

# PROJECT MANUAL

*Tennyson AML*

*Land Reclamation Project*

*Callaway County, Missouri*

Designed By: Gredell Engineering Resources  
1505 East High Street  
Jefferson City, MO 65101

Date Issued: October 17, 2025

Project No.: Y2401-01

STATE *of* MISSOURI

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OFFICE *of* ADMINISTRATION  
Facilities Management, Design and Construction

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**SECTION 000107 - PROFESSIONAL SEALS AND CERTIFICATIONS**

**PROJECT NUMBER: Y2401-01**

**THE FOLLOWING DESIGN PROFESSIONALS HAVE SIGNED AND SEALED THE ORIGINAL PLANS AND SPECIFICATIONS FOR THIS PROJECT, WHICH ARE ON FILE WITH THE DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION:**

**1.1 DESIGN PROFESSIONALS OF RECORD**

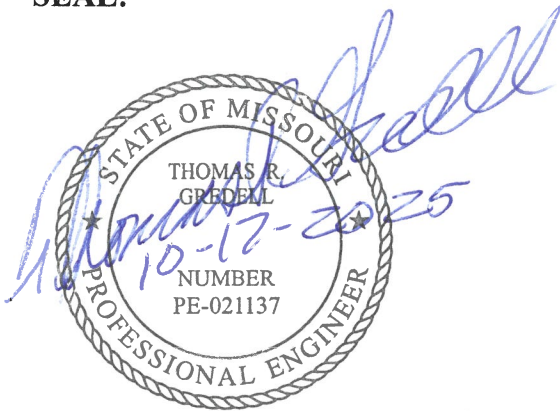
A. Civil Engineer:

1. Thomas R. Gredell, P.E.  
Missouri P.E. No. 21137.

Responsible for Specifications:

Division 00  
Division 01  
Division 03  
Division 07  
Division 31  
Division 32  
Division 33  
Division 35

**SEAL:**



**END OF SECTION 000107**

**TABLE OF CONTENTS**

<b>SECTION</b>	<b>TITLE</b>	<b>NUMBER OF PAGES</b>
----------------	--------------	------------------------

**DIVISION 00 – PROCUREMENT AND CONTRACTING INFORMATION**

**000000 INTRODUCTORY INFORMATION**

000101	Project Manual Cover	1
000107	Professional Seals and Certifications	1
000110	Table of Contents	2
000115	List of Drawings	2

<b>001116</b>	<b>INVITATION FOR BID (IFB)</b>	<b>2</b>
---------------	---------------------------------	----------

<b>002113</b>	<b>INSTRUCTIONS TO BIDDERS</b>	<b>7</b>
---------------	--------------------------------	----------

**NOTICE TO BIDDERS**

**The following procurement forms can be found on our website at:**  
<https://oa.mo.gov/facilities/bid-opportunities/bid-listing-electronic-plans>  
**and shall be submitted with your bid to [FMDCBids@oa.mo.gov](mailto:FMDCBids@oa.mo.gov)**

**004000 PROCUREMENT FORMS & SUPPLEMENTS**

004113	Bid Form	*
004322	Unit Prices Form	*
004336	Proposed Subcontractors Form	*
004337	MBE/WBE/SDVE Compliance Evaluation Form	*
004338	MBE/WBE/SDVE Eligibility Determination Form for Joint Ventures	*
004339	MBE/WBE/SDVE Good Faith Effort (GFE) Determination Forms	*
004340	SDVE Business Form	*
004541	Affidavit of Work Authorization	*
004545	Anti-Discrimination Against Israel Act Certification form	*

**ADDITIONAL U.S. DEPARTMENT OF INTERIOR FORMS**

- AML Contractor Information Form (AVS) \*
- U.S. Dept. of the Interior Certification Regarding Lobbying \*
- U.S. Dept. of the Interior Certification Regarding Debarment, Suspension, Ineligible, and Voluntary Exclusion \*

**005000 CONTRACTING FORMS AND SUPPLEMENTS**

005213	Construction Contract	3
--------	-----------------------	---

**006000 PROJECT FORMS**

006113	Performance and Payment Bond	2
006325	Product Substitution Request	2
006519.16	Final Receipt of Payment and Release Form	1
006519.18	MBE/WBE/SDVE Progress Report	2
006519.21	Affidavit of Compliance with Prevailing Wage Law	1

**007000 CONDITIONS OF THE CONTRACT**

007213	General Conditions	20
007300	Supplementary Conditions	2
007333	Supplementary General Conditions for Federally Funded/Assisted Construction Projects	16
007346	Wage Rate (State and Davis-Bacon Act Wage Determination, Heavy Classification)	39

<b>DIVISION 1 - GENERAL REQUIREMENTS</b>		
011000	Summary of Work	6
012100	Allowances	2
012200	Unit Prices	4
012600	Contract Modification Procedures	3
013100	Coordination	5
013115	Project Management Communications	5
013200	Schedules-Bar Chart	5
013300	Submittals	7
013513.31	Site Security and Health Requirements	4
015000	Construction Facilities and Temporary Controls	6
015723	Temporary Stormwater Pollution Control	11
017400	Cleaning	2

**TECHNICAL SPECIFICATIONS INDEX:**

<b>DIVISION 3 - CONCRETE</b>		
033053	Cast-In-Place Concrete	5

<b>DIVISION 7 – THERMAL AND MOISTURE PROTECTION</b>		
079200	Joint Sealants	8

<b>DIVISION 31 - EARTHWORK</b>		
311000	Site Clearing	4
312000	Earth Moving-General	11
312319	Dewatering	5

<b>DIVISION 32 - EXTERIOR IMPROVEMENTS</b>		
323100	Fencing & Gates	5
329200	Seeding	9

<b>DIVISION 33 - UTILITIES</b>		
334900	Storm Drainage Structures	5

<b>DIVISION 35 - EARTHEN EMBANKMENT CONSTRUCTION AND EQUIPMENT</b>		
357313	Earthen Embankments	8

**APPENDICES:**

<b>APPENDIX 1</b>	NPDES Stormwater, Impounded Water, Mine Dewatering Discharge Permit	44
<b>APPENDIX 2</b>	Bathymetric Pit Soundings	8
<b>APPENDIX 3</b>	Geotechnical Test Pit Logs	10
<b>APPENDIX 4</b>	Effective Neutralizing Material (ENM) Sample Calculation	2
<b>APPENDIX 5</b>	Storm Water Pollution Prevention Plan (SWPPP)	5

**END OF SECTION 000110**

## SECTION 000115 – LIST OF DRAWINGS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Bid Form and other Division 1 Specifications Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section provides a comprehensive list of the drawings that comprise the bid documents for this project:

### PART 2 - PRODUCTS (NOT APPLICABLE)

### PART 3 - EXECUTION

#### 3.1 LIST OF DRAWINGS

- A. The following list of drawings, is a part of the Bid Documents:

	<u>TITLE</u>	<u>SHEET #</u>	<u>DATE</u>
1.	Cover Sheet	G-001	10/17/2025
2.	General Notes	G-002	10/17/2025
3.	Reference Drawing	G-100	10/17/2025
4.	Sites 1, 2, and 4 Topographic Survey	V-100	10/17/2025
5.	Site 3 Topographic Survey	V-101	10/17/2025
6.	Site 1 Excavation Plan	C-100	10/17/2025
7.	Site 1 Final Grading Plan	C-101	10/17/2025
8.	Site 4 Excavation Plan	C-102	10/17/2025
9.	Site 4 Final Grading Plan	C-103	10/17/2025
10.	Site 2 Excavation Plan	C-104	10/17/2025
11.	Site 2 Final Grading Plan	C-105	10/17/2025
12.	Site 3 Gob Pile Excavation Plan	C-106	10/17/2025
13.	Site 3 Gob Pile Final Grading Plan	C-107	10/17/2025

14.	Site 1, 2, and 4 Erosion Control Plan	C-108	10/17/2025
15.	Site 3 Erosion Control Plan	C-109	10/17/2025
16.	Site 1 Cross Sections	C-300	10/17/2025
17.	Site 1 Cross Sections	C-301	10/17/2025
18.	Site 4 Cross Sections	C-302	10/17/2025
19.	Site 4 Cross Sections	C-303	10/17/2025
20.	Site 2 Main Alignment Cross Sections	C-304	10/17/2025
21.	Site 2 Main Alignment Cross Sections	C-305	10/17/2025
22.	Site 2 Pond 1 Alignment Cross Sections	C-306	10/17/2025
23.	Site 3 Cross Sections	C-307	10/17/2025
24.	Site 3 Cross Sections	C-308	10/17/2025
25.	Details	D-500	10/17/2025
26.	Details	D-501	10/17/2025
27.	Box Culvert Details	D-502	10/17/2025
28.	Box Culvert Details	D-503	10/17/2025
29.	Erosion Details	D-504	10/17/2025

**END OF SECTION 000115**

## SECTION 001116 - INVITATION FOR BID

### 1.0 OWNER:

- A. The State of Missouri  
Office of Administration,  
Division of Facilities Management, Design and Construction  
Jefferson City, Missouri

### 2.0 PROJECT TITLE AND NUMBER:

- A. Tennyson AML  
Land Reclamation Project  
Callaway County, Missouri  
**Project No.: Y2401-01**

### 3.0 BIDS WILL BE RECEIVED:

- A. Until: 1:30 PM, May 21, 2026
- B. **Only electronic bids sent to [FMDCBids@oa.mo.gov](mailto:FMDCBids@oa.mo.gov) shall be accepted: (See Instructions to Bidders for further detail)**

### 4.0 DESCRIPTION:

- A. Scope: The Tennyson AML Land Reclamation Project (TALRP) consists of approximately 18 acres of abandoned coal mine land in Callaway County that was mined prior to the advent of mining regulations. The TALRP is located near the southern limits of the Town of Fulton, in the NW/4, S-29 and SW/4, S-20, T47N, R09W. The project also includes a coal waste (gob) pile located in the NE/4, S-19, T47N, R09W. The area affected by mining is owned by several different landowners, including the Town of Fulton, Westminster College, and three private landowners. Priority features identified by the Land Reclamation Program (LRP) at the TALRP are both safety and environmentally related and include, but are not limited to; Hazardous Water Bodies, Dangerous Piles and/or Embankments, and Spoils Areas. It is the intent of OA/FMDC and LRP to remedy the environmental and safety concerns at this site and provide the impacted landowners with functioning areas for agriculture and/or businesses. Reclamation activities include, but are not limited to, clearing and grubbing, excavation and grading mine spoil; backfill abandoned coal mine pits and ponds; extending drainage structures; embankment construction, grade, excavate, relocated and covering coal waste (gob), the application and incorporation of agricultural lime, seed, fertilize and mulch all work areas, and other related work, all in accordance with the enclosed plans and specifications.
- B. MBE/WBE/SDVE Goals: MBE **10%**, WBE **10%**, and SDVE **3%**. **NOTE: Only MBE/WBE firms certified by the State of Missouri Office of Equal Opportunity as of the date of bid opening, or SDVE(s) meeting the requirements of Section 34.074, RSMo and 1 CSR 30-5.010, can be used to satisfy the MBE/WBE/SDVE participation goals for this project.**
- C. In addition to the State of Missouri MBE/WBE/SDVE participation goals set forth herein and in the bid documents for this project, the contractor on a federally funded/assisted construction project is subject to federal Executive Order 11246. The Bidder's attention is drawn to the Notice of Requirement for Affirmative Action To Ensure Equal Employment Opportunity (Executive Order 11246, 41 C.F.R. 60-4.2) in Section 007333, SUPPLEMENTARY GENERAL CONDITIONS FOR FEDERALLY FUNDED/ASSISTED CONSTRUCTION PROJECTS, which is incorporated by reference.

### 5.0 PRE-BID MEETING:

- A. Place/Time: 1 PM, May 5, 2026, at 1480 County Road 401, Fulton, MO 65251, 38.827789, -91.964014 (if it is raining, we will meet then proceed to a covered location).
- B. Access to State of Missouri property requires presentation of a photo ID by all persons.

### 6.0 HOW TO GET PLANS & SPECIFICATIONS:

- A. View Only Electronic bid sets are available at no cost or paper bid sets for a **deposit of \$100.00** from American Document Solutions (ADS). MAKE CHECKS PAYABLE TO: American Document Solutions. Mail to: American Document Solutions, 1400 Forum Blvd., Suite 7A, Columbia, Missouri 65203. Phone 573-446-7768, Fax 573-355-5433, <https://www.adsplanroom.net>. NOTE: Prime contractors will be allowed a maximum of two bid sets at the deposit rate shown above. Other requesters will be allowed only one bid set at this rate. Additional bid sets or parts thereof may be obtained by any bidder at the cost of printing and shipping by request to American Document Solutions at the address shown above. Bidder must secure at least one bid set to become a planholder.
- B. **Refunds: Return plans and specifications in unmarked condition within 15 working days of bid opening to American Document Solutions, 1400 Forum Blvd., Suite 7A, Columbia, Missouri 65203. Phone 573-446-7768, Fax 573-355-5433. Deposits for plans not returned within 15 working days shall be forfeited.**
- C. Information for upcoming bids, including downloadable plans, specifications, Invitation for Bid, bid tabulation, award, addenda, and access to the ADS planholders list, is available on the Division of Facilities Management, Design and Construction's web site: <https://oa.mo.gov/facilities/bid-opportunities/bid-listing-electronic-plans>.

**7.0 POINT OF CONTACT:**

- A. Designer: Gredell Engineering Resources, Tom Gredell, P.E., 573-659-9078, email: [tomg@ger-inc.biz](mailto:tomg@ger-inc.biz)
- B. Project Manager: Scott Zeller, 573-680-8138, email: [Scott.Zeller@oa.mo.gov](mailto:Scott.Zeller@oa.mo.gov)

**8.0 GENERAL INFORMATION:**

- A. The State reserves the right to reject any and all bids and to waive all informalities in bids. No bid may be withdrawn for a period of 20 working days subsequent to the specified bid opening time. The contractor shall pay not less than the prevailing hourly rate of wages for work of a similar character in the locality in which the work is performed, as determined by the Missouri Department of Labor and Industrial Relations and as set out in the detailed plans and specifications.
- B. Bid results will be available at <https://oa.mo.gov/facilities/bid-opportunities/bid-listing-electronic-plans> after it is verified that at least one bid is awardable and affordable.
- C. This is a federally funded/assisted construction project that requires compliance by the awarded contractor with applicable federal laws and regulations. The Bidder should review Section 007333, SUPPLEMENTARY GENERAL CONDITIONS FOR FEDERALLY FUNDED/ASSISTED CONSTRUCTION PROJECTS, which is made part of this solicitation and will be made part of the resulting contract by reference.

## **SECTION 002113 – INSTRUCTIONS TO BIDDERS**

### **1.0 - SPECIAL NOTICE TO BIDDERS**

- A. If awarded a contract, the Bidder's employees, and the employees of all subcontractors, who perform the work on the project must adhere to requirements in Section 013513 – Site Security and Health Requirements as applicable per Agency.
- B. The Bidder's prices shall include all city, state, and federal sales, excise, and similar taxes that may lawfully be assessed in connection with the performance of work, and the purchased of materials to be incorporated in the work. **THIS PROJECT IS NOT TAX EXEMPT.**

### **2.0 - BID DOCUMENTS**

- A. The number of sets obtainable by one (1) party may be limited in accordance with available supply.
- B. For the convenience of contractors, subcontractors and suppliers, bidding documents are available on the Owner's website at <https://oa.mo.gov/facilities/bid-opportunities/bid-listing-electronic-plans>.

### **3.0 - BIDDERS' OBLIGATIONS**

- A. Bidders must carefully examine the entire site of the work and shall make all reasonable and necessary investigations to inform themselves thoroughly as to the facilities available as well as to all the difficulties involved in the completion of all work in accordance with the specifications and the plans. Bidders are required to examine all maps, plans and data mentioned in the specifications. No plea of ignorance concerning observable existing conditions or difficulties that may be encountered in the execution of the work under this contract will be accepted as an excuse for any failure or omission on the part of the successful Bidder (contractor) to fulfill every detail of the requirements of the contract, nor accepted as a basis for any claims for extra compensation or time extension.
- B. Under no circumstances will Bidders give their plans and specifications to other Bidders. It is highly encouraged, but not required, that all Bidders be on the official planholders list to receive project updates including but not limited to any addenda that are issued during the bidding process.

### **4.0 - INTERPRETATIONS**

- A. No Bidder shall be entitled to rely on oral or written representations from any person as to the meaning of the plans and specifications or the acceptability of alternate products, materials, form or type of construction.
- B. Bidders shall make all requests for interpretations in writing and submit all requests to the Project Designer and Project Manager identified in Section 007300 – Supplementary Conditions with all necessary supporting documentation no less than five (5) working days before opening of bids. Responses to requests for interpretation will be issued via a written addendum and will be sent as promptly as is practicable to all official planholders and posted on the Owner's website. All such addenda shall become part of the bid and contract documents.
- C. Bidders shall make all requests for an "Acceptable Substitution" on the Section 006325 Substitution Request Form. The request shall be emailed to the Project Designer and Project Manager identified in Section 007300 – Supplementary Conditions no less than five (5) working days before opening of bids. Responses to requests for substitutions will be issued via a written addendum and will be sent as promptly as is practicable to all official planholders and posted on the Owner's website. All such addenda shall become part of the bid and contract documents.
- D. An "Acceptable Substitution" requested after the award of bid will only be approved if proven to the satisfaction of the Owner and the Designer that the product is acceptable in design, strength, durability, usefulness, and convenience for the purpose intended. Approval of the substitution after award is at the sole discretion of the Owner and all requests of this nature must be submitted in accordance with Article 3.1 of the General Conditions.

## **5.0 - BIDS AND BIDDING PROCEDURE**

- A. Bidders shall submit all submission forms and accompanying documents listed in Section 004113 – Bid Form, Article 5.0, Attachments to Bid by the stated time on the bid documents or the bid will be rejected for being non-responsive.
- B. Depending on the specific project requirements, **the following is a GENERIC list** of all possible bid forms that may be due with bid submittals. Bidders must verify each specific project’s requirements in Section 004113 to ensure they have provided all the required documentation with their submission.

### **Bid Submittal – due before stated date and time of bid opening (see IFB):**

004113	Bid Form (all pages are always required)
004322	Unit Prices Form
004336	Proposed Subcontractors Form
004337	MBE/WBE/SDVE Compliance Evaluation Form
004338	MBE/WBE/SDVE Eligibility Determination for Joint Ventures
004339	MBE/WBE/SDVE GFE Determination
004340	SDVE Business Form
004541	Affidavit of Work Authorization
004545	Anti-Discrimination Against Israel Act Certification form

- C. The Bidder shall submit its bid on the forms provided by the Owner in the same file format (PDF) with each space fully and properly completed, typewritten or legibly printed, including all amounts required for alternate bids, unit prices, cost accounting data, etc. The Owner will reject bids that are not on the Owner’s forms or that do not contain all requested information. All forms can be found on the Owner’s website at <https://oa.mo.gov/facilities/bid-opportunities/bid-listing-electronic-plans> and shall be submitted with your bid to [FMDCBids@oa.mo.gov](mailto:FMDCBids@oa.mo.gov).
- D. All bids shall be submitted without additional terms and conditions, modifications, or reservations. The completed forms should not include interlineations, alterations, or erasures. Bids not in compliance with the requirements of this paragraph will be rejected as non-responsive.
- E. All bids shall be accompanied by a bid bond executed by the bidder and a duly authorized surety company, certified check, cashier's check or bank draft made payable to the Division of Facilities Management, Design and Construction, State of Missouri, in the amount indicated in the bid documents in Section 004113. Failure of the Bidder to submit the duly authorized bid bond or the full amount required shall be sufficient cause to reject his bid. The Bidder agrees that the proceeds of the check, draft, or bond shall become the property of the State of Missouri, if for any reason the Bidder withdraws his bid after bid closing or if the Bidder, within ten (10) working days after notification of award, refuses or is unable to 1) execute the tendered contract, 2) provide an acceptable performance and payment bond, or 3) provide evidence of required insurance coverage.
- F. The bid bond check or draft submitted by the successful Bidder will be returned after the receipt of an acceptable performance and payment bond and execution of the formal contract. Checks or drafts of all other Bidders will be returned within a reasonable time after it is determined that the bid represented by same will receive no further consideration by the State of Missouri.

## **6.0 - SIGNING OF BIDS**

- A. A bid should contain the full and correct legal name of the Bidder. If the Bidder is an entity registered with the Missouri Secretary of State, the Bidder’s name on the bid form should appear as shown in the Secretary of State’s records. If the Bidder is an entity organized in a state other than Missouri, the Bidder must provide a Certificate of Authority to do business in the State of Missouri.
- B. If the successful Bidder is doing business in the State of Missouri under a fictitious name, the Bidder shall furnish to Owner, attached to the Bid Form, a properly certified copy of the certificate of Registration of Fictitious Name from the State of Missouri, and such certificate shall remain on file with the Owner.
- C. A bid from an individual shall be signed as noted on the Bid Form.
- D. A bid from a partnership or joint venture shall require only one signature of a partner, an officer of the joint venture authorized to bind the venture, or an attorney-in-fact. If the bid is signed by an officer of

a joint venture or an attorney-in-fact, a document evidencing the individual's authority to execute contracts should be included with the bid form.

- E. A bid from a limited liability company (LLC) shall be signed by a manager or a managing member of the LLC.
- F. A bid from a corporation shall have the correct corporate name thereon and the signature of an authorized officer of the corporation. Title of office held by the person signing for the corporation shall appear, along with typed name of said individual and the corporate license number shall be provided. In addition, for corporate proposals, the President or Vice-President listed per the current filing with the Missouri Secretary of State should sign as the Bidder. If the signatory is other than the corporate president or vice president, the bidder must provide satisfactory evidence that the signatory has the legal authority to bind the corporation.

#### **7.0 - RECEIVING BID SUBMITTALS**

- A. It is the Bidder's sole responsibility to ensure receipt of the bid submittals by Owner on or before the date and time specified in the Invitation for Bid or as modified via written addenda. Bids received after the date and time specified will not be considered by the Owner.
- B. All bids shall be received via email at [FMDCBids@oa.mo.gov](mailto:FMDCBids@oa.mo.gov) and bids received by the Owner through any other means, including hard copies, will not be considered, and will be discarded by the Owner unopened.

#### **8.0 - MODIFICATION AND WITHDRAWAL OF BIDS**

- A. Bidder may withdraw a bid at any time prior to the scheduled closing time for receipt of bids, but no bidder may withdraw his bid for a period of twenty (20) working days after the scheduled closing time for receipt of bids.
- B. Bidder may modify a bid until the scheduled closing time by sending a revised bid to [FMDCBids@oa.mo.gov](mailto:FMDCBids@oa.mo.gov) with a note in the subject line and body of the email that it is a revised bid. All revised bids must be submitted to [FMDCBids@oa.mo.gov](mailto:FMDCBids@oa.mo.gov), revised bids sent any other way will not be considered.

#### **9.0 - AWARD OF CONTRACT**

- A. The Owner reserves the right to reject any and/or all bids and further to waive all informalities in bidding when deemed in the best interest of the State of Missouri.
- B. The Owner reserves the right to let other contracts in connection with the work including, but not limited to, contracts for the furnishing and installation of furniture, equipment, machinery, appliances and other apparatuses.
- C. The Owner will award a contract to the lowest, responsive, and responsible Bidder in accordance with Section 8.250, RSMo. No contract will be awarded to any Bidder who has had a contract with the Owner terminated within the preceding twelve months for material breach of contract or who has been suspended or debarred by the Owner.
- D. Award of alternates, if any, will be made in numerical order unless all bids received are such that the order of acceptance of alternates does not affect the determination of the lowest, responsive, responsible bidder.
- E. No award shall be considered binding upon the Owner until the written contract has been properly executed and the following documentation has been provided: 1) performance and payment bond consistent with Article 6.1 of the General Conditions; 2) proof of the required insurance coverage; 3) an executed Section 004541 - Affidavit of Work Authorization form; and 4) documentation evidence enrollment and participation in a federal work authorization program.
- F. Failure to execute and return the contract and associated documents within the prescribed period shall be treated, at the option of the Owner, as a breach of Bidder's obligation and the Owner shall be under no further obligation to Bidder.
- G. Transient employers subject to Sections 285.230 and 285.234, RSMo, (out-of-state employers who temporarily transact any business in the State of Missouri) may be required to file a bond with the

Missouri Department of Revenue. No contract will be awarded by the Owner unless the successful Bidder certifies that he has complied with all applicable provisions of Section 285.230-234.

- H. Sections 285.525 and 285.530, RSMo, require business entities to enroll and participate in a federal work authorization program in order to be eligible to receive award of any state contract in excess of \$5,000. Bidders should submit with their bid an Affidavit of Work Authorization (Section 004541) along with appropriate documentation evidencing such enrollment and participation. Bidders must also submit an E-Verify Memorandum before the Owner may award a contract to the Bidder. Information regarding a E-Verify is located at <https://www.e-verify.gov/employers/enrolling-in-e-verify>. The contractor shall be responsible for ensuring that all subcontractors and suppliers associated with this contract enroll in E-Verify.
- I. The successful Bidder must be registered in MissouriBUYS powered by MOVERS at <https://missouribuys.mo.gov/supplier-registration#> as an approved vendor prior to being issued a contract.

#### **10.0 - CONTRACT SECURITY**

- A. The successful Bidder shall furnish a performance/payment bond as set forth in General Conditions Article 6.1 prior to the State executing the contract and issuing a notice to proceed.

#### **11.0 - LIST OF SUBCONTRACTORS**

- A. If required by “Section 004113 – Bid Form,” each Bidder must submit as part of their bid a list of subcontractors to be used in performing the work (Section 004336). The list must specify the name of the single designated subcontractor, manufacturer, or suppliers for each category of work listed in “Section 004336 - Proposed Subcontractors Form.” If work within a category will be performed by more than one subcontractor, the bidder must provide the name of each subcontractor and specify the exact portion of the work to be done by each. If the Bidder intends to perform any of the designated subcontract work with the use of his own employees, the Bidder shall make that fact clear, by listing his own firm for the subject category. **If any category of work is left vacant or if more than one subcontractor is listed for any category without designating the portion of work to be performed by each, the bid shall be rejected.**

#### **12.0 - WORKING DAYS**

- A. Contract duration time is stated in working days and will use the following definition in determining the actual calendar date for contract completion:
  - 1. Working days are defined as all calendar days except Saturdays, Sundays and the following State of Missouri observed holidays: New Year’s Day, Martin Luther King, Jr. Day, Lincoln Day, Washington’s Birthday, Truman Day, Memorial Day, Juneteenth, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day and Christmas Day.

#### **13.0 - AMERICAN AND MISSOURI - MADE PRODUCTS AND FIRMS**

- A. By signing the bid form and submitting a bid on this project, the Bidder certifies that it will use American and Missouri products as set forth in Article 1.7 of the General Conditions. Bidders are advised to review those requirements carefully prior to bidding.
- B. A preference shall be given to Missouri firms, corporations or individuals, or firms, corporations or individuals that maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less.
- C. Pursuant to Section 34.076, RSMo, a contractor or Bidder domiciled outside the boundaries of the State of Missouri shall be required, in order to be successful, to submit a bid the same percent less than the lowest bid submitted by a responsible contractor or Bidder domiciled in Missouri as would be required for such a Missouri domiciled contractor or Bidder to succeed over the bidding contractor or Bidder domiciled outside Missouri on a like contract or bid being let in the Bidder’s domiciliary state and, further, the contractor or Bidder domiciled outside the boundaries of Missouri shall be required to submit an audited financial statement as would be required of a Missouri domiciled contractor or Bidder on a like contract or bid being let in the domiciliary state of that contractor or Bidder.

**14.0 – ANTI-DISCRIMINATION AGAINST ISRAEL ACT CERTIFICATION:**

- A. If the Bidder meets the section 34.600, RSMo., definition of a “company” and the Bidder has ten or more employees, the Bidder must certify in writing that the Bidder is not currently engaged in a boycott of goods or services from the State of Israel and shall not engage in a boycott of goods or services from the State of Israel, if awarded a contract, for the duration of the contract. The Bidder is required to complete and submit the applicable portion of Section 004545 - Anti-Discrimination Against Israel Act Certification with its Bid Form. The applicable portion of the exhibit must be submitted prior to execution of a contract by the Owner and issuance of Notice to Proceed.

**15.0 – MBE/WBE/SDVE INSTRUCTIONS**

A. Definitions:

- 1. “**MBE**” means a Minority Business Enterprise.
- 2. “**MINORITY**” has the same meaning as set forth in 1 C.S.R. 10-17.010.
- 3. “**MINORITY BUSINESS ENTERPRISE**” has the same meaning as set forth in section 37.020, RSMo.
- 4. “**WBE**” means a Women’s Business Enterprise.
- 5. “**WOMEN’S BUSINESS ENTERPRISE**” has the same meaning as set forth in section 37.020, RSMo.
- 6. “**SDVE**” means a Service-Disabled Veterans Enterprise.
- 7. “**SERVICE-DISABLED VETERAN**” has the same meaning as set forth in section 34.074, RSMo.
- 8. “**SERVICE-DISABLED VETERAN ENTERPRISE**” has the same meaning as “Service-Disabled Veteran Business” set forth in section 34.074, RSMo.

B. MBE/WBE/SDVE General Requirements:

- 1. For all bids greater than \$100,000, the Bidder shall obtain MBE, WBE and SDVE participation in an amount equal to or greater than the percentage goals set forth in the Invitation for Bid and the Bid Form, unless the Bidder is granted a Good Faith Effort waiver by the Director of the Division, as set forth below. If the Bidder does not meet the MBE, WBE and SDVE goals, or make a good faith effort to do so, the Bidder shall be nonresponsive, and its bid shall be rejected.
- 2. The Bidder should submit with its bid all the information requested in the MBE/WBE/SDVE Compliance Evaluation Form for every MBE, WBE, or SDVE subcontractor or material supplier the Bidder intends to use for the contract work. The Bidder is required to submit all MBE/WBE/SDVE documentation before the stated time and date set forth in the Invitation for Bid. If the Bidder fails to provide such information by the specified date and time, the Owner shall reject the bid.
- 3. The Director reserves the right to request additional information from a Bidder to clarify the Bidder’s proposed MBE, WBE, and/or SDVE participation. The Bidder shall submit the clarifying information requested by the Owner within two (2) working days of receiving the request for clarification.
- 4. Pursuant to section 34.074, RSMo, a Prime Bidder that qualifies as an SDVE shall receive a three-percentage point bonus preference in the contract award evaluation process. The bonus preference will be calculated and applied by reducing the bid amount of the eligible SDVE by three percent of the apparent low responsive Bidder’s bid. Based on this calculation, if the eligible SDVE’s evaluation is less than the apparent low responsive Bidder’s bid, the eligible SDVE’s bid will become the apparent low responsive bid. This reduction is for evaluation purposes only and will have no impact on the actual amount(s) of the bid or the amount(s) of any contract awarded. In order to be eligible for the SDVE preference, the Bidder must complete and submit with its bid the Missouri Service-Disabled Veteran Business Form, and any information required by the form.

C. Computation of MBE/WBE/SDVE Goal Participation:

- 1. A Bidder who is a MBE, WBE, or SDVE may count 100% of the contract towards the MBE, WBE or SDVE goal, less any amounts awarded to another MBE, WBE or SDVE. (NOTE: a MBE firm that bids as general contractor must obtain WBE and SDVE participation; a WBE firm that bids as

a general contractor must obtain MBE and SDVE participation; and a SDVE firm that bids as general contractor must obtain MBE and WBE participation.) For the remaining contract amount to be counted towards the MBE, WBE or SDVE goal, the Bidder must complete the MBE/WBE/SDVE Compliance Evaluation Form (Section 004337) identifying itself as an MBE, WBE or SDVE.

2. The total dollar value of the work granted to a certified MBE, WBE or SDVE by the Bidder shall be counted towards the applicable goal.
3. Expenditures for materials and supplies obtained from a certified MBE, WBE, or SDVE supplier or manufacturer may be counted towards the MBE, WBE and SDVE goals, if the MBE, WBE, or SDVE assumes the actual and contractual responsibility for the provision of the materials and supplies.
4. The total dollar value of the work granted to a second or subsequent tier subcontractor or a supplier may be counted towards a Bidder's MBE, WBE and SDVE goals, if the MBE, WBE, or SDVE properly assumes the actual and contractual responsibility for the work.
5. The total dollar value of work granted to a certified joint venture equal to the percentage of the ownership and control of the MBE, WBE, or SDVE partner in the joint venture may be counted towards the MBE/WBE/SDVE goals.
6. Only expenditures to a MBE, WBE, or SDVE that performs a commercially useful function in the work may be counted towards the MBE, WBE and SDVE goals. A MBE, WBE, or SDVE performs a commercially useful function when it is responsible for executing a distinct element of the work and carrying out its responsibilities by performing, managing and supervising the work or providing supplies or manufactured materials.

D. Certification of MBE/WBE/SDVE Subcontractors:

1. In order to be counted towards the goals, an MBE or WBE must be certified by the State of Missouri Office of Equal Opportunity and an SDVE must be certified by the State of Missouri, Office of Equal Opportunity or by the Federal U.S. Small Business Administration directory.
2. The Bidder may determine the certification status of a proposed MBE or WBE subcontractor or supplier by referring to the Office of Equal Opportunity (OEO)'s online MBE/WBE directory <https://apps1.mo.gov/MWBCertifiedFirms/>. The Bidder may determine the eligibility of a SDVE subcontractor or supplier by referring to the Office of Equal Opportunity online SDVE directory at <https://o eo .mo .gov/sdve-certification-program/> or the Federal U.S. Small Business Administration directory <https://veterans.certify.sba.gov/#search>.
3. Additional information, clarifications, or other information regarding the MBE/WBE/SDVE listings in the directories may be obtained by contacting the Contract Specialist of record as shown in the Supplementary Conditions (Section 007300).

E. Waiver of MBE/WBE/SDVE Participation:

1. If a Bidder has made a good faith effort to secure the required MBE, WBE and/or SDVE participation and has failed, the Bidder shall submit with its bid the information requested in MBE/WBE/SDVE Good Faith Effort (GFE) Determination form. The Director will determine if the Bidder made a good faith effort to meet the applicable goals. If the Director determines that the Bidder did not make a good faith effort, the bid shall be rejected as being nonresponsive to the bid requirements. Bidders who demonstrate that they have made a good faith effort to include MBE, WBE, and/or SDVE participation will be granted a waiver and will be considered to be responsive to the applicable participation goals, regardless of the percent of actual participation obtained, if the bid is otherwise acceptable.
2. In determining whether a Bidder has made a good faith effort to obtain MBE, WBE and/or SDVE participation, the Director may evaluate the factors set forth in 1 CSR 30-5.010(6)(C) and the following:
  - a. The amount of actual participation obtained;

- b. How and when the Bidder contacted potential MBE, WBE, and SDVE subcontractors and suppliers;
- c. The documentation provided by the Bidder to support its contacts, including whether the Bidder provided the names, addresses, phone numbers, and dates of contact for MBE/WBE/SDVE firms contacted for specific categories of work;
- d. If project information, including plans and specifications, were provided to MBE/WBE/SDVE subcontractors;
- e. Whether the Bidder made any attempts to follow-up with MBE, WBE or SDVE firms prior to bid;
- f. Amount of bids received from any of the subcontractors and/or suppliers that the Bidder contacted;
- g. The Bidder's stated reasons for rejecting any bids;

F. Contractor MBE/WBE/SDVE Obligations

- 1. If awarded a contract, the Bidder will be contractually required to subcontract with or obtain materials from the MBE, WBE, and SDVE firms listed in its bid, in amounts equal to or greater than the dollar amount in the bid, unless the amount is modified in writing by the Owner.
- 2. If the Contractor fails to meet or maintain the participation requirements contained in the Contractor's bid, the Contractor must satisfactorily explain to the Director why it cannot comply with the requirement and why failing meeting the requirement was beyond the Contractor's control. If the Director finds the Contractor's explanation unsatisfactory, the Director may take any appropriate action including, but not limited to:
  - a. Declaring the Contractor ineligible to participate in any contracts with the Division for up to twelve (12) months (suspension); and/or
  - b. Declaring the Contractor be nonresponsive to the Invitation for Bid, or in breach of contract and rejecting the bid or terminating the contract.
- 3. If the Contractor replaces an MBE, WBE, or SDVE during the course of the contract, the Contractor shall replace it with another MBE, WBE, or SDVE or make a good faith effort to do so. All MBE, WBE and SDVE substitutions must be approved by the Director in writing.
- 4. The Contractor shall provide the Owner with regular reports on its progress in meeting its MBE/WBE/SDVE obligations. At a minimum, the Contractor shall report the dollar-value of work completed by each MBE, WBE, or SDVE during the preceding month and the cumulative total of work completed by each MBE, WBE or SDVE to date with each monthly application for payment. The Contractor shall also make a final report, which shall include the total dollar-value of work completed by each MBE, WBE, and SDVE during the entire contract.



# State of Missouri Construction Contract

THIS AGREEMENT is made (DATE) by and between:

## *Contractor Name and Address*

hereinafter called the "Contractor," and the **State of Missouri**, hereinafter called the "**Owner**", represented by the Office of Administration, Division of Facilities Management, Design and Construction.

WITNESSETH, that the Contractor and the Owner, for the consideration stated herein agree as follows:

## **ARTICLE 1. STATEMENT OF WORK**

The Contractor shall furnish all labor and materials and perform all work required for furnishing and installing all labor, materials, equipment and transportation and everything necessarily inferred from the general nature and tendency of the plans and specifications for the proper execution of the work for:

**Project Name:** Tennyson AML  
Land Reclamation Project  
Fulton, Missouri

**Project Number:** Y2401-01

in strict accordance with the Contract Documents as enumerated in Article 7, all of which are made a part hereof.

## **ARTICLE 2. TIME OF COMPLETION**

The contract performance time is **160 working days** from the transmittal date of this agreement. The contract completion date is **MONTH, DAY, YEAR**. This time includes ten (10) working days for the Contractor to receive, sign and return the contract form along with required bonding and insurance certificates. Failure of the Contractor to provide correct bonding and insurance within the ten (10) working days shall not be grounds for a time extension. Receipt of proper bonding and insurance is a condition precedent to the formation of the contract and if not timely received, may result in forfeiture of the Contractor's bid security. Work may not commence until the Owner issues a written Notice to Proceed and must commence within seven (7) working days thereafter.

## **ARTICLE 3. LIQUIDATED DAMAGES**

Whenever time is mentioned in this contract, time shall be and is of the essence of this contract. The Owner would suffer a loss should the Contractor fail to have the work embraced in this contract fully completed on or before the time above specified. THEREFORE, the parties hereto realize in order to adjust satisfactorily the damages on account of such failure that it might be impossible to compute accurately or estimate the amount of such loss or damages which the Owner would sustain by reason of failure to complete fully said work within the time required by this contract. The Contractor hereby covenants and agrees to pay the Owner, as and for **liquidated damages, the sum of \$1,000** per day for each and every day, Sunday and legal holidays excepted, during which the work remains incomplete and unfinished. Any sum which may be due the Owner for such damages shall be deducted and retained by the Owner from any balance which may be due the Contractor when said work shall have been finished and accepted. But such provisions shall not release the Bond of the Contractor from liability according to its terms. In case of failure to complete, the Owner will be under no obligation to show or prove any actual or specific loss or damage.

**ARTICLE 4. CONTRACT SUM**

The Owner shall pay the Contractor for the prompt, faithful and efficient performance of the conditions and undertakings of this contract, subject to additions, and deductions as provided herein, in current funds the sum of:

Base Bid: \$

Accepted Alternates, if applicable to the Project and accepted by the Owner.

**TOTAL CONTRACT AMOUNT: (\$CONTRACT AMOUNT)**

**UNIT PRICES:** The Owner accepts the following Unit Prices:

For changing specified quantities of work from those indicated by the contract drawings and specifications, upon written instructions of Owner, the following unit prices shall prevail. The unit prices include all labor, overhead and profit, materials, equipment, appliances, bailing, shoring, shoring removal, etc., to cover the finished work of the several kinds of work called for. Only a single unit price shall be given and it shall apply for either MORE or LESS work than that shown on the drawings and called for in the specifications or included in the Base Bid. In the event of more or less units than so indicated or included, change orders may be issued for the increased or decreased amount.

**ARTICLE 5. PREVAILING WAGE RATE**

**MISSOURI PREVAILING WAGE LAW (Sections 290.210 to 290.340, RSMo):** The Contractor shall pay not less than the specified hourly rate of wages, as set out in the wage order attached to and made part of the specifications for work under this contract, to all workers performing work under the contract, in accordance with sections 290.210 to 290.340, RSMo. The Contractor shall forfeit a penalty to the Owner of one hundred dollars per day (or portion of a day) for each worker that is paid less than the specified rates for any work done under the contract by the Contractor or by any subcontractor, in accordance with section 290.250, RSMo.

**DAVIS-BACON ACT:** If this Project is financed in whole or in part from Federal funds (as indicated in the Instructions to Bidders or other bid or contract documents for this Project), then this contract shall be subject to all applicable federal labor statutes, rules and regulations, including provisions of the Davis-Bacon Act, 40 U.S.C. §3141 et seq., and the “Federal Labor Standards Provisions,” as further set forth in Section 007333 – Supplementary General Conditions for Federally Funded/Assisted Construction Projects, which is incorporated into the contract by reference. Where the Missouri Prevailing Wage Law and the Davis-Bacon Act require payment of different wages for work performed under this contract, the Contractor and all Subcontractors shall pay the greater of the wages required under either law, on a classification-by-classification basis.

**ARTICLE 6. MINORITY/WOMEN/SERVICE DISABLED VETERAN BUSINESS ENTERPRISE PARTICIPATION**

The Contractor has been granted a waiver of the 10% MBE and 10% WBE and 3% SDVE participation goals. The Contractor agrees to secure the MBE/WBE/SDVE participation amounts for this project as follows: (OR)

The Contractor has met the MBE/WBE/SDVE participation goals and agrees to secure the MBE/WBE/SDVE participation amounts for this project as follows:

MBE/WBE/SDVE Firm: Subcontract Amt:\$  
MBE/WBE/SDVE Firm: Subcontract Amt:\$  
MBE/WBE/SDVE Firm: Subcontract Amt:\$

Total \$

MBE/WBE/SDVE assignments identified above shall not be changed without a contract change signed by the Owner.

The Director of the Division of Facilities Management, Design and Construction or his Designee shall be the final authority to resolve disputes and disagreements between the Contractor and the MBE/WBE/SDVE firms listed above when such disputes impact the subcontract amounts shown above.

**ARTICLE 7. CONTRACT DOCUMENTS**

The following documents are hereby incorporated into this contract by reference (all division/section numbers and titles are as utilized in the Project Manual published by the Owner for this Project):

1. Division 0 – Procurement and Contracting Information, including, but not limited to:
  - a. Invitation for Bid (Section 001116)
  - b. Instructions to Bidders (Section 002113)
  - c. Supplementary Instructions to Bidders (if applicable) (Section 002213)
  - d. The following documents as completed and executed by the Contractor and accepted by the Owner, if applicable:
    - i. Bid Form (Section 004113)
    - ii. Unit Prices (Section 004322)
    - iii. Proposed Contractors Form (Section 004336)
    - iv. MBE, WBE, SDVE Compliance Evaluation Form(s) (Section 004337)
    - v. MBE, WBE, SDVE Eligibility Determination Form for Joint Ventures (Section 004338)
    - vi. MBE, WBE, SDVE Good Faith Effort (GFE) Determination Form (Section 004339)
    - vii. Missouri Service Disabled Veteran Business Form (Section 004340)
    - viii. Affidavit of Work Authorization (Section 004541)
  - e. Performance and Payment Bond, completed and executed by the Contractor and surety (Section 006113)
  - f. General Conditions (Section 007213)
  - g. Supplementary Conditions (Section 007300)
  - h. Supplementary General Conditions for Federally Funded/Assisted Construction Projects (Section 007333), if applicable
  - i. Wage Rate(s) (Section 007346)
2. Division 1 – General Requirements
3. All Drawings identified in the Project Manual
4. All Technical Specifications included in the Project Manual
5. Addenda, if applicable

**ARTICLE 8 – CERTIFICATION**

By signing this contract, the Contractor hereby re-certifies compliance with all legal requirements set forth in Section 6.0, Bidder’s Certifications of the Bid Form.

By signature below, the parties hereby execute this contract document.

**APPROVED:**

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Crystal Wessing, Interim Director  
 Division of Facilities Management,  
 Design and Construction

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Contractor’s Authorized Signature

I, Corporate Secretary, certify that I am Secretary of the corporation named above and that (CONTRACTOR NAME), who signed said contract on behalf of the corporation, was then (TITLE) of said corporation and that said contract was duly signed for and in behalf of the corporation by authority of its governing body, and is within the scope of its corporate powers.

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*Corporate Secretary*

**SECTION 006113 - PERFORMANCE AND PAYMENT BOND FORM**

KNOW ALL MEN BY THESE PRESENTS, THAT we \_\_\_\_\_

as principal, and \_\_\_\_\_

\_\_\_\_\_ as Surety, are held and firmly bound unto the

STATE OF MISSOURI. in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )

for payment whereof the Principal and Surety bind themselves, their heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

WHEREAS, the Principal has, by means of a written agreement dated the \_\_\_\_\_

day of \_\_\_\_\_, 20\_\_\_\_\_, enter into a contract with the State of Missouri for

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Insert Project Title and Number)

NOW, THEREFORE, if the Principal shall faithfully perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the State of Missouri, with or without notice to the Surety and during the life of any guaranty required under the contract; and shall also faithfully perform and fulfill all undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made with or without notice to the Surety; and shall also promptly make payment for materials incorporated, consumed or used in connection with the work set forth in the contract referred to above, and all insurance premiums, both compensation and all other kinds of insurance, on said work, and for all labor performed on such work, whether by subcontractor or otherwise, at not less than the prevailing hourly rate of wages for work of a similar character (exclusive of maintenance work) 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 (exclusive of maintenance work) in the locality in which the work is performed both as determined by the Department of Labor and Industrial Relations or determined by the Court of Appeal, as provided for in said contract and in any and all duly authorized modifications of said contract that may be hereafter made, with or without notice to the Surety, then, this obligation shall be void and of no effect, but it is expressly understood that if the Principal should make default in or should fail to strictly, faithfully and efficiently do, perform and comply with any or more of the covenants, agreements, stipulations, conditions, requirements or undertakings, as specified in or by the terms of said contract, and with the time therein named, then this obligation shall be valid and binding upon each of the parties hereto and this bond shall remain in full force and effect; and the same may be sued on at the instance of any material man, laborer, mechanic, subcontractor, individual, or otherwise to whom such payment is due, in the name of the State of Missouri, to the use of any such person.

AND, IT IS FURTHER specifically provided that any modifications which may hereinafter be made in the terms of the contract or in the work to be done under it or the giving by the Owner of any extension of the time for the performance of the contract or any other forbearance on the part of either the Owner or the Principal to the other, shall not in any way release the Principal and the Surety, or either or any of them, their heirs, executors, administrators and successors, from their liability hereunder, notice to the Surety of any such extension, modifications or forbearance being hereby waived.

IN WITNESS WHEREOF, the above bounden parties have executed the within instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

**AS APPLICABLE:**

**AN INDIVIDUAL**

Name: \_\_\_\_\_

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

**A PARTNERSHIP**

Name of Partner: \_\_\_\_\_

Signature of Partner: \_\_\_\_\_

Name of Partner: \_\_\_\_\_

Signature of Partner: \_\_\_\_\_

**CORPORATION**

Firm Name: \_\_\_\_\_

Signature of President: \_\_\_\_\_

**SURETY**

Surety Name: \_\_\_\_\_

Attorney-in-Fact: \_\_\_\_\_

Address of Attorney-in-Fact: \_\_\_\_\_

Telephone Number of Attorney-in-Fact: \_\_\_\_\_

Signature Attorney-in-Fact: \_\_\_\_\_

**NOTE:** Surety shall attach Power of Attorney



STATE OF MISSOURI  
 OFFICE OF ADMINISTRATION  
 DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION  
**PRODUCT SUBSTITUTION REQUEST**

PROJECT NUMBER

PROJECT TITLE AND LOCATION

CHECK APPROPRIATE BOX

- SUBSTITUTION PRIOR TO BID OPENING**  
 (Minimum of (5) working days prior to receipt of Bids as per Article 4 – Instructions to Bidders)
- SUBSTITUTION FOLLOWING AWARD**  
 (Maximum of (20) working days from Notice to Proceed as per Article 3 – General Conditions)

FROM: BIDDER/CONTRACTOR (PRINT COMPANY NAME)

TO: ARCHITECT/ENGINEER (PRINT COMPANY NAME)

Bidder/Contractor hereby requests acceptance of the following product or systems as a substitution in accordance with provisions of Division One of the Bidding Documents:

SPECIFIED PRODUCT OR SYSTEM

SPECIFICATION SECTION NO.

SUPPORTING DATA

- Product data for proposed substitution is attached (include description of product, standards, performance, and test data)
- Sample                       Sample will be sent, if requested

**QUALITY COMPARISON**

	SPECIFIED PRODUCT	SUBSTITUTION REQUEST
NAME, BRAND		
CATALOG NO.		
MANUFACTURER		
VENDOR		

**PREVIOUS INSTALLATIONS**

PROJECT	ARCHITECT/ENGINEER	DATE INSTALLED
LOCATION		

**SIGNIFICANT VARIATIONS FROM SPECIFIED PRODUCT**

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**REASON FOR SUBSTITUTION**

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**DOES PROPOSED SUBSTITUTION AFFECT OTHER PARTS OF WORK?**

YES       NO

IF YES, EXPLAIN

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**SUBSTITUTION REQUIRES DIMENSIONAL REVISION OR REDESIGN OF STRUCTURE OR A/E WORK**

YES       NO

**BIDDER'S/CONTRACTOR'S STATEMENT OF CONFORMANCE OF PROPOSED SUBSTITUTION TO CONTRACT REQUIREMENT:**

We have investigated the proposed substitution. We believe that it is equal or superior in all respects to specified product, except as stated above; that it will provide the same Warranty as specified product; that we have included complete implications of the substitution; that we will pay redesign and other costs caused by the substitution which subsequently become apparent; and that we will pay costs to modify other parts of the Work as may be needed, to make all parts of the Work complete and functioning as a result of the substitution.

BIDDER/CONTRACTOR	DATE
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**REVIEW AND ACTION**

Resubmit Substitution Request with the following additional information:

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Substitution is accepted.

Substitution is accepted with the following comments:

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Substitution is not accepted.

ARCHITECT/ENGINEER	DATE
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STATE OF MISSOURI  
 OFFICE OF ADMINISTRATION  
 DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION  
**FINAL RECEIPT OF PAYMENT AND RELEASE**

PROJECT NUMBER

KNOW ALL MEN BY THESE PRESENT THAT: hereinafter called "Subcontractor" who heretofore entered into an agreement with hereinafter called "Contractor", for the performance of work and/or furnishing of material for the construction of the project entitled

(PROJECT TITLE, PROJECT LOCATION, AND PROJECT NUMBER)

at

(ADDRESS OF PROJECT)

for the State of Missouri (Owner) which said subcontract is by this reference incorporated herein, in consideration of such final payment by Contractor.

DOES HEREBY:

1. ACKNOWLEDGE that they have been **PAID IN FULL** all sums due for work and materials contracted or done by their Subcontractors, Material Vendors, Equipment and Fixture Suppliers, Agents and Employees, or otherwise in the performance of the Work called for by the aforesaid Contract and all modifications or extras or additions thereto, for the construction of said project or otherwise.
2. RELEASE and fully, finally, and forever discharge the Owner from any and all suits, actions, claims, and demands for payment for work performed or materials supplied by Subcontractor in accordance with the requirements of the above referenced Contract.
1. REPRESENT that all of their Employees, Subcontractors, Material Vendors, Equipment and Fixture Suppliers, and everyone else has been **paid in full** all sums due them, or any of them, in connection with performance of said Work, or anything done or omitted by them, or any of them in connection with the construction of said improvements, or otherwise.

DATED this        day of        , 20    .

NAME OF SUBCONTRACTOR

BY (TYPED OR PRINTED NAME)

SIGNATURE

TITLE

ORIGINAL: FILE/Closeout Documents



STATE OF MISSOURI  
 OFFICE OF ADMINISTRATION  
 DIVISION OF FACILITIES MANAGEMENT,  
 DESIGN AND CONSTRUCTION

**MBE/WBE/SDVE PROGRESS REPORT**

Remit with ALL Progress and Final Payments

(Please check appropriate box) CONSULTANT CONSTRUCTION

PAY APP NO.	PROJECT NUMBER
CHECK IF FINAL <input type="checkbox"/> <b>FINAL</b>	DATE

PROJECT TITLE

PROJECT LOCATION

FIRM

ORIGINAL CONTRACT SUM (Same as Line Item 1. on Form A of Application for Payment) \$	TOTAL CONTRACT SUM TO DATE (Same as Line Item 3. on Form A of Application for Payment) \$
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THE TOTAL MBE/WBE/SDVE PARTICIPATION DOLLAR AMOUNT OF THIS PROJECT AS INDICATED IN THE ORIGINAL CONTRACT: \$

SELECT MBE, WBE, SDVE	ORIGINAL CONTRACT PARTICIPATION AMOUNT	PARTICIPATION AMOUNT PAID-TO-DATE (includes approved contract changes)	CONSULTANT/SUBCONSULTANT OR CONTRACTOR/SUBCONTRACTOR/SUPPLIER COMPANY NAME
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	
<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> SDVE	\$	\$	

Revised 06/2023

## INSTRUCTIONS FOR MBE/WBE/SDVE PROGRESS REPORT

### CONTRACTOR OR CONSULTANT TO FILL OUT AND REMIT WITH EACH PAY APPLICATION:

The MBE/WBE/SDVE Progress Report for the project is issued with the contract comprising values reported in the consultant's Proposal or on the successful contractor's Section 004337 Compliance Evaluation Forms.

At Initial Pay Application fill in the following:

1. Pay App No. Start with 1.
2. Fill in the Project Number and Date.
3. Enter Project Title, Project Location, and Firm.
4. Fill in the "Original Contract Sum" and "Total Contract Sum To Date" (Reference applicable Line Items on Form A of Application for Payment).
5. Indicate the Total Participation Dollar Amount from the Original Contract.
6. Select MBE, WBE, or SDVE for each Consultant/Subconsultant or Contractor/Subcontractor/Supplier.
7. Enter the "Total Amount of Subcontract", "\$ Amount (Paid-To-Date)", and Company Name.

For all subsequent Pay Applications fill in the following:

1. Pay App No.
2. If Final Pay App, check box.
3. Fill in the Project Number and Date.
4. Enter Project Title, Project Location, and Firm
5. At each Pay App fill in the "Original Contract Sum" and "Total Contract Sum To Date" (reference applicable Line Items on Form A of Application for Payment).
6. Indicate the Total Participation Dollar Amount from the Original Contract.
7. Select MBE, WBE, or SDVE for each Consultant/Subconsultant or Contractor/Subcontractor/Supplier
8. Enter the "Total Amount of Subcontract", "\$ Amount (Paid-To-Date)", and Company Name.



STATE OF MISSOURI  
 OFFICE OF ADMINISTRATION  
 DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION  
**AFFIDAVIT – COMPLIANCE WITH PREVAILING WAGE LAW**

PROJECT NUMBER

Before me, the undersigned Notary Public, in and for the County of \_\_\_\_\_

State of \_\_\_\_\_ personally came and appeared \_\_\_\_\_

(NAME)

of the \_\_\_\_\_

(POSITION)

(NAME OF THE COMPANY)

(a corporation) (a partnership) (a proprietorship) and after being duly sworn did depose and say that all provisions and requirements set out in Chapter 290, Sections 290.210 through and including 290.340, Missouri Revised Statutes, pertaining to the payment of wages to workmen employed on public works project have been fully satisfied and there has been no exception to the full and completed compliance with said provisions and requirements

and with Wage Determination No: \_\_\_\_\_ issued by the

Department of Labor and Industrial Relations, State of Missouri on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

in carrying out the contract and working in connection with \_\_\_\_\_

(NAME OF PROJECT)

Located at \_\_\_\_\_ in \_\_\_\_\_ County

(NAME OF THE INSTITUTION)

Missouri, and completed on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

SIGNATURE

**NOTARY INFORMATION**

NOTARY PUBLIC EMBOSSER OR BLACK INK RUBBER STAMP SEAL

STATE

COUNTY (OR CITY OF ST. LOUIS)

SUBSCRIBED AND SWORN BEFORE ME, THIS

DAY OF

YEAR

**USE RUBBER STAMP IN CLEAR AREA BELOW**

NOTARY PUBLIC SIGNATURE

MY COMMISSION EXPIRES

NOTARY PUBLIC NAME (TYPED OR PRINTED)

# GENERAL CONDITIONS

## INDEX

### ARTICLE:

#### 1. General Provisions

- 1.1. Definitions
- 1.2. Drawings and Specifications
- 1.3. Compliance with Laws, Permits, Regulations and Inspections
- 1.4. Nondiscrimination in Employment
- 1.5. Anti-Kickback
- 1.6. Patents and Royalties
- 1.7. Preference for American and Missouri Products and Services
- 1.8. Communications
- 1.9. Separate Contracts and Cooperation
- 1.10. Assignment of Contract
- 1.11. Indemnification
- 1.12. Disputes and Disagreements

#### 2. Owner/Designer Responsibilities

#### 3. Contractor Responsibilities

- 3.1. Acceptable Substitutions
- 3.2. Submittals
- 3.3. As-Built Drawings
- 3.4. Guaranty and Warranties
- 3.5. Operation and Maintenance Manuals
- 3.6. Other Contractor Responsibilities
- 3.7. Subcontracts

#### 4. Changes in the Work

- 4.1. Changes in the Work
- 4.2. Changes in Completion Time

#### 5. Construction and Completion

- 5.1. Construction Commencement
- 5.2. Project Construction
- 5.3. Project Completion
- 5.4. Payments

#### 6. Bond and Insurance

#### 6.1. Bond

#### 6.2. Insurance

#### 7. Termination or Suspension of Contract

#### 7.1. For Site Conditions

#### 7.2. For Cause

#### 7.3. For Convenience

## SECTION 007213 - GENERAL CONDITIONS

- A. These General Conditions apply to each section of these specifications. The Contractor is subject to the provisions contained herein.
- B. The General Conditions are intended to define the relationship of the Owner, the Designer and the Contractor thereby establishing certain rules and provisions governing the operation and performance of the work so that the work may be performed in a safe, orderly, expeditious and workmanlike manner.

## ARTICLE 1 – GENERAL PROVISIONS

### ARTICLE 1.1 - DEFINITIONS

As used in these contract documents, the following terms shall have the meanings and refer to the parties designated in these definitions.

1. **"COMMISSIONER"**: The Commissioner of the Office of Administration.
2. **"CONSTRUCTION DOCUMENTS"**: The "Construction Documents" shall consist of the Project Manual, Drawings and Addenda.
3. **"CONSTRUCTION REPRESENTATIVE:"** Whenever the term "Construction Representative" is used, it shall mean the Owner's Representative at the work site.
4. **"CONTRACTOR"**: Party or parties who have entered into a contract with the Owner to furnish work under these specifications and drawings.
5. **"DESIGNER"**: When the term "Designer" is used herein, it shall refer to the Architect, Engineer, or Consultant of Record specified and defined in Paragraph 2.0 of the Supplemental Conditions, or his duly authorized representative. The Designer may be either a consultant or state employee.
6. **"DIRECTOR"**: Whenever the term "Director" is used, it shall mean the Director of the Division of Facilities Management, Design and Construction or his Designee, representing the Office of Administration, State of Missouri. The Director is the agent of the Owner.
7. **"DIVISION"**: Shall mean the Division of Facilities Management, Design and Construction, State of Missouri.
8. **"INCIDENTAL JOB BURDENS"**: Shall mean those expenses relating to the cost of work, incurred either in the home office or on the job-site, which are necessary in the course of doing business but are incidental to the job. Such costs include office supplies and equipment, postage, courier services, telephone expenses including long distance, water and ice and other similar expenses.
9. **"JOINT VENTURE"**: An association of two (2) or more businesses to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills and knowledge.
10. **"OWNER"**: Whenever the term "Owner" is used, it shall mean the State of Missouri. Acting by and through the Office of Administration, Division of Facilities Management, Design and Construction.
11. **"PROJECT"**: Wherever the term "Project" is used, it shall mean the work required to be completed by the construction contract.
12. **"PROJECT MANUAL"**: The "Project Manual" shall consist of Introductory Information, Invitation for Bid, Instructions to Bidders, Bid Documents, Additional Information, Standard Forms, General Conditions, Supplemental General Conditions, General Requirements and Technical Specifications.
13. **"SUBCONTRACTOR"**: Party or parties who contract under, or for the performance of part or this entire Contract between the Owner and Contractor. The subcontract may or may not be direct with the Contractor.
14. **"WORK"**: All supervision, labor, materials, tools, supplies, equipment, and any incidental operations and/or activities required by or reasonably inferable from the Contract Documents necessary to construct the Project and to produce the results intended by the Contract Documents in a safe, expeditious, orderly, and workmanlike manner so that the project shall be complete and finished in the best manner known to each respective trade.
15. **"WORKING DAYS"**: are all calendar days except Saturdays, Sundays and the following holidays: New Year's Day, Martin Luther King, Jr. Day, Lincoln Day, Washington's Birthday (observed), Truman Day, Memorial Day, Juneteenth, Independence Day, Labor Day, Columbus Day, Veterans Day (observed), Thanksgiving Day, Christmas Day.

## ARTICLE 1.2 DRAWINGS AND SPECIFICATIONS

- A. In case of discrepancy between drawings and specifications, specifications shall govern. Should discrepancies in architectural drawings, structural drawings and mechanical drawings occur, architectural drawings shall govern and, in case of conflict between structural and mechanical drawings, structural drawings shall govern.
- B. Specifications are separated into titled divisions for convenience of reference only and to facilitate letting of contracts and subcontracts. The Contractor is responsible for establishing the scope of work for subcontractors, which may cross titled divisions. Neither the Owner nor Designer will establish limits and jurisdiction of subcontracts.
- C. Figured dimensions take precedence over scaled measurements and details over smaller scale general drawings. In the event of conflict between any of the documents contained within the contract, the documents shall take precedence and be controlling in the following sequence: addenda, supplementary general conditions, general conditions, division 1 specifications, technical division specifications, drawings, bid form and instructions to bidders.
- D. Anything shown on drawings and not mentioned in these specifications or vice versa, as well as any incidental work which is obviously necessary to complete the project within the limits established by the drawings and specifications, although not shown on or described therein, shall be performed by the Contractor at no additional cost as a part of his contract.
- E. Upon encountering conditions differing materially from those indicated in the contract documents, the Contractor shall promptly notify the Designer and Construction Representative in writing before such conditions are disturbed. The Designer shall promptly investigate said conditions and report to the Owner, with a recommended course of action. If conditions do materially differ and cause an increase or decrease in contract cost or time required for completion of any portion of the work, a contract change will be initiated as outlined in Article 4 of these General Conditions.
- E. Only work included in the contract documents is authorized, and the Contractor shall do no work other than that described therein or in accordance with appropriately authorized and approved contract changes.

## ARTICLE 1.3 - COMPLIANCE WITH LAWS, PERMITS, REGULATIONS AND INSPECTIONS

- A. Since the Owner is the State of Missouri, municipal or political subdivisions, zoning ordinances, construction codes (other than licensing of trades), and other like ordinances are not applicable to construction on Owner's property, and Contractor will not be required to submit drawings and specifications to any municipal or political subdivision, authority, obtain construction permits or any other licenses (other than licensing of trades) or permits from or submit to inspections by any municipality or political subdivision relating to the construction for this project. All permits or licenses required by municipality or political subdivision for operation on property not belonging to Owner shall be obtained by and paid for by Contractor. Each Contractor shall comply with all applicable laws, ordinances, rules and regulations that pertain to the work of this contract.
- B. Contractors, subcontractors and their employees engaged in the businesses of electrical, mechanical, plumbing, carpentry, sprinkler system work, and other construction related trades shall be licensed to perform such work by the municipal or political subdivision where the project is located, if such licensure is required by local code. Local codes shall dictate the level (master, journeyman, and apprentice) and the number, type and ratio of licensed tradesmen required for this project within the jurisdiction of such municipal or political subdivision.
- C. Equipment and controls manufacturers and their authorized service and installation technicians that do not maintain an office within the jurisdiction of the municipal or political subdivision but are a listed or specified contractor or subcontractor on this project are exempt from Paragraph 1.3 B above.
- D. The Contractor shall post a copy of the wage determination issued for the project and included as a part of the contract documents, in a prominent and easily accessible location at the site of construction for the duration of the project.
- E. Any contractor or subcontractor to such contractor at any tier signing a contract to work on this project shall provide a ten-hour Occupational Safety and Health Administration (OSHA) construction safety program for their on-site employees which includes a course in construction safety and health approved by OSHA or a similar program approved by the Department of Labor and Industrial Relations which is at least as stringent as an approved OSHA program. The contractor shall forfeit as a penalty to the public body on whose

behalf the contract is made or awarded, two thousand five hundred dollars plus one hundred dollars for each employee employed by the contractor or subcontractor, for each calendar day, or portion thereof, such employee is employed without the required training.

#### **ARTICLE 1.4 - NONDISCRIMINATION IN EMPLOYMENT**

A. The Contractor and his subcontractors will not discriminate against individuals based on race, color, religion, national origin, sex, disability, or age, but may use restrictions which relate to bona fide occupational qualifications. Specifically, the Contractor and his subcontractors shall not discriminate:

1. Against recipients of service on the basis of race, color, religion, national origin, sex, disability or age.
2. Against any employee or applicant, for employment on the basis of race, color, religion, national origin, sex or otherwise qualified disability status.
3. Against any applicant for employment or employee on the basis of age, where such applicant or employee is between ages 40 and 70 and where such Contractor employs at least 20 persons.
4. Against any applicant for employment or employee on the basis of that person's status as a disabled or Vietnam-era veteran.

The Contractor and his Subcontractors will ensure applicants for employment and employees are treated equally without regard to race, color, religion, national origin, sex, disability, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion and transfer; recruitment or recruitment advertising; and selection for training, including apprenticeship. The Contractor and his Subcontractors will give written notice of their commitments under this clause to any labor union with which they have bargaining or other agreements under this clause to any labor union with which they have bargaining or other agreements.

B. In the event of the Contractor's or his subcontractor's noncompliance with any provisions of this Article of the Contract, the Owner may cancel this contract in whole or in part or require the Contractor to terminate his contract with the subcontractor.

#### **ARTICLE 1.5 - ANTI-KICKBACK**

No employee of the division, shall have or acquire any pecuniary interest, whether direct or indirect, in this contract or in any part hereof. No officer, employee, designer, attorney, or administrator of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall have or acquire any pecuniary interest, whether direct or indirect, in this contract, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

#### **ARTICLE 1.6 - PATENTS AND ROYALTIES**

A. The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liabilities of any nature or kind, including cost and expenses, for, or on account of, any patented or unpatented invention, process, article or appliance manufactured or used in the performance of this contract, including its use by the Owner, unless otherwise specifically stipulated in the contract documents.

B. If the Contractor uses any design, device or materials covered by letters, patent or copyright, the Contractor shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device or material. It is mutually agreed and understood, without exception, that the contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The Contractor and/or his sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials or any trademark or copyright in connection with work agreed to be performed under this contract and shall indemnify the Owner for any cost, expense or damage it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

## **ARTICLE 1.7 - PREFERENCE FOR AMERICAN AND MISSOURI PRODUCTS AND SERVICES**

- A. By virtue of statutory authority a preference will be given to Missouri labor and to products of mines, forests and quarries of the state of Missouri when they are found in marketable quantities in the state, and all such materials shall be of the best quality and suitable character that can be obtained at reasonable market prices, all as provided for in Section 8.280, Missouri Revised Statutes and Cumulative Supplements.
- B. Furthermore, pursuant to Section 34.076 Missouri Revised Statutes and Cumulative Supplements, a preference shall be given to those persons doing business as Missouri firms, corporations, or individuals, or which maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less. In addition, in order for a non-domiciliary 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 non-domiciliary state.
- C. In accordance with the Missouri Domestic Products Procurement Act Section 34.350 RSMo and Cumulative Supplements any manufactured goods or commodities used or supplied in the performance of this contract or any subcontract thereto shall be manufactured, assembled or produced in the United States, unless the specified products are not manufactured, assembled or produced in the United States in sufficient quantities to meet the agency's requirements or cannot be manufactured, assembled or produced in the United States within the necessary time in sufficient quantities to meet the contract requirements, or if obtaining the specified products manufactured, assembled or produced in the United States would increase the cost of this contract for purchase of the product by more than ten percent.

## **ARTICLE 1.8 - COMMUNICATIONS**

- A. All notices, requests, instructions, approvals, and claims must be in writing and shall be delivered to the Designer and copied to the Construction Representative for the project except as required by Article 1.12 Disputes and Disagreements, or as otherwise specified by the Owner in writing as stated in Section 012600. Any such notice shall be deemed to have been given as of the time of actual receipt.
- B. The Contractor shall attend on-site progress and coordination meetings, as scheduled by the Construction Representative, no less than once a month.

- C. The Contractor shall ensure that major subcontractors and suppliers shall attend monthly progress meetings as necessary to coordinate the work, and as specifically requested by the Construction Representative.

