

# Project Manual

## Lewis and Clark County

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### Head Lane Bridge Replacement

- ☐ Bid Bond
- ☐ Bid Sheets and Signature Page (Notarized)
- ☐ Acknowledgement of Addenda
- ☐ Debarment Certification

April 2025

Prepared by:



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

GWE Project #: 1-17277-TO20  
MCEP Project#: MT-MCEP-CG-25-043

# PROJECT MANUAL

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## Head Lane Bridge Replacement

Lewis and Clark County

April 2025

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### **MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS**

The Montana Public Works Standard Specifications, Seventh Edition, April 2021 is incorporated herein by reference and shall be subject to the modifications and additions provided in the following Specifications.

### **STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION**

The Montana Department of Transportation Standard Specifications for Road and Bridge Construction, current edition, are incorporated herein by reference and shall be subject to the modifications and additions provided in the following Specifications.

The AASHTO Standard Specifications for Highway Bridges, current edition, are incorporated herein by reference and shall be subject to the modifications and additions provided in the following Specifications.

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# **INVITATION TO BID**

## SECTION 00100

### INVITATION TO BID

Notice is hereby given that the Board of County Commissioners of Lewis and Clark County, Montana are soliciting competitive bids from interested parties for the construction of the Head Lane Bridge. The project generally consists of the replacement of a single-span timber structure on Head Lane over Sevenmile Creek, in Lewis and Clark County. The new 54-foot single-span bridge will be constructed with County supplied prestressed concrete trideck girders. Improvements consist of but are not limited to: removal and disposal of existing bridge, structure excavation, structural backfill, roadway embankment, gravel base and surface course, random riprap, supply and driving of steel pile, construction of cast-in-place concrete pile caps, wingwalls & end diaphragms, installation of bridge superstructure, bridge rail, approach guardrail, cross-drain culverts, fencing, seeding and other miscellaneous items.

All Bids must be in accordance with the contract documents. The complete solicitation is available online at <https://www.lccountymt.gov/Government/Grants-and-Purchasing/Bids-and-Proposals-Current>. Questions related to this solicitation must be directed only to the designated point of contact for this solicitation: Karl Yakawich, [kyakawich@greatwesteng.com](mailto:kyakawich@greatwesteng.com), in accordance with Article 7.02 of Instructions to Bidders. A cone of silence is established for this solicitation which prohibits any bidder, or entity with financial interest in the bid award, from communicating regarding the solicitation with any Lewis and Clark County elected official, employee, or agent other than the designated point of contact. Contractors are encouraged to check for any addenda issued prior to submitting a bid.

There will be a pre-bid conference on Tuesday, April 15, 2025, at 3:30 p.m. in the Public Works Noxious Weed District Conference Room, located at 3402 Cooney Drive, Helena, MT. Interested bidders are encouraged to attend.

The deadline for bids to be delivered to the Lewis and Clark County Commissioner's Office, located at the City-County Administrative Building, 316 North Park Avenue, Room 345, Helena, MT 59623 is on or before 4:00 PM local time on April 21, 2025. The sealed envelope containing the bid must be labeled, "Head Lane Bridge, Bid Enclosed." Bids received by this deadline will be unsealed publicly on April 22, 2025 beginning at 9:00 AM local time in Room 330 of the City-County Administrative Building. Late bids are not accepted.

All bids must be accompanied by a bid bond or other form of security as specified in Montana Code Annotated 18-1-203, payable to Lewis and Clark County, in an amount not less than ten percent (10%) of the total amount of the bid. Successful Bidders shall furnish an approved Performance Bond and a Labor and Materials Payment Bond, each in the amount of one hundred percent (100%) of the contract amount. Insurance, as required, shall be provided by the successful Bidder(s) and a certificate(s) of that insurance shall be provided.

Contractor and any of the Contractor's Subcontractors bidding or doing work on this project will be required to be registered with the Montana Department of Labor and Industry (DLI). Forms for registration are available from the Department of Labor and Industry, PO Box 8011, 1805 Prospect, Helena MT 59604-8011. Information on registration can be obtained by calling (406) 444-7734. All laborers and mechanics employed by Contractor or Subcontractors in performance of the construction work shall be paid wages at rates as required by Montana Prevailing Wage Rates for Highway Construction Services 2025. The Contractor must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin.

Bids may only be withdrawn as provided in Article 15 of the Instructions to Bidders after the scheduled time for the public opening of bids. The right is reserved to reject any or all bids received, to waive informalities, to postpone the solicitation for a period not to exceed sixty (60) days, and to accept the lowest responsive and responsible bid that is in the best interest of the Owner.

This solicitation is being offered in accordance with federal and state statutes and county regulations governing procurement. Bids become the property of Lewis and Clark County. The County is not responsible for costs associated with preparing a bid.

Lewis and Clark County is an Equal Opportunity Employer.

Publication Dates:

- Saturday, April 5, 2025
- Saturday, April 12, 2025

**END OF SECTION**

# **INSTRUCTIONS TO BIDDERS**

## SECTION 00200

### INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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## ARTICLE 1—DEFINED TERMS

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

## ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner recommends that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.
- 2.04 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.
- 2.05 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are encouraged to register as plan holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.
- 2.06 *Electronic Documents*
- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.

1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.
- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

### **ARTICLE 3—QUALIFICATIONS OF BIDDERS**

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within seven (7) days of Owner's request, Bidder must submit the following information:
  - A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
  - B. A written statement that Bidder is authorized to do business in the state where the Project is located, ~~or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.~~
  - C. Bidder's state or other contractor license number, if applicable.
  - D. Subcontractor and Supplier qualification information.
  - E. Qualifications as defined in SP-02 in Section 00910: Special Provisions
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

### **ARTICLE 4—PRE-BID CONFERENCE**

- 4.01 A non-mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference; however, attendance at this conference is not required to submit a Bid.
- 4.02 Information presented at the pre-Bid conference does not alter the Contract Documents. Owner will issue Addenda to make any changes to the Contract Documents that result from

discussions at the pre-Bid conference. Information presented, and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an Addendum.

## **ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE**

### **5.01 *Site and Other Areas***

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

### **5.02 *Existing Site Conditions***

#### **A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions***

1. The Supplementary Conditions and/or Special Provisions identify the following regarding existing conditions at or adjacent to the Site:
  - a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.
  - b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.
  - c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
  - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions and/or Special Provisions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
3. If the Supplementary Conditions and/or Special Provisions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
4. *Geotechnical Baseline Report/Geotechnical Data Report*: The Bidding Documents contain a Geotechnical Baseline Report (GBR) and Geotechnical Data Report (GDR).
  - a. As set forth in the Supplementary Conditions, the GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations ("Baseline Conditions"). The GBR is a Contract Document.



- b. The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.
  - c. Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.
  - d. As set forth in the Supplementary Conditions, the GDR is a Contract Document containing data prepared by or for the Owner in support of the GBR.
- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

#### 5.03 *Other Site-related Documents*

- A. In addition to the documents regarding existing Site conditions referred to in Paragraph 5.02.A, the following other documents relating to conditions at or adjacent to the Site are known to Owner and made available to Bidders for reference:
- 1. **None**
- ~~Owner will make copies of these other Site-related documents available to any Bidder on request.~~
- ~~B. Owner has not verified the contents of these other Site-related documents, and Bidder may not rely on the accuracy of any data or information in such documents. Bidder is responsible for any interpretation or conclusion Bidder draws from the other Site-related documents.~~
- ~~C. The other Site-related documents are not part of the Contract Documents.~~
- ~~D. Bidders are encouraged to review the other Site-related documents, but Bidders will not be held accountable for any data or information in such documents. The requirement to review and take responsibility for documentary Site information is limited to information in (1) the Contract Documents and (2) the Technical Data.~~
- ~~E. No other Site-related documents are available.~~

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

- A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.
- B. A Site visit is scheduled following the pre-bid conference. Maps to the Site will be available at the pre-bid conference.
- C. Bidders visiting the Site are required to arrange their own transportation to the Site.

- D. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- E. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.
- F. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- G. Bidder must fill and compact all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program*

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

5.06 *Other Work at the Site*

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

## **ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS**

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.
- B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

6.02 Responsibilities of each Bidder Before Submitting a Bid:

- A. Examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;

- B. Visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work including but not limited to those general and local conditions affecting transportation, disposal, handling and storage facilities, availability of labor, utilities, roads, climatic conditions and seasons, physical conditions at the Site and project area a whole, Site topography and ground conditions, equipment and facilities needed prior to and during execution of the Work;
- C. Become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. Carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions and/or Special Provisions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions and/or Special Provisions, especially with respect to Technical Data in such reports and drawings;
- E. Consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;
- F. Agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. Agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

## ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
  - A. All questions about the meaning or intent of the Bidding Documents are to be submitted to the Engineer in writing and must be received by no later than 4:00 p.m. local time on April 16, 2025. Written comments may be submitted to Karl Yakawich of Great West Engineering by mail at: 2501 Belt View Drive, Helena, MT 59601 or email at: kyakawich@greatwesteng.com.
- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

## ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of ten (10%) percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety authorized to do business in Montana meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents. **Bid security must be at least 10% of the Bidder's maximum Bid price.**
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

## ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.
- 9.02 ~~Bidder must set forth in the Bid the time by which Bidder must achieve Substantial Completion, subject to the restrictions established in Paragraph 13.07 of these Instructions. The Owner will take Bidder's time commitment regarding Substantial Completion into consideration during the evaluation of Bids, and it will be necessary for the apparent Successful Bidder to satisfy Owner that it will be able to achieve Substantial Completion within the time such Bidder has designated in the Bid. [If applicable include the following: Bidder must also set forth in the Bid its commitments regarding the achievement of Milestones and readiness for final payment.] The Successful Bidder's time commitments will be entered into the Agreement or incorporated in the Agreement by reference to the specific terms of the Bid.~~
- 9.03 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

## ARTICLE 10—SUBSTITUTE AND “OR EQUAL” ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those “or-equal” or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an “or-equal” or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer within 10 days of the issuance of the Advertisement for Bids or invitation to Bidders. Each such request must comply with the requirements of Paragraphs 7.05 and 7.06 of the General Conditions, and the review of the request will be governed by the principles in those paragraphs. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all registered Bidders. Bidders cannot rely upon approvals made in any other manner.
- 10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder's sole risk.

## ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 11.02 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers within seven (7) days after Bid opening:

- 11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 11.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

## **ARTICLE 12—PREPARATION OF BID**

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
  - B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.
- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.
- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.

- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's ~~state contractor license number~~ current Montana Contractor's registration number, if any, must also be shown on the Bid Form.

#### **ARTICLE 13—BASIS OF BID**

13.01 *Lump Sum - Deleted*

13.02 *Base Bid with Alternates - Deleted*

13.03 *Sectional Bids - Deleted*

13.04 *Cost-Plus-Fee Bids - Deleted*

13.05 *Unit Price*

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in ~~the unit price section of bid schedule included in~~ the Bid Form.
- B. The Bid will not be considered unless the Bid Form is complete, containing all unit prices for each Bid item included in the Bid Form, and Bids and totals are shown legibly in their proper locations. The total amount of the Bid shall be legibly written and numerically presented in the proper place, and the Bid Form shall be manually signed.
- C. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- D. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in the favor of words.
- E. The Bid will not be considered unless the Bid Form is complete, containing all unit prices for each Bid item included in the Bid Form, and Bids and totals are shown legibly in their proper

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#### **Section 00200 - Instructions to Bidders**

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locations. The total amount of the Bid shall be legibly written and numerically presented in the proper place, and the Bid Form shall be manually signed.

13.06 *Allowances*

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

13.07 *Price-Plus-Time Bids - Deleted*

**ARTICLE 14—SUBMITTAL OF BID**

- 14.01 The Bidding Documents include one ~~separate unbound~~ copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be removed from the Bidding Documents or a copy may be produced. The form shall be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.
- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid. Hard copy bids must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "Head Lane Bridge, Bid Enclosed." A mailed Bid must be addressed to the location designated in the ~~Advertisement~~ Invitation to Bid.
  - A. A Bid will not be considered unless accompanied by the proper Bid Security in accordance with Article 8 of these Instructions to Bidders.
  - B. Bids, Bid Securities, or bid modifications submitted by electronic transmission (such as fax or e-mail) will not be considered.
- 14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

**ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID**

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid,



and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

#### **ARTICLE 16—OPENING OF BIDS**

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

#### **ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

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

#### **ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT**

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.
- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.
- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.
- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.
- 18.05 *Evaluation of Bids*
- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
  - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. ~~To determine the Bid prices for purposes of comparison, Owner will announce to all bidders a "Base Bid plus alternates" budget after receiving all Bids, but prior to opening them.~~ For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.
  - C. For determination of the apparent low Bidder(s) when sectional bids are submitted, Bids will be compared on the basis of the aggregate of the Bids for separate sections and the Bids for combined sections that result in the lowest total amount for all of the Work.

- D. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
  - E. For the determination of the apparent low Bidder when cost-plus-fee bids are submitted, Bids will be compared on the basis of the Guaranteed Maximum Price set forth by Bidder on the Bid Form.
- 18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.
- 18.08 The project has a finite budget and has therefore been separated into one base bid and one additive alternative based upon priority. The Bid will be awarded based upon one of two scenarios, either the base bid only or the base bid and Additive Alternative 1 combined. The award will be based upon the combined bid for all work awarded within the available funding. In either of the possible scenarios, the base bid and Additive Alternative 1 will be awarded to a single Bidder.

#### **ARTICLE 19—BONDS AND INSURANCE**

- 19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.
- 19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

#### **ARTICLE 20—SIGNING OF AGREEMENT**

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

#### **ARTICLE 21—STATE LAWS AND REGULATIONS**

- 21.01 All applicable laws, ordinances and the rules and regulations of authorities having jurisdiction over construction of the project shall apply to the Contract throughout. State laws and

ordinances which the Contractor must comply with, include but are not limited to, those involving workmen's compensation insurance, Contractor registration, and gross receipts tax.

- 21.02 Construction Contractors shall be registered in order to bid this project. Registration shall be per Montana Code Annotated 39-9-201. All Subcontractors whose portion of the work is over \$2,500 will be required to submit proof of registration with Department of Labor and Industry (DOLI).
- 21.03 Pursuant to Section 15-50-205, Montana Code Annotated, the Owner is required to withhold one (1) percent of all payments due the Contractor and is required to transmit such monies to the Montana Department of Revenue as part of the Public Contractor's Fee. In like fashion, the Contractor is required to withhold one (1) percent from payments to Subcontractors. Under the statute, these Public Contractor's Fees may be used as credits against income tax and corporation license tax paid or due in Montana.

## **ARTICLE 22—WAGE REQUIREMENTS**

- 22.01 In accordance with MCA 18-2-401 and 18-2-402, the Contractor and all Subcontractors must pay, as a minimum, the rate of wages as provided in the Montana Prevailing Wage Rates including fringe benefits and applicable zone pay. A copy of the current wage determination is included in the Contract Documents.
- 22.02 In addition, in accordance with MCA 18-2-422, the Contractor and all Subcontractors must maintain certified payrolls for a period of not less than 3 years from the completion of work and post a statement of all wages and fringe benefits at the site of the work.
- 22.03 The Contractor must also submit certified payrolls for all employees and employees of Subcontractors to the Engineer within one week of issuing each respective payroll.

## **ARTICLE 23—NOTICE OF EXTENDED PAYMENT PROVISION**

- 23.01 Pursuant to MCA 28-2-2115, Bidders are hereby notified that this contract allows the Owner to make payment within 30 days after approval of the payment request or as otherwise stipulated in the Supplementary Conditions to the General Conditions, SC-15.01.D.1. This provision is due to anticipated processing periods associated with funds to be received from state and federal grant and loan agencies.

## **ARTICLE 24—DEBARMENT CERTIFICATION**

- 24.01 Bidder shall submit with their Bid, the Debarment Certification statement included at the end of this section. The Certification must also be provided for all Subcontractors prior to the signing of the agreement.

**Certification Regarding Debarment, Suspension, and Other Responsibility Matters**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any State or Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

---

Business Name

---

Typed Name & Title of Authorized Representative

---

Signature of Authorized Representative

Date

\_\_\_\_\_ I am unable to certify to the above statements. My explanation is attached.

# BID FORM

## SECTION 00400

### BID FORM

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#### Section 00400 - Bid Form

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## **ARTICLE 1—OWNER AND BIDDER**

1.01 This Bid is submitted to:

***Lewis and Clark County  
Board of County Commissioners  
316 N. Park Avenue, Room 345  
Helena, MT 59623***

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

## **ARTICLE 2—ATTACHMENTS TO THIS BID**

2.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. Complete and Notarized Bid Form;
- C. Acknowledgement of Addendum;
- D. Contractor's License No. (List on page 7 of this bid form);
- E. Signed Debarment Certification;

**ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES****3.01 Unit Price Bids**

A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
101	Mobilization	LS	1	\$	\$
102	Removal and Disposal of Existing Bridge	LS	1	\$	\$
103	Structure Excavation	LS	1	\$	\$
104	Structural Backfill	CY	110	\$	\$
105	Cast-In-Place Concrete	CY	36	\$	\$
106	Install Prestressed Concrete Trideck Beams	LS	1	\$	\$
107	Furnish Steel H Piles	LF	270	\$	\$
108	Drive Steel H Piles	LF	237	\$	\$
109	Random Riprap, MDT Class II	CY	336	\$	\$
110	Roadway Embankment	CY	2027	\$	\$
111	1" - Minus Crushed Top Surfacing	CY	360	\$	\$
112	1.5" - Minus Crushed Base Course	CY	360	\$	\$
113	18" Diameter CSP Culvert, 0.064" Thickness, Annular	LF	40	\$	\$
114	Culvert Flared End Terminal Sections (FETS)	EA	2	\$	\$
115	W830 Bridge Barrier Rail	LF	118	\$	\$
116	Box Beam Guardrail	LF	306	\$	\$
117	Guardrail Approach Section	EA	4	\$	\$
118	Box Beam Terminal End Section	EA	4	\$	\$
119	Type 3 Object Markers and Posts	EA	4	\$	\$
120	Seed	LS	1		
121	Supply and Install New Fencing	LF	445	\$	\$
122	Traffic Control	LS	1	\$	\$
Total of All Unit Price Bid Items					\$

Additive Alternate No. 1					
Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
201	Concrete Approach Slab	SY	63	\$	\$
Total of All Unit Price Bid Items: Additive Alternate No. 1					\$

**Section 00400 - Bid Form**

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B. Bidder acknowledges that:

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

**ARTICLE 4—BASIS OF BID—COST-PLUS FEE - DELETED**

**ARTICLE 5—PRICE-PLUS-TIME BID - DELETED**

**ARTICLE 6—TIME OF COMPLETION**

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

**ARTICLE 7—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA**

7.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

7.03 *Receipt of Addenda*

- A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

**ARTICLE 8—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS**

8.01 *Bidder's Representations*

- A. In submitting this Bid, Bidder represents the following:
1. Bidder has examined and carefully studied the Bidding Documents, including Addenda and any data and reference items identified in the Bidding Documents.

2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the ~~Supplementary Conditions~~ Special Provisions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the ~~Supplementary Conditions~~ Special Provisions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### 8.02 *Bidder's Certifications*

- A. The Bidder certifies the following:

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#### Section 00400 - Bid Form

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1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
  - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
  - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
  - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
  - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

## ARTICLE 9—BID SUBMITTAL

BIDDER: [Indicate correct name of entity submitting this bid]

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

Address for giving notices:

Email Address: \_\_\_\_\_

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

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

Contactor's Registration No.: \_\_\_\_\_

Tax ID No.: \_\_\_\_\_

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

By:

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

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

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

*Authorized Company Official Signature*

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

State of Montana

County of \_\_\_\_\_

This instrument was acknowledged before me on \_\_\_\_\_ [date] by \_\_\_\_\_

\_\_\_\_\_ [printed name of authorized company official] as \_\_\_\_\_

[title] of \_\_\_\_\_ [printed company name].

[Seal]

\_\_\_\_\_  
Notary Signature

**Reminder to Notary:** When notarizing a signature on behalf of a corporation, the notary should determine (1) the identity of the person who is actually signing the document, (2) the capacity of the person to sign on behalf of the entity, and (3) the authority to sign for that entity in this particular transaction. If you have questions or are unsure of how to notarize a document in which the signature is in a representative capacity, please contact the Montana Secretary of State at (406) 444-5379.

