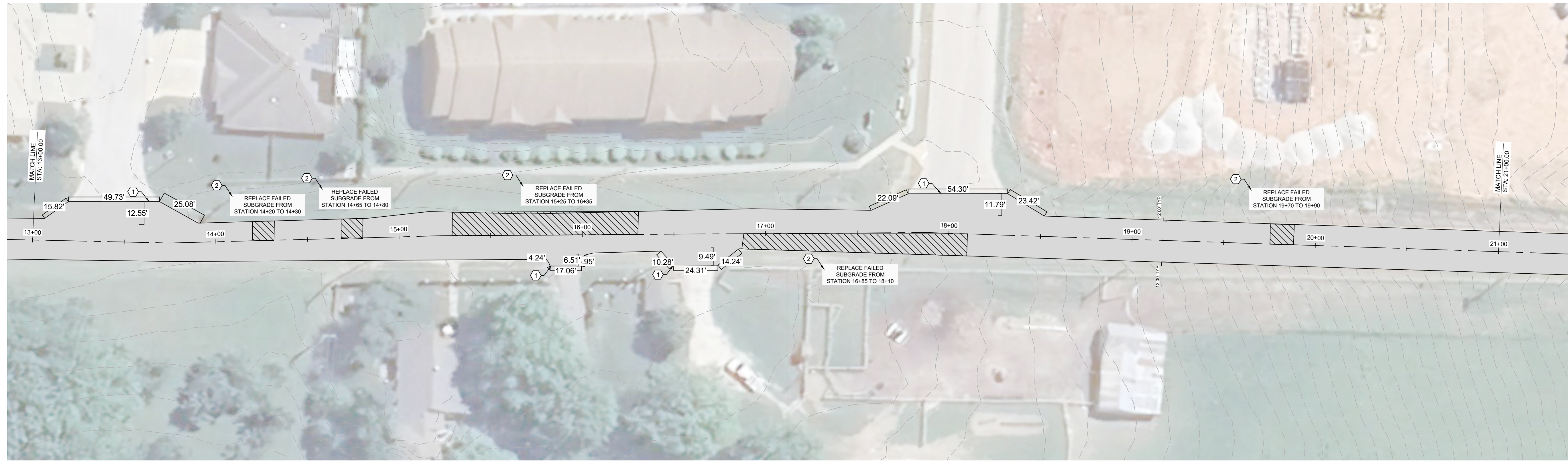
OZARK SPECIAL ROAD DISTRICT  
CHRISTIAN COUNTY, MISSOURI

25th STREET - STA 14+00.00 TO 27+23.08 - RESURFACING PLAN

SHT NO:

#	REVISION	DATE





25th STREET - STA 13+00.00 TO STA 21+00.00



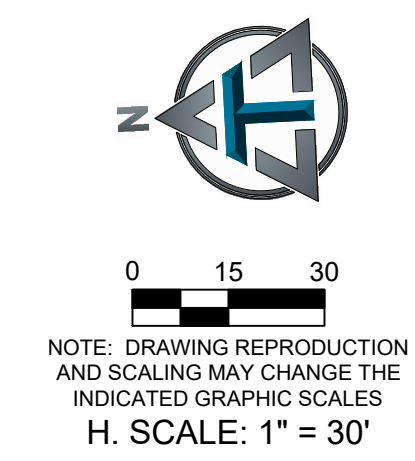
25th STREET - STA 21+00.00 TO STA 27+38.10

**HATCH LEGEND:**

- = MILL AND OVERLAY 2.0" SP125C (PG70-22).
- = FAILED SUBGRADE RESTORATION.

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#	REVISION	DATE

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**25TH STREET ROADWAY IMPROVEMENTS**  
 OZARK SPECIAL ROAD DISTRICT  
 CHRISTIAN COUNTY, MISSOURI  
 25th STREET - STA 0+00.00 TO 14+00.00 - RESURFACING PLAN  
 SHEET NO. 004