## **ARTICLE 1.9 - SEPARATE CONTRACTS AND COOPERATION**

- A. The Owner reserves the right to let other contracts in connection with this work. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate his work with theirs.
- B. The Contractor shall consult the drawings for all other contractors in connection with this work. Any work conflicting with the above shall be brought to the attention of the Owner's Representative before the work is performed. If the Contractor fails to do this, and constructs any work which interferes with the work of another contractor, the Contractor shall remove any part so conflicting and rebuild same, as directed by the Owner's Representative at no additional cost to the Owner.
- C. Each contractor shall be required to coordinate his work with other contractors so as to afford others reasonable opportunity for execution of their work. No contractor shall delay any other contractor by neglecting to perform contract work at the proper time. If any contractor causes delay to another, they shall be liable directly to that contractor for such delay in addition to any liquidated damages which might be due the Owner.
- D. Should the Contractor or project associated subcontractors refuse to cooperate with the instructions and reasonable requests of other Contractors or other subcontractors in the overall coordinating of the work, the Owner may take such appropriate action and issue directions, as required, to avoid unnecessary and unwarranted delays.
- E. Each Contractor shall be responsible for damage done to Owner's or other Contractor's property by him/her or workers in his employ through their fault or negligence.
- F. Should a Contractor sustain any damage through any act or omission of any other Contractor having a contract with the Owner, the Contractor so damaged shall have no claim or cause of action against the Owner for such damage, but shall have a claim or cause of action against the other Contractor to recover any and all damages sustained by reason of the acts or omissions of such Contractor. The phrase "acts or omissions" as used in this section shall be defined to include, but

not be limited to, any unreasonable delay on the part of any such contractors.

#### **ARTICLE 1.10 - ASSIGNMENT OF CONTRACT**

- A. No assignment by Contractor of any amount or any part of this contract or of the funds to be received there under will be recognized unless such assignment has had the written approval of the Director and the surety has been given due notice of such assignment and has furnished written consent thereto. In addition to the usual recitals in assignment contracts, the following language must be set forth: "It is agreed that the funds to be paid to the assignee under this assignment are subject to performance by the Contractor of this contract and to claims or liens for services rendered or materials supplied for the performance of the work called for in said contract in favor of all persons, firms or corporations rendering such services or supplying such materials."

#### **ARTICLE 1.11 - INDEMNIFICATION**

- A. Contractor agrees to indemnify and save harmless Owner and its respective commissioners, officers, officials, agents, consultants and employees and Designer, their agents, servants and employees, from and against any and all liability for damage arising from injuries to persons or damage to property occasioned by any acts or omissions of Contractor, any subcontractors, agents, servants or employees, including any and all expense, legal or otherwise, which may be incurred by Owner or Designer, its agents, servants or employees, in defense of any claim, action or suit.
- B. The obligations of the Contractor under this paragraph shall not extend to the liability of the Designer, his agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, contract changes, design or specifications, or (2) giving of or the failure to give directions or instructions by the Designer, his agents or employees as required by this contract documents provided such giving or failure to give is the primary cause of the injury or damage.

#### **ARTICLE 1.12 - DISPUTES AND DISAGREEMENTS**

It is hereby expressly agreed and understood that in case any controversy or difference of opinion arises during construction, best efforts will be given to resolution at the field level. Should those efforts be unsuccessful, the Contractor has the right to appeal in writing, the decision of the Director's Designee to the Director at Room 730 Truman Building, P.O. Box 809, Jefferson City, Missouri 65102. The decision of the Director shall be final and binding on all parties.

#### **ARTICLE 2 -- OWNER/DESIGNER RESPONSIBILITIES**

- A. The Owner shall give all orders and directions contemplated under this contract relative to the execution of the work. During progress of work the Owner will be represented at the project site by the Construction Representative and/or Designer, whose responsibilities are to see that this contract is properly fulfilled.
- B. The Owner shall at all times have access to the work whenever it is in preparation or progress. The Contractors shall provide proper facilities for such access and for inspection and supervision.
- C. All materials and workmanship used in the work shall be subject to the inspection of the Designer and Construction Representative, and any work which is deemed defective shall be removed, rebuilt or made good immediately upon notice. The cost of such correction shall be borne by the Contractor. Contractor shall not be entitled to an extension of the contract completion date in order to remedy defective work. All rejected materials shall be immediately removed from the site of the work.
- D. If the Contractor fails to proceed at once with the correction of rejected defective materials or workmanship, the Owner may, by separate contract or otherwise, have the defects remedied or rejected. Materials removed from the site and charge the cost of the same against any monies which may be due the Contractor, without prejudice to any other rights or remedies of the Owner.
- E. Failure or neglect on the part of Owner to observe faulty work, or work done which is not in accordance with the drawings and specifications shall not relieve the Contractor from responsibility for correcting such work without additional compensation.
- F. The Owner shall have the right to direct the Contractor to uncover any completed work.
  - 1. If the Contractor fails to adequately notify the Construction Representative and/or Designer of an inspection as required by the Contract Documents, the Contractor shall, upon written request, uncover the work. The Contractor shall bear all costs associated with uncovering and again covering the work exposed.
  - 2. If the Contractor is directed to uncover work, which was not otherwise required by the Contract Documents to be inspected, and the work is found to be defective in any respect, no compensation shall be allowed for this work. If, however, such work is found to meet

the requirements of this contract, the actual cost of labor and material necessarily involved in the examination and replacement plus 10% shall be allowed the Contractor.

- G. The Designer shall give all orders and directions contemplated under this contract relative to the scope of the work and shall give the initial interpretation of the contract documents.
- H. The Owner may file a written notice to the Contractor to dismiss immediately any subcontractors, project managers, superintendents, foremen, workers, watchmen or other employees whom the Owner may deem incompetent, careless or a hindrance to proper or timely execution of the work. The Contractor shall comply with such notice as promptly as practicable without detriment to the work or its progress.
- I. If in the Owner's judgment it becomes necessary at any time to accelerate work, when ordered by the Owner in writing, the Contractor shall redirect resources to such work items and execute such portions of the work as may be required to complete the work within the current approved contract schedule.

### **ARTICLE 3 -- CONTRACTOR RESPONSIBILITIES**

The Contractor shall register and utilize the Owner's eBuilder digital project management system for submission of documents described in the following sections. This includes but is not limited to submittals as required by designer, payment applications, Request for Information (RFI), construction change orders, Request for Proposals (RFP), Designer Supplemental Instructions (DSI), etc.

#### **ARTICLE 3.1 -- ACCEPTABLE SUBSTITUTIONS**

- A. The Contractor may request use of any article, device, product, material, fixture, form or type of construction which in the judgment of the Owner and Designer is equal in all respects to that named. Standard products of manufacturers other than those specified will be accepted when, prior to the ordering or use thereof, it is proven to the satisfaction of the Owner and Designer that they are equal in design, strength, durability, usefulness and convenience for the purpose intended.
- B. Any changes required in the details and dimensions indicated on the drawings for the substitution of products other than those specified shall be properly made at the expense of the Contractor requesting the substitution or change.
- C. The Contractor shall submit a request for such substitutions in writing to the Owner and Designer within twenty (20) working days after the date of

the "Notice to Proceed." Thereafter no consideration will be given to alternate forms of accomplishing the work. This Article does not preclude the Owner from exercising the provisions of Article 4 hereof.

- D. Any request for substitution by the Contractor shall be submitted in accordance with SECTION 002113 - INSTRUCTIONS TO BIDDERS.
- E. When a material has been approved, no change in brand or make will be permitted unless:
  - 1. Written verification is received from the manufacturer stating they cannot make delivery on the date previously agreed, or
  - 2. Material delivered fails to comply with contract requirements.

#### **ARTICLE 3.2 -- SUBMITTALS**

- A. The Contractor's submittals must be submitted with such promptness as to allow for review and approval so as not to cause delay in the work. The Contractor shall coordinate preparation and processing of submittals with performance of construction activities.

Coordinate each submittal with fabrication, = purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

Submit four (4) copies to the Designer and additional copies as required for the subcontractors and material suppliers. Also provide copies to meet the requirements for maintenance manuals.

- B. All subcontractors' shop drawings and schedules shall be submitted by the Contractor and shall bear evidence that Contractor has received, reviewed, and approved them. Any shop drawings and schedules submitted without this evidence will be returned to the Contractor for resubmission.
- C. The Contractor shall include with the shop drawing, a letter indicating any and all deviations from the drawings and/or specifications. Failure to notify the Designer of such deviations will be grounds for subsequent rejection of the related work or materials. If, in the opinion of the Designer, the deviations are not acceptable, the Contractor will be required to furnish the item as specified and indicated on the drawings.
- D. The Designer shall check shop drawings and schedules with reasonable promptness and approve them only if they conform to the design concept of the project and comply with the information given in the contract documents. The approval shall not relieve the Contractor from the responsibility to comply with the drawings and specifications, unless the Contractor has called the Designer's attention to the deviation, in writing, at the time of

submission and the Designer has knowingly approved thereof. An approval of any such modification will be given only under the following conditions:

1. It is in the best interest of the Owner
  2. It does not increase the contract sum and/or completion time
  3. It does not deviate from the design intent
  4. It is without prejudice to any and all rights under the surety bond.
- E. No extension of time will be granted because of the Contractor's failure to submit shop drawings and schedules in ample time to allow for review, possible resubmission, and approval. Fabrication of work shall not commence until the Contractor has received approval. The Contractor shall furnish prints of approved shop drawings and schedules to all subcontractors whose work is in any way related to the work under this contract. Only prints bearing this approval will be allowed on the site of construction
- F. The Contractor shall maintain a complete file on-site of approved shop drawings available for use by the Construction Representative.

#### **ARTICLE 3.3 – AS-BUILT DRAWINGS**

- A. The Contractor shall update a complete set of the construction drawings, shop drawings and schedules of all work monthly by marking changes, and at the completion of their work (prior to submission of request for final payment) note all changes and turn the set over to the Construction Representative. The updates shall show all addenda, all field changes that were made to adapt to field conditions, changes resulting from contract changes or supplemental instructions, and all locations of structures, buried installations of piping, conduit, and utility services. All buried and concealed items both inside and outside shall be accurately located as to depth and referenced to permanent features such as interior or exterior wall faces and dimensions shall be given in a neat and legible manner in a contrasting colored pencil or ink. If approved by the Designer, an electronic file format may be provided.

#### **ARTICLE 3.4 – GUARANTY AND WARRANTIES**

- A. General Guaranty
1. Neither the final certificate of payment nor any provision in the contract documents nor partial use or occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with contract requirements.

2. The Contractor or surety shall remedy any defects in the work and pay for any damage to property resulting there from which shall appear within a period of one (1) year from the date of substantial completion unless a longer period is otherwise specified or a differing guaranty period has been established in the substantial completion certificate. The Owner will give notice of observed defects with reasonable promptness.
3. In case of default on the part of the Contractor in fulfilling this part of this contract, the Owner may correct the work or repair the damage and the cost and expense incurred in such event shall be paid by or recoverable from the Contractor or surety.
4. The work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's guaranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment

#### **B. Extended Warranty**

Manufacturer's certificates of warranty shall be obtained for all major equipment. Warranty shall be obtained for at least one year. Where a longer period is offered at no additional cost or called for in the specific equipment specifications, the longer period shall govern.

#### **ARTICLE 3.5 -- OPERATION AND MAINTENANCE MANUALS**

- A. Immediately after equipment submittals are approved and no later than ten (10) working days prior to the substantial completion inspection, the Contractor shall provide to the Designer three (3) copies of operating instructions and service manuals, containing the following:
1. Start-up and Shut-down Procedures: Provide a step-by-step write up of all major equipment. When manufacturer's printed start-up, trouble shooting and shut-down procedures are available; they may be incorporated into the operating manual for reference.

2. Operating Instructions: Written operating instructions shall be included for the efficient and safe operation of all equipment.
  3. Equipment List: List of all major equipment as installed shall be prepared to include model number, capacities, flow rate, name plate data, shop drawings and air and water balance reports.
  4. Service Instructions: Provide the following information for all pieces of equipment.
    - a. Recommended spare parts including catalog number and name of local supplier or factory representative.
    - b. Belt sizes, types, and lengths.
    - c. Wiring diagrams.
  5. Manufacturer's Certificate of Warranty as described in Article 3.4.
  6. Prior to the final payment, furnish to the Designer three (4) copies of parts catalogs for each piece of equipment furnished by him/her on the project with the components identified by number for replacement ordering.
- B. Submission of operating instructions shall be done in the following manner.
1. Manuals shall be in quadruplicate, and all materials shall be bound into volumes of standard 8½" x 11" hard binders. Large drawings too bulky to be folded into 8½" x 11" shall be separately bound or folded and in envelopes, cross referenced and indexed with the manuals.
  2. The manuals shall identify project name, project number, and include the name and address of the Contractor, subcontractors and manufacturers who were involved with the activity described in that particular manual.
  3. Internally subdivide the binder contents with permanent page dividers, logically organized with tab titles clearly printed under reinforced laminated plastic tabs.
  4. Contents: Prepare a Table of Contents for each volume, with each product or system description identified.

**ARTICLE 3.6 – OTHER CONTRACTOR RESPONSIBILITIES**

- A. The Contractor shall keep on site, during progress of the work, a competent superintendent satisfactory to the Construction Representative. The superintendent shall represent the Contractor and all agreements made by the superintendent shall be binding. The superintendent shall

- carefully study and compare all drawings, specifications and other instructions and shall promptly notify the Construction Representative and Designer, in writing, any error, inconsistency or omission which may be discovered. The superintendent shall coordinate all work on the project. Any change of the superintendent shall be approved by the Construction Representative.
- B. Contractor shall, at all times, enforce strict discipline and good order among his employees, and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him/her.
  - C. The Contractor shall supply sufficient labor, material, plant and equipment and pay when due any laborer, subcontractor or supplier for supplies furnished and otherwise prosecute the work with diligence to prevent work stoppage and ensure completion thereof within the time specified.
  - D. The Contractor and each of his subcontractors shall submit to the Construction Representative, through the Designer such schedules of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under this contract.
  - E. The Contractor, subcontractors, and material suppliers shall upon written request, give the Owner access to all time cards, material invoices, payrolls, estimates, profit and loss statements, and all other direct or indirect costs related to this work.
  - F. The Contractor shall be responsible for laying out all contract work such as layout of architectural, structural, mechanical and electrical work, which shall be coordinated with layouts of subcontractors for general construction work. The Contractor is also responsible for unloading, uncrating and handling of all materials and equipment to be erected or placed by him/her, whether furnished by Contractor or others. No extra charges or compensation will be allowed as a result of failure to verify dimensions before ordering materials or fabricating items.
  - G. The Contractor must notify the Construction Representative at least one working day before placing concrete or burying underground utilities, pipelines, etc.
  - H. Contractors shall prearrange time with the Construction Representative for the interruption of any facility operation. Unless otherwise specified in these documents, all connections, alterations or relocations as well as all other portions of the work will be performed during normal working hours.

- I. The Contractor shall coordinate all work so there will not be prolonged interruptions of existing equipment operation. Any existing plumbing, heating, ventilating, air conditioning or electrical disconnections necessary for the project, which affect portions of this construction or building or any other building must be scheduled with the Construction Representative to minimize or avoid any disruption of facility operations. In no case, unless previously approved in writing by the Construction Representative, shall utilities be left disconnected at the end of a work day or over a weekend. Any interruption of utilities either intentionally or accidentally shall not relieve the Contractor responsible for the interruption from the responsibility to repair and restore the utility to normal service. Repairs and restoration shall be made before the workers responsible for the repair and restoration leave the job.
- J. Contractors shall limit operations and storage of materials to the area within the project, except as necessary to connect to existing utilities, and shall not encroach on neighboring property. The Contractor shall be responsible for repair of their damage to property on or off the project site occurring during construction of project. All such repairs shall be made to the satisfaction of the property owner.
- K. Unless otherwise permitted, all materials shall be new and both workmanship and materials shall be of the best quality.
- L. Unless otherwise provided and stipulated within these specifications, the Contractor shall furnish, construct, and/or install and pay for materials, devices, mechanisms, equipment, all necessary personnel, utilities including, but not limited to water, heat, light and electric power, transportation services, applicable taxes of every nature, and all other facilities necessary for the proper execution and completion of the work.
- M. Contractor shall carefully examine the plans and drawings and shall be responsible for the proper fitting of his material, equipment and apparatus into the building.
- N. The Contractor or subcontractors shall not overload, or permit others to overload, any part of any structure during the performance of this contract.
- O. All temporary shoring, bracing, etc., required for the removal of existing work and/or for the installation of new work shall be included in this contract. The Contractor shall make good, at no cost to the Owner, any damage caused by improper support or failure of shoring in any respect. Each Contractor shall be responsible for shoring required to protect his work or adjacent property and improvements of Owner and shall be responsible for shoring or for giving written notice to adjacent property owners. Shoring shall be removed only after completion of permanent supports.
- P. The Contractor shall provide at the proper time such material as is required for support of the work. If openings are required, whether shown on drawings or not, the Contractor shall see that they are properly constructed.
- Q. During the performance of work the Contractor shall be responsible for providing and maintaining warning signs, lights, signal devices, barricades, guard rails, fences and other devices appropriately located on site which will give proper and understandable warning to all persons of danger of entry onto land, structure or equipment.
- R. The Contractor shall be responsible for protection, including weather protection, and proper maintenance of all equipment and materials.
- S. The Contractor shall be responsible for care of the finished work and shall protect same from damage or defacement until substantial completion by the Owner. If the work is damaged by any cause, the Contractor shall immediately begin to make repairs in accordance with the drawings and specifications. Contractor shall be liable for all damage or loss unless attributable to the acts or omissions of the Owner or Designer. Any claim for reimbursement shall be submitted in accordance with Article 4. After substantial completion the Contractor will only be responsible for damage resulting from acts or omissions of the Contractor or subcontractors through final warranty.
- T. In the event the Contractor encounters an unforeseen hazardous material, the Contractor shall immediately stop work in the area affected and report the condition to the Owner and Designer in writing. The Contractor shall not be required, pursuant to Article 4, to perform, any work relating to hazardous materials.
- U. In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 4.
- V. Before commencing work, Contractors shall confer with the Construction Representative and facility representative and review any facility rules and regulations which may affect the conduct of the work.

W. Project signs will only be erected on major projects and only as described in the specifications. If no sign is specified, none shall be erected.

### **ARTICLE 3.7 -- SUBCONTRACTS**

- A. Subcontractor assignments as identified in the bid form shall not be changed without written approval of the Owner. The Owner will not approve changes of a listed subcontractor unless the Contractor documents, to the satisfaction of the Owner that the subcontractor cannot or will not perform the work as specified.
- B. The Contractor is fully responsible to the Owner for the acts and omissions of all subcontractors and of persons either directly or indirectly employed by them.
- C. Every subcontractor shall be bound by the applicable terms and provisions of these contract documents, but no contractual relationship shall exist between any subcontractor and the Owner unless the right of the Contractor to proceed with the work is suspended or this contract is terminated as herein provided, and the Owner in writing elects to assume the subcontract.
- D. The Contractor shall upon receipt of "Notice to Proceed" and prior to submission of the first payment request, notify the Designer and Construction Representative in writing of the names of any subcontractors to be used in addition to those identified in the bid form and all major material suppliers proposed for all parts of the work.

### **ARTICLE 4 -- CHANGES IN THE WORK**

#### **4.1 CHANGES IN THE WORK**

- A. The Construction Representative, without giving notice to the surety and without invalidating this contract, may order extra work or make changes by altering, adding to or deducting from the work, this contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract. A claim for extension of time caused by any change must be adjusted at the time of ordering such change. No future request for time will be considered.
- B. Each Contract Change shall include all costs required to perform the work including all labor, material, equipment, overheads and profit, delay, disruptions, or other miscellaneous expenses. No subsequent requests for additional compensation including claims for delay, disruption, or reduced efficiency as a result of each change will be considered. Values from the Schedule of Values will not be binding as a basis for additions to or deductions from the contract price.

C. The amount of any adjustment in this contract price for authorized changes shall be agreed upon before such changes become effective and shall be determined, through submission of a request for proposal, as follows:

- 1. By an acceptable fixed price proposal from the Contractor. Breakdowns shall include all takeoff sheets of each Contractor and subcontractor. Breakdown shall include a listing of each item of material with unit prices and number of hours of labor for each task. Labor costs per hour shall be included with labor burden identified, which shall be not less than the prevailing wage rate, etc. Overhead and profit shall be shown separately for each subcontractor and the Contractor.
  - 2. By a cost-plus-fixed-fee (time and material) basis with maximum price, total cost not to exceed said maximum. Breakdown shall include a listing of each item of material with unit prices and number of hours of labor for each task. Labor costs per hour shall be included with labor burden identified, which shall be not less than the prevailing wage rate, etc. Overhead and profit shall be shown separately for each subcontractor and the Contractor.
  - 3. By unit prices contained in Contractor's original bid form and incorporated in the construction contract.
- D. Overhead and Profit on Contract Changes shall be applied as follows:

- 1. The overhead and profit charge by the Contractor and all subcontractors shall be considered to include, but is not limited to: incidental job burdens, small truck (under 1 ton) expense, mileage, small hand tools, warranty costs, company benefits and general office overhead. Project supervision including field supervision and job site office expense shall be considered a part of overhead and profit unless a compensable time extension is granted.
- 2. The percentages for overhead and profit charged on Contract Changes shall be subject to the following limits: (a) the percentage mark-up for the Contractor shall be limited to the Contractor's fee; (b) fifteen percent (15%) maximum for Work directly performed by employees of a subcontractor, or sub-subcontractor; (c) five percent (5%) maximum for the Work performed or passed through to the Owner by the Contractor; (d) five percent (5%) maximum subcontractor's mark-up for

Work performed by a sub-subcontractor and passed through to the Owner by the subcontractor and Contractor; and (e) in no case shall the total overhead and profit paid by the Owner on any Contract Changes exceed twenty-five percent (25%) of the cost of materials, labor and equipment (exclusive of Contractor or any Subcontractor overhead and profit) necessary to put the contract change work in place.

3. The Contractor will be allowed to add the cost of Contractor's payment and performance bonding, builder's risk insurance, and general liability insurance to their cost of work. The above listed bonding and insurance cost shall not exceed two percent (2%) and shall be allowed on the total cost of the added work, including overhead and profit.
  4. On proposals covering both increases and decreases in the amount of this contract, the application of overhead and profit shall be on the net change in the cost of the work.
  5. The percentage(s) for overhead and profit to be credited to the Owner on Contract Changes that are solely decreases in the quantity of work or materials shall be the same as those for additive Contract Changes provided above.
- E. No claim for an addition to this contract sum shall be valid unless authorized as aforesaid in writing by the Owner. In the event that none of the foregoing methods are agreed upon, the Owner may order the Contractor to perform work on a time and material basis. The cost of such work shall be determined by the Contractor's actual labor and material cost to perform the work plus overhead and profit as outlined herein. The Designer and Construction Representative shall approve the Contractor's daily time and material invoices for the work involved.
- F. If the Contractor claims that any instructions involve extra cost under this contract, the Contractor shall give the Owner's Representative written notice thereof within a reasonable time after the receipt of such instructions, and in any event before proceeding to execute the work. No such claim shall be valid unless so made and authorized by the Owner, in writing.
- G. In an emergency affecting the safety of life or of the structure or of adjoining property, the Contractor, without special instruction or authorization from the Construction Representative, is hereby permitted to act at their discretion to prevent such threatened loss or injury. The Contractor shall submit a claim for compensation for such emergency work in writing to the Owner's Representative.

#### ARTICLE 4.2 – CHANGES IN COMPLETION TIME

- A. Extension of the number of work days stipulated in the Contract for completion of the work with compensation may be made when:
1. The contractor documents that proposed Changes in the work, as provided in Article 4.1, extends construction activities critical to contract completion date, OR
  2. The Owner suspends all work for convenience of the Owner as provided in Article 7.3, OR
  3. An Owner caused delay extends construction activities critical to contract completion (except as provided elsewhere in these General Conditions). The Contractor is to review the work activities yet to begin and evaluate the possibility of rescheduling the work to minimize the overall project delay.
- B. Extension of the number of work days stipulated in the Contract for completion of the work without compensation may be made when:
1. Weather-related delays occur, subject to provisions for the inclusion of a specified number of "bad weather" days when provided for in Section 012100-Allowances, OR
  2. Labor strikes or acts of God occur, OR
  3. The work of the Contractor is delayed on account of conditions which were beyond the control of the Contractor, subcontractors or suppliers, and were not the result of their fault or negligence.
- C. No time extension or compensation will be provided for delays caused by or within the control of the Contractor, subcontractors or suppliers and for concurrent delays caused by the Owner.
- D. The Contractor shall notify the Owner promptly of any occurrence or conditions which in the Contractor's opinion results in a need for an extension of time. The notice shall be in writing and shall include all necessary supporting materials with details of any resultant costs and be submitted in time to permit full investigation and evaluation of the Contractor's claim. The Owner shall promptly acknowledge the Contractor's notice and, after recommendation from the Owner's Representative and/or Designer, shall provide a decision to the Contractor. Failure on the part of the Contractor to provide such notice and to detail the costs shall constitute a waiver by the Contractor of any claim. Requests for extensions of time shall be for working days only.

**ARTICLE 5 - CONSTRUCTION AND COMPLETION**

**ARTICLE 5.1 – CONSTRUCTION COMMENCEMENT**

- A. Upon receipt of the "Intent to Award" letter, the Contractor must submit the following properly executed instruments to the Owner:
  - 1. Contract;
  - 2. Performance/payment bond as described in Article 6.1;
  - 3. Certificates of Insurance, or the actual policies themselves, showing that the Contractor has obtained the insurance coverage required by Article 6.2.

Above referenced items must be received by the Owner within ten (10) working days after the effective date of the contract. If not received, the Owner may treat the failure to timely submit them as a refusal by the Contractor to accept a contract for this work and may retain as liquidated damages the Contractor's bid bond, cashier's check or certified check as provided in the Instructions to Bidders. Upon receipt the Owner will issue a "Notice to Proceed" with the work to the Contractor.

- B. Within the time frame noted in Section 013200 - Schedules, following receipt of the "Notice to Proceed", the Contractor shall submit to the Owner a progress schedule and schedule of values, showing activities through the end of the contract period. Should the Contractor not receive written notification from the Owner of the disapproval of the schedule of values within fifteen (15) working days, the Contractor may consider it approved for purpose of determining when the first monthly Application and Certification for Payment may be submitted.
- C. The Contractor may commence work upon receipt of the Division of Facilities Management, Design and Construction's "Notice to Proceed" letter. Contractor shall prosecute the work with faithfulness and energy, and shall complete the entire work on or before the completion time stated in the contract documents or pay to the Owner the damages resulting from the failure to timely complete the work as set out within Article 5.4.

**ARTICLE 5.2 -- PROJECT CONSTRUCTION**

- A. Each Contractor shall submit for the Owner's approval, in reproducible form, a progress schedule showing the rate of progress and the order of the work proposed to carry on various phases of the project. The schedule shall be in conformance

with the requirements outlined in Section 013200 – Schedules.

- B. Contractor shall employ and supply a sufficient force of workers, material, and equipment and shall pay when due, any worker, subcontractor or supplier and otherwise prosecute the work with such diligence so as to maintain the rate of progress indicated on the progress schedule, prevent work stoppage, and insure completion of the project within the time specified.

**ARTICLE 5.3 -- PROJECT COMPLETION**

- A. Substantial Completion. A Project is substantially complete when construction is essentially complete and work items remaining to be completed can be done without interfering with the Owner's ability to use the Project for its intended purpose.
  - 1. Once the Contractor has reached what they believe is Substantial Completion, the Contractor shall notify the Designer and the Construction Representative of the following:
    - a. That work is essentially complete with the exception of certain listed work items. The list shall be referred to as the "Contractor's Punch."
    - b. That all Operation and Maintenance Manuals have been assembled and submitted in accordance with Article 3.5A.
    - c. That the Work is ready for inspection by the Designer and Construction Representative. The Owner shall be entitled to a minimum of ten working days notice before the inspection shall be performed.
  - 2. If the work is acceptable, the Owner shall issue a Certificate of Substantial Completion, which shall set forth the responsibilities of the Owner and the Contractor for utilities, security, maintenance, damage to the work and risk of loss. The Certificate shall also identify those remaining items of work to be performed by the Contractor. All such work items shall be complete within 30 working days of the date of the Certificate, unless the Certificate specifies a different time. If the Contractor shall be required to perform tests that must be delayed due to climatic conditions, it is understood that such tests and affected equipment will be identified on the Certificate and shall be accomplished by the Contractor at the earliest possible date. Performance of the tests may not be required before Substantial Completion can be issued. The date of the issuance of the Certificate of

Substantial Completion shall determine whether or not the work was completed within the contract time and whether or not Liquidated Damages are due.

3. If the work is not acceptable, and the Owner does not issue a Certificate of Substantial Completion, the Owner shall be entitled to charge the Contractor with the Designer's and Owner's costs of re-inspection, including time and travel.
- B. Partial Occupancy. Contractor agrees that the Owner shall be permitted to occupy and use any completed or partially completed portions of the Project, when such occupancy and use is in the Owner's best interest. Owner shall notify Contractor of its desire and intention to take Partial Occupancy as soon as possible but at least ten (10) working days before the Owner intends to occupy. If the Contractor believes that the portion of the work the Owner intends to occupy is not ready for occupancy, the Contractor shall notify the Owner immediately. The Designer shall inspect the work in accordance with the procedures above. If the Contractor claims increased cost of the project or delay in completion as a result of the occupancy, he shall notify the Owner immediately but in all cases before occupancy occurs.
- C. Final Completion. The Project is finally complete when the Certificate of Substantial Completion has been issued and all work items identified therein as incomplete have been completed, and when all administrative items required by the contract have been completed. Final Completion entitles the Contractor to payment of the outstanding balance of the contract amount including all change orders and retainage. Within five (5) working days of the date of the Certificate of Substantial Completion, the Contractor shall identify the cost to complete any outstanding items of work. The Designer shall review the Contractor's estimate and either approve it or provide an independent estimate for all such items. If the Contractor fails to complete the remaining items within the time specified in the Certificate, the Owner may terminate the contract and go to the surety for project completion in accordance with Article 7.2 or release the contract balance to the Contractor less 150% of the approved estimate to complete the outstanding items. Upon completion of the outstanding items, when a final cost has been established, any monies remaining shall be paid to the Contractor. Failure to complete items of work does not relieve the Contractor from the obligation to complete the administrative requirements of the contract, such as the provisions of Article 5.3 FAILURE TO COMPLETE ALL ITEMS OF WORK UNDER THE CONTRACT SHALL BE CONSIDERED A

#### DEFAULT AND BE GROUNDS FOR CONTRACT TERMINATION AND DEBARMENT.

- D. Liquidated Damages. Contractor agrees that the Owner may deduct from the contract price and retain as liquidated damages, and not as penalty or forfeiture, the sum stipulated in this contract for each work day after the Contract Completion Day on which work is not Substantially Complete. Assessment of Liquidated Damages shall not relieve the Contractor or the surety of any responsibility or obligation under the Contract. In addition, the Owner may, without prejudice to any other rights, claims, or remedies the Owner may have including the right to Liquidated Damages, charge the Contractor for all additional expenses incurred by the Owner and/or Designer as the result of the extended contract period through Final Completion. Additional Expenses shall include but not be limited to the costs of additional inspections.
- E. Early Completion. The Contractor has the right to finish the work before the contract completion date; however, the Owner assumes no liability for any hindrances to the Contractor unless Owner caused delays result in a time extension to the contract completion date. The Contractor shall not be entitled to any claims for lost efficiencies or for delay if a Certificate of Substantial Completion is given on or before the Contract Completion Date.

#### ARTICLE 5.4 -- PAYMENT TO CONTRACTOR

- A. Payments on account of this contract will be made monthly in proportion to the work which has been completed. Request for payment must be submitted on the Owner's forms. No other pay request will be processed. Supporting breakdowns must be in the same format as Owner's forms and must provide the same level of detail. The Designer will, within 5 working days from receipt of the contractor's request for payment either issue a Certificate for Payment to the Owner, for such amount as the Designer determines is properly due, or notify the Contractor in writing of reasons for withholding a Certificate. The Owner shall make payment within 30 calendar days after the "Application and Certification for Payment" has been received and certified by the Designer. The following items are to be attached to the contractor's pay request:
  1. Updated construction schedule
  2. Certified payrolls consisting of name, home addresses of all workers, occupation and craft, number of hours worked and actual wages paid for each individual employee, of the Contractor and all subcontractors working on the project

- B. The Owner shall retain 5 percent of the amount of each such payment application, except as allowed by Article 5.4, until final completion and acceptance of all work covered by this contract.
- C. Each payment made to Contractor shall be on account of the total amount payable to Contractor and all material and work covered by paid partial payment shall thereupon become the sole property of Owner. This provision shall not be construed as relieving Contractor from sole responsibility for care and protection of materials and work upon which payments have been made or restoration of any damaged work or as a waiver of the right of Owner to require fulfillment of all terms of this contract.
- D. Materials delivered to the work site and not incorporated in the work will be allowed in the Application and Certification for Payment on the basis of one hundred (100%) percent of value, subject to the 5% retainage providing that they are suitably stored on the site or in an approved warehouse in accordance with the following requirements:
  - 1. Material has previously been approved through submittal and acceptance of shop drawings conforming to requirements of Article 3.2 of General Conditions.
  - 2. Delivery is made in accordance with the time frame on the approved schedule.
  - 3. Materials, equipment, etc., are properly stored and protected from damage and deterioration and remain so - if not, previously approved amounts will be deleted from subsequent pay applications.
  - 4. The payment request is accompanied by a breakdown identifying the material equipment, etc. in sufficient detail to establish quantity and value.
- E. The Contractor shall be allowed to include in the Application and Certification for Payment, one hundred (100%) of the value, subject to retainage, of major equipment and material stored off the site if all of the following conditions are met:
  - 1. The request for consideration of payment for materials stored off site is made at least 15 working days prior to submittal of the Application for Payment including such material. Only materials inspected will be considered for inclusion on Application for Payment requests.
  - 2. Materials stored in one location off site are valued in excess of \$25,000.
  - 3. That a Certificate of Insurance is provided indicating adequate protection from loss, theft conversion or damage for materials stored off site. This Certificate shall show the State of Missouri as an additional insured for this loss.
- 4. The materials are stored in a facility approved and inspected, by the Construction Representative.
- 5. Contractor shall be responsible for, Owner costs to inspect out of state facilities, and any delays in the completion of the work caused by damage to the material or for any other failure of the Contractor to have access to this material for the execution of the work.
- F. The Owner shall determine the amount, quality and acceptability of the work and materials which are to be paid for under this contract. In the event any questions shall arise between the parties, relative to this contract or specifications, determination or decision of the Owner or the Construction Representative and the Designer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this contract affected in any manner or to any extent by such question.
- G. Payments Withheld: The Owner may withhold or nullify in whole or part any certificate to such extent as may be necessary to protect the Owner from loss on account of:
  - 1. Defective work not remedied. When a notice of noncompliance is issued on an item or items, corrective action shall be undertaken immediately. Until corrective action is completed, no monies will be paid and no additional time will be allowed for the item or items. The cost of corrective action(s) shall be borne by the Contractor.
  - 2. A reasonable doubt that this contract can be completed for the unpaid balance.
  - 3. Failure of the Contractor to update as-built drawings monthly for review by the Construction Representative.
  - 4. Failure of the Contractor to update the construction schedule.
 

When the Construction Representative is satisfied the Contractor has remedied above deficiencies, payment shall be released.
- H. Final Payment: Upon receipt of written notice from the Contractor to the Designer and Project Representative that the work is ready for final inspection and acceptance, the Designer and Project Representative, with the Contractor, shall promptly make such inspection. If the work is acceptable and the contract fully performed, the Construction Representative shall complete a final acceptance report and the Contractor will be

directed to submit a final Application and Certification for Payment. If the Owner approves the same, the entire balance shall be due and payable, with the exception of deductions as provided for under Article 5.4.

1. Where the specifications provide for the performance by the Contractor of (certain tests for the purpose of balancing and checking the air conditioning and heating equipment and the Contractor shall have furnished and installed all such equipment in accordance with the specifications, but said test cannot then be made because of climatic conditions, such test shall may be considered as required under the provisions of the specifications, Section 013300 and this contract may be substantial Full payment will not be made until the tests have been made and the equipment and system is finally accepted. If the tests are not completed when scheduled, the Owner may deduct 150% of the value of the tests from the final payment.
2. The final payment shall not become due until the Contractor delivers to the Construction Representative:
  - a) A complete file of releases, on the standard form included in the contract documents as "Final Receipt of Payment and Release Form", from subcontractors and material suppliers evidencing payment in full for services, equipment and materials, as the case may require, if the Owner approves, or a consent from the Surety to final payment accepting liability for any unpaid amounts.
  - b) An Affidavit of Compliance with Prevailing Wage Law, in the form as included in this contract specifications, properly executed by each subcontractor, and the Contractor
  - c) Certified copies of all payrolls
  - d) As-built drawings
3. If any claim remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such a claim including all costs and a reasonable attorney's fee.
4. Missouri statute requires prompt payment from the Owner to the Contractor within thirty calendar days and from the Contractor to his subcontractors within fifteen calendar days. Failure to make payments within the required

time frame entitles the receiving party to charge interest at the rate of one and one half percent per month calculated from the expiration of the statutory time period until paid.

5. The value of all unused unit price allowances and/or 150% of the value of the outstanding work items, and/or liquidated damages may be deducted from the final pay request without executing a Contract Change. Any unit price items which exceed the number of units in the contract may be added by Contract Change.

## **ARTICLE 6 -- INSURANCE AND BONDS**

### **ARTICLE 6.1 -- BOND**

- A. Contractor shall furnish a performance/payment bond in an amount equal to 100% of the contract price to guarantee faithful performance of the contract and 100% of the contract price to guarantee the payment of all persons performing labor on the project and furnishing materials in connection therewith under this contract as set forth in the standard form of performance and payment bond included in the contract documents. The surety on such bond shall be issued by a surety company authorized by the Missouri Department of Insurance to do business in the state of Missouri.
- B. All Performance/Payment Bonds furnished in response to this provision shall be provided by a bonding company with a rating of B+ or higher as established by A.M. Best Company, Inc. in their most recent publication.

**ARTICLE 6.2 – INSURANCE**

- A. The successful Contractor shall procure and maintain for the duration of the contract issued a policy or policies of insurance for the protection of both the Contractor and the Owner and their respective officers, officials, agents, consultants and employees. The Owner requires certification of insurance coverage from the Contractor prior to commencing work.
- B. Minimum Scope and Extent of Coverage
  - 1. General Liability  
Commercial General Liability, ISO coverage form number or equivalent CG 00 01 ("occurrence" basis), or I-SO coverage form number CG 00 02, or ISO equivalent.  
  
If ISO equivalent or manuscript general liability coverage forms are used, minimum coverage will be as follows: Premises/Operations; Independent Contractors; Products/Completed Operations; personal Injury; Broad Form Property Damage including Completed Operations; Broad Form Contractual Liability Coverage to include Contractor's obligations under Article 1.11 Indemnification and any other Special Hazards required by the work of the contract.
  - 2. Automobile Liability  
Business Automobile Liability Insurance, ISO Coverage form number or equivalent CA 00 01 covering automobile liability, code 1 "ANY AUTO".
  - 3. Workers' Compensation and Employer's Liability  
Statutory Workers' Compensation Insurance for Missouri and standard Employer's Liability Insurance, or the authorization to self-insure for such liability from the Missouri Division of Workers' Compensation.
  - 4. Builder's Risk or Installation Floater Insurance  
Insurance upon the work and all materials, equipment, supplies, temporary structures and similar items which may be incident to the performance of the work and located at or adjacent to the site, against loss or damage from fire and such other casualties as are included in extended coverage in broad "All Risk" form, including coverage for Flood and Earthquake, in an amount not less than the replacement cost of the work or this contract price, whichever is greater, with loss payable to Contractor and Owner as their respective interests may appear.

Contractor shall maintain sufficient insurance to cover the full value of the work and materials as the work progresses, and shall furnish Owner copies of all endorsements. If Builder's Risk Reporting- Form of Endorsement is used, Contractor shall make all reports as required therein so as to keep in force an amount of insurance which will equal the replacement cost of the work, materials, equipment, supplies, temporary structures, and other property covered thereby; and if, as a result of Contractor's failure to make any such report, the amount of insurance so recoverable shall be less than such replacement cost, Contractor's interest in the proceeds of such insurance, if any, shall be subordinated to Owner's interest to the end that Owner may receive full reimbursement for its loss.

- C. Minimum Limits of Insurance
  - 1. General Liability  
Contractor  
\$2,000,000 combined single limit per occurrence for bodily injury, personal injury, and property damage  
\$2,000,000 annual aggregate
  - 2. Automobile Liability  
\$2,000,000 combined single limit per occurrence for bodily injury and property damage
  - 3. Workers' Compensation and Employers Liability  
Workers' Compensation limits as required by applicable State Statutes (generally unlimited) and minimum of \$1,000,000 limit per accident for Employer's Liability.  
  
General Liability and Automobile Liability insurance may be arranged under individual policies for the full limits required or by a combination of underlying policies with the balance provided by a form-following Excess or Umbrella Liability policy.
- D. Deductibles and Self-Insured Retentions  
All deductibles, co-payment clauses, and self-insured retentions must be declared to and approved by the Owner. The Owner reserves the right to request the reduction or elimination of unacceptable deductibles or self-insured retentions, as they would apply to the Owner, and their respective officers, officials, agents, consultants and employees. Alternatively, the Owner may request Contractor to procure a bond guaranteeing

payment of losses and related investigations, claims administration, and defense expenses.

#### E. Other Insurance Provisions and Requirements

The respective insurance policies and coverage, as specified below, must contain, or be endorsed to contain the following conditions or provisions:

##### 1. General Liability

The Owner, and its respective commissioners, officers, officials, agents, consultants and employees shall be endorsed as additional insured's by ISO form CG 20 26 Additional Insured - Designated Person or Organization. As additional insured's, they shall be covered as to work performed by or on behalf of the Contractor or as to liability which arises out of Contractor's activities or resulting from the performance of services or the delivery of goods called for by the Contract.

Contractor's insurance coverage shall be primary with respect to all additional insured's. Insurance of self-insurance programs maintained by the designated additional -insured's shall be excess of the Contractor's insurance and shall not contribute with it.

Additionally, the Contractor and Contractor's general liability insurer shall agree to waive all rights of subrogation against the Owner and any of their respective officers, officials, agents, consultants or employees for claims, losses, or expenses which arise out of Contractor's activities or result from the performance of services or the delivery of goods called for by the Contract.

Contractor's failure to comply with the terms and conditions of these insurance policies shall not affect or abridge coverage for the Owner, or for any of their officers, officials, agents, consultants or employees.

##### 2. Automobile Insurance

The Owner, and their respective officers, officials, agents, consultants and employees shall be endorsed as additional insured's by ISO form CG 20 26 - Additional Insured Designated Person or Organization. As additional insured's, they shall be covered as to work performed by or on behalf of the Contractor or as to liability which arises out of Contractor's activities or resulting from the performance of services or the delivery of goods called for by the Contract.

Contractor's insurance coverage shall be primary with respect to all additional insured's. Insurance or self-insurance

programs maintained by the designated additional insured's shall be in excess of the Contractor's insurance and shall not contribute with it.

Additionally, the Contractor and Contractor's automobile insurer shall agree to waive all rights of subrogation against the Owner and any of their respective officers, officials, agents, consultants or employees for claims, losses, or expenses which arise out of Contractor's activities or result from the performance of services or the delivery of goods called for by the Contract.

Contractor's failure to comply with the terms and conditions of these insurance policies shall not affect or abridge coverage for the Owner or for any of its officers, officials, agents, consultants or employees.

##### 3. Workers' Compensation/Employer's Liability

Contractor's workers' compensation insurance shall be endorsed with NCCI form WC 00 03 01 A - Alternative Employer Endorsement. The Alternative Employer Endorsement shall designate the Owner as "alternate employers."

##### 4. All Coverages

Each insurance policy required by this section of the Contract shall contain a stipulation, endorsed if necessary, that the Owner will receive a minimum of a thirty (30) calendar day advance notice of any policy cancellation. Ten (10) calendar days advance notice is required for policy cancellation due to non-payment of premium.

#### F. Insurer Qualifications and Acceptability

Insurance required hereunder shall be issued by an A.M. Best, "B+" rated, Class IX insurance company approved to conduct insurance business in the state of Missouri.

#### G. Verification of Insurance Coverage

Prior to Owner issuing a Notice to Proceed, the Contractor shall furnish the Owner with Certificate(s) of Insurance and with any applicable original endorsements evidencing the required insurance coverage. The insurance certificates and endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements received by the Owner are subject to review and approval by the Owner. The Owner reserves the right to require certified copies of all required policies at any time. If the scope of this contract will exceed one (1) year - or, if any of Contractor's applicable insurance coverage expires prior to completion of the work or services required under this contract -

the Contractor will provide a renewal or replacement certificate before continuing work or services hereunder. If the Contractor fails to provide documentation of required insurance coverage, the Owner may issue a stop work order and no additional contract completion time and/or compensation shall be granted as a result thereof.

## **ARTICLE 7 – SUSPENSION OR TERMINATION OF CONTRACT**

### **ARTICLE 7.1 - FOR SITE CONDITIONS**

When conditions at the site of the proposed work are considered by the Owner to be unsatisfactory for prosecution of the work, the Contractor may be ordered in writing to suspend the work or any part thereof until reasonable conditions exist. When such suspension is not due to fault or negligence of the Contractor, time allowed for completion of such suspended work will be extended by a period of time equal to that lost due to delay occasioned by ordered suspension. This will be a no cost time extension.

### **ARTICLE 7.2 - FOR CAUSE**

#### **A. Termination or Suspension for Cause:**

1. If the Contractor shall file for bankruptcy, or should make a general assignment for the benefit of the creditors, or if a receiver should be appointed on account of insolvency, or if the contractor should persistently or repeatedly refuse or fail to supply enough properly skilled workers or proper materials, or if the contractor should fail to make prompt payment to subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Owner, or otherwise be guilty of a substantial violation of any provision of this contract, then the Owner may serve notice on the Contractor and the surety setting forth the violations and demanding compliance with this contract. Unless within ten (10) consecutive calendar days after serving such notice, such violations shall cease and satisfactory arrangements for correction be made, the Owner may suspend the Contractor's right to proceed with the work or terminate this contract.
2. In the event the Owner suspends Contractor's right to proceed with the work or terminates the contract, the Owner may demand that the Contractor's surety take over and complete the work on this contract, after the surety submits a written proposal to the Owner and receives written approval and upon the surety's failure or refusal to do so within ten (10) consecutive

calendar days after demand therefore, the Owner may take over the work and prosecute the same to completion by bid or negotiated contract, or the Owner may elect to take possession of and utilize in completing the work such materials, supplies, appliances and plant as may be on the site of the work, and all subcontractors, if the Owner elects, shall be bound to perform their contracts.

- B. The Contractor and its surety shall be and remain liable to the Owner for any excess cost or damages occasioned to the Owner as a result of the actions above set forth.
- C. The Contractor in the event of such suspension or termination shall not be entitled to receive any further payments under this contract until the work is wholly finished. Then if the unpaid balance under this contract shall exceed all expenses of the Owner as certified by the Director, such excess shall be paid to the Contractor; but, if such expenses shall exceed the unpaid balance as certified by the Director, the Contractor and their surety shall be liable for and shall pay the difference and any damages to the Owner.
- D. In exercising Owner's right to secure completion of the work under any of the provisions hereof, the Director shall have the right to exercise Owner's sole discretion as to the manner, methods and reasonableness of costs of completing the work.
- E. The rights of the Owner to suspend or terminate as herein provided shall be cumulative and not exclusive and shall be in addition to any other remedy provided by law.
- F. The Contractor in the event of such suspension or termination may be declared ineligible for Owner contracts for a minimal period of twelve (12) months. Further, no contract will be awarded to any Contractor who lists in their bid form any subcontractor whose prior performance has contributed, as determined by the Owner, to a breach of a contract. In order to be considered for state-awarded contracts after this period, the Contractor/subcontractor will be required to forward acceptance reports to the Owner regarding successful completion of non-state projects during the intervening twelve (12) months from the date of default. No contracts will be awarded to a subcontractor/Contractor until the ability to perform responsibly in the private sector has been proven to the Owner.

### **ARTICLE 7.3 -- FOR CONVENIENCE**

- A. The Owner may terminate or suspend the Contract or any portion of the Work without cause at any time, and at the Owner's convenience. Notification of a termination or suspension shall be in writing

and shall be given to the Contractor and their surety. If the Contract is suspended, the notice will contain the anticipated duration of the suspension or the conditions under which work will be permitted to resume. If appropriate, the Contractor will be requested to demobilize and re-mobilize and will be reimbursed time and costs associated with the suspension.

B. Upon receipt of notification, the Contractor shall:

1. Cease operations when directed.
2. Take actions to protect the work and any stored materials.
3. Place no further subcontracts or orders for material, supplies, services or facilities except as may be necessary to complete the portion of the Contract that has not been terminated. No claim for payment of materials or supplies ordered after the termination date shall be considered.
4. Terminate all existing subcontracts, rentals, material, and equipment orders.

5. Settle all outstanding liabilities arising from termination with subcontractors and suppliers.

6. Transfer title and deliver to the Owner, work in progress, completed work, supplies and other material produced or acquire for the work terminated, and completed or partially completed plans, drawings information and other property that, if the Contract had been completed, would be required to be furnished to the Owner.

C. For termination without cause and at the Owner's convenience, in addition to payment for work completed prior to date of termination, the Contractor may be entitled to payment of other documented costs directly associated with the early termination of the contract. Payment for anticipated profit and unapplied overhead will not be allowed.

## **SECTION 007300 - SUPPLEMENTARY CONDITIONS**

### **1.0 GENERAL:**

A. These Supplementary General Conditions clarify, add, delete, or otherwise modify standard terms and conditions of DIVISION 0, BIDDING AND CONTRACTING REQUIREMENTS.

### **2.0 CONTACTS:**

Designer: Tom Gredell, P.E.  
Gredell Engineering Resources  
1505 East High Street  
Jefferson City, MO 65101  
Telephone: 573-659-9078  
Email: [tomg@ger-inc.biz](mailto:tomg@ger-inc.biz)

Construction Representative: Megan Moore  
Division of Facilities Management, Design and Construction  
1101 Riverside Drive  
Jefferson City, MO 65101  
Telephone: 573-526-4287  
Email: [Megan.Moore@dnr.mo.gov](mailto:Megan.Moore@dnr.mo.gov)

Project Manager: Scott Zeller  
Division of Facilities Management, Design and Construction  
135 N. Chestnut  
Jefferson City, MO 65101  
Telephone: 573-680-8138  
Email: [Scott.Zeller@oa.mo.gov](mailto:Scott.Zeller@oa.mo.gov)

Contract Specialist: Mandy Roberson  
Division of Facilities Management, Design and Construction  
301 West High Street, Room 730  
Jefferson City, MO 65101  
Telephone: 573-690-9411  
Email: [mandy.roberson@oa.mo.gov](mailto:mandy.roberson@oa.mo.gov)

### **3.0 NOTICE: ALL BID MATERIALS ARE DUE AT THE TIME OF BID SUBMITTAL. THERE IS NO SECOND SUBMITTAL FOR THIS PROJECT.**

### **4.0 FURNISHING CONSTRUCTION DOCUMENTS:**

- A. The Owner will furnish the Contractor with approximately 5 complete sets of drawings and specifications at no charge.
- B. The Owner will furnish the Contractor with approximately 5 sets of explanatory or change drawings at no charge.
- C. The Contractor may make copies of the documents as needed with no additional cost to the Owner.

### **5.0 SAFETY REQUIREMENTS**

Contractor and subcontractors at any tier shall comply with RSMo 292.675 and Article 1.3, E, of Section 007213, General Conditions.

### **7.0 OFF-SITE BORROW & SPOIL DEPOSIT SITES FOR FEDERALLY FUNDED PROJECTS:**

All Federally funded projects which involve off-site borrow and/or off-site spoil deposit sites will require written certification that the site(s) are in compliance with the National Environmental Protection Act and all related applicable Federal and State laws and regulations. If the need for off-site borrow and/or spoil sites is stipulated in the Contract Documents, the following applies:

- A. The Contractor is required to use only the designated site described in the Contract Documents. If another off-site area is proposed by the Contractor, the Contractor must provide written certification to the Division of Facilities Management, Design and Construction Project Representative that the proposed borrow or spoil site has been cleared of environmental concerns in accordance with all applicable Federal and State laws and regulations. These include but are not limited to the following: Clean Water Act; the Endangered Species Act; the National Historic Preservation Act (NHPA) (The site must have Section 106 Clearance); the Farmland Protection Act; Resource Conservation and Recovery Act; Comprehensive Environmental Response; Compensation and Liability Act; and RSMo Chapter 194, Section 194.400, Unmarked Human Burial Sites. Certifications shall include clearance letters and other evidence of coordination with the appropriate regulatory agencies. The Missouri Historic Preservation Office, PO Box 176 Jefferson City, MO 65102, may be contacted to provide assistance with the NHPA and cultural resource issues pertaining to the borrow and spoil site regulations. The Missouri State Historic Preservation Office can provide a list of qualified and certified archaeologists to assist in borrow and spoil site investigations.
  
- B. If project conditions require off-site borrow or off-site deposit of spoils, the Contractor will be required to provide written certification to the Division of Facilities Management, Design and Construction Project Representative that the proposed borrow or spoil site has been cleared of environmental concerns in accordance with all applicable Federal and State laws and regulations. These include but are not limited to the following: Clean Water Act; the Endangered Species Act; the National Historic Preservation Act (NHPA) (The site must have Section 106 Clearance); the Farmland Protection Act; Resource Conservation and Recovery Act; Comprehensive Environmental Response; Compensation and Liability Act; and RSMo Chapter 194, Section 194.400, Unmarked Human Burial Sites. Certifications shall include clearance letters and other evidence of coordination with the appropriate regulatory agencies. The Missouri Historic Preservation Office, PO Box 176 Jefferson City, MO 65102, may be contacted to provide assistance with the NHPA and cultural resource issues pertaining to the borrow and spoil site regulations. The Missouri State Historic Preservation Office can provide a list of qualified and certified archaeologists to assist in borrow and spoil site investigations.
  
- C. The Owner recognizes that additional time (beyond what is allowed in the Construction Contract) may be required in order to secure the aforementioned certifications and approvals. Should more time be required, the Owner will consider approval of a no-cost time extension contract change. The Contractor will be required to provide documentation that substantiates the need for the time extension.

**8.0 PROPERTY OWNER ADDITIONAL INSURED**

From SECTION 007213 - GENERAL CONDITIONS, Article 6.2, the property owner shall also be named as additionally insured. They are:

William Lance Wilson	E.L. & Linda Kettle	Arlin Kettle	City of Fulton	Westminster College
Tennyson Road	596 Tennyson Road	Tennyson Road	BUS 54 and CR 401	US HWY 54
Fulton, MO 65251	Fulton, MO 65251	Fulton, MO 65251	Fulton, MO 65251	Fulton, MO 65251

**SECTION 007333 - SUPPLEMENTARY GENERAL CONDITIONS  
FOR FEDERALLY FUNDED/ASSISTED CONSTRUCTION PROJECTS**

**1.0 Notice of Federal Funding**

This project is being performed in whole or in part using federal funds. Therefore, all work or services performed by the Contractor and its subcontractors shall be subject to the terms and conditions set forth below in addition to all terms and conditions in the Construction Contract, General Conditions, and other contract documents. The concepts, rules, and guidelines set forth in 2 C.F.R. 200 describing allowable costs and administrative requirements apply.

**2.0 Definitions**

As used herein, “Federal Government” means the government of the United States of America. “Federal Agency” means an agency, entity, department or division of the Federal Government that is providing funding for this project. All other terms shall have the meanings established in the Construction Contract, General Conditions, and/or Project Manual, unless such definitions conflict with a definition provided in an applicable statute or regulation.

**3.0 Conflicting Terms or Conditions**

To the extent that any terms or conditions set forth herein conflict with the Construction Contract or its General Conditions, the more stringent of the two terms and conditions shall govern.

**4.0 No Obligation by Federal Government**

The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, Contractor, or any other party pertaining to any matter resulting from the contract.

**5.0 Compliance with Federal Laws, Regulations and Executive Orders**

The Contractor and its subcontractors and suppliers are required to comply with all applicable Federal laws, regulations, and executive orders, regardless of whether set forth herein. The Contractor shall assist and enable the State of Missouri in complying with any requirements imposed by the Federal Agency as a condition of funding.

**6.0 Compliance with Civil Rights Provisions**

The Contractor shall comply with all Federal statutes, executive orders, and regulations relating to nondiscrimination. These include, but are not limited to the following:

Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin;

Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex;

Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps;

The Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age;

Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing;

Title VII of the Civil Rights Act of 1964 (42 U.S.C. part 2000(e)), which prohibits discrimination against employees on the basis of religion;

Any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and

The requirements of any other nondiscrimination statute(s) that may apply to the application.

#### **7.0 Equal Employment Opportunity (41 C.F.R. 60-1.4(b)).**

During the performance of this contract, the Contractor agrees as follows:

- (1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- (2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicants or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.
- (4) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor

union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (4) in every subcontract or purchase order. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: *Provided*, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract. The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and sub-contractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

## **8.0 Prohibition of Segregated Facilities**

- (1) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Employment Opportunity clause in this contract.
- (2) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.
- (3) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Employment Opportunity clause of this contract.

## **9.0 Davis-Bacon Act (40 U.S.C. §§ 3141-3144, and §§ 3146-3148, and 29 C.F.R. pt. 5)**

- (1) Minimum wages.
  - (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations

issued by the Secretary of Labor under the Copeland Act (29 C.F.R. pt. 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis–Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis–Bacon poster (WH–1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- (ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination, and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
  - (2) The classification is utilized in the area by the construction industry; and
  - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.
- (C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized

representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The (write in name of Federal Agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 C.F.R. 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors

employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- (ii)(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 C.F.R. 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency), the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime Contractor to require a subcontractor to provide addresses and social security numbers to the prime Contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).
- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 C.F.R. pt. 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 C.F.R. pt. 5, and that such information is correct and complete;
  - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 C.F.R. pt. 3;
  - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal Agency may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 C.F.R. 5.12.

(4) Apprentices and trainees—

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 C.F.R. 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the

U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of 29 C.F.R. pt. 30.
- (5) Compliance with Copeland Act requirements. The Contractor shall comply with the requirements of 29 C.F.R. pt. 3, which are incorporated by reference in this contract.
- (6) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 C.F.R. 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal Agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 C.F.R. 5.5.
- (7) Contract termination: debarment. A breach of the contract clauses in 29 C.F.R. 5.5 may be grounds for termination of the contract, and for debarment as a Contractor and a subcontractor as provided in 29 C.F.R. 5.12.
- (8) Compliance with Davis–Bacon and Related Act requirements. All rulings and interpretations of the Davis–Bacon and Related Acts contained in 29 C.F.R. pts. 1, 3, and 5 are herein incorporated by reference in this contract.
- (9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 C.F.R. pts. 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
- (10) Certification of eligibility.

- (i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis–Bacon Act or 29 C.F.R. 5.12(a)(1).
- (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis–Bacon Act or 29 C.F.R. 5.12(a)(1).
- (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. § 1001.

#### **10.0 Copeland “Anti-Kickback” Act**

- (1) The Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract. The Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled.
- (2) The Contractor or subcontractor shall insert in any subcontracts the clause above, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
- (3) A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 C.F.R. 5.12.

#### **11.0 Contract Work Hours and Safety Standards Act (40 U.S.C. 3701 to 3708, 29 C.F.R. 5.5)**

- (1) Overtime requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
- (3) Withholding for unpaid wages and liquidated damages. The Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held

by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

- (4) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

## **12.0 Suspension and Debarment** (Executive Orders 12549 and 12689, 2 C.F.R. pt. 180)

- (1) A contract award (see 2 C.F.R. 180.220) must not be made to parties listed on the government-wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 C.F.R. 180 that implement Executive Orders 12549 (3 C.F.R. pt. 1986 Comp., p. 189) and 12689 (3 C.F.R. pt. 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.
- (2) The contractor is required to verify that none of the contractor’s principals (defined at 2 C.F.R. 180.995) or its affiliates (defined at 2 C.F.R. 180.905) are excluded (defined at 2 C.F.R. 180.940) or disqualified (defined at 2 C.F.R. 180.935).
- (3) The contractor must comply with 2 C.F.R. pt. 180, subpart C and the regulations of the granting Federal Agency regarding suspension and debarment and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (4) This certification is a material representation of fact relied upon by the Owner. If it is later determined that the Contractor did not comply with 2 C.F.R. pt. 180, subpart C in addition to remedies available to the Owner, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (5) By submitting a bid, the bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

## **13.0 Byrd Anti-Lobbying Amendment** (31 U.S.C. § 1352)

- (1) Contractors that apply or bid for an award exceeding \$100,000 agree to file the required certification (set forth below), in compliance with 31 U.S.C. § 1352 (as amended).
- (2) Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352.

- (3) Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

### **CERTIFICATION REGARDING LOBBYING**

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

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

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form–LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

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

#### **14.0 Procurement of Recovered Materials**

The Contractor shall comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (42 U.S.C. § 6962). The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

Information about this requirement, along with the list of EPA designated items, is available at EPA’s Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

## **15.0 Fair Labor Standards Act**

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 C.F.R. pt. 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers. The Contractor has full responsibility to monitor compliance to the referenced statute or regulation. The Contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

## **16.0 Access to Records and Reports**

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, the Federal Agency and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

## **17.0 Occupational Health and Safety Act**

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 C.F.R. pt. 1910 with the same force and effect as if given in full text. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (29 C.F.R. pt. 1910). The employer must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

## **18.0 Rights to Inventions**

Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 C.F.R. pt. 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within 37 C.F.R. 401.14. Contractor must include this requirement in all sub-tier contracts involving experimental, developmental, or research work.

## **19.0 Energy Conservation**

The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6201 et seq.).

## **20.0 Clean Air Act and Federal Water Pollution Control Act**

(1) If the amount of the Contract exceeds \$150,000, the Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. and the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 et seq.

- (2) The Contractor agrees to report each violation to the Owner, and understands and agrees that the Owner will, in turn, report each violation as required to assure notification to the Federal Agency and the appropriate Environmental Protection Agency Regional Office.
- (3) The Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance.

### **21.0 Contractor Employee Whistleblower Rights and Requirement to Inform Employees of Whistleblower Rights**

- (1) This contract and employees working on this contract will be subject to the whistleblower rights and remedies in the pilot program on contractor employee whistleblower protections established at 41 U.S.C. § 4712 by section 828 of the National Defense Authorization Act for Fiscal Year 2013 (Pub. L. 112-239) and FAR 3.908.
- (2) The Contractor shall inform its employees in writing, in the predominant language of the workforce, of employee whistleblower rights and protections under 41 U.S.C. § 4712, as described in section 3.908 of the Federal Acquisition Regulation.
- (3) The Contractor shall insert the substance of this clause, including this paragraph (c), in all subcontracts over the simplified acquisition threshold.

### **22.0 Veteran's Preference**

In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. § 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

### **23.0 Drug Free Workplace Act**

The Contractor shall provide a drug free workplace in accordance with the Drug Free Workplace Act of 1988, 41 U.S.C. Chapter 81, and all applicable regulations. The Contractor shall report any conviction of the Contractor's personnel under a criminal drug statute for violations occurring on the Contractor's premises or off the Contractor's premises while conducting official business. A report of a conviction shall be made to the state agency within five (5) working days after the conviction.

### **24.0 Access Requirements for Persons with Disabilities**

Contractor shall comply with 49 U.S.C. § 5301(d), stating Federal policy that the elderly and persons with disabilities have the same rights as other persons to use mass transportation services and facilities and that special efforts shall be made in planning and designing those services and facilities to implement that policy. Contractor shall also comply with all applicable requirements of Sec. 504 of the Rehabilitation Act (1973), as amended, 29 U.S.C. § 794, which prohibits discrimination on the basis of handicaps, and the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. § 12101 et seq., which requires that accessible

facilities and services be made available to persons with disabilities, including any subsequent amendments thereto.

## **25.0 Seismic Safety**

The Contractor agrees to ensure that all work performed under this contract, including work performed by subcontractors, conforms to a building code standard that provides a level of seismic safety substantially equivalent to standards established by the National Earthquake Hazards Reduction Guidelines for Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects Issued on June 19, 2018 Page 61 Program (NEHRP). Local building codes that model their code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety.

## **26.0 Required Use of American Iron, Steel, Manufactured Products, and Construction Materials – Build America, Buy America (Pub. L. No. 117-58, §§ 70901-52)**

The Owner is the recipient of an award of Federal financial assistance from a program for infrastructure for this project. Pursuant to the Build America, Buy America Act of the Infrastructure Investment and Jobs Act (“IIJA”), Pub. L. No. 117-58, none of the funds provided under the Federal award may be used unless the requirements of the domestic content procurement preference outlined below are met. Therefore, the Contractor shall ensure the following:

- (1) all iron and steel used in the project are produced in the United States--this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;
- (2) all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 65 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation; and
- (3) all construction materials are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States.

The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project, but are not an integral part of the structure or permanently affixed to the infrastructure project.

## *Waivers*

When necessary, recipients of Federal financial assistance may apply for, and the awarding agency may grant, a waiver from the domestic content procurement preference.

When the Federal agency has made a determination that one of the following exceptions applies, the awarding official may waive the application of the domestic content procurement preference in any case in which the agency determines that:

- (1) applying the domestic content procurement preference would be inconsistent with the public interest;
- (2) the types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or
- (3) the inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent. A request to waive the application of the domestic content procurement preference must be in writing. The agency will provide instructions on the format, contents, and supporting materials required for any waiver request. Waiver requests are subject to public comment periods of no less than 15 days and must be reviewed by the Made in America Office.

There may be instances where an award qualifies, in whole or in part, for an existing waiver described on the awarding agency web site.

If the Contractor determines that an application for a waiver is necessary or an existing waiver is applicable to this project, the Contractor shall timely notify the Owner. The Owner will make a determination if a waiver is applicable or if a waiver application is necessary. The Contractor shall not submit any waiver application or information directly to the Federal agency without prior approval by the Owner.

## *Definitions*

“Construction materials” includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives—that is or consists primarily of: • non-ferrous metals; • plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); • glass (including optic glass); • lumber; or • drywall.

“Domestic content procurement preference” means all iron and steel used in the project are produced in the United States; the manufactured products used in the project are produced in the United States; or the construction materials used in the project are produced in the United States.

“Infrastructure” includes, at a minimum, the structures, facilities, and equipment for, in the United States, roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property. Infrastructure includes facilities that generate, transport, and distribute energy.

“Project” means the construction, alteration, maintenance, or repair of infrastructure in the United States.

**27.0 Prohibition on Certain Telecommunication and Video Surveillances Services or Equipment**  
(Pub. L. 115-232, Section 889)

Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, and 2 C.F.R. § 200.216 prohibit the head of a Federal executive agency and recipients or subrecipients of funds from such agencies from obligating or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons. Pursuant to such provisions, the Contractor understands and agrees that the Contractor and its subcontractors shall not obligate or expend loan or grant funds from the Federal Agency under this Contract to:

(1) Procure or obtain;

(2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in [Public Law 115–232](#), section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

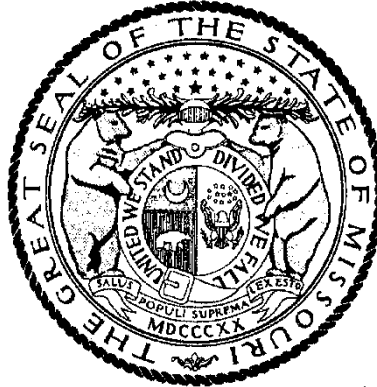
(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

# Missouri

## Division of Labor Standards

### WAGE AND HOUR SECTION



MIKE KEHOE, Governor

# Annual Wage Order No. 32

Section 014  
**CALLAWAY 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 \_\_\_\_\_

Logan Hobbs, Director  
Division of Labor Standards

Filed With Secretary of State: \_\_\_\_\_ **March 10, 2025**

Last Date Objections May Be Filed: **April 9, 2025**

Prepared by Missouri Department of Labor and Industrial Relations

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Asbestos Worker	\$61.59
Boilermaker	\$32.29*
Bricklayer-Stone Mason	\$55.95
Carpenter	\$56.66
Lather	
Linoleum Layer	
Millwright	
Pile Driver	
Cement Mason	\$32.29*
Plasterer	
Communication Technician	\$60.17
Electrician (Inside Wireman)	\$60.36
Electrician Outside Lineman	\$84.72
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Elevator Constructor	\$32.29*
Glazier	\$32.29*
<b>Ironworker</b>	<b>\$72.72</b>
Laborer	\$44.11
General Laborer	
First Semi-Skilled	
Second Semi-Skilled	
Mason	\$32.29*
Marble Mason	
Marble Finisher	
Terrazzo Worker	
Terrazzo Finisher	
Tile Setter	
Tile Finisher	
Operating Engineer	\$70.82
Group I	
Group II	
Group III	
Group III-A	
Group IV	
Group V	
Painter	\$45.99
Plumber	\$79.25
Pipe Fitter	
Roofer	\$32.29*
Sheet Metal Worker	\$57.78
Sprinkler Fitter	\$69.30
Truck Driver	\$45.31
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  
CALLAWAY County

Section 014

OCCUPATIONAL TITLE	**Prevailing Hourly Rate
Carpenter	\$32.29*
Millwright	
Pile Driver	
Electrician (Outside Lineman)	\$84.72
Lineman Operator	
Lineman - Tree Trimmer	
Groundman	
Groundman - Tree Trimmer	
Laborer	\$53.25
General Laborer	
Skilled Laborer	
Operating Engineer	\$76.26
Group I	
Group II	
Group III	
Group IV	
Truck Driver	\$32.29*
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.