## END OF SECTION

Section 00400 - Bid Form

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## BID BOND (PENAL SUM FORM)

<b>Bidder</b> Name: <b>[Full formal name of Bidder]</b> Address <i>(principal place of business)</i> : <b>[Address of Bidder's principal place of business]</b>	<b>Surety</b> Name: <b>[Full formal name of Surety]</b> Address <i>(principal place of business)</i> : <b>[Address of Surety's principal place of business]</b>
<b>Owner</b> Name: <b>[Full formal name of Owner]</b> Address <i>(principal place of business)</i> : <b>[Address of Owner's principal place of business]</b>	<b>Bid</b> Project <i>(name and location)</i> : <b>[Owner project/contract name, and location of the project]</b>  Bid Due Date: <b>[Enter date bid is due]</b>
<b>Bond</b> Penal Sum: <b>[Amount]</b> Date of Bond: <b>[Date]</b>	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
_____ <i>(Full formal name of Bidder)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i>	

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

# **AGREEMENT FORM**

## SECTION 00500

### AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT

This Agreement becomes effective after execution by the final party. This Agreement is by and between Lewis and Clark County (“Owner”) and \_\_\_\_\_ (“Contractor”).

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

Owner and Contractor hereby agree as follows:

#### ARTICLE 1 – WORK

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

*The project generally consists of the replacement of a single-span timber structure on Head Lane over Sevenmile Creek, in Lewis and Clark County. The new 54-foot single-span bridge will be constructed with County supplied precast, prestressed concrete trideck beams. Improvements consist of but are not limited to: removal and disposal of existing bridge, structure excavation, structural backfill, roadway embankment, gravel base and surface course, random riprap, supply and driving of steel pile, construction of cast-in-place concrete pile caps, wingwalls & end diaphragms, installation of bridge superstructure, bridge rail, approach guardrail, cross-drain culverts, fencing, seeding and other miscellaneous items.*

#### ARTICLE 2 – THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **Head Lane Bridge Replacement.**

#### ARTICLE 3 – ENGINEER

- 3.01 The Owner has retained **Great West Engineering** (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.
- 3.02 The part of the Project that pertains to the Work has been designed by Engineer.

#### ARTICLE 4 – CONTRACT TIMES

- 4.01 *Time of the Essence*
- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- 4.02 *Contract Times: Days*
- A. The Work will be substantially complete within **75** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and



completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **15** days after the date when the Contract Times commence to run.

#### 4.03 Milestones

- A. Parts of the Work shall be substantially completed on or before the following Milestone(s):
  - 1. Milestone 1 – All work completed for all schedules before **December 1, 2025**

#### 4.04 Liquidated Damages

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
  - 1. *Substantial Completion*: Contractor shall pay Owner **\$500** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
  - 2. *Completion of Remaining Work*: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **\$500** for each day that expires after such time until the Work is completed and ready for final payment.
  - 3. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

#### 4.05 Special Damages

- A. Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.
  - 1. Damages for (2) in the above paragraph will be incurred based on the following hourly rates:

Straight Time	
Project Manager	\$196.00/Hour
Project Engineer	\$171.00/Hour
Resident Project Representative (RPR)	\$165.00/Hour
RPR Overtime Rate	\$247.50/Hour
Project Administrator	\$145.00/Hour
Clerical	\$93.00/Hour
Mileage	\$ 0.85/Mile
Survey Crew	\$250.00/Hour
GPS Rental	\$250.00/Day
Nuclear Densometer	\$30.00/Day

- B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.
- C. The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.

## ARTICLE 5 – CONTRACT PRICE

- 5.01 *Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, an amount equal to the sum of the established unit prices for each Bid item from the Bid Form multiplied by the actual quantity of the respective Bid item constructed and accepted.*

## ARTICLE 6 – PAYMENT PROCEDURES

### 6.01 *Submittal and Processing of Payments*

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

### 6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on the basis of Contractor's Applications for Payment ~~on or about the \_\_\_\_\_ day of~~ once each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.
    - a. Ninety five-percent (95%) of the value of the Work completed (with the balance being retainage).
    - b. Ninety five-percent (95%) of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
  - B. Upon Substantial Completion of the entire construction to be provided under the construction Contract Documents, Owner shall pay an amount sufficient to increase total payments to Contractor to one hundred percent (100%) of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less two hundred percent (200%) of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.
- 6.03 *Final Payment*
- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.
- 6.04 *Consent of Surety*
- A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.
- 6.05 *Interest*
- A. All amounts not paid when due will bear interest at the ~~rate of percent~~ maximum rate per annum MCA 28-2-2103 and MCA 28-2-2104.

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

### **7.01 *Contents***

- A. The Contract Documents consist of the following:
  1. This Agreement (pages 1 to 8, inclusive).
  2. Invitation to Bid (pages 1 to 2, inclusive).
  3. Instructions to Bidders (pages 1 to 16, inclusive).
  4. Bid Form (pages 1 to 7, inclusive).
  5. Bonds:
    - a. Performance bond (together with power of attorney) (pages 1 to 4, inclusive).
    - b. Payment bond (together with power of attorney) (pages 1 to 4, inclusive).
  6. General Conditions (pages 1 to 77, inclusive).
  7. Supplementary Conditions (pages 1 to 24, inclusive).

8. Special Provisions (pages 1 to 11, inclusive).
  9. Montana Prevailing Wage Rates (pages 1 to 13, inclusive).
  10. Specifications as listed in the table of contents of the project manual (copy of list attached).
  11. Drawings (not attached but incorporated by reference) consisting of 14 sheets with each sheet bearing the following general title: Head Lane Bridge Replacement **[OR]** Drawings listed on the attached sheet index.
  12. Addenda (numbers to inclusive).
  13. Exhibits to this Agreement (enumerated as follows);
    - a. Notice of Award (pages 1 to , inclusive).
  14. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    - a. Notice to Proceed.
    - b. Work Change Directives.
    - c. Change Orders.
    - d. Field Orders.
    - e. Warranty Bond, if any.
  15. Permits, Approved and Pending.
  16. The Montana Public Works Standard Specifications, Seventh Edition, April 2021, collectively referred to as MPWSS, as may be modified by above Contract Documents. (The MPWSS is not attached to the Agreement).
  17. The Montana Department of Transportation Standard Specifications for Road and Bridge Construction, 2025 Edition, as may be modified by the above Contract Documents. (The Standard Specifications are not attached to this Agreement)
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the ~~Contract~~ General Conditions.

## **ARTICLE 8 – REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS**

### **8.01 Contractor's Representations**

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

Contractor has examined and carefully studied the Contract Documents, including Addenda.

2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the ~~Supplementary Conditions~~ Special Provisions, with respect to the Technical Data in such reports and drawings.
5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the ~~Supplementary Conditions~~ Special Provisions, with respect to Technical Data in such reports and drawings.
6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

#### 8.02 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:
  1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### 8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the Supplementary Conditions.

### **ARTICLE 9 – MISCELLANEOUS**

#### 9.01 *Terms*

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

#### 9.02 *Assignment of Contract*

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

#### 9.03 *Successors and Assigns*

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

#### 9.04 *Severability*

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

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

This Agreement will be effective after execution by the final party (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

\_\_\_\_\_ Date

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

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

\_\_\_\_\_ Date

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

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

Attest/Notary: \_\_\_\_\_

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

State of Montana

County of \_\_\_\_\_

This Instrument was Acknowledged before me  
on \_\_\_\_\_ [date] by

\_\_\_\_\_  
[printed name of authorized company  
official]

as \_\_\_\_\_ [title]  
of \_\_\_\_\_

- \_\_\_\_\_ [printed company  
name].

Notary Signature \_\_\_\_\_

\_\_\_\_\_

[seal]

Tax ID No. \_\_\_\_\_

Contractor's  
Registration No. \_\_\_\_\_

Address for giving notices:

3402 Cooney Drive

Helena, MT 59602

\_\_\_\_\_

\_\_\_\_\_

Address for giving notices:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# **STANDARD FORMS**



## NOTICE OF AWARD

Date of Issuance:

Owner:

Owner's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

Bidder:

Bidder's Address:

You are notified that Owner has accepted your Bid dated \_\_\_\_\_ for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

---

The Contract Price of the awarded Contract is \$\_\_\_\_\_. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

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

☐ Drawings will be delivered separately from the other Contract Documents.

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

1. Deliver to Owner ☐ counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

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

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner:

By (signature): \_\_\_\_\_

Name (printed): \_\_\_\_\_

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

Copy: Engineer

## NOTICE TO PROCEED

Owner: \_\_\_\_\_ Owner's Project No.: \_\_\_\_\_  
Engineer: \_\_\_\_\_ Engineer's Project No.: \_\_\_\_\_  
Contractor: \_\_\_\_\_ Contractor's Project No.: \_\_\_\_\_  
Project: \_\_\_\_\_  
Contract Name: \_\_\_\_\_  
Effective Date of Contract: \_\_\_\_\_

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on \_\_\_\_\_ pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is \_\_\_\_\_, and the date by which readiness for final payment must be achieved is \_\_\_\_\_.

**[or]**

The number of days to achieve Substantial Completion is \_\_\_\_ from the date stated above for the commencement of the Contract Times, resulting in a date for Substantial Completion of \_\_\_\_\_; and the number of days to achieve readiness for final payment is \_\_\_\_ from the commencement date of the Contract Times, resulting in a date for readiness for final payment of \_\_\_\_\_.

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

Owner: \_\_\_\_\_  
By (*signature*): \_\_\_\_\_  
Name (*printed*): \_\_\_\_\_  
Title: \_\_\_\_\_  
Date Issued: \_\_\_\_\_  
Copy: Engineer

## PERFORMANCE BOND

<b>Contractor</b> Name: Address <i>(principal place of business)</i> :	<b>Surety</b> Name: Address <i>(principal place of business)</i> :
<b>Owner</b> Name: Mailing address <i>(principal place of business)</i> :	<b>Contract</b> Description <i>(name and location)</i> :  Contract Price: Effective Date of Contract:
<b>Bond</b> Bond Amount: Date of Bond: <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <div style="text-align: center;"><i>(Signature)</i></div>	By: _____ <div style="text-align: center;"><i>(Signature)(Attach Power of Attorney)</i></div>
Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>	Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>
Title: _____	Title: _____
Attest: _____ <div style="text-align: center;"><i>(Signature)</i></div>	Attest: _____ <div style="text-align: center;"><i>(Signature)</i></div>
Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>	Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
  - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
  - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
  - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
  - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
  - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
  - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
  - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
- 6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
- 7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
  - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
  - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
  - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
- 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
- 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
- 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
- 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
- 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
  - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
  - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
  - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
  - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows:

## PAYMENT BOND

<b>Contractor</b> Name: Address <i>(principal place of business)</i> :	<b>Surety</b> Name: Address <i>(principal place of business)</i> :
<b>Owner</b> Name: Mailing address <i>(principal place of business)</i> :	<b>Contract</b> Description <i>(name and location)</i> :  Contract Price: Effective Date of Contract:
<b>Bond</b> Bond Amount: Date of Bond: <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i> Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <div style="text-align: center;"><i>(Signature)</i></div>	By: _____ <div style="text-align: center;"><i>(Signature)(Attach Power of Attorney)</i></div>
Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>	Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>
Title: _____	Title: _____
Attest: _____ <div style="text-align: center;"><i>(Signature)</i></div>	Attest: _____ <div style="text-align: center;"><i>(Signature)</i></div>
Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>	Name: _____ <div style="text-align: center;"><i>(Printed or typed)</i></div>
Title: _____	Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
  - 5.1. Claimants who do not have a direct contract with the Contractor
    - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
    - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
  - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
  - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
  - 7.2. Pay or arrange for payment of any undisputed amounts.
  - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.



8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
  - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
    - 16.1.1. The name of the Claimant;
    - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
    - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
    - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
- 16.1.7. The total amount of previous payments received by the Claimant; and
- 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
- 17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
- 18. Modifications to this Bond are as follows:

**Contractor's Application for Payment**

<b>Owner:</b> _____	<b>Owner's Project No.:</b> _____
<b>Engineer:</b> _____	<b>Engineer's Project No.:</b> _____
<b>Contractor:</b> _____	<b>Contractor's Project No.:</b> _____
<b>Project:</b> _____	
<b>Contract:</b> _____	

**Application No.:** \_\_\_\_\_ **Application Date:** \_\_\_\_\_  
**Application Period:** From \_\_\_\_\_ to \_\_\_\_\_

1. Original Contract Price	\$	-
2. Net change by Change Orders	\$	-
3. Current Contract Price (Line 1 + Line 2)	\$	-
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)	\$	-
5. Retainage		
a. _____ X \$ - Work Completed	\$	-
b. _____ X \$ - Stored Materials	\$	-
c. Total Retainage (Line 5.a + Line 5.b)	\$	-
6. Amount eligible to date (Line 4 - Line 5.c)	\$	-
7. Less previous payments (Line 6 from prior application)		
8. Gross Amount due this application	\$	-
9. 1% MT Gross Receipts Tax (1% x Line 8)	\$	-
10. Unscheduled Employment of the Engineer	\$	-
11. Current Payment Due (less MT GRT)	\$	-
12. Balance to finish (Line 3 - Line 4)	\$	-

**Contractor's Certification**

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

- (1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;
- (2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and
- (3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

**Contractor:** \_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Recommended by Engineer**

**By:** \_\_\_\_\_  
**Title:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

**Approved by Funding Agency**

**By:** \_\_\_\_\_  
**Title:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

**Approved by Owner**

**By:** \_\_\_\_\_  
**Title:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

**By:** \_\_\_\_\_  
**Title:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

### Progress Estimate - Lump Sum Work

### Contractor's Application for Payment

Owner:		Owner's Project No.:	
Engineer:		Engineer's Project No.:	
Contractor:		Contractor's Project No.:	
Project:			
Contract:			

Application No.:		Application Period:	From		to		Application Date:	
------------------	--	---------------------	------	--	----	--	-------------------	--

A	B	C	D	E	F	G	H	I
Item No.	Description	Scheduled Value (\$)	Work Completed		Materials Currently Stored (not in D or E) (\$)	Work Completed and Materials Stored to Date (D + E + F) (\$)	% of Scheduled Value (G / C) (%)	Balance to Finish (C - G) (\$)
			(D + E) From Previous Application (\$)	This Period (\$)				
Original Contract								
			-			-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
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						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
Original Contract Totals		\$ -	\$ -	\$ -	\$ -	\$ -		\$ -

### Progress Estimate - Lump Sum Work

### Contractor's Application for Payment

Owner:		Owner's Project No.:	
Engineer:		Engineer's Project No.:	
Contractor:		Contractor's Project No.:	
Project:			
Contract:			

**Application No.:** \_\_\_\_\_ **Application Period:** **From** \_\_\_\_\_ **to** \_\_\_\_\_ **Application Date:** \_\_\_\_\_

[illegible]

## Contractor's Application for Payment

Owner:	_____	Owner's Project No.:	_____
Engineer:	_____	Engineer's Project No.:	_____
Contractor:	_____	Contractor's Project No.:	_____
Project:	_____		
Contract:	_____		

Unit Price

## Contractor's Application for Payment

Owner:	_____	Owner's Project No.:	_____
Engineer:	_____	Engineer's Project No.:	_____
Contractor:	_____	Contractor's Project No.:	_____
Project:	_____		
Contract:	_____		

Application No.:	Application Period:	From	to	Application Date:
------------------	---------------------	------	----	-------------------

A	B	C	D	E	F	G	H	I	J	K	L
Bid Item No.	Description	Contract Information				Work Completed		Materials Currently Stored (not in G) (\$)	Work Completed and Materials Stored to Date (H + I) (\$)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) (\$)
		Item Quantity	Units	Unit Price (\$)	Value of Bid Item (C X E) (\$)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) (\$)				
Change Orders											
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
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					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
Change Order Totals					\$ -		\$ -	\$ -	\$ -		\$ -
Original Contract and Change Orders											
Project Totals					\$ -		\$ -	\$ -	\$ -		\$ -

### Contractor's Application for Payment

Owner:		Owner's Project No.:	
Engineer:		Engineer's Project No.:	
Contractor:		Contractor's Project No.:	
Project:			
Contract:			

<b>Application No.:</b> _____	<b>Application Period:</b> From _____ to _____	<b>Application Date:</b> _____
-------------------------------	--	--------------------------------

[illegible]



# CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:  
Engineer:  
Contractor:  
Project:  
Contract Name:

Owner's Project No.:  
Engineer's Project No.:  
Contractor's Project No.:

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

Date of Substantial Completion: \_\_\_\_\_

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

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

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

The following documents are attached to and made a part of this Certificate:

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

Engineer

By (signature): \_\_\_\_\_

Name (printed): \_\_\_\_\_

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

**WORK CHANGE DIRECTIVE NO.: \_\_\_\_**

Owner:

Owner's Project No.:

Engineer:

Engineer's Project No.:

Contractor:

Contractor's Project No.:

Project:

Contract Name:

Date Issued:

Effective Date of Work Change Directive:

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

Description:

Attachments:

Purpose for the Work Change Directive:

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

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

Contract Price: \$ \_\_\_\_\_ [increase] [decrease] [not yet estimated].

Contract Time: \_\_\_\_\_ days [increase] [decrease] [not yet estimated].

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

Recommended by Engineer

Authorized by Owner

By:

Title:

Date:

**CHANGE ORDER NO.: \_\_\_\_**

Owner:

Engineer:

Contractor:

Project:

Contract Name:

Date Issued:

Owner's Project No.:

Engineer's Project No.:

Contractor's Project No.:

Effective Date of Change Order:

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments:

Change in Contract Price	Change in Contract Times
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
<b>[Increase] [Decrease]</b> from previously approved Change Orders No. 1 to No. <b>[Number of previous Change Order]</b> : \$ _____	<b>[Increase] [Decrease]</b> from previously approved Change Orders No.1 to No. <b>[Number of previous Change Order]</b> : Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
<b>[Increase] [Decrease]</b> this Change Order: \$ _____	<b>[Increase] [Decrease]</b> this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

Recommended by Engineer (if required)

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

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

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

Authorized by Owner

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

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

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

Accepted by Contractor

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Approved by Funding Agency (if applicable)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**FIELD ORDER NO.:** \_\_\_\_

Owner:

Owner's Project No.:

Engineer:

Engineer's Project No.:

Contractor:

Contractor's Project No.:

Project:

Contract Name:

Date Issued:

Effective Date of Field Order:

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

**Reference:**

Specification Section(s):

Drawing(s) / Details (s):

**Description:**

**Attachments:**

**Issued by Engineer**

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

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

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

## REQUEST FOR INFORMATION (RFI)

RFI # \_\_\_\_\_

Project: \_\_\_\_\_

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

To: \_\_\_\_\_ (Great West Engineering, Inc.)  
2501 Belt View Drive  
Helena, MT 59601

From: \_\_\_\_\_ (Contractor)  
\_\_\_\_\_  
\_\_\_\_\_

Created Date: \_\_\_\_\_

Status: \_\_\_\_\_

Location: \_\_\_\_\_

Due Date: \_\_\_\_\_

Reference: \_\_\_\_\_

Drawing No. \_\_\_\_\_

Spec Section: \_\_\_\_\_

Question:

Owner

Engineer

Contractor

Date

Date

Date

Reply:

Owner

Engineer

Contractor

Date

Date

Date

# SUBMITTAL LOG

Project: Head Lane Bridge Replacement  
 Project No.: GWE# 1-17277-TO20

Owner: Lewis and Clark County

Contractor: \_\_\_\_\_

g g

[illegible]

# **STANDARD GENERAL CONDITIONS**

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By





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# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## ARTICLE 1—DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

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

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
  - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
  - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
  12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
  13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
  14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
  15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
  16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
  17. *Cost of the Work*—See Paragraph 13.01 for definition.
  18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
  19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
  20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
  21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the



recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
  - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
  - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
  - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
  - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
  - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

## 1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
  - 1. does not conform to the Contract Documents;
  - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
  - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
  - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
  - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
  - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
  - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2—PRELIMINARY MATTERS**

### **2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance***

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

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

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

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

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
  - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
  - 2. a preliminary Schedule of Submittals; and
  - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

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

2.05 *Acceptance of Schedules*

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

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

## ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

### 3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
  - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
  - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

### 3.02 *Reference Standards*

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

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

### 3.03 *Reporting and Resolving Discrepancies*

#### A. *Reporting Discrepancies*

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

#### B. *Resolving Discrepancies*

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

### 3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.



- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

### 3.05 *Reuse of Documents*

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

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

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

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

### 4.02 *Starting the Work*

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

### 4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

#### 4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
  - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
  - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

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

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
  - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
  - 2. Abnormal weather conditions;
  - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
  - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
  2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
  3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
  2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
  3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
  4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
  5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

## **ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

### **5.01 *Availability of Lands***

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

## 5.02 *Use of Site and Other Areas*

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

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
  2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
  - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

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

### 5.03 *Subsurface and Physical Conditions*

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

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
  2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
  3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
  4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

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

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

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

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
  - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
  - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
    - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
    - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
    - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
  3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
  4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

#### 5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
  2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
  4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
  5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
  2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
  3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
  4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown



or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
  - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
  - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
  3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
  4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

#### 5.06 *Hazardous Environmental Conditions at Site*

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

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
  3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

## **ARTICLE 6—BONDS AND INSURANCE**

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

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

#### 6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
  - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
  - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
  - 1. include at least the specific coverages required;
  - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
  - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
  - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
  - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
  - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
  - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
  - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
  2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.