"General Decision Number: MO20250001 08/15/2025

Superseded General Decision Number: MO20240001

State: Missouri

Construction Types: Heavy and Highway

Counties: Missouri Statewide.

#### HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> <li>. Executive Order 14026 generally applies to the contract.</li> <li>. The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.</li> </ul>
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> <li>. Executive Order 13658 generally applies to the contract.</li> <li>. The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.</li> </ul>

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/03/2025
1	01/31/2025
2	02/07/2025

3	02/21/2025
4	04/11/2025
5	05/16/2025
6	06/13/2025
7	07/18/2025
8	08/15/2025

CARP0002-002 05/01/2024

ST. LOUIS COUNTY AND CITY

	Rates	Fringes
Carpenters.....	\$ 41.71	21.85

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CARP0005-006 05/01/2024

CASS (Richards-Gebauer AFB ONLY), CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Carpenters:		
CARPENTERS & LATHERS.....	\$ 44.63	22.40
MILLWRIGHTS & PILEDRIVERS...	\$ 44.63	22.40

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CARP0011-001 05/01/2024

	Rates	Fringes
Carpenter and Piledriver		
ADAIR, AUDRAIN (West of Hwy 19), BOONE, CALLAWAY, CHARITON, COLE, COOPER, HOWARD, KNOX, LINN, MACON, MILLER, MONITEAU, MONROE, OSAGE, PUTNAM, RANDOLPH, SCHUYLER, SHELBY AND SULLIVAN COUNTIES.....	\$ 35.61	22.40
ATCHISON, ANDREW, BATES, CALDWELL, CARROLL, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HENRY, HOLT, LIVINGSTON, MERCER, NODAWAY, ST. CLAIR, SALINE AND WORTH COUNTIES.....	\$ 34.98	22.40
AUDRAIN (East of Hwy.19), RALLS, MARION, LEWIS, CLARK AND SCOTLAND COUNTIES.	\$ 35.61	22.40
BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES.	\$ 33.25	22.40
BENTON, MORGAN AND PETTIS...	\$ 34.98	22.40
BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MISSISSIPPI, NEW MADRID, PEMISCOT, PERRY, STE. GENEVIEVE, SCOTT, STODDARD AND WAYNE COUNTIES.....	\$ 35.37	22.40

BUCHANAN, CLINTON, JOHNSON AND LAFAYETTE COUNTIES.....	\$ 34.98	22.40
CARTER, HOWELL, OREGON AND RIPLEY COUNTIES.....	\$ 34.04	22.40
CRAWFORD, DENT, GASCONADE, IRON, MADISON, MARIES, MONTGOMERY, PHELPS, PULASKI, REYNOLDS, SHANNON AND TEXAS COUNTIES.....	\$ 35.37	22.40
FRANKLIN COUNTY.....	\$ 42.19	22.40
JEFFERSON AND ST. CHARLES COUNTIES.....	\$ 42.19	22.40
LINCOLN COUNTY.....	\$ 38.04	22.40
PIKE, ST. FRANCOIS AND WASHINGTON COUNTIES.....	\$ 36.13	22.40
WARREN COUNTY.....	\$ 38.04	22.40

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ELEC0001-002 06/02/2024

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, FRANKLIN,  
IRON, JEFFERSON, LINCOLN, MADISON, MISSISSIPPI, NEW MADRID,  
PEMISCOT, PERRY, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS,  
ST. LOUIS (City and County), STE. GENEVIEVE, SCOTT, STODDARD,  
WARREN, WASHINGTON AND WAYNE COUNTIES

	Rates	Fringes
Electricians.....	\$ 47.04	18.196

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ELEC0002-001 09/09/2024

ADAIR, AUDRAIN, BOONE, CALLAWAY, CAMDEN, CARTER, CHARITON,  
CLARK, COLE, COOPER, CRAWFORD, DENT, FRANKLIN, GASCONADE,  
HOWARD, HOWELL, IRON, JEFFERSON, KNOX, LEWIS, LINCON, LINN,  
MACON, MARIES, MARION, MILLER, MONITEAU, MONROE, MONTGOMERY,  
MORGAN, OREGON, OSAGE, PERRY, PHELPS, PIKE, PULASKI, PUTNAM,  
RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS,  
ST. LOUIS (City and County), STE. GENEVIEVE, SCHUYLER,  
SCOTLAND, SHANNON, SHELBY, SULLIVAN, TEXAS, WARREN AND  
WASHINGTON COUNTIES

	Rates	Fringes
Line Construction:		
Equipment Operator.....	\$ 47.77	24.68
Groundman & Truck Driver....	\$ 36.49	20.56
Lineman & Cable Splicer.....	\$ 55.65	27.56

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ELEC0053-005 01/01/2025

ANDREW, ATCHINSON, BARRY, BARTON, BATES, BENTON, BUCHANAN,  
CALDWELL, CARROLL, CASS, CEDAR, CHRISTIAN, CLAY, CLINTON, DADE,  
DALLAS, DAVIES, DEKALB, DOUGLAS, GENTRY, GREENE, GRUNDY,  
HARRISON, HENRY, HICKORY, HOLT, LAFAYETTE, JACKSON, JASPER,  
LACLEDE, LAWRENCE, LIVINGSTON, JOHNSON, MCDONALD, MERCER,  
NEWTON, NODAWAY, OZARK, PETTIS, PLATTE, POLK, RAY, SALINE, ST.  
CLAIR, STONE, TANEY, VERNON, WEBSTER, WORTH AND WRIGHT COUNTIES

	Rates	Fringes
Line Construction:		
Groundman Powderman.....	\$ 37.14	1.5%+19.76

Groundman.....	\$ 34.65	1.5%+18.93
Lineman Operator.....	\$ 52.45	1.5%+26.05
Lineman.....	\$ 56.18	1.5%+24.22

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ELEC0095-001 06/01/2025

BARRY, BARTON, CEDAR, DADE, JASPER, LAWRENCE, MCDONALD, NEWTON,  
ST CLAIR, AND VERNON COUNTIES

Rates Fringes

Electricians:

Cable Splicers.....	\$ 25.40	12.19
Electricians.....	\$ 31.09	20.81

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ELEC0124-007 08/26/2024

BATES, BENTON, CARROLL, CASS, CLAY, COOPER, HENRY, JACKSON,  
JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY AND SALINE  
COUNTIES:

Rates Fringes

Electricians.....	\$ 51.01	26.25
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ELEC0257-003 03/01/2025

AUDRAIN (Except Cuivre Township), BOONE, CALLAWAY, CAMDEN,  
CHARITON, COLE, CRAWFORD, DENT, GASCONADE, HOWARD, MARIES,  
MILLER, MONITEAU, OSAGE, PHELPS AND RANDOLPH COUNTIES

Rates Fringes

Electricians:

Cable Splicers.....	\$ 30.42	16.085
Electricians.....	\$ 40.50	23.26

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ELEC0350-002 12/01/2024

ADAIR, AUDRAIN (East of Highway 19), CLARK, KNOX, LEWIS, LINN,  
MACON, MARION, MONROE, MONTGOMERY, PIKE, PUTNAM, RALLS,  
SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES

Rates Fringes

Electricians.....	\$ 37.60	22.145
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ELEC0453-001 09/01/2024

Rates Fringes

Electricians:

CHRISITAN, DALLAS, DOUGLAS, GREENE, HICKORY, HOWELL, LACLEDE, OREGON, OZARK, POLK, SHANNON, WEBSTER and WRIGHT COUNTIES..	\$ 32.40	19.11
PULASKI and TEXAS COUNTIES..	\$ 39.70	19.84
STONE and TANEY COUNTIES....	\$ 28.65	18.34

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\* ELEC0545-003 06/01/2025

ANDREW, BUCHANAN, CLINTON, DEKALB, ATCHISON, HOLT, MERCER, GENTRY, HARRISON, DAVIESS, GRUNDY, WORTH, LIVINGSTON, NODAWAY, AND CALDWELL COUNTIES

	Rates	Fringes
Electricians:.....	\$ 43.20	21.50
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ELEC0702-004 01/06/2025		

BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MADISON, MISSISSIPPI, NEW MADRID, PEMISCOT, SCOTT, STODDARD AND WAYNE COUNTIES

	Rates	Fringes
Line Construction:		
Groundman - Class A.....	\$ 38.18	29%+8.85
Groundman-Equipment		
Operator Class II (all		
other equipment).....	\$ 46.49	29%+8.85
Heavy-Equipment Operator		
Class I (all crawler type		
equipment D-4 and larger)...	\$ 52.13	29%+8.85
Lineman.....	\$ 74.55	29%+8.85
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ENGI0101-001 05/01/2025		

AREA 1  
 ANDREW, ATCHISON, BATES, BENTON, BUCHANAN, CALDWELL, CARROLL, CHARITON, CLINTON, COOPER, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HENRY, HOLT, HOWARD, JOHNSON, LAFAYETTE, LINN, LIVINGSTON, MERCER, NODAWAY, PETTIS, SALINE, SULLIVAN AND WORTH COUNITIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 38.83	21.87
GROUP 2.....	\$ 38.43	21.87
GROUP 3.....	\$ 36.43	21.87

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or sub-grader; backhoe; blade operator (all types); boilers - 2; booster pump on dredge; bulldozer operator; boring machine (truck or crane mounted); clamshell operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching machine; dragline operator; dredge engineman; dredge operator; drill cat with compressor mounted (self-contained) or similar type self-propelled rotary drill (not air tract); drilling or boring machine (rotary-self-propelled); finishing machine operator; greaser; high loader-fork lift-skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard gauge); mechanics and welders (field and plants); mucking machine operator; pile drive operator; pitman crane or boom truck (all types); push cat; quad track; scraper

operators (all types); shovel operator; sideboom cats; side discharge spreader; skimmer scoop operators; slip form paver operator (CMI, Rex, Gomeco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; wood and log chippers (all types).

GROUP 2: A-frame truck operator; articulated dump truck; back filler operator; boilers (1); chip spreader; churn drill operator; compressor; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grade operator; hoisting engine (one drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra-hammer (or similar type); paymill operator; power shield; pumps; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; siphons and jets; straw blower; stump cutting machine; siphons and jets; tank car heater operator (combination boiler and booster); welding machine; vibrating machine operator (not hand held); welding machine.

GROUP 3: (a) Oiler;  
(b) Oiler driver  
(c) Mechanic.

HOURLY PREMIUMS:

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$ .25) ABOVE GROUP 1 RATE: Dragline operator - 3 yds. & over; shovel 3 yds. & over; clamshell 3 yds. & over; Crane, rigs or piledrivers, 100' of boom or over (incl. jib.), hoist - each additional active drum over 2 drums

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$ .50) ABOVE GROUP 1 RATE: Tandem scoop operator; crane, rigs or piledrivers 150' to 200' of boom (incl. jib.)

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$ .75) ABOVE GROUP 1 RATE: Crane rigs, or piledrivers 200 ft. of boom or over (including jib.)

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ENGI0101-005 04/01/2025

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 40.17	22.29
GROUP 2.....	\$ 39.13	22.29
GROUP 3.....	\$ 34.66	22.29
GROUP 4.....	\$ 38.01	22.29

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or sub-grader; backhoe; blade operator (all types); boilers-2; booster pump on dredge; boring machine (truck or crane mounted); bulldozer operator; clamshell operator; concrete cleaning decontamination machine operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching

machine; dragline operator; dredge engineman; dredge operator; drillcat with compressor mounted (self-contained) or similar type self propelled rotary drill (not air tract); drilling or boring machine (rotary - self-propelled); finishing machine operator; greaser; heavy equipment robotics operator/mechanic; horizontal directional drill operator; horizontal directional drill locator; loader-forklift - skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard gauge); master environmental maintenance mechanic; mechanics and welders (field and plants); mucking machine operator; piledrive operator; pitman crane or boom truck (all types); push cat; quad-track; scraper operators (all types); shovel operator; side discharge spreader; sideboom cats; skimmer scoop operator; slip-form paver (CMI, REX, Gomaco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; ultra high pressure waterjet cutting tool system operator/mechanic; vacuum blasting machine operator/mechanic; wood and log chippers (all types)

GROUP 2: "A" Frame truck operator; back filler operator; boilers (1); chip spreader; churn drill operator; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grader operator; hoisting engine (1 drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra-hammer (or similar type); power shield; paymill operator; pumps; siphons and jets; stump cutting machine; tank car heater operator (combination boiler and booster); compressor; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; straw blower; tank car heater operator (combination boiler and booster); vibrating machine operator (not hand held)

GROUP 3: Oilers

GROUP 4: Oiler Driver (All Types)

FOOTNOTE:

HOURLY PREMIUMS FOLLOWING CLASSIFICATIONS SHALL RECEIVE (\$1.00) ABOVE GROUP 1 RATE:

Clamshells - 3 yd. capacity or over; Cranes or rigs, 80 ft. of boom or over (including jib); Draglines, 3 yd. capacity or over;

Piledrivers 80 ft. of boom or over (including jib);

Shovels & backhoes, 3 yd. capacity or over.

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 ENGI0101-022 05/01/2025

BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES and CITY OF SPRINGFIELD

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 36.60	19.32
GROUP 2.....	\$ 36.25	19.32

GROUP 3.....	\$ 36.05	19.32
GROUP 4.....	\$ 34.00	19.32

## POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening spreader; asphalt plant console operator; autograder; automatic slipform paver; backhoe; blade operator - all types; boat operator - tow; boilers-2; central mix concrete plant operator; clamshell operator; concrete mixer paver; crane operator; derrick or derrick trucks; ditching machine; dozer operator; dragline operator; dredge booster pump; dredge engineman; dredge operator; drill cat with compressor mounted on cat; drilling or boring machine rotary self-propelled; highloader; hoisting engine - 2 active drums; launch hammer wheel; locomotive operator; - standard gauge; mechanic and welders; mucking machine; off-road trucks; piledriver operator; pitman crane operator; push cat operator; quad trac; scoop operator - all types; shovel operator; sideboom cats; skimmer scoop operators; trenching machine operator; truck crane.

GROUP 2: A-frame; asphalt hot-mix silo; asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant man; asphalt plant mixer operator; asphalt roller operator; backfiller operator; barber-greene loader; boat operator (bridges and dams); chip spreader; concrete mixer operator - skip loader; concrete plant operator; concrete pump operator; crusher operator; dredge oiler; elevating grader operator; fork lift; greaser-fleet; hoisting engine - 1; locomotive operator - narrow gauge; multiple compactor; pavement breaker; powerbroom - self-propelled; power shield; rooter; side discharge concrete spreader; slip form finishing machine; stumpcutter machine; throttle man; tractor operator (over 50 h.p.); winch truck.

GROUP 3: Boilers - 1; chip spreader (front man); churn drill operator; clef plane operator; concrete saw operator (self-propelled); curb finishing machine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; roller operator, other than high type asphalt; screening & washing plant operator; siphons & jets; sub-grading machine operator; spreader box operator, self-propelled (not asphalt); tank car heater operator (combination boiler & booster); tractor operator (50 h.p. or less); Ulmac, Ulric or similar spreader; vibrating machine operator, not hand;

GROUP 4: Grade checker; Oiler; Oiler-Driver

## HOURLY PREMIUMS:

The following classifications shall receive \$ .25 above GROUP 1 rate:

Clamshells - 3 yds. or over; Cranes - Rigs or Piledrivers, 100 ft. of boom or over (including jib);  
 Draglines - 3 yds. or over; Hoists - each additional active drum over 2 drums; Shovels - 3 yds. or over;

The following classifications shall receive \$ .50 above GROUP 1 rate:

Tandem scoop operator; Cranes - Rigs or Piledrivers, 150 ft. to 200 ft. of boom (including jib); Tandem scoop.

The following classifications shall receive \$ .75 above GROUP

1 rate:

Cranes - Rigs or Piledrivers, 200 ft. of boom or over (including jib.).

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 ENGI0513-004 05/05/2025

FRANKLIN, JEFFERSON, LINCOLN, ST CHARLES, AND WARREN COUNTIES

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 45.96	30.96
GROUP 2.....	\$ 45.96	30.96
GROUP 3.....	\$ 44.66	30.96
GROUP 4.....	\$ 44.22	30.96

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, Cable; Backhoe, Hydraulic (2 cu yds bucket and under regardless of attachment, one oiler for 2 or 3, two oilers for 4 through 6); Backhoe, Hydraulic over 2 cu yds; Cableway; Crane, Crawler or Truck; Crane, Hydraulic - Truck or Cruiser mounted, 16 tons and over; Crane, Locomotive; crane with boom including jib over 100 ft from pin to pin; Crane using rock socket tool; Derrick, Steam; Derrick Car and Derrick Boat; Dragline, 7 cu yds and over; Dredge; Gradall, Crawler or tire mounted; Locomotive, Gas, Steam & other powers; Pile Driver, Land or Floating; Scoop, Skimmer; Shovel, Power (Electric, Gas, Steam or other powers); Shovel, Power (7 cu yds and over); Switch Boat; Whirley; Air Tugger with air compressor; Anchor Placing Barge; Asphalt Sprecker; Athey Force Feeder Loader, self-propelled; Backfilling Machine; Boat Operator - Push Boat or Tow Boat (job site); Boiler, High Pressure Breaking in Period; Boom Truck, Placing or Erecting; Boring Machine, Footing Foundation; Bullfloat; Cherry Picker; Combination Concrete Hoist and Mixer (such as Mixermobile); Compressor, Two 125 CFM and under; Compressor, Two through Four over 125 CFM; Compressor when operator runs throttle; Concrete Breaker (Truck or Tractor mounted); Concrete Pump (such as Pumpcrete machine); Concrete Saw (self-propelled); Concrete Spreader; Conveyor, Large (not selfpropelled) hoisting or moving brick and concrete into, or into and on floor level, one or both; Crane, Cimbing (such as Linden); Crane, Hydraulic - Rough Terrain, self-propelled; Crane, Hydraulic - Truck or Cruiser mounted - under 16 tons; Drilling machine - Self-powered, used for earth or rock drilling or boring (wagon drills and any hand drills obtaining power from other souces including concrete breakers, jackhammers and Barco equipmnet no engineer required); Elevating Grader; Engine Man, Dredge; Excavator or Powerbelt Machine; Finishing Machine, self- propelled oscillating screed; Forklift; Generators, Two through Six 30 KW or over; Grader, Road with power blade; Greaser; Highlift; Hoist, Concrete and Brick (Brick cages or concrete skips operating or on tower, Towermobile, or similar equipment); Hoist, Three or more drums in use; Hoist, Stack; Hydro-Hammer; Lad-A-Vator, hoisting brick or concrete; Loading Machine such as Barber-Greene; Mechanic on job site

GROUP 2: Air Tugger with plant air; Boiler (for power or heating shell of building or temporary enclosures in connection with construction work); Boiler, Temporary; Compressor, One over 125 CFM; Compressor, truck mounted;

Conveyor, Large (not self- propelled); Conveyor, Large (not self- propelled) moving brick and concrete (distributing) on floor level; Curb Finishing Machine; Ditch Paving Machine; Elevator (outside); Endless Chain Hoist; Fireman (as required); Form Grader; Hoist, One Drum regardless of size (except brick or concrete); Lad-A-Vator, other hoisting; Manlift; Mixer, Asphalt, over 8 cu ft capacity; Mixer, one bag capacity or less; Mixer, without side loader, two bag capacity or more; Mixer, with side loader, regardless of size, not Paver; Mud Jack (where mud jack is used in conjunction with an air compressor, operator shall be paid \$ .55 per hour in addition to his basic hourly rate for covering both operations); Pug Mill operator; Pump, Sump - self powered, automatic controlled over 2"; Scissor Lift (used for hoisting); Skid Steer Loader; Sweeper, Street; Tractor, small wheel type 50 HP and under with grader blade and similar equipment; Welding Machine, One over 400 amp; Winch, operating from truck

GROUP 3: Boat operator - outboard motor, job site; Conveyors (such as Con-Vay-It) regardless of how used; Elevator (inside); Heater operator, 2 through 6; Sweeper, Floor

GROUP 4: Crane type

HOURLY PREMIUMS:

Backhoe, Hydraulic 2 cu yds or less without oiler - \$2.00;  
 Crane,climbing (such as Linden) - \$.50;  
 Crane, Pile Driving and Extracting - \$ .50  
 Crane with boom (including job) over  
 100 ft from pin to pin - add \$.01 per foot  
 to maximum of \$4.00);  
 Crane, using rock socket tool - \$ .50;  
 Derrick, diesel, gas or electric hoisting material  
 and erecting steel (150 ft or more above ground) - \$ .50;  
 Dragline, 7 cu yds and over - \$ .50;  
 Hoist, Three or more drums in use - \$ .50;  
 Scoop, Tandem - \$.50;  
 Shovel, Power - 7 cu yds and over - \$ .50;  
 Tractor, Tandem Crawler - \$ .50;  
 Tunnel, man assigned to work in tunnel or  
 tunnel shaft - \$ .50;  
 Wrecking, when machines are working on  
 second floor or higher - \$ .50

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 ENGI0513-006 05/01/2025

ADAIR, AUDRAIN, BOLLINGER, BOONE, BUTLER, CALLAWAY, CAPE GIRARDEAU, CARTER, CLARK, COLE, CRAWFORD, DENT, DUNKLIN, GASCONADE, HOWELL, IRON, KNOX, LEWIS, MACON, MADISON, MARIES, MARION, MILLER, MISSISSIPPI, MONITEAU, MONROE, MONTGOMERY, MORGAN, NEW MADRID, OREGON, OSAGE, PEMISCOT, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. FRANCOIS, STE. GENEVIEVE, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD, TEXAS, WASHINGTON, AND WAYNE COUNTIES

Rates Fringes

Power equipment operators:		
GROUP 1.....	\$ 40.39	30.33
GROUP 2.....	\$ 40.04	30.33
GROUP 3.....	\$ 39.84	30.33

GROUP 4.....\$ 36.19

30.33

## POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening spreader, asphalt plant console operator; autograder; automatic slipform paver; back hoe; blade operator - all types; boat operator tow; boiler two; central mix concrete plant operator; clam shell operator; concrete mixer paver; crane operator; derrick or derrick trucks; ditching machine; dozer operator; dragline operator; dredge booster pump; dredge engineman; dredge operator; drill cat with compressor mounted on cat; drilling or boring machine rotary self-propelled; highloader; hoisting engine 2 active drums; launchhammer wheel; locomotive operator standrad guage; mechanics and welders; mucking machine; piledriver operator; pitman crane operator; push cat operator; quad-trac; scoop operator; sideboom cats; skimmer scoop operator; trenching machine operator; truck crane, shovel operator.

GROUP 2: A-Frame; asphalt hot-mix silo; asphalt roller operator asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant mixer operator; backfiller operator; barber-greene loader; boat operator (bridge & dams); chip spreader; concrete mixer operator skip loader; concrete plant operator; concrete pump operator; dredge oiler; elevating graded operator; fork lift; grease fleet; hoisting engine one; locomotive operator narrow guage; multiple compactor; pavement breaker; powerbroom self-propelled; power shield; rooter; slip-form finishing machine; stumpcutter machine; side discharge concrete spreader; throttleman; tractor operator (over 50 hp); winch truck; asphalt roller operator; crusher operator.

GROUP 3: Spreader box operator, self-propelled not asphalt; tractor operator (50 h.p. or less); boilers one; chip spreader (front man); churn drill operator; compressor over 105 CFM 2-3 pumps 4" & over; 2-3 light plant 7.5 KWA or any combination thereof; clef plane operator; compressor maintenance operator 2 or 3; concrete saw operator (self-propelled); curb finishing mancine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; riller operator other than high type asphalt; screening & washing plant operator; siphons & jets; subgrading machine operator; tank car heater (combination boiler & booster); ulmac, ulric or similar spreader; vibrating machine operator; hydrobroom.

GROUP 4: Oiler; grout machine; oiler driver; compressor over 105 CFM one; conveyor operator one; maintenance operator; pump 4" & over one.

## FOOTNOTE: HOURLY PREMIUMS

Backhoe hydraulic, 2 cu. yds. or under Without oiler - \$2.00  
 Certified Crane Operator - \$1.50;  
 Certified Hazardous Material Operator \$1.50;  
 Crane, climbing (such as Linden) - \$0.50;  
 Crane, pile driving and extracting - \$0.50;  
 Crane, with boom (including jib) over 100' from pin to pin add \$0.01 per foot to maximum of \$4.00;  
 Crane, using rock socket tool - \$0.50;  
 Derrick, diesel, gas or electric, hoisting material and

- erecting steel (150' or more above the ground) - \$0.50;
- Dragline, 7 cu. yds, and over - \$0.50;
- Hoist, three or more drums in use - \$0.50; Scoop, Tandem - \$0.50;
- Shovel, power - 7 cu. yds. or more - \$0.50;
- Tractor, tandem crawler - \$0.50;
- Tunnel, man assigned to work in tunnel or tunnel shaft - \$0.50;
- Wrecking, when machine is working on second floor or higher - \$0.50;

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ENGI0513-007 05/05/2025

ST. LOUIS CITY AND COUNTY

	Rates	Fringes
Power equipment operators:		
GROUP 1.....	\$ 45.96	30.96
GROUP 2.....	\$ 45.96	30.96
GROUP 3.....	\$ 44.66	30.96
GROUP 4.....	\$ 44.22	30.96

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, cable or hydraulic; cableway; crane crawler or truck; crane, hydraulic-truck or cruiser mounted 16 tons & over; crane locomotive; derrick, steam; derrick car & derrick boat; dragline; dredge; gradall, crawler or tire mounted; locomotive, gas, steam & other powers; pile driver, land or floating; scoop, skimmer; shovel, power (steam, gas, electric or other powers); switch boat; whirley.

GROUP 2: Air tugger w/air compressor; anchor-placing barge; asphalt spreader; atney force feeder loader (self-propelled); backfilling machine; backhoe-loader; boat operator-push boat or tow boat (job site); boiler, high pressure breaking in period; boom truck, placing or erecting; boring machine, footing foundation; bull- float; cherry picker; combination concrete hoist & mixer (such as mixer mobile); compressor (when operator runs throttle); concrete breaker (truck or tractor mounted); concrete pump, such as pump-crete machine; concrete saw (self-propelled), concrete spreader; conveyor, large (not self-propelled), hoisting or moving brick and concrete into, or into and on floor level, one or both; crane, hydraulic-rough terrain, self-propelled; crane hydraulic-truck or cruiser mounted-under 16 tons; drilling machines, self-powered use for earth or rock drilling or boring (wagon drills and any hand drills obtaining power from other sources including concrete breakers, jackhammers and barco equipment-no engineer required); elevating grader; engineman, dredge; excavator or powerbelt machine; finishing machine, self-propelled oscillating screed; forklift; grader, road with power blade; highlift. greaser; hoist, stack, hydro-hammer; loading machine (such as barber-greene); machanic, on job site; mixer, pipe wrapping machines; plant asphalt; plant, concrete producing or ready-mix job site; plant heating-job site; plant mixing-job site; plant power, generating-job site; pumps, two through six self-powered over 2""; pumps, electric submersible, two through six, over 4""; quad-track; roller, asphalt, top or sub-grade; scoop, tractor drawn; spreader box; sub-grader; tie tamper;

tractor-crawler, or wheel type with or without power unit, power take-offs and attachments regardless of size; trenching machine; tunnel boring machine; vibrating machine automatic, automatic propelled; welding machines (gasoline or diesel) two through six; well drilling machine

GROUP 3: Conveyor, large (not self-propelled); conveyor, large (not self-propelled) moving brick and concrete distributing) on floor level; mixer two or more mixers of one bag capacity or less; air tugger w/plant air; boiler, for power or heating on construction projects; boiler, temporary; compressor (mounted on truck; curb finishing machine; ditch paving machine; elevator; endless chain hoist; form grader; hoist, one drum regardless of size; lad-a-vator; manlift; mixer, asphalt, over 8 cu. ft. capacity, without side loader, 2 bag capacity or more; mixer, with side loader, regardless of size; pug mill operator; pump, sump-self-powered, automatic controlled over 2" during use in connection with construction work; sweeper, street; welding machine, one over 400 amp.; winch operating from truck; scissor lift (used for hoisting); tractor, small wheel type 50 h.p. & under with grader blade & similar equipment; Oiler on dredge and on truck crane.

GROUP 4: Boat operator-outboard motor (job site); conveyor (such as con-vay-it) regardless of how used; sweeper, floor

HOURLY PREMIUMS:

Backhoe, hydraulic	
2 cu. yds. or under without oiler	\$2.00
Certified Crane Operator	1.50
Certified Hazardous Material Operator	1.50
Crane, climbing (such as Linden)	.50
Crane, pile driving and extracting	.50
Crane, with boom (including jib) over 100' (from pin to pin) add \$.01 per foot to maximum of	4.00
Crane, using rock socket tool	.50
Derrick, diesel, gas or electric, hoisting material and erecting steel (150' or more above ground)	.50
Dragline, 7 cu. yds. and over	.50
Hoist, three (3) or more drums in use	.50
Scoop, Tandem	.50
Shovel, power - 7 cu. yds. or more	.50
Tractor, tandem crawler	.50
Tunnel, man assigned to work in tunnel or tunnel shaft	.50
Wrecking, when machine is working on second floor or higher	.50

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IRON0010-012 04/01/2025

Rates Fringes

Ironworkers:

ANDREW, BARTON, BENTON,  
CAMDEN, CEDAR, CHARITON,  
CHRISTIAN, COOPER, DADE,  
DALLAS, DAVIESS, DE KALB,  
GENTRY, GREENE, GRUNDY,  
HARRISON, HICKORY, HOLT,  
HOWARD, LACLEDE, LINN,  
LIVINGSTON, MERCER,

MONITEAU, MORGAN, NODAWAY,  
 PETTIS, POLK, PUTNAM,  
 RANDLOPH, ST. CLAIR,  
 SULLIVAN, TANEY, VERNON,  
 WEBSTER, WRIGHT and WORTH  
 Counties and portions of  
 ADAIR, BOONE, MACON,  
 MILLER and RANDOLPH  
 Counties.....\$ 36.00                    34.25

ATCHISON, BATES, BUCHANAN,  
 CALDWELL, CARROLL, CASS,  
 CLAY, CLINTON, HENRY,  
 JACKSON, JOHNSON,  
 LAFAYETTE, PETTIS, PLATTE,  
 SALINE, AND RAY COUNTIES....\$ 39.00                    34.25

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 IRON0010-020 04/01/2025

BARRY, JASPER, LAWRENCE, MCDONALD, NEWTON AND STONE Counties

	Rates	Fringes
Ironworkers:.....	\$ 36.00	34.25

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 IRON0321-002 08/01/2023

DOUGLAS, HOWELL and OZARK COUNTIES

	Rates	Fringes
Ironworker.....	\$ 27.00	20.96

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 IRON0396-004 08/07/2024

ST. LOUIS (City and County), ST. CHARLES, JEFFERSON, IRON,  
 FRANKLIN, LINCOLN, WARREN, WASHINGTON, ST. FRANCOIS, STE.  
 GENEVIEVE, and REYNOLDS Counties; and portions of MADISON,  
 PERRY, BOLLINGER, WAYNE, and CARTER Counties

	Rates	Fringes
Ironworker.....	\$ 41.67	31.25

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 IRON0396-009 08/07/2024

AUDRAIN, CALLAWAY, COLE, CRAWFORD, DENT, GASCONADE, MARIES,  
 MONTGOMERY, OSAGE, PHELPS, PIKE, PULASKI, TEXAS and WRIGHT  
 Counties; and portions of BOONE, CAMDEN, DOUGLAS, HOWELL,  
 LACLEDE, MILLER, MONROE, OREGON, SHANNON and RALLS Counties

	Rates	Fringes
Ironworker.....	\$ 41.67	31.25

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 IRON0577-005 06/01/2024

ADAIR, CLARK, KNOX, LEWIS, MACON, MARION, MONROE, RALLS,  
 SCHUYLER, SCOTLAND, AND SHELBY COUNTIES

	Rates	Fringes
Ironworker.....	\$ 34.05	25.30

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 IRON0782-003 08/01/2023

CAPE GIRARDEAU, MISSISSIPPI, NEW MADRID, SCOTT, & STODDARD  
 Counties; and portions of BOLLINGER, BUTLER, CARTER, DUNKLIN,  
 MADISON, PEMISCOT, PERRY, RIPLEY, and WAYNE Counties

	Rates	Fringes
Ironworkers:		
Locks, Dams, Bridges and other major work on the Mississippi and Ohio River only.....	\$ 38.77	29.51
All Other Work.....	\$ 33.47	24.12

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 LAB00042-003 06/04/2025

ST. LOUIS (City and County)

	Rates	Fringes
LABORER		
Plumber Laborer.....	\$ 40.82	17.56

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 LAB00042-005 06/04/2025

ST. LOUIS (City and County)

	Rates	Fringes
LABORER		
Dynamiter, Powderman.....	\$ 40.82	17.56
Laborers, Flaggers.....	\$ 40.82	17.56
Wrecking.....	\$ 40.82	17.56

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 LAB00110-005 05/01/2024

Jefferson and Washington Counties

	Rates	Fringes
LABORER (Jefferson County)		
GROUP 1.....	\$ 38.24	15.55
GROUP 2.....	\$ 38.24	15.55
LABORER (Washington County)		
GROUP 1.....	\$ 35.13	15.55
GROUP 2.....	\$ 35.12	15.55

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders;  
 salamander Tenders; Dump Man; Ticket Takers; loading trucks  
 under bins, hoppers, and conveyors; track man; cement  
 handler; dump man on earth fill; georgie buggy man;  
 material batch hopper man; spreader on asphalt machine;  
 material mixer man (except on manholes); coffer dams;  
 riprap pavers rock, block or brick; scaffolds over ten feet  
 not self-supported from ground up; skip man on concrete  
 paving; wire mesh setters on concrete paving; all work in  
 connection with sewer, water, gas, gasoling, oil, drainage  
 pipe, conduit pipe, tile and duct lines and all other pipe  
 lines; power tool operator; all work in connection with  
 hydraulic or general dredging operations; form setters,

puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutment and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men or brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.

GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun's chairs; scaffolds or platforms on dams or power plants over 10 ft. high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other similar type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

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LAB00579-005 05/01/2023

	Rates	Fringes
LABORER (ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HOLT, LIVINGSTON, MERCER, NODAWAY and WORTH COUNTIES.)		
GROUP 1.....	\$ 29.04	16.59
GROUP 2.....	\$ 29.39	16.59
LABORER (BARRY, BARTON, BATES, BENTON, CAMDEN, CARROLL, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HENRY, HICKORY, JASPER, JOHNSON, LACLEDE, LAWRENCE, MCDONALD, MORGAN, NEWTON, OZARK, PETTIS, POLK, ST. CLAIR, SALINE, STONE, TANEY, VERNON, WEBSTER and WRIGHT COUNTIES)		
GROUP 1.....	\$ 28.23	15.60
GROUP 2.....	\$ 28.78	15.60
LABORER (LAFAYETTE COUNTY)		
GROUP 1.....	\$ 29.78	15.85
GROUP 2.....	\$ 30.13	15.85

LABORERS CLASSIFICATIONS

GROUP 1: General Laborers - Carpenter tenders; salamander tenders; loading trucks under bins; hoppers & conveyors; track men & all other general laborers; air tool operator; cement handler-bulk or sack; dump man on earth fill; georgie buggy man; material batch hopper man; material mixer man (except on manholes); coffer dams; riprap pavers - rock, block or brick; signal man; scaffolds over ten feet not self-supported from ground up; skipman on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoline, oil drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator, all work in connection with hydraulic or general dredging operations; puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material or materials (where special protection is required); rubbing concrete; topper of standing trees; batter board man on pipe and ditch work; feeder man on wood pulverizers; board and willow mat weavers and cable tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 feet where compressed air is not used; abutment and pier hole men working six (6) feet or more below ground; men working in coffer dams for bridge piers and footings in the river; ditchliners; pressure groutmen; caulker; chain or concrete saw; cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet above ground; mortarmen on brick or block manholes; toxic and hazardous waste work.

GROUP 2: Skilled Laborers - Head pipe layer on sewer work; laser beam man; Jackson or any other similar tamp; cutting torch man; form setters; liners and stringline men on concrete paving, curb, gutters; hot mastic kettleman; hot tar applicator; sandblasting and gunite nozzle men; air tool operator in tunnels; screed man on asphalt machine; asphalt raker; barco tamper; churn drills; air track drills and all similar drills; vibrator man; stringline man for electronic grade control; manhole builders-brick or block; dynamite and powder men; grade checker.

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 LAB00660-004 05/01/2024

Clark, Knox, Lewis, Marion, Pike, Ralls, Scotland, Shelby Counties

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 35.13	15.55
GROUP 2.....	\$ 35.13	15.55

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders; salamander Tenders; Dump Man; Ticket Takers; loading trucks under bins, hoppers, and conveyors; track man; cement handler; dump man on earth fill; georgie buggy man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap pavers rock, block or brick; scaffolds over ten feet not self-supported from ground up; skip man on concrete

paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters, puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutment and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men or brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.

GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun's chairs; scaffolds or platforms on dams or power plants over 10 ft. high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other similar type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

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LAB00660-006 06/02/2025

Lincoln, Montgomery, St Charles and Warren Counties

	Rates	Fringes
LABORER (Common or General).....	\$ 36.91	15.62
Lincoln, Monntomery, and Warrner Counties.....	\$ 39.76	15.96
St. Charles County.....	\$ 41.18	15.96

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LAB00662-001 05/01/2024

Callaway, Cole, Miller and Moniteau Counties

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 38.24	15.55
GROUP 2.....	\$ 38.24	15.55

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders; salamander Tenders; Dump Man; Ticket Takers; loading trucks under bins, hoppers, and conveyors; track man; cement

handler; dump man on earth fill; georgie buggy man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap pavers rock, block or brick; scaffolds over ten feet not self-supported from ground up; skip man on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters, puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutment and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men or brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.

GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun's chairs; scaffolds or platforms on dams or power plants over 10 ft. high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other similar type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

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 LAB00663-002 04/01/2025

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 36.24	15.87
GROUP 2.....	\$ 37.45	15.87

LABORERS CLASSIFICATIONS

GROUP 1: General laborers, Carpenter tenders, salamander tenders, loading trucks under bins, hoppers and conveyors, track men and all other general laborers, air tool operator, cement handler (bulk or sack), chain or concrete saw, deck hands, dump man on earth fill, Georgie Buggies man, material batch hopper man, scale man, material mixer man (except on manholes), coffer dams, abutments and pier hole men working below ground, riprap pavers rock, black or brick, signal man, scaffolds over ten feet not

self-supported from ground up, skipman on concrete paving, wire mesh setters on concrete paving, all work in connection with sewer,water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipelines, power tool operator, all work in connection with hydraulic or general dredging operations, straw blower nozzleleman,asphalt plant platform man, chuck tender, crusher feeder, men handling creosote ties on creosote materials, men working with and handling epoxy material or materials (where special protection is required), topper of standing trees, batter board man on pipe and ditch work, feeder man on wood pulverizers, board and willow mat weavers and cable tiers on river work, deck hands, pile dike and revetment work, all laborers working on underground tunnels less than 25 feet where compressed air is not used, abutment and pier hole men working six (6) feet or more below ground, men working in coffer dams for bridge piers and footings in the river, ditchliners, pressure groutmen, caulker and chain or concrete saw, cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet above ground, mortarmen on brick or block manholes, signal man.

GROUP 2: Skilled Laborer - spreader or screed man on asphalt machine, asphalt raker, grade checker, vibrator man, concrete saw over 5 hp., laser beam man, barco tamper, jackson or any other similar tamp, wagon driller, churn drills, air track drills and other similar drills, cutting torch man, form setters, liners and stringline men on concrete paving, curb, gutters and etc., hot mastic kettleman, hot tar applicator, hand blade operators, mortar men on brick or block manholes, sand blasting and gunnite nozzle men, rubbing concrete, air tool operator in tunnels, head pipe layer on sewer work, manhole builder (brick or block), dynamite and powder men.

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 LAB00840-011 05/01/2024

Crawford, Dent, Franklin, Gasconade, Howell, Maries, Oregon, Osage, Phelps, Pulaski, Shannon and Texas Counties

	Rates	Fringes
LABORER (Crawford, Dent, Gasconade, Howell, Maries, Oregon, Osage, Phelps, Pulaski, Shannon and Texas Counties)		
GROUP 1.....	\$ 35.13	15.55
GROUP 2.....	\$ 35.13	15.55
LABORER (Franklin County)		
GROUP 1.....	\$ 38.19	15.55
GROUP 2.....	\$ 38.19	15.55

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders; salamander Tenders; Dump Man; Ticket Takers; loading trucks under bins, hoppers, and conveyors; track man; cement handler; dump man on earth fill; georgie buggy man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap pavers rock, block or brick; scaffolds over ten feet

not self-supported from ground up; skip man on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters, puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutment and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men or brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.

GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun's chairs; scaffolds or platforms on dams or power plants over 10 ft. high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other similar type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

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 LAB00955-012 05/01/2024

Adair, Audrain, Boone, Chariton, Cooper, Howard, Linn, Macon, Monroe, Putnam, Randolph, Schuyler and Sullivan Counties

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 35.13	15.55
GROUP 2.....	\$ 35.13	15.55

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders; salamander Tenders; Dump Man; Ticket Takers; loading trucks under bins, hoppers, and conveyors; track man; cement handler; dump man on earth fill; georgie buggy man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap pavers rock, block or brick; scaffolds over ten feet not self-supported from ground up; skip man on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe

lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters, puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutment and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men or brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.

GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun's chairs; scaffolds or platforms on dams or power plants over 10 ft. high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other similar type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

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 LAB01104-005 05/01/2024

Bollinger, Butler, Cape Girardeau, Carter, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscot, Perry, Reynolds, Ripley, Scott, St Francois, Ste Genevieve, Stoddard and Wayne Counties

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 35.13	15.55
GROUP 2.....	\$ 35.13	15.55

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders; salamander Tenders; Dump Man; Ticket Takers; loading trucks under bins, hoppers, and conveyors; track man; cement handler; dump man on earth fill; georgie buggie man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap pavers rock, block or brick; scaffolds over ten feet not self-supported from ground up; skip man on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters,

puddlers (paving only); straw blower nozzle man; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutment and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men or brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.

GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun's chairs; scaffolds or platforms on dams or power plants over 10 ft. high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other similar type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

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 PAIN002-002 09/01/2007

CLARK, FRANKLIN, JEFFERSON, LEWIS, LINCOLN, MARION, PIKE, RALLS, ST. CHARLES, ST. LOUIS (CITY & COUNTY), AND WARREN COUNTIES

	Rates	Fringes
Painters:		
Brush and Roller; Taper.....	\$ 28.61	10.24
High work over 60 feet.....	\$ 29.11	10.24
Lead Abatement.....	\$ 29.36	10.24
Pressure Roller; High work under 60 ft.....	\$ 28.86	10.24
Spray & Abrasive Blasting; Water Blasting (Over 5000 PSI).....	\$ 30.61	10.24
Taper (Ames Tools & Bazooka).....	\$ 30.21	10.24

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 PAIN002-006 04/01/2023

ADAIR, AUDRAIN, BOONE, CALLAWAY, CHARITON, COLE, GASCONADE, HOWARD, KNOX, LINN, MACON, MONROE, MONTGOMERY, OSAGE, PUTNAM, RANDOLPH, SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES and the City of Booneville.

	Rates	Fringes
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Painters:

Bridges, Dams, Locks or Powerhouses.....	\$ 28.49	15.03
Brush and Roll; Taping, Paperhanging.....	\$ 26.49	15.03
Epoxy or Any Two Part Coating; Sandblasting; Stage or other Aerial Work - Platforms over 50 feet high; Lead Abatement.....	\$ 27.49	15.03
Spray; Structural Steel (over 50 feet).....	\$ 27.49	15.03
Tapers using Ames or Comparable Tools.....	\$ 27.24	15.03

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PAIN003-004 04/01/2019

CASS, CLAY, CLINTON, JACKSON, JOHNSON, LAFAYETTE, PLATTE & RAY  
COUNTIES

Rates Fringes

Painters:

Bridgeman; Lead Abatement; Sandblast; Storage Bin & Tanks.....	\$ 33.41	17.76
Brush & Roller.....	\$ 30.54	17.76
Drywall.....	\$ 31.74	17.76
Paper Hanger.....	\$ 31.04	17.76
Stageman; Beltman; Steelman; Elevator Shaft; Bazooka, Boxes and Power Sander; Sprayman; Dipping...	\$ 32.41	17.76
Steeplejack.....	\$ 36.98	17.76

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PAIN003-011 04/01/2019

BATES, BENTON, CALDWELL, CARROLL, COOPER, DAVIESS, GRUNDY,  
HARRISON, HENRY, LIVINGSTON, MERCER, MONITEAU, MORGAN, PETTIS &  
SALINE COUNTIES

Rates Fringes

Painters:

Bridgeman; Lead Abatement; Sandblast; Storage Bin & Tanks.....	\$ 26.73	17.76
Brush & Roller.....	\$ 24.43	17.76
Drywall.....	\$ 25.39	17.76
Paper Hanger.....	\$ 24.83	17.76
Stageman; Beltman; Steelman; Elevator Shaft; Bazooka, Boxes and Power Sander; Sprayman; Dipping...	\$ 26.35	17.76
Steeplejack.....	\$ 29.58	17.76

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PAIN1185-008 04/01/2025

CAMDEN, CRAWFORD, DENT, LACLEDE, MARIES, MILLER, PHELPS,  
PULASKI AND TEXAS COUNTIES

Rates Fringes

Painters:

Brush and Roller.....	\$ 33.90	17.21
Floor Work.....	\$ 34.90	17.21
Lead Abatement.....	\$ 33.25	17.21
Spray.....	\$ 34.90	17.21
Structural Steel, Sandblasting and All Tank Work.....	\$ 35.90	17.21
Taping, Paperhanging.....	\$ 34.90	17.21

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PAIN1292-002 09/01/2024

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN,  
MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, REYNOLDS,  
RIPLEY, SCOTT, SHANNON, STODDARD and WAYNE COUNTIES

Rates Fringes

Painters:

Bridges, Stacks & Tanks.....	\$ 35.30	17.65
Brush & Roller.....	\$ 29.80	17.65
Spray & Abrasive Blasting; Waterblasting (over 5000 PSI).....	\$ 31.80	17.65

Height Rates (All Areas):

Over 60 ft. \$0.50 per hour.  
Under 60 ft. \$0.25 per hour.

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PAIN1292-003 09/01/2024

IRON, MADISON, ST. FRANCOIS, STE. GENEVIEVE and WASHINGTON  
COUNTIES

Rates Fringes

Painters:

Bridges, Stacks & Tanks.....	\$ 35.30	17.65
Brush & Roller.....	\$ 30.95	17.65
Spray & Abrasive Blasting; Waterblasting (Over 5000 PSI).....	\$ 32.95	17.65

Height Rates (All Areas):

Over 60 ft. \$0.50 per hour  
Under 60 ft. \$0.25 per hour.

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PAIN2012-001 04/01/2023

ANDREW, ATCHISON, BUCHANAN, DE KALB, GENTRY, HOLT, NODAWAY &  
WORTH COUNTIES

Rates Fringes

Painters:

Brush & Roller.....	\$ 34.22	19.13
Sandblaster.....	\$ 38.46	19.13
Steeplejack.....	\$ 42.03	19.13

PAIN2015-001 04/01/2012

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, HOWELL, JASPER, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, and WRIGHT COUNTIES

Rates Fringes

Painters:

Finisher.....	\$ 20.18	11.33
Painter.....	\$ 19.75	11.76
Sandblaster, High Man, Spray Man, Vinyl Hanger, Tool Operator.....	\$ 21.18	11.33

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PLAS0518-006 03/01/2025

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, AND WRIGHT COUNTIES

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...	\$ 30.37	12.43
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PLAS0518-007 04/01/2025

CASS (Richards-Gebaur AFB only), CLAY, JACKSON, PLATTE AND RAY COUNTIES

Rates Fringes

Cement Masons:.....	\$ 39.06	18.71
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PLAS0518-011 04/01/2025

ANDREW, ATCHISON, BATES, BUCHANNAN, CLINTON, DEKALB, GENTRY, HENRY, HOLT, JOHNSON, LAFAYETTE, NODAWAY & WORTH COUNTIES

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...	\$ 40.13	20.50
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PLAS0518-019 03/01/2025

Adair, Audrain, Benton, Boone, Callaway, Caldwell, Camden, Carroll, Chariton, Cole, Cooper, Daviess, Gasconade, Grundy, Harrison, Howard, Linn, Livingston, Macon, Maries, Mercer, Miller, Moniteau, Monroe, Montgomery, Morgan, Osage, Pettis, Putnam, Randolph, Saline, Schuyler, Shelby and Sullivan Counties

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...	\$ 33.52	15.88
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PLAS0527-001 04/01/2023

Rates Fringes

CEMENT MASON

FRANKLIN, LINCOLN AND WARREN COUNTIES.....	\$ 37.29	20.23
JEFFERSON, ST. CHARLES COUNTIES AND ST. LOUIS (City and County).....	\$ 38.46	20.13

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PLAS0527-004 06/01/2023

CRAWFORD, DENT, IRON, MADISON, MARION, PHELPS, PIKE, PULASKI,  
RALLS, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SHANNON, TEXAS,  
WASHINGTON COUNTIES

	Rates	Fringes
CEMENT MASON.....	\$ 32.00	19.72

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PLAS0908-001 05/01/2025

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, HOWELL,  
MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, RIPLEY,  
SCOTT, STODDARD, AND WAYNE COUNTIES

	Rates	Fringes
CEMENT MASON.....	\$ 35.10	18.78

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PLUM0008-003 06/01/2024

CASS, CLAY, JACKSON, JOHNSON, AND PLATTE COUNTIES

	Rates	Fringes
Plumbers.....	\$ 56.63	24.54

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PLUM0008-017 06/01/2024

BATES, BENTON, CARROLL, HENRY, LAFAYETTE, MORGAN, PETTIS, RAY,  
ST. CLAIR, SALINE AND VERNON COUNTIES

	Rates	Fringes
Plumbers.....	\$ 56.63	24.54

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PLUM0045-003 08/01/2024

ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB,  
GENTRY, HARRISON, HOLT, NODAWAY AND WORTH COUNTIES

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 47.45	26.15

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PLUM0178-003 11/01/2024

BARRY, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE,  
HICKORY, LACLEDE, LAWRENCE, POLK, STONE, TANEY, WEBSTER AND  
WRIGHT COUNTIES

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 39.35	15.72

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PLUM0178-006 11/01/2022

BARTON, JASPER, MCDONALD AND NEWTON COUNTIES

	Rates	Fringes
Plumbers and Pipefitters		
Projects \$750,000 & under...	\$ 32.78	15.32
Projects over \$750,000.....	\$ 35.75	15.32

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PLUM0533-004 06/01/2024

BATES, BENTON, CARROLL, CASS, CLAY, HENRY, HICKORY, JACKSON, JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY, SALINE, ST. CLAIR AND VERNON COUNTIES

	Rates	Fringes
Pipefitters.....	\$ 55.56	25.80

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PLUM0562-004 07/01/2023

ADAIR, AUDRAIN, BOLLINGER, BOONE, BUTLER, CALLAWAY, CAMDEN, CAPE GIRARDEAU, CARTER, CHARITON, CLARK, COLE, COOPER, CRAWFORD, DENT, DUNKLIN, FRANKLIN, GASCONADE, GRUNDY, HOWARD, HOWELL, IRON, JEFFERSON, KNOX, LEWIS, LINCOLN, LINN, LIVINGSTON, MACON, MADISON, MARIES, MARION, MERCER, MILLER, MISSISSIPPI, MONITEAU, MONROE, MONTGOMERY, NEW MADRID, OREGON, OSAGE, PEMISCOTT, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS, STE. GENEVIEVE, ST. LOUIS, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD, SULLIVAN, TEXAS, WARREN, WASHINGTON, AND WAYNE COUNTIES.

	Rates	Fringes
Plumbers and Pipefitters		
Mechanical Contracts		
including all piping and		
temperature control work		
\$7.0 million & under.....	\$ 46.66	21.99
Mechanical Contracts		
including all piping and		
temperature control work		
over \$7.0 million.....	\$ 46.66	21.99

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PLUM0562-016 07/01/2023

CAMDEN, COLE, CRAWFORD, FRANKLIN, JEFFERSON, MARIES, MILLER, MONITEAU, OSAGE, PHELPS, PULASKI, ST. CHARLES, ST. LOUIS (City and County), WARREN and WASHINGTON COUNTIES

	Rates	Fringes
Plumbers		
Mechanical Contracts		
including all piping and		
temperature control work		
\$7.0 million & under.....	\$ 46.66	21.99

Mechanical Contracts  
 including all piping and  
 temperature control work  
 over \$7.0 million.....\$ 46.66                      21.99

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 TEAM0013-001 05/01/2025

	Rates	Fringes
Truck drivers (ADAIR, BUTLER, CLARK, DUNKIN, HOWELL, KNOX, LEWIS, OREGON, PUTNAM, RIPLEY, SCHUYLER AND SCOTLAND COUNTIES)		
GROUP 1.....	\$ 35.84	15.85
GROUP 2.....	\$ 35.99	15.85
GROUP 3.....	\$ 36.11	15.85
GROUP 4.....	\$ 35.74	15.85
Truck drivers (AUDRAIN, BOLLINGER, BOONE, CALLAWAY, CAPE GIRARDEAU, CARTER, COLE, CRAWFORD, DENT, GASCONADE, IRON, MACON, MADISON, MARIES, MARION, MILLER, MISSISSIPPI, MONROE, MONTGOMERY, NEW MADRID, OSAGE, PEMISCOT, PERRY, PHELPS, PIKE, PULASKI, RALLS, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SCOTT, SHANNON, SHELBY, STODDARD, TEXAS, WASHINGTON AND WAYNE COUNTIES)		
GROUP 1.....	\$ 36.57	15.85
GROUP 2.....	\$ 36.72	15.85
GROUP 3.....	\$ 36.84	15.85
GROUP 4.....	\$ 36.73	15.85
Truck drivers (FRANKLIN, JEFFERSON and ST. CHARLES COUNTIES)		
GROUP 1.....	\$ 38.93	15.85
GROUP 2.....	\$ 39.08	15.85
GROUP 3.....	\$ 39.15	15.85
GROUP 4.....	\$ 39.04	15.85
Truck drivers (LINCOLN and WARREN COUNTIES)		
GROUP 1.....	\$ 37.58	15.85
GROUP 2.....	\$ 38.73	15.85
GROUP 3.....	\$ 37.80	15.85
GROUP 4.....	\$ 37.69	15.85

TRUCK DRIVERS CLASSIFICATIONS:

GROUP 1: Flat Bed Trucks, Single Axle; Station Wagons;  
 Pickup Trucks; Material Trucks, Single Axle; Tank Wagon,  
 Single Axle

GROUP 2: Agitator and Transit Mix Trucks

GROUP 3: Flat Bed Trucks, Tandem Axle; Articulated Dump  
 Trucks; Material Trucks, Tandem Axle; Tank Wagon, Tandem  
 Axle

GROUP 4: Semi and/or Pole Trailers; Winch, Fork & Steel  
 Trucks; Distributor Drivers and Operators; Tank Wagon,  
 Semi-Trailer; Insley Wagons, Dumpsters, Half-Tracks,

Speedace, Euclids and other similar equipment; A-Frame and  
Derrick Trucks; Float or Low Boy

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TEAM0056-001 05/01/2025

Rates Fringes

Truck drivers (ANDREW,  
BARTON, BATES, BENTON,  
CALDWELL, CAMDEN, CARROLL,  
CEDAR, CHARITON, CHRISTIAN,  
CLINTON, COOPER, DADE,  
DALLAS, DAVIESS, DEKALB,  
DOUGLAS, GREENE, HENRY,  
HICKORY, HOWARD, JASPER,  
LACLEDE, LAWRENCE, LINN,  
LIVINGSTON, MONITEAU, MORGAN,  
NEWTON, PETTIS, POLK,  
RANDOLPH, ST. CLAIR, SALINE,  
VERNON, WEBSTER AND WRIGHT  
COUNTIES)

GROUP 1.....	\$ 36.27	15.85
GROUP 2.....	\$ 36.43	15.85
GROUP 3.....	\$ 36.42	15.85
GROUP 4.....	\$ 36.54	15.85

Truck drivers: (ATCHISON,  
BARRY, GENTRY, GRUNDY,  
HARRISON, HOLT, MCDONALD,  
MERCER, NODAWAY, OZARK,  
STONE, SULLIVAN, TANEY AND  
WORTH COUNTIES)

GROUP 1.....	\$ 35.54	15.85
GROUP 2.....	\$ 35.70	15.85
GROUP 3.....	\$ 35.69	15.85
GROUP 4.....	\$ 35.81	15.85

Truck drivers; (BUCHANAN,  
JOHNSON AND LAFAYETTE  
COUNTIES)

GROUP 1.....	\$ 35.93	15.75
GROUP 2.....	\$ 36.04	15.75
GROUP 3.....	\$ 36.08	15.75
GROUP 4.....	\$ 36.08	15.75

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Flat bed trucks single axle; station wagons; pickup  
trucks; material trucks single axle; tank wagons single  
axle.

GROUP 2: Agitator and transit mix-trucks.

GROUP 3: Flat bed trucks tandem axle; articulated dump  
trucks; material trucks tandem axle; tank wagons tandem  
axle.

GROUP 4: Semi and/or pole trailers; winch, fork & steel  
trucks; distributor drivers & operators; tank wagons semi-  
trailer; insley wagons, dumpsters, half-tracks, speedace,  
euclids & other similar equipment; A-frames and derrick  
trucks; float or low boy.

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TEAM0245-001 03/26/2012

BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DALLAS, DENT, DOUGLAS, GREENE, HICKORY, HOWELL, JASPER, LACLEDE, LAWRENCE, MCDONALD, MILLER, NEWTON, OZARK, PHELPS, POLK, PULASKI, SHANNON, STONE, TANEY, TEXAS, VERNON, WEBSTER AND WRIGHT COUNTIES

Rates Fringes

Truck drivers:

Traffic Control Service Driver.....\$ 20.45 0.00

PAID HOLIDAYS: New Year's Day, Decoration Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day, employee's birthday and 2 personal days.

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TEAM0541-001 04/01/2025

CASS, CLAY, JACKSON, PLATTE AND RAY COUNTIES

Rates Fringes

Truck drivers:

GROUP 1.....\$ 38.61 15.85  
GROUP 2.....\$ 38.04 15.85  
GROUP 3.....\$ 37.52 15.85

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Mechanics and Welders, Field; A-Frame Low Boy-Boomer Driver.

GROUP 2: Articulated Dump Truck; Insley Wagons: Dump Trucks, Excavating, 5 cu yds and over; Dumpsters; Half-Tracks: Speedace: Euclids & similar excavating equipment Material trucks, Tandem Two teams; Semi-Trailers; Winch trucks-Fork trucks; Distributor Drivers and Operators; Agitator and Transit Mix; Tank Wagon Drivers, Tandem or Semi; One Team; Station Wagons; Pickup Trucks; Material Trucks, Single Axle; Tank Wagon Drivers, Single Axle

GROUP 3: Oilers and Greasers - Field

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TEAM0682-002 05/01/2025

ST LOUIS CITY AND COUNTY

Rates Fringes

Truck drivers:

GROUP 1.....\$ 37.83 9.85+a+b+c  
GROUP 2.....\$ 37.83 9.85+a+b+c  
GROUP 3.....\$ 37.83 9.85+a+b+c

a. PENSION: 5/1/2012 - \$182.20 per week.

b. HAZMAT PREMIUM: If Hazmat certification on a job site is required by a state or federal agency or requested by project owner or by the employer, employees on that job site shall receive \$1.50 premium pay.

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1 - Pick-up trucks; forklift, single axle; flatbed trucks; job site ambulance, and trucks or trailers of a water level capacity of 11.99 cu. yds. or less

GROUP 2 - Trucks or trailers of a water level capacity of 12.0 cu yds. up to 22.0 cu yds. including euclids, speedace and similar equipment of same capacity and compressors

GROUP 3 - Trucks or trailers of a water level capacity of 22.0 cu. yds & over including euclids, speedace & all floats, flatbed trailers, boom trucks, winch trucks, including small trailers, farm wagons tilt-top trailers, field offices, tool trailers, concrete pumps, concrete conveyors & gasoline tank trailers and truck mounted mobile concrete mixers

FOOTNOTE FOR TRUCK DRIVERS:

c. PAID HOLIDAYS: Christmas Day, Independence Day, Labor Day, Memorial Day, Veterans Day, New Years Day, Thanksgiving Day

d. PAID VACATION: 3 days paid vacation for 600 hours of service in any one contract year; 4 days paid vacation for 800 hours of service in any one contract year; 5 days paid vacation for 1,000 hours of service in any one contract year. When such an employee has completed 3 years of continuous employment with the same employer and then works the above required number of hours, he shall receive double the number of days of vacation specified above. When such an employee has completed 10 years of continuous employment with the same employer and then works the above required number of hours, he shall receive triple the number of days of vacation specified above. When such an employee has completed 15 years of continuous employment with the same employer and then works the above required number of hours, he shall receive 4 times the number of days of vacation specified above.

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

#### Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

#### Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

#### Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the

year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

#### State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

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#### WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to [davisbaconinfo@dol.gov](mailto:davisbaconinfo@dol.gov) or by mail to:

Branch of Wage Surveys  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to [BCWD-Office@dol.gov](mailto:BCWD-Office@dol.gov) or by mail to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage

and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210.

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END OF GENERAL DECISION"

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **SECTION 011000 – SUMMARY OF WORK**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

##### **1.2 WORK COVERED BY CONTRACT DOCUMENTS**

- A. The Tennyson AML Land Reclamation Project (TALRP) consists of approximately 18 acres of abandoned coal mine land in Callaway County that was mined prior to the advent of mining regulations. The TALRP is located near the southern limits of the Town of Fulton, in the NW/4, S-29 and SW/4, S-20, T47N, R09W. The project also includes a coal waste (gob) pile located in the NE/4, S-19, T47N, R09W. The area affected by mining is owned by several different landowners, including the Town of Fulton, Westminster College, and three private landowners. Priority features identified by the Land Reclamation Program (LRP) at the TALRP are both safety and environmentally related and include, but are not limited to, Hazardous Water Bodies, Dangerous Piles and/or Embankments, and Spoils Areas. It is the intent of OA/FMDC and LRP to remedy the environmental and safety concerns at this site and provide the impacted landowners with functioning areas for agriculture and/or businesses. Reclamation activities include, but are not limited to, clearing and grubbing, excavation and grading mine spoil; backfill abandoned coal mine pits and ponds; extending drainage structures; embankment construction, grade, excavate, relocated and covering coal waste (gob), the application and incorporation of agricultural lime, seed, fertilize and mulch all work areas, and other related work, all in accordance with the enclosed plans and specifications.

- 1. Owner: State of Missouri, Office of Administration, Division of Facilities Management, Design and Construction, Harry S. Truman State Office Building, Post Office Box 809, 301 West High Street, Jefferson City, Missouri 65102.

- B. Contract Documents dated October 17, 2025 were prepared for the Project by Missouri Department of Natural Resources, Land Reclamation Program. Designer: GREDELL Engineering Resources, Inc.
- C. The Work will be constructed under a single prime contract.

##### **1.3 WORK SEQUENCE**

- A. A construction sequence shall be submitted by the Contractor and approved by the Owner's Representative prior to beginning work. Trees and brush resulting from site clearing activities may be burned provided it is conducted in accordance with Section

#### **1.4 CONTRACTOR USE OF PREMISES**

- A. General: During the construction period the Contractor shall have full use of the premises within the project limits for construction operations. The Contractor's use of the premises limited only by the Owner's right to perform work or to retain other contractors on portions of the Project.
- B. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract project limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
  - 1. Owner Occupancy: Allow for Owner occupancy and authorized use by the public.
  - 2. Driveways and Entrances: Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
  - 3. Contractor shall conduct the Work in a manner to avoid unnecessary noise, dust and other pollutants in accordance with all State and Federal regulations.
  - 4. Contractor shall cooperate with other occupants of the site for efficient utilization of available space.

#### **1.5 OCCUPANCY REQUIREMENTS**

- A. Full Owner Occupancy: The Owner will occupy the site during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with the Owner's operations.
- B. Partial Owner Occupancy: The Owner reserves the right to occupy and to place and install equipment in completed areas of the construction prior to Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.
  - 1. The Owner's Representative will prepare a Certificate of Partial Occupancy/Substantial Completion for each specific portion of the Work to be occupied prior to Owner occupancy.
  - 2. Prior to partial Owner occupancy, required inspections and tests shall have been successfully completed. Upon occupancy, the Owner will operate and maintain the occupied portions of the site.
  - 3. Upon occupancy, the Owner will assume responsibility for maintenance and custodial service for occupied portions of the site.

## 1.6 DEFINITIONS USED IN CONTRACT

- A. Refer to General Conditions, Article 1.
- B. CONSULTANT: GREDELL Engineering Resources, Inc., 1505 East High Street, Jefferson City, Missouri 65101.
- C. RESIDENT PROJECT REPRESENTATIVE: The Land Reclamation Program, or its duly authorized representative, shall provide construction inspection services for this project.
- D. OWNER'S REPRESENTATIVE: The Land Reclamation Program, Department of Natural Resources, or its duly authorized representative. The Owner's Representative will also act as Construction Manager.
- E. OFFICE OF ADMINISTRATION REPRESENTATIVE: The Division of Facilities Management, Design and Construction's Project Manager is Scott Zeller, Division of Design and Construction, 301 West High Street, Room 730, P.O. Box 809, Jefferson City, Missouri 65102, Ph: (573) 680-8138.

## 1.7 CONSTRUCTION PROCEDURES

- A. Construction procedures shall be determined by the Contractor. Where the work is on or adjacent to existing facilities or county roads, the Contractor shall exercise caution and schedule operations to ensure that functioning of present facilities will not be endangered and the safety of the general public is insured at all times.

## 1.8 UNDERGROUND OBSTRUCTIONS

- A. Underground obstructions known to the Owner are indicated on the Contract Plans. Contractor shall notify sufficiently in advance public and private utilities of his/her approach to any of their facilities and conform to their requirements.
- B. Contractor shall perform exploratory operations as necessary to verify the location, elevation, and dimensions of all known or suspected underground obstructions ahead of any work affected thereby, and shall use care to avoid damage to them.
- C. Any underground obstruction not indicated on the Contract Plans and which could not be reasonably anticipated by Contractor shall be relocated or removed and replaced by the owning utility at no expense to the Contractor, or by the Contractor as so instructed by Owner's Representative, in which case a Change Order will be issued to cover the additional cost.
- D. The utility(s) listed below and contract details are provided for informational purposes only: The Contractor shall be responsible for contacting DIG-RITE and locating/verifying ALL PUBLIC and PRIVATE utilities at least 1 week in advance of mobilizing/completing the contracted work.

## **1.9 PERMITS**

- A. The Contractor is responsible for obtaining all permits necessary to complete the contracted work, except the National Pollutant Discharge Permit (NPDES – Appendix 1). The Contractor is responsible for compliance with the NPDES permit.

## **1.10 LAYOUT OF STAKES**

- A. From the control points and benchmarks contained in the Plans, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for execution of the Work to the location and limit marks indicated. The contractor shall layout the baselines at one-hundred foot intervals as shown on the plans and the associated grade and slope stakes necessary to maintain quality control and quality assurance by the Land Reclamation Program (LRP). Coordination shall be maintained with the LRP and GREDELL Engineering Resources, inc. to assure the project is being constructed to the lines, grades and elevations shown on the plans and detailed in the Specifications
- B. The Contractor shall be responsible for the protection of all existing legal survey markers and if disturbed, shall properly have it replaced by a licensed surveyor at no additional cost to the Owner. The Contractor shall notify the Owner's Representative of all potential survey markers discovered during construction.
- C. Contractor shall submit one copy of all construction survey notes and data to the Owner's Representative upon request.
- D. To the extent practicable, Contractor shall maintain all slopes and cut stakes in excavation areas until the adjacent excavation has reached final grade or subgrade.
- E. When so requested by the Resident Project Representative, the Contractor shall furnish one laborer to assist the Resident Project Representative in spot checking of the construction layout and grades.

## **1.11 PROTECTION OF EXISTING PROPERTY**

- A. Contractor shall provide for the safety and protection of existing property as set forth in the General Conditions. Any damage to existing facilities resulting from construction operations shall be reported immediately to the Resident Project Representative thereof and promptly repaired by the Contractor.
- B. Parties having jurisdiction over operating roads and utilities in the work area shall be contacted a minimum of one week prior to use or other traffic areas or excavating near underground utilities or pole lines. CALL MISSOURI ONE CALL SYSTEM BEFORE WORK BEGINS AT 811 OR WWW.MISSOURI-811.ORG.
- C. Where fences are to be breached on private property, the Owner's Representative thereof shall be contacted and arrangements made to ensure proper protection of any livestock or other property thus exposed.

- D. All gates must be closed and locked after each entry and exit unless approval is obtained from the Owner's Representative to do otherwise.
- E. The applicable requirements specified for protection of the Work shall also apply to the protection of existing property.
- F. Before acceptance of the Work by the Owner, Contractor shall restore all property affected by his operations to the original or better condition, including but not limited to fences and roads.

#### **1.12 PROTECTION OF THE WORK**

- A. Contractor shall provide for the safety and protection of the Work as set forth in the General Conditions.
- B. Owner's Representative shall be notified immediately at any time operations are stopped due to conditions which make it impossible to continue operations safely or to obtain proper results.

#### **1.13 MAINTENANCE AND USE OF ROADWAYS**

- A. Contractor shall make adequate provisions to prevent unnecessary interference with the use of public and private roads, walkways and drives. The Contractor shall provide and maintain suitable detours or other temporary expedients, if necessary.
- B. Contractor shall repair roads, walkways and other traffic areas damaged by the operations to an equal or better condition. Traffic areas shall be kept as free as possible of excavated materials and maintained in a manner to eliminate dust.
- C. Contractor shall provide traffic barricades, construction signs, warning lights, guards and all other devices and services necessary to adequately protect the public and in accordance with all appropriate Manual of Uniform Traffic Control Devices (MUTCD), Federal Highway Administration and MoDOT Engineering Policy Standards 616.19 for Temporary Traffic Control Devices.
- D. The Contractor shall employ personnel to direct traffic through construction areas, as directed by the Owner's Representative or as required to ensure the safety of workers and the public and all in accordance with the approved Traffic Control Plan provisions.
- E. All operations shall meet the approval of Owner's Representative or agencies having jurisdiction over walkways and traffic areas. It is the Contractor's responsibility to coordinate with, and obtain all required permits or approvals from, the agency having jurisdiction over walkways and traffic areas.
- F. The Contractor shall repair and reseed all temporary access routes and disturbed areas at no additional expense to the Owner.

#### **1.14 ACCEPTANCE OF WORK**

- A. Upon completion of all operations, the Contractor shall request the Owner's Representative to perform an inspection for acceptance. All work must be completed in strict accordance with the Plans and Specifications prior to final acceptance. Where, in the opinion of the Owner's Representative, inspected work does not comply with the requirements of the Plans and Specifications, the Contractor shall replace rejected work at no additional cost to the Owner.

#### **1.15 INSURANCE**

- A. The "Builders Risk" portion of the required insurance as stated in Section 007213 - General Conditions, Article 6.2 will be waived for this project.

**END OF SECTION 011000**

## **DIVISION 1 - GENERAL REQUIREMENTS**

### **SECTION 012100 – ALLOWANCES**

#### **PART 1 – GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Bid Form, and other Division 1 Specification Sections, apply to this Section.

##### **1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements governing allowances.
  - 1. Selected materials and equipment are specified in the Contract Documents by allowances. In some cases, these allowances include installation. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
  - 1. Weather allowance.

##### **1.3 WEATHER ALLOWANCE**

- A. Included within the completion period for this project are a specified number of “bad weather” days (see Schedule of Allowances).
- B. In the event weather conditions preclude performance of critical work activities for 50% or more of the Contractor’s scheduled workday, that day shall be declared unavailable for work due to weather (a “bad weather” day) and charged against the above allowance. Critical work activities will be determined by review of the Contractor’s current progress schedule.
- C. The Contractor’s and Owner’s Representative shall agree monthly on the number of “bad weather” days to be charged against the allowance. This determination will be documented in writing and be signed by the Contractor’s and the Owner’s Representative. If there is a failure to agree on all or part of the “bad weather” days for a particular month, that disagreement shall be noted on this written document and signed by each party’s representative. Failure of the Contractor’s representative to sign the “bad weather” day documentation after it is presented, with or without the notes of disagreement, shall constitute agreement with the “bad weather” day determination contained in that document.

- D. There will be no modification to the time of contract performance due solely to the failure to deplete the “bad weather” day allowance.

**PART 2 – PRODUCTS (NOT APPLICABLE)**

**PART 3 – EXECUTION**

**3.1 SCHEDULE OF ALLOWANCES**

- A. Weather Allowance: Included within the completion period for this project are 15 “bad weather” days.

**END OF SECTION 012100**

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **SECTION 012200 – UNIT PRICES**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including other Division 01 Specification Sections, apply to this Section.

##### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for unit prices.

##### **1.3 DEFINITIONS**

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if the estimated quantities of Work required by the Contract Documents are increased or decreased. Unit Prices include all labor, materials, equipment, tools, and incidentals necessary to complete the work.

##### **1.4 PROCEDURES**

- A. Unit prices include necessary material, equipment, labor, necessary for a complete installation, plus delivery costs, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner's Representative reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owners' Representative expense, by an independent surveyor acceptable to Contractor.
- D. Schedule: A "Unit Price Schedule" is included at the end of this Section 1 and 2. Specification sections referenced in the Schedule contain requirements for materials described under each unit price.
- E. Quantities of units to be included in the Base Bid are indicated in Section 004322 – Unit Prices Form

## PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION

### 3.1 UNIT PRICE SCHEDULE

- A. Unit Price 1 – One (1”) Inch Minus Surface Aggregate:
1. Description: One (1”) Inch Minus Aggregate according to Division 31 Section 312000 “Earth Moving”
  2. Unit of Measurement: Ton.
  3. Quantity in Base Bid: 360 tons are to be included in the base bid.
- B. Unit Price 2 – Three (3”) Inch Minus Base Aggregate:
1. Description: Three (3”) Inch Minus Aggregate installation according to Division 31 Section 312000 “Earth Moving – General”
  2. Unit of Measurement: Ton.
  3. Quantity in Base Bid: 1080 tons are to be included in the Base Bid.
- C. Unit Price 3 – Agricultural Lime:
1. Description: AG Lime installation according to Division 31, Section 312000, “Earth Moving - General”.
  2. Unit of Measurement: 100 lbs ENM Installed.
  3. Quantity in Base Bid: 4,970 units of 100 lbs ENM Installed are to be included in the Base Bid.
- D. Unit Price 4 – 12” Shot Rock
1. Description: Shot rock will be used for Aprons, Outlets, Spillways, and Rifles in accordance with Division 31, Section 312000 “Earth Moving – General”.
  2. Unit of Measurement: Tons
  3. Quantity in Base Bid: 920 tons are included in the Base Bid.
- E. Unit Price 5 – 24” Shot Rock
1. Description: Shot rock will be used for Aprons, Outlets, Spillways, and Rifles in accordance with Division 31, Section 312000 “Earth Moving – General”.
  2. Unit of Measurement: Tons
  3. Quantity in Base Bid: 600 tons are included in the Base Bid.
- F. Unit Price 6 – Total Nitrogen (N)
1. Description: Total Nitrogen applied and incorporated in accordance with Division 32, Section 329200 “Seeding”

2. Unit of Measurement: Pound (lb.)
  3. Quantity in Base Bid: 660 pounds are included in the Base Bid.
- G. Unit Price 7 – Total Phosphorus (P)
1. Description: Total Phosphorus applied and incorporated in accordance with Division 32, Section 329200 “Seeding”
  2. Unit of Measurement: Pound (lb.)
  3. Quantity in Base Bid: 1650 pounds are included in the Base Bid.
- H. Unit Price 8 – Total Potassium (K)
1. Description: Total Potassium applied and incorporated in accordance with Division 32, Section 329200 “Seeding”
  2. Unit of Measurement: Pound (lb.)
  3. Quantity in Base Bid: 2200 pounds are included in the Base Bid.
- I. Unit Price 9 – Temporary Seed and Mulch
1. Description: Temporary Seed and Mulch shall be installed in accordance with Division 1, Section 015723 “Temporary Storm Water Pollution Control”.
  2. Unit of Measurement: Acre.
  3. Quantity in Base Bid: 3 acres are included in the Base Bid.
- J. Unit Price 10 – Temporary Sediment Control Straw Bale Silt Fence
1. Description: Temporary Sediment Control Straw Bales shall be installed in accordance with Division 1, Section 015723 “Temporary Storm Water Pollution Control”.
  2. Unit of Measurement: Bales.
  3. Quantity in Base Bid: 870 bales are included in the Base Bid.
- K. Unit Price 11 - Temporary Sediment Control Geotextile Silt Fence:
1. Description: Temporary Sediment Control Geotextile Silt Fence shall be installed in accordance with Division 1, Section 015723 “Temporary Storm Water Pollution Control”.
  2. Unit of Measurement: Linear Feet.
  3. Quantity in Base Bid: 2600 Linear Feet are included in the Base Bid.
- L. Unit Price 12 – New Barbed Wire Fence
1. Description: New Barbed Wire Fence shall be installed in accordance with Division 32, Section 323100 “Fencing and Gates”.
  2. Unit of Measurement: Linear Feet.
  3. Quantity in Base Bid: 1230 Linear Feet are included in the Base Bid.

M. Unit Price 13 – Gates

1. Description: Gates shall be installed in accordance with Division 32, Section 323100 “Fencing and Gates”.
2. Unit of Measurement: Each
3. Quantity in Base Bid: 5 gates are included in the Base Bid.

**END OF SECTION 012200**

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **SECTION 012600 – CONTRACT MODIFICATION PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions and other Division 1 Specification Sections apply to this Section.

##### **1.2 SUMMARY**

- A. This Section specifies administrative and procedural requirements for handling and processing Contract Modifications.
- B. Related Sections include the following:
  - 1. Division 1, Section 012100 "Allowances" for procedural requirements for handling and processing Allowances.
  - 2. Division 1, Section 012200 "Unit Prices" for administrative requirements for using Unit Prices.
  - 3. Division 1, Section 013115 "Project Management Communications" for administrative requirements for communications.
  - 4. Division 0, Section 007213, Article 3.1 "Acceptable Substitutions" for administrative procedures for handling Requests for Substitutions made after Contract award.
  - 5. Division 0, Section 007213, Article 4.0 "Changes in the Work" for Change Order requirements

##### **1.3 REQUESTS FOR INFORMATION**

- A. In the event that the Contractor or Subcontractor, at any tier, determines that some portion of the Drawings, Specifications, or other Contract Documents requires clarification or interpretation, the Contractor shall submit a "Request for Information" (RFI) in writing to the Designer. A RFI may only be submitted by the Contractor and shall only be submitted on the RFI forms provided by the Owner. The Contractor shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed. In the RFI, the Contractor shall set forth an interpretation or understanding of the requirement along with reasons why such an understanding was reached.
- B. Responses to RFI shall be issued within ten (10) working days of receipt of the Request from the Contractor unless the Designer determines that a longer time is necessary to provide an adequate response. If a longer time is determined necessary by the Designer, the Designer will, within five (5) working days of receipt of the request, notify the Contractor of the anticipated response time. If the Contractor submits a RFI on a time sensitive activity on the current project schedule, the

Contractor shall not be entitled to any time extension due to the time it takes the Designer to respond to the request provided that the Designer responds within the ten (10) working days set forth above.

- C. Responses from the Designer will not change any requirement of the Contract Documents. In the event the Contractor believes that a response to a RFI will cause a change to the requirements of the Contract Document, the Contractor shall give written notice to the Designer requesting a Change Order for the work. Failure to give such written notice within ten (10) working days, shall waive the Contractor's right to seek additional time or cost under Article 4, "Changes in the Work" of the General Conditions.

#### **1.4 MINOR CHANGES IN THE WORK**

- A. Designer will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Amount or the Contract Time, on "Designer's Supplemental Instructions" (DSI).

#### **1.5 PROPOSAL REQUESTS**

- A. The Designer or Owner Representative will issue a detailed description of proposed Changes in the Work that may require adjustment to the Contract Amount or the Contract Time. The proposed Change Description will be issued using the "Request for Proposal" (RFP) form. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Proposal Requests issued by the Designer or Owner Representative are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
  - 2. Within ten (10) working days after receipt of Proposal Request, submit a proposal for the cost adjustments to the Contract Amount and the Contract Time necessary to execute the Change. The Contractor shall submit his proposal on the appropriate Change Order Detailed Breakdown form. Subcontractors may use the appropriate Change Order Detailed Breakdown form or submit their proposal on their letterhead provided the same level of detail is included. All proposals shall include:
    - a. A detailed breakdown of costs per Article 4.1 of the General Conditions.
    - b. If requesting additional time per Article 4.2 of the General Conditions, include an updated Contractor's Construction Schedule that indicates the effect of the Change including, but not limited to, changes in activity duration, start and finish times, and activity relationship.

#### **1.6 CHANGE ORDER PROCEDURES**

- A. On Owner's approval of a Proposal Request, the Designer or Owner Representative will issue a Change Order for signatures of Owner and Contractor on the "Change Order" form.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 012600**

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **SECTION 013100 – COORDINATION**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions and other Division 1 Specification Sections apply to this Section.

##### **1.2 SUMMARY**

- A. This Section includes administrative provisions for coordinating construction operations on Projects including, but not limited to, the following:
  - 1. Coordination Drawings.
  - 2. Administrative and supervisory personnel.
  - 3. Project meetings.
- B. Each Contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific Contractor.
- C. Related Sections include the following:
  - 1. Division 1, Section 013200 "Schedules" for preparing and submitting Contractor's Construction Schedule.
  - 2. Articles 1.8.B and 1.8.C of Section 007213 "General Conditions" for coordinating meetings onsite.
  - 3. Article 5.4.H of Section 007213 "General Conditions" for coordinating Closeout of the Contract.

##### **1.3 COORDINATION**

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections, which depend on each other for proper installation, connection, and operation.
- B. Coordination: Each Contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each Contractor shall coordinate its operations with operations included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.

2. Coordinate installation of different components with other Contractors to ensure maximum accessibility for required maintenance, service, and repair.
  3. Make adequate provisions to accommodate items scheduled for later installation.
  4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components including mechanical and electrical.
- C. Prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for Owner and separate Contractors if coordination of their Work is required.
- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other Contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
  2. Preparation of the Schedule of Values.
  3. Installation and removal of temporary facilities and controls.
  4. Delivery and processing of submittals.
  5. Progress meetings.
  6. Preinstallation conferences.
  7. Startup and adjustment of systems.
  8. Project Closeout activities.
- E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

#### **1.4 SUBMITTALS**

- A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
- B. Key Personnel Names: Within fifteen (15) work days of starting construction operations, submit a list of key personnel assignments including superintendent and

other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

## **1.5 PROJECT MEETINGS**

A. The Owner's Construction Representative will schedule a Pre-Construction Meeting prior to beginning of construction. The date, time, and exact place of this meeting will be determined after Contract Award and notification of all interested parties. The Contractor shall arrange to have the Job Superintendent and all prime Subcontractors present at the meeting. During the Pre-Construction Meeting, the construction procedures and information necessary for submitting payment requests will be discussed and materials distributed along with any other pertinent information.

1. Minutes: Designer will record and distribute meeting minutes.

B. Progress Meetings: The Owner's Construction Representative will conduct Monthly Progress Meetings as stated in Articles 1.8.B and 1.8.C of Section 007213 "General Conditions".

1. Minutes: Designer will record and distribute to Contractor the meeting minutes.

C. Preinstallation Conferences: Contractor shall conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of Manufacturers and Fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Designer and Construction Representative of scheduled meeting dates.

2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration including requirements for the following:

- a. Contract Documents
- b. Options
- c. Related RFIs
- d. Related Change Orders
- e. Purchases
- f. Deliveries
- g. Submittals
- h. Review of mockups

- i. Possible conflicts
  - j. Compatibility problems
  - k. Time schedules
  - l. Weather limitations
  - m. Manufacturer's written recommendations
  - n. Warranty requirements
  - o. Compatibility of materials
  - p. Acceptability of substrates
  - q. Temporary facilities and controls
  - r. Space and access limitations
  - s. Regulations of authorities having jurisdiction
  - t. Testing and inspecting requirements
  - u. Installation procedures
  - v. Coordination with other Work
  - w. Required performance results
  - x. Protection of adjacent Work
  - y. Protection of construction and personnel
3. Contractor shall record significant conference discussions, agreements, and disagreements including required corrective measures and actions.
  4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
  5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
  6. Revise paragraph below if Project requires holding progress meetings at different intervals. Insert special intervals such as "every third Tuesday" to suit special circumstances.
  7. Project name & number
  8. Name and address of Contractor
  9. Name and address of Designer
  10. RFI number including RFIs that were dropped and not submitted
  11. RFI description
  12. Date the RFI was submitted
  13. Date Designer's response was received
  14. Identification of related DSI or Proposal Request, as appropriate

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 013100**

## DIVISION 1 – GENERAL REQUIREMENTS

### SECTION 013115 - PROJECT MANAGEMENT COMMUNICATIONS

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions, Bid Form, and other Division 1 Specification Sections apply to this Section.
- B. Division 1, Section 013300 - Submittals
- C. Division 1, Section 012600 – Contract Modification Procedures

##### 1.2 SUMMARY

- A. Project Management Communications: The Contractor shall use the Internet web based project management communications tool, E-Builder® ASP software, and protocols included in that software during this project. The use of project management communications as herein described does not replace or change any contractual responsibilities of the participants.
  - 1. Project management communications is available through E-Builder® as provided by "e-Builder®" in the form and manner required by the Owner.
  - 2. The project communications database is on-line and fully functional. User registration, electronic and computer equipment, and Internet connections are the responsibility of each project participant. The sharing of user accounts is prohibited
- B. Support: E-Builder® will provide on-going support through on-line help files.
- C. Copyrights and Ownership: Nothing in this specification or the subsequent communications supersedes the parties' obligations and rights for copyright or document ownership as established by the Contract Documents. The use of CAD files, processes or design information distributed in this system is intended only for the project specified herein.
- D. Purpose: The intent of using E-Builder® is to improve project work efforts by promoting timely initial communications and responses. Secondly, to reduce the number of paper documents while providing improved record keeping by creation of electronic document files
- E. Authorized Users: Access to the web site will be by individuals who are authorized users.
  - 1. Individuals shall complete the E-Builder New Company/User Request Form located at the following web site: <https://oa.mo.gov/facilities/vendor->

[links/contractor-forms](#). Completed forms shall be emailed to the following email address: [OA.FMDCE-BuilderSupport@oa.mo.gov](mailto:OA.FMDCE-BuilderSupport@oa.mo.gov).

2. Authorized users will be contacted directly and assigned a temporary user password.
  3. Individuals shall be responsible for the proper use of their passwords and access to data as agents of the company in which they are employed.
- F. Administrative Users: Administrative users have access and control of user licenses and all posted items. DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE! Improper or abusive language toward any party or repeated posting of items intended to deceive or disrupt the work of the project will not be tolerated and will result in deletion of the offensive items and revocation of user license at the sole discretion of the Administrative User(s).
- G. Communications: The use of fax, email and courier communication for this project is discouraged in favor of using E-Builder® to send messages. Communication functions are as follows:
1. Document Integrity and Revisions:
    - a. Documents, comments, drawings and other records posted to the system shall remain for the project record. The authorship time and date shall be recorded for each document submitted to the system. Submitting a new document or record with a unique ID, authorship, and time stamp shall be the method used to make modifications or corrections.
    - b. The system shall make it easy to identify revised or superseded documents and their predecessors.
    - c. Server or Client side software enhancements during the life of the project shall not alter or restrict the content of data published by the system. System upgrades shall not affect access to older documents or software.
  2. Document Security:
    - a. The system shall provide a method for communication of documents. Documents shall allow security group assignment to respect the contractual parties communication except for Administrative Users. DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE!
  3. Document Integration:
    - a. Documents of various types shall be logically related to one another and discoverable. For example, requests for information, daily field reports, supplemental sketches and photographs shall be capable of reference as related records.
  4. Reporting:

- a. The system shall be capable of generating reports for work in progress, and logs for each document type. Summary reports generated by the system shall be available for team members.
5. Notifications and Distribution:
- a. Document distribution to project members shall be accomplished both within the extranet system and via email as appropriate. Project document distribution to parties outside of the project communication system shall be accomplished by secure email of outgoing documents and attachments, readable by a standard email client.
6. Required Document Types:
- a. RFI, Request for Information.
  - b. Submittals, including record numbering by drawing and specification section.
  - c. Transmittals, including record of documents and materials delivered in hard copy.
  - d. Meeting Minutes.
  - e. Application for Payments (Draft or Pencil).
  - f. Review Comments.
  - g. Field Reports.
  - h. Construction Photographs.
  - i. Drawings.
  - j. Supplemental Sketches.
  - k. Schedules.
  - l. Specifications.
  - m. Request for Proposals
  - n. Designer's Supplemental Instructions
  - o. Punch Lists
- H. Record Keeping: Except for paper documents, which require original signatures and large format documents (greater than 8½ x 11 inches), all other 8½ x 11 inches documents shall be submitted by transmission in electronic form to the E-Builder® web site by licensed users.
1. The Owner and his representatives, the Designer and his consultants, and the Contractor and his Sub Contractors and suppliers at every tier shall respond to documents received in electronic form on the web site, and consider them as if received in paper document form.
  2. The Owner and his representatives, the Designer and his consultants, and the Contractor and his Sub Contractors and suppliers at every tier reserves

the right to and shall reply or respond by transmissions in electronic form on the web site to documents actually received in paper document form.

3. The Owner and his representatives, the Designer and his consultants, and the Contractor and his Sub Contractors and suppliers at every tier reserves the right to and shall copy any paper document into electronic form and make same available on the web site.

I. Minimum Equipment and Internet Connection: In addition to other requirements specified in this Section, the Owner and his representatives, the Construction Manager and his representatives, the Architect and his consultants, and the Contractor and his sub-contractors and suppliers at every tier required to have a user license(s) shall be responsible for the following:

1. Providing suitable computer systems for each licensed user at the users normal work location<sup>1</sup> with high-speed Internet access, i.e. DSL, local cable company's Internet connection, or T1 connection.
2. Each of the above referenced computer systems shall have the following minimum system<sup>2</sup> and software requirements:
  - a. Desktop configuration (Laptop configurations are similar and should be equal to or exceed desktop system.)
    - 1) Operating System: Windows XP or newer
    - 2) Internet Browser: Internet Explorer 6.01SP2+ (Recommend IE7.0+)
    - 3) Minimum Recommend Connection Speed: 256K or above
    - 4) Processor Speed: 1 Gigahertz and above
    - 5) RAM: 512 mb
    - 6) Operating system and software shall be properly licensed.
    - 7) Internet Explorer version 7 (current version is a free distribution for download). This specification is not intended to restrict the host server or client computers provided that industry standard HTTP clients may access the published content.
    - 8) Adobe Acrobat Reader (current version is a free distribution for download).
    - 9) Users should have the standard Microsoft Office Suite (current version must be purchased) or the equivalent.

## **PART 2 - PRODUCTS (Not Applicable)**

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<sup>1</sup> The normal work location is the place where the user is assigned for more than one-half of his time working on this project.

<sup>2</sup> The minimum system herein will not be sufficient for many tasks and may not be able to process all documents and files stored in the E-Builder® Documents area.

**PART 3 - EXECUTION (Not Applicable.)**

**END OF SECTION 013115**

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **SECTION 013200 – SCHEDULE – BAR CHART**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions, Bid Form, and other Division 1 Specification Sections apply to this Section.

##### **1.2 SUMMARY**

- A. This Section includes requirements for a Bar Chart Schedule for the project construction activities, schedule of submittals, and schedule for testing.

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

#### **PART 3 - EXECUTION**

##### **3.1 SUBMITTAL PROCEDURES**

- A. The Contractor shall submit to the Designer, within ten (10) working days following the Notice to Proceed, a Progress Schedule including Schedule of Values showing the rate of progress the Contractor agrees to maintain and the order in which he proposed to carry out the various phases of Work. No payments shall be made to the Contractor until the Progress Schedule has been approved by the Owner.
  - 1. The Schedule of Values must have the following line items included with the value of the item as indicated below:
    - a. O&M's (Owner's Manual)
      - 1) \$1,000,000.00 (One million) and under – 2% of the total contract amount
      - 2) Over \$1,000,000.00 (One million) – 1% of the total contract amount
    - b. Close Out Documents
      - 1) \$1,000,000.00 (One million) and under – 2% of the total contract amount
      - 2) Over \$1,000,000.00 (One million) – 1% of the total contract amount
    - c. General Conditions
      - 1) No more than 10%
- B. The Contractor shall submit an updated Schedule for presentation at each Monthly Progress Meeting. The Schedule shall be updated by the Contractor as necessary

to reflect the current Schedule and its relationship to the original Schedule. The updated Schedule shall reflect any changes in the logic, sequence, durations, or completion date. Payments to the Contractor shall be suspended if the Progress Schedule is not adequately updated to reflect actual conditions.

- C. The Contractor shall submit Progress Schedules to Subcontractors to permit coordinating their Progress Schedules to the general construction Work. The Contractor shall coordinate preparation and processing of Schedules and reports with performance of other construction activities.

### **3.2 CONSTRUCTION PROGRESS SCHEDULE – BAR CHART SCHEDULE**

A. Bar-Chart Schedule: The Contractor shall prepare a comprehensive, fully developed, horizontal bar chart-type Contractor’s Construction Schedule. The Contractor for general construction shall prepare the Construction Schedule for the entire Project. The Schedule shall show the percentage of work to be completed at any time, anticipated monthly payments by Owner, as well as significant dates (such as completion of excavation, structures, pipes, seeding, etc.) which shall serve as check points to determine compliance with the approved Schedule. The Schedule shall also include an activity for the number of “bad” weather days specified in Section 012100 – Allowances.

1. The Contractor shall provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week.
  - a. If practical, use the same Schedule of Values breakdown for schedule time bars.
2. The Contractor shall provide a base activity time bar showing duration for each construction activity. Each bar is to indicate start and completion dates for the activity. The Contractor is to place a contrasting bar below each original schedule activity time for indicating actual progress and planned remaining duration for the activity.
3. The Contractor shall prepare the Schedule on a minimal number of separate sheets to readily show the data for the entire construction period.
4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on schedule with other construction activities. Include minor elements involved in the overall sequence of the Work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the Work.
5. Coordinate the Contractor’s Construction Schedule with the Schedule of Values, list of subcontracts, Submittal Schedule, progress reports, payment requests, and other required schedules and reports.
6. Indicate the Intent to Award and the Contract Substantial Completion dates on the schedule.

B. Phasing: Provide notations on the schedule to show how the sequence of the Work is affected by the following:

1. Requirement for Phased completion
  2. Work by separate Contractors
  3. Work by the Owner
  4. Pre-purchased materials
  5. Coordination with existing construction
  6. Limitations of continued occupancies
  7. Un-interruptible services
  8. Partial Occupancy prior to Substantial Completion
  9. Site restrictions
  10. Provisions for future construction
  11. Seasonal variations
  12. Environmental control
- C. Work Stages: Use crosshatched bars to indicate important stages of construction for each major portion of the Work. Such stages include, but are not necessarily limited to, the following:
1. Subcontract awards
  2. Submittals
  3. Purchases
  4. Sample testing
  5. Deliveries
  6. Installation
  7. Testing
  8. Startup and placement into final use and operation
- D. Area Separations: Provide a separate time bar to identify each major area of construction for each major portion of the Work. For the purposes of this Article, a “major area” is a story of construction, a separate building, or a similar significant construction element.
1. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
    - a. Mobilization
    - b. Clearing and Grubbing
    - c. Earthwork
    - d. Pit Muck Removal
    - e. Box Culvert Extension
    - f. Pond Modifications

- g. Coal Waste (Gob) Relocation and Burial
- h. Ag-Lime Incorporation
- i. Seeding, Fertilization, Mulching
- j. Substantial Completion

### **3.3 SCHEDULE OF SUBMITTALS**

- A. Upon acceptance of the Construction Progress Schedule, prepare and submit a complete schedule of submittals. Coordinate the submittal schedule with Section 013300 “Submittals”, the approved Construction Progress Schedule, list of subcontracts, Schedule of Values and the list of products.
- B. Prepare the schedule in chronological order. Provide the following information
  - 1. Scheduled date for the first submittal
  - 2. Related Section number
  - 3. Submittal category
  - 4. Name of the Subcontractor
  - 5. Description of the part of the Work covered
  - 6. Scheduled date for resubmittal
  - 7. Scheduled date for the Designer’s final release or approval
- C. Distribution: Following the Designer’s response to the initial submittal schedule, print and distribute copies to the Designer, Resident Project Representative, subcontractors, and other parties required to comply with submittal dates indicated.
  - 1. Post copies in the Project meeting room.
  - 2. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned part of the Work and are no longer involved in construction activities.
- D. Schedule Updating: Revise the schedule after each meeting or other activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

### **3.4 SCHEDULE OF INSPECTIONS AND TESTS**

- A. Prepare a schedule of inspections, tests, and similar services required by the Contract Documents. Submit the schedule with (15) days of the date established for commencement of the Contract Work. The Contractor is to notify the testing agency at least (5) working days in advance of the required tests unless otherwise specified.

- B. Form: This schedule shall be in tabular form and shall include, but not be limited to, the following:
1. Specification Section number
  2. Description of the test
  3. Identification of applicable standards
  4. Identification of test methods
  5. Number of tests required
  6. Time schedule or time span for tests
  7. Entity responsible for performing tests
  8. Requirements for taking samples
  9. Unique characteristics of each service
- C. Distribution: Distribute the schedule to the Owner, Architect, and each party involved in performance of portions of the Work where inspections and tests are required.

**END OF SECTION 013200**

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **SECTION 013300 – SUBMITTALS**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract including General and Supplementary Conditions, Bid Form, and other Division 1 Specification Sections apply to this Section.
- B. Division 1, Section 013115 “Project Management Communications” for administrative requirements for communications.

##### **1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work including the following:
  - 1. Shop Drawings
  - 2. Product Data
  - 3. Samples
  - 4. Certification of Materials and Quality Assurance Submittals
  - 5. Survey Data
  - 6. Shipping and Weight Tickets
  - 7. Receipts for Materials Used
  - 8. Warranties
  - 9. MBW/WBE/SDVE Reports
  - 10. Applicant/Violator System Eligibility
  - 11. Certification Regarding Lobbying
  - 12. Debarment and Suspension Certification
- B. Administrative Submittals: Refer to General and Supplementary Conditions other applicable Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
  - 1. Construction Progress Schedule including Schedule of Values
  - 2. Performance and Payment Bonds
  - 3. Insurance Certificates
  - 4. Applications for Payment
  - 5. Certified Payroll Reports

6. Partial and Final Receipt of Payment and Release Forms
  7. Affidavit – Compliance with Prevailing Wage Law
  8. Record Drawings
  9. Notifications, Permits, etc.
- C. The Contractor is obliged and responsible to check all shop drawings and schedules to assure compliance with contract plans and specifications. The Contractor is responsible for the content of the shop drawings and coordination with other contract work. Shop drawings and schedules shall indicate, in detail, all parts of an Item or Work including erection and setting instructions and integration with the Work of other trades.
- D. The Contractor shall at all times make a copy, of all approved submittals, available on site to the Construction Representative.

### **1.3 SUBMITTAL PROCEDURES**

- A. The Contractor shall comply with the General and Supplementary Conditions and other applicable sections of the Contract Documents. The Contractor shall submit, with such promptness as to cause no delay in his work or in that of any other contractors, all required submittals indicated in Part 3.1 of this section and elsewhere in the Contract Documents. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
    - a. The Designer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
- B. Each drawing and/or series of drawings submitted must be accompanied by a letter of transmittal giving a list of the titles and numbers of the drawings. Each series shall be numbered consecutively for ready reference and each drawing shall be marked with the following information:
1. Date of Submission
  2. Name of Project
  3. Location
  4. Section Number of Specification
  5. State Project Number
  6. Name of Submitting Contractor

7. Name of Subcontractor

8. Indicate if Item is submitted as specified or as a substitution

#### **1.4 SHOP DRAWINGS**

- A. Comply with the General Conditions, Article 3.2.
- B. The Contractor shall submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.
- C. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings including the following information:
  - 1. Dimensions
  - 2. Identification of products and materials included by sheet and detail number
  - 3. Compliance with specified standards
  - 4. Notation of coordination requirements
  - 5. Notation of dimensions established by field measurement
  - 6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8½"x11" but no larger than 24"x36".

#### **1.5 PRODUCT DATA**

- A. The Contractor shall comply with the General Conditions, Article 3.2.
- B. The Contractor shall collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
  - 1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information including the following information:
    - a. Manufacturer's printed recommendations
    - b. Compliance with Trade Association standards
    - c. Compliance with recognized Testing Agency standards
    - d. Application of Testing Agency labels and seals
    - e. Notation of dimensions verified by field measurement
    - f. Notation of coordination requirements

2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

## 1.6 SAMPLES

- A. The Contractor shall comply with the General Conditions, Article 3.2.
- B. The Contractor shall submit full-size, fully fabricated samples, cured and finished as specified, and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
  1. The Contractor shall mount or display samples in the manner to facilitate review of qualities indicated. Prepare samples to match the Designer's sample including the following:
    - a. Specification Section number and reference
    - b. Generic description of the Sample
    - c. Sample source
    - d. Product name or name of the Manufacturer
    - e. Compliance with recognized standards
    - f. Availability and delivery time
  2. The Contractor shall submit samples for review of size, kind, color, pattern, and texture. Submit samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
    - a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least three (3) multiple units that show approximate limits of the variations.
    - b. Refer to other Specification Sections for requirements for samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
    - c. Refer to other Sections for samples to be returned to the Contractor for incorporation in the Work. Such samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of sample submittals.
    - d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.
  3. Field samples are full-size examples erected onsite to illustrate finishes, coatings, or finish materials and to establish the Project standard.

- a. The Contractor shall comply with submittal requirements to the fullest extent possible. The Contractor shall process transmittal forms to provide a record of activity.

## **1.7 QUALITY ASSURANCE DOCUMENTS**

- A. The Contractor shall comply with the General Conditions, Article 3.2
- B. The Contractor shall submit quality control submittals including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.
- C. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the Manufacturer certifying compliance with specified requirements.
  1. Signature: Certification shall be signed by an officer of the Manufacturer or other individual authorized to contractually bind the Company.
- D. Inspection and Test Reports: The Contractor shall submit the required inspection and test reports from independent testing agencies as specified in this Section and in other Sections of the Contract Documents.

## **1.8 APPLICANT/ VIOLATOR SYSTEM ELIGIBILITY**

- A. As required by federal statutes, eligibility of every successful bidder for an Abandoned Mine Land contract must be confirmed by the Office of Surface Mining's Applicant/ Violator System for each contract awarded over \$25,000. This includes clearance for all subcontractor's performing work of value \$25,000 or greater. The successful bidder and subcontractors will be required to submit a signed Applicant Violator System information form and return it to the Owner's Representative. No contract shall be made until the successful bidder's eligibility has been confirmed by the Office of Surface Mining.

## **1.9 CERTIFICATION REGARDING LOBBYING**

- A. Federal law requires that the Contractor certify that he has not used federal funds to influence federal contracting and financial transactions.
  1. The Contractor must submit a signed copy of "Certification Regarding Lobbying" if the Contractor's bid exceeds \$100,000.
  2. The Contractor should be aware that the "Certification Regarding Lobbying" will also be required from Subcontractors if their work exceeds \$100,000.

## **1.10 DEBARMENT AND SUSPENSION CERTIFICATION**

- A. As required by federal law, the Contractor shall certify that it has not been debarred or suspended from completing work on federally funded projects. Any bidder or equipment supplier whose firm or affiliate is listed in the General Services Administration (GSA) publication entitled "Lists of Parties Excluded from Federal Procurement of

Nonprocurement Programs” will be excluded from the bidding process. Anyone submitting a bid who is so listed will be determined to be a nonresponsive bidder.

1. The Contractor must submit a signed copy of “Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions.”
2. The Contractor should also be aware of Item Number 6 of the Instruction for Certification (page 2 of 2) which requires all subcontractor(s) to conform to this requirement.

## **PART 2 - PRODUCTS (Not Applicable)**

## **PART 3 - EXECUTION**

### **3.1 REQUIRED SUBMITTALS**

- A. Contractor shall submit the following information for materials and equipment to be provided under this contract.

<b>SPEC SECTION</b>	<b>TITLE</b>	<b>CATEGORY</b>
011000	Construction Sequence	Construction Schedule
011000	Traffic Control Plan	Certification
012200	Neutralization of Acid Impoundments	Certification
012200	Neutralization of Acid Impoundments (Weight Tickets for Materials)	Product Data
012200	Neutralization of Acid Impoundments (Receipts for Materials)	Product Data
012200	Neutralization of Acid Impoundments (Digital Record Photographs)	As-Builts
012200	Neutralization of Acid Impoundments (Operating Instructions)	Operation / Maintenance Manual
013100	List of Key Personnel Names	Schedule of Values
013200	Construction Progress Schedule	Construction Schedule
013200	Schedule of Values	Schedule of Values
013200	List of Subcontractors	List of Subcontractors
013200	Schedule of Inspections, Tests, and Similar Services	Construction Schedule
013300	Field Test Reports	Test Report
013300	Materials and Quality Assurance	Certification
013300	Shipping and Weight Tickets	Product Data
013300	Receipts for Materials Used	Product Data
013300	Record Drawings	As-Builts
013300	Applicant/Violator System Eligibility	Certification
013300	Certification Regarding Lobbying	Certification
013300	Debarment and Suspension Certification	Certification

013300	Certifications (signed) for Products, Materials, and Installation	Certification
013300	Construction Progress Schedule including Schedule of Values	Schedule of Values
013513	Superintendent Name and Phone Number	Certification
015723	Temp Storm Water Pollution Control	Certification
015723	Weight Tickets for Materials	Product Data
015723	Receipts for Materials	Product Data
015723	Record Photographs	Product Data
034100	Manufacturer QMP Forms	Product Data
034100	Design Mixtures	Product Data
034100	Precast Shop Drawings	Product Data
034100	Material Certificates and Quality Control Reports	Product Data
311000	Site Clearing (Weight Tickets & Receipts for Recycled/Res Waste Materials)	Product Data
311000	Site Clearing (Weight and/.or Shipping Materials for Rock or Other Materials Brought On Site)	Product Data
312000	Earth Moving (Ag Lime and Effective Neutralizing Materials)	Certification
312000	Earth Moving (Weight Tickets for Materials)	Product Data
312000	Earth Moving (Receipts for Materials Used)	Product Data
312000	Earth Moving (Record Digital Photographs)	As-Builts
312319	Dewatering Plan	Operation / Maintenance Manual
323100	Fencing and Gates	Certification
323100	Fencing and Gates (Receipts for Materials Used)	Product Data
323100	Fencing and Gates (Record Digital Photographs)	As-Builts
329200	Seeding	Certification
329200	Seeding (Weight Tickets for Materials)	Product Data
329200	Seeding (Receipts for Materials Used)	Product Data
329200	Seeding (Digital Record Photographs)	As-Builts
334900	Storm Drainage Structures	Certification
334900	Storm Drainage Structures (Weight Tickets for Materials)	Product Data
334900	Storm Drainage Structures (Receipts for Materials Used)	Product Data
334900	Seeding (Digital Record Photographs)	As-Builts

**END OF SECTION 013300**

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **SECTION 013513.31 – SITE SECURITY AND HEALTH REQUIREMENTS**

#### **PART 1 – GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Bid Form and other Division 1 Specification Sections, apply to this Section.

#### **PART 2 – PRODUCTS (NOT APPLICABLE)**

#### **PART 3 – EXECUTION**

##### **3.1 ACCESS TO THE SITE**

- A. The Contractor shall arrange with the Owner's Representative for the controlled entry of construction personnel, materials, and equipment into the work areas.
- B. The Contractor shall establish regular working hours with the Owner's Representative. However, all work, except equipment maintenance, fueling, etc. shall be completed during daylight hours. Daylight hours shall be defined as beginning one hour before sunrise and ending one hour after sunset.
- C. The Contractor shall provide the name and phone number of the individual who is in charge on site and who can be contacted in case of an emergency. This individual must be able to furnish names and addresses of all construction personnel upon request.

##### **3.2 HEALTH AND TRAFFIC CONTROLS**

- A. Take all necessary reasonable measures to reduce air and water pollution by any material or equipment used during construction. Keep volatile wastes in covered containers. Do not dispose of volatile wastes or oils on the project site.
- B. Keep the project area neat, orderly, and in a safe condition at all times. Immediately remove all hazardous waste. Do not allow trash to build up and accumulate. Provide on-site containers for collection of trash and dispose of it at frequent intervals during progress of work.
- C. Conduct operations and removal of debris to ensure minimum interference with roads, streets, walks, and other adjacent facilities.
- D. Do not obstruct streets or walks or use facilities without permission from the construction representative.
- E. No driver shall exceed the facility speed limit. The facility speed limit is 15 M.P.H.

unless indicated otherwise.

- F. Temporary toilet unit(s) shall be placed on site, at a location approved by the Construction Representative and shall be routinely maintained throughout the term of the project.

### **3.3 PROTECTION OF PERSONS AND PROPERTY**

#### **A. SAFETY PRECAUTIONS AND PROGRAMS**

- 1. The Contractor shall at all times conduct operations under this Contract in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. The Contractor shall promptly take precautions which are necessary and adequate against conditions created during the progress of the Contractor's activities hereunder which involve a risk of bodily harm to persons or a risk of damage to property. The Contractor shall continuously inspect Work, materials, and equipment to discover and determine any such conditions and shall be solely responsible for discovery, determination, and correction of any such conditions. The Contractor shall comply with applicable safety laws, standards, codes, and regulations in the jurisdiction where the Work is being performed, specifically, but without limiting the generality of the foregoing, with rules regulations, and standards adopted pursuant to the Williams-Steiger Occupational Safety and Health Act of 1970 and applicable amendments.
- 2. All contractors, subcontractors and workers on this project are subject to the Construction Safety Training provisions 292.675 RSMo.
- 3. In the event the Contractor encounters on the site, material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), lead, mercury, or other material known to be hazardous, which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner's Representative and the Architect in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner's Representative and Contractor if in fact the material is asbestos or polychlorinated biphenyl (PCB) and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos or polychlorinated biphenyl (PCB), or when it has been rendered harmless by written agreement of the Owner's Representative and the Contractor. "Rendered Harmless" shall mean that levels of such materials are less than any applicable exposure standards, including but limited to OSHA regulations.

#### **B. SAFETY OF PERSONS AND PROPERTY**

- 1. The Contractor shall take reasonable precautions for safety of, and shall provide protection to prevent damage, injury, or loss to:
  - a. clients, staff, the public, construction personnel, and other persons who may be affected thereby;
  - b. the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control

- of the Contractor or the Contractor's Subcontractors of any tier; and
- c. other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.
2. The Contractor shall give notices and comply with applicable laws, standards, codes, ordinances, rules, regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury, or loss.
  3. The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, safeguards for safety and protection, including, but not limited to, posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities
    - a. When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise the highest degree of care and carry on such activities under supervision of properly qualified personnel.
    - b. The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in this Section caused in whole or in part by the Contractor, a Subcontractor of any tier, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable, and for which the Contractor is responsible under this Section, except damage or loss attributable solely to acts or omissions of Owner or the Architect or any- one directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's other obligations stated elsewhere in the Contract.
    - c. The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents, and the maintaining, enforcing and supervising of safety precautions and programs. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner's Representative and Architect. The Contractor shall hold regularly scheduled safety meetings to instruct Contractor personnel on safety practices, accident avoidance and prevention, and the Project Safety Program. The Contractor shall furnish safety equipment and enforce the use of such equipment by its employees and its subcontractors of any tier.
    - d. The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

- e. The Contractor shall promptly report in writing to the Owner all accidents arising out of or in connection with the Work which cause death, lost time injury, personal injury, or property damage, giving full details and statements of any witnesses. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported immediately.
- f. The Contractor shall promptly notify in writing to the Owner of any claims for injury or damage to personal property related to the work, either by or against the Contractor.
- g. The Owner assumes no responsibility or liability for the physical condition or safety of the Work site or any improvements located on the Work site. The Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment in either the Contract Sum or Contract Time concerning any failure by the Contractor or any Subcontractor to comply with the requirements of this Paragraph.
- h. In no event shall the Owner have control over, charge of, or any responsibility for construction means, methods, techniques, sequences or procedures or for safety precautions and programs in connection with the Work, notwithstanding any of the rights and authority granted the Owner in the Contract Documents.
- i. The Contractor shall maintain at his own cost and expense, adequate, safe and sufficient walkways, platforms, scaffolds, ladders, hoists and all necessary, proper, and adequate equipment, apparatus, and appliances useful in carrying on the Work and which are necessary to make the place of Work safe and free from avoidable danger for clients, staff, the public and construction personnel, and as may be required by safety provisions of applicable laws, ordinances, rules regulations and building and construction codes.

**END OF SECTION 013513.31**

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **SECTION 015000 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

#### **PART 1 – GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Bid Form, and other Division 1 Specification Sections, apply to this Section.

##### **1.2 SUMMARY**

- A. This section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities include, but are not limited to, the following:
  - 1. Water service and distribution.
  - 2. Temporary electric power and light.
  - 3. Temporary heat.
  - 4. Telephone service.
  - 5. Sanitary facilities, including drinking water.
- C. Support facilities include, but are not limited to, the following:
  - 1. Field offices and storage sheds.
  - 2. Temporary roads and paving.
  - 3. Dewatering facilities and drains.
  - 4. Temporary enclosures.
  - 5. Temporary project identification signs and bulletin boards
  - 6. Waste disposal services.
  - 7. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities include, but are not limited to, to following:
  - 1. Temporary fire protection.
  - 2. Barricades, warning signs, and lights.
  - 3. Sidewalk bridge or enclosure fence for the site.
  - 4. Environmental protection.

##### **1.3 SUBMITTALS (Not Applicable)**

##### **1.4 QUALITY ASSURANCE**

- A. Regulations: Comply with industry standards and applicable laws and regulations, including but not limited to the following:
  - 1. Health and safety regulations.
  - 2. Utility company regulations.
  - 3. Police, fire department, and rescue squad rules.
  - 4. Environmental protection regulations.
- B. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

## **1.5 PROJECT CONDITIONS**

- A. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

## **PART 2 – PRODUCTS**

### **2.1 MATERIALS**

- A. General: Provide new materials. If acceptable to the Designer, the Contractor may use undamaged, previously used materials in serviceable condition; provided materials are suitable for use intended.
- B. Water: When specified, provide potable water approved by local health authorities, as necessary to complete the appropriate work tasks.

### **2.2 EQUIPMENT**

- A. General: Provide new equipment. If acceptable to the Designer, the Contractor may use undamaged, previously used equipment in serviceable condition; provided equipment is suitable for use intended.
- B. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage rating.
- C. Temporary Offices: A construction office is not required on this project.
- D. Telephones: Provide a minimum of one (1) functioning mobile telephone or landline on-site at all times for the purpose of safety.

- E. Water: The Contractor shall provide all water required during the construction period.
- F. Temporary Toilet Units: Provide and maintain self-contained, single-occupant toilet units of the chemical, aerated re-circulation or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- G. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers, or a combination of extinguishers of NFPA-recommended classes for the exposures.
  - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

## **PART 3 – EXECUTION**

### **3.1 INSTALLATION**

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

### **3.2 TEMPORARY UTILITY INSTALLATION**

- A. General: Utility connections are not available at the site. All utilities shall be provided at no additional cost to the Owner.
- B. Temporary Water Service: Contractor shall provide all water required during the construction period.
- C. Temporary Electric Power Service: Contractor shall provide all electric service required during the construction period. Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics for the various construction tools, machinery, lights, heating and air conditioning, pumps, and other tools required by the Contractor, Subcontractors, and the construction office during construction period. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters, temporary wiring, panelboards, switches, and main distribution switch gear as necessary. Temporary service and light circuits shall be moved as required to maintain progress in the Work and all temporary facilities shall be removed upon completion of the Work.

- D. Temporary Heating: Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction, materials, and equipment from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.
  - 1. Heating Facilities: Except where the Owner authorizes use of the permanent system, provide vented, self-contained, LP-gas or fuel-oil heaters with individual space thermostatic control.
  - 2. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.
- E. Temporary Telephones: Provide a minimum of one functioning mobile phone or landline on site at all times when personnel are present on site.
- F. Temporary Toilets: Install and maintain self-contained toilet units. Use of pit-type privies will not be permitted. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.
  - 1. Shield toilets to ensure privacy.
  - 2. Provide separate facilities for male and female personnel; unless a signed waiver is provided to the Owner.
  - 3. Provide toilet tissue materials for each facility.
- G. Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.
- H. All open excavations associated with temporary facilities or utility installations that are not completed during the daylight period shall be surrounded by a 48" high bright orange temporary safety fence and supported by steel T-posts spaced no greater than 5' apart.

### **3.3 SUPPORT FACILITIES INSTALLATION**

- A. General: Locate storage sheds and other temporary construction and support facilities for easy access.
  - 1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- B. Storage facilities: Install storage sheds sized, furnished, and equipped to

accommodate materials and equipment involved.

1. Contractor shall provide all temporary buildings or trailers needed for storage of equipment and materials installed under this Contract (including those furnished by Owner or others under separate contract) which require indoor storage or protected outdoor storage at the site prior to their installation. Temporary buildings and trailers and stored materials shall be in locations acceptable to Owner's Representative and will be removed when the Work is completed.
  2. Owner's Representative shall be advised of any arrangements made for storage of equipment and materials in a place other than Owner's site.
  3. Contractor shall assume responsibility for and protect all equipment and materials during the storage period in accordance with the manufacturer or supplier's recommendations.
- C. Project Identification and Temporary Signs: Prepare project identification and other signs of sizes indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. No unauthorized signs shall be permitted.
1. Project Identification Signs: Engage an experienced sign painter to apply graphics. Comply with details indicated.
  2. Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.
- D. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80° F (27° C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.

### **3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION**

- A. Barricades, Warning Signs, and Lights: Comply with all appropriate and current FHA Manual on Uniform Traffic Control Device (MUTCD) standards and code requirements. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations; plus minimize the possibility that air, waterways, and subsoil might be become contaminated or polluted and/or other undesirable effects might occur. Avoid the use of tools and equipment that produce harmful noise. Restrict the use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near the site.

### **3.5 OPERATION, TERMINATION, AND REMOVAL**

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
  - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Termination and Removal: Unless the Designer requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - 1. Materials and facilities that constitute temporary facilities are the Contractor's property. The Owner reserves the right to take possession of project identification signs.

**END OF SECTION 015000**

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **015723 – TEMPORARY STORM WATER POLLUTION CONTROL**

#### **PART 1 – GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections apply to this section.

##### **1.2 SUMMARY**

- A. Section includes:
  - 1. Furnishing, installing, maintaining (including sediment removal), and removing temporary control measures as shown on the Plans or ordered by the Owner's Representative. Temporary water pollution and sediment control shall be accomplished through the use of seeding, mulching, straw bales, silt fences, and other erosion control devices or methods, in accordance with these Specifications.
  - 2. The temporary project water pollution control provisions contained herein shall be coordinated with the permanent erosion and sediment control features specified elsewhere in the Specifications to the extent practical to assure effective and continuous erosion control throughout the construction and post construction period.

##### **1.3 UNIT PRICES**

- A. All work in this section required by the Specifications or Plans shall be included in the Contractor's Base Bid Lump Sum contract price. The Base Bid Lump Sum price shall include all labor, materials, equipment, tools, and incidentals necessary to complete the work including maintenance and sediment removal. However, should the actual quantity of Sediment Control Bales, Geotextile Silt Fence, Temporary Mulch, Temporary Seeding, Lime or Fertilizer vary from that required by these Specifications or Plans (more or less), the following shall apply to payment:
  - 1. Payment for temporary sediment control measures shall be made at the Unit Price established in the Contractor's Bid Proposal form.
  - 2. Quantities of geotextile silt fence shall be measured to the nearest linear foot.
  - 3. Quantities of straw bale silt fence shall be measured by the standard bale.
  - 4. Quantities of temporary seeding and mulching shall be measured to the nearest acre.
  - 5. Payment for temporary sediment control will not be made until work has been completed in strict accordance with the specifications.

6. The Unit Prices established by the Contractor's Bid Proposal Form shall include the cost of all labor, materials, tools, equipment, profit, and incidentals necessary to complete the work.

#### **1.4 DEFINITIONS – (Not Applicable)**

#### **1.5 SUBMITTALS**

- A. Submit as specified in Division 1.
- B. Includes, but is not limited to, the following:
  1. Manufacturer's installation instruction and certification for the geotextile silt fence stating that the material supplied conforms to the requirements of these specifications. The certification shall include or have attached typical results of tests for the specified properties, representative of the materials supplied.
  2. Weight and/or shipping tickets of materials brought on site shall be presented to the Owner's Representative.

#### **1.6 QUALITY ASSURANCE**

- A. Applicable Standards:
  1. American Society for Testing and Materials (ASTM).
    - a. ASTM D4632 Tensile Strength.
    - b. ASTM D4355 Ultraviolet Degradation
    - c. ASTM D4751 Apparent Opening Size
    - d. ASTM D4491 Permittivity.
- B. Field Quality Control
  1. Prior to installation all materials required under this section shall be subject to the inspection and approval of the Owner's Representative. During installation, the Owner's Representative may make surveys and spot checks to ensure that plan lines and grades are met.

#### **1.7 PROJECT CONDITIONS**

- A. Temporary project water pollution control work generally will involve installation of materials on mine spoil. Surface flow of rainwater may be considerable should precipitation occur during construction.

## **PART 2 – PRODUCTS**

### **2.1 SEDIMENT CONTROL BALES**

- A. Bales shall consist of straw of oats or wheat. Hay may be substituted upon approval by the Owner's Representative.
- B. Posts. Hardwood posts shall be used. Posts shall have a minimum length of 36 inches and be of sufficient strength to resist damage during installation and to support applied loads.
- C. Bales shall be installed in areas located by the Owner's Representative or Owner's Representative or as otherwise directed.
- D. Bales shall be dug approximately 4" deep with a minimum of eight inches on either side of the gully. Excess soil shall be thrown on the uphill side of the gully.

### **2.2 GEOTEXTILE SILT FENCE**

- A. Fibers used in the manufacture of geotextiles shall consist of long chain synthetic polymers, composed of at least 85 percent by weight polyolefin's, polyesters, or polyamides. They shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other including selvages. The geotextile shall be free of any treatment or coating which might adversely alter its physical properties after installation. Unless otherwise specified, geotextile shall be furnished in 36-inch width (minimum) rolls.
- B. Geotextile rolls shall be furnished with suitable wrapping for protection against moisture and extended ultraviolet exposure prior to placement. Each roll shall be labeled or tagged to provide product identification sufficient for inventory and quality control purposes. Rolls shall be stored in a manner that protects them from the elements.
- C. Support Fence may be required in areas of high velocities/flows. Wire or other support fence shall be at least 24 inches high and strong enough to support applied loads.
- D. Prefabricated Fence. Prefabricated fence systems may be used provided they meet all of the above material requirements.
- E. Posts. Hardwood posts shall be used. Posts shall have a minimum length of 36 inches and be of sufficient strength to resist damage during installation and to support applied loads.
- F. Geotextile silt fence shall be installed as per manufacturer's instructions in locations as indicated on the plans or as otherwise directed by the Owner's Representative or Owner's Representative.

**Table 1: Physical Requirements for Temporary Silt Fence Geotextiles**

<u>Property</u>	<u>Test method</u>	<u>Wire Fence Supported Requirements</u>	<u>Self Supported Requirements</u>
Tensile Strength, Lbs.	ASTM D4632	90 Minimum <sup>2</sup>	90 Minimum <sup>2</sup>
Elongation at 50% Minimum tensile strength (45 Lbs.)	ASTM D4632	N/A	50 Maximum
Permittivity (Sec <sup>-1</sup> )	ASTM D4491	0.01 *3	0.01 *3
Apparent Opening Size (AOS)(mm)	ASTM D4751	0.84 *3	0.84 *3
Ultraviolet Degradation at 500 hours.	ASTM D4355	Minimum 70% Strength Retained	Minimum 70% Strength Retained

\*1 All numerical values represent minimum average roll value.

\*2 When tested in any principal direction.

\*3 Permittivity and AOS do not relate directly to the filtration performance of silt fence fabrics. Values presented reflect minimum criteria of products currently used. Performance tests such as VTM-51 or ASTM D5141 may be used to evaluate silt fence performance if deemed necessary by the Owner's Representative.

**2.3 MULCH**

- A. Shall consist of wheat or oat straw.
- B. Straw shall be relatively free of prohibited weed seed and all other noxious and undesirable seed as approved by the Owner's Representative. The straw shall not be in an advanced stage of decomposition.

**2.4 TEMPORARY SEED:**

- A. Provide fresh, clean new-crop seed complying with rate of application as stated herein. Ship all seed and other materials with certificates of inspection required by governing authorities. Comply with regulations applicable to such materials.

- B. All seed must comply with the requirements of the Missouri Seed Law, contain no seed of any plant on the Federal noxious weed list, and contain no seed of any weed not known to exist in Missouri.
- C. Seed, which has become wet, moldy, or otherwise damaged in transit or in storage will not be acceptable and shall be removed from the project site.
- D. All leguminous seed shall be inoculated or treated with the proper cultures for the particular legume to be sown.
  - 1. The inoculant for treating leguminous seed shall be a pure culture of nitrogen-fixing bacteria. The containers of inoculant shall be plainly marked with the expiration date for use and the manufacturer's directions for inoculating seed.
  - 2. The process of inoculation shall be in accordance with the manufacturer's direction for the particular species of legume. The time lapse for sowing the seed following inoculations shall not exceed 24 hours.
  - 3. A legume shall be inoculated separately with sufficient inoculant to cover all seed before mixing with other seeds. A commercial sticker shall be used to ensure the inoculant adheres to the seed.
  - 4. Inoculants shall be applied at double the manufacturer's recommendation.
- E. Areas finished outside of the seeding dates may be mulched as per specifications outlined in 015723.3.4 of this section.
- F. Acceptable seed mixtures and rates of application are as follows. Seed mixtures are to be applied to those areas as otherwise directed by the Owner's Representative.

### **Temporary Seed Mix #1**

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>VARIETY</u>	<u>PLS*/ACRE</u>
Pearl Millet	<i>Pennisetum glaucum</i>		25
Perennial Ryegrass	<i>Lolium perenne</i>	Manhattan	5
Oats	<i>Avena sativa</i>	Jerry	30

Seed Mixture #1 shall be planted in all areas if seeded between May 16 and July 31.

\*Pounds of PLS/Acre is the seeding application rate in terms of Pure Live Seed per acre.

### **Temporary Seed Mix #2**

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>VARIETY</u>	<u>PLS*/ACRE</u>
Wheat	<i>Triticum</i>		100
Perennial Ryegrass	<i>Lolium perenne</i>	Manhattan	5
Annual Ryegrass	<i>Lolium multiflorum</i>		5

Seed Mixture #2 shall be planted in all areas if seeded between October 01 and February 29.

\*Pounds of PLS/Acre is the seeding application rate in terms of Pure Live Seed per acre.

## **2.5 FERTILIZER:**

- A. Fertilizer shall be a standard commercial product, which when applied at the proper rate, will supply the quantity of total actual nitrogen (N), total phosphorus (P), and soluble potassium (K), required under Part 3 (3.5.G) of this Section.

## **PART 3 – EXECUTION**

### **3.1 GENERAL REQUIREMENTS**

- A. Prior to initiation of any disturbance within the Project limits, the Contractor shall install and maintain the temporary and/or permanent erosion and water pollution control measures in accordance with the requirements of this section and other appropriate sections of the Specifications and as shown of the Plans and as directed by the Owner’s Representative or Resident Project Representative.
- B. The Contractor will be required to incorporate all permanent erosion and sediment control features into the project at the earliest practical time. Temporary pollution control measures shall be used to correct conditions that develop during construction; that are needed prior to installation of permanent pollution control features; or that are needed temporarily to control erosion that results from normal construction practices.
- C. Where erosion and sedimentation is likely to be a problem, the Owner’s Representative may require the Contractor to schedule and perform clearing and

grubbing such that grading and storm drainage systems are completed immediately following clearing and grubbing, if conditions permit. Temporary erosion and sediment control measures may be required between successive construction stages.

- D. The Owner's Representative may limit the surface area of erodible earth material exposed by clearing and grubbing, the surface area of erodible earth material exposed by excavation, borrow, and fill operations. The Owner's Representative may direct the Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment. Such work may involve construction of geotextile or bale silt fence, use of temporary mulches, seeding, or other control devices or methods, as necessary to control erosion. If sediment control features are not maintained the work may be shut down until corrective actions are performed by the Contractor, at the direction of the Owner's Representative. A 24-hour written notice will be given prior to shutdown.
- E. The Owner's Representative or Owner's Representative may 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 pollution control measures current. Should seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately.
- F. Unless otherwise provided or approved in writing by the Owner's Representative, construction operations in rivers, streams, and impoundments shall be restricted to those areas which must be entered for the construction of temporary or permanent structures. Rivers, streams, and impoundments shall be promptly cleared of all falsework, piling, debris, or other obstructions placed therein or caused by the construction operations.
- G. Fording of live streams with construction equipment will not be permitted unless specifically approved by the Owner's Representative. Temporary bridges or other structures shall be used wherever an appreciable number of stream crossings are necessary. Unless otherwise approved in writing by the Owner's Representative, mechanized equipment shall not be operated in live streams except as may be required to construct channel changes and temporary or permanent structures. If a Section 404 permit is applicable for this project, its requirements and/or conditions shall prevail.
- H. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, State, or local agencies, the more restrictive laws, rules, or regulations shall apply.
- I. The Owner's Representative has obtained a NPDES permit for this Project which is included as Appendix 1. The Contractor will be required to operate within all permit restrictions. In the event that any fines are assessed to the Owner's Representative resulting from the Contractor's violation of permit restrictions, the

amounts payable to the Contractor under this Project will be reduced by the amount of such fines.

1. If, at any time, the Contractor is found to be in violation of the permit restrictions and requirements, he will be allowed 48 hours to take corrective actions to bring the work back into conformance with the permit restrictions and requirements. The 48 hour time period will commence to run at that date and time at which the Contractor or his superintendent at the project site is first notified of the violation.
  - a. If adequate corrective actions are not taken within 48 hours after such notification, the Contractor will be directed to cease all other operations until the necessary corrective actions have been taken, and a notice to recommence the work is issued.
  - b. No Contract Time Extensions or increase in compensation will be made to the Contractor as a result of violation of the permit restrictions and requirements.
2. The Contractor shall implement and meet all applicable requirements of the NPDES permit.
3. The Resident Project Representative will monitor water quality and sample, if required, in accordance with the permits.
4. The Owner's Representative will bear the costs of all laboratory testing associated with monitoring.
5. The Contractor will bear the cost of all laboratory testing associated with the discharge resulting from dewatering activities if required.
6. The Contractor will be responsible for the repair and cost of all damages resulting from sedimentation.

### **3.2 STRAW BALE INSTALLATION**

- A. Straw bales shall be installed in accordance with the Plans and Specifications.
- B. Straw bales may be used at the bottom of slopes and on the lower side of cleared areas to divert water and retain sediment.
- C. Straw bales may be used as ditch checks and to correct rill and gully erosion in small ditches and drainage areas.
- D. The Contractor shall maintain the integrity of the straw bales as long as they are necessary to control sediment. The Resident Project Representative and Contractor shall inspect all straw bales immediately after each rainfall and at least daily during prolonged rainfall. Any deficiencies shall be immediately corrected by the Contractor. In addition, the Contractor shall make a daily review of the location of the straw bales in areas where construction activities have changed the natural contour and drainage runoff to ensure that the straw bales are properly located for effectiveness. Where deficiencies exist, additional straw bales shall be installed as approved or directed by the Resident Project Representative .

- E. The Contractor shall remove and dispose of sediment deposits when the deposit approached one-half (1/2) the height of the bales or sooner when directed by the Resident Project Representative. If required by heavy sediment loading, more lines of straw bales shall be installed as directed by the Resident Project Representative.
- F. The straw bales shall remain in place until the Owner's Representative directs removal. The Contractor shall remove and dispose of any excess silt accumulations, grade and dress the area to the satisfaction of the Owner's Representative, and establish vegetation on all bare areas in accordance with the requirements of the applicable Specifications.

### **3.3 SILT FENCE INSTALLATION**

- A. Installation of wire supported and self-supporting geotextile fence may be required in areas of high velocities or flows, as directed by the Resident Project Representative.
- B. Silt fence may be used at the bottom of slopes and on the lower side of cleared areas to divert water and retain sediment.
- C. Silt fence may be used as ditch checks and to correct rill and gully erosion in small ditches and drainage areas.
- D. Post spacing shall not exceed eight (8) feet for wire support fence installations or five (5) feet for self-supported installations. Posts shall be driven a minimum of 24 inches into the ground. Where rock is encountered posts shall be installed in a manner approved by the Owner's Representative. Closer spacing, greater embedment depth and/or wider posts shall be used as necessary in low areas and soft or swampy ground to ensure adequate resistance to applied loads.
- E. When support fence is used, the mesh shall be fastened securely to the up-slope side of the post. The mesh shall extend into the trench a minimum of two inches and extend a maximum of 36 inches above the original ground surface.
- F. When self-supported fence is used, the geotextile shall be securely fastened to fence posts.
- G. The Contractor shall maintain the integrity of silt fences as long as they are necessary to contain sediment runoff. The Resident Project Representative and the Contractor shall inspect all temporary silt fences immediately after each rainfall and at least daily during prolonged rainfall. Any deficiencies shall be immediately corrected by the Contractor. In addition, the Contractor shall make a daily review of the location of silt fences in areas where construction activities have changed the natural contour and drainage runoff to ensure that the silt fences are properly located for effectiveness. Where deficiencies exist, additional silt fences shall be installed as approved or directed by the Resident Project Representative .
- H. The Contractor shall remove and dispose of sediment deposits when the deposit approaches one-half the height of the fence or sooner when directed by the Resident

Project Representative. If required by heavy sediment loading, more silt fence shall be installed as directed by the Resident Project Representative.

- I. The silt fence shall remain in place until the Owner's Representative directs removal. Upon silt fence removal, the Contractor shall remove and dispose of any excess silt accumulations, grade and dress the area to the satisfaction of the Owner's Representative, and establish vegetation on all bare areas in accordance with the requirements of the applicable Specifications and at no additional expense to the Owner.

### **3.4 TEMPORARY MULCH**

- A. At the discretion of the Owner's Representative, for the purpose of temporary erosion control prior to seeding, temporary mulch may be required on all or parts of the project site. Mulch shall be composed of straw of oats or wheat for temporary water pollution control.
  1. At the request of the Owner's Representative; the Contractor, Resident Project Representative, and Owner's Representative shall meet on-site to determine what area(s) of the project site should be mulched and their associated acreage.
  2. Mulch shall be spread uniformly to form a continuous loose blanket not less than one and one-half (1 ½) inches or more than two (2) inches.
  3. Bunching or matting of mulch shall be avoided and corrected by hand methods, if so directly by the Owner's Representative.
  4. Straw mulch shall be crimped into the soil by means of a straw crimper manufactured specially for such purpose.
  5. The Contractor shall promptly complete the mulch application within fifteen (15) days of written notice to proceed from the Owner's Representative.
  6. If mulch is required on the project site totaling less than three (3) acres, the Contractor will be reimbursed for not less than three (3) acres. The three (3) acres may or may not be contiguous.

### **3.5 TEMPORARY SEEDING**

- A. At the discretion of the Resident Project Representative, for the purpose of temporary erosion control prior to permanent seeding, temporary seed may be required on all or parts of the project site.
- B. At the request of the Owner's Representative, the Contractor and Owner's Representative shall meet on site to determine what area(s) of the project site should be temporary seeded and their associated acreage.
- C. Seed Mixture 1 or 2 shall be applied at the rates as described in Section 015723.2.4.F:

- D. Drill seed following the contour using a mechanical power drawn seed drill that places the seed at least ¼", but no more than ½" into the soil, or at depths directed by the Owner's representative. Drill seeding shall be accomplished with drills using a drill width of between 7" and 9". If inspections during seeding operations, or after there is a show of green, indicate that areas have been left unplanted, additional seed of the appropriate species and quantity shall be sown as directed by the Owner's Representative at no additional cost to the Owner. Hand broadcasting may be allowed in areas not accessible to drills or other equipment, upon request. Once applied, the seed must be covered at least ¼" but no more than ½" with soil by means of hand rakes or other approved methods. Seeding rates in hand broadcasted areas shall be double those listed in Section 015723.2.4.F.
- E. The Contractor shall promptly complete the temporary seeding within fifteen (15) days of written notice to proceed from the Owner's Representative.
- F. If temporary seed is required on the project site totaling less than three (3) acres, the Contractor will be reimbursed for not less than three (3) acres. The three (3) acres may or may not be contiguous.
- G. Lime and/or fertilizer will be required as directed by the Owner's Representative. Rates will be provided by the Owner's Representative. Application of lime and fertilizer shall be in accordance with the requirements already set forth in Section 312000.2.2 and Section 312000.3.13 respectively.
- H. The seedhead of the temporary crop shall not be allowed to mature. The Contractor shall mow the temporary crop to prevent seedhead maturity. Should wet conditions not allow the Contractor to mow the crop and the seedhead matures, the Contractor shall combine the crop to prevent a volunteer cereal crop.
- I. The permanent grass species shall not be drilled directly into the temporary seeded areas. The temporary seeded areas shall be incorporated to a depth of six (6) inches by discing, harrowing, or other approved methods.

**END OF SECTION 015723**

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **SECTION 017400 – CLEANING**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Bid Form and other Division 1 Specification Sections, apply to this Section.

##### **1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements for cleaning during the Project.
- B. Environmental Requirements: Conduct cleaning and waste-disposal operations in compliance with local laws and ordinances. Comply fully with federal and local environmental and anti-pollution regulations.
  - 1. Do not dispose of hazardous or volatile wastes, such as mineral spirits, oil, or paint thinner onsite.
  - 2. Onsite disposal of debris, rubbish, or other non-wood waste material is not permitted.
  - 3. Burning or burying of debris, rubbish, or other non-wood waste material is not permitted.

#### **PART 2 - PRODUCTS**

##### **2.1 MATERIALS**

- A. Cleaning Agents: Use cleaning materials and agents recommended by the manufacturer or fabricator for the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

#### **PART 3 - EXECUTION**

##### **3.1 PROGRESS CLEANING**

- A. General
  - 1. Retain stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the required protection of materials.
  - 2. Do not allow the accumulation of scrap, debris, waste material, and other items not required for construction of this Work.