6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

**ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES**

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

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

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

#### 7.04 *Services, Materials, and Equipment*

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

#### 7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
  - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
    - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
      - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
  - 3) has a proven record of performance and availability of responsive service; and
  - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
  - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

#### 7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
  2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
  - a. will certify that the proposed substitute item will:
    - 1) perform adequately the functions and achieve the results called for by the general design;
    - 2) be similar in substance to the item specified; and
    - 3) be suited to the same use as the item specified.
  - b. will state:
    - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
    - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
    - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
  - c. will identify:
    - 1) all variations of the proposed substitute item from the item specified; and
    - 2) available engineering, sales, maintenance, repair, and replacement services.
  - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

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

#### 7.09 *Permits*

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

#### 7.10 *Taxes*

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

#### 7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

#### 7.12 *Record Documents*

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

### 7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
  - 1. all persons on the Site or who may be affected by the Work;
  - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.



- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

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

7.15 *Emergencies*

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

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall:
  - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determine and verify:
    - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
    - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
    - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
  - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
- 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
    - a. Contractor shall submit the number of copies required in the Specifications.
    - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
  2. *Samples*
    - a. Contractor shall submit the number of Samples required in the Specifications.
    - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
  3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
  2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
  3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
  4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

*D. Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

*E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
  - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
  - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
  - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

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

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
  - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
  - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
  - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
  - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
  - 1. Observations by Engineer;
  - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
  - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
  - 4. Use or occupancy of the Work or any part thereof by Owner;
  - 5. Any review and approval of a Shop Drawing or Sample submittal;
  - 6. The issuance of a notice of acceptability by Engineer;
  - 7. The end of the correction period established in Paragraph 15.08;
  - 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

**7.18 Indemnification**

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

**7.19 Delegation of Professional Design Services**

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
  - 1. Checking for conformance with the requirements of this Paragraph 7.19;
  - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
  - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

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

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

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

#### 8.02 *Coordination*

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

#### 8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
  - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
  - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

## **ARTICLE 9—OWNER'S RESPONSIBILITIES**

### **9.01    *Communications to Contractor***

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

### **9.02    *Replacement of Engineer***

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

### **9.03    *Furnish Data***

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

### **9.04    *Pay When Due***

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



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

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

9.06 *Insurance*

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

9.07 *Change Orders*

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

9.08 *Inspections, Tests, and Approvals*

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

9.09 *Limitations on Owner's Responsibilities*

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

9.10 *Undisclosed Hazardous Environmental Condition*

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

9.11 *Evidence of Financial Arrangements*

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

9.12 *Safety Programs*

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

## **ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION**

### **10.01 *Owner's Representative***

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

### **10.02 *Visits to Site***

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

### **10.03 *Resident Project Representative***

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

### **10.04 *Engineer's Authority***

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

**10.05 *Determinations for Unit Price Work***

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

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

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

**10.07 *Limitations on Engineer's Authority and Responsibilities***

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

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

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

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

**10.08 *Compliance with Safety Program***

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

## ARTICLE 11—CHANGES TO THE CONTRACT

### 11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

### 11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
  - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
  - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
  - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
  - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

### 11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
  - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
  - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

#### 11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

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

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

#### 11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

#### 11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
  2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
  3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
  2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
    - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
    - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
    - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
    - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
    - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

#### 11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

#### 11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
  - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
  - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

#### 11.10 *Notification to Surety*

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

### ARTICLE 12—CLAIMS

#### 12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
  1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
  2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
  3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
  4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge



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

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

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

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

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

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

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
  - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
  - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
  - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
  - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
  - 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
  - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
  - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
  - 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
  - 6. Expenses incurred in preparing and advancing Claims.
  - 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee*
- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
    - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
    - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
      - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
      - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
  - 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

### 13.02 Allowances

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

### 13.03 Unit Price Work

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

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
  - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
  - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

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

14.01 *Access to Work*

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

14.02 *Tests, Inspections, and Approvals*

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

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
  2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
  3. by manufacturers of equipment furnished under the Contract Documents;
  4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
  5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

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

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

#### 14.03 *Defective Work*

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

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

#### 14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

#### 14.05 *Uncovering Work*

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

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

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,



or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

**14.07 Owner May Correct Defective Work**

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

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

**15.01 Progress Payments**

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
  - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
  - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

*C. Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
  - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
  - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
  - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
  - a. to supervise, direct, or control the Work;
  - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
  - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
  - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
  - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
  - a. the Work is defective, requiring correction or replacement;
  - b. the Contract Price has been reduced by Change Orders;
  - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
  - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

**D. *Payment Becomes Due***

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

**E. *Reductions in Payment by Owner***

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
  - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
  - c. Contractor has failed to provide and maintain required bonds or insurance;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
  - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
  - f. The Work is defective, requiring correction or replacement;
  - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - h. The Contract Price has been reduced by Change Orders;
  - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
  - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
  - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
  - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
  3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

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

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

#### 15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

#### 15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

#### 15.05 *Final Inspection*

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

#### 15.06 *Final Payment*

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

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents;
  - b. consent of the surety, if any, to final payment;
  - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
  - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

#### 15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

#### 15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. correct the defective repairs to the Site or such adjacent areas;
  - 2. correct such defective Work;
  - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
  - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.



- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

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

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

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

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

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
  - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
  - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
  - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
  - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
  - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
  - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

#### 16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
  - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
  - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

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

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

## **ARTICLE 17—FINAL RESOLUTION OF DISPUTES**

### **17.01 *Methods and Procedures***

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
  - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
  - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
  - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
  - 2. agree with the other party to submit the dispute to another dispute resolution process; or
  - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

## **ARTICLE 18—MISCELLANEOUS**

### **18.01 *Giving Notice***

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
  - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
  - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
  - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

### **18.02 *Computation of Times***

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

18.03 *Cumulative Remedies*

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

18.04 *Limitation of Damages*

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

18.05 *No Waiver*

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

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Assignment of Contract*

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

18.09 *Successors and Assigns*

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

18.10 *Headings*

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

# **SUPPLEMENTARY CONDITIONS TO THE GENERAL CONDITIONS**

## SECTION 00800

### SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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# SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

## ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

### SC-1.01 *Defined Terms*

- SC-1.01.A Add to the list of definitions in Paragraph 1.01.A by inserting the following as numbered items in their proper alphabetical positions:

*Abnormal Weather Conditions* – Conditions of extreme or unusual weather for a given region, elevation, or season as determined by Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered Abnormal Weather Conditions.

## ARTICLE 2 - PRELIMINARY MATTERS

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

- SC-2.01 Delete Paragraphs 2.01.B. and C. in their entirety and insert the following in their place:

- A. *Bonds*: Engineer shall furnish to Contractor six copies of the agreement and other Contract Documents bound therewith. Contractor shall execute the Agreement, attach executed copies of the required Bonds and Power of Attorney, and submit all copies to Engineer who will forward them to the Owner. Owner shall execute all copies and return two copies to the Contractor. Owner shall also furnish two counterparts or conformed copies to the Engineer and shall retain two copies.
- B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Engineer, Contractor shall also deliver to Engineer copies of the policies (including all endorsements, and identification of applicable self-insured retentions and deductibles) of insurance required to be provided by Contractor in this Contract. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- C. *Evidence of Owner's Insurance*: After receipt from Contractor of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor copies of the policies of insurance to be provided by Owner in this Contract (if any). Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

*SC-2.02 Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor four printed copies of the Contract Documents (including two fully executed counterparts of the Agreement), and one copy in electronic portable document format (PDF).

Additional copies of Drawings and Project Manuals may be obtained from the Engineer on the following basis:

Full or partial sets of Drawings	\$5.00 per sheet (Full size)
	\$1.50 per sheet (Half size)
Each book of Specifications	\$50.00

*SC-2.03 Before Starting Construction*

SC-2.03.A Add the following new paragraph immediately after Paragraph 2.03.A.3

4. A preliminary list of construction equipment with hourly rates, owned or rented by the Contractor and all Subcontractors that will be used in the performance of the Work. The equipment list will include information necessary to confirm the hourly rates per the General Conditions and SC-13.01.B.5.c, including make, model, and year of manufacture as well as the horse power, capacity or weight, and accessories.

*SC-2.04 Preconstruction Conference; Designation of Authorized Representatives*

SC-2.04.A Delete Paragraph 2.04.A in its entirety and insert the following in its place:

Before any Work at the Site is started, a conference will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

The conference shall be attended by authorized representatives of Owner, Engineer, and their consultants; Contractor and its superintendent. The Contractor shall be responsible for ensuring that all major Subcontractors; Suppliers; and other concerned parties attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

*SC-2.05 Initial Acceptance of Schedules*

SC-2.05.A Delete Paragraph 2.05.A in its entirety and insert the following in its place:

- A. Prior to the first application for payment all schedules and documents identified in Paragraph 2.03.A shall be finalized and acceptable to the Engineer and Owner. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer and Owner as provided below. Acceptance of these schedules and documents by either Engineer or Owner will neither impose on Engineer or Owner responsibility for the sequencing, scheduling or progress of the Work and will not interfere with or relieve Contractor from Contractor's full responsibility therefore.



SC-2.05.A Add the following new paragraph immediately after Paragraph 2.05.A.4:

5. Contractor's Schedule of Construction Equipment will be acceptable to Engineer as to form and substance if it provides the necessary information to reference the equipment and establish the hourly rates in accordance with the General Conditions and SC-13.01.B.5.c.

*SC-2.06 Electronic Transmittals*

SC-2.06 Add the following new paragraph immediately after Paragraph 2.06.A:

1. Electronic data for Shop Drawings and other submittals may be relied upon if done in accordance with Section 01300.

SC-2.06 Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

- B. *Electronic Documents Protocol:* The parties shall conform to the following provisions in Paragraphs 2.06.B and 2.06.C, together referred to as the Electronic Documents Protocol ("EDP" or "Protocol") for exchange of electronic transmittals.

1. *Basic Requirements*

- a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Unless otherwise agreed upon, Electronic documents will only be transmitted and accepted in Portable Document Format (PDF), Microsoft Word Document (DOC), Microsoft Excel Document (XLS), AutoCAD Drawing File (DWG), and Design Web Format (DWF) formats. If another type of file is required, Engineer approval is required. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.
- b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.
- c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.
- d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.

- e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.
  - f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.
2. System Infrastructure for Electronic Document Exchange
- a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.
    - 1) The maximum size of an email attachment for exchange of Electronic Documents under this EDP is twenty (20) MB. Attachments larger than that may be exchanged using large file transfer functions or physical media.
    - 2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.
  - b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.
  - c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and

systems, it shall not be liable to the other party for any breach of system security.

- d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Contractor, not reasonably anticipated under the original EDP, Contractor may seek an adjustment in price or time under the appropriate process in the Contract.
- e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.
- f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.
- g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

C. Software Requirements for Electronic Document Exchange; Limitations

- 1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.
- 2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.
- 3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in Exhibit A to this EDP, including software versions, if listed.

## ARTICLE 4 - COMMENCEMENT AND PROGRESS OF THE WORK

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

SC-4.01.A –Amend the first sentence of Paragraph 4.01.A to read as follows:

Following execution of the Agreement by the Owner and the Contractor, written Notice to Proceed with the Work shall be given by the Owner to the Contractor. The Contract Time will commence to run on the day indicated in the Notice to Proceed.

### SC-4.04 *Progress Schedule*

SC-4.04.A Delete Paragraph 4.04.A.1 in its entirety and insert the following in its place:

1. Contractor shall submit to Engineer with each application for payment an updated progress schedule reflecting the amount of work completed and adjustments to future work. Such adjustments will be acceptable to Engineer as providing an orderly progression of the Work to completion within any specified milestones and the Contract Time. No progress payment will be made to Contractor until the updated schedules are submitted to and acceptable to Engineer and Owner. Review and acceptance of progress schedules by the Engineer will neither impose on Engineer responsibility for the sequencing, scheduling or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefore.

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

SC-4.05.C.2 Amend paragraph 5.04.C.2 by striking out the following words "Abnormal weather conditions;" and inserting the following words "Abnormal Weather Conditions;"

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. Weather-Related Delays
  - a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled. Weather that is perceived to be extreme or unusual but is typical for the project site location, elevation, or season, should not be considered Abnormal Weather Conditions. Requests for time extensions due to abnormal weather conditions will be submitted to the Engineer within five days of the end of the abnormal weather condition event. It is the responsibility of the Contractor to provide the information in Items 1-3 of this paragraph for the Engineer to determine awarded weather days. listed in SC 4.05.C.5.b.

## ARTICLE 5 - SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

### SC-5.01 *Availability of Lands*

SC-5.01 Add the following new paragraph at the end of Paragraph 5.01.C:

If it is necessary or desirable that the Contractor use land outside of the Owner's easement or right-of-way, the Contractor shall obtain consent from the property owner and tenant of the land. The Contractor shall not enter for materials delivery or occupy for any other purpose with men, tools, equipment, construction materials, or with materials excavated from the site, any private property outside the designated construction easement boundaries or right-of-way without written permission from the property owner and tenant.

### SC-5.03 *Subsurface and Physical Conditions*

SC-5.03.A Amend the first sentence of Paragraph 5.03.A to read as follows:

A. *Reports and Drawings:* The Special Provisions identify:

SC-5.03.B Amend the first sentence of Paragraph 5.03.C to read as follows:

C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Special Provisions with respect to such reports and drawings, but such reports and drawings are not Contract Documents.

SC-5.03.D Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

Report Title	Date of Report	Technical Data
Geotechnical Evaluation – Head Lane Bridge over Sevenmile Creek	10/08/2024	Geotechnical evaluation

F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
None		

G. Contractor may examine copies of reports and drawings identified in SC-5.03.E and SC-5.03.F that were not included with the Bidding Documents at the office of Great West Engineering during regular business hours, or may request copies from Engineer.

### SC-5.04 *Differing Subsurface of Physical Conditions*

SC-5.04.A Add the following new paragraph at the end of Paragraph 5.04.A:

Contractor to notify Owner and Engineer in writing about differing subsurface or physical conditions within 15 days of discovery and before disturbing the subsurface as stated above.

No claim for an adjustment in the contract price or contract times (or Milestones) will be valid for differing subsurface or physical conditions if procedures of this Paragraph 5.04 are not followed.

**SC-5.05**      *Underground Facilities*

SC-5.05.A    Add the following new paragraph immediately after Paragraph 5.05.A.5:

6.    At least 2 but not more than 10 business days before beginning any excavation, the Contractor shall, in accordance with MCA 69-4-502, notify all owners of underground facilities and coordinate the Work with the owners of such underground facilities. The information shown or indicated in the Contract Documents with respect to existing underground facilities is based on information and data obtained from the owners of the facilities without field exploration, and as such, Owner and Engineer are not responsible for the accuracy or completeness of such information or data.

**SC-5.06**      *Hazardous Environmental Conditions*

SC-5.06.A    Amend the first sentence of Paragraph 5.06.A to read as follows:

A.    *Reports and Drawings:* The Special Provisions identify:

SC-5.06.B    Amend the first sentence of Paragraph 5.06.B to read as follows:

B.    *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Special Provisions with respect to such reports and drawings, but such reports and drawings are not Contract Documents.

SC-5.06      Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4.    The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Date of Report	Technical Data
None		

5.    The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
None		

## ARTICLE 6 - BONDS AND INSURANCE

### SC-6.02 Insurance—General Provisions

SC-6.02.B Delete Paragraph 6.02.B in its entirety and insert the following in its place:

- B. Without limiting any of the other obligations or liabilities of the Contractor, Contractor shall secure and maintain such insurance from an insurance company (or companies) authorized to write insurance in the State of Montana, with minimum “A.M. Best Rating” of A-VI, as will protect the Contractor, the vicarious acts of subcontractors, the Owner and the Engineer and their agents and employees from claims for bodily injury, or property damage which may arise from operations and completed operations under this Agreement. Contractor shall not commence work under this Agreement until such insurance has been obtained and certificates of insurance, with binders, or certified copies of the insurance policy shall have been filed with the Owner and the Engineer.

All insurance coverages shall remain in effect throughout the life of the Agreement, except that the Contractor shall maintain the Commercial General Liability Policy including product and completed operations coverage for a period of at least three years following the substantial completion date for property damage resulting from occurrences during the agreement period.

SC-6.02.B Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker’s compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a worker’s compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker’s compensation insurance for similar projects by the state within the last 12 months.

### SC-6.03 Contractor’s Insurance

SC-6.03 Amend Paragraph 6.03.B.4 by striking out the word “and” at the end of the Paragraph.

SC-6.03 Amend Paragraph 6.03.B.5 to read as follows:

5. include all necessary endorsements to support the stated requirements; and

SC-6.03 Add the following paragraph immediately after Paragraph 6.03.B.5:

6. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 45 days prior to written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the

following: Engineer's Consultants, the State, its officers, officials, employees, and volunteers.

- E. *Workers' Compensation and Employer's Liability*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

<b>Workers' Compensation and Related Policies</b>	<b>Policy limits of not less than:</b>
<b>Workers' Compensation</b>	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
<b>Jones Act (if applicable)</b>	
Bodily injury by accident—each accident	<u>\$1,000,000</u>
Bodily injury by disease—aggregate	<u>\$1,000,000</u>
<b>Employer's Liability</b>	
Each accident	<u>\$1,000,000</u>
Each employee	<u>\$1,000,000</u>
Policy limit	<u>\$1,000,000</u>
<b>Stop-gap Liability Coverage</b>	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	<u>\$1,000,000</u>

- F. *Commercial General Liability—Claims Covered*: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
  2. damages insured by reasonably available personal injury liability coverage, and
  3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content*: Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
    - a. Such insurance must be maintained for three years after final payment.



- b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
  2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
  3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
  4. Underground, explosion, and collapse coverage.
  5. Personal injury coverage.
  6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
  7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- H. *Commercial General Liability—Excluded Content*: The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
  2. Any exclusion for water intrusion or water damage.
  3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
  4. Any exclusion of coverage relating to earth subsidence or movement.
  5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
  6. Any limitation or exclusion based on the nature of Contractor's work.
  7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.
- I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$2,000,000

<b>Commercial General Liability</b>	<b>Policy limits of not less than:</b>
Products—Completed Operations Aggregate	<u>\$2,000,000</u>
Personal and Advertising Injury	<u>\$1,000,000</u>
Bodily Injury and Property Damage—Each Occurrence	<u>\$1,000,000</u>

- J. *Automobile Liability*: Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

<b>Automobile Liability</b>	<b>Policy limits of not less than:</b>
<b>Bodily Injury</b>	
Each Person	<u>\$1,000,000</u>
Each Accident	<u>\$1,000,000</u>
<b>Property Damage</b>	
Each Accident	<u>\$1,000,000</u>
<b>[or]</b>	
<b>Combined Single Limit</b>	
Combined Single Limit (Bodily Injury and Property Damage)	<u>\$1,000,000</u>

- K. *Umbrella or Excess Liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

<b>Excess or Umbrella Liability</b>	<b>Policy limits of not less than:</b>
Each Occurrence	<u>\$1,000,000</u>
General Aggregate	<u>\$2,000,000</u>

- L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements*: Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of \$500,000 after accounting for partial attribution of its limits to underlying policies, as allowed above.