3. At least **once** each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.
  4. Provide adequate storage for items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.
- B. Site
1. Daily, inspect the site and pick up scrap, debris, and waste material. Remove such items to the place designated for their storage.
  2. Weekly, inspect arrangements of materials stored on the site. Re-stack, tidy, or otherwise service material arrangements.
  3. Maintain the site in a neat and orderly condition at all times.

### **3.2 FINAL CLEANING**

- A. General: Provide final cleaning operations when indicated. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to the condition expected from a commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
- B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for the Project or a portion of the Project.
1. Clean the Project Sites, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and foreign substances.
  2. Sweep paved areas broom clean. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
  3. Remove petrochemical spills, stains, and other foreign deposits.
  4. Remove tools, construction equipment, machinery, and surplus material from the site.
  5. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  6. Leave the Project clean and ready for occupancy.
- C. Removal of Protection: Remove temporary protection and facilities installed during construction to protect previously completed installations during the remainder of the construction period.
- D. Compliances: Comply with governing regulations and safety standards for cleaning operations. Remove waste materials from the site and dispose of lawfully.
1. Where extra materials of value remain after Final Acceptance by the Owner, they become the Owner's property.

END OF SECTION 017400

## **DIVISION 3 - CONCRETE**

### **SECTION 033053 – CAST-IN-PLACE CONCRETE**

#### **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.
- B. Related Sections include the following:
  - 1. Section 079200 – “Joint Sealants” for solvent release curing joint sealants.

##### **1.2 REFERENCES**

- A. Advancing Standards Transforming Markets (ASTM) International Specifications
- B. American Concrete Institute (ACI) Codes and Specifications
- C. Missouri Standard Specification for Highway Construction 2024 4<sup>th</sup> edition dated April 2025, Section 1026 “Reinforced Concrete Culvert Pipe”.

##### **1.3 SUMMARY**

- A. This Section specifies cast-in-place concrete, concrete materials, mixture design, placement procedures, and finishes, for concrete placed as a bearing pad, box culvert sections, risers, and concrete placed for paving the invert of the principal spillway riser.
- B. This section follows the Missouri Standard Specifications for Highway Construction 2024 4<sup>th</sup> Edition, April 2025. Any literature in the provided specifications that contradict MoDOT’s specifications, should follow the MoDOT specifications.

##### **1.4 SUBMITTALS**

- A. General: In addition to the following, comply with submittal requirements in ACI 301.
- B. Product Data: For each type of product indicated.
- C. Design Mixtures: For each concrete mixture.

## **1.5 QUALITY ASSURANCE**

- A. **Manufacturer Qualifications:** A firm experienced in manufacturing ready-mixed concrete products that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. **Source Limitations:** Obtain each type of cement of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.
- C. **Comply with ACI 301, "Specification for Structural Concrete,"** including the following sections, unless modified by requirements in the Contract Documents:
- D. **Comply with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."**

## **PART 2 - PRODUCTS**

### **2.1 CONCRETE MATERIALS**

- A. **Cementitious Material:** Use the following cementitious materials, of the same type, brand, and source throughout Project:
- B. **Portland Cement:** ASTM C 150, Type II.
- C. **Fly Ash:** ASTM C 618, Class C or F.
- D. **Normal-Weight Aggregate:** ASTM C 33, graded, 1-inch nominal maximum aggregate size.
- E. **Water:** ASTM C 94; potable.

### **2.2 ADMIXTURES**

- A. **Air-Entraining Admixture:** ASTM C 260.
- B. **Chemical Admixtures:** Provide admixtures certified by the manufacturer to be compatible with other admixtures that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
  - 1. **Water-Reducing Admixture:** ASTM C 494/C 494M, Type A.
  - 2. **Retarding Admixture:** ASTM C 494/C 494M, Type B.
  - 3. **Water-Reducing and Retarding Admixture:** ASTM C 494/C 494M, Type D.
  - 4. **High-Range, Water-Reducing Admixture:** ASTM C 494/C 494M, Type F.
  - 5. **High-Range, Water-Reducing and Retarding Admixture:** ASTM C 494/C 494M, Type G.

6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

### **2.3 CURING MATERIALS**

- A. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.
- B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.

### **2.4 CONCRETE MIXTURES**

- A. Comply with ACI 301 requirements for concrete mixtures.
- B. Normal-Weight Concrete: Prepare design mixes, proportioned according to ACI 301, as follows:
  1. Minimum Compressive Strength: 4,000 pounds per square inch (psi) at 28 days.
  2. Maximum Water-Cementitious Materials Ratio: 0.45.
  3. Slump Limit: 4 inches, +/- 1 inch.
  4. Air entrainment: 5%, +/- 1%.

### **2.5 CONCRETE MIXING**

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and furnish batch ticket information.
  1. When the air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

### **2.6 REINFORCING MATERIALS**

- A. Reinforcing Bars, Plain-Steel Welded Wire Reinforcement, Spiral Reinforcement, Deformed Steel Wire, and Epoxy Coated Reinforcement shall be in accordance with MODOT Section 1036 – “Reinforcing Steel for Concrete”

## **PART 3 - EXECUTION**

### **3.1 CONCRETE PLACEMENT**

- A. Comply with ACI 301 for measuring, batching, mixing, transporting, and placing concrete.

- B. Before test sampling and concrete placement, water may be added at the Project site, with careful consideration not to exceed a 0.45 W/C ratio (See Section 033053 2.4.B.2), subject to limitations of ACI 301.
- C. Consolidate concrete with mechanical vibrating equipment.

### **3.2 FINISHING UNFORMED SURFACES**

- A. General: Comply with ACI 302.1R for screeding, re-straightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleed water appears on surface.
  - 1. Do not further disturb surfaces before starting finishing operations.
- C. Float Finish: Apply float finish.

### **3.3 CONCRETE PROTECTING AND CURING**

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 pounds per square foot (lb./sq.) feet per hour (ft./hr.) 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 after finishing concrete but not before free water has disappeared from concrete surface.
- D. Curing Methods: Cure formed and unformed concrete for at least seven days by one or a combination of the following methods:
  - 1. 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 hours after initial application. Maintain continuity of coating and repair damage during curing period.
  - 2. Curing and Sealing Compound: Apply uniformly in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat the process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

### **3.4 FIELD QUALITY CONTROL**

- A. Testing Agency: Contractor shall engage a qualified independent testing and inspecting agency to test fresh and hardened concrete, sample materials, perform 7-day and 28-day concrete compressive strength tests, and submit test reports during concrete placement according to requirements specified in this Section and ACI 301.

### **3.5 REPAIRS**

- A. Removal and replacement of concrete that does not comply with the requirements in this section will be at the Contractor's expense.

**END OF SECTION 033053**

## **DIVISION 7 – THERMAL AND MOISTURE PROTECTION**

### **SECTION 079200 – 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 REFERENCES**

- A. ASTM International (ASTM):
  - 1. ASTM C990 Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants.
- B. MoDOT 2024 Missouri Standard Specifications for Highway Construction:
  - 1. SECTION 1057 Material for Joints

##### **1.3 SUMMARY**

- A. Section Includes:
  - 1. Solvent-release-curing joint sealants.
  - 2. Preformed joint sealants.
- B. Related Sections:
  - 1. Section 033053 - “Miscellaneous Cast-In-Place Concrete” for concrete materials and concrete mixtures.

##### **1.4 SUBMITTALS**

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. 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.
- D. 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.
- E. Qualification Data: For qualified Installer and testing agency.
- F. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.
- G. Sealant, Waterproofing, and Restoration Institute (SWRI) Validation Certificate: For each sealant specified to be validated by SWRI's Sealant Validation Program.
- H. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.
- I. Preconstruction Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
  2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- J. Preconstruction Field-Adhesion Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates.
- K. Warranties: Sample of special warranties.

## **1.5 QUALITY ASSURANCE**

- A. Installer Qualifications: The Contractor shall have a qualified subcontractor, who is trained and experienced in the installation of the product approved by the Resident Project Representative, present on-site for this project.
- B. Source Limitations: Obtain each kind of joint sealant from a single source from a single manufacturer.

## **1.6 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.

## **1.7 WARRANTY**

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period. Verify available warranties and warranty periods with manufacturers listed in Part 2 articles.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
- C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
  - 1. Movement of the structure caused by structural settlement or errors attributable to design or construction resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
  - 2. Disintegration of joint substrates from natural causes exceeding design specifications.
  - 3. Mechanical damage caused by individuals, tools, or other outside agents.
  - 4. Changes in sealant appearance that are caused by accumulation of dirt or other atmospheric contaminants.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS, GENERAL**

- A. Compatibility: Provide joint sealants, backings, 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. VOC Content of Interior Sealants: Provide sealants and sealant primers for use inside the weatherproofing system that comply with the following limits for VOC content when calculated according to 40 CFR 59, Part 59, Subpart D (EPA Method 24):
  - 1. Architectural Sealants: 250 g/L.
  - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
  - 3. Sealant Primers for Porous Substrates: 775 g/L.
- C. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

1. Suitability for Immersion in Liquids. Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.
- D. Stain-Test-Response Characteristics: Where sealants are specified to be non-staining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- E. Colors of Exposed Joint Sealants: As indicated by manufacturer's designations.

## **2.2 SOLVENT-RELEASE-CURING JOINT SEALANTS**

- A. Butyl-Rubber-Based Joint Sealant: ASTM C 1311.
  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. Bostik, Inc.; Chem-Calk 300.
    - b. Pecora Corporation; BC-158.
    - c. Tremco Incorporated; Tremco Butyl Sealant.
    - d. Or approved equal.

## **2.3 PREFORMED JOINT SEALANTS**

- A. Preformed Butyl Rubber Sealants: ASTM C 990
  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. ConSeal Concrete Sealants Inc.; CS-102 Butyl Rubber Sealant.
    - b. Press Seal Corporation; PRO-STIK Preformed Butyl Joint Sealant.
    - c. Henry; BN109 – Butyl-Nek Joint Sealant
    - d. Or approved equal.
- B. Preformed Silicone Joint Sealants: Manufacturer's standard sealant consisting of precured low-modulus silicone extrusion, in sizes to fit joint widths indicated, combined with a neutral-curing silicone sealant for bonding extrusions to substrates.
  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. Dow Corning Corporation; 123 Silicone Seal.
    - b. GE Advanced Materials - Silicones; UltraSpan US1100.

- c. May National Associates, Inc.; Bondaflex Silbridge 300.
  - d. Pecora Corporation; Sil-Span.
  - e. Sealex, Inc.; ImmerSeal.
  - f. Or approved equal.
- C. Preformed Foam Joint Sealant: Manufacturer's standard preformed, precompressed, open-cell foam sealant manufactured from urethane foam with minimum density of 10 lb./cu. ft. (160 kg/cu. m) and impregnated with a nondrying, water-repellent agent. Factory produce in precompressed sizes in roll or stick form to fit joint widths indicated; coated on one side with a pressure-sensitive adhesive and covered with protective wrapping.
- 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. Dayton Superior Specialty Chemicals; Polytite Standard.
    - b. EMSEAL Joint Systems, Ltd.; Emseal 25V.
    - c. Sandell Manufacturing Co., Inc.; Polyseal.
    - d. Or approved equal.

## **2.4 MISCELLANEOUS MATERIALS**

- A. Primer: Material 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.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealants backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Non-staining, non-absorbent material compatible with joint sealants and surfaces adjacent to joints.

## **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.

## 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 and the following requirements:
1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  2. Clean, porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
    - a. Concrete.
  3. Remove laitance and form-release agents from concrete.
  4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
    - a. Metal.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by 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.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

## 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. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- C. Install sealants using proven techniques that comply with the:
1. Place 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.
- D. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below 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 sealant from surfaces adjacent to joints.
  2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
- E. Use masking tape to protect surfaces adjacent to recessed tooled joints.
- F. Installation of Preformed Butyl Rubber Sealant System: Comply with manufacturer's written instructions.
- G. Installation of Preformed Silicone-Sealant System: Comply with the following requirements:
1. Apply masking tape to each side of joint, outside of area to be covered by sealant system.
  2. Apply silicone sealant to each side of joint to produce a bead of size complying with preformed silicone-sealant system manufacturer's written instructions and covering a bonding area of not less than 3/8 inch (10 mm). Hold edge of sealant bead 1/4 inch (6 mm) inside masking tape.
  3. Within 10 minutes of sealant application, press silicone extrusion into sealant to wet extrusion and substrate. Use a roller to apply consistent pressure and ensure uniform contact between sealant and both extrusion and substrate.
  4. Complete installation of sealant system in horizontal joints before installing in vertical joints. Lap vertical joints over horizontal joints. At ends of joints, cut silicone extrusion with a razor knife.
- H. Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping. Do not pull or stretch material. Produce seal continuity at ends, turns, and intersections of joints. For applications at low ambient temperatures, apply heat to sealant in compliance with sealant manufacturer's written instructions.

### **3.4 CLEANING**

- A. Clean off excess 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 so installations with repaired areas are indistinguishable from original work.

**END OF SECTION 079200**

## **DIVISION 31 - EARTHWORK**

### **311000 – SITE CLEARING**

#### **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. Site preparation activities such as clearing, grubbing, access construction and waste disposal.
  - 2. Materials to be handled under this contract may include trees, brush, and quantities of trash, mine spoil material, and coal refuse which may be acidic in nature.
  - 3. The Contractor shall not use explosives on this work.

##### **1.3 UNIT PRICES**

- A. Unit Prices are not applicable. All work in this section required by the Specifications or Plans shall be included in the Contractor's Base Bid Lump Sum contract price. The Base Bid Lump Sum shall include all labor, materials, equipment, tools, and incidentals necessary to complete the work.

##### **1.4 DEFINITIONS**

###### **A. MINE SPOILS**

- 1. Mine spoil is the earthen material excavated by the mining process while removing coal. This material is unconsolidated and unsorted.

###### **B. COAL WASTE**

- 1. Coal waste has a pH of less than 4.5, and consists of carbon rich, acid forming materials remaining after strip or underground mining. These areas are typically bare to sparsely vegetated and consist of low grade coal materials remaining after mining.

## C. CONSTRUCTION DEBRIS

1. Construction debris consists of non-hazardous materials removed from construction demolition sites such as bricks, concrete, rebar, asphalt, clay tile, etc.

## 1.5 SUBMITTALS

A. Includes, but are not limited to, the following:

1. Submit as specified in Division I.
2. The Contractor shall submit weight tickets and receipts for recycled materials and for residential waste materials.
3. Weight and/or shipping materials for rock and other materials brought on-site shall be presented to the Owner's Representative.

## 1.6 QUALITY ASSURANCE (NOT APPLICABLE)

## 1.7 PROJECT CONDITIONS

- A. Material to be handled under this contract consists primarily of mine spoil and coal waste which are acidic.
- B. Saturated ground conditions may prevail in and near mine pits. Should ground conditions warrant, to fulfill the specifications set forth in this section, the Contractor shall be responsible for utilizing the appropriate low ground pressure equipment at no additional expense to the Owner. For the purposes of this section, appropriate low ground pressure equipment is defined as having maximum load pressure of 4.3 lbs. per square inch.

## PART 2 – PRODUCTS (NOT APPLICABLE)

## PART 3 – EXECUTION

**3.1 CLEARING AND GRUBBING** – The Contractor shall perform clearing and grubbing only to the extent necessary to perform the work required. Clearing and grubbing within the construction limits shall be rigidly adhered to.

A. Clearing:

1. **All Clearing of vegetation shall be completed between November 1<sup>st</sup> and March 31<sup>st</sup>.**

2. In cutting of timber growth, cuts shall be made such that all trees are felled into the area to be cleared. Exercise care when clearing near the project limits so as not to damage existing trees, vegetation, structures or utilities which are outside of the clearing limits.
  3. Conduct work in a manner so as to prevent damage to property and to provide for the safety of employees and others.
- B. Grubbing: Includes removal and disposal of tree stumps and roots larger than 3 inches in diameter.
1. Backfill all excavated depressions with borrow material and grade to drain.
  2. Stumps shall be disposed of per Section 311000.3.3.A.

### **3.2 PROTECTION OF EXISTING VEGETATION**

- A. The Contractor shall protect tops, trunks and roots of existing trees on project site which are designated not to be disturbed.
- B. Box, fence around, or otherwise protect trees before any construction work is started.
- C. Do not permit heavy equipment or stockpiles within branch spread.
- D. Trim or prune to obtain working space in lieu of complete removal when possible. Conduct operation as follows:
  1. With experienced personnel.
  2. Conform to good horticultural practice.
  3. Preserve natural shape and character.

### **3.3 DEBRIS REMOVAL AND DISPOSAL**

- A. Disposal of site clearing debris.
  1. No materials other than trees and brush may be burned. A burn permit must be obtained from the Fulton Fire Department before any burning occurs. All burning must be conducted in accordance with the requirements of the local Fire Department and all other local, state, and federal authorities having jurisdiction. Protection of property outside project limits and protection of on-site trees and other vegetation to remain shall be maintained at all times.
  2. Burning of clearing wastes on coal refuse areas is not permitted.

3. Appliances, scrap metal, tires, and all other recyclables within construction limits shall be considered salvage, and shall become the property of the Contractor. The Contractor shall transport all materials to an appropriate recycler.
  4. Residential waste shall be hauled to a DNR permitted landfill.
- B. Construction debris handling.
1. Construction debris found within project limits will be consolidated and stockpiled for use according to the project drawings or as otherwise directed by the Owner's Representative.

### **3.4 ACCESS CONSTRUCTION**

- A. The Contractor shall confine all activities to within the construction limits. Any damage to the site outside of the construction limits shall be repaired to the satisfaction of the Owner's Representative at no additional cost to the Owner.
- B. All disturbed areas adjacent to the access road shall be repaired by smoothing, liming, seeding and fertilizing in accordance with these specifications at no additional expense to the Owner.

**END OF SECTION 311000**

## DIVISION 31 - EARTHWORK

### SECTION 312000 – EARTH MOVING - GENERAL

#### 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.
- B. Related Requirements:
  - 1. Section 311000 - "Site Clearing" for site stripping, grubbing, stripping and stockpiling cover material, and removal of above- and below-grade improvements and utilities.
  - 2. Section 329200 - "Seeding" for finish grading in vegetated areas, including preparing and placing planting soil.

##### 1.2 SUMMARY

- A. Section Includes:
  - 1. This work consists of grading and shaping of the area in accordance with the Plans and Specifications. This work includes grading mine spoil, Applying AG Lime, installing 1" minus rock, 3" minus rock, 12" shot rock, and 24" shot rock. Material to be handled under this contract consists primarily of mine spoil.

##### 1.3 MEASUREMENT AND PAYMENT

- A. Work in this section required by the Specifications and/or Plans shall be included in the Contractor's Base Bid Lump Sum Contract price. The Base Bid Lump Sum Contract shall include all labor, materials, equipment, tools, and incidentals necessary to complete the work. However, should the actual quantities of Contract included Unit Price items including Ag Lime, one (1") inch minus surface aggregate, three (3") inch minus base aggregate, 12" shot rock, and 24" shot rock vary from those required by these Specifications and/or Plans (more or less), payment shall be made based on the Contractor's Section 004322 - Unit Prices Bid Proposal Form, and the following:
  - 1. Original vendor/ quarry scale ticket(s) for each pre-approved delivery of Ag Lime and rock hauled to the project site shall be provided to the Owner's Representative showing the Unit of Measure and Actual Quantity delivered.
  - 2. Ag Lime shall be measured to the nearest one hundred (100 lbs.) pounds ENM. **NO payment shall be made for Ag Lime until it has been installed/incorporated in accordance with the Specifications.**

3. Quantities of one (1") inch minus surface aggregate, three (3") inch minus base aggregate, 12" shot rock, and 24" shot rock shall be measured to the nearest ton.
4. The Unit Prices established by the Contractors Bid Proposal Form shall include the cost of all labor/installation/incorporation, materials, tools, equipment, profit, and incidentals.

#### **1.4 DEFINITIONS**

- A. Borrow Soil: Satisfactory soil or mine spoil obtained from on-site excavations for use as fill or backfill.
- B. Excavation: Removal of material encountered above subgrade elevations to lines and dimensions indicated.
  1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices.
  2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
  3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.
- C. Fill: Soil materials used to raise existing grades.
- D. Utilities: On-site underground pipes, conduits, ducts, cables, wiring, etc. and related above ground structures or appurtenances.
- E. Gob/Coal Waste: Gob/Coal waste has a pH of less than 4.5, and consists of carbon rich, acid forming materials remaining after strip or underground mining. These areas are typically bare to sparsely vegetated and consist of low-grade coal materials remaining after mining. Incidental coal waste encountered shall be excavated and buried in accordance with Section 312000, or as directed by the Owner's Representative.
- F. Mine Spoil: Mine spoil is earth and rock material excavated by the surface mining process while removing coal. The mine spoil generally represents overburden materials excavated below the surface. The Contractor shall be responsible to grade the spoil piles to the contours shown on the Drawings. Mine spoil shall comprise the final grade. The Contractor shall apply and incorporate amendments per Section 312000 and Section 329200.
- G. Ag Lime: Agriculture liming material conforming to both the Missouri Agricultural Liming Materials Act, 1976 and the requirements stated in Part 2.1 of this specification (312000).

- H. Site Clearing: Site clearing is the removal of trees, bushes, grasses, and other organic materials from the site. Other materials may include trash, dead animals, and other materials not intended for use on the project.

## **1.5 SUBMITTALS**

- A. Includes, but are not limited to, the following:
  - 1. Submit as specified in Division 1.
  - 2. Certificates from vendors certifying that Ag Lime meets the requirements of these Specifications.
  - 3. Effective Neutralizing Materials (ENM) values shall be stated on the tickets.
  - 4. Weight and/or shipping tickets of materials brought on-site shall be presented to the Owner's Representative.

## **1.6 QUALITY ASSURANCE**

- A. Applicable Standards:
  - 1. Missouri Agriculture Liming Materials Act. 1976.
  - 2. The Owner's Representative will make surveys and spot checks to ensure that plan lines and grades are obtained on the project. The Contractor shall schedule work so the Owner's Representative may make the required field tests and surveys. The Contractor shall furnish one laborer to assist the Owner's Representative in spot checking construction layout and grades. Spot check of grades by the Owner's Representative will be only for verification that work is in accordance with the plans. The Owner's Representative is not responsible for setting grades for the Contractor.

## **1.7 FIELD CONDITIONS**

- A. Traffic: Minimize interference with adjoining public and private roadways during earth-moving operations.
  - 1. Do not close or obstruct public or private roadways without permission from Owner's Representative and authorities having jurisdiction.
  - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner's Representative or authorities having jurisdiction.
- B. Utility Locator Service(s): Notify Missouri One Call System (<https://mo1call.com/excavators/itic/>, 1-800-DIG-RITE or 811) to locate public utilities. Also, the contractor shall hire a private utility location service as necessary to prevent an outage to private utilities.
- C. Do not commence earth-moving operations until temporary site fencing and erosion-and-sedimentation control measures specified in Section 311000 - "Site Clearing" are in place.

## 1.8 PROJECT CONDITIONS

- A. Materials to be handled under this contract consist primarily of mine spoils and coal waste which are acidic.
- B. Saturated ground conditions may prevail in or near the mine pit. Should ground conditions warrant, to fulfill the specifications set forth in this section, the Contractor shall be responsible for utilizing the appropriate low ground pressure equipment at no additional expense to the Owner. For the purposes of this section, low ground pressure equipment is defined as having maximum load pressure of 4.3 lbs. per square inch or as approved by Engineer.

## PART 2 - PRODUCTS

### 2.1 AG LIME:

- A. Shall consist of agricultural liming material conforming to the Missouri Agricultural Liming Materials Act. 1976.
- B. Ag Lime shall contain not less than four hundred (400 lbs.) pounds ENM (Effective Neutralizing Material) per ton.
  - 1. Ag Lime with different ENM per ton equivalents **SHALL NOT** be mixed during application, storage, or transportation, unless specifically approved by the Owner's Representative.
  - 2. Contractor shall not stockpile lime unless approved by the Owner's Representative.
  - 3. If Ag lime meeting the above Specification is not locally available, the Contractor may submit a proposal for use of equivalent material based upon the minimum pounds of ENM per ton of Ag lime to be applied.
- C. Manufacturer's certification shall include the minimum pounds of ENM per ton of the material to be supplied.
- D. If Ag lime is stockpiled on site, it shall be segregated into separate piles if the ENM rating varies by more than ten (10) percent.
- E. Ag lime must be obtained from a DNR permitted quarry.
- F. An example calculation for determining Effective Neutralizing Material (ENM) is provided in Appendix 4.

### 2.2 ALL ROCK

- A. General Requirements
  - 1. In general, rock provided for this Project shall be clean, sound durable, angular or blocky in shape limestone that is obtained from a DNR permitted quarry. No more than ten (10%) percent of the stone/rock shall have an elongation greater than 3:1, and no stone shall have an elongation greater than 4:1

2. The stone shall be free from cracks, seams, or other defects that would tend to increase its deterioration from natural causes.
3. The stone shall contain a combined total of not more than ten (10%) percent by weight of earth, sand, shale, and non-durable rock.
4. The minimum bulk-saturated-surface-dry specific gravity of the aggregate determined in accordance with ASTM C-127 shall be 2.55.
5. Size for shot rock shall be well graded, except the maximum and minimum stone size shall be limited as shown on the plans.

### 2.3 ROCK TYPES

- A. One (1") Inch Minus Surface Aggregate
  1. The aggregate shall not contain more than 15 percent deleterious rock and shale. The fraction passing No. 40 sieve shall have a maximum plasticity index of six. Any sand, silt and clay and any deleterious rock and shale shall be uniformly distributed throughout the material.
- B. Three (3") Inch Minus Base Aggregate
  1. Type 1 Rock Ditch Liner shall consist of crushed stone with a predominant aggregate size of three (3") inches, a maximum aggregate size of four (4") inches and a gradation such that no more than fifteen (15%) percent will be less than one (1") inch. The aggregate for Ditch Liner shall be clean, sound, durable limestone obtained from a DNR permitted quarry.
- C. Shot Rock
  1. Poorly sorted rock materials (shot rock) shall be reasonably well graded by weight and poorly sorted by size, within the limits stated below or on the Drawings to meet the following requirements:

Aggregate Gradation A ( $D_{50} = 24$  inch in.)

Size (lbs)	Percent Heavier
10	90
450	50
1000	0-10

Aggregate Gradation A ( $D_{50} = 12$  in.)

Size (lbs)	Percent Heavier
5	85-100
50	50-70
100	5-15
400	0

## **PART 3 - EXECUTION**

### **3.1 SEQUENCE OF WORK**

- A. The Contractor will perform all operations in sequence specified in Section 011000 – “Summary of Work” Paragraph 1.3 (Work Sequence).

### **3.2 PREPARATION**

- A. Protect and maintain erosion and sedimentation controls during earth-moving operations.
- B. Do not place materials on frozen ground.

### **3.3 EXPLOSIVES**

- A. Explosives: Do not use explosives.

### **3.4 EXCAVATION, GENERAL**

- A. Excavation shall be performed to the lines and grades indicated and specified. Care shall be exercised not to excavate below the grades shown. Excess excavation shall be backfilled to grade with approved materials and compacted in accordance with the Specifications and Drawings at no additional cost to the Owner.
- B. Incidental coal waste found in the elevations and grades, shall be limed, and buried a minimum of six (6') feet below final grade or as directed by the Owner's Representative.

### **3.5 SUBGRADE INSPECTION**

- A. Notify Engineer when excavations have reached required subgrade.
- B. If Engineer determines that unsatisfactory soil is present, including channel sand or gravel deposits, or unstable mine spoil or coal waste, continue excavation and replace with compacted fill material composed of satisfactory materials as directed.
- C. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

### **3.6 COVER MATERIAL STRIPPING, STOCKPILING, AND REDISTRIBUTION**

- A. Remove surface vegetation before stripping topsoil.
- B. Prior to temporary stockpiling or final distribution, stripped cover material shall be free of non-soil materials, including gravel, cobbles, and boulders, woody debris, trash, man-made waste materials, and other deleterious materials.
- C. Cover material shall be stripped prior to conducting grading operations. Contractor shall salvage additional cover material if present at greater depths with approval of

Engineer or Resident Project Representative. Cover material shall either be temporarily stockpiled or redistributed in areas requiring cover material as final cover within property limits as designated on the Drawings.

### 3.7 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
  - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.
  - 2. Install erosion control materials on the downslopes of soil stockpile areas.
- B. Stockpiled cover material shall be placed in a stable area and protected from wind and water erosion, unnecessary compaction, and contaminants.

### 3.8 EARTHEN FILL

- A. Construct fill to the elevations and grades as shown in the Drawings and applicable specifications.
- B. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 5 horizontal so fill material will bond with existing material in areas except where otherwise specified.
- C. Place and compact fill material in layers to required elevations as indicated by project drawings.
- D. Mixing of earthen materials from two or more sources is anticipated to complete the project work.
- E. Place soil fill on subgrades free of mud, frost, snow, or ice. Do not place snow, ice, or frozen materials in fill.
- F. The maximum allowable content of rock fragments with a diameter greater than four (4") inches allowed in the upper twelve (12") inches of the final grade is fifteen (15%) percent. Rocks larger than four (4") inches in diameter are **not allowed** in the upper four (4") inches of fill. Rocks shall be buried or placed in windrows or piles along the site periphery as directed by the Resident Project Representative.
- G. Final subgrade to receive cover material must be approved by the Owner's Representative prior to incorporation of Ag Lime.

### 3.9 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place fill soil materials in uniform, horizontal layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment.
- B. Compaction of fill soil materials shall be to the following limits:

1. All fill material shall be compacted by four (4) or five (5) uniform passes by a tracked dozer or equivalent machine.
2. The final graded surface shall be lightly scarified prior to topsoil, seeding, and mulching.

### **3.10 GRADING**

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to indicated lines, elevations, and cross sections.
- B. The finished grades shall be at final plan grade elevations plus or minus three-tenths (0.3) feet or approved by Engineer.
- C. The transition between the graded areas and the undisturbed areas shall be graded to minimize abrupt slope changes and the possibility of erosion.
- D. Degree of finish shall be that ordinarily obtained from blade grader operations and shall be accomplished and maintained so that no ponding of surface water occurs.
- E. Provide rounded transitions at top and bottom of banks and at other breaks in grade and carry final grade contours to existing contours such that there is a smooth transition with no ponding.
- F. The Contractor shall limit the amount of compaction on the upper twenty-four (24") inches of surface. Equipment traffic shall be kept to a minimum over areas that have reached final grade.
- G. Finish-grade all ditches and swales to drain readily as shown in the Plan Drawings and applicable Specifications.

### **3.11 PROTECTION**

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
  1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.
- C. Where settling occurs before Project warranty period elapses, remove finished cover material, seeding, and other plantings, backfill with additional cover material, compact, and reconstruct surfacing.
  1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

### 3.12 AG LIME APPLICATION:

#### A. Gob/Coal Waste

1. The Contractor shall evenly apply and incorporate Ag lime to all areas of gob/coal waste depicted on the drawings.
2. For areas where gob/coal waste is being transported and placed as subgrade fill on Site 2, the following requirements apply.
  - a) The Contractor shall incorporate agricultural lime into each twelve-inch lift by deep ripping with a track mounted ripper or other approved method, as directed by the Engineer. Continue the incorporation and manipulation process until the agricultural lime is thoroughly mixed before placement of the next twelve-inch lift.
  - b) For each lift, Ag lime shall be spread at a rate of 42,000 lbs ENM (Effective Neutralizing Material) per acre by using a mechanical spreading device that is specifically designed for the spreading of lime.
3. For areas where gob/coal waste remain at the surface at Site 3 following transport of material to Site 2, the following requirements apply.
  - a) The Contractor shall incorporate agricultural lime into the upper twelve (12) inches of the gob/coal waste subgrade by deep ripping with a track mounted ripper or other approved method, as directed by the Engineer. Continue the incorporation and manipulation process until the agricultural lime is thoroughly mixed within the upper twelve (12) inches of the material to be treated, as directed by the Engineer.
  - b) Ag lime shall be spread at a rate of 42,000 lbs ENM (Effective Neutralizing Material) per acre by using a mechanical spreading device that is specifically designed for the spreading of lime.
  - c) Incorporation by deep ripping or other approved methods shall consist of at least three (3) passes, with each pass being on an approximate sixty (60) degree bias of the previous pass.
  - d) Ripping shanks shall be set no wider than thirty-six (36) inches apart or as directed by the Engineer.
  - e) The Contractor shall incorporate Ag lime as described within twenty-four (24) hours of application. If, due to heavy rainfall, substantial washing of the lime occurs prior to incorporation, the Contractor will be required to supply and reapply Ag lime to the affected areas at no additional cost to the Owner.
  - f) The Contractor shall obtain approval of the Engineer prior to application of Ag lime. The Engineer reserves the right to prohibit lime application due to excess soil moisture conditions, high winds, excessive rainfall, or frozen ground conditions.
  - g) The Contractor shall obtain approval of the Engineer prior to application of final cover.

#### B. Final Graded Surfaces

1. The Contractor shall evenly apply and incorporate Ag lime to areas that have attained final grade as designated by the Engineer.
2. Areas of Ag lime application shall be documented on Record Drawings at an accuracy acceptable to the Engineer.
3. Ag lime shall be spread at the rate of 2,000 pounds ENM (Effective Neutralizing Material) per acre by using a mechanical spreading device that is specifically designed for the spreading of lime.
4. The Contractor shall incorporate agricultural lime into the upper twelve (12) inches of final cover material by deep ripping with a track mounted ripper or other approved method, as directed by the Engineer. Continue the incorporation and manipulation process until the agricultural lime is thoroughly mixed within the upper twelve (12) inches of the material to be treated, as directed by the Engineer.
  - a) The Contractor shall complete the incorporation of Ag lime prior to completing additional work related to cover material and seeding (Section 329200).
  - b) Incorporation by deep ripping or other approved methods shall consist of at least two (2) passes, with each pass being on an approximate sixty (60) degree bias of the previous pass.
  - c) Ripping shanks shall be set no wider than thirty-six (36) inches apart or as directed by the Engineer.
  - d) If, due to heavy rainfall, substantial washing of the lime occurs prior to incorporation, the Contractor will be required to supply and reapply Ag lime to the affected areas at no additional cost to the Owner.
  - e) The Contractor shall incorporate Ag lime as described within twenty-four (24) hours of application. The Contractor shall obtain approval of the Engineer prior to application of Ag lime. The Engineer reserves the right to prohibit lime application due to excess soil moisture conditions, high winds, excessive rainfall, or frozen ground conditions.

### **3.13 DISPOSAL OF SURPLUS AND WASTE MATERIALS**

- A. Remove waste materials, including trash, and debris, and legally dispose of them off project property.

### **3.14 SURFACE WATER CONTROL**

- A. The Contractor is responsible for control of grading around excavations to prevent surface water from flowing and ponding into excavation areas.
- B. Runoff from the site may not exceed those limits included in the NPDES permit (See Appendix 1 of these Specifications).
- C. The contractor is liable for damage outside the construction limits for this project that is due to the Contractor's operations, including sedimentation caused by construction.

- D. Drain as required to continually maintain excavation and trenches free of water or mud from a source and discharge to approved drains or channels.
- E. Remove sub-grade materials rendered unsuitable by excessive wetting and replace with approved backfill material.
- F. Should the contractor allow water to impound in contaminated areas, subsequent discharge shall fall under the NPDES permit's Special Conditions contained in Appendix 1 and shall be performed at no additional cost to the Owner.

### **3.15 ROCK INSTALLATION**

- A. For installation of specific rock types, refer to the Plan Sheets and Plan Sheet details.
- B. Rock shall be placed in a manner that will produce a reasonably uniform well-graded mass of stone with the minimum practicable percentage of voids.
- C. The larger stones shall be well distributed. Material shall be placed and distributed such that there will be no objectionable accumulations of either the larger or smaller sizes of stone.
- D. The rock shall be delivered and placed in a manner that will ensure the rock shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks and spalls filling the voids between the larger rocks. Rock shall be placed in a manner to prevent damage to existing structures. Hand placing will be required as necessary to prevent damage to any new and existing structures.
- E. The sub-grade surfaces on which the rock is to be placed shall be cut and graded to the lines and grades shown on the Drawings. The surface to which the rock is to be placed shall be reasonably smooth and free of mounds, dips, or windrows.
- F. Side slopes for rock check dams and cross vanes should be the natural angle of repose, which approximates 1.5 feet (ft.) horizontal to 1 ft. vertical.

**END OF SECTION 312000**

## DIVISION 31 - EARTHWORK

### SECTION 312319 – DEWATERING

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS:

- A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 01 Specifications sections, apply to this Section.
- B. Related Sections:
  - 1. Section 312000 - "Earth Moving - General" for excavating, backfilling, site grading, and controlling surface-water runoff and ponding.

##### 1.2 SUMMARY

- A. Section Includes:
  - 1. Construction dewatering includes necessary control and disposal of impounded water, groundwater, and stormwater runoff as needed during construction.
  - 2. Dewatering is expected to include the lowering of the existing impounded water surface as deemed necessary by the Contractor to perform grading and related construction safely and expeditiously. It may also include intercepting seepage which may be encountered during grading and excavation.
  - 3. Other related documents:
    - a. Current Missouri State Operating Permit #MOG050000 issued to MO DNR Land Reclamation Program.
      - i. This permit authorizes only wastewater, including stormwater, discharges under the Missouri Clean Water Law and National Pollutant Discharge Elimination System.
      - ii. A copy of the current Missouri State Operating Permit #MOG050000 is provided as Appendix 1.

##### 1.3 SUBMITTALS

- A. Dewatering Plan:
  - 1. Include written plan for dewatering operations, including sequence of placement coordinated with excavation shoring and bracings and control procedures to be adopted if dewatering problems arise.

## **1.4 INFORMATIONAL SUBMITTALS**

- A. Field Quality-Control Submittals:
  - 1. Field quality-control reports.
    - a. Water sample test results analyzed by a qualified, fixed-base analytical laboratory approved in advance by the Owner's Representative.
- B. Qualification Statement for fixed-base analytical laboratory providing water sample test results.
- C. Record Drawings: Identify locations and depths of abandoned-in-place dewatering equipment.
- D. Observation Reports: Observational reports of dewatering system performance while in operation.

## **1.5 FIELD CONDITIONS**

- A. If the contractor determines that dewatering will improve the safety or efficiency of construction, the Contractor shall furnish and install a dewatering system at no additional cost to the Owner's Representative.
- B. Project-Site Information: Test Pit Logs (Appendix 3) have been prepared for this Project and are available for information only.

## **PART 2 - PRODUCTS**

### **2.1 PERFORMANCE REQUIREMENTS**

- A. Contractor to submit a Dewater Plan as specified by this specification.
- B. Onsite materials may be used within the limits of construction to construct temporary dams and berms. Materials such as plastic sheeting, sandbags, and storm sewer pipe may also be used if desired by the Contractor.
- C. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of impoundment water and groundwater and permit excavation and construction to proceed on dry, stable subgrades.
  - 1. Design and install dewatering system.
  - 2. Continuously monitor and maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, prevention of

- flooding in excavation, and prevention of damage to subgrades and permanent structures.
3. Prevent surface water from entering excavations by grading, dikes, or other means.
  4. Accomplish dewatering without damaging existing buildings, structures, and site improvements adjacent to excavation.
  5. Remove dewatering system when no longer required for construction.
- D. Regulatory Requirements: Comply with water and debris-disposal regulations of authorities having jurisdiction.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- A. Protect existing maintenance roads, utilities, structures, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations.
  1. Prevent surface water and subsurface or groundwater from entering excavations, from ponding on prepared subgrades, and from flooding site or surrounding area.
  2. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.
- B. Contractor is responsible for investigating and becoming familiar with site conditions that may affect the Work including surface water, potential flooding conditions, level of groundwater and the time of year the work is to be done.
- C. Provide temporary grading to facilitate dewatering and control of surface water.
- D. Protect and maintain temporary erosion and sedimentation controls, which are specified in 015723 - "Temporary Storm Water Pollution Control" during dewatering operations.

### **3.2 INSTALLATION**

- A. Install dewatering system utilizing gravity drainage or pump equipment, standby power and pumps, filters, valves, appurtenances, water disposal, and surface-water controls. Use filters or other means to prevent pumping of fine sands or silts from the subsurface.
- B. Provide flow-control devices as required by authorities having jurisdiction.

- C. Provide standby equipment on-site, installed, and available for immediate operation, to maintain dewatering on a continuous basis if the system becomes inadequate or fails.

### **3.3 OPERATION**

- A. Operate the system continuously until structures have been constructed and fill materials have been placed or until dewatering is no longer required.
- B. Operate system to lower and control surface water and groundwater to permit excavation, construction of structures, and placement of fill materials on dry subgrades. Drain water-bearing strata above and below bottom of foundations and other excavations.
  - 1. Do not permit open sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.
  - 2. Reduce hydrostatic head in water-bearing strata below subgrade elevations of foundations, drains, sewers, and other excavations.
  - 3. Maintain piezometric water level a sufficient depth below bottom of excavations for embankment construction to ensure the safety and stability of the excavation.
- C. Dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water and sediment in a manner that avoids inconvenience to others.
- D. Dispose of water removed by dewatering in accordance with Missouri State Operating Permit #MOG050000.
- E. Remove dewatering system from Project site on completion of dewatering.

### **3.4 FIELD QUALITY CONTROL**

- A. Under no circumstances shall discharges from the impoundment be allowed until the water has been tested and the results have been approved by the Owner's Representative.
- B. Prior to discharging and during discharge from the impoundment, the Contractor will take a water sample and will coordinate with the Owner's Representative to test the water for compliance with NPDES permit parameters in accordance with the Surface Monitoring requirements in Section 312500 - "Erosion and Sediment Control.
- C. If a sample fails to meet the requirements of the NPDES permit, the Contractor shall cease discharge and treat the water until such time as the permit requirements are met. Subsequent sample collection and analysis shall be the responsibility of the Contractor and will be conducted at the direction of the Owner's Representative.

Costs associated with water testing and treatment are the responsibility of the Contractor.

- D. An impoundment affected by construction within project limits that discharges off the project limits will be sampled and tested as per the NPDES parameters. Such sampling costs will be the responsibility of the Contractor unless otherwise determined by the Owner's Representative. Immediately after the impoundment has been lowered to acceptable levels, the Contractor is to take appropriate actions to prevent further accumulation of surface runoff and seepage. The Contractor shall be responsible for the treatment of re-contaminated and impounded water resulting from recharge by surface runoff or seepage at no additional cost to the Owner's Representative.
- E. Samples must be analyzed by a certified, fixed-base analytical laboratory approved in advance by the Owner's Representative and, if the results are within NPDES limitations, discharge must be initiated within seventy-two (72) hours of sampling. If a rainfall event occurs during this period, a new sample shall be taken and analyzed at the Contractor's expense.
- F. During Box Culvert and Channel construction, the Contractor shall take necessary precautions and actions to prevent water from overtopping the structure during precipitation events.
- G. Prepare reports of data collected. Data collected will include, but not limited to, laboratory analyses; daily, weekly, and monthly flow analysis. The requirements of Section 312500 "Erosion and Sediment Control" take precedence over this specification.

### **3.5 PROTECTION**

- A. Protect and maintain the dewatering system during dewatering operations.
- B. The Contractor shall promptly repair damages to adjacent downstream facilities and property caused by dewatering at no additional expense to the owner.
- C. The Contractor is responsible for damage to downstream aquatic life, livestock, and other public and private property resulting from non-compliance with the requirements of the NPDES Permit for the site. The Contractor is also responsible for fines levied by the Missouri Department of Natural Resources associated with such damages.

**END OF SECTION 312319**

## **DIVISION 32 – EXTERIOR IMPROVEMENTS**

### **SECTION 323100 – FENCING AND GATES**

#### **PART 1 – GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawing and general provisions of the Contract, including General and Supplemental Conditions and Division 01 Specifications apply to this Section.

##### **1.2 SUMMARY**

- A. Section Includes:
  - 1. Furnishing and installing fences, and gates as shown on the Plans and as necessary to accomplish this work task.

##### **1.3 MEASUREMENT AND PAYMENT**

- A. Work in this section required by the Specifications or Plans shall be included in the Contractor's Base Bid Lump sum contract price. The Base Bid Lump Sum shall include labor, materials, equipment, tools, and incidentals necessary to complete the work. However, should the actual quantity of Barb Wire Fence or Gates differentiate from that required by the Plans or Specification (more or less), the following shall apply to payment:
  - 1. Payment for Barb Wire Fence and gates shall be made at the Unit Prices established in the Contractor's Bid Proposal Form.
  - 2. Quantities of Barb Wire Fence shall be measured by the linear foot installed.
  - 3. Quantities of Gates shall be measured by per unit cost of each gate installed.
  - 4. The Unit Prices established by the Contractor's Bid Proposal Form shall include cost of labor, materials, tools, equipment, profit, and incidentals necessary to complete the work.

##### **1.4 DEFINITIONS (NOT APPLICABLE)**

##### **1.5 SUBMITTALS**

- A. Supplier certification that fencing and incidentals meet the Specifications.
- B. Shipping tickets of materials delivered to the site.
- C. Certificates and shipping tickets shall be provided to the Owner's Representative.
- D. Materials shall be delivered to the site undamaged. Materials shall be handled and stored according to the manufacturer's instructions and as required to prevent damage. Damaged materials shall be replaced by the Contractor at no expense to the Owner.

##### **1.6 QUALITY ASSURANCE**

- A. Applicable Standards:
  - 1. American Association of State Highway and Transportation Officials (AASHTO)
  - 2. American Wood-Preservers' Association (AWPA)
  - 3. Missouri Department of Transportation (MoDOT)

## **1.7 PROJECT CONDITIONS**

- A. Installation of some fencing will be adjacent to traveled roadways. Contractor shall provide for the safety of its crews and the public.
- B. Installation of fencing may be impacted by the location of buried utilities. The contractor shall locate public and private utilities prior to initiating work.
- C. In the course of the work, the contractor may need to, or may opt to, remove existing fencing that's interferes with the work. Do not relocate or dismantle until approval is obtained from the Owner's Representative. Where existing fences are removed, whether required by the work or for Contractor's convenience, field establish such reference points and ties as are necessary to ensure replacement fencing will follow the same alignment as the existing fencing. Contractor shall maintain existing and new fences on the project until completion of the work.
- D. The location of fencing shall be established by a licensed surveyor to ensure that new fencing is located outside of the existing road right-of-way.
- E. Existing fencing which is removed, but is not called out on the Plans to be replaced with new fencing; shall be replaced in kind with like or acceptable similar material and at no additional cost to the Owner.
- F. In the event fencing is installed during or after seeding work, exercise care not to damage the seedbed area. In the event of damage, redress, reseed and remulch as applicable.
- G. Temporary fencing and gates shall be installed at locations shown on the Drawings to keep livestock out of project work areas.

## **PART 2 – PRODUCTS**

### **2.1 GENERAL**

- A. Materials that are “standard products” of a manufacturer may be used when such products conform to the Specifications and/or are approved by the Owners Representative.

### **2.2 BARBED WIRE FENCE**

- A. Barbed wire shall be galvanized; zinc-coated meeting ASTM A121 requirements, Class 3, or aluminum coated meeting ASTM A585 requirements, five strand 12.5

gage steel wire with 4-point barbs at 5-inch centers.

- B. Smooth wire shall be galvanized, zinc-coated meeting ASTM A121 requirements, Class 2, or aluminum coated meeting ASTM A585 requirements, two 12-1/2 gage steel wire.
- C. Wood posts and wood braces used for fencing shall comply with the latest requirements of AWWA Standard C14 for ground contact. Wood posts shall be pressure-treated with waterborne preservatives in accordance with AWWA Standard C2, with a retention requirement of 0.40 pounds per cubic foot (pcf) for soil contact use under normal conditions and 60 pcf in wet or boggy conditions. Previously unused, new or seasoned hedge or cedar posts may be approved by the Owner's Representative provided the posts have solid ends and are of comparable dimensions as those specified herein or as shown on the Drawings.
- D. Vertical posts, except steel line posts, shall be made of wood and shall be 8 feet long. Gate posts, end posts and corner posts shall be minimum 8 inches in diameter. For minimum diameter of other wood posts, refer to Drawings.
- E. Steel line posts shall be "T" section high carbon steel; 1-3/8 inch by 1-3/8 inch by 7/64 inch by 6 1/2 feet long (barbed wire or smooth wire) as indicated on the Drawings.
- F. Horizontal braces shall be steel or wood, approximately 7 feet long. If steel is used, braces shall be 3-inch diameter, Schedule 40 galvanized steel. If wood is used, braces shall be 4" in diameter and shall comply with the requirements of Section D. above.
- G. Brace wire shall be 9-gauge galvanized steel wire conforming to ASTM A116, Class 2, or aluminum coated.
- H. Nails, staples and clips shall be galvanized.

### **2.3 GATES**

- A. Gates shall be 2-inch rolled steel tubing, 16-gauge, shop painted at 16 foot length or as indicated on the Drawings.
- B. Mounting hardware, including hinges and latches, shall be as recommended by the gate manufacturer. Provide chain of suitable length to secure gate if not provided by manufacturer.

### **2.4 BACKFILL**

- A. Backfill augered holes for fence posts with the following materials:
  - 1. Concrete, where required, shall be packaged mix or ready mix as approved by Resident Project Representative.
  - 2. Excavated material shall be tamped in lifts with any excess evenly spread around the post base. Clean stone or concrete specified above may be used wherever material is allowed.

## **PART 3 - EXECUTION**

### **3.1 SAFETY**

- A. Provide two orange warning signs and/or cones in both directions of traffic to warn motorists when installing fencing along roads or at other time work is being conducted along roads.

### **3.2 SITE CONDITIONS**

- A. Proper support of the posts is an important aspect for the long-term integrity and performance of field fencing. Lateral soil support shall be required around posts.
- B. Prior to installation of posts, grade the area to provide a zone where suitable lateral support will be achieved around each post. This may require cutting and/or filling. Excess cut material shall be incorporated into the general grading of the appropriate site. Fill material required shall be obtained from the general grading of the appropriate site.
- C. The graded zone for the posts shall also be brought to proper elevation, prior to setting the posts. Grade the zone to minimize excessively steep ridges and valleys between the posts, and to achieve a functional and aesthetically pleasing final product.
- D. Lateral soil support shall be considered suitable when the soil mass into which each post is to be installed is firm, stable and solid, and when the final grades around the post will provide the following conditions:
  - 1. Field Fence - Wooden Post: Two feet minimum clear zone of essentially level soil around the entire circumference of the post, prior to a drop-off slope.
  - 2. Field Fence - Steel Line Post: One foot minimum clear zone of essentially level soil around the entire circumference of the post, prior to a steep drop-off slope, except that individual post may have a reduced zone of only 6 inches provided no two adjacent line posts have such a reduced zone.

### **3.3 FENCE INSTALLATION**

- A. New fence shall be installed to conform to the limits, alignment and finish grade indicated on the Drawings. The fence shall consist of five barbed wires with the bottom wire having an initial wire located 12 inches above the ground with the remaining wire evenly spaced above that shown on plans.
- B. Terminal posts shall be set prior to setting line posts. Line posts shall be set equal distances apart, but not more than 12 feet apart. Posts shall be plumb. Corner and terminal posts shall be installed wherever the change in fence alignment exceeds 10 degrees.
- C. Steel line posts shall be set by driving the post into undisturbed ground.

- D. Vertical wood posts shall be set by driving into undisturbed ground or set into a 15-inch diameter by 3-3/4 foot deep augered hole. If driven, predrilling beyond a depth of 12 inches will not be allowed. At small depressions and waterways, and if required by the Owners Representative, wood posts shall be set in a 15-inch diameter by 3-1/2 foot deep augered hole and installed as shown on the fencing detail in the Drawings.
- E. If posts are driven, no backfill is required. Posts set in an augered hole shall be properly tamped in place to ensure stability.
- F. Braces shall be provided for corner posts, end posts, gate posts, changes in slope exceeding 15 degrees, points of connection to existing fence, and pull post assemblies. Corner posts shall be braced in both directions.
- G. Brace wires consist of two complete loops of wire twisted together until tight, both above and below the brace post.
- H. Barbed wire shall be drawn taut with an approved mechanical device and securely fastened to every post. The wire shall be looped around corner and terminal posts and fastened with sufficient staples to anchor the wire securely.

### **3.4 GATE INSTALLATION**

- A. Tubular gates shall be provided and installed in locations indicated on the Drawings. Gates shall be hinged to swing 90 degrees from closed to open, complete with frames, latches, stops, keepers, hinges, braces and terminal posts. Gates shall be hung with one hinge pointing up and one pointing down to help prevent the gate from being lifted off the hinges.

**END OF SECTION 323100**

## **DIVISION 32 – EXTERIOR IMPROVEMENTS**

### **SECTION 329200 - SEEDING**

#### **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.
- B. Related Sections:
  - 1. Section 312000 “Earth Moving – General” for site stripping, stockpiling topsoil, and removal of above- and below-grade improvements and utilities.

##### **1.2 SUMMARY**

- A. Summary includes:
  - 1. Work shall include seedbed preparation, fertilizing, seeding, and mulching of areas disturbed by construction operations. The Contractor shall seed disturbed areas according to these Specifications. Should the Contractor disturb areas outside of the construction limits, such areas shall be repaired and reseeded in accordance with these Specifications at no additional cost to the Owner.
  - 2. All seeding activities shall not occur over the weekends or on Federal or State recognized holidays without prior approval in writing by the Owner’s Representative. All seeding activities shall be completed during daylight hours.

##### **1.3 MEASUREMENT AND PAYMENT**

- A. Work in this section required by the Specifications or Plans shall be included in the Contractor’s Base Bid Lump sum contract price. The Base Bid Lump Sum shall include labor, materials, equipment, tools, and incidentals necessary to complete the work. However, should the actual quantity of fertilizer differentiate from that required by the Plans or Specification (more or less), the following shall apply to payment:
  - 1. Payment for fertilizer shall be made at the Unit Prices established in the Contractor’s Bid Proposal Form.
    - a. Quantities of fertilizer shall be measured to the nearest pound. No payment will be made for fertilizer until seed operations have been completed in strict conformance with the Specifications.

- b. The Unit Price established by the Contractor's Bid Proposal Form shall include cost of all labor, materials, tools, equipment, profit, and incidentals necessary to complete the work.

## 1.4 QUALITY ASSURANCE

### A. Applicable Standards:

1. Federal Seed Act: Rules and Regulations.
2. Field and Laboratory Methods Applicable to Overburden and Mine Soils, A. A. Sobek et. al., PB/280 495 EPA-600/2-78/054, March 1978 or current updated edition.
3. Soil Testing in Missouri: A Guide for Conducting Soil Tests in Missouri. Missouri Cooperative Extension Service publication EC923, revised 8/83 or current updated edition.
4. Missouri Seed Law.

### B. Seed Labeling and Certification:

1. Ship all seed and other materials with certificates of inspection required by governing authorities. Comply with regulations applicable to such materials.

### C. Field Quality Control

1. The Owner's Representative shall ensure that the Contractor follows seeding specifications and that seed mixes are planted in appropriate areas. The Owner's Representative shall.
  - a. Inspect and remove company seed tickets from seed bags to ensure quantity and quality of seed is adequate and that the proper mixture and species are planted. Seed without bag tags or company certification **shall not** be planted and will be replaced at no cost to the Owner.
  - b. Ensure soil amendments meet specification for quantity and quality. **No payment** shall be made for amendments or products that do not meet specifications.
  - c. Ensure specified seed methods are followed. **No payment** shall be made for seed that does not meet specifications.
  - d. Ensure areas are planted and seeded with the appropriate seed mixtures. **No payment** shall be made for seeding work that does not meet specifications.
  - e. Ensure rutted or damaged areas are smoothed, repaired, and seeded. **No payment** shall be made until all such areas are repaired.

- f. Ensure that the entire site is mulched according to specifications. **No payment** shall be made if mulch is not applied as specified.
2. If the Contractor does not meet specified methods or use specified materials, the Owner's Representative will take appropriate action. Seeding methods that do not meet specifications will not be paid for by the Owner's Representative until such work is corrected and at no additional cost to the Owner or time extension to the contract.
3. If the work or materials do not meet specification, the Contractor shall be responsible to replace material, work or make repairs at no cost to the Owner or time extension to the contract.

## 1.5 PROJECT CONDITIONS

### A. JOB CONDITIONS

1. Saturated ground conditions may prevail in some low-lying areas. Should ground conditions be warranted, and to fulfill the Specifications set forth in this section, the Contractor shall be responsible for utilizing appropriate low ground pressure equipment at no additional expense to the Owner's Representative. For the purposes of this section, appropriate low ground pressure equipment is defined as having a maximum load pressure of 4.3 (pounds) lbs. per square inch.
2. The Contractor shall perform seeding only after preceding work affecting ground surface is completed, has been approved by the Owner's representative, and the initial soil amendments have been incorporated.
3. Whenever conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions or obstructions, the Contractor shall notify the Owner's Representative prior to seeding for approval to proceed.

## 1.6 SUBMITTALS

- A. Submit as specified in Division 1.
- B. Includes, but is not limited to the following:
  1. Seed and fertilizer shall be accompanied by certificates from vendors certifying they meet the requirements of these Specifications.
  2. Receipts proving quantity of materials used.
  3. Receipts, tickets, and certificates for the materials listed above or elsewhere in these Specifications must be submitted to the Owner's Representative prior to installation.

## PART 2 – PRODUCTS

### 2.1 SEED

- A. All Seed must comply with the requirements of the Missouri Seed Law, contain no seed of any plant on the Federal noxious weed list, and contain no seed of any weed not known to exist in Missouri.
- B. Seed, which has become wet, moldy, or otherwise damaged in transit or in storage, will not be acceptable and shall be removed from the project site.
- C. Provide fresh, clean new-crop seed complying with rate of application as stated herein. Seed mixes are to be applied to those areas so designated on the Plans or as otherwise directed by the Owner’s Representative. Acceptable seed mixtures and rates of application are as follows:

#### Seed Mixture #1 – Cool Seasons – Site 1, 2, 4

<u>COOL SEASON GRASS MIX</u>	<u>POUNDS OF PLS*/ ACRE</u>	<u>VARIETY</u>
Redtop	3.0	
Timothy	4.0	
Smooth Brome	8.0	
Orchard Grass	10.0	
Ladino Clover	1.0	
Red Clover	2.0	
Crimson Clover	1.0	
Alfalfa ( <i>Medicago sativa</i> )	1.0	
Perennial Ryegrass	12.0	
Tall Fescue	10.0	
Korean Lespedeza ( <i>Lespedeza striata</i> )	3.0	
Partridge Pea	2.0	
Pearl Millet/Wheat	*See note below	
<p>+20 lbs (not PLS) of pearl millet will be included in the mix for planting between March 1<sup>st</sup> and June 15<sup>th</sup></p> <p>+20 lbs (not PLS) of wheat will be included in the mix for planting between August 1<sup>st</sup> and October 15<sup>th</sup></p> <p>This Seed Mixture shall be planted between March 1<sup>st</sup> and June 15<sup>th</sup>, or between August 1<sup>st</sup> and October 15<sup>th</sup> unless otherwise directed by the Owner’s Representative.</p> <p>*Pounds of PLS/Acre is the seeding application rate in terms of Pure Live Seed per acre.</p>		

**Seed Mixture #2 – Warm Seasons – Site 3 ONLY**

<u>WARM SEASON GRASS MIX</u>	<u>POUNDS OF PLS*/ ACRE</u>	<u>VARIETY</u>
Big Bluestem	7.0	Aldous
Little Bluestem	10.0	Kaw
Sideoats Grama	5.0	
Eastern Gama Grass	8.0	
Indian Grass	7.0	Osage
Switchgrass	10.0	
Illinois Bundleflower	2.0	
Red Clover	2.0	
Partridge Pea	2.0	
Purple Milkweed	0.3	
Butterfly Milkweed	0.3	
Purple Prairie Clover	0.3	
Lanceleaf Coreopsis	0.3	
Prairie Blazing Star	0.3	
Purple Coneflower	0.3	
Oats	25 lbs (Not PLS)	
This Seed Mixture shall be planted between January 1 <sup>st</sup> and May 15 <sup>th</sup> unless otherwise directed by the Owner's Representative.		
*Pounds of PLS/Acre is the seeding application rate in terms of Pure Live Seed per acre.		

**2.2 INOCULANTS**

- A. Leguminous seed shall be inoculated or treated with the proper cultures for the particular legume to be sown.
- B. The inoculant for treating leguminous seed shall be a pure culture of nitrogen-fixing bacteria. The containers of inoculant shall be plainly marked with the expiration date for use and the manufacturer's directions for inoculating seed.
- C. The process of inoculation shall be in accordance with the manufacturer's direction for the particular species of legume. The time lapse for sowing the seed following inoculations shall not exceed 24 hours.
- D. A legume shall be inoculated separately with sufficient inoculant to cover the seed before mixing with other seeds. A commercial sticker shall be used to ensure the inoculant adheres to the seed.

- E. Inoculants shall be applied at double the manufacturer's recommendation.

### **2.3 FERTILIZER**

- A. Fertilizer shall be a standard commercial product which when applied at the proper rate will supply the quantity of actual nitrogen (N), actual phosphorus (P) and actual soluble potassium (K).

### **2.4 MULCH**

- A. Shall consist of straw of wheat or oats.
- B. The mulch shall be free of prohibited weed seed and other noxious and undesirable seed and shall not be in an advanced stage of decomposition.

## PART 3 - EXECUTION:

### 3.1 SITE CONDITIONS

- A. Seeding schedule: Seeding shall be performed only during the specific time period as stated hereafter:
  - 1. Seed mixtures shall be seeded according to dates listed in 329200, Section 2.1.
- B. When conditions are such by reason of drought, excessive moisture, frozen soil or when in the opinion of the Owner's Representative less than satisfactory results are likely to be obtained, seeding work shall be halted as directed by the Owner's Representative and resumed only when conditions are favorable or when approved alternative or corrective measures and procedures have been enacted.
- C. **The Contractor is to proceed with complete seeding work as rapidly as portions of the site become available, working within seasonal limitations.** In any event, seeding shall be accomplished before the prepared seedbed becomes eroded, crusted over, or dried out and shall not be conducted when the ground is frozen, or snow covered.

### 3.2 SEEDBED PREPARATION

- A. The Contractor shall grade areas to be seeded to a smooth, even surface of a loose, uniformly fine texture.
- B. After areas required to be seeded have been brought to final grade and treated with Ag lime where required in accordance with Section 312000.3.11, the soil shall be tilled to a depth of six (6) inches by discing or other methods approved by the Owner's Representative until the condition of the seedbed is acceptable to the Owner's Representative.
  - 1. Undulations or irregularities in the surface shall be leveled and existing grass, sod, weeds, and seeds must be tilled under.
  - 2. Restore prepared areas as directed by the Owner's Representative if eroded or otherwise disturbed after final grading and prior to seeding.
  - 3. Seedbed shall be free of growth, rocks, dirt clods or other obstructions exceeding four (4) inches in diameter or that otherwise may interfere with subsequent seeding or maintenance operations.

### 3.3 FERTILIZATION

- A. Rate of Application: Seeded areas shall receive a fertilizer rate of sixty (60) pounds of actual nitrogen per acre, one hundred fifty (150) pounds of total actual phosphorous per acre and two hundred (200) pounds of actual soluble potassium per acre or as otherwise directed by the Resident Project Representative.
- B. Incorporation:
  - 1. Initial fertilizer application shall be distributed uniformly over the areas to be seeded at the rates written in these Specifications.
  - 2. Incorporate thoroughly into the soil to a depth of six (6) inches by discing or other methods approved by the Owner's Representative within 24 hours of application.
  - 3. Fertilizer shall be applied and incorporated no more than two (2) weeks prior to the seeding operation for any specific area being planted.

### 3.4 SEEDING

- A. Seed shall be applied at the rates previously described in this section.
- B. Seed Mix 1 and 2.
  - 1. Drill seed following the contour using a mechanical power drawn seed drill that places the seed at least ¼ inch (”), but no more than ½” into the soil, or at depths directed by the Owner's Representative. Drill seeding shall be accomplished with drills using a drill width of between seven (7) and nine (9) inches. If inspection during seeding operations or after there is a show of green indicates that areas have been left unplanted, additional seed of the appropriate species and quantity shall be sown as directed by the Owner's Representative at no additional cost to the Owner.
- C. Hydro seeding or hand broadcasting will be allowed in areas not accessible to drills or other equipment. Hand broadcasted must be covered at least ¼” but no more than ½” with soil by means of a harrow and hand rakes or other approved methods. Seeding rates in hydro seeded and hand broadcasted areas shall be double those listed in Section 329200.2.1.
- D. The Contractor shall cultipack the seeded area upon completion of the seeding operation.
- E. The Contractor may use specialized cultipacker seeders for seed incorporation, in which case, the previous requirement for cultipacking may be omitted as a separate operation. The type of cultipacker seeder to be used shall ensure adequate seed depth and placement and shall be subject to the written prior approval of the Owner's Representative.

### 3.5 MULCHING

- A. Application Rate and Method:

1. Except for hydro seeded locations, seeded areas will be protected against erosion by spreading straw mulch after completion of the seeding operations. Mulch shall be spread uniformly to form a continuous blanket not less than 1-1/2 inches or more than 2 inches loose measurement over seeded areas.
  2. Bunching or matting of mulch shall be avoided and corrected by hand methods, if directed by the Owner's Representative.
- B. Anchoring: Straw mulch shall be crimped into the soil by means of a straw crimper manufactured specifically for such purposes.

### **3.6 RECONDITIONING EXISTING AREAS**

- A. Existing areas damaged by the Contractor's operations (e.g., Contractor's storage areas) including storage of materials and equipment, and movement of vehicles, are to be reconditioned. The Contractor is also to recondition existing grass areas where minor regrading is required.
- B. Contractor is to provide fertilizer, seed, Ag lime, and mulch as required for reconditioned areas, as well as new soil as may be required to fill low spots to finished grade, at no additional cost to the Owner's Representative.
- C. The contractor shall rip or chisel all disturbed areas to a depth of twelve (12) inches, unless otherwise directed by the Owner's Representative.
- D. Contractor is to remove diseased and unsatisfactory grass areas. These grasses shall not be buried in the soil at a depth of less than one foot. Contractor shall remove topsoil containing foreign materials resulting from the Contractor's operation including oil drippings, stone, gravel, and other materials as directed by the Owner's Representative.
- E. Where substantial grass remains (but is thin) the Contractor shall mow, rake, aerate (if compacted), fill low spots, remove humps, cultivate, fertilize, re-seed and mulch in accordance with these Specifications.

**END OF SECTION 329200**

## **DIVISION 33 – UTILITIES**

### **334900 – STORM DRAINAGE STRUCTURES**

#### **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.
- B. Related Requirements:
  - 1. Section 311000 - "Site Clearing" for site stripping, grubbing, stripping and stockpiling cover material, and removal of above- and below-grade improvements and utilities.
  - 2. Section 329200 - "Seeding" for finish grading in vegetated areas, including preparing and placing planting soil.
  - 3. Section 312000 – "Earth Moving – General" for grading and construction of the finished grades.

##### **1.2 SUMMARY**

- A. Section includes:
  - 1. Storm drainage structures as described in these specifications and as indicated on the Plans. Items include, but are not limited to:
    - a. Rock gradation, procurement, storage, and handling.
    - b. Sub-grade preparation prior to rock installation.
    - c. Rock installation.
  - 2. Types of structures covered by this specification:
    - a. Check Dams
    - b. Rock Apron
    - c. Rock Riffles
    - d. Rock Base

##### **1.3 UNIT PRICES**

- A. All work in this section required by the Specifications or Plans shall be included in the Contractor's Base Bid Lump Sum contract price. The Base Bid Lump Sum

shall include all labor, materials, equipment, tools, and incidentals necessary to complete the work. However, should the actual quantity of rock vary from that required by these Specifications or the Plans, more or less, the following shall apply to payment:

1. Payment for all rock shall be made at the Unit Prices established in the Contractor's bid Proposal Form.
2. Quantities of rock shall be measured to the nearest ton.
3. The Unit Price established by the Contractor's Bid Proposal Form shall include the cost of all labor, materials, tools, equipment, profit, and incidentals.

#### **1.4 DEFINITIONS (NOT APPLICABLE)**

#### **1.5 SUBMITTALS**

- A. Includes, but are not limited to, the following:
  1. As specified in Division 1.
  2. Certified test reports from a qualified, independent testing laboratory of tests called out in Section 1.6 of this specification.
  3. Weight and/or shipping tickets of materials brought on-site shall be presented to the Owner's Representative.

#### **1.6 QUALITY ASSURANCE**

- A. Applicable Standards:
  1. American Society for Testing and Materials (ASTM).
    - a. ASTM C 127-24: Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate.
  2. Missouri Standard Specifications for Highway Construction, 2024.
- B. Field Quality Control
  1. All materials and workmanship shall be subject to the final inspection of the Resident Project Representative.
  2. The Resident Project Representative will make surveys and spot checks to ensure that plan lines and grades shall conform to the drawings, while on the project. The Contractor will schedule work such that the Resident Project Representative may make the required field tests and surveys. The Contractor will furnish one laborer to assist the Resident Project Representative in spot checking construction layout and grade.

## **1.7 PROJECT CONDITIONS**

### **A. Job Conditions**

1. Storm Drainage Work will generally involve installation of materials on previously graded materials that are prone to erosion. Surface flow of rainwater may be considerable should precipitation occur during construction of storm drainage systems.
2. The Contractor shall use appropriate measures to continuously remove water from excavated trenches and construction area in order to assure proper bedding and installation of the concrete box culvert.
3. If water pumping is required, it shall be the Contractor's responsibility to ensure that all water discharges meet the requirements of the NPDES Permit (see Appendix 1).