SC-6.04 *Builder's Risk and Other Property Insurance*

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

- F. *Builder's Risk Requirements*: The builder's risk insurance must:

1. be written on a builder's risk "all risk" policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).
  - a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.
  - b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.
2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
3. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).
4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
5. extend to cover damage or loss to insured property while in transit.
6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
8. include performance/hot testing and start-up, if applicable.

9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
10. include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following:
  - a. **None**
11. include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties:
  - a. **Trideck Beams: \$117,638.50**

## ARTICLE 7 - CONTRACTOR'S RESPONSIBILITIES

### SC-7.13 *Safety and Protection*

- SC-7.13.G Amend the second sentence of Paragraph 7.13.G by striking out the words "Supplementary Conditions" and replacing them with the words "Special Provisions".
- SC-7.13 Insert the following after the second sentence of Paragraph 7.13.G:  
The following Owner safety programs are applicable to the Work: **None**
- SC-7.13.J Add the following new paragraphs immediately after Paragraph 7.13.J:
- K. It is expressly understood by the parties to this Agreement that the Contractor is solely responsible for initiating, maintaining, and supervising safety precautions and programs in connection with the Work. The right of the Owner and Engineer to observe or otherwise review the Work and operations shall not relieve the Contractor from any of his covenants and obligations hereunder. Contractor shall incorporate all safety requirements into his construction progress and work schedules including preconstruction and scheduled monthly safety meetings, posted safety rules, tailgate meetings, and site inspections by safety and other inspectors employed by the Contractor.
  - L. The Contractor shall be responsible for and shall take necessary precautions and provide all material and equipment to protect, shore, brace, support and maintain all underground pipes, conduits, drains, sewers, water mains, gas mains, cables, etc., and other underground construction uncovered in the proximity, or otherwise affected by the construction work performed by him. All pavement, surfacing, driveways, curbs, walks, buildings, grass areas, trees, utility poles or guy wires damaged by the Contractor's operations in the performance of this work shall be repaired and/or replaced to the satisfaction of the Owner, Engineer, and effected

property owner at the Contractor's expense. The Contractor shall also be responsible for all damage to streets, roads, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property or facility, regardless of location or character, which may be caused by moving, hauling, or otherwise transporting equipment, materials, or men to and from the work or any part of site thereof; whether by him or his subcontractors. The Contractor shall make satisfactory and acceptable arrangements with owner of, or the agency or authority having jurisdiction over, the damaged property or facility concerning its repair or replacement or payment of costs incurred in connection with said damage.

- M. The Contractor shall conduct his work so as to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross, obstruct, or close roads, driveways, and walks, whether public or private, the Contractor shall obtain approval from the governing party and shall, at his own expense, provide and maintain suitable and safe bridges, detours, and other temporary expedients for the accommodation of public and private drives before interfering with them. The provisions for temporary expedients will not be required when the Contractor has obtained permission from the owner and tenant of the private property, or from the authority having jurisdiction over public property involved, to obstruct traffic at the designated point.
- N. Safety provisions must be entirely adequate and meet with City or State and Federal regulations to protect the public on these streets and roads.

**SC-7.18**      *Indemnification*

SC-7.18.A Add the following new paragraph at the end of Paragraph 7.18.A:

While Owner and Engineer may have the right under this Contract to observe or otherwise review the work, progress and operations of the Contractor, it is expressly understood and agreed that such observation shall not relieve the Contractor from any of its covenants and obligations hereunder.

**ARTICLE 8 - OTHER WORK AT THE SITE**

**SC-8.02**      *Coordination*

SC-8.02 Delete Paragraph 8.02 in its entirety and replace with the following:

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

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

## ARTICLE 10 - ENGINEER'S STATUS DURING CONSTRUCTION

### SC-10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
1. *Schedules*: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of values prepared by Contractor and consult with Engineer concerning acceptability.
  2. *Conferences and Meetings*: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
  3. *Safety Compliance*: Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
  4. *Liaison*:
    - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
    - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
    - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
  5. *Interpretation of Contract Documents*: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
  6. *Shop Drawings and Samples*:
    - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
    - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.

- c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
- 7. *Modifications:* Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
- 8. *Review of Work; Defective Work:*
  - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
  - b. Observe whether any Work in place appears to be defective.
  - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
  - d. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
- 9. *Inspections, Tests, and System Start-ups:*
  - a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
  - b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
  - c. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
  - d. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
- 10. *Reports:*
  - a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.

- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
    - c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.
  - 11. *Payment Requests*: Review Applications for Payment with Contractor.
  - 12. *Certificates, Operation and Maintenance Manuals*: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.
  - 13. *Completion*
    - a. Participate in Engineer's visits regarding Substantial Completion.
    - b. Assist in the preparation of a punch list of items to be completed or corrected.
    - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
    - d. Observe whether items on the final punch list have been completed or corrected.
- D. The RPR will not:
- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
  - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
  - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
  - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
  - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
  - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
  - 7. Authorize Owner to occupy the Project in whole or in part.



## ARTICLE 13 - COST OF WORK; ALLOWANCES, UNIT PRICE WORK

### SC-13.01 *Cost of the Work*

SC-13.01.B.5.c Delete paragraph 13.01.B.5.c in its entirety and insert the following in its place:

- c. The rental of all construction equipment and machinery and parts thereof whether rented from contractor or rented from others. The cost shall be calculated as follows and will include the costs of transportation, loading, unloading, assembly, dismantling and removal thereof for equipment involved only in the changed portion of the work covered under the cost of the Work method. Transportation, loading and assembly costs will not be included for equipment already on the site which is being used for other portions of the Work. The cost of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work. Hourly equipment and machinery rates shall be calculated from the Rental Rate Blue Book for Construction Equipment, and the Equipment List submitted according to SC-2.03 and SC-2.05, and as follows:
  1. for working equipment, the hourly rate shall be the monthly rental rate divided by 176 hours per month plus the hourly operating cost.
  2. for equipment on standby, the hourly rate shall be 50% of the monthly rental rate divided by 176 hours per month, and the hourly operating cost shall not be applied.
  3. for specialized equipment rented for a short duration used for change order work or additional work not part of the scope of work bid, the equipment rental rates will be negotiated prior to the work being performed.

SC-13.01.C.2 Add the following definition of small tools and hand tools:

- a. For purposes of this paragraph, "small tools and hand tools" means any tool or equipment whose current price if it were purchased new at retail would be less than \$500.

### SC-13.02 *Allowances*

SC-13.02.C – Delete paragraph in its entirety and insert "Deleted".

### SC-13.03 *Unit Price Work*

SC-13.03.E Delete Paragraph 13.03.E in its entirety and insert the following in its place:

#### E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
  - a. the extended price of a particular item of Unit Price Work amounts to ten percent (10%) or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by

- Contractor differs by more than twenty-five (25%) percent from the estimated quantity of such item indicated in the Agreement; and
- b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
  3. Adjusted unit prices will apply to all units of that item.

## **ARTICLE 15 - PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD**

### **SC-15.01      *Progress Payments***

SC-15.01.B.2 - Add the following new paragraph at the end of Paragraph 15.01.B.2:

Reflect Change Orders approved as of the date of the Application in each Application for Payment.

For stored materials and equipment, provide clear descriptions of the materials and equipment, the relation of materials and equipment to individual bid items, and the dollar values of materials and equipment stored and in place. The amount allowed for materials and equipment in storage shall not exceed the value of material remaining to be installed less the value of installation. Progress payments for stored materials and equipment to Contractor will not include any overhead or profit.

SC-15.01.B.4 - Add the following new paragraphs at the end of Paragraph 15.01.B.4:

Retainage may be used by the Owner to offset costs for any of the losses enumerated in Paragraphs 15.01.C.6.a through 15.01.C.6.e inclusive, 15.01.E.1.a through 15.01.E.1.l inclusive, or 16.02.E. In addition, retainage may be used by the Owner to protect against loss from failure by the Contractor to complete necessary work and to offset any liquidated damages due Owner.

SC-15.01.B.5 – Add new paragraphs immediately after Paragraph 15.01.B.4:

5. Each application for progress payment shall be accompanied by Contractor's updated progress schedule, shop drawing schedule, procurement schedule, subcontractor or supplier lien releases from previous pay application, and other data specified herein or reasonably required by Owner or Engineer. The Owner reserves the right to require submission of weekly certified payrolls by the Contractor.

SC-15.01.D.1 – Delete paragraph in its entirety and insert the following in its place:

The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency for consideration. If the Owner finds the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 15.01.E will become due twenty (20) days after the

Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

SC-15.01.E. Add the following language at the end of the first sentence of Paragraph 15.01.E.I:  
, including liquidated damages.

SC-15.01 Add the following new Paragraph 15.01.F:

- F. For contracts in which the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work (as measured by reference to the Schedule of Values), or present a potential conflict with the Guaranteed Maximum Price, then Owner may require that Contractor prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Guaranteed Maximum Price (if any), through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment.

*SC-15.02 Contractor's Warranty of Title*

SC-15.02.A – Amend paragraph by striking out the following text: “7 days after”.

SC-15.02.B - Add the following new paragraph immediately after Paragraph 15.02.A:

- B. Neither recommendation of any progress payment by Engineer nor payment by the Owner to Contractor, nor any use or occupancy of the Work or any part thereof will release the Contractor from complying with the Contract Documents. Specifically, the Contractor shall maintain in accordance with Article 6, property insurance on all Work, materials, and equipment whether incorporated in the project or not and whether included in an application for payment or not, for the full insurable value thereof. Passing title to Owner for materials and equipment included in an application for payment does not relieve the Contractor of the Contractor's obligation to provide insurance (including property insurance) as required in Article 6 of the General Conditions and these Supplementary Conditions. All insurance shall remain in effect as provided in Article 6.

*SC-15.03 Substantial Completion*

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

*SC-15.04 Partial Use or Occupancy*

SC-15.04 Add the following new paragraph immediately after Paragraph 15.04.A.4:

- B. Owner has the right to take possession of or use any completed or substantially completed portions of the work at any time, but such taking possession or use will not be deemed an acceptance of any work not completed in accordance with the Contract Documents. Owner's use of any facilities so identified in the Contract Documents will not be grounds for extension of the contract time or change in the contract price. Owner's use of any facilities not specifically identified in the Contract Documents will be in accordance with conditions agreed to prior to such use, and any extra costs or delays in completion incurred and properly claimed by Contractor will be equitably adjusted with a Change Order. Facilities substantially completed in accordance with the Contract Documents which are occupied or used by Owner prior to substantial completion of the entire work will be done in accordance with General Conditions 15.03. Guarantee periods for accepted or substantially completed work including mechanical and electrical equipment will commence upon the start of continuous use by Owner. All tests and instruction of Owner's personnel must be satisfactorily completed, and Owner shall assume responsibility for and operation of all facilities occupied or used except as may arise through portions of work not yet completed by Contractor. If the work has been substantially completed and the Engineer certifies that full completion thereof is materially delayed through no fault of the Contractor, the Owner shall, without terminating the Agreement, make payment of the balance due for the portion of the work fully completed and accepted.

*SC-15.05 Final Inspection*

SC-15.05 Add the following new paragraph immediately after Paragraph 15.05.A:

- B. After Contractor has remedied all deficiencies to the satisfaction of the Engineer and delivered all construction records, maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, and other documents (all as required by the Contract Documents), Owner and Contractor shall be promptly notified in writing by Engineer that the work is acceptable.

**ARTICLE 16 - SUSPENSION OF WORK AND TERMINATION**

*SC-16.01 Owner May Suspend Work*

SC-16.01 Add the following new paragraph immediately after Paragraph 16.01.A

- B. Owner may also suspend the Work or any portion thereof at the request of the Contractor by written notice to Contractor and Engineer. Contractor shall make such a request in writing to the Owner and furnish a copy of the request to the Engineer. If the Owner grants the Contractor's request to suspend the Work, Contractor will not be entitled to an adjustment in the Contract Price or an extension of the Contract Times, directly attributable to the suspension. However, the days which expire during the suspension would not be counted against Contract Times.

## ARTICLE 17 - FINAL RESOLUTIONS OF DISPUTES

### SC-17.02      *Arbitration*

SC-17.02      Add the following new paragraph immediately after Paragraph 17.01.

#### 17.02    *Arbitration*

- A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of \$100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations.
- C. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate in-person hearings. The arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.
- D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties, but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.
- E. The award of the arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.
- F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be required to present

evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.

- G. No arbitration arising out of or relating to the Contract will include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
  - 1. the inclusion of such other individual or entity will allow complete relief to be afforded among those who are already parties to the arbitration;
  - 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration, and which will arise in such proceedings;
  - 3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and
  - 4. the consolidation or joinder is in compliance with the arbitration administrator's procedural rules.
- H. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- I. Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

*SC-17.03 Attorneys' Fees*

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02.

*SC-17.03 Attorneys' Fees*

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

## ARTICLE 18 - MISCELLANEOUS

### 18.01 Giving Notice

SC-18.01 Add the following new paragraph immediately after Paragraph 18.01.A:

- B. The mailing address for giving notices to Contractor given in the Agreement is hereby designated as the place to which all notices, letters, and other communication to Contractor will be mailed or delivered. The mailing address for giving notices to Owner given in the Agreement is hereby designated as the place to which all notices, letters, and other communication to Owner shall be mailed or delivered. Either party may change his address at any time by an instrument in writing delivered to Engineer and to other party.

**EXHIBIT A—SOFTWARE REQUIREMENTS FOR ELECTRONIC DOCUMENT EXCHANGE**

Item	Electronic Documents	Transmittal Means	Data Format	Note (1)
a.1	General communications, transmittal covers, meeting notices and responses to general information requests for which there is no specific prescribed form.	Email	Email	
a.2	Meeting agendas, meeting minutes, RFI's and responses to RFI's, and Contract forms.	Email w/ Attachment	PDF	(2)
a.3	Contractors Submittals (Shop Drawings, "or equal" requests, substitution requests, documentation accompanying Sample submittals and other submittals) to Owner and Engineer, and Owner's and Engineer's responses to Contractor's Submittals, Shop Drawings, correspondence, and Applications for Payment.	Email w/ Attachment	PDF	
a.4	Correspondence; milestone and final version Submittals of reports, layouts, Drawings, maps, calculations and spreadsheets, Specifications, Drawings and other Submittals from Contractor to Owner or Engineer and for responses from Engineer and Owner to Contractor regarding Submittals.	Email w/ Attachment or LFE	PDF	
a.5	Layouts and drawings to be submitted to Owner for future use and modification.	Email w/ Attachment or LFE	DWG	
a.6	Correspondence, reports and Specifications to be submitted to Owner for future word processing use and modification.	Email w/ Attachment or LFE	DOC	
a.7	Spreadsheets and data to be submitted to Owner for future data processing use and modification.	Email w/ Attachment or LFE	EXC	
a.8	Database files and data to be submitted to Owner for future data processing use and modification.	Email w/ Attachment or LFE	DB	
Notes				
(1)	All exchanges and uses of transmitted data are subject to the appropriate provisions of Contract Documents.			
(2)	Transmittal of written notices is governed by Paragraph 18.01 of the General Conditions.			
Key				
Email	Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies			
LFE	Agreed upon Large File Exchange method (FTP, CD, DVD, hard drive)			
PDF	Portable Document Format readable by Adobe® Acrobat Reader Version [2024] or later			
DWG	Autodesk® AutoCAD .dwg format Version [2023]			
DOC	Microsoft® Word .docx format Version [2411]			
EXC	Microsoft® Excel .xls or .xml format Version [2411]			
DB	Microsoft® Access .mdb format Version [2411]			



## **EXHIBIT B—NONDISCRIMINATION AGAINST FIREARMS ENTITIES/TRADE ASSOCIATIONS CERTIFICATION**

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## Lewis and Clark County Grants and Purchasing Department

### **Nondiscrimination Against Firearms Entities/Trade Associations.**

The contractor shall not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, and the Contractor shall not discriminate during the term of the contract against a firearm entity or firearm trade association. This section shall be construed in accordance with HB 356, Ch. 193, Mont. L. 2023.

### **Verification of Nondiscrimination Against Firearms Entities/Trade Associations.**

1. By selecting 'Yes,' the Contractor certifies and affirms:
  - a. Contractor does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association during the term of this contract; and
  - b. Contractor will not discriminate against a firearm entity or firearm trade association during the term of this contract.
2. By selecting 'No', the Contractor certifies and affirms that the Contractor is unable to make both of the certifications in part 1, during the anticipated term of the contract.

The contractor's certification is made in compliance with and in reference to HB 356, Ch. 193, Mont. L. 2023 (HB 356) and the terms defined therein. If the Contractor determines the provisions of HB 356 do not apply to the contract, the Contractor shall submit a statement setting forth in detail the basis for such determination.

☐ Yes. I confirm that we do not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association.

☐ No. I cannot confirm.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name and Title of Person Signing Above

\_\_\_\_\_  
Print Name of Organization

# **SPECIAL PROVISIONS**

## SECTION 00910

### SPECIAL PROVISIONS

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## **SP-01 INCORPORATION OF THE MPWSS**

All provisions of the Montana Public Works Standard Specifications, Seventh Edition, April 2021, hereafter collectively referred to as the MPWSS, apply to the project, except where portions of the MPWSS are modified or replaced by the Contract Documents. Each section of the MPWSS that has been modified is listed in the Table of Contents of Section 00950 Standard Modifications to MPWSS. The entire section from the MPWSS has not been rewritten for these modifications. Instead, modifications are indicated for a specific subsection, paragraph, sentence or drawing.

Where a Standard Modification to MPWSS does not exist for a particular section of MPWSS it shall be assumed the work is to be completed in accordance with the appropriate MPWSS section. When a Standard Modification to MPWSS does exist the requirements of that modification supersede the related MPWSS requirement. Where paragraphs are specifically deleted or modified, or new paragraphs added, all other parts of the MPWSS will remain in effect unless otherwise modified by the Project Manual in accordance with the order of governance as specified in "Summary of Work". Forms included in the Project Manual will be used in lieu of similarly titled forms in the MPWSS. Where Technical Specifications follow the Modifications in later Divisions of the Project Manual, those Specifications replace same numbered specifications in the MPWSS.

**Delete Part 4: MEASUREMENT AND PAYMENT in all sections of the MPWSS.** Payment for an item will only be made if that item is listed as a Bid Item in Section 00400: Bid Form. If an item is listed as a Bid Item, administrative and procedural requirements will be listed in Section 01275: Measurement and Payment. If an item is not listed as a Bid Item, the item is not required or is considered an incidental cost to other Bid Items.

## **SP-02 QUALIFICATIONS OF CONTRACTOR, SUBCONTRACTORS, SUPPLIERS, AND OTHERS**

Provide qualifications for the Contractor and all Subcontractors, Suppliers, or other persons or organizations identified in Technical Specifications per the guidelines in the respective specification sections.

Per Article 3.1 of the Instructions to Bidders, within five (5) days of the Owner's or Engineer's request, submit the evidence of qualifications listed in the referenced article as well as the following additional information.

- A list of at least three (3) jobs successfully completed within the last five (5) years by the Bidder similar in size and scope to the Work, including references for each project;
- The proposed Superintendent's name and resume; and
- The general availability of the Bidder to complete the Work within a reasonable timeframe.

In accordance with Article 6.06 of the General Conditions and Supplementary Conditions to the General Conditions, provide a list of all Subcontractors, Suppliers, or other persons or organizations providing Work or items of equipment exceeding \$5,000 within five (5) days of the Owner's or Engineer's request. For each Subcontractor, Supplier, or other person or organization, include on the list the primary contact and phone number, approximate anticipated monetary value of Work, and a list of similar projects over the past three (3) years.

### **SP-03 SUBSURFACE AND PHYSICAL CONDITIONS**

In the preparation of Drawings and Specifications, the Engineer or Engineer's Consultants relied upon the following report of exploration and tests of subsurface conditions at the Site:

1. *Geotechnical Evaluation – Head Lane Road Bridge, Lewis and Clark County, Montana*, prepared by SK Geotechnical. Located in Appendix A of this Project Manual.