## **PART 2 – PRODUCTS**

### **2.1 ALL ROCK**

#### **A. General Requirements**

1. In general, rock provided for this Project shall be clean, sound durable, angular or blocky in shape limestone that is obtained from a DNR permitted quarry. No more than ten (10%) percent of the stone/rock shall have an elongation greater than 3:1, and no stone shall have an elongation greater than 4:1.
2. The stone shall be free from cracks, seams, or other defects that would tend to increase its deterioration from natural causes.
3. The stone shall contain a combined total of not more than ten (10%) percent by weight of earth, sand, shale, and non-durable rock.
4. The minimum bulk-saturated-surface-dry specific gravity of the aggregate determined in accordance with ASTM C-127 shall be 2.55.
5. Size for shot rock shall be well graded, except the maximum and minimum stone size shall be limited as shown on the plans.

### **2.2 ROCK TYPES**

#### **A. One (1") Inch Minus Surface Aggregate**

1. The aggregate shall not contain more than 15 percent deleterious rock and shale. The fraction passing No. 40 sieve shall have a maximum plasticity index of six. Any sand, silt and clay and any deleterious rock and shale shall be uniformly distributed throughout the material.

B. Three (3") Inch Minus Base Aggregate:

1. Type 1 Rock Ditch Liner shall consist of crushed stone with a predominant aggregate size of three (3") inches, a maximum aggregate size of four (4") inches and a gradation such that no more than fifteen (15%) percent will be less than one (1") inch. The aggregate for Ditch Liner shall be clean, sound, durable limestone obtained from a DNR permitted quarry.

C. Shot Rock

1. Poorly sorted rock materials (shot rock) shall be reasonably well graded by weight and poorly sorted by size, within the limits stated below or on the Drawings to meet the following requirements:

Aggregate Gradation A (D<sub>50</sub> = 24 inch in.)

Size (lbs)	Percent Heavier
10	90
450	50
1000	0-10

Aggregate Gradation A (D<sub>50</sub> = 12 in.)

Size (lbs)	Percent Heavier
5	85-100
50	50-70
100	5-15
400	0

### PART 3 – EXECUTION

#### 3.1 ROCK INSTALLATION

- A. For installation of specific rock types, refer to the Plan Sheets and Plan Sheet details.
- B. Rock shall be placed in a manner that will produce a reasonably uniform well-graded mass of stone with the minimum practicable percentage of voids.
- C. The larger stones shall be well distributed. Material shall be placed and distributed such that there will be no objectionable accumulations of either the larger or smaller sizes of stone.
- D. The rock shall be delivered and placed in a manner that will ensure the rock shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks and spalls filling the voids between

the larger rocks. Rock shall be placed in a manner to prevent damage to existing structures. Hand placing will be required as necessary to prevent damage to any new and existing structures.

- E. The sub-grade surfaces on which the rock is to be placed shall be cut and graded to the lines and grades shown on the Drawings. The surface to which the rock is to be placed shall be reasonably smooth and free of mounds, dips, or windrows.
- F. Side slopes for rock check dams and cross vanes should be the natural angle of repose, which approximates 1.5 feet (ft.) horizontal to 1 ft. vertical.

**END OF SECTION 334900**

## **DIVISION 35 – EARTHEN EMBANKMENT CONSTRUCTION AND EQUIPMENT**

### **357313 – EARTHEN EMBANKMENTS**

#### **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.
- B. Related Requirements:
  - 1. Section 312000 – “Earth Moving – General” for excavating, backfilling, site grading, and controlling surface-water runoff and ponding.
  - 2. Section 312319 – “Dewatering” for control and disposal of impounded water, groundwater, and stormwater runoff.
  - 3. Section 334900 – “Storm Drainage Structures” for descriptions of different structures such as Check Dams, Rock Aprons, and Rock Riffles.

##### **1.2 SUMMARY**

- A. This work consists of grading, shaping, and compacting the area in accordance with the Plans and Specifications.
- B. In preparing the foundation site for earthen embankments, the Contractor shall remove topsoil, organic material, rocks, boulders, coal waste, and any other deleterious materials down to the bottom of the excavation as shown on the Plan Sheets. Materials removed shall be stockpiled for later reuse, or disposed of properly, as appropriate for the material.
- C. When the work is being conducted on earthen embankments, it shall be the Contractor’s responsibility to use reasonable prudence and care to ensure the integrity of the embankments and to prevent failure of said structures. Once work is initiated on earthen embankments, it shall be continued, without interruption, during normal work times until it is completed.
- D. Any time that the Contractor is working on a embankment the Contractor shall prevent water from overtopping the structure during precipitation events.
- E. The Contractor is referred to the NPDES permit in Appendix 1. It shall be the Contractor’s responsibility to ensure that water discharges meet the requirements of the NPDES Permit.

##### **1.3 UNIT PRICES**

- A. All work in this section required by the Specifications or Plans shall be included in the Contractor’s Base Bid Lump Sum contract price. The Base Bid Lump Sum shall include all labor, materials, equipment, tools, and incidentals necessary to complete the

work. However, should the actual quantity of rock vary from that required by these Specifications or the Plans, more or less, the following shall apply to payment:

1. Payment for all rock shall be made at the Unit Prices established in the Contractor's bid Proposal Form.
2. Quantities of rock shall be measured to the nearest ton.
3. The Unit Price established by the Contractor's Bid Proposal Form shall include the cost of all labor, materials, tools, equipment, profit, and incidentals.

## **1.4 DEFINITIONS**

### **A. MINE SPOIL**

1. The material to be handled includes mine spoil. Mine spoil is unconsolidated and unsorted earth and rock material excavated by the surface mining process while removing coal. The mine spoil generally represents overburden materials excavated below the surface. The Contractor shall be responsible to grade the spoil piles to the contours shown on the Drawings. Mine spoil shall comprise the final grade. The Contractor shall apply and incorporate amendments per Section 312000 and Section 329200.

### **B. ORGANIC MATERIALS**

1. Organic materials include any material containing organic matter such as vegetation, sod, brush, woody debris, roots, manure, rotted straw, hay or other biodegradable material unsuitable for embankment construction. Organic materials may not be used in the construction of the earthen embankments.

## **1.5 SUBMITTALS**

### **A. Includes, but is not limited to**

1. Submit as specified in Division I.
2. Certified test reports from a qualified, independent testing laboratory of bulk-saturated-surface-dry specific gravity for riprap/shot rock.
3. Weight and/or shipping tickets of materials brought on site shall be presented to the Owner's Representative.
4. The planned method of dewatering shall be submitted to the Resident Project Representative for review and approval prior to the initiation of such work, if required.

## **1.6 QUALITY ASSURANCE**

### **A. Applicable Standards:**

1. American Society for Testing and Materials (ASTM)

- a. D-698-91 Laboratory Compaction Characteristics of Soil Using Standard Effort.
- b. D-2167 Density of Soil in Place by Rubber Balloon Method.
- c. D-2922 Density of Soil and Soil Aggregate in Place by Nuclear Method.
- d. C-911 Quicklime, Hydrated Lime, and Limestone for Chemical Uses.
- e. D-1293 pH on Industrial Water.
2. Missouri Agriculture Liming Materials Act, 1976 MO Rev Stat § 266.500-550 (2023).
3. Standard Methods for the Examination of Water and Wastewater, 16<sup>th</sup> Edition, 1985. American Public Health Association, American Waterworks Association, Water Pollution Control Federation.
  - a. Section 424 – pH values

#### B. Field Quality Control

1. The Resident Project Representative will ensure that plan lines and grades are obtained on the project. The Contractor will schedule work such that the Resident Project Representative may make the required field tests and surveys. The Contractor will furnish one laborer to assist the Resident Project Representative in spot checking construction layout and grades.
2. The Resident Project Representative at his option will conduct field compaction density tests.

### 1.7 PROJECT CONDITIONS

#### A. Job Conditions

1. Saturated ground conditions may prevail in or near the mine pit. Should ground conditions warrant, to fulfill the specifications set forth in this section, the Contractor shall be responsible for utilizing the appropriate low ground pressure equipment at no additional expense to the Owner. For the purposes of this section, low ground pressure equipment is defined as having maximum load pressure of 4.3 lbs. per square inch or as approved by the Engineer.
2. The Contractor shall use appropriate measure to continuously remove water from excavated trenches and construction areas in order to ensure proper bedding and installation of the core trench.
3. If water pumping is required, it shall be the Contractor's responsibility to ensure that water discharges meet the requirements of the NPDES Permit (see Appendix 1).

## PART 2 – PRODUCTS

### 2.1 SHOT ROCK

- A. Poorly sorted rock materials (shot rock) shall be reasonably well graded by weight and poorly sorted by size, within the limits stated below or on the Drawings to meet the following requirements:

Aggregate Gradation A ( $D_{50} = 24$  in.)

Size (lbs)	Percent Heavier
10	90
450	50
1000	0-10

Aggregate Gradation A ( $D_{50} = 12$  in.)

Size (lbs)	Percent Heavier
5	85-100
50	50-70
100	5-15
400	0

## PART 3 – EXECUTION

### 3.1 EXCAVATION

- A. Excavation shall be performed to the lines and grades indicated and specified. Care shall be exercised not to excavate below the grades shown. Any excessive excavation due to fault or negligence of the Contractor shall be backfilled and compacted to grade with mine spoil at no additional expense to the Owner.
- B. Coal waste may not be used in the construction of the earthen embankments.
- C. Any contaminated material or material otherwise unsuitable for embankment construction encountered shall be excavated and removed from the earthen embankment areas at no additional expense to the Owner. Excavated waste shall be buried a minimum of six (6') feet below final grade.

### 3.2 EARTHEN EMBANKMENTS AND CORE TRENCH

- A. Construct earthen embankments to the elevations indicated using approved material. Core trenches shall be excavated to the lines, dimensions, and grades as indicated on project drawings.
1. Place fill only on sub-grade approved by Resident Project Representative.
  2. Do not place snow, ice or frozen material in fill.
  3. Do not place fill upon frozen surfaces.

4. Material used for construction of the core trench and embankment shall be free from roots, sticks, and other organic materials and shall consist primarily of soils. Areas exhibiting weak or unstable materials (i.e. pumping), or contain large amounts of gravel or rock, shall be removed and replaced at no additional cost to the Owner.
5. Fill material shall be placed in eight (8") inch maximum loose lift thickness and compacted in accordance with section 3.5.A.
6. After placement of the material in the lift, it shall be spread parallel to the axis of the embankment and with a uniform thickness prior to compaction. Each lift shall be constructed continuously and approximately horizontal for the width and length of such portion of the lift.
7. The distribution of materials throughout the earth-fill shall be such that the lifts shall be free from lenses, pockets, streaks, or layers of material differing substantially in texture, gradation, or moisture from the surrounding material.
8. The lift surface shall be maintained to prevent rutting and/or displacement of the lift material by equipment traffic. If rutting and/or displacement should occur, the area will be re-graded and compacted in accordance with the specifications prior to placing the next lift.
9. Borrow material containing a substantial percentage of rock, shale, cobbles, boulders and other debris which does not break up during placement and compaction is not acceptable for earthen embankment construction.

### **3.3 GRADING**

- A. Areas within the earthen embankments, including excavated and filled sections, and adjacent transition areas shall be reasonably smooth, compacted and free from irregular surface changes.
- B. Each lift is to be graded to remove mounds and ridges caused by dumping operations and to obtain uniform thickness prior to and during compacting.
- C. Degree of finish shall be ordinarily obtained from blade grader operations and shall be accomplished and maintained so that no ponding of surface water occurs.
- D. The finish grades shall be graded to plan elevation plus or minus three tenths ( $\pm 0.3'$ ) of a foot.

### **3.4 COMPACTION**

- A. The Resident Project Representative shall perform all compaction sampling and testing. Compaction of fill for the earthen embankments and core trenches shall be to the following limits:

1. All material shall be compacted to a minimum of ninety five percent (95%) of the maximum density as determined by ASTM D-698
  2. The moisture content of the material being compacted shall be within plus four (4%) percent or minus two (-2%) percent of the standard optimum moisture content per ASTM D-698.
- B. If, in the opinion of the Resident Project Representative, the moisture content of the material to be compacted is more than two percent (2%) below the standard optimum moisture content, the material shall be uniformly moistened throughout the lift by sprinkling or other approved methods. It shall not be acceptable to allow water to flow across the material or to use other gravity flow methods. During application of water, the Contractor shall have sufficient control that water does not appear or stand on the surface at the time of application nor during the compaction operations. If water should appear on the surface, the Contractor shall rework the material in accordance with Section 357313.3.4.C of this Specification. The above shall be at no additional expense to the Owner.
- C. If, in the opinion of the Resident Project Representative, the compacted material of any lift in the fill has a moisture content greater than four percent (4%) above the standard optimum moisture content, it shall be removed and replaced with suitable material and compacted in accordance with the Specifications prior to placing the next lift; or work in the area shall cease until the lift in question has dried; or the lift shall be worked with a harrow, scarifier, or other suitable equipment to reduce the moisture content to the required amount and then re-compacted in accordance with the Specifications prior to placing the next lift of material. Depth control for reworking the material shall be such that the operation does not extend through the entire lift thickness. The above shall be at no additional expense to the Owner.
- D. If, in the opinion of the Resident Project Representative, the surface of any lift is too dry or smooth to bond with the next lift to be placed thereon, it shall be moistened and/or worked at no additional expense to the Owner with a harrow, scarifier, or other suitable equipment in an approved manner and to a sufficient depth to provide satisfactory bonding before the next lift of material is placed. Depth control for reworking the material shall be such that the operation does not extend through the entire lift thickness.
- E. Embankment and core trench fill shall be placed in uniform, horizontal lifts with a maximum of eight (8") inch loose lift thickness and compaction of each lift shall consist of at least four complete uniform passes with a padfoot or wedgefoot roller with a minimum ground pressure of 250 psi., each pass shall cover the entire layer.
1. The compactive method described herein does not relieve the Contractor of meeting the requirements outlined in Section 357313.3.4.A. Should the lift being compacted not meet the requirements outlined in Section 357313.3.4.A, the Contractor shall continue his compaction efforts at no additional expense to the Owner until the minimum dry density is achieved.
- F. Continuous leveling and manipulating will be required during compacting operations and the moisture content shall be adjusted as necessary to permit proper consolidation.

- G. The final graded surface shall be slightly scarified prior to topsoil, seeding, and mulching.

### **3.5 MATERIAL HANDLING**

- A. The Contractor shall be responsible for ensuring that his operations are conducted in such a manner as to avoid mixing of satisfactory and unsatisfactory materials.
- B. In the event that mine spoil becomes contaminated with unsatisfactory materials due to Contractor's operations, such material shall be disposed of and replaced as directed by the Owner's Representative at no additional expense to the Owner.

### **3.6 DEWATERING**

- C. Any time that the Contractor is working on an earthen embankment or the Contractor is modifying and/or removing a spillway, the Contractor shall, at a minimum, lower and maintain the water level in the impoundment to an elevation to prevent water from overtopping the structure during precipitation events.
- D. Under no circumstances shall discharge of an impoundment be permitted until the water has been tested and the results have been approved by the Owner's Representative.
- E. Prior to discharging from an impoundment, the Owner's Representative will take a water sample and test the water for compliance with NPDES permit parameters (see Appendix 1).
- F. In the event that any sample fails to meet requirements of the NPDES permit (see Appendix 1), the Contractor shall treat the water until such time as the permit requirements are met. All subsequent sample collection and analysis shall be the responsibility of the Contractor and will be conducted at the direction of the Resident Project Representative.
- G. Any impoundment discharges that will be discharge off the project limits will be sampled and tested as per the NPDES parameters (see Appendix 1). Such sampling costs will be the responsibility of the Owner's Representative. Immediately after all impoundment water is discharged, the Contractor is to take appropriate actions to prevent further accumulation of surface runoff and seepage. The Contractor shall be responsible for treatment of re-contaminated and impounded water resulting from recharge by surface runoff or seepage at no additional cost to the Owner.

### **3.7 SURFACE WATER CONTROL**

- A. The Contractor is responsible for control of grading around excavations to prevent surface water from flowing and ponding into excavation areas.
- B. Runoff from the site shall not exceed those limits included in the NPDES Permit (Appendix 1).

- C. The Contractor is liable for all damage outside the construction limits of this project that is due to the Contractor's operations, including sedimentation caused by construction.
- D. Drain as required to continually maintain all excavation and trenches free of water or mud from any source and discharge to approved drain channels.
- E. Remove subgrade materials rendered unsuitable by excessive wetting and replace with approved backfill material.
- F. Should the Contractor allow water to impound in contaminated areas, all subsequent discharge shall fall under the NDPEs Permit (Appendix 1) special conditions, and any treatment required shall be performed at no additional cost to the Owner.

### **3.8 SHOT ROCK**

- A. Rock shall be placed in a manner that will produce a reasonably uniform well-graded mass of stone with the minimum practicable percentage of voids.
- B. The larger stones shall be well distributed. Material shall be placed and distributed such that there will be no objectionable accumulations of either the larger or smaller sizes of stone.
- C. The rock shall be delivered and placed in a manner that will ensure the rock shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact with one to another with the smaller rocks and spalls filling the voids between the larger rocks. Rock shall be placed in a manner to prevent damage to existing structures. Hand placing will be required as necessary to prevent damage to new and existing structures.
- D. The sub-grade surfaces on which the rock is to be placed shall be cut and graded to the lines and grades shown on the Drawings. The surface to which the rock is to be placed shall be reasonably smooth and free of mounds, dips, or windrows.
- E. Side slopes for rock check dams and cross vanes should be the natural angle of repose, which approximates 1.5 feet (ft.) horizontal to 1 ft. vertical.

**END OF SECTION 357313**

# **Appendix 1**

## **NPDES STORMWATER, IMPOUNDED WATER, MINE DEWATERING DISCHARGE PERMIT**

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION



## MISSOURI STATE OPERATING PERMIT

### General Operating Permit

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No: MOG050094

Owner: MO DNR Land Reclamation Program  
Address: PO Box 176  
Jefferson City, MO 65102

Continuing Authority: MO DNR Land Reclamation Program  
PO Box 176  
Jefferson City, TN 65102

Facility Name: Tennyson Reclamation Project  
Facility Address: 596 Tennyson Rd  
Fulton, MO 65251

Legal Description: See Page 2  
UTM Coordinates: See Page 2  
Receiving Stream: See Page 2  
First Classified Stream - ID#: See Page 2  
USGS# and Sub Watershed#: See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations, benchmarks, and monitoring requirements as set forth herein.

### **FACILITY DESCRIPTION** All Outfalls SIC #9512

All Outfalls - This Missouri State Operating Permit (permit) authorizes the discharge of stormwater, impoundment water and mine dewatering to waters of the state of Missouri from reclamation sites under the control of the Missouri Department of Natural Resources, Land Reclamation Program, including but not limited to the following primary SIC Codes: 1629, 9512

This permit authorizes activities pursuant to the terms and conditions of this permit in the Missouri Clean Water Law and/or the National Pollutant Discharge Elimination System; it does not apply to other regulated activities.

March 01, 2026

Issue Date

Handwritten signature of Heather S Peters in blue ink.

Heather S Peters, Director  
Water Protection Program

October 31, 2026

Expiration Date

Outfall Number: 001  
Legal Description: Sec. 29, T47N, R09W, Callaway County  
UTM Coordinates: 590219.048/4297738.810  
Receiving Stream: Rockhouse Creek (C)  
First Classified Stream - ID#: Presumed Use Streams (C) 5016.00  
USGS# and Sub Watershed#: 10300102 - 1508

Outfall Number: 002  
Legal Description: Sec. 19, T47N, R09W, Callaway County  
UTM Coordinates: 589886.317/4299719.953  
Receiving Stream: Tributary to Stinson Creek  
First Classified Stream - ID#: Presumed Use Streams (C) 5016.00  
USGS# and Sub Watershed#: 10300102 - 1508

## DEFINITIONS

The terms defined in this section are used throughout the permit. Any use of these terms in the permit meet the definition established here, unless otherwise noted.

*Abandoned mine* – A mine where mining operations have occurred in the past and the applicable reclamation bond or financial assurance has been released or forfeited, or, if no reclamation bond or other financial assurance has been posted, no mining operations have occurred for five years or more.

*Acid mine drainage* – Mine drainage which, before any treatment, either has a pH of less than 6.0 or a total iron concentration equal to or greater than 10 mg/L. Acid mine drainage is not authorized for discharge without treatment under this permit.

*Active mining area* – The area, on and beneath land, used or disturbed in activity related to the extraction, removal, or recovery of coal from its natural deposits. This term excludes coal preparation plants, coal preparation plant associated areas, and post-mining areas.

*Alkaline mine drainage* – Mine drainage which, before any treatment, has a pH equal to or greater than 6.0 and a total iron concentration of less than 10 mg/L.

*Bond release* – The time at which the appropriate regulatory authority returns a reclamation or performance bond based upon determination that reclamation work (including, in the case of underground mines, mine sealing and abandonment procedures) has been satisfactorily completed.

*Coal preparation plant* – A facility where coal is subjected to cleaning, concentrating, or other processing or preparation in order to separate coal from impurities and then is loaded for transit to a consuming facility.

*Coal preparation plant associated areas* – Coal preparation plant yards, immediate access roads, coal refuse piles, and coal storage piles and facilities.

*Mine drainage* – Any drainage, and any water pumped or siphoned, from an active mining area or post-mining area.

*Post mining area* – A reclamation area or the underground workings of an underground coal mine after the extraction, removal, or recovery of coal from its natural deposit has ceased and prior to bond release.

*Reclamation area* – The surface area of a coal mine which is being returned to required contour and on which revegetation (specifically, seeding or planting) work will or has commenced.

## APPLICABILITY

1. This Missouri State Operating Permit (permit) authorizes the discharge of stormwater, impoundment water, and mine dewatering effluent directly or overland flow to waters of the State of Missouri from reclamation sites under the control of the Missouri Department of Natural Resources Land Reclamation Program. These sites are assigned the SIC Codes #9512 and #1629.
2. Acid mine drainage (as defined above) is not authorized under this permit for discharge without treatment for protection of the general narrative criteria found pursuant to 10 CSR 20-7.031(4). The chosen treatment shall be sufficient to comply with all narrative criteria, including color, as well as comply in-stream with all applicable numeric criteria found in 10 CSR 20-7.031 Tables A1 through B.
3. This permit does not apply to active mining sites, coal preparation plants, coal preparation plant associated areas, or any of the discharges related to these sites. This permit applies only to post-mining activities at sites abandoned within or prior to 1977 and not subject to the Regulatory Program of the Surface Mining Control and Reclamation Act of 1977 identified as mine land reclamation and the associated construction projects under the control of the Missouri Department of Natural Resources Land Reclamation Program or assigns. Active mining and coal preparation sites have differing effluent discharges; these conditions were not considered in the development of this general permit.
4. This permit does not cover construction of earthen basins used for wastewater management. Construction of an earthen basin or holding structure may require a construction permit. Instructions on how to obtain a construction permit are located at <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/wastewater/construction-engineering> . Questions regarding permit requirements may be directed to Department's Water Protection Program phone line at [573-751-1300](tel:573-751-1300), or toll free at [800-361-4827](tel:800-361-4827).

APPLICABILITY, CONTINUED

5. This permit authorizes only stormwater to be discharged in Metropolitan No-Discharge watersheds. This permit does not authorize the discharge of impoundment water or mine dewatering effluent to be released in these watersheds. Discharge to the watersheds of a Metropolitan No-Discharge Stream (10 CSR 20-7.031 Table F) is prohibited except uncontaminated cooling water, non-contaminated stormwater flows, permitted stormwater discharges in compliance with permit conditions, and excess wet-weather bypass discharges not interfering with beneficial uses per 10 CSR 20-7.015(5) and 7.031(7). Existing interim discharges of wastewater may be allowed until interceptors are available within 2,000 feet or a distance deemed feasible by the Department, or unless construction of outfalls to alternative receiving waters not listed in Table F is deemed feasible by the Department. Only (a), (c), (e), and (f) from “allowable non-stormwater discharges” found in Applicability Condition #16 below are authorized for discharge to Metropolitan No-Discharge Streams. The other types of non-stormwater discharges are not authorized for discharge to Metropolitan No-Discharge watersheds.
6. This permit does not authorize discharges which are located in a way to allow water to be released into sinkholes, caves, fissures, or other openings in the ground which could drain into aquifers directly or indirectly (except losing streams) per 10 CSR 20-7.015(7).
7. This permit does not authorize the discharge of industrial or domestic wastewater into the watersheds of lakes and reservoirs designated as L1 in 10 CSR 20-7.031, per 10 CSR 20-7.015(3)(C). Stormwater only discharges are authorized in these watersheds so long as no degradation of water quality occurs.
8. For facilities which would discharge directly to Outstanding State Resource Waters:
  - (a) Outstanding State Resource Waters are protected against any degradation in quality as defined in 10 CSR 20-7.015(6)(B) and 7.031(3)(C).
  - (b) This permit does not authorize wastewater discharge to Outstanding State Resource Waters.
  - (c) This permit authorizes stormwater discharge facilities to operate and continue to discharge only stormwater in Outstanding State Resource Watersheds so long as no degradation of water quality occurs.
9. For facilities operating within the watershed of Outstanding National Resource Water, which includes the Ozark National Riverways and the National Wild and Scenic Rivers System:
  - (a) This permit authorizes only no-discharge facilities [as defined in 10 CSR 20-6.015(1)(B)7.] to operate.
  - (b) Any discharge from a no-discharge facility, including stormwater, will be considered a violation of this permit unless a catastrophic or chronic storm event [as defined in 10 CSR 20-6.015(1)(B)2.-3.] occurs. In the event of a catastrophic or chronic storm event, the no-discharge facility is authorized to release only the amount of stormwater required to prevent damage to the facility or established Best Management Practices (BMPs).
10. Facilities located within the watershed of an impaired water as designated in the 305(b) Report must be evaluated on a case-by-case basis for inclusion under this permit. Facilities found to be discharging the listed pollutant(s) of concern for any impaired water may be required to obtain a site-specific permit. However, the remediation aspect of the reclamation work will be taken into consideration, as many mine reclamation projects occur on stream segments impacted by mining activities, and reclamation projects are expected to improve water quality in receiving streams after completion.
11. This permit does not allow stream channel or wetland alterations unless approved by Section 404 of the federal Clean Water Act (CWA) permitting authorities.
12. This permit does not authorize the placement of fill materials in flood plains, placement of solid materials into any waterway, the obstruction of stream flow, or changing the channel of a defined drainage course.
13. The Department may require any facility authorized by a general permit to apply for a site-specific permit [10 CSR 20-6.010(13)(C)]. Cases where a site-specific permit may be required include, but are not limited to, the following:
  - (a) The discharge(s) is a significant contributor of a pollutant(s) which impairs the beneficial uses of the receiving stream;
  - (b) The discharger is not in compliance with the conditions of the general permit;
  - (c) A Total Maximum Daily Load (TMDL) containing requirements applicable to the discharge(s) is approved.
14. If a facility covered under a current general permit desires to apply for a site-specific permit, the facility may do so by contacting the Department for application requirements and procedures.
15. Facilities covered under a current site-specific permit who desire to apply for inclusion under this general permit may contact the Department for application requirements and procedures.

APPLICABILITY, CONTINUED

16. The following are additional allowable non-stormwater discharges authorized under this permit:
  - (a) Discharges from fire-fighting activities;
  - (b) Fire hydrant flushing (testing);
  - (c) Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
  - (d) Landscape watering, provided all pesticides, herbicides, and fertilizers have been applied in accordance with manufacturer's instructions;
  - (e) Uncontaminated ground water or spring water which has not contacted industrial materials, wastewater, or processes; and
  - (f) Foundation or footing drains where flows are not contaminated with process materials or wastewater.
17. Any non-stormwater discharges other than those explicitly authorized in condition #16 above or explicitly included for permit coverage are prohibited. For clarity, a number of prohibited discharges will be listed here as a reminder. These discharges were not considered when developing the limitations of the permit and are thus prohibited. The list is not all inclusive, but contains common prohibited discharges:
  - (a) Water from washout of concrete;
  - (b) Water from the washing of vehicles and equipment, with or without detergents;
  - (c) Potable water treated with chlorine;
  - (d) Water from the washout of form release oils, curing compounds, or other construction materials;
  - (e) Water containing soaps, solvents, or detergents from any source; and
  - (f) Water containing substances from a spill on site, hazardous or otherwise.
18. This permit authorizes the operation of oil water separators solely for the treatment of stormwater. The oil water separators must be appropriately operated and sized per manufacturer's or engineering specifications. Oil water separators used to treat wastewater (including drips, spills, shop floor drains, pavement wash water, etc.) must be authorized under permit MO-G14 for oil water separator discharges or a site-specific permit authorizing all industrial activities at the site. This permit authorizes only the discharge of stormwater treated by an oil water separator (precipitation that has fallen on the site and is discharged through the oil water separator). The facility must maintain oil water separator sludge removal records for a period of at least five years and provide them to the Department if requested. Sludge from the oil water separator is considered used oil per 10 CSR 25-11.279 and must be disposed of accordingly.
19. Spills, Overflows, and Other Unauthorized Discharges.
  - (a) Any spill, overflow, or other discharge(s) not specifically authorized in this permit are unauthorized discharges.
  - (b) Should an unauthorized discharge cause or permit any contaminants to discharge or enter waters of the state, the unauthorized discharge must be reported to the regional office as soon as practicable but no more than 24 hours after the discovery of the discharge. If the spill or overflow needs to be reported after normal business hours or on the weekend, the facility must call the Department's 24 hour spill line at 573-634-2436.
  - (c) If the unauthorized discharge was from an overflow from a no-discharge wastewater basin, the report must include all records confirming operation and maintenance records documenting proper maintenance in accordance with condition (d) below.
  - (d) Permittee shall adhere to the following minimum BMPs for no-discharge wastewater holding structures:
    - (1) To prevent unauthorized discharges, the no-discharge wastewater basin must be properly operated and maintained to contain all wastewater plus run-in and direct precipitation. During normal weather conditions, the liquid level in the storage structure shall be maintained below the upper operating level, so adequate storage capacity is available for use during adverse weather periods. The liquid level in the storage structure should be lowered on a routine schedule based on the design storage period. Typically this should be accomplished prior to expected seasonal wet and winter climate periods. Maintain liquid level in the no-discharge wastewater structure at least 2.0 feet from the bottom of the discharge pipe, top of the basin, or the bottom of the overflow canal, whichever is lower.
    - (2) Weekly inspection of no-discharge wastewater basins shall occur. Inspection notes will be kept at the facility and made available to the Department upon request.
    - (3) The inspections will note any issues with the no-discharge structure and will record the level of liquid as indicated by the depth marker.

EXEMPTION

Facilities discharging all effluent (stormwater, mine dewatering, and wastewater) directly to a combined sewer system (as defined in 40 CFR 122.26 and 40 CFR 35.2005) connecting to a publicly owned treatment works which has consented to receive such a discharge are exempt from permit requirements.

**EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

<b>TABLE A1</b>	<b>COAL MINE RECLAMATION ACTIVITIES INTERIM LIMITS FOR EXISTING FACILITIES AT RENEWAL ONLY</b>
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The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limits shall become effective upon issuance and are effective until December 31, 2024. The final effluent limitations in Table A2 shall become effective on January 1, 2025, and remain in effect until expiration of the permit. All discharges shall be controlled, limited, and monitored by the facility as specified below:

EFFLUENT PARAMETERS	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS ***	
		DAILY MAXIMUM		BENCHMARK	SAMPLING FREQUENCY	SAMPLE TYPE

**STORMWATER ASSOCIATED WITH COAL MINE LAND DISTURBANCE  
OUTFALL: MGP PF FEATURE/LIMIT SET DESIGNATOR: 01A/SW**

Flow	MGD	*		-	once/quarter ◊	24 hr estimate
Chloride	mg/L	*		-	once/quarter ◊	grab
Chloride + Sulfate	mg/L	**		1,000	once/quarter ◊	grab
Iron, Total Recoverable	µg/L	**		7,000	once/quarter ◊	grab
pH †	SU	6.0-9.0		-	once/quarter ◊	grab
Settleable Solids	mL/L/hr	**		1.5	once/quarter ◊	grab
Sulfate	mg/L	*		-	once/quarter ◊	grab
Total Suspended Solids	mg/L	**		100	once/quarter ◊	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY VIA THE DEPARTMENT'S eDMR SYSTEM.

THE FIRST REPORT IS DUE JULY 28, 2026. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE.

THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

**DISCHARGES FROM COAL MINE SHAFT PUMPING, COAL MINE DRAINING, AND PROCESSING AREA IMPOUNDMENT DRAINING  
OUTFALL: MGP PF FEATURE/LIMIT SET DESIGNATOR: 01B OR 01C ††/01B:MS, 01C:PI**

EFFLUENT PARAMETERS	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS***	
		DAILY MAXIMUM		MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	††	24 hr estimate
Chloride	mg/L	*		*	††	grab
Chloride + Sulfate	mg/L	*		*	††	grab
Iron, Total Recoverable	µg/L	7,000		3,500	††	grab
Manganese, Total Recoverable ‡	µg/L	4,000		2,000	††	grab
pH †	SU	6.0-9.0		-	††	grab
Settleable Solids	mL/L/hr	1.5		1.0	††	grab
Specific Conductance	µmhos/cm	*		*	††	grab
Sulfate	mg/L	*		*	††	grab
Total Suspended Solids	mg/L	100		50	††	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY VIA THE DEPARTMENT'S eDMR SYSTEM.

THE FIRST REPORT IS DUE MONTH 28, 20xx. IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE.

THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

EFFLUENT PARAMETERS		UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS ***	
			DAILY MAXIMUM		BENCHMARK	SAMPLING FREQUENCY	SAMPLE TYPE
<b>COAL MINE RECLAMATION ACTIVITIES</b>							
<b>FINAL LIMITS FOR ALL NEW FACILITIES AND</b>							
<b>FOR ALL EXISTING FACILITIES AFTER DECEMBER 1<sup>ST</sup>, 2024</b>							
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance for new facilities; and January 1, 2025, for existing facilities; and remain in effect until expiration of the permit. All discharges shall be controlled, limited, and monitored by the facility as specified below:							
<b>STORMWATER ASSOCIATED WITH COAL MINE LAND DISTURBANCE</b>							
<b>OUTFALL: MGP PF FEATURE/LIMIT SET: 01A</b>							
Flow	MGD	*		-	once/quarter ◊	24 hr estimate	
Chloride	mg/L	*		-	once/quarter ◊	grab	
Chloride + Sulfate	mg/L	**		1,000	once/quarter ◊	grab	
Iron, Total Recoverable	µg/L	**		7,000	once/quarter ◊	grab	
pH †	SU	6.0-9.0		-	once/quarter ◊	grab	
Settleable Solids	mL/L/hr	**		1.5	once/quarter ◊	grab	
Sulfate	mg/L	*		-	once/quarter ◊	grab	
Total Suspended Solids	mg/L	**		100	once/quarter ◊	grab	
MONITORING REPORTS SHALL BE SUBMITTED <b>QUARTERLY</b> VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE <b>MONTH 28, 20xx</b> . IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE. THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.							
<b>DISCHARGES FROM COAL MINE SHAFT PUMPING, COAL MINE DRAINING, AND PROCESSING AREA IMPOUNDMENT DRAINING</b>							
<b>OUTFALL: MGP PF NUMBER/ LIMIT SET DESIGNATOR: 1BN OR 1CN ††/1BN:MS, 1CN:PI</b>							
EFFLUENT PARAMETERS		UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS ***	
			DAILY MAXIMUM		MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	‡‡	24 hr estimate	
Chloride	mg/L	*		*	‡‡	grab	
Chloride + Sulfate	mg/L	1000		*	‡‡	grab	
Iron, Total Recoverable	µg/L	7,000		1,000	‡‡	grab	
Manganese, Total Recoverable ‡	µg/L	4,000		2,000	‡‡	grab	
pH †	SU	6.5-9.0		-	‡‡	grab	
Settleable Solids	mL/L/hr	1.5		1.0	‡‡	grab	
Specific Conductance	µmhos/cm	*		*	‡‡	grab	
Sulfate	mg/L	*		*	‡‡	grab	
Total Suspended Solids	mg/L	100		50	‡‡	grab	
MONITORING REPORTS SHALL BE SUBMITTED <b>MONTHLY</b> VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE <b>MONTH 28, 20xx</b> . IT IS A VIOLATION OF THIS PERMIT TO FAIL TO SAMPLE. THE DISCHARGE SHALL NOT CONTAIN FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.							

See table notes on **page 8**

TABLE B		METALLIC MINERAL RECLAMATION ACTIVITIES FOR ALL FACILITIES				
The facility is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. All discharges shall be controlled, limited, and monitored by the facility as specified below:						
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS ***	
		DAILY MAXIMUM		BENCHMARK	SAMPLING FREQUENCY	SAMPLE TYPE
<b>STORMWATER ASSOCIATED WITH METALLIC MINERAL LAND DISTURBANCE</b>						
<b>OUTFALL: MGP PF NUMBER/ LIMIT SET DESIGNATOR: 01D/SW</b>						
Flow	MGD	*		-	once/month	24 hr estimate
Cadmium, Total Recoverable	µg/L	**		9	once/month	grab
Chloride	mg/L	*		-	once/month	grab
Chloride + Sulfate	mg/L	**		1,000	once/month	grab
Cobalt, Total Recoverable	µg/l	*		-	once/month	grab
Copper, Total Recoverable	µg/l	*		-	once/month	grab
Iron, Total Recoverable	µg/L	**		7,000	once/month	grab
Lead, Total Recoverable	µg/L	**		160	once/month	grab
Mercury, Total Recoverable	µg/l	*		-	once/month	grab
pH †	SU	6.5-9.0		-	once/month	grab
Settleable Solids	mL/L/hr	**		1.5	once/month	grab
Specific Conductance	µmhos/cm	*		-	once/month	grab
Sulfate	mg/L	*		-	once/month	grab
Total Suspended Solids	mg/L	**		100	once/month	grab
Zinc, Total Recoverable	µg/L	**		180	once/month	grab
REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE <b>MONTH 28, 20XX.</b>						
<b>METALLIC MINERAL MINE SHAFT PUMPING, MINE DRAINING, AND PROCESSING AREA IMPOUNDMENT DRAINING</b>						
<b>OUTFALL: MGP PF NUMBER/ LIMIT SET: 01E/WW</b>						
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS***	
		DAILY MAXIMUM		MONTHLY AVERAGE	SAMPLING FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	‡‡	24 hr estimate
Cadmium, Total Recoverable	µg/L	9		1	‡‡	grab
Chloride	mg/L	*		*	‡‡	grab
Chloride + Sulfate	mg/L	*		*	‡‡	grab
Cobalt, Total Recoverable	µg/l	*		*	‡‡	grab
Copper, Total Recoverable	µg/l	23		15	‡‡	grab
Iron, Total Recoverable	µg/l	7,000		1,000	‡‡	grab
Lead, Total Recoverable	µg/l	160		6	‡‡	grab
Mercury, Total Recoverable	µg/l	*		*	‡‡	grab
pH †	SU	6.5-9.0		-	‡‡	grab
Settleable Solids	mL/L/hr	1.5		1.0	‡‡	grab
Specific Conductance	µmhos/cm	*		*	‡‡	grab
Sulfate	mg/L	*		*	‡‡	grab
Total Suspended Solids	mg/L	100		50	‡‡	grab
Zinc, Total Recoverable	µg/l	188		187	‡‡	grab
REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> VIA THE DEPARTMENT'S eDMR SYSTEM. THE FIRST REPORT IS DUE <b>MONTH 28, 20XX.</b>						

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS, CONTINUED

Table Notes:

- \* Monitoring requirement only.
- \*\* Monitoring and reporting associated with benchmark. See STORMWATER REQUIREMENTS for additional requirements.
- \*\*\* If a discharge occurs during the reporting period, samples shall be collected and tested for the required parameters listed in Table A. Report as no-discharge when a discharge does not occur during the reporting period. If multiple samples are collected and analyzed during the sampling period, the multiple samples are not to be averaged at intervals exceeding one calendar month. The permittee may report ‘No-Discharge’ if all reasonable attempts to collect a sample throughout the reporting period have resulted in the inability to collect an effluent sample.
- † pH is measured in standard units (SU) and is not to be averaged.
- †† Permitted Feature 01B/1BN added for discharge from mine shaft pumping. Permitted feature 01C/1CN added for coal mine and processing area impoundment draining. 01B/01C for existing facilities at renewal; 1BN/1CN added for new facilities. Permitted feature 01B/01C will have the schedule of compliance included.
- ‡ The effluent shall be tested prior to discharge for pH and iron to determine if it meets the definition of “acid mine drainage.” (see definitions in permit above.) Monitoring and limitations for manganese are required only when the drainage is classified as “acid mine drainage”. If it does not meet the definition of acid mine drainage, “conditional monitoring not required this period” may be reported for this parameter. The NODI code for this in eDMR is AG.
- ‡‡ Monitoring is required once/month during discharge of the impoundment, with once/day monitoring required when the total depth of the impoundment or shaft surface water reaches 1 foot or less. The first reported monthly sample shall be a dip sample taken from the impoundment prior to discharging for the first time. In the case of both abandoned coal mine and metallic mineral shafts, if the impoundment is less than 150 feet in length, one grab sample from the midpoint is an adequate sample. If the impoundment is longer than 150 feet, three grab samples shall be taken, one near each end and one near the midpoint. All discharges from the impoundment must not exceed pre-project instream water quality monitoring results. If the pre-project water quality or impoundment monitoring results indicate pollutants at levels above the limits in this permit, the facility should contact the Water Protection Program to discuss next steps for discharging, including possible alternative limits. Alternative limits shall not, in any case, cause general narrative water quality standard excursions. eDMR will accept only one value per parameter when entering data. All additional monthly or daily data shall be uploaded as an attachment to the monthly report. The daily monitoring requirement does not apply to temporary impoundments created by reclamation contractors.

◇ Quarterly sampling

MINIMUM QUARTERLY SAMPLING REQUIREMENTS			
QUARTER	MONTHS	QUARTERLY EFFLUENT PARAMETERS	REPORT IS DUE
First	January, February, March	Sample at least once during any month of the quarter	April 28 <sup>th</sup>
Second	April, May, June	Sample at least once during any month of the quarter	July 28 <sup>th</sup>
Third	July, August, September	Sample at least once during any month of the quarter	October 28 <sup>th</sup>
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 <sup>th</sup>

SCHEDULE OF COMPLIANCE

Schedules of compliance are allowed per 40 CFR 122.47 and 10 CSR 20-7.031(11). Existing coal mine reclamation facilities (renewal permits only, not applicable to new permits or new facilities) shall attain compliance with final effluent limitations established in this permit for chlorides plus sulfates, monthly average iron, and pH in coal mining impoundment and processing area draining effluent as soon as reasonably achievable, with final limitations becoming effective after three (3) years, on August 1<sup>st</sup>, 2024.

## PRE-PROJECT AND POST-PROJECT SAMPLING REQUIREMENTS

If land disturbance of more than one acre or impoundment draining is to occur in a project, pre- and post-project receiving stream sampling is required to document water quality using the following guidelines:

1. Pre- and post-project sampling is not done at the outfalls of the project site. The samples required under this section are done at specific in-stream monitoring locations to document water quality of the receiving streams before and after project completion. Pre-project sampling shall be submitted with the application for discharge. Post-project sampling shall be submitted with the application for termination.
2. The following receiving stream locations must be sampled unless alternate arrangements are approved by the Water Protection Program:
  - (a) The first stream, including those that are unclassified, downstream of all drainage from the project site if there is flowing water.
  - (b) If the sample required in (a) was not a classified stream with designated uses, a sample shall also be taken at the first classified stream, downstream of all drainage from the project site. This sampling point should be at least one-half (1/2) mile below the project, but before the classified stream to be sampled flows into another stream. If the stream flows into another stream before one-half mile, sample prior to the stream confluence.
  - (c) If the project flows into more than one classified stream, all classified streams receiving flow from the site must be sampled unless the area draining to the classified stream is less than five acres and contains no gob pile, slurry ponds, or other concentrated form or coal waste or acid forming materials.
  - (d) All locations shall be sampled at least twice prior to initiation of reclamation work. Sampling dates must be at least four weeks apart, and sampling should not occur within one week following precipitation that has produced surface runoff. At the end of the project, each location should be sampled once, within four weeks of completing work, and not within one week following precipitation that has produced surface runoff.
  - (e) Samples shall be analyzed for the same parameters as impoundment draining with the addition of dissolved oxygen (DO).

## STORMWATER CONDITIONS

1. When a sample of stormwater is collected:
  - (a) The laboratory results of all samples from a discharge collected and analyzed must be retained on site with monitoring records and made available to the Department upon request and shall be submitted with renewal application materials.
  - (b) Precipitation events include rainfall as well as run-off from the melting of frozen precipitation.
  - (c) For flow-through BMPs, stormwater samples shall be collected within the first 60 minutes of discharge occurring as a result of precipitation events exceeding 0.1 inches during a 24-hour period, if possible.
  - (d) For retention BMPs, stormwater samples shall be collected only when a discharge occurs and, if possible, shall be taken from the outfalls. Dip sampling of effluent in retention structures should not be performed.
  - (e) Stormwater samples shall be collected prior to leaving or at the property boundary or before the discharge enters waters of the state on the property.

More information on stormwater sampling may be found in the following document: Industrial Stormwater Monitoring and Sampling Guide (Document number: EPA 832-B-09-003) published by the Environmental Protection Agency (EPA) in March 2009, [https://www3.epa.gov/npdes/pubs/msgp\\_monitoring\\_guide.pdf](https://www3.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf).

2. This permit stipulates pollutant benchmarks applicable to the facility's stormwater discharges.
  - (a) Benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Stormwater monitoring, numeric benchmark compliance, and visual inspections shall be used to determine the overall effectiveness of the BMPs identified in the Stormwater Pollution Prevention Plan (SWPPP).
  - (b) If a sample exceeds a benchmark concentration or an inspection exceeds a narrative requirement, the facility must review the SWPPP and BMPs to determine what improvements or additional controls are needed to reduce the pollutant concentrations in the facility's future stormwater discharges.
  - (c) Every time a numeric benchmark exceedance occurs, a Corrective Action Report (CAR) must be completed. A CAR is a document recording the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and be available to the Department upon request. This permit may require CARs be submitted to the Department upon permit renewal; see Renewal Requirements section below.
  - (d) Failure to take corrective action to address any narrative or numeric benchmark exceedance, and failure to make measureable progress towards achieving the numeric benchmark(s), is a permit violation.

STORMWATER CONDITIONS, CONTINUED

- (e) Stormwater benchmarks and required minimum BMPs as described in this permit are enforceable permit conditions. Any requested change(s) to numeric benchmark values or deviation from minimum BMP requirements must be established through the permitting process, which may include a transfer to a site specific permit to incorporate site specific conditions. Assessment, evaluation, and implementation of specific BMPs to meet numeric benchmarks or minimum BMP requirements, must be addressed through the SWPPPs and CARs.
3. This permit requires the development and implementation of a SWPPP. The Land Reclamation Program shall be required to draft and implement the SWPPP on each site under this permit. When applying for coverage under this permit, a SWPPP including an Alternative Analysis of the BMPs must be developed, implemented, and maintained at the facility. Failure to implement and maintain the chosen alternative, which can be revised and updated, is a permit violation. The Alternative Analysis is a structured evaluation of BMPs to determine which are reasonable and cost effective. The analysis should include practices designed to be 1) non-degrading 2) less degrading, or 3) degrading water quality. The chosen BMP will be the most reasonable and cost effective while ensuring the highest quality water attainable for the facility is discharged. The analysis must demonstrate why “no discharge” or “no exposure” are not feasible alternatives at the facility. Existing facilities with established SWPPPs and BMPs need not conduct an additional Alternatives Analysis unless new BMPs are established to address BMP failures. This structured analysis of BMPs serves as the Antidegradation review, fulfilling the requirements of 10 CSR 20-7.015(9)(A)5 and 7.031(3).
4. The permittee shall select, install, use, operate, and maintain the BMPs prescribed in the SWPPP in accordance with the concepts and methods described in the following documents: *Developing Your Stormwater Pollution Prevention Plan, a Guide for Industrial Operators*, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (EPA) in June 2015. [https://www.epa.gov/sites/production/files/2015-11/documents/swppp\\_guide\\_industrial\\_2015.pdf](https://www.epa.gov/sites/production/files/2015-11/documents/swppp_guide_industrial_2015.pdf). (General information may also be found at <https://www.epa.gov/npdes/industrial-stormwater-guidance>.); and *Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*, (Document number EPA 833-R-06-004) published by EPA in May 2007 (This manual as well as other information, including examples of construction SWPPPs, is available at the EPA internet site at [https://www.epa.gov/sites/production/files/2015-10/documents/sw\\_swppp\\_guide.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/sw_swppp_guide.pdf)).
- (a) **New Facilities:** The new SWPPP for the facility must be prepared within 60 days and implemented within 180 days of permit issuance.
- (b) **Existing Facilities:** The existing SWPPP for your facility must be reviewed, revised as necessary, and implemented within 30 days of reissuance of coverage.
- (c) **Expanding Facilities:** The existing SWPPP for the facility, including the Alternative Analysis, must be reviewed and revised as necessary. Once expansion occurs the revised SWPPP must be implemented within 30 days of permit modification.
5. The purpose of the SWPPP and the BMPs listed therein is to prevent pollution per 10 CSR 20-2.010(56) to waters of the state. A deficiency of a BMP means it was not effective in preventing pollution of waters of the state or meeting benchmarks of this permit. Corrective action means the facility took steps to eliminate the deficiency. The SWPPP must be kept on-site (either electronically or paper copy), readily available upon request, and should not be sent to the Department unless specifically requested. Throughout coverage under this permit, the facility must perform SWPPP review and revision to incorporate any significant site condition changes which impact the nature and condition of stormwater discharges. For all facilities the SWPPP must include the following:
- (a) An assessment of all stormwater discharges associated with the facility, facility activities, and facility materials. This assessment must include a list of potential contaminants and an annual estimate of amounts used and/or produced in the described activities.
- (b) A listing of BMPs and a narrative explaining how the BMPs will be implemented to control and minimize the amount of potential contaminants entering stormwater.
- (c) Wash water for vehicles, building, or pavement must be handled in a no-discharge manner (infiltration, hauled off-site, etc.). Describe the disposal method and include all pertinent information (destination for effluent, BMPs, etc.) in the SWPPP. If wash water is not produced, note this instead.
- (d) A site map or, if necessary, multiple maps. The map shall be updated as needed to reflect current BMPs in use. Stormwater outfalls do not need to be marked in the field. The map does not need to be printed on paper. Electronic or other accessible maps will be considered adequate compliance with this condition. The map(s) shall show the following:
- (1) Boundaries of the property and the size of the property in acres;
  - (2) Location and extent of significant structures and impervious surfaces;
  - (3) Direction of stormwater flow, marking areas (use arrows) where high potential for soil erosion are found;
  - (4) Location of all permitted features, outfalls, structural BMPs, and other stormwater control measures;
  - (5) Location of all stormwater conveyances including ditches, pipes, and swales;
  - (6) Location of potential stormwater pollutant sources;

STORMWATER CONDITIONS, CONTINUED

- (7) If applicable, municipal separate storm sewer systems (MS4s) and where stormwater from the facility discharges to them;
  - (8) Locations of the following activities which are exposed to precipitation:
    - i. Fueling stations;
    - ii. Vehicles and equipment maintenance and/or cleaning areas;
    - iii. Loading and unloading areas;
    - iv. Locations used for the treatment, storage, or disposal of wastes;
    - v. Salt storage areas (salt used for de-icing or other commercial or industrial purposes);
    - vi. Liquid storage tanks, noting whether they have secondary containment; and
    - vii. Processing and storage areas.
  - (9) Locations and sources of run-on to your site from adjacent property that may contain significant quantities of pollutants.
- (e) A schedule for monthly site inspections and a brief written report, which includes the name of the inspector, the signature of the inspector, and the date. The inspections must include observation and analysis of BMP effectiveness, deficiencies, and corrective action to be taken.
- (1) At a minimum, the following areas must be inspected:
    - i. Disturbed areas;
    - ii. Stormwater controls and pollution prevention measures;
    - iii. Locations where stabilization measures have been implemented;
    - iv. Material, waste, borrow, or equipment storage and maintenance areas;
    - v. Areas where stormwater flows; and
    - vi. Points of discharge.
  - (2) During inspections, at the minimum, the following must be checked:
    - i. Whether all stormwater controls are installed, operational, and working as intended;
    - ii. Whether any new or modified stormwater controls are needed;
    - iii. Facilities examined for conditions that could lead to a spill or leak; and
    - iv. Facility examined for visual signs of erosion or sedimentation at outfalls. Excessive erosion or sedimentation may be due to BMP failure or insufficiency. Response to the excessive erosion or sedimentation should be addressed in the inspection report.
  - (3) Operational deficiencies must be corrected within seven (7) days and must be documented in the inspection report.
  - (4) Minor structural deficiencies must be corrected within fourteen (14) calendar days and must be documented in the SWPPP records.
  - (5) For major structural deficiencies which are projected to take longer than fourteen (14) calendar days to correct, The facility may submit a written request to the Department justifying additional time, if necessary, to complete corrective action. If required by the Department, the permittee shall work with the regional office to determine the best course of action. The permittee should consider temporary structures in the interim to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
  - (6) BMP failure causing discharge through an unregistered outfall is considered an illicit discharge and must be reported in accordance with Standard Conditions Part I.
  - (7) Inspection reports must be kept with the SWPPP and must be made available to the Department upon request.
  - (8) Inactive facilities: the requirement to conduct facility inspections on a monthly basis does not apply at a facility that is inactive and unstaffed as long as there are no industrial materials or activities exposed to stormwater. Such a facility shall only be required to conduct an inspection annually. To invoke this exception, notification the facility is inactive must be made in the application materials submitted to the Department for renewal or issuance of a new permit. If a facility is already covered by a permit when they become inactive, they must submit notification to the appropriate Department Regional Office in writing of their intent to be considered "inactive". The SWPPP shall also be updated to reflect this information. If circumstances change and industrial materials or activities become exposed to stormwater or the site becomes active, this exception will no longer apply, and the facility must immediately resume required monthly inspections.
- (f) A provision for designating an individual to be responsible for environmental matters.
- (g) A provision for providing training to all personnel involved in material handling, material storage, and housekeeping of areas having materials exposed to stormwater. Proof of training must be made available to the Department upon request.
- (h) A provision for evaluating benchmarks/effluent limitations established in this permit.

STORMWATER CONDITIONS, CONTINUED

6. The following minimum BMPs must be implemented at all facilities:
- (a) Collection facilities shall be provided on-site, and arrangements shall be made for proper disposal of waste products, including but not limited to petroleum waste products, solid waste, de-icing products, and solvents, which may be exposed to stormwater. Keep storage bins for waste products covered to minimize contact with precipitation, where possible.
  - (b) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of stormwater from these substances. This might include, for example, utilizing drip pans under vehicles and equipment stored outdoors, covering fueling areas, using dry clean-up methods, use of absorbents, and cleaning pavement surfaces to remove oil and grease.
  - (c) Store all paints, solvents, petroleum products, petroleum waste products and storage containers (such as drums, cans, or cartons) so they are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit. Provide spill prevention, control, and countermeasures to prevent any spill of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall prevent the contamination of groundwater.
  - (d) Provide sediment and erosion control sufficient to minimize sediment loss off of the property, pollution of waters of the state, and to comply with the conditions of this permit, Missouri Clean Water Law, and the CWA. This may require the use of straw bales, silt fences, sediment basins, or other treatment structures. This may also require the construction of properly designed sediment basins or other treatment structures.
    - (1) Ensure that all erosion and sediment controls remain in effective operating condition.
    - (2) A sediment or erosion control measure needs maintenance to continue operating effectively. Wherever a problem is discovered, initiate efforts to fix it immediately. Complete such work by the end of the next work day when possible.
    - (3) When a sediment or erosion control must be completely replaced or significantly repaired, complete the work within seven (7) days unless infeasible. If seven days is infeasible, replacement or repair must be completed as soon as practicable.
  - (e) Provide good housekeeping practices on-site to keep solid waste from entering waters of the state. For example, direct stormwater away from areas where storage, loading and unloading, and material handling occur and perform good housekeeping to prevent the discharge discolored or otherwise impacted stormwater.
  - (f) Facilities shall manage materials (products, stockpiles, waste piles, etc.).
    - (1) Minimize erosion from soil or other stockpiles from stormwater and wind via a temporary cover where possible.
    - (2) Minimize sediment from stormwater that runs off stockpiles using sediment controls.
    - (3) Prevent stormwater flows from causing erosion of stockpiles, for example, by diverting flows around them.
    - (4) Facility shall ensure materials are not discharged off-site or into a water of the state during a high water event.
  - (g) Minimize the generation of dust and off-site tracking (track-out) of raw, final, or waste materials in order to minimize contact pollutants discharged in stormwater.
    - (1) Restrict vehicle traffic to designated and controlled exit points.
    - (2) Use stabilization techniques at all exit points onto paved roads
    - (3) Use additional controls to remove sediment from vehicle and equipment tires prior to exit from facility where necessary.
    - (4) Remove sediment that is tracked out of the facility onto paved roads by the end of the work day where possible.
  - (h) Minimize the accumulation of metals or aging equipment with visible rust in outdoor locations exposed to stormwater. Ensure metal equipment and scrap are stored indoors or in a covered container when possible.
  - (i) The drainage area around secondary containments and the interior of the secondary containments shall be inspected monthly. Solids, sludge, and soluble debris shall not be allowed to accumulate in the secondary containment.
  - (j) The drainage area around secondary containments and the interior of the secondary containments shall be inspected monthly. Records of inspection shall be stored with permit records. Solids, sludge, and soluble debris shall not be allowed to accumulate in the secondary containment.

LAND DISTURBANCE CONDITIONS

The facility will not be required to procure a separate general permit (MO-RA000000) for land disturbance activities which discharge through outfalls authorized in this permit if the following conditions are followed. If land disturbance activities discharge to any location other than through a permitted outfall, a separate MORA general permit or site specific permit is required. The general permit does not cover disturbance of contaminated soils.

1. Minimum Best Management Practices (BMPs) for land disturbance must prevent discharges from causing or contributing to an exceedance of water quality standards, including general criteria. All pollution prevention measures must be described in the SWPPP; at a minimum such measures must be designed, installed, implemented, and maintained to:
  - (a) Control stormwater volume and velocity to reduce peak flow rate at the facility and minimize erosion of the outlets, downstream channel, and stream banks.
  - (b) Installation of sediment controls necessary to prevent soil erosion at the project boundary must be complete prior to the start of all phases of land disturbance in areas where stormwater runoff may freely leave the site. For projects where perimeter controls are infeasible, other practices shall be implemented to minimize discharges to perimeter areas of the project.
  - (c) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property to comply with water quality criteria (narrative and numeric) and effluent limits or benchmarks contained in this permit.
  - (d) Minimize the amount of soil exposed during construction or land disturbance activity.
  - (e) Minimize the disturbance of steep slopes.
  - (f) Minimize sediment discharges from the project. Design, install, and maintain erosion and sediment controls addressing factors such as the amount, frequency, intensity, and duration of precipitation; the nature of resulting stormwater runoff; and soil characteristics, including the range of soil particle size expected to be present on the project;
  - (g) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal, and maximize stormwater infiltration and filtering unless infeasible;
  - (h) Unless infeasible, preserve topsoil, existing vegetation, and trees.
  - (i) Remove any sediment from perimeter controls per the manufacturer's instructions or before it has accumulated to one-half of the above-ground height of any perimeter control.
  - (j) For protection of surface waters of the state, the facility shall:
    - (1) Provide and maintain a 25-foot, undisturbed, natural buffer from any stream or property boundary;
    - (2) If less than 25 feet, provide and maintain an undisturbed natural buffer supplemented by erosion and sediment controls to achieve the sediment load reduction equivalent to a 25-foot undisturbed natural buffer; or
    - (3) If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 25-foot undisturbed natural buffer.
    - (4) Where retaining a buffer of any size, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the water. The ordinary high water mark of the water body, [33 CFR 328.3(c)(6)]; or the edge of the stream or river bank, bluff, or cliff, whichever is applicable.
  - (k) The facility shall ensure BMPs are properly installed at the locations and times specified in the SWPPP. Peripheral or border BMPs to control runoff from disturbed areas shall be installed or marked for preservation before general site clearing is started. Note, this requirement does not apply to earth disturbances related to initial site clearing for establishing entry, exit, and access of the site, which may require stormwater controls be installed immediately after the earth disturbance. For phased projects, BMPs shall be properly installed iteratively prior to construction activities. Stormwater discharges shall pass through an appropriate sediment control measure, such as a sedimentation basin, sediment traps, or silt fences, prior to leaving the land disturbance area.
  - (l) Stormwater control inlets susceptible to receiving sediment shall have curb inlet protection. Curb inlet protection shall be cleaned as needed and per manufacturer's specification when applicable.
  - (m) Where land disturbance stormwater will flow from a roadway, a sediment catching BMP such as a berm or silt fence shall be provided.
2. In addition to the SWPPP requirements found in the STORMWATER REQUIREMENTS section above, the following shall be included in a "Land Disturbance" section of the SWPPP:
  - (a) A list and description of selected BMPs in use for land disturbance at the site. The list shall include structural, operational, managerial, and procedural BMPs used or intended for use. Procedural BMPs are activities or behaviors such as street sweeping or good housekeeping techniques. Descriptions shall include whether the BMP is temporary or permanent; the site conditions required for effective use of the BMP (maximum slope, etc.); BMP installation/construction procedures, including representative drawings as necessary; and operation and maintenance procedures for the BMPs. Procedural BMPs shall be described based on frequency required, interval between executions, or other detailed site conditions or qualifying events shown to be applicable to each procedural BMP. The descriptions must indicate where and how BMPs will be implemented to address specific, variable site locations including but not limited to entry/exit, slopes, stream buffer zones, allowable dewatering activities, sediment stockpiles, and stabilization measures.

LAND DISTURBANCE CONDITIONS, CONTINUED

- (b) A description of any anticipated dewatering methods. The description shall include a detailed list of BMPs planned or implemented to treat water pumped from trenches and excavations. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by proper controls. In no case shall water from trenches or excavations be pumped off-site or into waters of the state without being treated by the specified BMPs, which must treat the water to comply with the narrative general water quality standards found in 10 CSR 20-7.031(4).
  - (c) Land disturbance areas shall be inspected at the same time as general inspections required in the STORMWATER REQUIREMENTS section, condition #7, above. In addition, the land disturbance BMPs will be inspected after the following conditions, and a record of the additional inspections will be kept with the SWPPP:
    - (1) At least once every seven calendar days and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour storm has ceased during a normal work day and within 72 hours if the rain event ceases during a non-work day such as a weekend or holiday; or
    - (2) Once every 14 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches of precipitation or greater or the occurrence of runoff from snowmelt. To determine if a storm event of 0.25 inches or greater has occurred on your site, the responsible individual must either keep a properly maintained rain gauge on site or obtain the storm event information from a weather station for the location.
    - (3) If inspections occur every 14 calendar days, there is a storm event at the site continuing for multiple days, and each day of the storm produces 0.25 inches or more of rain, the facility is required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.
    - (4) An individual must conduct an inspection within 24 hours once a storm event has produced 0.25 inches within a 24 hour period, even if the storm event is still continuing.
    - (5) The SWPPP must explain how the person responsible for erosion control will be notified when stormwater runoff occurs. If weather conditions prevent correction of BMPs within seven calendar days, the reasons for the delay must be documented (including pictures), and there must be a narrative explaining why the work cannot be accomplished within the seven day time period. The documentation must be filed with the regular inspection reports. The permittee shall correct the problem as soon as weather conditions allow.
    - (6) Areas on-site and finally stabilized must be inspected at least once per month and are not required to meet (1), (2), (3), and (4) above.
  - (d) A section recording the dates the land disturbance section of the SWPPP is updated and the purpose of the update. The land disturbance section of the SWPPP shall be updated when the design, operation, or maintenance of land disturbance BMPs are changed; when design of the land disturbance project is changed and could significantly alter the quality of stormwater discharges; facility site inspections indicate deficiencies in land disturbance BMPs, or the BMPs are found to be ineffective as minimizing and controlling erosion and sedimentation; or the Department notifies the facility in writing of deficiencies in land disturbance BMPs or the SWPPP, including notification that discharges from the site caused violations of water quality standards, including general criteria found at 10 CSR 20-7.031(4).
  - (e) The Land Reclamation Program shall be responsible for notifying each contractor or entity (including but not limited to utility crews, city employees or their agents, or other personnel) who will perform work which could impact stormwater runoff at the site. These notifications shall include notice of the existence of the SWPPP and what actions or precautions shall be taken while on-site to minimize the potential for erosion and the potential for damaging any BMP.
3. For disturbed areas:
- (a) For temporarily ceased soil disturbing activities on any portion of the project not resuming for a period exceeding 14 calendar days, the facility shall construct BMPs to establish interim stabilization, and stabilization must be initiated immediately and completed within 14 calendar days.
  - (b) For permanently ceased soil disturbing activities on any portion of the project, final stabilization of disturbed areas must be initiated immediately and completed within 14 calendar days. Allowances to the 14 day completion period for temporary and final stabilization may be made due to weather and equipment malfunctions. The use of allowances shall be documented in the SWPPP.
  - (c) Interim stabilization shall consist of well-established and maintained BMPs reasonably certain to protect waters of the state from sediment pollution over an extended period of time. This may require adding more BMPs to an area normally used during daily operations. These BMPs may include a combination of sediment basins, check dams, sediment fences, and/or mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed and the steepness of the slopes. If the slope of the area is greater than 4:1 (four feet horizontal to one foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, the permittee shall establish interim stabilization within seven days of ceasing operations on interim areas.
  - (d) If vegetative stabilization measures are being implemented, stabilization is considered "installed" when activities necessary to seed or plant the area are complete. Final stabilization is not considered achieved until vegetation is established. Two years of growing seasons may be required to ensure roots are fully established and vegetation and soils will not be washed away during high-precipitation storm events. If non-vegetative stabilization measures are being implemented, stabilization is considered "installed" when all such measures are implemented or applied.

STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Standard Conditions Part I dated August 01, 2014, hereby incorporated as though fully set forth herein.

PERMIT REQUIREMENTS

1. Electronic Discharge Monitoring Report (eDMR) Submission System. Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent monitoring data and any report required by the permit (unless specifically directed otherwise by the permit), shall be submitted via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data for the NPDES program. The eDMR system is currently the only Department-approved reporting method for this permit unless specified elsewhere in this permit, or a waiver is granted by the Department. The facility must register in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before the first report is due.
2. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (Section 644.055, RSMo). The fee structure can be found at 10 CSR 20-6.011.
3. Compliance with all requirements in this permit does not supersede nor remove liability for compliance with county and other local ordinances.
4. The laboratory results of all samples from a discharge collected and analyzed must be uploaded into the eDMR system.
5. Non-stormwater outfalls must be clearly marked in the field. Stormwater outfalls shall be, at a minimum, marked on a map kept with the SWPPP.
6. The permittee shall furnish to the Department, upon request, copies of records required to be kept according to the terms and conditions of this permit. Records may be maintained electronically and provided electronically through email if applicable.
7. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
  - (a) The alteration or addition could significantly change the nature or increase the quantity of pollutants in the discharge. This notification applies to pollutants subject to the effluent limitations of this permit as well as new pollutants different from pollutants listed in this permit; or
  - (b) The alteration or addition results in a significant change in disposal practices and may justify the application of permit conditions different from or absent in the current permit.
8. Before releasing water accumulated in petroleum secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen to protect the general criteria found at 10 CSR 20-7.031(4).
  - (a) If odor or sheen is found, the water shall not be discharged without treatment and shall be disposed of in accordance with legally approved methods, such as being sent to an accepting wastewater treatment facility.
  - (b) If the facility wishes to discharge the accumulated stormwater with hydrocarbon odor or presence of sheen, the water shall be treated using an appropriate removal method. Following treatment and before release, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream found in 10 CSR 20-7.031 Table A before discharge is authorized. Records of all testing and treatment of water accumulated in secondary containment shall be available on demand to the Department. Electronic records retention is acceptable.
9. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with RSMo 644.051.16 and the CWA section 402(k); however, this permit may be reopened and modified or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Clean Water Act Sections 301(b)(2)(C) and (D), §304(b)(2), and §307(a) (2) if the effluent standard or limitation so issued or approved contains different conditions or is otherwise more stringent than any effluent limitation in the permit or controls any pollutant not limited in the permit. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, termination, notice of planned changes, or anticipated non-compliance does not stay any permit condition.
10. Changes in Discharges of Toxic Substances. In addition to the reporting requirements under 40 CFR 122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Department as soon as they know or have reason to believe:
  - (a) An activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit if the discharge will exceed the highest of the following notification levels:

- 1) One hundred micrograms per liter (100 µg/L);
  - 2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
  - 3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
  - 4) One milligram per liter (1 mg/L) for antimony;
  - 5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
  - 6) The notification level established by the Department in accordance with 40 CFR 122.44(f).
- (b) An activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit if the discharge will exceed the highest of the following “notification levels”:
- 1) Five hundred micrograms per liter (500 µg/L);
  - 2) One milligram per liter (1 mg/L) for antimony;
  - 3) Ten (10) times the maximum concentration value reported for the pollutant in the permit application in accordance with §122.21(g)(7).
  - 4) The level established by the Director in accordance with §122.44(f).