This report is not part of the Contract Documents, but the "technical data" contained therein upon which the Contractor may rely as identified and the above are incorporated therein by reference. Contractor is not entitled to rely upon other information and data utilized by Engineer and Engineer's Consultants in the preparation of Drawings and Specifications.

### **SP-04 SPOIL**

Unless otherwise indicated on the Drawings or elsewhere in these specifications, place spoil in the confines of the existing easements or right-of-ways. In areas where confines limit the placement of spoil, the Contractor may have to haul the spoil out of the area until they are ready to backfill. The locations of spoil placement will be discussed at the preconstruction conference and will be subject to approval by the Engineer. The Contractor will be responsible for the disposal of all excess spoil.

No additional payment will be allowed the Contractor for this work. Refer to Section 01275: Measurement and Payment for more information.

### **SP-05 BEST MANAGEMENT PRACTICES**

**Dust Control** – Dust control is to be considered an integral part of the Work. Dust Control shall be provided from the start of construction until the Work is complete. Fugitive dust as a result of construction shall be controlled at all times within the subject property. The Contractor shall have a water truck available for dust control prior to beginning any construction tasks. Wetting shall be done a minimum of twice per day in dry conditions or at the direction of the Engineer or Owner as required until the final construction activities are completed. Contractor shall be prepared to provide dust control until the final surface restoration is completed. All costs incurred to meet dust control requirements are incidental to other items of the contract and no separate payment shall be made.

**Road and Parking Lot Cleaning** – It shall be the sole responsibility of the Contractor to keep all roads and parking lots free from mud, gravel, cobbles or other contaminants generated as a result of construction activities. It shall be the responsibility of the Contractor clean all foreign matter from roads and parking areas in a reasonable amount of time as determined by the Owner or Engineer. All costs incurred to meet road and parking lot cleaning requirements are incidental to other items of the contract and no separate payment shall be made.

**Erosion Control Measures** – Temporary erosion and sediment control measures includes the installation and maintenance of temporary structural control measures to reduce or eliminate the erosion of soil and transport of sediment offsite as result of construction activities. This may include, but not be limited to, silt fences, ditch checks, sediment basins, erosion control mats, stabilized construction entrance, temporary diversions, inlet protection, sediment traps, and slope drains. If erosion control measures are required, it shall be the responsibility of the Contractor to install and maintain them throughout the construction. All costs incurred to meet erosion control requirements are incidental to other items of the contract and no separate payment shall be made.

**Noxious Weed Control** – Comply with the County Noxious Weed Management Act, Title 7, Chapter 22, Part 21 and all county and contract noxious weed control requirements. Determine the specific noxious weed control requirements of each county where the project is located before submitting a bid. Equipment and vehicles shall be washed prior to entering the project site to remove vegetation so as to avoid the spread of weeds. All costs incurred to meet noxious weed control requirements are incidental to other items of the contract and no separate payment shall be made.

**Failure to Provide Service** – If the Contractor fails to provide adequate service on the above listed items, the Owner reserves the right to contract these activities to a third party, the cost of which will be deducted from the contract amount at the time of the next pay request.

#### **SP-06 PRIVATE ACCESS**

At all times during construction, afford property owners access to their property to the highest degree possible. Ensure that businesses will have at least one approach open at all times, if possible, and open closed-off approaches as quickly as possible.

#### **SP-07 STAGING AREA**

Storage of construction materials, equipment, and other items pertinent to the construction of the project will be allowed within the road right-of-way (and inside of the construction extents). However, bulk storage of petroleum-based products (stored in tanks) will not be allowed. At all times, spill kits must be available on-site for any accidental spills of petroleum-based products.

Take care to protect, preserve and/or replace objects and structures encountered within the confines of the staging areas and restore all disturbed areas as close as possible to original conditions unless otherwise dictated in these specifications.

No payment will be made to the Contractor for any work, including restoration, with regards to the staging areas.

#### **SP-08 CONFLICTS WITH UTILITIES**

As shown on the Drawings, utilities may be in conflict with certain areas of the project. Utilities and other appurtenances may include but are not limited to the following: culverts; propane or gas mains and services; television cables; telephone lines and pedestals; electrical boxes and lines; street lights; telephone and power poles; water mains and services; sanitary sewer mains and services; and storm drain pipes and inlets.

As specifically noted on the Drawings, there is a conflict with an underground gas line, underground communications line and overhead power line. The overhead power poles and underground gas line will be relocated by Northwest Energy. The Contractor should take great care when working under and near these lines and poles. The underground fiber optic communications line will remain in place. The Contractor shall coordinate work with all utility companies or private entities that may be affected by the project. An update on the status of relocations will be provided at the pre-bid conference.

Utility locations are based on the available information which has been provided to or discovered by the Engineer. There is no guarantee as to the accuracy and completeness thereof is expressly disclaimed. As outlined in SC-5.05.A.3, the Contractor must check with the Utilities Underground Location Center (800-424-5555) at least two full working days in advance of the planned work date so that all utilities are located prior to digging. The Contractor shall also be solely responsible for any damage to the utilities due

to their operations. The Contractor shall work closely with the utilities to ensure their criteria are met and no problems result. For underground utilities not shown on the Drawings, the Contractor shall follow procedures outlined in Article 5.05: Underground Facilities of the General Conditions.

Unless identified as a bid item in the Bid Form, no separate payment will be made for this work, and the Contractor shall figure the cost of such work into other applicable bid items.

#### **SP-09 DEWATERING**

The Contractor will be responsible for any dewatering operations which may be necessary to adequately remove water such that construction activities can be completed as specified. The Contractor will be responsible for conveyance and disposal of water to surface watercourses. Make all necessary arrangements for infringements across private property and obtain and adhere to any necessary discharge permits from the Montana DEQ.

#### **SP-10 QUALITY CONTROL TESTING OF SOIL MATERIALS**

This Special Provision only applies to soil materials. Refer to other applicable sections of the specifications for quality control testing requirements of other materials.

Complete testing of all components of the project will be required to the satisfaction of the Owner and the Engineer. The Contractor is solely responsible for quality control (QC) testing. The Contractor may utilize quality assurance (QA) testing provided by the Owner or the Owner's representative as part of the Contractor's quality control program at the Contractor's risk. Use of Owner provided quality assurance testing will not replace appropriate Contractor quality control testing or relieve the Contractor of any responsibility for quality control testing identified in the technical specifications.

The following table outlines the minimum frequency of quality control testing and defines what QA testing will be performed by the Owner's representative. The minimum frequency of testing may be performed by the Owner or the Owner's representative. Should the materials fail to meet the test specified, the Contractor will pay the costs of all retests conducted by the Owner or the Owner's representative, or the Contractor may elect to have an approved testing laboratory conduct retests at the Contractor's expense.

Contractor must remedy all defects and performance problems revealed by the testing to the satisfaction of the Engineer at no additional expense to the Owner.

**Minimum Quality Control Testing Frequency Table**

SECTION	ITEM DESCRIPTION	TEST OR SUBMITTAL	FREQUENCY
02230	Subgrade Preparation	Field Density/Moisture Content	1 test / 5,000 SF / lift
02230	Embankment Placement	Field Density/Moisture Content	1 test / 5,000 SF / lift
02234	Structural Backfill	Field Density/Moisture Content	1 test / 1,500 SF / lift
02235	Base Course	Field Density/Moisture Content	1 test / 5,000 SF / lift
02240	Crushed Aggregate Surfacing	Field Density/Moisture Content	1 test / 5,000 SF / lift

*Refer to the Technical Specifications for material testing requirements.*



### **SP-11 CONSTRUCTION STAKING**

The Engineer will provide horizontal and vertical control for the project. A total of one staking visit by the Engineer will be completed prior to the start of construction to establish centerline structure/centerline bearing for each bridge abutment, fencing at points shown on the staking table in the Drawings and roadway centerline at the points shown on the staking table in the Drawings. All offset staking and supplemental staking is the Contractor's responsibility such that the project may be completed in accordance with the Drawings and Specifications. The Contractor shall protect all control points during the course of their work and replace any points damaged or removed by their activities. All survey monuments and stakes provided by the Contractor shall be subject to inspection and verification by the Engineer.

### **SP-12 CONSTRUCTION SEQUENCING**

Because this project involves the installation of a bridge on a public roadway, it is important that the work progresses quickly and sequentially. The Contractor shall submit a Construction Schedule for approval immediately after execution of the Agreement that shows the proposed dates of starting and completing each regular activity of the various sections of work.

The County has procured the precast, prestressed trideck bridge beams. The bridge beams will be available by June 1, 2025.

In accordance with the SPA 124 Permit from Montana Fish, Wildlife & Parks in-stream work is not allowed between **October 1<sup>st</sup> and July 1<sup>st</sup>** due to trout spawning seasons.

The Contractor shall give the County at least 21 calendar days of advanced written notice prior to the road closure and submit a Construction Schedule for approval by the Preconstruction Meeting or within 5 days after execution of the Agreement that shows the proposed dates of starting and completing each regular activity of the various sections of work.

The work sequence will be discussed further at the Pre-Bid Conference. It is the responsibility of the Contractor to schedule delivery of materials, equipment, and all necessary supplies to the site, to ensure that the bridge can be substantially completed within the specified contract time.

### **SP-13 PERMITS**

The Owner will obtain the following permits at no expense to the Contractor. The Contractor will be required to carry out all provisions of these permits as part of this contract.

1. Montana Department of Fish, Wildlife, and Parks – Montana Stream Protection Act (SPA124 Permit) – **Obtained.**
2. Montana Department of Environmental Quality – Short-Term Water Quality Standard for Turbidity (318 Authorization) - **Obtained.**
3. U.S. Army Corps of Engineers – Federal Clean Water Act (404 Permit) – **Obtained.**
4. County Local Floodplain Permit – **Obtained.**

The Contractor will be responsible for all other temporary facility permitting not covered by the permits acquired.

These permits require the Contractor to minimize the project's impact(s) on fish, wildlife, stream quality, and riparian areas through proper construction practices (BMPs) and erosion control measures. The Contractor shall adhere to all requirements set forth in the permits obtained by the Owner.

This project is expected to disturb less than 1.0 acre total of previously undisturbed ground. Therefore, the project will not require a construction stormwater discharge permit from the State of Montana. The Contractor will be required to install silt fence (or other adequate BMP measure) along the creek below any disturbed areas. The State does not allow sediment from construction to enter state waters. The Contractor will prepare and implement a stormwater control plan in accordance with state requirements to prevent sediment from entering the creek and minimize erosion on the construction site. This plan will be submitted to the Engineer for approval prior to beginning construction. The plan will utilize straw bales, straw wattles, and/or other methods to control site runoff. For each day that stormwater leaves the project site without erosion control in place, the Owner will assess liquidated damages of \$500 per day. The Contractor will be responsible for any potential damages or penalties assessed by the State of Montana due to any permit violations by the Contractor. No additional payment will be made for this item. The cost for this work is incidental to the contract.

#### **SP-14 EASEMENTS, CONSTRUCTION LIMITS, AND RIGHT-OF-WAY**

Conduct construction operations within the easement, construction limits, and right-of-way limits. Obtain written permission from the adjoining private landowner(s) prior to conducting any operations off the allowed easement. Take care to protect, preserve and/or replace objects and structures encountered within the confines of the easements and restore all disturbed areas restored to the original condition unless otherwise dictated in these specifications.

#### **SP-15 WORKING HOURS**

Regular working hours are defined as an eight-hour period (plus 1 hour lunch allotment) within the bounds of 7:00 AM and 7:00 PM. Work during other hours may be permitted following written approval of the Owner. Contractor shall provide the Engineer a request at least three (3) days prior to working other hours, or in excess of 8 hours per day. Engineer shall provide a response to the request within 24 hours of receipt. Emergency work may be done without prior permission.

#### **SP-16 UNSCHEDULED EMPLOYMENT OF THE ENGINEER**

Examples of damages for unscheduled employment of the Engineer that will be assessed against the Contractor include, but are not limited to:

- 1) The Contractor working beyond the specified contract time.
- 2) The Contractor working more than 8 hours per day, (or 40 hours per week if four ten-hour shifts are run) or on Saturdays, Sundays, and Federal Holidays.
- 3) The Contractor utilizing material, supplies, or equipment that requires the redesign of the project.
- 4) The Contractor destroying or disturbing baselines benchmarks or reference stakes.
- 5) Failure of the Contractor to maintain acceptable as-built records.
- 6) The review of a fourth or subsequent submittal of a Shop Drawing, sample, or other item requiring approval.
- 7) Additional services required due to the Contractor's failure to pay subcontractors and/or suppliers.
- 8) Retests required by the Engineer of tests that have failed.
- 9) Additional construction administration required by the Engineer as a result of unacceptable work.

10) The Contractor requiring observation of product work outside of those trips identified in the contract between the Owner and Engineer.

- a. 16 total trips: 2- riprap placement, 4- piling installation, 4 – rebar/concrete placement, 1 – setting beams, 2 – structural backfill, 1- roadway embankment, 1- roadway surfacing placement, 1 – substantial completion.

Damages for the unscheduled employment of the Engineer may be incurred by the following personnel and will be determined based on the following hourly rates:

Straight Time	
Project Manager	\$217.00/Hour
Project Engineer	\$180.00/Hour
Resident Project Representative (RPR)	\$173.00/Hour
RPR Overtime Rate	\$259.50/Hour
Project Administrator	\$152.00/Hour
Clerical	\$115.00/Hour
Mileage	\$ 0.85/Mile
Survey Crew	\$350.00/Hour
GPS Rental	\$400.00/Day
Nuclear Densometer	\$30.00/Day

The rates listed herein are subject to changes on January 1<sup>st</sup> of each year.

Out of pocket expenses for materials, equipment, supplies, transportation, lodging, and subsistence will be billed at cost plus ten percent. Damages for unscheduled employment of the Engineer will be deducted from monthly progress payments and the final payment as the damages are incurred. Damages for unscheduled employment of the Engineer are independent from liquidated damages for delay as described in the agreement.

#### **SP-17 COUNTY - SUPPLIED CONSTRUCTION MATERIALS**

Lewis and Clark County will supply the following materials:

- Prestressed Concrete Trideck beams.

The contractor shall coordinate delivery of Prestressed Concrete Trideck beams with Rinker Materials.

#### **SP-18 SALVAGED BRIDGE MATERIALS**

The Contractor shall salvage all bridge materials to Lewis and Clark County. The members shall be neatly stacked at the project site for subsequent pickup by the County. The contractor will be responsible for any damage to the steel deck pan when removed.

#### **SP-19 TRAFFIC CONTROL**

Adhere to all traffic control requirements as set forth in the *Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)*, latest edition, published by the U.S. Department of Transportation,

Federal Highway Administration. Coordinate with the Owner to schedule road closures and/or detours and conduct construction activities so as not to interfere with the traffic control.

The crossing will be closed in the project vicinity during construction. Local traffic will detour along existing alternate access routes, including but not limited to: Franklin Mine Road to Green Meadow Drive to travel around the project site. Contractor to provide Type 3 barricades on each bridge approach and all construction signage. The Contractor will be responsible for all detour route signing.

#### **SP-20 BRIDGE CONCRETE – CLASS STRUCTURE**

Provide 4,000 psi Concrete – Class Structure with Type I/II Cement for pile caps, diaphragms, wingwalls, or as specified on the drawings meeting all of the Montana Department of Transportation's Standard Specifications and supplemental specifications. Price reductions for Concrete – Class Structure will be calculated using the greater of the contract bid price or \$500 per cubic yard.

All concrete testing is the responsibility of the Contractor and must be conducted by an approved, certified testing laboratory or individual. Refer to MDT Standard Specifications Section 551. The Contractor will be responsible for conducting and paying for the following tests:

1. Mix designs for cast-in-place concrete.
2. Laboratory analysis of concrete aggregate.
3. Slump and Air Entrainment tests for concrete.
4. Taking and breaking of concrete test cylinders.

**Minimum Contractor Quality Control Frequency Table**

SECTION	ITEM DESCRIPTION	TEST OR SUBMITTAL	FREQUENCY
MDT 551	Cast-in-place Concrete	Mill Certificates	With Every Mix Design
		Mix Design	Every Concrete Class
		Air Content	1 test / 20 CY/ Day
		Slump	1 test / 20 CY/ Day
		Compressive Strength	1 test / 20 CY/ Day
		Temperature	1 test / 20 CY/ Day

#### **SP-21 REINFORCING STEEL**

All reinforcing steel to be plain black steel, Grade 60. Epoxy coated steel is not required.

#### **SP-22 STRUCTURE DEMOLITION NOTIFICATION**

An asbestos inspection was performed at the existing bridge and did not identify any Asbestos Containing Materials. Prior to the demolition of the structure, a notification form must be submitted to the Montana DEQ Asbestos Control Program. The demolition notification form is available from the Montana DEQ website at <https://app.mt.gov/asbestospermits>. The completed permit must be submitted to DEQ and the Engineer at least ten days prior to commencement of any bridge demolition activities. The cost for this works is incidental to the contract.

### **SP-23 CONTRACTOR EMERGENCY CONTACT**

Provide a primary and secondary 24-hour, 7-day a week emergency contact.

### **SP-24 NOXIOUS WEEDS**

Comply with the County Noxious Weed Management Act, Title 7, Chapter 22, Part 21 and all county and contract noxious weed control requirements. Determine the specific noxious weed control requirements of each county where the project is located before submitting a bid. Equipment and vehicles will be washed prior to entering the project site to remove vegetation to avoid the spread of weeds. All costs incurred to meet noxious weed control requirements are incidental to other items of the contract.

### **SP-25 SEEDING**

Furnish weed-free seed mix as described in the table below. Sow seed in all impacted areas above the OHW (Ordinary High Water) mark to the start of the roadway subbase.

**Seed Mix**

Species	Full Stand Rate (PLS lb/ac)	Planned Percent of Mixture	Planned Rate (PLS Pound/Acre)	Number of Seeds (Seeds/LB)	Seeds/ft <sup>2</sup>	Total Planned (PLS lbs/field)
Fescue, Rough	24.0	35%	8.40	171,000	33.0	36%
Wheatgrass, Bluebunch	28.0	35%	9.80	139,000	31.3	34%
Wheatgrass, Thickspike	28.0	15%	4.20	152,000	14.7	16%
Wheatgrass, Western	28.0	15%	6.00	93,000	12.8	14%

### **SP-26 PROGRESS MEETINGS**

The Engineer will schedule and conduct progress meetings at regular intervals to discuss the status of the project. The meetings will be conducted at the project site, unless otherwise indicated. The Engineer will prepare the meeting agenda and will distribute the agenda to all invited attendees.

In addition to representatives of the Owner and the Engineer, the Contractor and each subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

Engineer shall record significant discussions and agreements achieved and shall distribute the meeting minutes to everyone concerned within 7 days of the meeting.

### **SP-27 ZONE PAY**

For the purposes of calculating zone pay for prevailing wage rates, it should be noted that the center of the project site is 5 miles from the Lewis and Clark County Courthouse in Helena one-way, over the shortest practical maintained route. **(Refer to wage rates for Dispatch Cities)**

## **SP-28 MCEP SPECIAL PROVISIONS**

### **28.1 MCEP SIGN**

One sign shall be erected at a prominent location (as approved by the Owner/Engineer) near the major portion of the work in plain view of the general public prior to the start of work. The cost of furnishing and installing the sign will be included in the mobilization Bid Item.

The Contractor shall erect a sign constructed of 4'X8'X $\frac{3}{4}$ " exterior plywood (A-B) and shall be supported by and bolted to two (2) 4"X4" posts with the bottom of the sign at a point at least two (2) feet above the ground line. The project sign shall be maintained in a good condition until project completion. The sign will be edged, painted and lettered as shown below. The letters shall be approximately three (3) inches in height.

A statement indicating all agencies participating in the financing of the project shall be included on the sign. The sign shall be subject to agency approval prior to being erected.

The MCEP logo must be installed in color. A .JPG of the logo is obtainable from the Engineer, upon request. Submit a proposed sign design in accordance with the referenced conditions, and the Engineer will fill in the applicable dollar amounts on the submittal and make any other comments or corrections at the time.