#### 11. Reporting of Non-Detects.

- (a) Compliance analysis conducted by the permittee or any contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated. See sufficiently sensitive test method requirements in Standard Conditions Part I, Section A, #4 regarding proper testing and detection limits used for sample analysis. For the purposes of this permit, the definitions in 40 CFR 136 apply; method detection limit (MDL) and laboratory established reporting limit (RL) are used interchangeably in this permit.
- (b) The permittee shall not report a sample result as “non-detect” without also reporting the MDL. Reporting “non-detect” without also including the MDL will be considered failure to report, which is a violation of this permit.
- (c) For the daily maximum, the permittee shall report the highest value; if the highest value was a non-detect, use the less than “<” symbol and the laboratory’s highest method detection limit (MDL) or the highest reporting limit (RL); whichever is higher (e.g. <6).
- (d) When calculating monthly averages, zero shall be used in place of any value(s) not detected. Where all data used in the average are below the MDL or RL, the highest MDL or RL shall be reported as “<#” for the average as indicated in item (c).

#### PERMIT RENEWAL

1. Unless terminated, the permittee shall submit an application for the renewal of this permit by submitting *Form E-Application for General Permit* <https://dnr.mo.gov/document/form-e-application-general-permit-under-missouri-clean-water-law-mo-780-0795-0> no later than thirty (30) days prior to the permit’s expiration date.
2. When a facility submits a timely and complete application in accordance with 10 CSR 20-6.010(10)(C)1 and the Department is unable through no fault of the permittee to issue a renewal prior to expiration of the previous permit, the terms and conditions of the expired permit are administratively continued and will remain fully effective and enforceable until such time when a permit action is taken. Failure to submit a renewal application is a violation of the Missouri Clean Water Law. Failure to apply for renewal of a permit may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.
3. This facility must submit all corrective action reports completed for the last permit term if a benchmark exceedance occurred.

#### PERMIT TRANSFER

1. This permit may not be transferred to a new owner in any fashion except by submitting an *Application for Transfer of Operating Permit* <https://dnr.mo.gov/sites/dnr/files/vfc/2018/10/main/780-1517-f.pdf> signed by the current owner and future owner of the facility along with the appropriate modification fee. In some cases, revocation and reissuance may be necessary. Standard Condition Part 1, Subsection D.7 applies.
2. Facilities that have undergone transfers of ownership without prior notice to the Department will be considered to be operating without a permit.

#### PERMIT TERMINATION

1. Post-project sampling for instream water quality (see PRE-PROJECT AND POST-PROJECT SAMPLING REQUIREMENTS above) shall be submitted with the application for termination.
2. The permittee shall apply for permit termination when activities covered by this permit have ceased and no significant materials as defined by 10 CSR 20-6.200(1)(C)27 remain on the property or if on the property are stored in such a way as to have no

potential for pollution. Whenever a release or a potential for release from a permitted facility is permanently eliminated, the existing permit may be terminated.

3. Proper closure of any effluent storage structure is required prior to permit termination.
4. Permits do not terminate automatically upon expiration. In order to terminate this permit, the permittee shall notify the Department's appropriate regional office by completing and submitting *Request for Termination of Operating Permit* <https://dnr.mo.gov/document-search/request-termination-operating-permit-mo-780-2814> . The Department may require inspection of the premises prior to granting termination of a permit.

#### NOTICE OF RIGHT TO APPEAL

If you were adversely affected by this decision, you may be entitled to pursue an appeal before the administrative hearing commission (AHC) pursuant to Sections 621.250 and 644.051.6 RSMo. To appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Any appeal should be directed to:

Administrative Hearing Commission  
U.S. Post Office Building, Third Floor  
131 West High Street, P.O. Box 1557  
Jefferson City, MO 65102-1557  
Phone: 573-751-2422  
Fax: 573-751-5018  
Website: <https://ahc.mo.gov>

## **MISSOURI DEPARTMENT OF NATURAL RESOURCES FACT SHEET FOR MASTER GENERAL PERMIT MO-G05XXX**

The Federal Water Pollution Control Act [Clean Water Act (CWA)] Section 402 of Public Law 92-500 (as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the CWA). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (permit) are issued by the Missouri Department of Natural Resources (Department) under an approved program, operated in accordance with federal and state laws (Federal CWA and Missouri Clean Water Law Section 644 as amended). Permits are issued for a period of five (5) years unless otherwise specified.

Per 40 CFR 124.56, 40 CFR 124.8, and 10 CSR 20-6.020(1)(A)2., a Fact Sheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the permit. A Fact Sheet is not an enforceable part of an MSOP.

### **Part I – Facility Information**

Facility Type: Land Reclamation Land Disturbance and Dewatering  
Facility SIC Code(s): 9512, 1629

This permit is for Land Reclamation projects involving land disturbance and projects consisting solely of pond and shaft dewatering under control of the Missouri Department of Natural Resources, Land Reclamation Program. Surface discharges from these reclamation projects result from precipitation, including snow melt, runoff/impoundment discharges, and shaft pumping. These projects may also involve stockpiling aggregate, soil, or biosolids for reclamation use.

This permit establishes a SWPPP requirement with quarterly monitoring for pollutants of concern for all facilities covered under this permit. 10 CSR 20-6.200(7) specifies “general permits shall contain BMP requirements and/or monitoring and reporting requirements to keep the stormwater from becoming contaminated”. The requirements are established in accordance with 10 CSR 20-7.031 in a manner deemed protective of all possible receiving stream conditions. Specific local conditions are not considered when developing conditions for a general permit. A facility may apply for a site-specific permit if they desire a review of site-specific conditions.

The facilities eligible for this permit are the sites covered under the land reclamation or Abandoned Mine Land portion of the SMCRA, rather than under the regulatory program established within the same act. As such, these facilities are not subject to the coal mining Effluent Limit Guideline (ELG) 40 CFR 125.3(a). However, as portions of this ELG establish technology limits for abandoned mine reclamation areas, as this is extremely similar to activities authorized in this permit, the permit writer reviewed these technology limits and considered them when developing select limits and benchmarks within this permit.

#### **CLARIFICATION:**

- Definitions were added to this permit to clarify various terms used in the mining industry and in land reclamation activities.
- Clarified acid mine drainage is not authorized for discharge under this permit without treatment to meet limitations.
- Clarified this permit is not applicable to active mining sites, coal preparation plants, or associated areas.

#### **CHANGES TO THE RENEWAL OF THIS PERMIT INCLUDE:**

- Updated language throughout the permit to current permit language used by the Department.
- Updated applicability statements to current permit language.
- Clarified conditions which were ambiguous.
- Updated non-stormwater discharges covered by this permit, and included examples of excluded discharges.
- Oil water separator use for stormwater treatment is authorized by the permit.
- Updated requirements for spills, overflows, and unauthorized discharges.
- Added chloride and sulfate monitoring and limits to coal reclamation stormwater discharges.
- Updated benchmark requirements.
- Schedule of compliance for coal mine reclamation sites to meet chloride and sulfate and pH limits when dewatering.
- Updated SWPPP and site minimum BMP requirements.
- Added a section clarifying land disturbance requirements.
- Mine shaft pumping and processing area impoundment draining requirements have been combined into a single table.

## **Part II – Receiving Stream Information**

### **APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**

Per Missouri Effluent Regulations (10 CSR 20-7.015), the waters of the state are divided into seven (7) categories. This permit applies to facilities discharging to the following water body categories:

- Missouri or Mississippi River [10 CSR 20-7.015(2)]
- Lakes or Reservoirs [10 CSR 20-7.015(3)], excluding L1 lakes.
- Losing Streams [10 CSR 20-7.015(4)]
- Metropolitan No-Discharge Streams [10 CSR 20-7.015(5)], stormwater discharges only
- Special Streams [10 CSR 20-7.015(6)], stormwater discharges only to OSRW, no-discharge facilities only in ONRW
- Subsurface Waters [10 CSR 20-7.015(7)]
- All Other Waters [10 CSR 20-7.015(8)]

Missouri Water Quality Standards (10 CSR 20-7.031) defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1<sup>st</sup> classified receiving stream's beneficial water uses shall be maintained in accordance with 10 CSR 20-7.031(4). A general permit does not take into consideration site-specific conditions.

### **MIXING CONSIDERATIONS:**

This permit applies to receiving streams of varying low flow conditions. Therefore, the effluent limitations must be based on the smallest low flow streams considered, which includes waters without designated uses. As such, no mixing is allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)]. No Zone of Initial Dilution is allowed. [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

### **RECEIVING STREAM MONITORING REQUIREMENTS:**

This permit requires pre- and post-permit receiving stream monitoring. Please see PRE-PROJECT AND POST-PROJECT SAMPLING REQUIREMENTS in the permit for more information.

## **Part III – Rationale and Derivation of Effluent Limitations & Permit Conditions**

### **305(B) REPORT, 303(d) LIST, & TOTAL MAXIMUM DAILY LOAD (TMDL):**

Section 305(b) of the Federal CWA requires each state identify waters not meeting Water Quality Standards and for which adequate water pollution controls have not been required. Water Quality Standards protect such beneficial uses of water as whole body contact, maintaining fish and other aquatic life, and providing drinking water for people, livestock, and wildlife. The 303(d) list helps state and federal agencies keep track of waters which are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed which shall include the TMDL calculation. For facilities with an existing general permit before a TMDL is written on their receiving stream, the Department will evaluate the permit and may require any facility authorized by this general permit to apply for and obtain a site-specific operating permit. Requests for coverage of a new facility under this general permit will be evaluated on a case-by-case basis for facilities located within the watershed of an impaired water as designated on the 305(b) Report.

### **ANTI-BACKSLIDING:**

A provision in the Federal Regulations [CWA Section 303(d)(4); CWA Section 402(c); 40 CFR Part 122.44(I)] requires a reissued permit to be as stringent as the previous permit with some exceptions.

- ✓ Applicable: Limitations in this operating permit for the reissuance conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
- ✓ Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) which would have justified the application of a less stringent effluent limitation.
  - Five years of DMR data were available to support removal of some parameters. The permit writer determined arsenic, barium, chromium, cobalt, and mercury were not necessary for monitoring, as the data did not indicate they were pollutants of concern at the metallic minerals sites.
- ✓ The Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
  - Monthly averages were not implemented for stormwater outfalls in this permit as the discharge consists of only stormwater which is not continuous pursuant to 40 CFR 122.45(d). Further, average monthly limitations are impracticable measures of non-continuous stormwater discharges because they vary widely in frequency,

magnitude, and duration. This permit applies only acute short-term or daily maximum measures which represent stormwater discharges which are acute and sporadic in nature. Discharges of industrial stormwater rarely persist for long durations, making them impracticable to assess using measures with long term exposures or averaging periods. Last, the instream water quality target remains unchanged and the conditions of this permit are protective of both narrative and numeric water quality criteria.

- The previous permit special conditions contained a specific set of prohibitions related to general criteria (GC) found in 10 CSR 20-7.031(4); however, there was no determination as to whether the discharges have reasonable potential to cause or contribute to excursion of those general water quality criteria in the previous permit. This permit assesses each general criteria as listed in the previous permit's special conditions. Federal regulations 40 CFR 122.44(d)(1)(iii) requires instances where reasonable potential (RP) to cause or contribute to an exceedance of a water quality standard exists, a numeric limitation must be included in the permit. Rather than conducting the appropriate RP determination, the previous permit simply placed the prohibitions in the permit. These conditions were removed from the permit. Appropriate reasonable potential determinations were conducted for each general criterion listed in 10 CSR 20-7.031(4)(A) through (I) and effluent limitations were placed in the permit for those general criteria where it was determined the discharge had reasonable potential to cause or contribute to excursions of the general criteria. Specific effluent limitations were not included for those general criteria where it was determined the discharges will not cause or contribute to excursions of general criteria. Removal of the prohibitions does not reduce the protections of the permit or allow for impairment of the receiving stream. The permit maintains sufficient effluent limitations, monitoring requirements and best management practices to protect water quality while maintaining permit conditions applicable to permittee disclosures and in accordance with 10 CSR 20-7.031(4) where no water contaminant by itself or in combination with other substances shall prevent the water of the state from meeting the following conditions:
  - (A) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
    - ✓ For all outfalls, there is no RP for putrescent bottom deposits preventing full maintenance of beneficial uses because nothing in the research done by the permit writer on the industry indicates putrescent wastewater would be discharged from the facility.
    - ✓ For all outfalls, there is RP for unsightly or harmful bottom deposits preventing full maintenance of beneficial uses because of the nature of the activities on site. The primary activity is land disturbance, and the sites are likely to have large stockpiles of materials which are mobile in stormwater. The limits on settleable solids are maintained in this permit for both stormwater and wastewater discharges due to this reasonable potential. At metallic mineral outfalls, the limits are based on technology capabilities; however, it is believed these technology based limitations will also be protective of the receiving stream's water quality.
  - (B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses.
    - ✓ For all outfalls, there is no RP for oil in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing in the research done by the permit writer on the industry indicates oil will be present in sufficient amounts to impair beneficial uses. Oil and grease monitoring was added to stormwater requirements of all facility types for monitoring only, as the heavy truck traffic at these sites, as well as some flocculants used and stored onsite at some facilities, indicate this may be a pollutant of concern.
    - ✓ For all outfalls, there is no RP for scum and floating debris in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing in the research the permit writer did on the industry indicates scum and floating debris will be present in sufficient amounts to impair beneficial uses.
  - (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
    - ✓ For all outfalls, there is RP for unsightly color or turbidity in sufficient amounts preventing full maintenance of beneficial uses because of the nature of the industrial activity at the site. The primary activity is land disturbance, and the sites are likely to have large stockpiles of materials which are mobile in stormwater. The limits on total suspended solids (TSS) are maintained in this permit for both stormwater and wastewater discharges due to this reasonable potential. Some TSS limits in this permit were established by the permit writer based on a review of similar facilities regulated under a related Effluent Limitation Guideline (ELG) and based on technology; however, it is believed these technology limitations are also protective of water quality of the receiving streams.
    - ✓ For all outfalls, there is no RP for offensive odor in sufficient amounts preventing full maintenance of beneficial uses because nothing discovered in the research of the permit writer indicates offensive odor will be present in sufficient amounts to impair beneficial uses. Odor is not expected in stormwater discharges from this industry.
  - (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
    - ✓ The permit writer considered specific toxic pollutants when writing this permit. Numeric effluent limitations are included for those pollutants could be discharged in toxic amounts. These effluent limitations are protective of human health, animals, and aquatic life.

- (E) Waters shall maintain a level of water quality at their confluences to downstream waters that provides for the attainment and maintenance of the water quality standards of those downstream waters, including waters of another state.
    - This criteria was not assessed for antibacksliding as this is a new requirement, approved by the EPA on July 30, 2019.
  - (F) There shall be no significant human health hazard from incidental contact with the water.
    - ✓ Much like the condition above, the permit writer considered specific toxic pollutants when writing this permit, including those pollutants could cause human health hazards. The discharge is limited by numeric effluent limitations for those conditions could result in human health hazards.
  - (G) There shall be no acute toxicity to livestock or wildlife watering.
    - ✓ The permit writer considered specific toxic pollutants when writing this permit. Numeric effluent limitations are included for those pollutants could be discharged in toxic amounts. These effluent limitations are protective of livestock and wildlife watering.
  - (H) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.
    - ✓ For all outfalls, there is no RP for physical changes impairing the natural biological community because nothing found in research by the permit writer on the industry indicates discharges would cause physical changes to the receiving stream.
    - ✓ It has been established any chemical changes are covered by the specific numeric effluent limitations established in the permit.
    - ✓ For all outfalls, there is RP for hydrologic changes impairing the natural biological community as reclamation may include changing the hydrology of the site or area; however, all changes are controlled and approved as part of a reclamation activity, and receive US Army Corps of Engineer approval as needed. It is expected that any changes will long term improve the natural biological community of the area.
  - (I) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
    - ✓ The conditions of this permit, including SWPPP conditions, requires management of solid waste on site. Compliance with the conditions of this permit are expected to result with no reasonable potential to violate this criterion.
- The previous permit had a special condition stating: "There shall be no open burning of containers, cartons, and other wastes on-site." The permit writer has determined this special condition was outside the scope of NPDES permitting and was removed.
  - The previous permit had a special condition which indicated spills from hazardous waste substances must be reported to the department. However, this condition is covered under standard conditions therefore was removed from special conditions.
  - The previous permit's condition requiring the facility notify the appropriate regional office within five days if results of settleable solids exceeds 1.5 mL/L/hr has been removed. The permit writer believes the reporting requirements of standard conditions part I and corrective action reports (as required by the stormwater conditions of this permit) are sufficient to correct these exceedances. Additional notification to the regional offices is not required and would provide no additional benefit to the environment.
  - Language in the previous permit prohibited discharges within 2 miles of an OSRW, in the watershed of an ONRW, within 1000 ft up gradient of major reservoirs (L2), or within 2 miles upstream of biocriteria reference locations or critical habitats for endangered species. This setback language in the previous permit is believed to have been established to provide a buffer between the discharge and the above types receiving streams, thus reducing the potential for general water quality criteria to be violated by a facility's discharge. The language in this permit has been updated to reflect requirements in regulations and current permitting practices. The current setbacks are protective of the receiving streams' designated uses.

#### **ANTIDegradation:**

Antidegradation policies ensure protection of water quality for a particular water body on a pollutant by pollutant basis to ensure Water Quality Standards are maintained to support beneficial uses such as fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as an Outstanding National Resource Water or Outstanding State Resource Water [10 CSR 20-7.031(3)(C)]. Antidegradation policies are adopted to minimize adverse effects on water.

For stormwater discharges, the Department has determined the best avenue forward for implementing the Antidegradation requirements into general stormwater permits is by requiring the appropriate development and maintenance of a SWPPP. The SWPPP must identify all reasonable and effective Best Management Practices (BMPs), taking into account environmental impacts and costs. This analysis must document why no discharge or no exposure options are not feasible at the facility. This selection and documentation of appropriate control measures will then serve as the analysis of alternatives and fulfill the requirements of the Antidegradation Rule and Implementation Procedure 10 CSR 20-7.031(3) and 10 CSR 20-7.015(9)(A)5.

Any facility seeking coverage under this permit which undergoes expansion or discharges a new pollutant of concern must update their SWPPP and select reasonable and cost effective new BMPs. New facilities seeking coverage under this permit are required to develop a SWPPP including this analysis and documentation of appropriate BMPs. Renewal of coverage for a facility requires a review of the SWPPP to ensure the selected BMPs continue to be appropriate. The facility must review and maintain stormwater BMPs as appropriate.

For wastewater discharges under this permit, the facilities are expected to be remediating the land and water of the area; while the anticipated discharges are technically “new”, they are anticipated to be short term, consist mostly of land disturbance stormwater, and ultimately improve water quality in the immediate receiving streams and surrounding areas. A full antidegradation review is not required for each of these discharges, as the pollutants of concern are known and limited in the permit.

#### **BENCHMARKS:**

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer. Benchmarks require the facility to monitor and, if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective actions may be necessary to comply with the limitations of the permit.

Because of the fleeting nature of stormwater discharges, the Department, under the direction of EPA guidance, determined monthly averages are typically unpredictable measures of stormwater discharges. The Technical Support Document for Water Quality Based Toxics Control (EPA/505/2-90-001; 1991) Section 3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater only outfalls will generally only contain a maximum daily limit (MDL) or benchmark determined by the site-specific conditions including the receiving water’s current quality.

Numeric benchmark values are based on water quality standards or other stormwater permits including the Environmental Protection Agency’s (EPA’s) Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP). Because precipitation events are sudden and momentary, benchmarks based on state or federal standards or recommendations use the Criteria Maximum Concentration (CMC) value, or acute standard. The CMC is the estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The CMC for aquatic life is intended to be protective of the vast majority of the aquatic communities in the United States.

- ✓ Applicable; this permit contains benchmark requirements.

#### **BEST MANAGEMENT PRACTICES:**

Minimum site-wide best management practices are established in this permit to ensure all permittees are managing their sites equally to protect waters of the state from certain activities which could cause negative effects in receiving water bodies. While not all sites require a SWPPP because the SIC codes are specifically exempted in 40 CFR 122.26(b)(14), these best management practices are not specifically included for stormwater purposes. These practices are minimum requirements for all industrial sites to protect waters of the state. If the minimum best management practices are not followed, the facility may violate general criteria [10 CSR 20-7.031(4)]. Statutes are applicable to all permitted facilities in the state; therefore, pollutants cannot be released unless in accordance with RSMo 644.011 and 644.016 (17).

#### **CHANGES IN DISCHARGES OF TOXIC POLLUTANT:**

This special condition reiterates the federal rules found in 40 CFR 122.44(f) and 122.42(a)(1). In these rules, the facility is required to report changes in amounts of toxic substances discharged. Toxic substances are defined in 40 CFR 122.2 as “...any pollutant listed as toxic under section 307(a)(1) or, in the case of “sludge use or disposal practices,” any pollutant identified in regulations implementing section 405(d) of the CWA.” Section 307 of the clean water act then refers to those parameters found in 40 CFR 401.15. The permittee should also consider any other toxic pollutant in the discharge as reportable under this condition.

**DOMESTIC WASTEWATER, SLUDGE, AND BIOSOLIDS:** Domestic wastewater is defined as wastewater (i.e., human sewage) originating primarily from the sanitary conveyances of bathrooms and kitchens. Domestic wastewater excludes stormwater, animal waste, process waste, and other similar waste.

- ✓ Not applicable; this permit does not authorize discharge of domestic waste, sludge, or biosolids. This includes discharges to onsite lagoons. If a facility has an onsite lagoon, they may need to obtain a separate general or site specific permit to cover discharges or land application from this structure.

Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for productive use (i.e. fertilizer) and after having pathogens removed.

- ✓ Not applicable; this permit does not authorize discharge or land application of biosolids or sludge. A separate permit must be obtained for these activities, either general or site specific.

#### **EFFLUENT LIMITATION GUIDELINE:**

Effluent Limitation Guidelines, or ELGs, are found at 40 CFR 400-499. These are limitations established by the EPA based on the SIC code and the type of work a facility is conducting. Most ELGs are for process wastewater and some address stormwater. All are technology based limitations which must be met by the applicable facility at all times.

- ✓ The facilities eligible for this permit are the sites covered under the land reclamation or Abandoned Mine Land portion of the SMCRA, rather than under the regulatory program established within the same act. As such, these facilities are not subject to the coal mining Effluent Limit Guideline (ELG) 40 CFR 125.3(a). However, as portions of this ELG establish technology limits for abandoned mine reclamation areas; as this is extremely similar to activities authorized in this permit, the permit writer reviewed these technology limits and used them to develop limits and benchmarks within this permit.

#### **ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:**

The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The final rule requires regulated entities and state and federal regulators to use information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing paper reports. To comply with the federal rule, the Department is requiring all permittees to begin submitting discharge monitoring data and reports online.

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a permittee must first submit an eDMR Waiver Request Form: <https://dnr.mo.gov/document-search/electronic-discharge-monitoring-report-waiver-request-form-mo-780-2692>. A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is not transferable.

The Department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 124.27(a)]. During the Department review period as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The Department will enter data submitted in hard-copy from those facilities allowed to do so and electronically submit the data to the EPA on behalf of the facility.

To assist the facility in entering data into the eDMR system, the permit describes limit sets in each table in Part A of the permit. The data entry personnel should use these identifiers to ensure data entry is being completed appropriately.

#### **GENERAL CRITERIA CONSIDERATIONS:**

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants determined to cause, have reasonable potential to cause, or to contribute to, an excursion above any water quality standard, including narrative water quality criteria. In order to comply with this regulation, the permit writer has completed a reasonable potential determination on whether discharges have reasonable potential to cause, or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). In instances where reasonable potential exists, the permit includes limitations within the permit to address the reasonable potential. In discharges where reasonable potential does not exist, the permit may include monitoring to later determine the discharge's potential to impact the narrative criteria. Additionally, RSMo 644.076.1, as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit state it shall be unlawful for any person to cause or allow any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule, or regulation promulgated by the commission.

#### **LAND APPLICATION:**

Land application, or surficial dispersion of wastewater and/or sludge, is performed by facilities to maintain a basin as no-discharge. Requirements for these types of operations are found in 10 CSR 20-6.015; authority to regulate these activities is from RSMo 644.026.

- ✓ Not applicable; this permit does not authorize operation of a surficial land application system to disperse wastewater or sludge.

#### **LAND DISTURBANCE:**

Land disturbance, sometimes called construction activities, are actions which cause disturbance of the root layer or soil; these include clearing, grading, and excavating of the land. 40 CFR 122.26(b)(14) and 10 CSR 20-6.200(3) requires permit coverage for these activities. Coverage is not required for facilities when only providing maintenance of original line and grade, hydraulic capacity, or to continue the original purpose of the facility.

- ✓ Applicable; this permit provides coverage for land disturbance activities. These activities have SWPPP requirements and may be combined with the standard site SWPPP.

- Land disturbance BMPs should be designed to control the expected peak discharges. To calculate peak discharges, the website <https://www.lmnoeng.com/Hydrology/rational.php> has the rational equation to calculate expected discharge volume from the peak storm events.

**MAJOR WATER USER:**

Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. All major water users are required by law to register water use annually (Missouri Revised Statutes Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). <https://dnr.mo.gov/document-search/frequently-asked-major-water-user-questions-pub2236/pub2236>

- ✓ Facilities meeting this definition must register with the Water Resources Center as soon as possible. <https://apps5.mo.gov/MWU/>

**NUTRIENT MONITORING:**

Nutrient monitoring is required for facilities characteristically or expected to discharge nutrients (nitrogenous compounds and/or phosphorus) when the design flow is equal to or greater than 0.1 MGD per 10 CSR 20-7.015(9)(D)8.

- ✓ This industry is not expected to have nutrients present in the discharge; therefore, no nutrient monitoring is required at this time.

**OIL/WATER SEPARATORS:**

Oil water separator (OWS) tank systems are frequently found at industrial sites where process water and stormwater may contain oils and greases, oily wastewaters, or other immiscible liquids requiring separation. Food industry discharges typically require pretreatment prior to discharge to municipally owned treatment works. Per 10 CSR 26-2.010(2)(B), all oil water separator tanks must be operated according to manufacturer's specifications and authorized in NPDES permits per 10 CSR 26-2.010(2) or may be regulated as a petroleum tank.

- ✓ Applicable; this permit authorizes the operation of OWS for the treatment of stormwater without the requirement to obtain a separate permit. If the OWS treats water other than precipitation which has run across the property (non-precipitation discharges include: wash water, effluent from shop drains, drips, spills, etc.) the facility must obtain an MOG14 or site specific permit to cover the discharges.

**OPERATOR CERTIFICATION REQUIREMENTS:**

As per 10 CSR 20-6.010(8) Terms and Conditions of a Permit, permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation.

- ✓ Not applicable; the facilities covered under this permit are not required to have a certified operator.

**PRETREATMENT PROGRAM:**

This permit does not regulate pretreatment requirements for facilities discharging to an accepting permitted wastewater treatment facility. If applicable, the receiving entity (the publicly owned treatment works - POTW) must ensure compliance with any effluent limitation guidelines for pretreatment listed in 40 CFR Subchapter N per 10 CSR 20-6.100. Pretreatment regulations per RSMo 644.016 are limitations on the introduction of pollutants or water contaminants into publicly owned treatment works or facilities.

- ✓ Not Applicable; the facilities covered under this permit, at this time, are not required to meet pretreatment requirements under an ELG.

**PUBLIC NOTICE OF COVERAGE FOR AN INDIVIDUAL FACILITY:**

Public Notice of reissuance of coverage is not required unless the facility is a specific type of facility as defined in 10 CSR 20-6.200(1). The need for an individual public notification process shall be determined and identified in the permit [10 CSR 20-6.020(1)(C)5.].

- ✓ Not applicable; public notice is not required for issuance of coverage under this permit to individual facilities for the first time.

**REASONABLE POTENTIAL ANALYSIS (RPA):**

Federal regulation 40 CFR Part 122.44(d)(1)(i) requires effluent limitations for all pollutants which are or may be discharged at a level which will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard. In accordance with 40 CFR Part 122.44(d)(iii) if the permit writer determines any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the water quality standard, the permit must contain effluent limits for the pollutant.

- ✓ Conservative assumption; a traditional statistical Reasonable Potential Analysis has not been conducted for this master general permit; but instead the Department has made a reasonable potential determination based on sources of pollutants related to water quality standards. Activities performed by facilities covered under this master general permit were evaluated as to whether discharges have reasonable potential to cause or contribute to excursions of general criteria listed in 10 CSR 20-7.031(4). A reasonable potential to violate water quality standards is assumed for certain pollutants of concern due to the nature of the

activities carried out under this permit, resulting in the effluent limits contained in the permit for those pollutants. See the individual parameter descriptions below for more information on the limitation basis.

- ✓ The permit writer reviewed industry materials, available DMR data, available past inspections, and other documents and research to evaluate general and narrative water quality reasonable potential for this permit. Permit writers also use the Department's permit writer's manual (<https://dnr.mo.gov/water/business-industry-other-entities/technical-assistance-guidance/wastewater-permit-writers-manual>), the EPA's permit writer's manual (<https://www.epa.gov/npdes/npdes-permit-writers-manual>), program policies, and best professional judgment. For each parameter in each permit, the permit writer carefully considers all applicable information regarding technology based effluent limitations, effluent limitation guidelines, and water quality standards. Best professional judgment is based on the experience of the permit writer, cohorts in the Department and resources at the EPA, research, and maintaining continuity of permits if necessary.

#### **SCHEDULE OF COMPLIANCE (SOC):**

Per § 644.051, RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. An SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR 122.2. For new effluent limitations, the permit may include interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR 122.47(a)(1) and 10 CSR 20-7.031(11), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, an SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

- ✓ Applicable: This permit contains a three (3) year SOC for chlorides and sulfates and pH in mine dewatering effluent at existing coal mine reclamation facilities. This SOC provides ample time for renewal facilities to sample discharges, evaluate compliance with the effluent limitations, and take corrective action as necessary. The schedule of compliance applies only to facilities currently operating under this permit. All new facilities will be immediately subject to the limitations for chlorides and sulfates and pH.

#### **SETBACKS:**

Setbacks are common elements of permits and are established to provide a margin of safety in order to protect the receiving water from accidents, spills, unusual events, etc.

- ✓ Discharge to the watersheds of a Metropolitan No-Discharge Stream (10 CSR 20-7.031 Table F) for stormwater only is authorized by this permit, if the discharges are in compliance with 10 CSR 20-7.015(5) and 10 CSR 20-7.031(7). Discharges to these watersheds are authorized for uncontaminated stormwater discharges only. Certain non-stormwater discharges are authorized under this permit, many are not allowed to discharge to these watersheds; see Special Conditions #5 and #16 in the permit for more information. Impoundment dewatering effluent is not authorized for discharge into Metropolitan No Discharge streams' watersheds.
- ✓ This permit does not authorize discharges which are located in a way to allow water to be released into sinkholes, caves, fissures, or other openings in the ground which could drain into aquifers (except losing streams) per 10 CSR 20-7.015(7). The previous permit did not authorize discharges to losing streams; however, this was reassessed by the permit writer and found to have no support in regulation for stormwater discharges. It is the best professional judgment of the permit writer to allow discharges to losing streams as the effluent is stormwater only. This permit continues to prohibit the discharge of effluent to sinkholes or other ground openings which empty directly to groundwater. The issuing authority will assess whether a discharge from a facility is eligible for this permit based on the distance from a sinkhole and the likelihood of effluent having reasonable potential to enter and affect groundwater.
- ✓ This permit does not authorize the discharge of industrial wastewater into the watersheds on lakes and reservoirs that are designated as L1, per 10 CSR 20-7.015(3)(C). Stormwater only discharges are allowed in these watersheds so long as water quality is preserved.
- ✓ This permit authorizes stormwater discharge in Outstanding state Resource Waters (OSRW) so long as no degradation of water quality occurs in the OSRW due to discharges from the permitted facility per 10 CSR 20-7.015(6)(B) and 10 CSR 20-7.031(3)(C). The previous permit did not authorize these discharges; however, the permit writer has determined these discharges are acceptable as long as they do not cause degradation to the receiving stream. The Antidegradation Analysis performed by the facility for the SWPPP should include the determination of no degradation. Additionally, if the facility is found to be causing degradation during an inspection or through complaint investigations, they will be required to become a no discharge facility or obtain a site specific permit with more stringent monitoring and SWPPP requirements. Wastewater is not authorized for discharge in these watersheds.
- ✓ For facilities operating within the watershed of Outstanding National Resource Water, which includes the Ozark National Riverways and the National Wild and Scenic Rivers System, no discharge facilities are authorized. This includes no-discharge of stormwater.
- ✓ Facilities located within the watershed of an impaired water as designated in the 305(b) Report must be evaluated on a case-by-case basis for inclusion under this permit. Facilities found to be discharging the listed pollutant(s) of concern for any impaired

water may be required to obtain a site-specific permit. Missouri's impaired waters can be found at <https://dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/impaired-waters>. The pollutants of concern at the facilities covered under this permit are found in Tables A1, A2, and B. The Department will assess the pollutants of concern for impaired waters on the 305(b) report and evaluate the reasonable potential for the facility to cause further impairment to the receiving stream. If the facility is not expected to cause further impairment to the receiving stream, this general permit may be issued to the facility.

#### **SLUDGE – DOMESTIC BIOSOLIDS:**

Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for beneficial use (i.e. fertilizer). Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. <https://extension.missouri.edu/publications/eq421>

✓ This permit does not authorize discharge or land application of biosolids. Sludge/biosolids must be removed by contract hauler, incinerated, stored in the lagoon, etc.

#### **SLUDGE – INDUSTRIAL:**

Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and a material derived from industrial sludge.

✓ Not applicable; sludge is not generated by this industry.

#### **SPILL REPORTING:**

Any emergency involving a hazardous substance must be reported to the Department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. These reporting requirements apply when the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I.

<https://revisor.mo.gov/main/OneSection.aspx?section=260.500&bid=13989&hl>.

Underground and above ground storage devices for petroleum products, vegetable oils, and animal fats may be subject to control under SPCC and are expected to be managed under those provisions, if applicable. Substances regulated by federal law under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) which are transported, stored, or used for maintenance, cleaning or repair shall be managed according to the provisions of RCRA and CERCLA.

#### **STANDARD CONDITIONS:**

The standard conditions Part I attached to this permit incorporate all sections of 40 CFR 122.41(a) through (n) by reference as required by law. These conditions, in addition to the conditions enumerated within the permit should be reviewed by the permittee to ascertain compliance with this permit, state regulations, state statutes, federal regulations, and the Clean Water Act.

#### **STORMWATER POLLUTION PREVENTION PLAN (SWPPP):**

In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 [https://www.epa.gov/sites/production/files/2015-11/documents/swppp\\_guide\\_industrial\\_2015.pdf](https://www.epa.gov/sites/production/files/2015-11/documents/swppp_guide_industrial_2015.pdf), BMPs are measures or practices used to reduce the amount of pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to 1) identify sources of pollution or contamination, and 2) select and carry out actions which prevent or control the pollution of storm water discharges. Additional information can be found in *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-006; September 1992).

A SWPPP must be prepared if the SIC code for the facility is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all

encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include but is not limited to minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established. The EPA has developed factsheets on the pollutants of concern for specific industries along with the BMPs to control and minimize stormwater (<https://www.epa.gov/npdes/stormwater-discharges-industrial-activities>). Along with EPA's factsheets, the International Stormwater BMP database (<http://bmpdatabase.org>) may provide guidance on BMPs appropriate for specific industries.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. For further guidance, consult the antidegradation implementation procedure (<https://dnr.mo.gov/document-search/antidegradation-implementation-procedure>). Alternative analysis evaluation of the BMPs is a structured evaluation of BMPs which are reasonable and cost effective. The alternative analysis evaluation should include practices designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of *Antidegradation Implementation Procedure* defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why "no discharge" or "no exposure" is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure*, Section II.B.

If parameter-specific numeric benchmark exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review; and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the Department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of modification site-specific permit application, which includes an appropriate fee; the Form A and Form C applications are found at: <https://dnr.mo.gov/forms-applications>

✓ Applicable: A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate control practices specific to site conditions, and provide for maintenance and adherence to the plan.

#### **UNDERGROUND INJECTION CONTROL (UIC):**

The UIC program for all classes of wells in the State of Missouri is administered by the Missouri Department of Natural Resources and approved by EPA pursuant to section 1422 and 1425 of the Safe Drinking Water Act (SDWA) and 40 CFR 147 Subpart AA. Injection wells are classified based on the liquids which are being injected. Class I wells are hazardous waste wells which are banned by RSMo 577.155; Class II wells are established for oil and natural gas production; Class III wells are used to inject fluids to extract minerals; Class IV wells are also banned by Missouri in RSMo 577.155; Class V wells are shallow injection wells; some examples are heat pump wells and groundwater remediation wells. Domestic wastewater being disposed of sub-surface is also considered a Class V well. In accordance with 40 CFR 144.82, construction, operation, maintenance, conversion, plugging, or closure of injection wells shall not cause movement of fluids containing any contaminant into Underground Sources of Drinking Water (USDW) if the presence of any contaminant may cause a violation of drinking water standards or groundwater standards under 10 CSR 20-7.031, or other health based standards, or may otherwise adversely affect human health. If the Department finds the injection activity may endanger USDWs, the Department may require closure of the injection wells or other actions listed in 40 CFR 144.12(c), (d), or (e). In accordance with 40 CFR 144.26, the permittee shall submit a Class V Well Inventory Form for each active or new underground injection well drilled, or when the status of a well changes, to the Missouri Department of Natural Resources, Geological Survey Program, P.O. Box 250, Rolla, Missouri 65402. The Class V Well Inventory Form can be requested from the Geological Survey Program or can be found at the following web address: <https://dnr.mo.gov/document-search/class-v-well-inventory-form-mo-780-1774>.

- ✓ Not applicable; this permit does not authorize subsurface wastewater systems or other underground injection. These activities must be assessed under an application for a site specific permit.

**VARIANCE:**

Per the Missouri Clean Water Law Section 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law Section 644.006 to 644.141 or any standard, rule, or regulation promulgated pursuant to Missouri Clean Water Law Section 644.006 to 644.141.

- ✓ Not Applicable: This permit is not drafted under premises of a petition for variance.

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITATIONS:**

Per 10 CSR 20-2.010(78), the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant which may be discharged into the stream without endangering its water quality. Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA’s Technical Support Document For Water Quality-based Toxics Control (TSD) (EPA/505/2-90-001).

- ✓ Not applicable; water quality limitations based on TSD methods were not applied in this permit. See individual parameter descriptions for limit derivation methods.

**WATER QUALITY STANDARDS:**

Per 10 CSR 20-7.031(4), General Criteria shall be applicable to all waters of the state at all times, including mixing zones. Additionally, 40 CFR 122.44(d)(1) directs the Department to include in each NPDES permit conditions to achieve water quality established under Section 303 of the CWA, including state narrative criteria for water quality.

**WHOLE EFFLUENT TOXICITY (WET) TEST:**

Per 10 CSR 20-7.031(1)(FF), a toxicity test conducted under specified laboratory conditions on specific indicator organism; and per 40 CFR 122.2, the aggregate toxic effect of an effluent measured directly by a toxicity test. A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with, or through synergistic responses when mixed with receiving water.

- ✓ Not Applicable: At this time, permittees are not required to conduct a WET test.

**Part IV – Effluent Limitations Determination**

Any flow through the outfall is considered a discharge and must be sampled and reported as provided below. Future permit action due to permit modification may contain new operating permit terms and conditions which supersede the terms and conditions, including effluent limitations, of this operating permit. Daily maximums and monthly averages are required per 40 CFR 122.45(d)(1) for continuous discharges (not from a POTW).

**EFFLUENT LIMITATIONS FOR TABLE A1 & A2:**

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVERAGE/ BENCHMARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
STORMWATER FOR COAL MINE LAND DISTURBANCE			BENCHMARK				
FLOW	MGD	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	24 Hr. TOT
CHLORIDE	mg/L	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHLORIDE + SULFATE	mg/L	**	1,000	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
pH	SU	6.0-9.0	-	*/*	ONCE/QUARTER	ONCE/QUARTER	GRAB
SETTLABLE SOLIDS (SS)	mL/L/hr	*	1.5	1.5/1.0	ONCE/QUARTER	ONCE/QUARTER	GRAB
SULFATE	mg/L	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOTAL SUSPENDEED SOLIDS (TSS)	mg/L	**	100	100/50	ONCE/QUARTER	ONCE/QUARTER	GRAB
COAL MINE SHAFT PUMPING, MINE DRAINING, AND PROCESSING AREA IMPOUNDMENTS			MONTHLY AVERAGE				
FLOW	MGD	*	*	SAME	‡‡	ONCE/MONTH	24 HR EST.
CHLORIDE	mg/L	*	*	NEW	‡‡	ONCE/MONTH	GRAB

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVERAGE/ BENCHMARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
CHLORIDE + SULFATE	mg/L	1,000	*	NEW	‡‡	ONCE/MONTH	GRAB
IRON, TR	µg/L	7,000	1,000	7,000/3,500	‡‡	ONCE/MONTH	GRAB
MANGANESE, TR ‡	µg/L	4,000	2,000	NEW	‡‡	ONCE/MONTH	GRAB
pH †	SU	6.5-9.0	-	*/*	‡‡	ONCE/MONTH	GRAB
SETTLABLE SOLIDS	mL/L/hr	1.5	1.0	SAME	‡‡	ONCE/MONTH	GRAB
SPECIFIC CONDUCTANCE	µmhos/cm	*	*	SAME	‡‡	ONCE/MONTH	GRAB
SULFATE	mg/L	*	-	SAME	‡‡	ONCE/MONTH	GRAB
TOTAL SUSPENDED SOLIDS	mg/L	100	50	SAME	‡‡	ONCE/MONTH	GRAB

\* Monitoring and reporting requirement only

\*\* Monitoring with associated benchmark

† Report the minimum and maximum pH values; pH is not to be averaged

‡ The effluent shall be tested prior to discharge for pH and iron to determine if it meets the definition of “acid mine drainage.” (see definitions in permit above.) Monitoring and limitations for manganese are required only when the drainage is classified as “acid mine drainage”. If it does not meet the definition of acid mine drainage, “conditional monitoring not required this period” may be reported for this parameter. The NODI code for this in eDMR is AG.

‡‡ Monitoring is required once/month during discharge of the impoundment, with once/day monitoring required when the total depth of the impoundment or shaft surface water reaches 1 foot or less. The first reported monthly sample shall be a dip sample taken prior to discharging from the impoundment for the first time. In the case of both abandoned coal mine and metallic mineral shafts, if the impoundment is less than 150 feet in length, one grab sample from the midpoint is an adequate sample. If the impoundment is longer than 150 feet, three grab samples shall be taken, one near each end and one near the midpoint. All discharges from the impoundment must not exceed pre-project instream water quality monitoring results. If the pre-project water quality or impoundment monitoring results indicate pollutants at levels above the limits in this permit, the facility should contact the Water Protection Program to discuss next steps for discharging, including possible alternative limits. Alternative limits shall not, in any case, cause general narrative water quality standard excursions. eDMR will accept only one value per parameter when entering data. All additional daily data shall be uploaded as an attachment to the monthly report. The daily monitoring requirement does not apply to temporary impoundments created by reclamation contractors.

NEW Parameter not established in previous state operating permit

TR Total Recoverable

## DERIVATION AND DISCUSSION OF LIMITS, STORMWATER FOR COAL MINE LAND DISTURBANCE:

### Flow

In accordance with [40 CFR Part 122.44(i)(1)(ii)] the estimated volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain estimated effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD).

### Chloride, Sulfate, Chloride + Sulfate

Chloride, Sulfate: Quarterly Monitoring/Reporting

Chloride + Sulfate: Quarterly Monitoring with a 1,000 mg/L Benchmark

Sulfate is a pollutant of concern at coal mines and thus reclamation sites. It’s found in high quantities in coal and in the surrounding soils due to mingling. In Missouri, water quality standards for sulfates alone are not found; however, there is a water quality standard for the combined chlorides and sulfates. Therefore, in this permit, monitoring and reporting is required of both chlorides and sulfates and the totaled sum of both. The benchmark of 1,000 mg/L is considered technologically feasible by sites operating standard BMP technologies designed to control and prevent the discharge of sediment, which is often a vehicle for chloride and sulfate in stormwater.

### pH

6.0 to 9.0 SU. Technology based limits, established using the permit writer’s best professional judgment and based on similar site technology limitations found in a relevant, if not directly applicable ELG, 40 CFR 434 Subpart F. The previous permit required monitoring only but these limitations are reasonable technology limitations that permittees should be able to meet until implementation of the water quality standard limits for this parameter. The permit writer determines these limitations are also sufficiently protective of water quality given the dilution provided by rain events in the receiving streams.

### Settleable Solids (SS)

Previous permit limits continued, but limits were switched to benchmarks for stormwater. The previous permit required a daily maximum limit of 1.5 mL/L/hr and a monthly average limit of 1.0 mL/L/hr. There is no numeric water quality standard for SS;

however, sediment discharges can negatively impact aquatic life. Increased settleable solids are known to interfere with multiple stages of the life cycle in many benthic organisms. For example, they can smother eggs and young or clog the crevasses benthic organisms use for habitat. Settleable solids are also a valuable indicator parameter. Solids monitoring allows the facility to identify increases in sediment and solids indicating uncontrolled materials leaving the site. Furthermore, settleable solids in stormwater are a valuable indicator parameter. Solids monitoring allows the facility to identify increases in sediment and solids may indicate uncontrolled materials leaving the site. The benchmark value falls within the range of values implemented in other permits having similar industrial activities

### **Total Suspended Solids (TSS)**

Daily maximum limit of 100 mg/L. The previous permit required a daily maximum limit of 100 mg/L, with a monthly average limit of 50 mg/L. Monthly average limitations are removed from stormwater in this permit (see the Antidegradation section of the fact sheet above for more information) and switched to benchmarks. Solids are a primary pollutant of concern in stormwater at these sites, which largely consist of land disturbance stormwater. There is no numeric water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS indicating uncontrolled materials leaving the site. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution. The permit writer has determined maintaining the 100 mg/L daily maximum benchmark limit for this pollutant is an appropriate and relevant control. The TSS technology limit in the ELG 40 CFR 434 Subpart E was considered but was deemed less relevant as the facilities eligible for this permit are those eligible for the Land Reclamation Program, meaning no active mining has occurred in at least 40 years. As such, the more typical stormwater TSS benchmark of 100 mg/L was deemed appropriate.

## **DERIVATION AND DISCUSSION OF LIMITS, COAL MINE SHAFT PUMPING, MINE DRAINING, AND PROCESSING AREA IMPOUNDMENTS:**

### **Flow**

In accordance with [40 CFR Part 122.44(i)(1)(ii)] the estimated volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain estimated effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD).

### **Chloride, Sulfate, Chloride + Sulfate**

Chloride, Sulfate: Monitoring/Reporting only

Chloride + Sulfate: 1,000 mg/L Daily Maximum Limit

Sulfate is a pollutant of concern at coal mines and thus reclamation sites. It's found in high quantities in coal and in the surrounding soils due to mingling. In Missouri, water quality standards for sulfates alone are not found; however, there is a water quality standard for the combined chlorides and sulfates. Therefore, in this permit, we require monitoring and reporting of both chlorides and sulfates and the totaled sum of both. DMR data from these facilities indicated levels of chloride + sulfate above the water quality standard; therefore, limits are required to protect water quality standards found in 10 CSR 20-7.031. A three year schedule of compliance is provided to existing facilities to meet these limitations.

### **Iron, Total Recoverable**

Daily maximum limit of 7,000 µg/L with a monthly average limit of 1,000 µg/L. The previous permit had a daily maximum limit of 7,000 µg/L with a monthly average limit of 3,500 µg/L. The permit writer believes the previous limits were based on those found in the ELG; however, the fact sheet of the previous permit did not explain the source. The permit writer reviewed the available data for the discharges and found reasonable potential for the exceedance of chronic total recoverable iron in stream with data as high as 3,880 µg/L reported. The water quality standards found at 10 CSR 20-7.031 Table A1 indicate the chronic standard for iron for the protection of aquatic life to be 1,000 µg/L. However, acute standards are not assigned. The permit writer determined that a technology limit based on the ELG 40 CFR 434 Subpart E for similar sites is a reasonable technology limit for the acute standard for iron. A schedule of compliance is offered to existing facilities to meet the new water quality based limitations based on the chronic water quality standards. The 7,000 µg/L limit may also be a level around which staining or discoloration of discharges may occur (staining and discoloration of surface water occur at highly variable levels); therefore, the facilities should implement visual inspections to ensure compliance with the general narrative water quality standards. Narrative water quality standards must not be violated, even if the facility is in compliance with the benchmarks or limitations in this permit.

### **pH**

6.5 to 9.0 SU, new to this permit. The previous permit required monitoring only. The wastewater flows from these facilities do not receive the dilution provided during rain events; therefore, the permit writer believes there is reasonable potential to exceed water quality standards in stream. As there is reasonable potential, the more stringent of either water quality or technology must be applied; therefore, water quality limitations are applied. Existing facilities are provided a 3 year schedule of compliance to

meet the new limits; however, these sites are similar in operation to other reclamation sites, like those covered under 40 CFR 434 and the permit writer determined that the facility can meet technology based standards 6.0-9.0 SU immediately.

### **Settleable Solids (SS)**

Previous permit limits continued, but limits were switched to benchmarks for stormwater. The previous permit required a daily maximum limit of 1.5 mL/L/hr and a monthly average limit of 1.0 mL/L/hr. There is no numeric water quality standard for SS; however, sediment discharges can negatively impact aquatic life. Increased settleable solids are known to interfere with multiple stages of the life cycle in many benthic organisms. For example, they can smother eggs and young or clog the crevasses benthic organisms use for habitat. Settleable solids are also a valuable indicator parameter. Solids monitoring allows the facility to identify increases in sediment and solids indicating uncontrolled materials leaving the site. Furthermore, settleable solids in stormwater are a valuable indicator parameter. Solids monitoring allows the facility to identify increases in sediment and solids may indicate uncontrolled materials leaving the site. The benchmark value falls within the range of values implemented in other permits having similar industrial activities

### **Specific Conductance**

Monitoring, continued from the previous permit. In the previous permit this was referred to as “conductivity”. Specific conductance is an indicator parameter used to identify general water quality. Specific conductance is the measure of the ability of water to pass an electrical current at 25° C. Because dissolved salts and other inorganic chemicals (such as metals) conduct electrical current, increases in these pollutants lead to increases in specific conductance. Significant changes in specific conductance in a waterbody may indicate pollutants have entered it. As chloride, sulfate, and metals are pollutants of concern in the discharges from these sites, conductivity is included as an indicator.

### **Total Suspended Solids (TSS)**

Daily maximum limit of 100 mg/L with a monthly average limit of 50 mg/L continued from the previous permit. There is no numeric water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS indicating uncontrolled materials leaving the site. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution. General permits must be protective of water quality over a range of stream sizes and conditions throughout the state. The permit writer has determined maintaining the 100 mg/L daily maximum limit for this pollutant is protective of the water quality of the receiving streams covered by this permit.

**EFFLUENT LIMITATIONS FOR TABLE B:**

Facilities under the new limitations of this table are not provided a schedule of compliance to meet the limitations, as there are no current facilities under this category at the time of issuance of this permit. The limitations shall be met at the time of issuance.

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVERAGE/ BENCHMARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
METALLIC MINERAL LAND DISTURBANCE STORMWATER			BENCHMARK				
FLOW	MGD	*	-	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
ARSENIC, TR	REMOVED						
BARIIUM, TR	REMOVED						
CADMIUM, TR	µg/L	**	10	*/*	ONCE/MONTH	ONCE/MONTH	GRAB
CHLORIDE	mg/L	*	-	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
CHLORIDE + SULFATE	mg/L	**	1,000	NEW	ONCE/MONTH	ONCE/MONTH	GRAB
CHROMIUM, TR	REMOVED						
COBALT, TR	µg/l	*	-	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
COPPER, TR	µg/L	**	23	*/*	ONCE/MONTH	ONCE/MONTH	GRAB
IRON, TR	µg/L	**	7,000	*/*	ONCE/MONTH	ONCE/MONTH	GRAB
LEAD, TR	µg/L	**	160	*/*	ONCE/MONTH	ONCE/MONTH	GRAB
MERCURY, TR	µg/l	*	-	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
pH	SU	6.5-9.0	-	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
SETTLABLE SOLIDS	mL/L/hr	**	1.5	1.5/1.0	ONCE/MONTH	ONCE/MONTH	GRAB
SPECIFIC CONDUCTANCE	µmhos/cm	*	-	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
SULFATE	mg/L	*	-	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
TOTAL SUSPENDED SOLIDS	mg/L	**	100	100/50	ONCE/MONTH	ONCE/MONTH	GRAB
ZINC, TR	µg/L	**	188	*/*	ONCE/MONTH	ONCE/MONTH	GRAB
METALLIC MINERAL MINE SHAFT PUMPING, MINE DRAINING, AND PROCESSING AREA IMPOUNDMENT DRAINING			MONTHLY AVERAGE				
FLOW	MGD	*	*	SAME	‡‡	ONCE/MONTH	GRAB
ARSENIC, TR	REMOVED						
BARIIUM, TR	REMOVED						
CADMIUM, TR	µg/l	9	1	*/*	‡‡	ONCE/MONTH	GRAB
CHLORIDE	mg/L	*	*	SAME	‡‡	ONCE/MONTH	GRAB
CHLORIDE + SULFATE	mg/L	*	*	NEW	‡‡	ONCE/MONTH	GRAB
CHROMIUM, TR	REMOVED						
COBALT, TR	µg/l	*	*	SAME	‡‡	ONCE/MONTH	GRAB
COPPER, TR	µg/l	23	15	*/*	‡‡	ONCE/MONTH	GRAB
IRON, TR	µg/l	7,000	1,000	*/*	‡‡	ONCE/MONTH	GRAB
LEAD, TR	µg/l	160	6	*/*	‡‡	ONCE/MONTH	GRAB
MERCURY, TR	µg/l	*	*	SAME	‡‡	ONCE/MONTH	GRAB
pH †	SU	6.5-9.0	-	SAME	‡‡	ONCE/MONTH	GRAB
SETTLABLE SOLIDS	mL/L/hr	1.5	1.0	SAME	‡‡	ONCE/MONTH	GRAB
SPECIFIC CONDUCTANCE	µmhos/cm	*	*	SAME	‡‡	ONCE/MONTH	GRAB
SULFATE	mg/L	*	*	SAME	‡‡	ONCE/MONTH	GRAB
TOTAL SUSPENDED SOLIDS	mg/L	100	50	SAME	‡‡	ONCE/MONTH	GRAB
ZINC, TR	µg/l	188	187	*/*	‡‡	ONCE/MONTH	GRAB

- \* Monitoring and reporting requirement only
- \*\* Monitoring with associated benchmark
- † Report the minimum and maximum pH values; pH is not to be averaged
- NEW Parameter not established in previous state operating permit
- TR Total Recoverable

## **DERIVATION AND DISCUSSION OF LIMITS, METALLIC MINERAL LAND DISTURBANCE STORMWATER:**

### **Flow**

In accordance with [40 CFR Part 122.44(i)(1)(ii)], the estimated volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain estimated effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the estimated total flow in millions of gallons per day (MGD).

### **Cadmium, Total Recoverable**

Monthly monitoring with a benchmark of 9 µg/L. The previous permit required monitoring only for this parameter. Very little data were available for review by the permit writer. Only one metallic minerals reclamation site reported discharges in the previous permit cycle, and only three data points. The data provided indicated cadmium is a pollutant of concern in the discharges from these facilities. While reviewing the DMR data, the permit writer observed all data were reported as stormwater data; however, after review of the submitted paper DMRs, it was determined one of the data points (08/31/2016) for each reporting period was, in fact, for impoundment discharges from the site. The two stormwater data points both met this benchmark.

### **Chloride; Sulfate; Chloride plus Sulfate**

Chloride (separate), Sulfate (separate): Monitoring only. Monitoring for these parameters is required separately to total them into the combined chloride plus sulfate parameter.

Chloride + Sulfate: Monitoring with a 1,000 mg/L benchmark. The previous permit did not require reporting of the combined chloride and sulfate parameters; however, Missouri Water Quality Standards found in 10 CSR 20-7.031 have standards for both chloride individually and the two parameters totaled. The requirements for this pollutant in stormwater in this permit are currently not based on water quality, as reasonable potential for exceedances of the standard has not been established. However, it does not add additional burden to the facilities to report the totaled amount, allowing the permit writer to compare the data to water quality standards. This permit requires them be totaled and compared to a benchmark of 1,000 mg/L. This benchmark is commonly applied in industrial permits where chloride and sulfate are pollutants of concern.

### **Cobalt, Total Recoverable**

Monitoring, continued from the previous permit. DMR data did not indicate values of water quality concern for this parameter. However, it is a known pollutant of concern at metallic minerals sites; therefore, monitoring is continued.

### **Copper, Total Recoverable**

Monitoring, continued from the previous permit. DMR data did not indicate values of water quality concern for this parameter. However, it is a known pollutant of concern at metallic minerals sites; therefore, monitoring is continued.

### **Iron, Total Recoverable**

Monitoring with a benchmark of 7,000 µg/L. The previous permit required monitoring only for this parameter. The permit writer uses best professional judgment to apply a technology based benchmark in this permit, specifically that similar sites regulated under 40 CFR 434 Subpart E must meet a similarly applied technology limit. The 7,000 µg/L benchmark is believed to be achievable with proper BMP operations and has been met at numerous industrial sites. The technology benchmark, while not a limitation based on water quality, may also be used as a guideline to ensure general narrative water quality standards are maintained at the site, as the criteria found at 10 CSR 20-7.031(4) for unsightly color may be exceeded at varying values.

### **Lead, Total Recoverable**

Monitoring with a benchmark of 160 µg/L. The previous permit required monitoring only for this parameter. The permit writer used best professional judgment to apply a benchmark to this parameter at a level known to be achievable with the correct installation and operation of typical BMPs. Lead is a pollutant of concern at these sites due to previous mining activities. Lead is transported to outfalls via solids, so proper installation and maintenance of sediment control BMPs are necessary for benchmark compliance.

### **Mercury, Total Recoverable**

Monitoring, continued from the previous permit. DMR data did not indicate values of water quality concern for this parameter; however, since it is a known pollutant of concern at metallic minerals sites, monitoring is continued.

### **pH**

6.5 to 9.0 SU – instantaneous grab sample. Water quality limits [10 CSR 20-7.031(5)(E)] are applicable to this outfall, continued from the previous permit. pH is a primary pollutant of concern in mine and mine reclamation discharges, as they can be highly acidic. The limit will protect and maintain all receiving streams' water quality.

### **Settleable Solids (SS)**

Monitoring with a benchmark of 1.5mL/L/hr. The previous permit required a daily maximum limit of 1.5 mL/L/hr with a monthly average of 1.0 mL/L/hr. This permit implements a water quality based limitation to protect a wide variety of receiving streams, including losing streams. Benchmarks were implemented and monthly averages were removed from stormwater discharges in this renewal (see the “Antibacksliding” section for more information). There is no numeric water quality standard for SS; however, sediment discharges can negatively impact aquatic life habitat. Settleable solids are also a valuable indicator parameter. Solids monitoring allows the permittee to identify increases in sediment and solids may indicate uncontrolled materials leaving the site. Solids are a primary pollutant of concern in mine reclamation activities due to land disturbance.

### **Specific Conductance**

Monitoring, continued from the previous permit. In the previous permit this was referred to as “conductivity”. Specific conductance is an indicator parameter used to identify general water quality. Specific conductance is the measure of the ability of water to pass an electrical current at 25° C. Because dissolved salts and other inorganic chemicals (such as metals) conduct electrical current, increases in these pollutants lead to increases in conductivity. Significant changes in specific conductance in a waterbody may indicate pollutants have entered it. As chloride, sulfate, and metals are pollutants of concern in the discharges from these sites, specific conductance is included as an indicator.

### **Total Suspended Solids (TSS)**

Monitoring with a benchmark of 100 mg/L. The previous permit required a daily maximum limit of 100 mg/L, with a monthly average limit of 50 mg/L. Monthly averages were removed from stormwater discharges in this renewal (see the “Antibacksliding” section for more information). There is no numeric water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS indicating uncontrolled materials leaving the site. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution. Solids are a primary pollutant of concern in mine reclamation activities due to land disturbance.

### **Zinc, Total Recoverable**

Monitoring with a benchmark of 180 µg/L. The previous permit required monitoring only for this parameter. The permit writer uses best professional judgment to require a benchmark for this parameter. DMR data indicates BMPs need to be improved at these facilities to meet the benchmark. Zinc is a pollutant of concern in the discharges due to previous mining activities. Zinc is transported to outfalls via solids, so proper installation and maintenance of sediment control BMPs is necessary for benchmark compliance.

### **Arsenic, Total Recoverable; Barium, Total Recoverable; Chromium, Total Recoverable**

Monitoring is removed for these pollutants per the permit writer's best professional judgment. They were determined to not be pollutants of concern in the discharges of these facilities. No limits were established therefore this removal is not subject to antibacksliding regulations.

## **DERIVATION AND DISCUSSION OF LIMITS, METALLIC MINERAL MINE SHAFT PUMPING, MINE DRAINING, AND PROCESSING AREA IMPOUNDMENT DRAINING:**

### **Flow**

In accordance with [40 CFR Part 122.44(i)(1)(ii)] the estimated volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain estimated effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the estimated total flow in millions of gallons per day (MGD).

### **Cadmium, Total Recoverable**

Daily maximum limit of 9 µg/L with a monthly average limitation of 1 µg/L. The previous permit required monitoring only for this parameter. Very little data were available for review by the permit writer. Only one metallic minerals reclamation site reported discharges in the previous permit cycle with only three data points available. The data provided indicated cadmium is a pollutant of concern in the discharges from these facilities. While reviewing the DMR data, the permit writer observed all data were reported as stormwater data; however, after review of the submitted paper DMRs, it was determined one of the data points (08/31/2016) for each reporting period was, in fact, for impoundment discharges from the site. The data point reported was well

above the water quality standards, at 77.1 µg/L, indicating reasonable potential to exceed. A limit is added to protect the water quality standards found at 10 CSR 20-7.031 Table A1 & A2. No schedule of compliance is provided for this parameter, as no existing facilities under this permit are metallic minerals facilities.

#### **Chloride; Chloride + Sulfate; Sulfate**

Chloride (separate), Sulfate (separate): Monitoring for these parameters is required separately to total them into the combined chloride + sulfate parameter.

Chloride + Sulfate: Monitoring and reporting required. The previous permit did not require reporting of the combined chloride and sulfate parameters; however, Missouri Water Quality Standards found in 10 CSR 20-7.031 have standards for both chloride individually and the two parameters totaled. It does not add additional burden to the facilities to report the totaled amount, allowing the permit writer to compare the data to water quality standards. DMR data reported for this parameter did not indicate exceedances of the chloride + sulfate water quality standards, and the number of data points was not sufficient to determine reasonable potential statistically. However, the sulfate data reported in the previous permit cycle was quite high, and sites should consider BMP measures to address levels of these pollutants in the discharge.

#### **Cobalt, Total Recoverable**

Monitoring, continued from the previous permit. DMR data did not indicate values of water quality concern for this parameter; however, since it is a known pollutant of concern at metallic minerals sites, monitoring is continued.

#### **Copper, Total Recoverable**

Daily maximum limit of 23 µg/L with a monthly average limit of 15 µg/L. The previous permit required monitoring only for this parameter. Very little data were available for review by the permit writer. Only one metallic minerals reclamation site reported discharges in the previous permit cycle with only three data points available. The data provided indicated copper is a pollutant of concern in the discharges from these facilities. While reviewing the DMR data, the permit writer observed all data were reported as stormwater data; however, after review of the submitted paper DMRs, it was determined one of the data points (08/31/2016) for each reporting period was, in fact, for impoundment discharges from the site. The data point reported was well above the water quality standards, at 128 µg/L, indicating reasonable potential to exceed. A limit is added to protect the water quality standards found at 10 CSR 20-7.031 Table A1 & A2. No schedule of compliance is provided for this parameter, as no existing facilities under this permit are metallic minerals facilities.

#### **Iron, Total Recoverable**

Daily maximum limit of 7,000 µg/L with a monthly average limit of 1,000 µg/L. The previous permit required monitoring only. The permit writer reviewed the available data for the discharges and found reasonable potential for the exceedance of total recoverable iron in stream with data as high as 11,700 µg/L reported. The water quality standards found at 10 CSR 20-7.031 Table A1 indicate the chronic standard for iron for the protection of aquatic life to be 1,000 µg/L.

The water quality standards are more stringent for the monthly average limits and are therefore applied to this parameter; however, the daily maximum is based on available industry-related treatment technology and assessments, including similar sites which may be covered under the ELG 40 CR 434, subpart E.. The 7,000 µg/L limit may also be a level around which staining of surfaces or discoloration of discharges may occur (staining and discoloration of surface water occur at highly variable levels); therefore, the facilities should implement visual inspections to ensure compliance with the general narrative water quality standards. Narrative water quality standards must not be violated, even if the facility is in compliance with the benchmarks or limitations in this permit.

#### **Lead, Total Recoverable**

Daily maximum limit of 160 µg/L with a monthly average limit of 6 µg/L. The previous permit required monitoring only for this parameter. Very little data were available for review by the permit writer. Only one metallic minerals reclamation site reported discharges in the previous permit cycle with only three data points available. The data provided indicated lead is a pollutant of concern in the discharges from these facilities. While reviewing the DMR data, the permit writer observed all data were reported as stormwater data; however, after review of the submitted paper DMRs, it was determined one of the data points (08/31/2016) for each reporting period was, in fact, the impoundment discharges from the site. Lead was reported well above the water quality standards at 1,070 µg/L, indicating reasonable potential to exceed. Lead is a pollutant of concern at these sites due to previous mining activities. Lead is transported to outfalls via solids, so proper installation and maintenance of sediment control BMPs is necessary for limit compliance. A limit is added to protect the water quality standards found at 10 CSR 20-7.031 Table A1 & A2. No schedule of compliance is provided for this parameter, as no existing facilities under this permit are metallic minerals facilities.

### **Mercury, Total Recoverable**

Monitoring, continued from the previous permit. DMR data did not indicate values of water quality concern for this parameter; however, it is a known pollutant of concern at metallic minerals sites, therefore monitoring is continued.

### **pH**

6.5 to 9.0 SU – instantaneous grab sample. Water quality limits [10 CSR 20-7.031(5)(E)] are applicable to this outfall, continued from the previous permit. pH is a primary pollutant of concern in mine and mine reclamation discharges, as they can be highly acidic. The limit will protect and maintain all receiving streams' water quality. One DMR data point was reported at 3.4 SU, indicating reasonable potential for excursions from the water quality standards.

### **Settleable Solids (SS)**

The previous permit required a daily maximum limit of 1.5 mL/L/hr with a monthly average of 1.0 mL/L/hr, which are continued herein. This permit implements a water quality based limitation to protect receiving a wide variety of receiving streams, including losing streams. There is no numeric water quality standard for SS; however, sediment discharges can negatively impact aquatic life habitat. Settleable solids are also a valuable indicator parameter. Solids monitoring allows the permittee to identify increases in sediment and solids may indicate uncontrolled materials leaving the site. Solids are a primary pollutant of concern in mine reclamation activities due to land disturbance.

### **Specific Conductance**

Monitoring, continued from the previous permit. In the previous permit this was referred to as “conductivity”. Specific conductance is an indicator parameter, used to identify general water quality. Specific Conductance is the measure of the ability of water to pass an electrical current at 25° C. Because dissolved salts and other inorganic chemicals (such as metals) conduct electrical current, increases in these pollutants lead to increases in conductivity. Significant changes in conductivity in a waterbody may indicate pollutants have entered it. As both chlorides and sulfates and metals are pollutants of concern in the discharges from these sites, and cause increases in conductivity, it is included as an indicator.

### **Total Suspended Solids (TSS)**

Daily maximum limit of 100 mg/L with a monthly average limit of 50 mg/L, continued from the previous permit. There is no numeric water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS indicating uncontrolled materials leaving the site. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution. Solids are a primary pollutant of concern in mine reclamation activities due to land disturbance. The limit is maintained as DMR data indicated it was achievable by these sites, and it is protective of receiving streams' water quality to be maintained.

### **Zinc, Total Recoverable**

Daily maximum limit of 188 µg/L, with a monthly average limit of 187 µg/L. The previous permit required monitoring only for this parameter. Very little data were available for review by the permit writer. Only one metallic minerals reclamation site reported discharges in the previous permit cycle, with only three data points available. The data provided indicated zinc is a pollutant of concern in the discharges from these facilities. While reviewing the DMR data, the permit writer observed all data were reported as stormwater data; however, after review of the submitted paper DMRs, it was determined one of the data points (08/31/2016) for each reporting period was, in fact, for impoundment discharges from the site. Zinc was reported well above the water quality standards at 6,290 µg/L, indicating reasonable potential to exceed. Zinc is a pollutant of concern at these sites due to previous mining activities. Zinc is transported to outfalls via solids, so proper installation and maintenance of sediment control BMPs is necessary for limit compliance. A limit is added to protect the water quality standards found at 10 CSR 20-7.031 Table A1 & A2. No schedule of compliance is provided for this parameter, as no existing facilities under this permit are metallic minerals facilities.

### **Arsenic, Total Recoverable; Barium, Total Recoverable; Chromium, Total Recoverable**

Monitoring is removed for these pollutants per the permit writer's best professional judgment. They were determined to not be pollutants of concern in the discharges of these facilities.

## **PART V – SAMPLING AND REPORTING REQUIREMENTS**

### **SAMPLING FREQUENCY:**

Sampling frequency is established in accordance with Department policy. Effluent limitations are expressed in a daily maximum and a monthly average for wastewater and a daily maximum only for stormwater. Results from samples may be submitted as both the daily maximum and the monthly average. If the facility collects multiple samples during any month, the permit requires the facility to submit a monthly average. If no discharges occur during a sampling period, report as “no discharge.”

### **SAMPLING TYPE JUSTIFICATION:**

Sampling type was continued from the previous permit. The sampling types are representative of the discharges and are protective of water quality. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, volatile organic compounds, and others.

### **SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:**

Please review Standard Conditions Part 1, section A, number 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 unless alternates are approved by the Department and incorporated within this permit. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method quantifies the pollutant below the level of the applicable water quality criterion; 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A permittee is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive.

## **Part VI – Administrative Requirements**

On the basis of preliminary staff review and applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the permit. The proposed determinations are tentative pending public comment.

### **PUBLIC MEETING:**

A public meeting is not required for general permits with fewer than 50 General Permit Covered Facilities (GPCFs). MOG05 covers four GPCFs.

### **PUBLIC NOTICE:**

The Department shall give public notice when a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest or because of water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and facility must be notified of the denial in writing.

The Department must give public notice of a pending permit or of a new or reissued Missouri State Operating Permit. The public comment period is a length of time not less than thirty (30) days following the date of the public notice, during which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed permit, please refer to the Public Notice page located at the front of this draft permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- ✓ The Public Notice period for this permit was from May 28, 2021 through June 28, 2021. One comment was received from the Operating Permits Section's Industrial Unit after a meeting with the Land Reclamation Program in which the applicability of the ELG 40 CFR 434 was questioned. After a review, it was determined that sites under the purview of the Land Reclamation Program were not subject to the *regulatory* program under Surface Mining Control and Reclamation Act, including the bond requirements. References to the ELG were removed, resulting in a slight increase in the TSS and SS limits and removal of the manganese limit, as these were tied directly to the ELG technology limits and do not have an established water quality numeric standard.
- ✓ This permit went through a second public notice from September 10, 2021 through October 11, 2021.

**DATE OF FACT SHEET:** 04/09/2021 EDITED 08/18/2021

### **COMPLETED BY:**

**AMBERLY SCHULZ – ENVIRONMENTAL SPECIALIST  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
[dnr.generalpermits@dnr.mo.gov](mailto:dnr.generalpermits@dnr.mo.gov)**



STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
REVISED  
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

## Part I – General Conditions

### Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
  - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
  - a. Records of monitoring information shall include:
    - i. The date, exact place, and time of sampling or measurements;
    - ii. The individual(s) who performed the sampling or measurements;
    - iii. The date(s) analyses were performed;
    - iv. The individual(s) who performed the analyses;
    - v. The analytical techniques or methods used; and
    - vi. The results of such analyses.
  - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
  - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
  - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

### Section B – Reporting Requirements

1. **Planned Changes.**
  - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
    - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
    - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
    - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
    - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
  - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



STANDARD CONDITIONS FOR NPDES PERMITS  
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THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
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AUGUST 1, 2014

- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
    - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
    - ii. Any upset which exceeds any effluent limitation in the permit.
    - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
  - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
  4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
  5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
  6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
  7. **Discharge Monitoring Reports.**
    - a. Monitoring results shall be reported at the intervals specified in the permit.
    - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
    - c. Monitoring results shall be reported to the Department no later than the 28<sup>th</sup> day of the month following the end of the reporting period.

## Section C – Bypass/Upset Requirements

1. **Definitions.**
  - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
  - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
  - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

- b. Notice.
    - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
    - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
  - c. Prohibition of bypass.
    - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
      1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      3. The permittee submitted notices as required under paragraph 2. b. of this section.
    - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
    - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
    - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      - ii. The permitted facility was at the time being properly operated; and
      - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
    - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
    - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

## Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
  - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
  - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



STANDARD CONDITIONS FOR NPDES PERMITS  
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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



STANDARD CONDITIONS FOR NPDES PERMITS  
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MISSOURI CLEAN WATER COMMISSION  
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10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
  - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
  - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
  - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
  - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
  - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
  - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

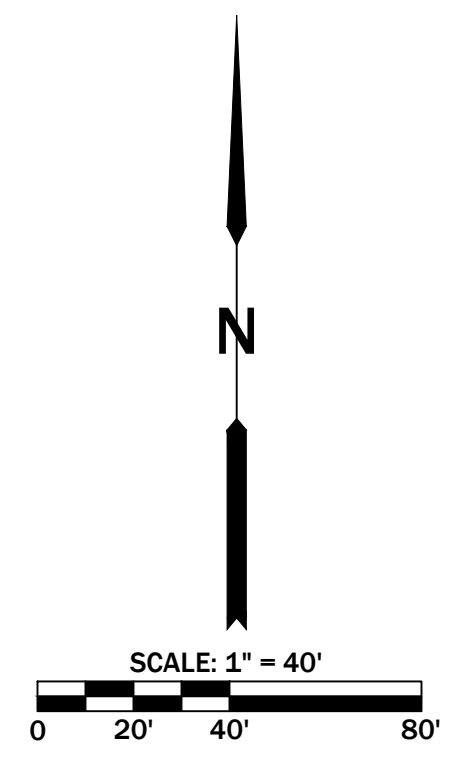
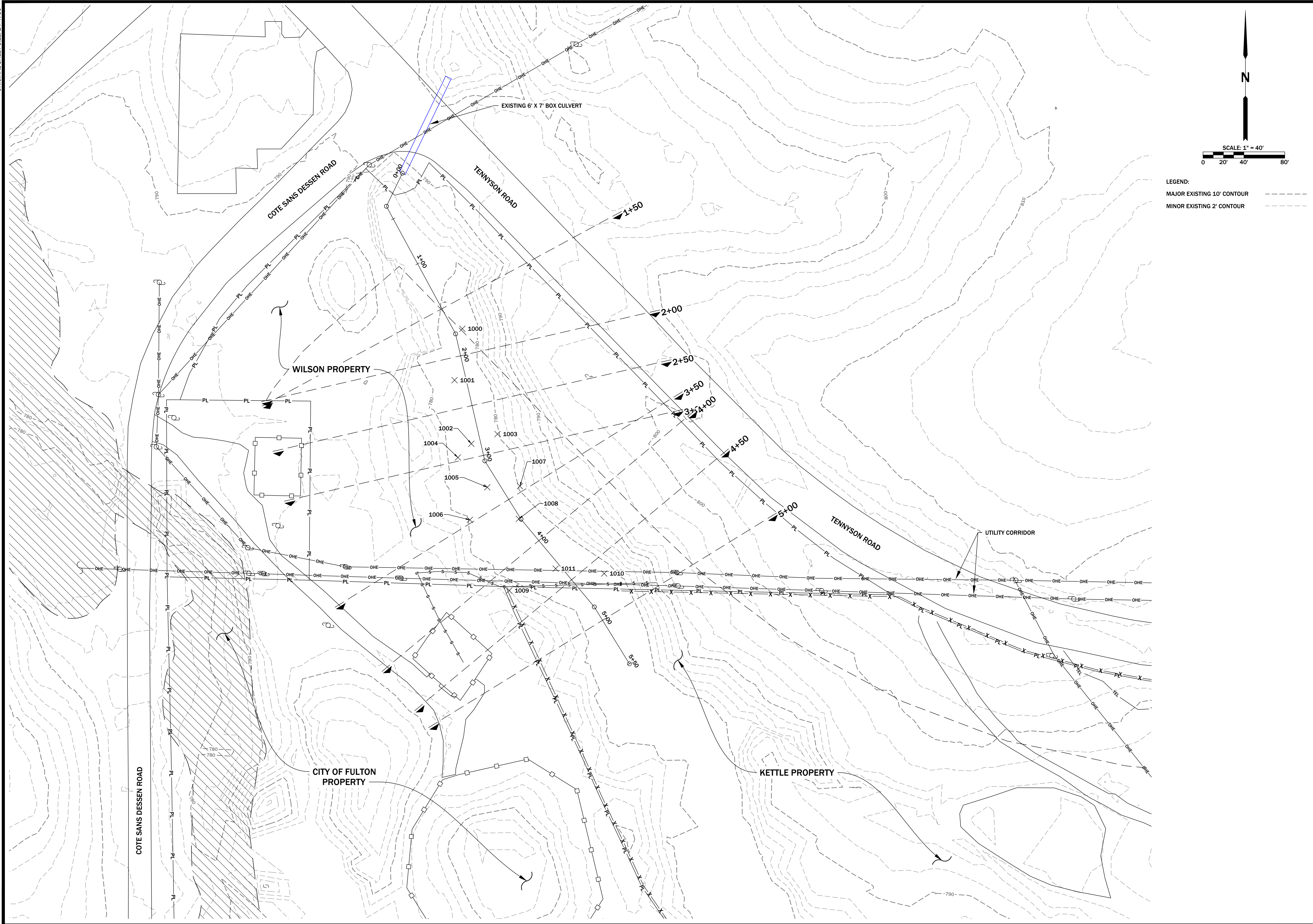
## **APPENDIX 2**



### **BATHYMETRIC PIT SOUNDINGS**

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PRINTED ON: 8/23/24 BY: ctm

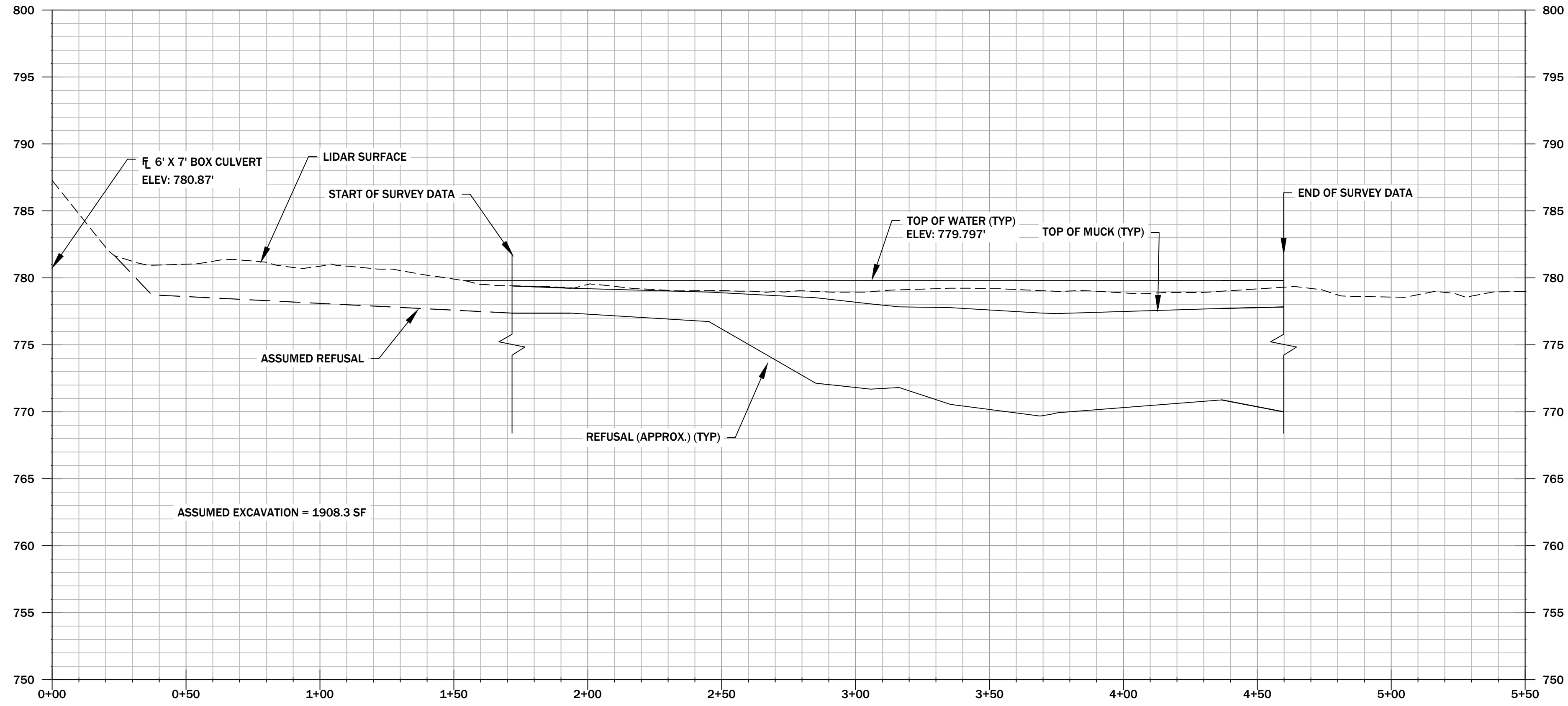
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LEGEND:  
 MAJOR EXISTING 10' CONTOUR   
 MINOR EXISTING 2' CONTOUR 

BY		REVISION DESCRIPTION	
DATE		#	
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DESIGNED	CM	DATE	SCALE
N/A	JB	05/2024	1" = 40'
PROJECT NAME	FILE NAME	SHEET #	
Y240-L-01	Base-Site-11	1 OF 22	

**GREDELL**  
 ENGINEERING RESOURCES  
 CIVIL • GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • EARTH SCIENCES  
 1505 East High Street  
 Jefferson City, Missouri  
 MO CORP. ENGINEERING LICENSE NO. E-200310016893-0  
 Telephone: (573) 659-9078  
 Facsimile: (573) 659-9079



HORIZONTAL SCALE:  
1" = 30'

VERTICAL SCALE:  
1" = 6'

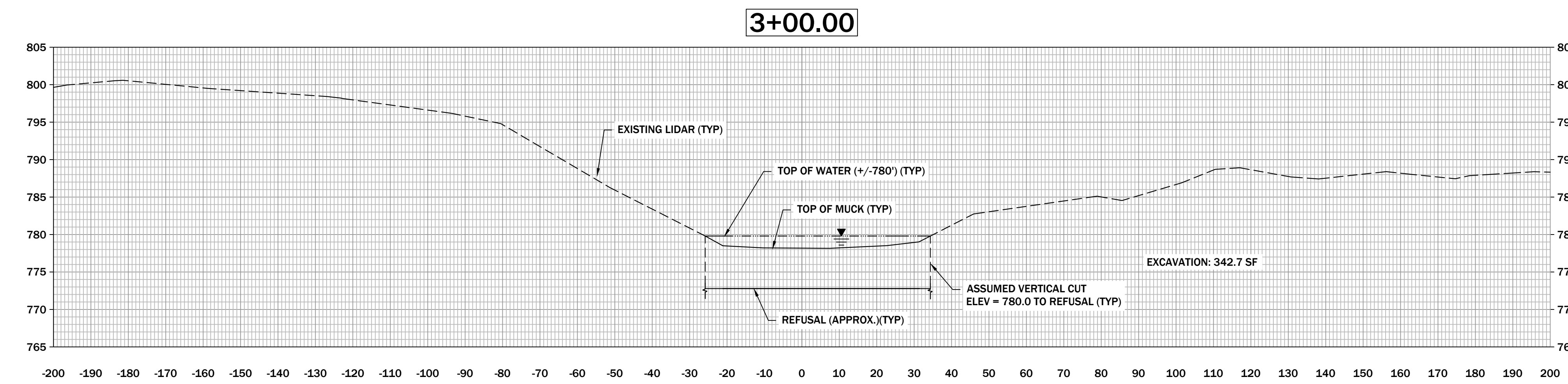
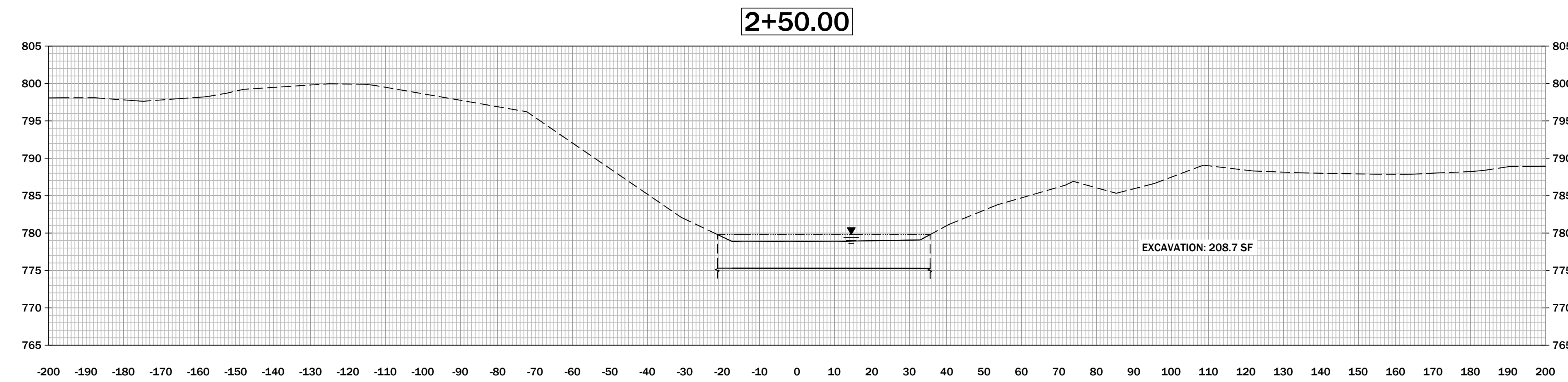
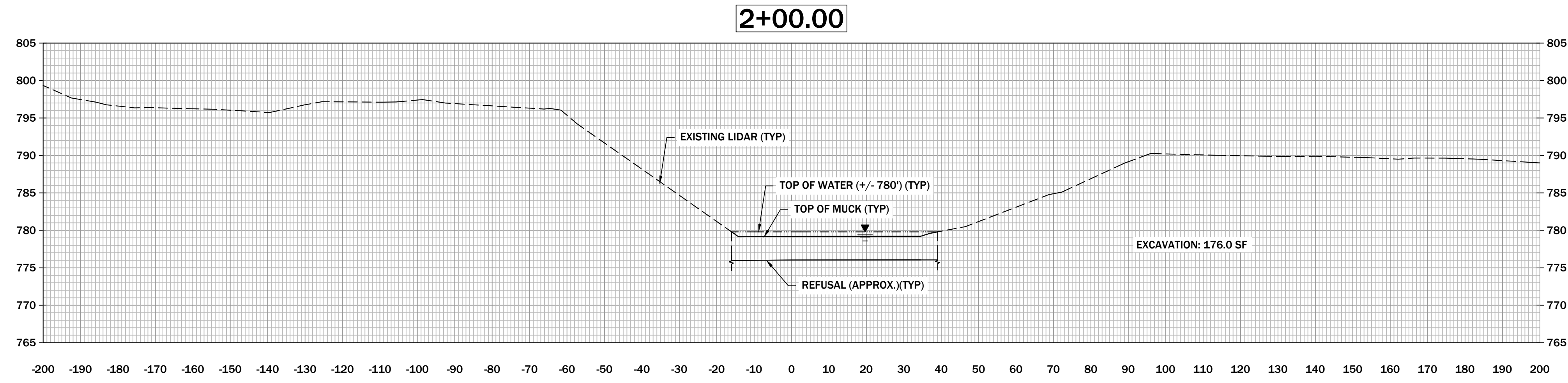
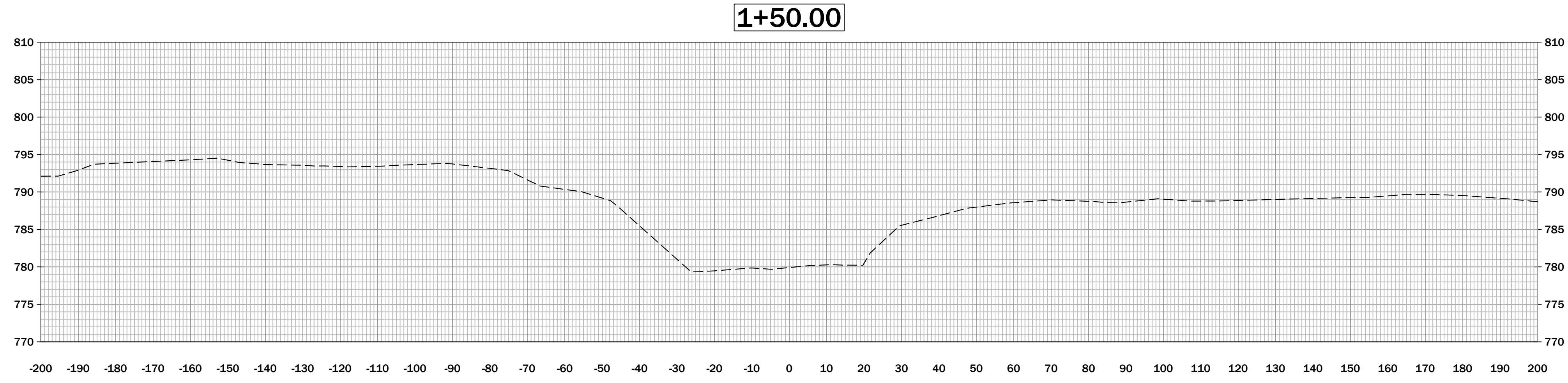
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				<p>CHECKED JB</p>		<p>APPROVED JB</p>		<p>DATE 05/2024</p>	
<p>SURVEYED N/A</p>		<p>DESIGNED JB</p>		<p>DRAWN CM</p>		<p>END OF SURVEY DATA</p>		<p>REVISION DESCRIPTION</p>	
<p>BY</p>		<p>DATE</p>		<p>#</p>		<p>REVISION DESCRIPTION</p>		<p>BY</p>	

**GREDELL**  
**ENGINEERING RESOURCES**  
 CIVIL • GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • EARTH SCIENCES  
 1505 East High Street  
 Jefferson City, Missouri  
 Telephone: (573) 659-9078  
 Facsimile: (573) 659-9079  
 REG. CORP. ENGINEERING LICENSE NO. E-2003.00016893.0

ORIGINAL SHEET SIZE: 24" X 36"

PRINTED ON: 8/23/24 BY: cm

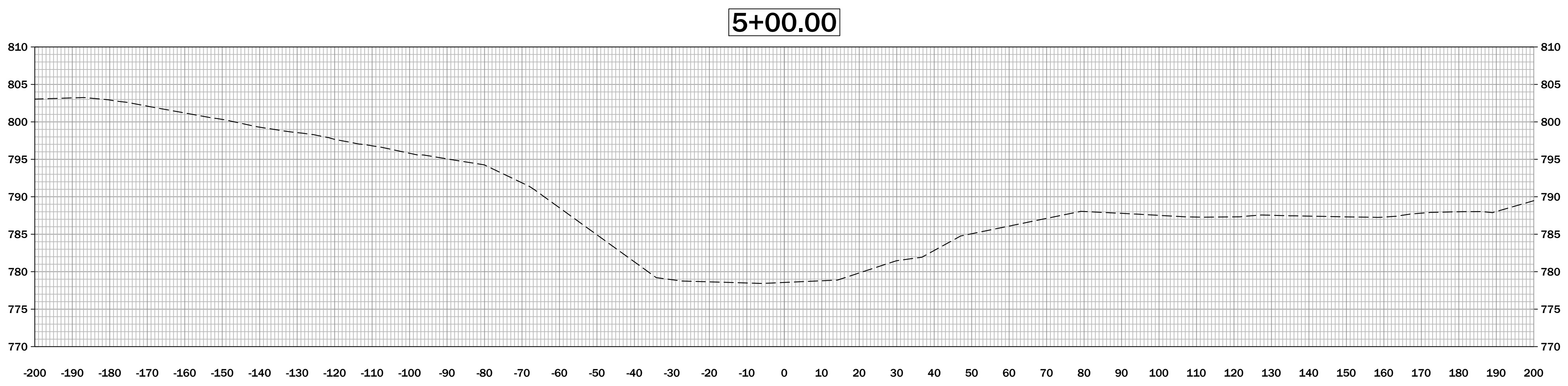
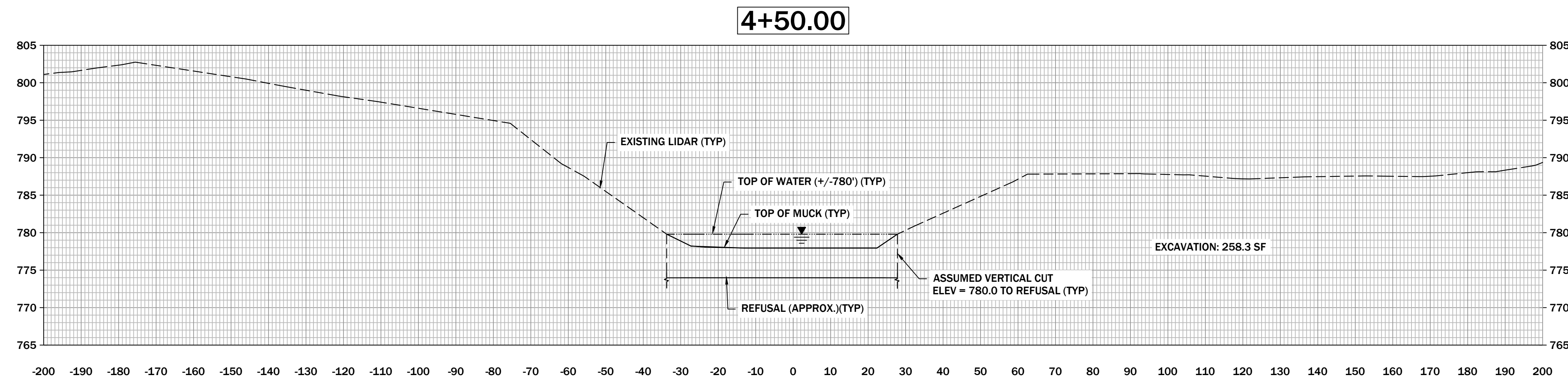
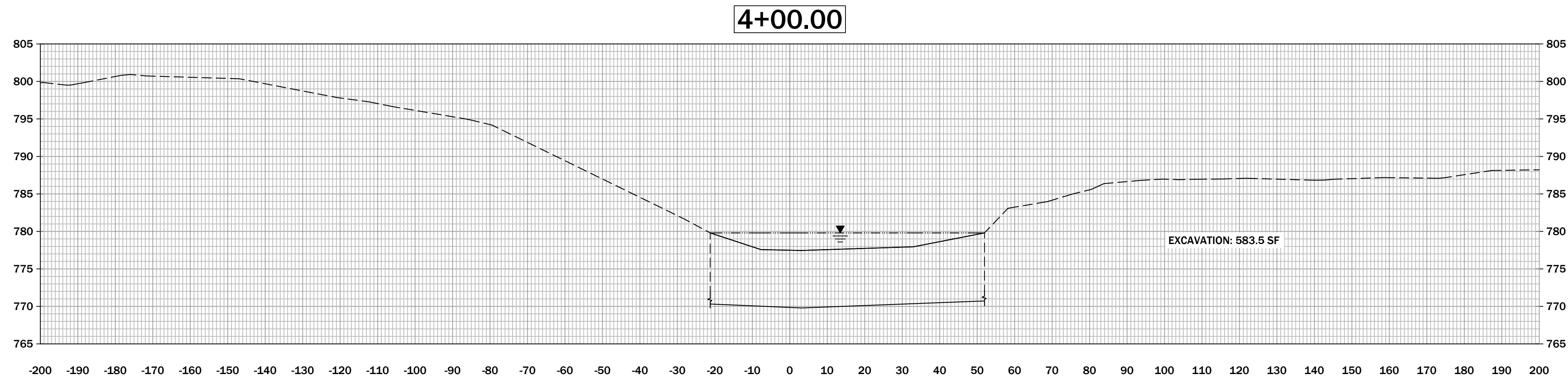
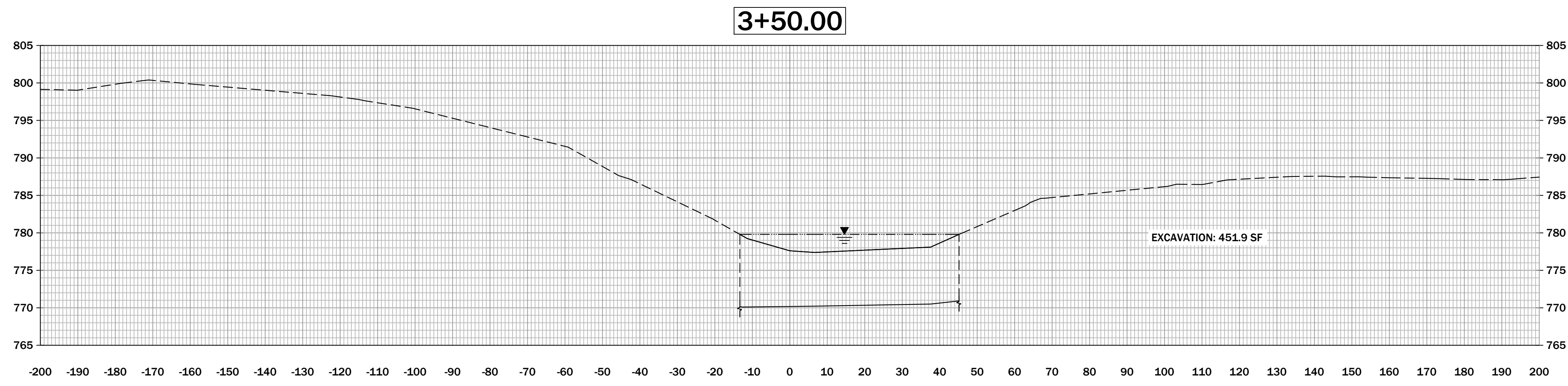
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HORIZONTAL SCALE:  
1" = 20'

VERTICAL SCALE:  
1" = 10'

BY	REVISION DESCRIPTION				
	DATE				
#					
<b>TENNYSON AML</b>					
<b>SHEET 3</b>					
<b>CROSS SECTION 1+50 TO 3+00</b>					
<b>TENNYSON AML PROJECT</b>					
SURVEYED	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
N/A	JB	CM	JB	JB	05/2024
PROJECT NAME	FILE NAME	SHEET #			
Y240-L-01	Base-Site-11	3 OF 22			
<p><b>GREDELL</b> ENGINEERING RESOURCES CIVIL • GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • EARTH SCIENCES 1505 East High Street Jefferson City, Missouri MO CORP. ENGINEERING LICENSE NO. E-2003.0001689-D Telephone: (573) 659-9078 Facsimile: (573) 659-9079</p>					



HORIZONTAL SCALE:  
1" = 20'  
VERTICAL SCALE:  
1" = 10'

BY		REVISION DESCRIPTION	#	DATE
<b>SHEET 4</b> <b>CROSS SECTION 3+50 TO 5+00</b> <b>TENNYSON AML PROJECT</b>				
	PROJECT NAME Y240-L-01	FILE NAME Base-Site-1.1	SHEET # 4 OF 22	
<b>TENNYSON AML</b>				
	SURVEYED N/A	DESIGNED JB	CHECKED JB	APPROVED JB
	DRAWN CM	DATE 05/2024	SCALE AS SHOWN	
<b>GREDELL</b> ENGINEERING RESOURCES CIVIL • GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • EARTH SCIENCES 1505 East High Street Jefferson City, Missouri Telephone: (573) 659-9078 Facsimile: (573) 659-9079 INC. CORP. ENGINEERING LICENSE NO. E-2003.00016893.0				



1505 East High Street  
Jefferson City, Missouri 65101  
Telephone No. (573) 659-9078  
Fax No. (573) 659-9079

# Memo

To: Austin Rehagen, Missouri Department of Natural Resources.  
From: Tristanna Crapo and Jacob Wolken, GREDELL Engineering Resources, Inc.  
CC: Mikel Carlson, R.G., GREDELL Engineering Resources, Inc., John N. Browning, P.E., GREDELL Engineering Resources, Inc., Megan Moore, Missouri Department of Natural Resources.  
Date: August 23, 2024  
Re: Y2401-01 Tennyson Land Reclamation Project Pit Bathymetric Observations

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GREDELL Engineering Resources, Inc. (GER), provided bathymetric observations for the Tennyson Land Reclamation Project (TLRP) in the City of Fulton, Callaway County Missouri. The site visit was made on April 17<sup>th</sup>, 2024. This letter describes those observations and the interpretations related to those observations.

## **General Scope of Observations**

During the site visit, GER used a small boat to move along the surface of the water of the portion of the pit located on the Wilson property to collect bathymetric data. A sounding rod and measuring tape were used to measure water depth to top of “muck” and approximate “muck” thickness of the pit. The “muck” consisted of organic matter and fine-grained sediments that have settled to the bottom of the pit. GER staff began measuring on the north end of the pit and continued measuring while moving southeast following the natural shape of the pit. In areas where the pit was wide enough, measurements were recorded near the bank on the east and west sides of the waterbody and in the center of the waterbody, between the two bank measurements. Staff finished recording measurements before crossing the Kettle property line. Twelve measurements were recorded as shown on Figure 1.

Two general trends were observed while performing measurements of the pit. As water depth to top of “muck” increased, thickness of “muck” increased. Water depth to top of “muck” increased from north to southeast in the pit as shown on Table 1.

The condition of the subgrade at the bottom of the pit was observed while measurements were taken. The condition of the subgrade was determined by the material’s resistance to pressure placed on it by the sounding rod. In different measurement locations, the subgrade was observed to be distinctively firm or rock. Subgrade condition could not be determined with certainty due to the inability to observe it directly.

## **Conclusions**

The bathymetric observations described in this report was performed in a workmanlike manner using equipment and procedures that were instructed and overseen by an experienced professional.

GER appreciates the opportunity to work with the Missouri Department of Natural Resources during this reclamation project. If you have any questions or need additional information, please contact me, or Mikel Carlson at (573) 659-9078 or me by email at [tristannac@ger-inc.biz](mailto:tristannac@ger-inc.biz). John Browning can be reached at (913) 808-5004.

Sincerely,

Tristanna Crapo and Jacob Wolken

Attachments: Figure 1 “Pit Measurement Locations”, Table 1 “Tennyson Pit Measurements”

**Y2401-01 Tennyson Land Reclamation Project  
Bathymetric Data Collected From Pit**

**Table 1**

Point #	Location		Water Depth To Top of "Muck"		"Muck" Thickness		Subgrade Condition
	North	West	Inches	Feet	Inches	Feet	
1	38° 49' 40.966"	91° 57' 46.796"	6.0	0.5	10.0	0.8	Rock
2	38° 49' 40.469"	91° 57' 46.869"	8.0	0.7	30.0	2.5	Rock
3	38° 49' 39.853"	91° 57' 46.666"	16.0	1.3	87.0	7.2	Firm
4	38° 49' 39.94"	91° 57' 46.38"	17.0	1.4	67.0	5.6	Rock
5	38° 49' 39.721"	91° 57' 46.833"	14.0	1.2	56.0	4.7	Rock
6	38° 49' 39.431"	91° 57' 46.472"	28.0	2.3	80.0	6.7	Rock
7	38° 49' 39.117"	91° 57' 46.689"	19.0	1.6	91.0	7.6	Firm
8	38° 49' 39.440"	91° 57' 46.068"	19.0	1.6	96.0	8.0	Firm
9	38° 49' 39.124"	91° 57' 46.084"	30.0	2.5	92.0	7.7	Firm
10	38° 49' 38.73"	91° 57' 46.14"	17.0	1.4	42.0	3.5	Rock
11	38° 49' 38.592"	91° 57' 45.033"	19.0	1.6	25.0	2.1	Rock
12	38° 49' 38.638"	91° 57' 45.633"	26.0	2.2	92.0	7.7	Firm

**NOTES:**

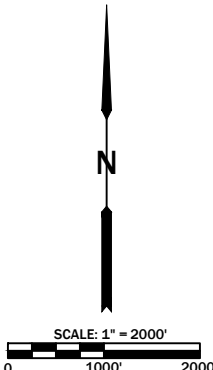
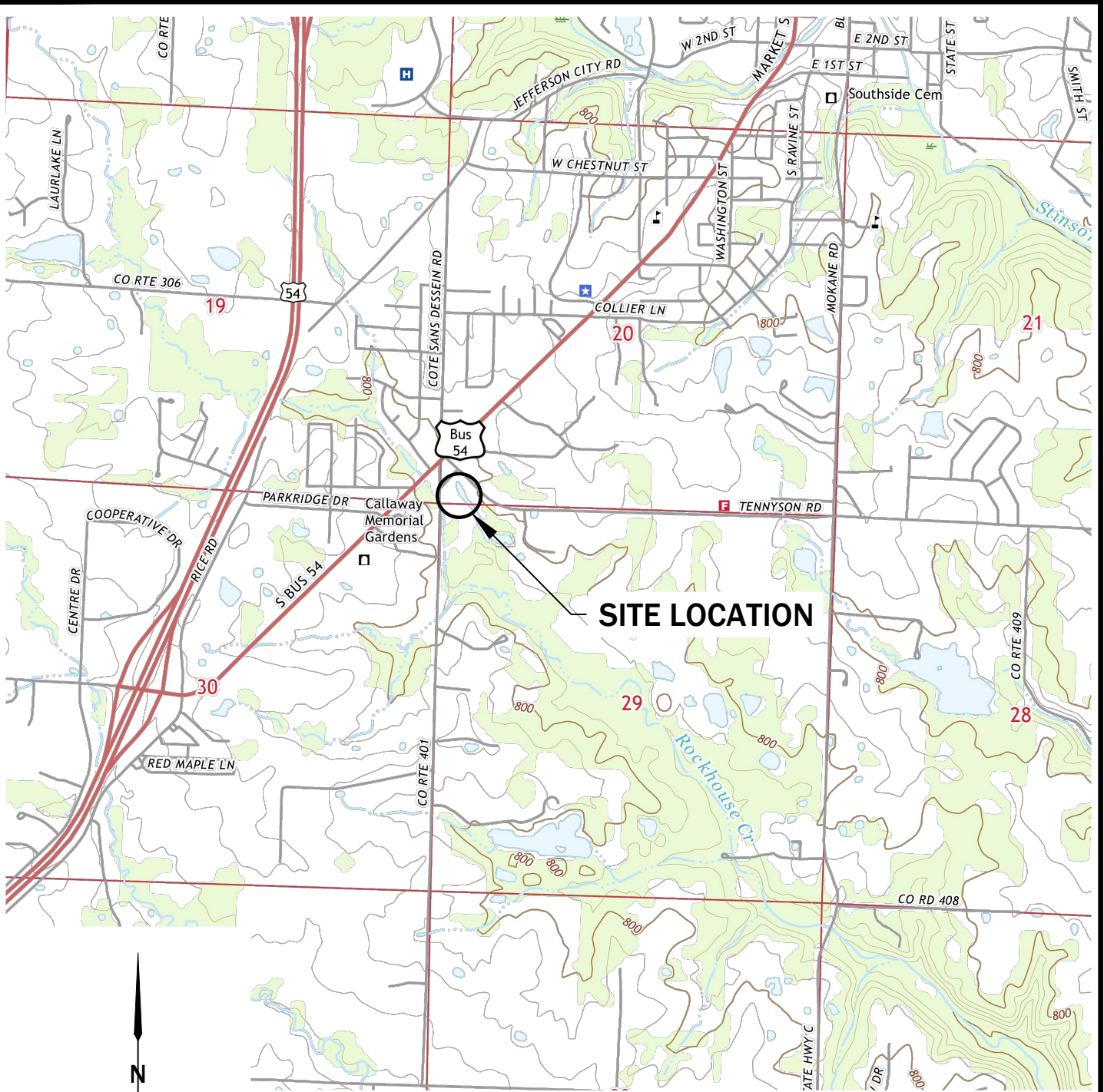
1. GER staff collected bathymetric data on April 17th, 2024.
2. GPS locations are not exact.
3. Water surface elevation was surveyed by CMPS on March 1st, 2024 with an elevation of 779.77 feet.

FIGURE 1 MEASUREMENT LOCATIONS MAP



# **APPENDIX 3**

## **GEOTECHNICAL TEST PIT LOGS**



**USGS FULTON QUADRANGLE  
7.5 - MINUTE SERIES, MISSOURI  
SW 1/4 SECTION 20, T47N, R9W**

**Y2401-01  
TENNYSON AML  
RECLAMATION PROJECT**



CIVIL • GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • EARTH SCIENCES  
1505 East High Street Telephone: (573) 659-9078  
Jefferson City, Missouri Facsimile: (573) 659-9079  
MO CORP. ENGINEERING LICENSE NO. E-2001001669-D

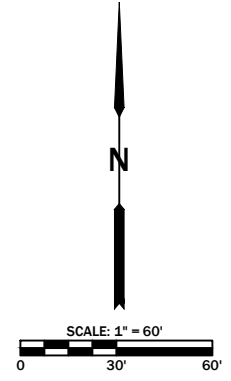
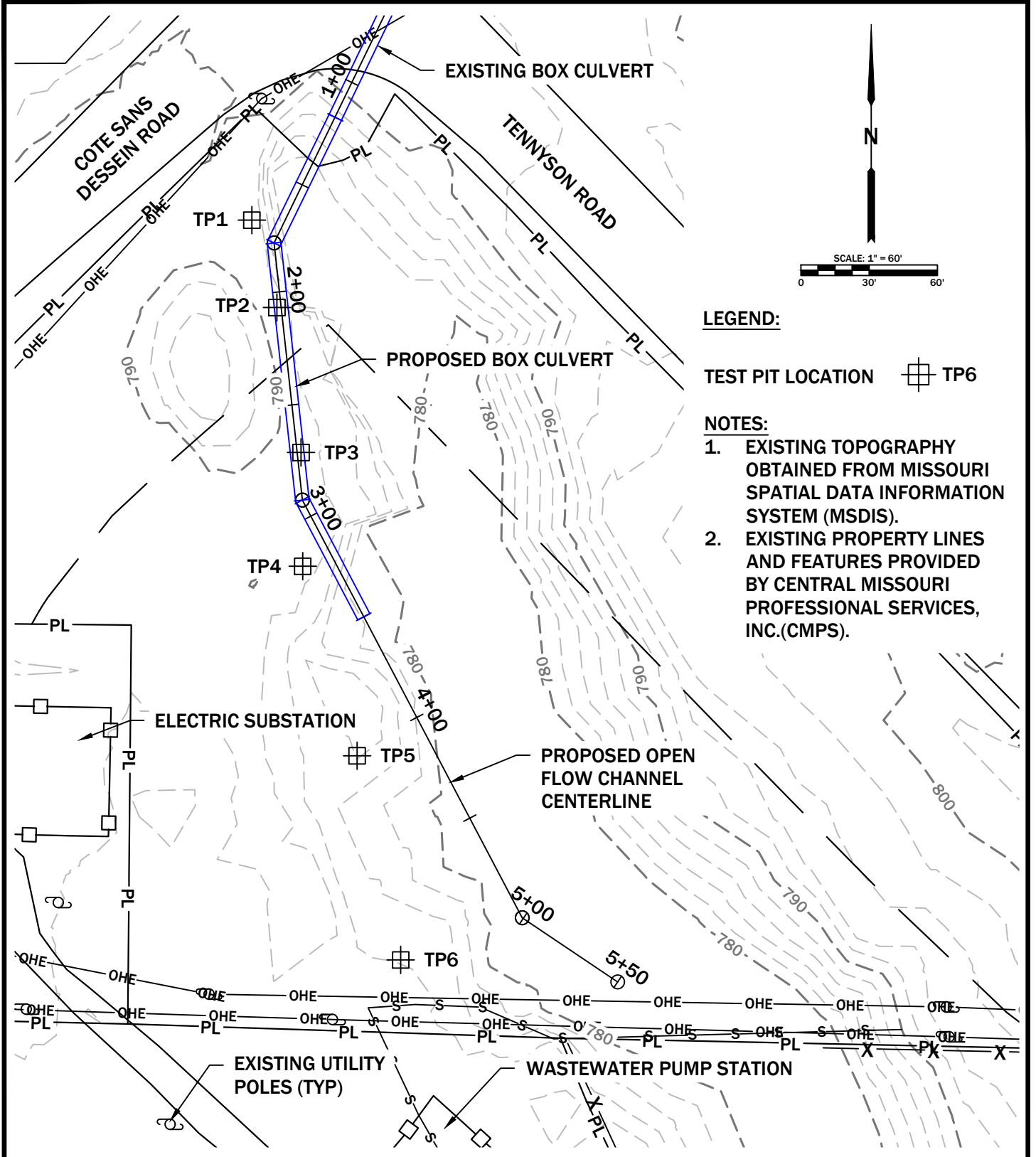
**SITE LOCATION MAP**

DATE 08/2024	SCALE 1" = 2000'	PROJECT NAME Y2401-01 - GEOTECH FIGURES	REVISION N/A
DRAWN CM	APPROVED WE	FILE NAME SITE-PLAN-13	SHEET # 1 OF 2

ORIGINAL SHEET SIZE: 8.5" X 11"

PRINTED ON: 8/19/24 By: cm

FILE PATH AND FILENAME: O:\CADDFiles\TENNYSON AML DRAWINGS\_Site-Plan-12.dwg



**LEGEND:**

TEST PIT LOCATION TP6

**NOTES:**

1. EXISTING TOPOGRAPHY OBTAINED FROM MISSOURI SPATIAL DATA INFORMATION SYSTEM (MSDIS).
2. EXISTING PROPERTY LINES AND FEATURES PROVIDED BY CENTRAL MISSOURI PROFESSIONAL SERVICES, INC.(CMPS).

**Y2401-01  
TENNYSON AML  
RECLAMATION PROJECT**

**EXPLORATION PLAN**



CIVIL • GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • EARTH SCIENCES  
 1505 East High Street Telephone: (573) 659-9078  
 Jefferson City, Missouri Facsimile: (573) 659-9079  
 MO CORP. ENGINEERING LICENSE NO. E-2001001669-D

DATE 08/2024	SCALE 1" = 60'	PROJECT NAME Y2401-01 - GEOTECH FIGURES	REVISION N/A
DRAWN CM	APPROVED WE	FILE NAME SITE-PLAN-12	SHEET # 2 OF 2

# GREDELL Engineering Resources, Inc.

# TEST PIT LOG TP1

**Y2401-01 Tennyson Land Reclamation Project**  
**Fulton, Missouri**  
 CLIENT: **Missouri OA FMDC**

LOCATION: **Fulton, Missouri**  
 ELEVATION: **789 ft** DATUM: **Site Topo**  
 DATE EXCAVATED: **6-5-24**

DEPTH (FEET)	ELEVATION	WATER TABLE	GRAPHIC LOG	SAMPLE TYPE	MATERIAL DESCRIPTION	SAMPLE ID DRY UNIT WEIGHT (PCF) BLOWS PER 6 INCHES RQD= ROCK QUALITY DES.	MOISTURE CONTENT PERCENT BY WEIGHT	SHEAR STRENGTH, tsf							
								△ QU/2	■ PP	□ SV	◆ TV				
0.0	789				SOD.										
0.7	788.3				FILL: Clay and buckshot; Light gray, moist to wet, firm. - clay/spoil, gray with orange and black mottling, moist to wet, soft to firm. - brown.  - gray-black.  - sandy clay, orange-brown.  - wet.										
1.3	787.7														
2.5	786.5														
4.5	784.5														
6.7	782.3														
9.5	779.5	▽													
12.5	776.5					S1	28.8	◆	■	●	—				
13.5	775.5					S2		◆	■						
15.5	773.5				Test pit terminated 15.5 feet in Fill due to excavator limit.										

OPERATOR: Jason  
 EQUIPMENT: CAT 313  
 BUCKET SIZE: 36"  
 LOGGED BY: Wayne E.  
 BACKFILLED WITH: Spoil

STRATIFICATION LINES ARE APPROXIMATE SOIL BOUNDARIES ONLY; ACTUAL CHANGES MAY BE GRADUAL OR MAY OCCUR BETWEEN SAMPLES.

**WATER LEVELS:** DURING EXCAVATION 9.5 FEET

AT - FEET AFTER - HOURS  
 COMPLETION DEPTH 15.5 FEET  
 CHECKED BY: WE REVIEWED BY: JB

Date Printed: 8/22/2024

**Y2401-01 Tennyson Land Reclamation Project  
Fulton, Missouri  
CLIENT: Missouri OA FMDC**

**LOCATION: Fulton, Missouri  
ELEVATION: 788 ft DATUM: Site Topo  
DATE EXCAVATED: 6-5-24**

DEPTH (FEET)	ELEVATION	WATER TABLE	GRAPHIC LOG	SAMPLE TYPE	MATERIAL DESCRIPTION	SAMPLE ID DRY UNIT WEIGHT (PCF) BLOWS PER 6 INCHES RQD= ROCK QUALITY DES.	MOISTURE CONTENT PERCENT BY WEIGHT	SHEAR STRENGTH, tsf						
								△ QU/2	■ PP	□ SV	◇ TV			
0.0	788				SOD.									
0.6	787.4				FILL: Clay; Light orange-brown, moist to wet, firm. - clay/spoil, orange-brown mottling gray-brown, soft to firm.  - 7" root.  - more 3"-6" roots, 4"-6" long.  - black gray with orange-brown, spoil/ clay.	S1	20.3	STANDARD PENETRATION TEST						
1.0	787			▲ N-VALUE (BLOWS PER LAST FOOT)				● MOISTURE CONTENT, %			○ % FINES (PASSING #200 SIEVE)			
3.0	785							PL	20	40	60	LL		
3.4	784.6													
3.5	784.5													
4.5	783.5					S2	28.9							
4.9	783.1					S3								
6.0	782													
9.0	779					S4	31.4							
12.0	776					S5								
14.0	774				Test pit terminated at 14.0 feet in Fill due to side cave in.									

OPERATOR: Jason  
EQUIPMENT: CAT 313  
BUCKET SIZE: 36"  
LOGGED BY: Wayne E.  
BACKFILLED WITH: Spoil

STRATIFICATION LINES ARE APPROXIMATE SOIL BOUNDARIES ONLY; ACTUAL CHANGES MAY BE GRADUAL OR MAY OCCUR BETWEEN SAMPLES.

**WATER LEVELS:** DURING EXCAVATION      FEET

AT      FEET AFTER      HOURS  
COMPLETION DEPTH 14.0 FEET  
CHECKED BY: WE REVIEWED BY: JB

Date Printed: 8/22/2024

# GREDELL Engineering Resources, Inc.

# TEST PIT LOG TP3

**Y2401-01 Tennyson Land Reclamation Project**  
**Fulton, Missouri**  
 CLIENT: **Missouri OA FMDC**

LOCATION: **Fulton, Missouri**  
 ELEVATION: **789 ft** DATUM: **Site Topo**  
 DATE EXCAVATED: **6-5-24**

DEPTH (FEET)	ELEVATION	WATER TABLE	GRAPHIC LOG	SAMPLE TYPE	MATERIAL DESCRIPTION	SAMPLE ID	MOISTURE CONTENT PERCENT BY WEIGHT	SHEAR STRENGTH, tsf					
								△ QU/2	■ PP	□ SV	◇ TV		
0.0	789				SOD.								
0.7	788.3				FILL: Clay; Brown, moist to wet, firm. - clay/spoil, orange mottling, gray, soft to firm.								
1.5	787.5												
4.0	785				- brown mottling, orange-brown.								
5.0	784				- brown.	S1	27.2						
6.0	783												
7.0	782				- light gray and yellowish brown.	S2	28.4						
10.0	779												
11.0	778					S3	24.5						
17.0	772				Test pit terminated at 17.0 feet in Fill due to excavator limit.								

OPERATOR: Jason  
 EQUIPMENT: CAT 313  
 BUCKET SIZE: 36"  
 LOGGED BY: Wayne E.  
 BACKFILLED WITH: Spoil

STRATIFICATION LINES ARE APPROXIMATE SOIL BOUNDARIES ONLY; ACTUAL CHANGES MAY BE GRADUAL OR MAY OCCUR BETWEEN SAMPLES.

WATER LEVELS: DURING EXCAVATION      FEET

AT      FEET AFTER      HOURS  
 COMPLETION DEPTH 17.0 FEET  
 CHECKED BY: WE REVIEWED BY: JB

Date Printed: 8/22/2024

# GREDELL Engineering Resources, Inc.

# TEST PIT LOG TP4

**Y2401-01 Tennyson Land Reclamation Project**  
**Fulton, Missouri**  
 CLIENT: **Missouri OA FMDC**

LOCATION: **Fulton, Missouri**  
 ELEVATION: **789 ft** DATUM: **Site Topo**  
 DATE EXCAVATED: **6-5-24**

DEPTH (FEET)	ELEVATION	WATER TABLE	GRAPHIC LOG	SAMPLE TYPE	MATERIAL DESCRIPTION	SAMPLE ID	MOISTURE CONTENT PERCENT BY WEIGHT	SHEAR STRENGTH, tsf					
								1	2	3			
0.0	789				SOD: Tree roots.								
0.7	788.3				FILL: Clay; Brown, moist to wet, firm. - clay/spoil, gray and orange-brown, soft to firm. - light gray, with orange streaks.								
1.3	787.7												
2.5	786.5												
4.0	785				- clay with light gray shale.	S1	28.1						
4.7	784.3												
6.0	783					S2	24.9						
10.0	779				- soft.	S3							
15.0	774												
16.0	773					S4	21						
17.0	772				Test pit terminated at 17.0 feet in Fill due to excavator limit.								

OPERATOR: Jason  
 EQUIPMENT: CAT 313  
 BUCKET SIZE: 36"  
 LOGGED BY: Wayne E.  
 BACKFILLED WITH: Spoil

STRATIFICATION LINES ARE APPROXIMATE SOIL BOUNDARIES ONLY; ACTUAL CHANGES MAY BE GRADUAL OR MAY OCCUR BETWEEN SAMPLES.

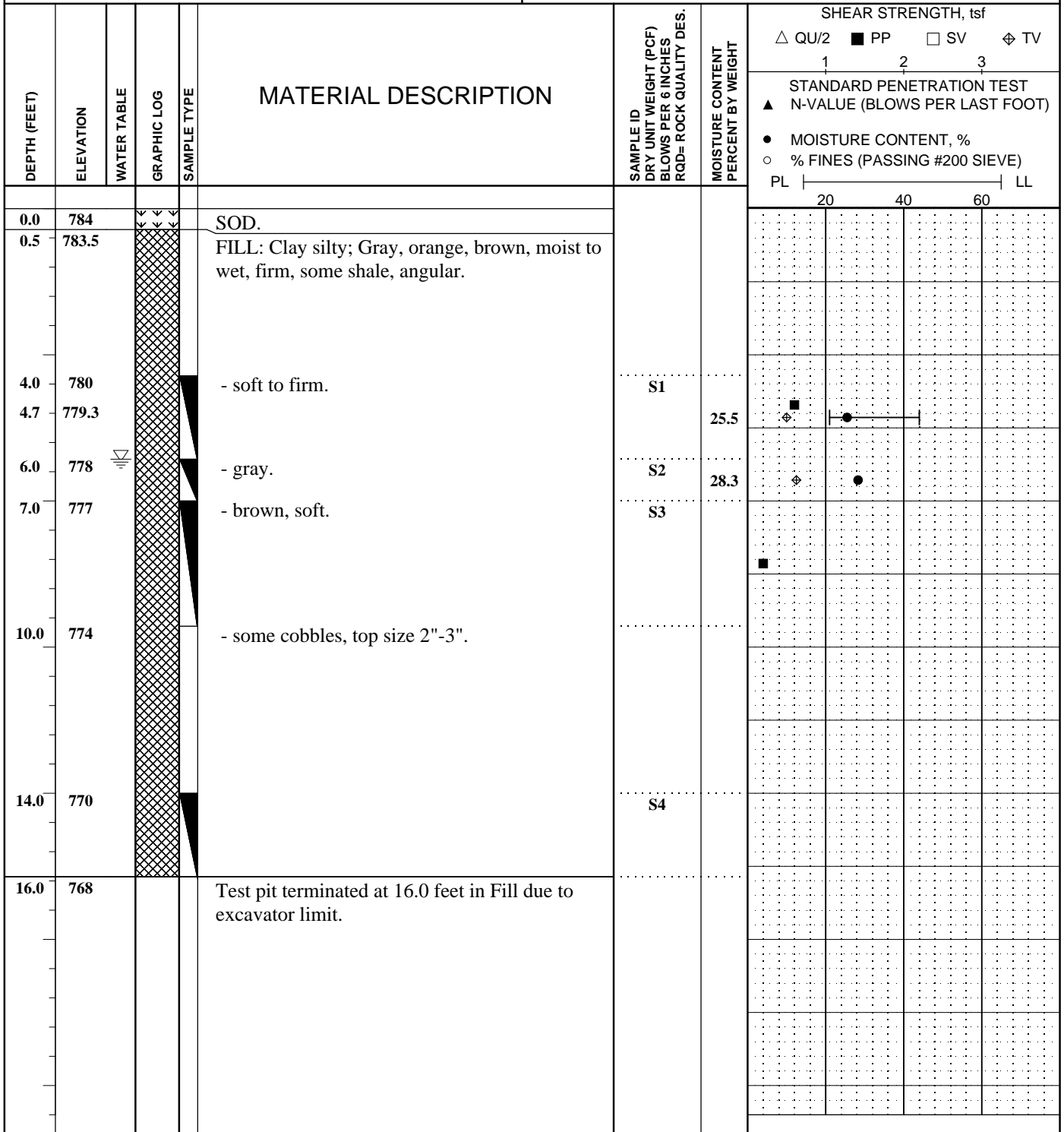
**WATER LEVELS:** DURING EXCAVATION 12.0 FEET

AT - FEET AFTER - HOURS  
 COMPLETION DEPTH 17.0 FEET  
 CHECKED BY: WE REVIEWED BY: JB

Date Printed: 8/22/2024

**Y2401-01 Tennyson Land Reclamation Project  
Fulton, Missouri  
CLIENT: Missouri OA FMDC**

**LOCATION: Fulton, Missouri  
ELEVATION: 784 ft DATUM: Site Topo  
DATE EXCAVATED: 6-5-24**



OPERATOR: Jason  
 EQUIPMENT: CAT 313  
 BUCKET SIZE: 36"  
 LOGGED BY: Tristanna C.  
 BACKFILLED WITH: Spoil

STRATIFICATION LINES ARE APPROXIMATE SOIL BOUNDARIES ONLY; ACTUAL CHANGES MAY BE GRADUAL OR MAY OCCUR BETWEEN SAMPLES.

**WATER LEVELS:** DURING EXCAVATION 6.0 FEET

AT - FEET AFTER - HOURS  
 COMPLETION DEPTH 16.0 FEET  
 CHECKED BY: WE REVIEWED BY: JB

Date Printed: 8/22/2024

**Y2401-01 Tennyson Land Reclamation Project  
Fulton, Missouri  
CLIENT: Missouri OA FMDC**

**LOCATION: Fulton, Missouri  
ELEVATION: 786 ft DATUM: Site Topo  
DATE EXCAVATED: 6-5-24**

DEPTH (FEET)	ELEVATION	WATER TABLE	GRAPHIC LOG	SAMPLE TYPE	MATERIAL DESCRIPTION	SAMPLE ID DRY UNIT WEIGHT (PCF) BLOWS PER 6 INCHES RQD= ROCK QUALITY DES.	MOISTURE CONTENT PERCENT BY WEIGHT	SHEAR STRENGTH, tsf						
								1	2	3				
0.0	786				SOD.									
0.5	785.5				FILL: Clay; Brown, orange, black streaks, dry to moist, firm.									
2.5	783.5				- light brown, orange, soft to firm.	S1	27.1							
2.9	783.1													
3.0	783													
6.0	780					S2	27.7							
12.5	773.5				- moist to wet.	S3								
14.5	771.5				- clayey gravel, angular shale pieces.	S4								
18.0	768				Test pit terminated at 18.0 feet in Fill due to excavator limit.									

OPERATOR: Jason  
EQUIPMENT: CAT 313  
BUCKET SIZE: 36"  
LOGGED BY: Wayne E.  
BACKFILLED WITH: Spoil

STRATIFICATION LINES ARE APPROXIMATE SOIL BOUNDARIES ONLY; ACTUAL CHANGES MAY BE GRADUAL OR MAY OCCUR BETWEEN SAMPLES.

**WATER LEVELS:** DURING EXCAVATION 12.5 FEET

AT - FEET AFTER - HOURS  
COMPLETION DEPTH 18.0 FEET  
CHECKED BY: WE REVIEWED BY: JB

Date Printed: 8/22/2024

# KEY TO SYMBOLS

Y2401-01 Tennyson Land Reclamation Project

## Symbol Description



Grass



Fill: As described

## Misc. Symbols



Water table during  
drilling/excavation



Penetrometer



Torvane

## Soil Samplers



Bulk/Grab sample

## Notes:

NE Not Encountered

NA Not Applicable

CFA Continuous Flight Augers

HSA Hollow Stem Augers

## **APPENDIX 4**

# **EFFECTIVE NEUTRALIZING MATERIAL (ENM) SAMPLE CALCULATION**

## Effective Neutralizing Material (ENM) sample calculation

### Notes:

1. Pounds of ENM DOES NOT EQUAL pounds of Ag lime. Pounds of ENM per ton of Ag lime vary from quarry to quarry. Pounds of ENM per ton of Ag lime can vary within a single quarry as the quality of the limestone being mined and how fine it is crushed varies.
2. The pounds of ENM per ton of Ag lime used in the sample below IS AN ASSUMPTION. 425 pounds of ENM per ton of Ag lime is assumed for EXAMPLE PURPOSES ONLY. The only way to determine the pounds of ENM per ton of Ag lime is to call the supplier and ask how many pounds of ENM per ton they are currently producing. It should also be asked of the supplier if they have a lot of variation or if it tends to be fairly consistent.
3. The base bid quantity used in the example below is ASSUMED FOR THE PURPOSES OF THIS EXAMPLE. The actual base bid quantity must be obtained from Sections 00313 and 01026 of the specifications. The application and incorporation method and amount of ENM per acre are described in Section 312000 of the specifications.

### Sample calculation:

Sections 004322 - Unit Prices and 012200 - Unit Prices of the specifications require a Unit Price for the application and incorporation of Ag lime. The unit of measurement is 100 POUNDS OF ENM NOT 100 POUNDS OF AG LIME. These sections contain a base bid quantity of ENM to be included with the Contractor's base bid.

If the base bid quantity is 50,000 units and the units are in 100 pound increments of ENM, then the total pounds of ENM required is:

$$50,000 \times 100 = 5,000,000 \text{ pounds of ENM}$$

If the Contractor calls a supplier and the supplier states his Ag lime is running at 425 pounds of ENM per ton of Ag lime then the tons of Ag lime required in the Contractor's base bid is:

$$5,000,000 \text{ pounds of ENM required} \div 425 \text{ pounds ENM per ton of Ag lime} = 11,764.7 \text{ tons of Ag lime}$$

Therefore, 11,764.7 tons of Ag lime are required to fulfill the base bid requirement of 50,000, 100 pound units of ENM.

Note: if the supplier's pounds of ENM per ton increase, then less tons of Ag lime will be required. If the pounds ENM per ton decrease, then more tons of Ag lime will be required.

## **APPENDIX 5**

# **STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**

**STORM WATER POLLUTION PREVENTION PLAN**  
NPDES GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES

FOR: Project Number: Y2401-01  
Project Name: Tennyson AML Land Reclamation Project  
Callaway County, Missouri

PREPARED BY: Missouri Department of Natural Resources  
Land Reclamation Program  
Abandoned Mine Lands

The project location and scope of work is as follows:

The Tennyson AML Land Reclamation Project (TALRP) consists of approximately 18 acres of abandoned coal mine land in Callaway County that was mined prior to the advent of mining regulations. The TALRP is located near the southern limits of the Town of Fulton, in the NW/4, S-29 and SW/4, S-20, T47N, R09W. The project also includes a coal waste (gob) pile located in the NE/4, S-19, T47N, R09W. The area affected by mining is owned by several different landowners, including the Town of Fulton, Westminster College, and three private landowners. Priority features identified by the Land Reclamation Program (LRP) at the TALRP are both safety and environmentally related and include, but are not limited to Hazardous Water Bodies, Dangerous Piles and/or Embankments, and Spoils Areas. It is the intent of OA/FMDC and LRP to remedy the environmental and safety concerns at this site and provide the impacted landowners with functioning areas for agriculture and/or businesses. Reclamation activities include, but are not limited to clearing and grubbing, excavation and grading mine spoil; backfill abandoned coal mine pits and ponds; extending drainage structures; embankment construction, grading, excavating, relocation, and covering coal waste (gob); application and incorporation of agricultural lime, seed, fertilizer and mulch all work areas, and other related work.

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION PROGRAM  
ABANDONED MINE LANDS  
STORM WATER POLLUTION PREVENTION PLAN

Project Name: Tennyson Reclamation Project  
Project Number: Y2401-01 Construction Acreage: 17.5 acres  
County: Callaway Section(s): NW/4, S-29 and SW/4, S-20 Township: T47N Range:  
R09W

The plans and specifications have been prepared to comply with the provisions of the NPDES Permit Number MOG050000, issued by the Missouri Department of Natural Resources (MDNR) Water protection Program (WPP) for storm water discharges from Construction Site activities. **This General Permit is applicable to all reclamation sites resulting in the disturbance of one or more acres total land area.**

### **Background**

This project is being conducted in order to either restore abandoned lands to productive use, to protect the health and safety of the people, to correct and prevent soil erosion, stream pollution, water, air, and land pollution, and/or other injurious effects to persons, property, wildlife and natural resources. It is recognized that the MDNR, Land Reclamation and MDNR-Water Protection Program are committed to ensuring that abandoned mine reclamation activities in Missouri are conducted in such manner so as to minimize, to the fullest extent practicable, any further adverse impact to the public's health safety and/or the environment. It is hereby recognized that this site may exist in a state of non-compliance with or in violation of, the provisions of the Environmental Protection Act and/or the WPP's Rules and Regulations. It is further recognized and agreed that the LRP and its Contractor(s) do not assume the responsibilities for the pre-existing pollutional sources. It shall be the objective of all parties that offsite pollution will be controlled to the maximum extent practicable, throughout the course of this reclamation project.

### **Controls**

The plans and specifications for the above-mentioned project, together with all attachments and documents incorporated therein by reference, comprise the storm water pollution prevention plan as required by the General Permit. The following items highlight the critical components of the storm water pollution prevention plan developed for this construction site and covered by this permit:

- 1) An assessment of all storm water discharges associated with the facility, including any materials existing or stored onsite will be conducted as part of the site design and in preparation of applying for a stormwater permit:
- 2) The construction limits, grading plan, erosion and sediment controls and storm water management controls as shown in the Project Plans:
- 3) The Temporary Storm Water Pollution Control, Site Clearing, Earth Moving, and Seeding requirements of the contract.

- 4) Schedule (Section 013216) of the Specifications, which requires submittal of the progress schedule by the contractor prior to the preconstruction meeting and monthly updates;
- 5) The Temporary Seeding, Erosion and Sediment Control, Special Excelsior Blanket and Riprap Sections as detailed in Temporary Storm Water Pollution Control (Section 015723), and Storm Drainage Structures (334900) of the Specifications, including other sections which relate to the establishment of vegetation, erosion control, and storm water pollution prevention;
- 6) The Temporary Erosion Controls, described in the Specifications, especially Section 015723.3.1.D, which states that the Contractor may be directed to provide immediate permanent or temporary pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment. Such work may involve construction of geotextile or bale silt fence, use of temporary mulches, seeding, or other control devices or methods, as necessary to control erosion. This section incorporates the requirements of the General Permit for storm water discharges;
- 7) Controls will be implemented to ensure that biosolids are not carried by storm water into the receiving streams, and
- 8) Site Inspections by the Design Engineer or Resident Project Representative will be conducted to ensure that storm water pollution controls are in place and operating correctly. At a minimum, these inspections will be conducted on a monthly basis. The disturbed areas will be inspected for evidence of, or the potential for, pollutants entering the drainage system. Should the inspection reveal inadequate or ineffective measures in preventing storm water pollutants entering the drainage system, the Resident Project Representative will discuss these findings with the Contractor. The Contractor and the Resident Project Representative will establish the revised or additional control measures determined necessary and appropriate, and the timetable for implementation. The Resident Project Representative will document on the Inspection Report, major observations relating to the implementation of this storm water pollution prevention plan, discussions with the Contractor with regard to this plan and any specific if changes to the plan.
- 9) The Department's Regional Office will be notified within fifteen (15) days by letter of any corrections of deficiencies. Deficiencies that consist of minor repairs or maintenance will be corrected within seven (7) days. Deficiencies that require additional time or installation of a treatment device to correct may be detailed in the written notification. Inspection reports will be kept on site with the SWPPP. These will be made available to DNR personnel upon request.

NPDES PERMIT No. **MOG050000**  
Storm Water Pollution Prevention Plan  
Certifications

Project Name: Tennyson Reclamation Project

Project Number: Y2401-01

The Storm Water Pollution Prevention Plan and Training was presented and discussed at the Preconstruction Meeting on \_\_\_\_\_. It shall be the responsibility of the Contractor to provide the necessary training to ensure all stormwater management practices are properly installed and maintained. The Land Reclamation Program Staff will be trained through the Office of Surface Mining's National Technical Training Program or on-site training.

The plans and specifications and all attachments were prepared under my supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

The Department's Regional Office will be notified within fifteen (15) days by letter of any corrections of deficiencies. Deficiencies that consist of minor repairs or maintenance must be corrected within seven (7) days. Deficiencies that require additional time or installation of a treatment device to correct should be detailed in the written notification.

\_\_\_\_\_  
Supervisor of Resident Project Representative  
Missouri Department of Natural Resources  
Land Reclamation Program  
Abandoned Mine Lands

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature (Contractor/Subcontractor)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City

\_\_\_\_\_  
State

\_\_\_\_\_  
Zip code

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