# MONTANA DEPARTMENT OF COMMERCE

## Lewis and Clark County

### Head Lane Bridge Replacement

COMMISSIONERS:	Candace Payne Tom Rolfe Andy Hunthausen	
CONTRACTOR:	XYZ Construction, Inc. Town, MT	
ENGINEER:	Great West Engineering, Inc., Helena, MT	
FUNDING:	Montana Department of Commerce Montana Coal Endowment Program	\$xxx,xxx
	Lewis and Clark County	\$xxx,xxx

#### 28.2 Reports, Information, and Access to Records

The Contractor, at such times and in such form as required by the Owner (defined herein as the entity for which the project is being constructed) shall furnish reports pertaining to the work or services undertaken pursuant to this contract, the costs and obligations incurred or to be incurred in connection therewith, and any other matters covered by this contract.

The Owner and any federal, state or local governmental agency having a valid interest in this project shall be permitted by the contractor to have full access to and the right to examine pertinent documents of the contractor involving transactions related to this contract during the period of the project and for three (3) years from the date of final payment or until all findings have been resolved to the satisfaction of the funding agencies.

#### 28.3 Gross Receipts Withholding Requirements

Pursuant to Section 15-50-206(2)(3), MCA, the owner is required to withhold one percent (1%) of all payments due the contractor and is required to transmit such moneys to the Montana Department of Revenue as part of the public contractor's license fee. In like fashion, the contractor is required to withhold one percent (1%) from payments to subcontractors.

#### END OF SECTION

# **STANDARD MODIFICATIONS TO MPWSS**



## SECTION 00950

### STANDARD MODIFICATIONS to MPWSS (7<sup>th</sup> EDITION)

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## **SM-00001      GENERAL**

These Standard Modifications apply changes, deletions, and additions to the Montana Public Works Standard Specifications Seventh Edition, April 2021, referred to as the MPWSS. Each Section of the MPWSS that has been modified is listed in the Table of Contents of Section 00950 Standard Modifications to MPWSS. The entire Section from the MPWS has not been rewritten for these modifications. Instead, modifications are indicted for a specific subsection, paragraph, sentence or drawing.

Where a Standard Modification to MPWSS does not exist for a particular Section of MPWSS it shall be assumed the work is to be completed in accordance with the appropriate MPWSS Section. When a Standard Modification to MPWSS does exist the requirements of that modification supersede the related MPWSS requirement. Where paragraphs are specifically deleted or modified, or new paragraphs added, all other parts of the MPWSS will remain in effect unless otherwise modified by the Project Manual in accordance with the order of governance as specified in "Summary of Work".

Forms included in the Project Manual will be used in lieu of similarly titled forms in the MPWSS. Where Technical Specifications follow these Modifications in later Divisions of the Project Manual, those Specifications replace same numbered specifications in the MPWSS.

**Delete Part 4: MEASUREMENT AND PAYMENT in all sections of the MPWSS.** Payment for an item will only be made if that item is listed as a Bid Item in Section 00400: Bid Form. If an item is listed as a Bid Item, administrative and procedural requirements will be listed in Section 01275: Measurement and Payment. If an item is not listed as a Bid Item, the item is not required or is considered an incidental cost to other Bid Items.

## **SM-01010      SUMMARY OF WORK**

Delete Section 01010.1.2.D and replace with the following:

- D. The various portions of the Contract documents, of which these specifications are a part, are essential parts of the Agreement, and a requirement occurring in one is as binding as though occurring in all. All portions are intended to be complementary and to describe and provide for complete work as referenced in Article 3, General Conditions. Unless specifically noted otherwise, in the case of discrepancy, the following precedence will govern.
  - 1. Permits from Town/City/County Departments and other agencies as may be required by law, which will govern over;
  - 2. Change Orders, which will govern over;
  - 3. Executed Agreement, which will govern over;
  - 4. Addenda, which will govern over;
  - 5. Special Provisions, which will govern over;
  - 6. Divisions 1 through Division 16 Technical Specifications, which will govern over;
  - 7. Funding Agency Special Provisions for Montana Public Facility Projects, which will govern over;
  - 8. Standard Modifications to the Montana Public Works Standard Specifications, which will govern over;
  - 9. Supplementary Conditions to the General Conditions, which will govern over;
  - 10. General Conditions, which will govern over;
  - 11. Drawings, which will govern over;

12. Contractor's Bid, which will govern over;
13. Montana Public Works Standard Specifications Seventh Edition, April 2021, which will govern over;
14. Montana Department of Transportation Standard Specifications for Road and Bridge Construction, which will govern over;
15. Reference Specifications, which will govern over;

With reference to Drawings, the order of precedence is as follows:

1. Addenda/Change Order Drawings govern over any other Drawings.
2. Figures govern over scaled dimensions.
3. Contract Detail Drawings govern over Contract General Drawings.
4. Contract Drawings govern over Standard Drawings.

#### **SM-01041 PROJECT COORDINATION**

Delete Section 01041 in its entirety.

#### **SM-01050 FIELD ENGINEERING**

Delete Section 01050 in its entirety and replace with Section 01050: Field Engineering contained in the Project Manual.

#### **SM-01300 SUBMITTALS**

Delete Section 01300 in its entirety and replace with Section 01300: SUBMITTALS contained in the Project Manual.

#### **SM-01400 CONTRACTOR QUALITY CONTROL AND OWNER QUALITY ASSURANCE**

Delete Section 01400 in its entirety and replace with Section 01400: Quality Control and Quality Assurance contained in the Project Manual.

#### **SM-01500 CONSTRUCTION AND TEMPORARY FACILITIES**

If Section 01500: CONSTRUCTION AND TEMPORARY FACILITIES is contained in the Project Manual, delete MPWSS Section 01500 in its entirety and replace with Section 01500: CONSTRUCTION AND TEMPORARY FACILITIES contained in the Project Manual. If Section 01500: CONSTRUCTION AND TEMPORARY FACILITIES is not contained in the Project Manual, refer to MPWSS Section 01500.

#### **SM-01570 CONSTRUCTION TRAFFIC CONTROL**

Delete Sections 01570.1.3.B and C and replace with the following:

- B. Prepare traffic control Drawings and submit to the Owner for review at least 14 days prior to the beginning of construction or change in a zone of work. Do not start work until the traffic control plan is reviewed and approved by the Owner.
- C. Cooperate with the Engineer and the Owner to adjust traffic control Drawings as required to fit specific field conditions. Modifications to construction timing based upon field adjustments to the traffic control plan will not constitute a claim for additional payment to the Contractor.
- D. The traffic plan will be subject to review and approval by the Montana Department of Transportation for roads under their jurisdiction, by the local County for county roads, by the local municipalities for municipal roads, and by the U.S. Forest Service or Bureau of Land Management for roads under their control. No work may commence until all approvals of the traffic plan have been secured.
- E. Notify all impacted parties (including but not limited to landowners, businesses, and residents adjacent to the work, local utilities, City and County personnel, emergency services, school district transportation directors, and the postal service) regarding the type and duration of the construction.
- F. For project sites involving a through street, provide the Owner with a news release when submitting the traffic control Drawings. Include in the release, as a minimum, the work activity and duration. Once approved, furnish the news release to the local media at least 2 weeks before starting work.

Add Section 01570.1.4.

#### 1.4 TRAFFIC CONTROL OFFICER

- A. Name one employee responsible to coordinate traffic control for the entirety of the project. Assure the individual responsible for traffic control remains on-site whenever construction activity is taking place.

Delete Section 01570.3.1.B and replace with the following.

- B. Inspect the work area at least twice a day during construction, including weekends, holidays, and other non-working days. Correct all deficiencies discovered during inspections and assure traffic control is appropriate to the work. Maintain records of traffic control devices used and their location and daily checklists, signed by the traffic control officer, for each inspection.

Delete Section 01570.3.2.C and replace with the following.

- C. The Contractor is solely responsible for the construction traffic control system including removing, repairing, or replacing any traffic control device not providing its intended function. The Owner will periodically observe the traffic control for compliance with the approved traffic control Drawings and inform the Contractor of any discovered non-compliance.

**SM-01700 CONTRACT CLOSEOUT**

Delete Section 01700 in its entirety and replace with Section 01700: CONTRACT CLOSEOUT contained in the Project Manual.

**SM-02113 ADJUSTING EXISTING MANHOLES, LAMPHOLES, INLETS, WATER VALVE BOXES, WATER SERVICES, AND FIRE HYDRANTS TO GRADE**

In Section 02113.3.1.A change the maximum rings under the casting from 12-inch (30 cm) to 6-inch (15 cm).

**SM-02221 TRENCH EXCAVATION AND BACKFILL FOR PIPELINES & APPURTENANT STRUCTURES**

Delete Section 02221.1.4.A.1 replace with the following.

1. Meet the testing requirements of Special Provisions and Section 01400: Contractor Quality Control and Owner Quality Assurance.

**SM-02230 STREET EXCAVATION, BACKFILL, AND COMPACTION**

Delete Section 02230.1.3.A and replace with the following.

- A. Field Density Testing
  2. Assure in-place field density tests meet ASTM D1556 (AASHTO T191) Sand Cone Method or ASTM D2922 and D3017 (AASHTO T238 and T239) Nuclear Densometer Methods. Quality assurance field density testing frequency is at the Engineer's discretion.

**SM-02510 ASPHALT CONCRETE PAVEMENT**

Add the following to Table 1 in Section 02510.2.2.I.

Percent by Weight Passing	
Sieve Size	Type B-Modified
1" (25 mm)	---
3/4" (19 mm)	100
1/2" (12.5 mm)	82 – 95
3/8" (9.5 mm)	70 – 90
No. 4 (4.75 mm)	45 – 65
No. 10 (2.00 mm)	32 – 45
No. 40 (0.425 mm)	15 – 25
No. 200 (0.075 mm)	4 – 8

Add the following to Section 02510.2.5.B.2:

All type B-modified asphaltic concrete surfacing shall meet the following Marshall Design criteria as determined by ASTM D1559.

- a. Number of Compaction Blows, Each End of Specimen..... 75
- b. Stability, Minimum..... 1500 lbs.
- c. Flow..... 8 – 16
- d. Air Voids, Percent..... 3 % - 5%
- e. Percent Air Voids Filled with Bitumen.. 65-75

Delete Section 02510.3.9 and replace with the following.

- A. Sampling and testing of the aggregates and other constituent materials will meet the requirements of Special Provisions and Section 01400: Contractor Quality Control and Owner Quality Assurance.

Delete Section 02510.3.29.A and replace with the following.

- A. Owner or Owner's representative may perform field density testing of the pavement through the use of a nuclear densometer and/or by providing 4 inch diameter core samples of the asphalt surface courses.

Add the following Section 02510.3.29.G.

- G. Correct all pavement composition and field density deficiencies at Contractor's expense. Areas found deficient in thickness by more than the allowable deviation will be evaluated by the Engineer. If the Engineer determines the deficient areas warrant removal, remove

and replace the areas with asphaltic concrete of the thickness shown on the Drawings at the Contractor's expense.

**SM-02529 CONCRETE SIDEWALKS, DRIVEWAYS, APPROACHES, CURB TURN FILLETS, VALLEY GUTTERS, AND MISCELLANEOUS NEW CONCRETE CONSTRUCTION**

Delete Standard Drawing 02529-6, Retrofit Drive Approach, from the list in Section 02529.1.2.A and the drawing in its entirety from Appendix A.

**SM-02720 STORM DRAIN SYSTEMS**

Delete Sections 02720.2.2.B and C

In Section 02720.3.2.A.3 change total ring height from 12-inch (30 cm) maximum to 6-inch (15 cm) maximum.

**SM-02730 SANITARY SEWER COLLECTION SYSTEMS**

Delete Sections 02730.2.2.C and D and replace with the following.

- A. If HDPE pipe is included in the work, refer to the "High Density Polyethylene (HDPE) Pipe" technical specification.
- B. Ductile Iron Pipe (DIP)
  - 1. General
    - a. Furnish ductile iron pipe with a Class 52 wall thickness and a minimum operating pressure of 150 psi (10 Bar) that meets AWWA C151.
    - b. Assure the pipe interior is coated with a fusion bonded epoxy, a 40 mil polyethylene liner, or another coating rated for wastewater applications, as approved by Engineer.
    - c. Polyethylene encasement installation shall be per the Ductile Iron Pipe Research Association (DIPRA) Polyethylene Encasement Installation Guide.

In Section 02730.3.2.A.3 change total ring height from 12-inch (30 cm) maximum to 6-inch (15 cm) maximum.

Delete Sections 02730.3.4.G.1 – 2 and replace with the following.

- 1. Before final acceptance, Owner will require all sewers to be inspected using a television camera after leakage tests. Dewatering equipment must be shut down a minimum of 24 hours prior to the television inspection to allow groundwater to return to typical levels. Adequately flush the sewer lines prior to each television inspection. Television inspection of dry sewer lines is not acceptable. A sewer line is deficient and unacceptable if (1) the alignment is outside the specified limits, (2) water ponds in any section are equal to or greater than 2 times the grade tolerances specified herein under Section 02730.3.E.1, or (3) the pipe has visible defects such as open joints, pinched gaskets, cracked barrels or bells, or similar

- defects. Correct any deficiencies and re-inspect using a television camera. Sanitary sewer service lines may be subject to the same television inspection requirements as sanitary sewer mains at the discretion of the Engineer and Owner.
2. As with all other testing, the cost for televising the sewer line for final acceptance will be considered incidental to the Contractor's bid price per lineal foot of pipe, and no additional payment will be made for such work. All costs incurred in any television inspection performed solely for the Contractor's benefit will be the responsibility of the Contractor.

In Section 02730.3.4.G.3 change "Record all television inspections." To "Record all television inspections in a format acceptable to the Owner."

**SM-03210 REINFORCING STEEL**

Delete this section in its entirety and refer to the Montana Department of Transportation Road and Bridge Standard Specifications.

**SM-03310 STRUCTURAL CONCRETE**

Delete this section in its entirety and refer to the Montana Department of Transportation Road and Bridge Standard Specifications.

**END OF SECTION**



# WAGE RATES

MONTANA  
PREVAILING WAGE RATES FOR HIGHWAY CONSTRUCTION SERVICES 2025

**Effective: *January 11, 2025***

*Greg Gianforte, Governor  
State of Montana*

*Sarah Swanson, Commissioner  
Department of Labor & Industry*

To obtain copies of prevailing wage rate schedules, or for information relating to public works projects and payment of prevailing wage rates, visit ESD at [erd.dli.mt.gov/labor-standards](http://erd.dli.mt.gov/labor-standards) or contact:

Employment Standards Division  
Montana Department of Labor and Industry  
P. O. Box 8011  
Helena, MT 59604  
Phone 406-444-6543

The department welcomes questions, comments, and suggestions from the public. In addition, we'll do our best to provide information in an accessible format, upon request, in compliance with the Americans with Disabilities Act.

**MONTANA PREVAILING WAGE REQUIREMENTS**

The Commissioner of the Department of Labor and Industry, in accordance with Sections 18-2-401 and 18-2-402 of the Montana Code Annotated (MCA), has determined the standard prevailing rate of wages for the occupations listed in this publication.

The wages specified herein control the prevailing rate of wages for the purposes of Section 18-2-401, et seq., MCA. It is required each employer pay (as a minimum) the rate of wages, including fringe benefits, travel allowance, zone pay and per diem applicable to the district in which the work is being performed as provided in the attached wage determinations.

All Montana Prevailing Wage Rates are available on the internet at [erd.dli.mt.gov/labor-standards](http://erd.dli.mt.gov/labor-standards) or by contacting the department at (406) 444-6543.

In addition, this publication provides general information concerning compliance with Montana's Prevailing Wage Law and the payment of prevailing wages. For detailed compliance information relating to public works contracts and payment of prevailing wage rates, please consult the regulations on the internet at [erd.dli.mt.gov/labor-standards](http://erd.dli.mt.gov/labor-standards) or contact the department at (406) 444-6543.

SARAH SWANSON  
Commissioner  
Department of Labor and Industry  
State of Montana

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**A. Date of Publication January 13, 2025**

**B. Definition of Highway Construction**

The Administrative Rules of Montana (ARM), 24.17.501(3) – (3)(b), states “Highway construction projects include, but are not limited to, the construction, alteration, or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, and parking areas, bridges constructed or repaired in conjunction with highway work, and other similar projects not incidental to building construction or heavy construction.

*Highway construction projects include, but are not limited to, alleys, base courses, bituminous treatments, bridle paths, concrete pavement, curbs, excavation and embankment (for road construction), fencing (highway), grade crossing elimination (overpasses or underpasses), guard rails on highways, highway signs, highway bridges (overpasses, underpasses, grade separation), medians, parking lots, parkways, resurfacing streets and highways, roadbeds, roadways, runways, shoulders, stabilizing courses, storm sewers incidental to road construction, street paving, surface courses, taxiways, and trails.”*

**C. Definition of Public Works Contract**

Section 18-2-401(11)(a), MCA defines “public works contract” as “...a contract for construction services let by the state, county, municipality, school district, or political subdivision or for nonconstruction services let by the state, county, municipality, or political subdivision in which the total cost of the contract is in excess of \$25,000...”.

**D. Prevailing Wage Schedule**

This publication covers only Highway Construction occupations and rates in the specific localities mentioned herein. These rates will remain in effect until superseded by a more current publication. Current prevailing wage rate schedules for Building Construction, Heavy Construction and Nonconstruction Services occupations can be found on the internet at <https://erd.dli.mt.gov/labor-standards/state-prevailing-wage-rates/> or by contacting the department at (406) 444-6543.

**E. Rates to Use for Projects**

ARM, 24.17.127(1)(c), states “The wage rates applicable to a particular public works project are those in effect at the time the bid specifications are advertised.”

**F. Wage Rate Adjustments for Multiyear Contracts**

Section 18-2-417, MCA states:

*“(1) Any public works contract that by the terms of the original contract calls for more than 30 months to fully perform must include a provision to adjust, as provided in subsection (2), the standard prevailing rate of wages to be paid to the workers performing the contract.*

*(2) The standard prevailing rate of wages paid to workers under a contract subject to this section must be adjusted 12 months after the date of the award of the public works contract. The amount of the adjustment must be a 3% increase. The adjustment must be made and applied every 12 months for the term of the contract.*

*(3) Any increase in the standard rate of prevailing wages for workers under this section is the sole responsibility of the contractor and any subcontractors and not the contracting agency.”*

## **G. Fringe Benefits**

Section 18-2-412, MCA states:

*“(1) To fulfill the obligation...a contractor or subcontractor may:*

*(a) pay the amount of fringe benefits and the basic hourly rate of pay that is part of the standard prevailing rate of wages directly to the worker or employee in cash;*

*(b) make an irrevocable contribution to a trustee or a third person pursuant to a fringe benefit fund, plan, or program that meets the requirements of the Employee Retirement Income Security Act of 1974 or that is a bona fide program approved by the U. S. department of labor; or*

*(c) make payments using any combination of methods set forth in subsections (1)(a) and (1)(b) so that the aggregate of payments and contributions is not less than the standard prevailing rate of wages, including fringe benefits and travel allowances, applicable to the district for the particular type of work being performed.*

*(2) The fringe benefit fund, plan, or program described in subsection (1)(b) must provide benefits to workers or employees for health care, pensions on retirement or death, life insurance, disability and sickness insurance, or bona fide programs that meet the requirements of the Employee Retirement Income Security Act of 1974 or that are approved by the U. S. department of labor.”*

Fringe benefits are paid for all hours worked (straight time and overtime hours). However, fringe benefits are not to be considered a part of the hourly rate of pay for calculating overtime, unless there is a collectively bargained agreement in effect that specifies otherwise.

## **H. Dispatch City**

ARM, 24.17.103(11), defines dispatch city as *“...the courthouse in the city from the following list which is closest to the center of the job: Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Miles City, Missoula and Sidney.”*

## **I. Zone Pay**

Zone pay is not travel pay. ARM, 24.17.103(25), defines zone pay as *“...an amount added to the base pay; the combined sum then becomes the new base wage rate to be paid for all hours worked on the project. Zone pay must be determined by measuring the road miles one way over the shortest practical maintained route from the dispatch city to the center of the job.”* See section H above for a list of dispatch cities.

## **J. Computing Travel Benefits**

ARM, 24.17.103(23), states *“ ‘Travel pay,’ also referred to as ‘travel allowance,’ is and must be paid for travel both to and from the job site, except those with special provisions listed under the classification. The rate is determined by measuring the road miles one direction over the shortest practical maintained route from the dispatch city or the employee's home, whichever is closer, to the center of the job.”* See section H above for a list of dispatch cities.

## **K. Per Diem**

ARM, 24.17.103(19), states *“ ‘Per diem’ typically covers costs associated with board and lodging expenses. Per diem is paid when an employee is required to work at a location outside the daily commuting distance and is required to stay at that location overnight or longer.”*

## **L. Apprentices**

Wage rates for apprentices registered in approved federal or state apprenticeship programs are contained in those programs. Additionally, Section 18-2-416(2), MCA states *“...The full amount of any applicable fringe benefits must be paid to the apprentice while the apprentice is working on the public works contract.”* Apprentices not registered in approved federal or state apprenticeship programs will be paid the appropriate journey level prevailing wage rate when working on a public works contract.

**M. Posting Notice of Prevailing Wages**

Section 18-2-406, MCA, provides that contractors, subcontractors, and employers who are “...performing work or providing construction services under public works contracts, as provided in this part, shall post in a prominent and accessible site on the project or staging area, not later than the first day of work and continuing for the entire duration of the project, a legible statement of all wages and fringe benefits to be paid to the employees.”

**N. Employment Preference**

Sections 18-2-403 and 18-2-409, MCA require contractors to give preference to the employment of bona fide Montana residents in the performance of work on public works contracts.

**O. Projects of a Mixed Nature**

Section 18-2-418, MCA states:

*“(1) The contracting agency shall determine, based on the preponderance of labor hours to be worked, whether the public works construction services project is classified as a highway construction project, a heavy construction project, or a building construction project.*

*“(2) Once the project has been classified, employees in each trade classification who are working on that project must be paid at the rate for that project classification”*

**P. Occupations Definitions**

You can find definitions for these occupations on the following Bureau of Labor Statistics website:

[http://www.bls.gov/oes/current/oes\\_stru.htm](http://www.bls.gov/oes/current/oes_stru.htm)

**Q. Welder Rates**

Welders receive the rate prescribed for the craft performing an operation to which welding is incidental.

**R. Foreman Rates**

Rates are no longer set for foremen. However, if a foreman performs journey level work, the foreman must be paid at least the journey level rate.

# WAGE RATES

## BRICK, BLOCK, AND STONE MASONS

No Rate Established

**Travel:**  
**Travel:**  
**All Districts**  
0-70 mi. free zone  
>70-90 mi. \$60.00/day  
>90 mi. \$80.00/day

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## CARPENTERS

Wage	Benefit
\$36.49	\$14.33

**Zone Pay:**  
0-30 mi. free zone  
>30-60 mi. base pay + \$4.00/hr.  
>60 mi. base pay + \$6.00/hr.

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## CEMENT MASONS AND CONCRETE FINISHERS

Wage	Benefit
\$33.41	\$16.51

**Duties Include:**

Smooth and finish surfaces of poured concrete, such as floors, walks, sidewalks, or curbs. Align forms for sidewalks, curbs, or gutters.

**Zone Pay:**  
0-30 mi free zone  
30-60 mi base pay+2.95/hr.  
>60 mi base pay+4.75/hr

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## CONSTRUCTION EQUIPMENT OPERATORS GROUP 1

Wage	Benefit
\$32.47	\$12.77

**This group includes but is not limited to:**

Air Compressor; Auto Fine Grader; Belt Finishing; Boring Machine (Small); Cement Silo; Crane, A-Frame Truck Crane; Crusher Conveyor; DW-10, 15, and 20 Tractor Roller; Farm Tractor; Forklift; Form Grader; Front-End Loader, under 1 cu. yd; Oiler, Heavy Duty Drills; Herman Nelson Heater; Mucking Machine; Oiler, All Except Cranes/Shovels; Pumpman.

**Zone Pay:**  
No zone pay established.

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## CONSTRUCTION EQUIPMENT OPERATORS GROUP 2

Wage	Benefit
\$35.70	\$12.77

**Zone Pay:**  
No zone pay established.

**This group includes but is not limited to:**

Air Doctor; Backhoe\Excavator\Shovel, up to and incl. 3 cu. yds; Bit Grinder; Bituminous Paving Travel Plant; Boring Machine, Large; Broom, Self-Propelled; Concrete Travel Batchers; Concrete Float & Spreader; Concrete Bucket Discharge; Concrete Finish Machine; Concrete Conveyor; Distributor; Dozer, Rubber-Tired, Push, & Side Boom; Elevating Grader\Gradall; Field Equipment Serviceman; Front-End Loader, 1 cu. yd up to and incl. 5 cu. yds; Grade Setter; Heavy Duty Drills, All Types; Hoist\Tugger, All; Hydralift Forklifts & Similar; Industrial Locomotive; Motor Patrol (except finish); Mountain Skidder; Oiler, Cranes\Shovels; Pavement Breaker, EMSCO; Power Saw, Self-Propelled; Pugmill; Pumpcrete\Grout Machine; Punch Truck; Roller, other than Asphalt; Roller, Sheepsfoot (Self-Propelled); Roller, 25 tons and over; Ross Carrier; Rotomill, under 6 ft; Trenching Machine; Washing /Screening Plant

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## CONSTRUCTION EQUIPMENT OPERATORS GROUP 3

Wage	Benefit
\$35.70	\$12.77

**Zone Pay:**  
No zone pay established.

**This group includes but is not limited to:**

Asphalt Paving Machine; Asphalt Screed; Backhoe\Excavator\Shovel, over 3 cu. yds; Cableway Highline; Concrete Batch Plant; Concrete Curing Machine; Concrete Pump; Cranes, Crawler; Cranes, Electric Overhead; Cranes, 24 tons and under; Curb Machine\Slip Form Paver; Finish Dozer; Front-End Loader, over 5 cu. yds; Mechanic\Welder; Pioneer Dozer; Roller Asphalt (Breakdown & Finish); Rotomill, over 6 ft; Scraper, Single, Twin, or Pulling Belly-Dump; YO-YO Cat Haul Truck, Articulating Trucks, Vac Truck.

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## CONSTRUCTION EQUIPMENT OPERATORS GROUP 4

Wage	Benefit
\$36.91	\$12.77

**Zone Pay:**  
No zone pay established.

**This group includes but is not limited to:**

Asphalt\Hot Plant Operator; Cranes, 25 tons up to and incl. 44 tons; Crusher Operator; Finish Motor Patrol; Finish Scraper.

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## CONSTRUCTION EQUIPMENT OPERATORS GROUP 5

Wage	Benefit
\$38.05	\$12.77

**Zone Pay:**  
No zone pay established.

**This group includes but is not limited to:**

Cranes, 45 tons up to and incl. 74 tons.

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## CONSTRUCTION EQUIPMENT OPERATORS GROUP 6

Wage	Benefit
\$39.27	\$12.77

**Zone Pay:**  
No zone pay established.

**This group includes but is not limited to:**

Cranes, 75 tons up to and incl. 149 tons; Cranes, Whirley (All).

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## CONSTRUCTION EQUIPMENT OPERATORS GROUP 7

Wage	Benefit
\$41.95	\$12.77

**Zone Pay:**  
No zone pay established.

**This group includes but is not limited to:**

Cranes, 150 tons up to and incl. 250 tons; Cranes, over 250 tons—add \$1.00 for every 100 tons over 250 tons; Crane, Tower (All); Crane Stiff-Leg or Derrick; Helicopter Hoist.

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## CONSTRUCTION LABORERS GROUP 1/FLAG PERSON FOR TRAFFIC CONTROL

**Wage**  
\$27.71

**Benefit**  
\$12.80

**Zone Pay:**  
No zone pay established.

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## CONSTRUCTION LABORERS GROUP 2

**Wage**  
\$30.87

**Benefit**  
\$12.36

**Zone Pay:**  
No zone pay established.

**This group includes but is not limited to:**

General Labor; Asbestos Removal; Burning Bar; Bucket Man; Carpenter Tender; Caisson Worker; Cement Mason Tender; Cement Handler (dry); Chuck Tender; Choker Setter; Concrete Worker; Curb Machine-lay Down; Crusher and Batch Worker; Heater Tender; Fence Erector; Landscape Laborer; Landscaper; Lawn Sprinkler Installer; Pipe Wrapper; Pot Tender; Powderman Tender; Rail and Truck Loaders and Unloaders; Riprapper; Sign Erection; Guardrail and Jersey Rail; Spike Driver; Stake Jumper; Signalman; Tail Hoseman; Tool Checker and Houseman and Traffic Control Worker.

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## CONSTRUCTION LABORERS GROUP 3

**Wage**  
\$31.10

**Benefit**  
\$12.36

**Zone Pay:**  
No zone pay established.

**This group includes but is not limited to:**

Concrete Vibrator; Dumpman (Grademan); Equipment Handler; Geotextile and Liners; High-Pressure Nozzleman; Jackhammer (Pavement Breaker) Non-Riding Rollers; Pipelayer; Posthole Digger (Power); Power Driven Wheelbarrow; Rigger; Sandblaster; Sod Cutter-Power and Tamper.

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## CONSTRUCTION LABORERS GROUP 4

Wage	Benefit
\$32.12	\$12.36

**Zone Pay:**  
No zone pay established.

**This group includes but is not limited to:**

Hod Carrier\*\*\*; Water Well Laborer; Blaster; Wagon Driller; Asphalt Raker; Cutting Torch; Grade Setter; High-Scaler; Power Saws (Faller & Concrete); Powderman; Rock & Core Drill; Track or Truck Mounted Wagon Drill and Welder incl. Air Arc.

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## DIVERS

	Wage	Benefit
Stand-By	\$46.33	\$18.38
Diving	\$92.66	\$18.38

**Zone Pay:**  
0-30 mi. free zone  
>30-60 mi. base pay + \$4.00/hr.  
>60 mi. base pay + \$6.00/hr.

Depth Pay (Surface Diving)  
0-20 ft. free zone  
>20-100 ft. \$2.00 per ft.  
>100-150 ft. \$3.00 per ft.  
>150-220 ft. \$4.00 per ft.  
>220 ft. \$5.00 per ft.

Diving In Enclosures  
0-25 ft. free zone  
>25-300 ft. \$1.00 per ft.

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## DIVER TENDERS

Wage	Benefit
\$45.30	\$18.38

**Zone Pay:**  
0-30 mi. free zone  
>30-60 mi. base pay + \$4.00/hr.  
>60 mi. base pay + \$6.00/hr.

The tender shall receive 2 hours at the straight time pay rate per shift for dressing and/or undressing a Diver when work is done under hyperbaric conditions.

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## ELECTRICIANS

<b>Wage</b>	<b>Benefit</b>
\$39.08	\$20.00

### Travel:

No mileage due when traveling in employer's vehicle.

The following travel allowance is applicable when traveling in employee's vehicle:

0-18 mi. free zone  
>18-60 mi. federal mileage rate/mi.

### Per Diem

#### District 4

>60 mi. \$80.00/day

Per Diem in Big Sky and West Yellowstone \$125/day.

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## IRONWORKERS – REINFORCING IRON AND REBAR WORKERS

<b>Wage</b>	<b>Benefit</b>
\$34.83	\$25.37

### Duties Include:

Structural steel erection; assemble prefabricated metal buildings; cut, bend, tie, and place rebar; energy producing windmill type towers; metal bleacher seating; handrail fabrication and ornamental steel.

### Travel:

#### All Districts

0-45 mi. free zone  
>45-85 mi. \$100.00/day  
>85 mi. \$150.00/day

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## IRONWORKERS – STRUCTURAL IRON AND STEEL WORKERS

<b>Wage</b>	<b>Benefit</b>
\$30.43	\$25.22

### Duties Include:

Structural steel erection; assemble prefabricated metal buildings; cut, bend, tie, and place rebar; energy producing windmill type towers; metal bleacher seating; handrail fabrication and ornamental steel.

### Travel:

#### All Districts

0-45 mi. free zone  
>45-85 mi. \$100.00/day  
>85 mi. \$150.00/day

## LINE CONSTRUCTION – EQUIPMENT OPERATORS

<b>Wage</b>	<b>Benefit</b>
\$38.38	\$18.60

### Duties Include:

All work on substations

### Travel:

No Free Zone  
\$60.00/day

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## LINE CONSTRUCTION – GROUNDMAN

<b>Wage</b>	<b>Benefit</b>
\$29.96	\$17.64

**Travel:**  
No Free Zone  
\$60.00/day

**Duties Include:**

All work on substations

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## LINE CONSTRUCTION – LINEMAN

<b>Wage</b>	<b>Benefit</b>
\$50.11	\$19.88

**Travel:**  
No Free Zone  
\$60.00/day

**Duties Include:**

All work on substations

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## MILLWRIGHTS

<b>Wage</b>	<b>Benefit</b>
\$40.45	\$21.25

**Zone Pay:**  
0-30 mi. free zone  
>30-60 mi. base pay + \$4.00/hr.  
>60 mi. base pay + \$6.00/hr.

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## PAINTERS

<b>Wage</b>	<b>Benefit</b>
\$36.00	\$12.84

**Zone Pay:**  
No zone pay established.

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## PILE BUCKS

<b>Wage</b>	<b>Benefit</b>
\$36.49	\$14.33

**Zone Pay:**  
0-30 mi. free zone  
>30-60 mi. base pay + \$4.00/hr.  
>60 mi. base pay + \$6.00/hr.

**Duties Include:**

Set up crane; set up hammer; weld tips on piles; set leads; insure piles are driven straight with the use of level or plum bob. Give direction to crane operator as to speed, and direction of swing. Cut piles to grade.

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## TRUCK DRIVERS

	Wage	Benefit
Pilot Car Driver	\$28.21	\$12.57
Truck Driver	\$35.74	\$12.57

**Zone Pay:**  
No zone pay established.

**Truck drivers include but are not limited to:**

Combination Truck and Concrete Mixer and Transit Mixer;  
Dry Batch Trucks; Distributor Driver; Dumpman; Dump  
Trucks and similar equipment; Dumpster; Flat Trucks;  
Lumber Carriers; Lowboys; Pickup; Powder Truck Driver;  
Power Boom; Serviceman; Service Truck/Fuel  
Truck/Tireperson; Truck Mechanic; Trucks with Power  
Equipment; Warehouseman, Partsman, Cardex and  
Warehouse Expeditor; Water Trucks.

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# **DIVISION 1**

## **GENERAL REQUIREMENTS**

## **SECTION 01010**

### **SUMMARY OF WORK**

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

##### **1.1 DESCRIPTION**

- A. The Invitation to Bid contains a general description of the project work to be performed under this Contract. The Supplemental Conditions and Special Provisions and other documents contain additional information necessary to perform the work.

##### **1.2 CONTRACT DOCUMENTS**

- A. Portions of the Contract Documents are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, "Furnish..." means "Contractor shall furnish...", "Provide" means "Contractor shall provide...". For imperatives specifically addressing the Engineer/Owner, see paragraph 1.02, General Conditions.
- B. Contract Documents are defined in Article 1, paragraph 1.01.A.12, General Conditions, as modified by Montana Public Works Standard Specifications, any supplemental conditions, and Article 9 of the Agreement Form.
- C. The Contract Documents are intended to provide the basis for proper completion of the work suitable for the intended use of the Owner. Comply with Article 3, General Conditions. Specifications and Drawings included in these contract documents establish the performance, quality requirements, location and general arrangement of materials and equipment, and establish the minimum standards for quality of workmanship and appearance. Anything not expressly set forth but which is reasonably implied or necessary for proper performance of the project shall be included.
- D. The various portions of the Contract Documents, of which these specifications are a part, are essential parts of the Agreement, and a requirement occurring in any portion or part is binding as though occurring in all. All portions are intended to be complementary and to describe and provide for a complete work as referenced in Article 3, General Conditions. Unless specifically noted otherwise, in the case of discrepancy the following hierarchy shall be observed:
  - 1. Addenda, which will govern over;
  - 2. Special Provisions, which will govern over;
  - 3. Standard Modifications, which will govern over;
  - 4. Supplementary Specifications, which will govern over;
  - 5. Project Drawings, which will govern over;
  - 6. These Specifications and Standard Drawings, which will govern over;
  - 7. Montana Department of Transportation Standard Specifications for Road and Bridge Construction



- E. The bound copy of the Montana Public Works Standard Specifications, as distributed by the Montana Contractor's Association, Inc., will govern as the legal set of these specifications over any unbound copy, or any CD-ROM or floppy disk versions
- F. A requirement mentioned in one part/section of the Contract Documents shall be considered as having been mentioned in all parts/sections.

### 1.3 WORK SEQUENCE

- A. Comply with paragraph 2.03, 2.05 and 4.04 of the General Conditions and Milestones specified in the Contract Documents.
- B. Submit detail schedules as specified in the Contract Documents.
- C. Field verify dimensions indicated on drawings before fabricating or ordering materials. Do not scale drawings.
- D. Notify Engineer/Owner of existing conditions differing from those indicated on the drawings. Comply with paragraph 5.04, of the General Conditions and any Supplementary Conditions. Verify the existence and location of underground utilities along the route of the proposed work. Omission of an existing or previous abandoned utility location on the Drawings is not to be considered as its nonexistence. Inclusion of existing utility locations on the Drawings is not to be considered as its definite location. Do not remove or alter existing utilities without prior written approval.

### 1.4 CONTRACTOR USE OF PREMISES

- A. Comply with paragraph 5.02, General Conditions, and as specified in the Contract Documents.
- B. Do not park vehicles or equipment or store materials on private property without written permission from the property owner. Provide Engineer/Owner with copy of authorization.

### 1.5 OWNER FURNISHED ITEMS

- A. Owner-furnished items are listed in the Contract Documents.

## **PART 2 - PRODUCT – NOT USED**

## **PART 3 - EXECUTION – NOT USED**

## **SECTION 01050**

### **FIELD ENGINEERING**

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

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

- A. Drawings and Special 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 general procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. Construction layout.
  - 2. Field engineering.
- B. Related Sections include the following:
  - 1. Division 1 Section "Submittals" for submitting surveys.
  - 2. Division 1 Section "Contract Closeout" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

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

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

##### **3.1 CONSTRUCTION LAYOUT**

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Engineer promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
  - 1. Establish benchmarks and control points to set lines and levels.
  - 2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
  - 3. Inform installers of lines and levels to which they must comply.
  - 4. Check the location, level and plumb, of every major element as the Work progresses.
  - 5. Notify Engineer when deviations from required lines and levels exceed allowable tolerances.
  - 6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Engineer.

### 3.2 FIELD ENGINEERING

- A. Identification: Owner and Engineer will identify existing benchmarks, control points, and property corners to the best of his knowledge. The Contractor will have the ultimate responsibility to locate, recognize and preserve all of these that are encountered.
- B. Retain a licensed land surveyor, at the Contractor's expense, to replace any survey corners, property pins, or highway right-of-way monuments removed or damaged during construction.
- C. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
  - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Engineer. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Engineer before proceeding.
  - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- D. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
  - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
  - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
  - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

## **PART 4 - MEASUREMENT AND PAYMENT (Not Used)**

### **END OF SECTION**

## **PART 4 - MEASUREMENT AND PAYMENT**

### **4.1 PAYMENT**

- A. Unless specifically noted otherwise, the work of Division 1 shall be incidental to the work, and no separate payment shall be made.

**END OF SECTION**

## **SECTION 01275**

### **MEASUREMENT AND PAYMENT**

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

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

- A. Drawings and Special 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 and procedural requirements for measurement and payment.

##### **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 estimated quantities of Work required by the Contract Documents are increased or decreased.

##### **1.4 PROCEDURES**

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
- B. Measurement and Payment: The Measurement and Payment sections do not necessarily name all incidental items required to complete the work. The cost of all such incidentals shall be included in the various related items of work. All estimated quantities stipulated in the Bid Forms or other Contract Documents are approximate and are to be used only as a basis for estimating the probable cost of the work and for the purpose of comparing the proposals submitted for the work. It is understood and agreed that the actual amounts of work performed and materials furnished under unit price items may differ from such estimated quantities and the payment for such work and materials shall be based on the actual amount of work done and materials furnished in each case.
- C. Engineer will determine the actual quantities and classifications of Unit Price Work performed by the Contractor.
- D. List of Bid Items: A list of unit Bid Items is included at the end of this Section. Specification Sections referenced in the schedule contain requirements for materials described under each Bid Item.

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

## PART 3 - EXECUTION

### 3.1 LIST OF BID ITEMS – BASE BID.

#### A. Bid Item No. 101. – MOBILIZATION:

1. Description: This item shall cover the costs of preparatory work and operations. **Any bids that contain a lump sum bid price for mobilization greater than 10% of the bid price for the respective schedule may be rejected at the option of the Owner.**
2. Work required under this section includes, but is not limited to, the following:
  - a. The movement of personnel, equipment, supplies and incidentals to the project site;
  - b. The establishment of all facilities necessary for the work on the project;
  - c. All necessary site restoration;
  - d. Installation of a MCEP Project Sign at each project site meeting requirements of Special Provisions;
  - e. The costs of obtaining the required permits, bonds, and insurance; and
  - f. All other work and operations which must be performed, or costs incurred prior to beginning work on the various items of the project.
3. Unit of Measurement: Lump Sum
4. Measurement: When the percentage of the original contract amount for each unit shown below is earned, the percentage of the Contract lump sum price for MOBILIZATION shown below will be paid.

<u>Percentage of Original Contract Amount In-Place</u>	<u>Percentage of Lump Sum Price for Mobilization Earned</u>
5	20
10	50
25	60
65	75
90	90
100	100

5. Payment: Payment for MOBILIZATION will be made on the percentage of the contract unit price bid per lump sum as indicated in the Bid Form.

#### B. Bid Item No. 102. – REMOVAL AND DISPOSAL OF EXISTING BRIDGE:

1. Description: This item includes the removal and disposal of the existing superstructure, abutments, and wingwalls. The Contractor shall verify for themselves the dimensions and other particulars of the deck, abutments, etc. to be removed and disposed.
2. Work required under this section shall include but not be limited to the following:
  - a. Bridge removal as called out in the Drawings;
  - b. Disposing of all bridge elements as called out in the Drawings;
  - c. Salvage of materials as called out in the Special Provisions;
  - d. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified.
3. Unit of Measurement: Lump Sum
4. Measurement: Measurement for REMOVAL AND DISPOSAL OF EXISTING BRIDGE shall be lump sum.

5. Payment: Payment will be made at the contract unit price bid per lump sum for REMOVAL AND DISPOSAL OF EXISTING BRIDGE as indicated in the Bid Form.
- C. Bid Item No. 103. – STRUCTURE EXCAVATION:
1. Description: This item shall consist of all necessary structure excavation for installation of the bridge. No earthen material shall be placed in or near the stream.
  2. Work required under this section shall include, but not be limited to the following:
    - a. Dewatering & conveying water away from the project site, if necessary;
    - b. Excavation required to construct the particular structural component to the lines and grades indicated in the Drawings;
    - c. Excavation required for shaping of the stream to the lines and grades indicated in the Drawings;
    - d. Hauling spoil out of areas where no storage space is available for spoil;
    - e. Disposal of excess spoil, debris and rubbish;
    - f. Implementation of best management practice (BMP's) including temporary erosion control measures and silt fence;
    - g. Any necessary shoring to protect utilities and install pile cap and wingwalls;
    - h. Final grading, cleanup;
    - i. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
  3. Unit of Measurement: Lump Sum
  4. Measurement: Measurement for STRUCTURE EXCAVATION shall be by lump sum.
  5. Payment: Payment for STRUCTURE EXCAVATION will be made by lump sum as indicated in the Bid Form.
- D. Bid Item No. 104. – STRUCTURAL BACKFILL:
1. Description: This item shall consist of all necessary imported structural backfill for installation of the concrete abutment and wingwalls meeting requirements as defined in Earthwork (Section 02300).
  2. Work required under this section shall include, but not be limited to the following:
    - a. Supplying imported structural backfill meeting Type 1, 2, or 3 Bridge End Backfill in accordance with MDTSS Subsection 701.13. Place in conformance with moisture and density requirements of MDTSS Section 203.
    - b. Provide gradation and proctor tests for material as required;
    - c. Compacted imported structural backfill in lifts to the bottom of the roadway base course;
    - d. If necessary, providing water for proper compaction of imported structural backfill;
    - e. Final grading, cleanup;
    - f. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
  3. Unit of Measurement: Cubic Yard
  4. Measurement: STRUCTURAL BACKFILL shall be measured for by the cubic yard to the neat lines as indicated in the Drawings. No excess imported structural backfill will be paid for outside of the neat lines established by the Engineer.

5. Payment: Payment for STRUCTURAL BACKFILL will be made according as indicated in the Drawings at the contract unit price bid per cubic yard as indicated in the Bid Form.
- E. Bid Item No. 105. – CAST-IN-PLACE CONCRETE:
1. Description: This item shall consist of all cast-in-place concrete and reinforcing steel for end diaphragms, abutment/concrete pile caps, wingwalls, and incidental concrete. Concrete shall be MDT Concrete - Class Structure and have a minimum compressive strength (f'c) of 4,000 psi in 28 days.
  2. Work required under this section shall include, but not be limited to the following:
    - a. Preparing subgrade;
    - b. Construction of forms;
    - c. Furnish and install reinforcing steel;
    - d. Furnish and install neoprene or PVC water stop;
    - e. Furnish and place expansion joint filler between wingwalls and end diaphragm (Abutment #2, Upstream location only);
    - f. Submit concrete mix design;
    - g. Submit reinforcing steel shop drawings;
    - h. Furnish, place, and finish concrete;
    - i. Provide necessary quality control testing, including concrete cylinder testing;
    - j. Removal of forms;
    - k. All labor, tools, equipment, materials, royalties and incidentals required to complete the work as specified.
  3. Unit of Measurement: Cubic Yard
  4. Measurement: CAST-IN-PLACE CONCRETE shall be measured for by the neat line volume in cubic yards.
  5. Payment: Payment for CAST-IN-PLACE CONCRETE will be made at the contract unit price bid per cubic yard as indicated on the Bid Form.
- F. Bid Item No. 106. – INSTALL PRESTRESSED CONCRETE TRIDECK BEAMS:
1. Description: This item consists of installation of County supplied trideck beams meeting requirements as defined in the Special Provisions and Section 03410. The trideck beams will be supplied with elastomeric bearing pads, shims, and connector plates for making the connections between the beams. The Contractor shall coordinate with the supplier for delivery date and logistics. The Contractor shall notify the Engineer at least 48 hours prior to delivery so the beams can be inspected.
  2. Work required under this section shall include, but not be limited to the following:
    - a. Coordination with beam supplier;
    - b. Furnish and place joint filler, tar paper and connector bars at locations shown in the drawings;
    - c. Install elastomeric bearing pad bearing system;
    - d. Install galvanized steel shims where required;
    - e. Furnish and place grout;
    - f. Furnish all welding equipment, labor, and materials to secure beam-to-beam connections;
    - g. Clean bridge deck and provide and place silane sealer;
    - h. All labor, tools, equipment, materials, royalties and incidentals required to complete the work as specified.



3. Unit of Measurement: Lump Sum
4. Measurement: INSTALL PRESTRESSED CONCRETE TRIDECK BEAMS shall be measured per lump sum and shall consist of installing the number of members indicated in the Drawings, completed and accepted.
5. Payment: Payment shall be the contract unit price lump sum bid for INSTALL PRESTRESSED CONCRETE TRIDECK BEAMS, in place and approved.

G. Bid Item No. 107. – FURNISH STEEL H PILES:

1. Description: This item consists of the supply of steel H-piles.
2. Work required under this section shall include, but not be limited to the following:
  - a. Providing material submittals;
  - b. Wave equation analysis;
  - c. Furnish steel piles;
  - d. End protection;
  - e. Splicing (as necessary);
  - f. All labor, tools, equipment, materials, royalties and incidentals required to complete the work as specified.
3. Unit of Measurement: Linear Foot
4. Measurement: FURNISH STEEL H PILES shall be measured by the linear foot based on the plan (bid sheet) quantities required below cutoff. Excess piling not incorporated into the finished structure (if any) shall be removed by the Contractor unless the County requests the materials. Coordinate with the County prior to material removal.
5. Payment: Payment shall be made at the unit price bid per linear foot for FURNISH STEEL H PILES.

H. Bid Item No. 108. – DRIVE STEEL H PILES:

1. Description: This item consists of installation of steel H-piles from the bottom of pile cap to the design pile tip elevation.
2. Work required under this section shall include, but not be limited to the following:
  - a. Providing material submittals;
  - b. Drive steel piles;
  - c. All labor, tools, equipment, materials, royalties and incidentals required to complete the work as specified.
3. Unit of Measurement: Linear Feet
4. Measurement: DRIVE STEEL H PILES shall be measured by the linear foot and shall consist of driving the number and lengths of piles indicated in the Drawings, completed and accepted
5. Payment: Payment shall be the contract unit price per linear foot bid for DRIVE STEEL H PILES, in place and approved.

I. Bid Item No. 109. – RANDOM RIPRAP, MDT CLASS II:

1. Description: This item includes supplying and installing the riprap to the lines and grades shown in the Drawings.
2. Work required under this section shall include, but not be limited to the following:
  - a. Providing material submittals; including specific gravity, bulk density, and sodium sulfate test;
  - b. Excavation required to prepare subgrade and place geotextile and riprap to the lines and grades shown in the Drawings;

- c. Preparing subgrade for riprap, including all work associated with geotextile fabric;
  - d. Furnish and install geotextile fabric (MDT Class C);
  - e. Furnish and place MDT Class II riprap material to the lines and grade shown in the Drawings;
  - f. Grade, level, and compact MDT Class II riprap material to a well graded, uniform surface;
  - g. Salvage, stockpile and replacement of existing native overbank material as called out in the Drawings;
  - h. All labor, tools, equipment, materials, royalties and incidentals required to complete the work as specified.
- 3. Unit of Measurement: Cubic Yard
  - 4. Measurement: RANDOM RIPRAP, MDT CLASS II will be measured to the nearest cubic yard of completed and accepted imported riprap material in place to the approximate lines and grade as shown in the Drawings.
  - 5. Payment: Payment for RANDOM RIPRAP, MDT CLASS II will be made at the contract unit price bid per cubic yard as indicated in the bid proposal, which price and payment shall be full compensation for furnishing and placing the riprap complete and in place and for any excavation necessary to install and cover the riprap to the lines and grades specified.
- J. Bid Item No. 110. – ROADWAY EMBANKMENT:
- 1. Description: This item includes all roadway embankment as shown on the Drawings meeting requirements as defined for embankment material in Section 02230.
  - 2. Work required under this section shall include, but not be limited to the following:
    - a. Supplying imported embankment material. If using excess excavation material contractor responsible for salvage, stockpile, placement, and any necessary mixing and sorting to achieve proper gradation of useable excavation material;
    - b. Providing gradation and proctor tests for embankment material;
    - c. Excavation & embankment placement required to construct, shape and slope backslopes, cuts, subgrades, shoulders, ditches, etc. to lines and grades indicated in the Drawings;
    - d. On-site quality control testing;
    - e. Hauling spoil out of areas where no storage space is available for spoil;
    - f. Disposal of excess spoil, debris and rubbish;
    - g. Compacted embankment in lifts;
    - h. If necessary, providing water for compaction of embankment;
    - i. Final grading and cleanup;
    - j. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
  - 3. Unit of Measurement: Cubic Yard
  - 4. Measurement: ROADWAY EMBANKMENT shall be measured per cubic yard as indicated in the Bid Form and to the neat lines and grade as shown on the Drawings.
  - 5. Payment: Payment for ROADWAY EMBANKMENT will be made at the contract unit price bid per cubic yard as indicated in the Bid Form.

K. Bid Item No. 111. – 1”- MINUS CRUSHED TOP SURFACING:

1. Description: This item consists of furnishing, hauling, depositing, shaping, blading, and compacting crushed top surfacing on the prepared subgrade as indicated by the plans, Special Provisions, and Section 02240. The size of material to be used on this project is listed on the bid forms.
2. Work required under this section shall include but not be limited to the following:
  - a. Provide material tests for aggregate as required;
  - b. Loading, hauling, and spreading the aggregate surface course material;
  - c. Haul route maintenance;
  - d. Furnishing and placing water for dust control;
  - e. Blending, watering, and compacting;
  - f. Blue top staking and finish grading;
  - g. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
1. Unit of Measurement: Cubic Yard
2. Measurement: Measurement for 1”- MINUS CRUSHED TOP SURFACING will be per cubic yard as indicated in the Bid Form and to the neat lines and grade as shown on the Drawings.
3. Payment: Payment for 1”- MINUS CRUSHED TOP SURFACING will be made at the contract unit price bid per cubic yard as indicated in the Bid Form.

L. Bid Item No. 112. – 1.5” - MINUS CRUSHED BASE COURSE:

1. Description: This item shall meet the requirements of Section 02235 of the MPW Standard Specifications. The size of material to be used on this project is listed on the bid forms.
2. Work required under this section shall include but not be limited to the following:
  - a. Providing gradation and proctor tests for material as required;
  - b. Loading, hauling, and spreading the material;
  - c. Blending, watering and compacting;
  - d. Finish grading to the lines and grade shown on the Drawings;
  - e. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: Cubic Yard
4. Measurement: Measurement for 1.5” - MINUS CRUSHED BASE COURSE will be per cubic yard as indicated in the Bid Form and to the neat lines and grade as shown on the Drawings.
5. Payment: Payment for 1.5” - MINUS CRUSHED BASE COURSE will be made at the contract unit price bid per cubic yard as indicated in the Bid Form.

M. Bid Item No. 113. – CSP CULVERT:

1. Description: This item shall meet the requirements of Section 02720 of the MPW Standard Specifications. Contractor shall install the cross drain at the size and location shown on the Drawings. The size of culvert to be used on this project is listed on the Bid Form.
2. Work required under this section shall include but not be limited to the following:
  - a. Providing material submittals;
  - b. Furnishing, excavating, placement, and backfilling of the culvert at the location shown on Drawings;
  - c. Removal and disposal of the existing culvert as shown on the Drawings;

- d. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
  3. Unit of Measurement: Linear Foot
  4. Measurement: Measurement for CSP CULVERT will be per linear foot as indicated in the Bid Form and as shown on the Drawings.
  5. Payment: Payment for CSP CULVERT will be made at the contract unit price bid per linear foot as indicated in the Bid Form.
- N. Bid Item No. 114 – CULVERT FLARED END TERMINAL SECTION (FETS):
1. Description: This item shall meet the requirements of MDT Standard Detail 603-02.
  2. Work required under this section shall include but not be limited to the following:
    - a. Furnishing FETS on all new culverts as specified in the plans;
    - b. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
  3. Unit of Measurement: Each
  4. Measurement: Measurement for CULVERT FLARED END TERMINAL SECTION (FETS) will be per each as indicated in the Bid Form and as shown on the plans.
  5. Payment: Payment for CULVERT FLARED END TERMINAL SECTION (FETS) will be made at the contract unit price bid per each as indicated in the Bid Form.
- O. Bid Item No. 115. – W830 BRIDGE BARRIER RAIL:
1. Description: This item shall include the fabrication and installation of W830 steel bridge rail as indicated in the Drawings. Materials and installation procedures shall meet the requirements in the MDT standard drawings.
  2. Work required under this section shall include, but not be limited to the following:
    - a. Providing material submittals and shop drawings;
    - b. Providing and installing W830 steel bridge barrier rail shown in the Drawings;
    - c. Provide material for connecting steel bridge barrier rail to the bridge deck;
    - d. Provide materials for extending bridge rail to first guardrail post at each end;
    - e. All labor, tools, equipment, materials, and incidentals required to complete the work as specified.
  3. Unit of Measurement: Linear Foot
  4. Measurement: W830 BRIDGE BARRIER RAIL shall be measured by the linear foot of bridge railing, as shown in the Drawings.
  5. Payment: Payment shall be made at the unit price bid per linear foot of W830 BRIDGE BARRIER RAIL in place and approved. Payment shall include all costs of materials, tools, equipment and labor necessary to complete the work, including fastening and anchors required to attach the railing to the structure.
- P. Bid Item No. 116. – BOX BEAM GUARDRAIL:
1. Description: This item shall include fabrication and installation of box beam guardrail. **Posts shall be steel.** Materials and installation procedures shall meet the requirements in the MDT standard drawings. Work required under this section shall include but not be limited to the following:

- a. Providing material submittals and shop drawings;
  - b. Providing and installing guardrail in locations shown on the Drawings;
  - c. Providing material for and connecting guardrail to the bridge approach sections and terminal end sections.
  - d. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
2. Unit of Measurement: Linear Foot
  3. Measurement: BOX BEAM GUARDRAIL shall be measured by the linear foot of guardrail, as shown in the Drawings.
  4. Payment: Payment shall be made at the unit price bid per linear foot of BOX BEAM GUARDRAIL in place and approved. Payment shall include all costs of materials, tools, equipment and labor necessary to complete the work.

Q. Bid Item No. 117. – GUARDRAIL APPROACH SECTION:

1. Description: This item shall include fabrication and installation of the guardrail approach sections. Materials and installation procedures for the approach sections shall meet the requirements in the MDT standard drawings. **Posts shall be steel.**
2. Work required under this section shall include but not be limited to the following:
  - a. Providing material submittals and shop drawings;
  - b. Providing and installing guardrail bridge approach sections in locations shown in the Drawings;
  - c. Providing material for and connecting bridge approach sections to the end of the W830 bridge barrier rail.
  - d. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: Each
4. Measurement: Measurement for GUARDRAIL APPROACH SECTION will be made per Each as indicated in the Bid Form.
5. Payment: Payment for the GUARDRAIL APPROACH SECTION will be made at the contract unit price bid per Each as indicated in the Bid Form.

R. Bid Item No. 118. – BOX BEAM TERMINAL END SECTION:

1. Description: This item shall include fabrication and installation of the box beam terminal end sections. Materials and installation procedures for the approach sections shall meet the requirements in the MDT standard drawings. **Posts shall be steel.** Work required under this section shall include but not be limited to the following:
  - a. Providing material submittals and shop drawings;
  - b. Providing and installing guardrail terminal end sections in locations shown on the Drawings;
  - c. Providing material for and connecting terminal end sections to the guardrail or transition sections.
  - d. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
2. Unit of Measurement: Each.
3. Measurement: Measurement for BOX BEAM TERMINAL END SECTION will be made per Each as indicated in the Bid Form.
4. Payment: Payment for the BOX BEAM TERMINAL END SECTION will be made at the contract unit price bid Each as indicated in the Bid Form.

- S. Bid Item No. 119. – TYPE 3 OBJECT MARKERS AND POSTS:
1. Description: This item includes the fabrication and installation of Object Markers (X1-1) (Type 3) on galvanized U-channel steel posts.
  2. Work required under this section shall include, but not be limited to the following:
    - a. Material submittals;
    - b. Furnish and install of object markers and steel posts;
    - c. All labor, tools, equipment, materials, royalties and incidentals required to complete the work as specified.
  3. Unit of Measurement: Each
  4. Measurement: Measurement for TYPE 3 OBJECT MARKERS AND POSTS shall be per each, as delineated in the Drawings.
  5. Payment: Payment for TYPE 3 OBJECT MARKERS AND POSTS shall be made at the contract unit price bid per each as indicated in the Bid Form.
- T. Bid Item No. 120. – SEED:
1. Description: This item includes seeding disturbed areas with approved mixtures. All areas that the Contractor disturbs above the OHW (Ordinary High Water) location to the start of the roadway base course shall be seeded.
  2. Work required under this section shall include but not be limited to the following:
    - a. Provide certifications of weed free seed mix;
    - b. Seed bed preparation;
    - c. Seeding the disturbed areas;
    - d. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified.
  3. Unit of Measurement: Lump Sum
  4. Measurement: Measurement for SEED shall be made per lump sum as indicated in the Bid Form.
  5. Payment: Payment for SEED shall be made at the contract lump sum price bid as indicated in the Bid Form.
- U. Bid Item No. 121. – SUPPLY AND INSTALL NEW FENCING:
1. Description: This item includes installation of a new combination woven wire and two-strand barbed wire fence (MDT type F2M-32 IN WW). This item shall follow the requirements in MDT Section 607 and Detailed Drawing 607.
  2. Work required under this section shall include but not be limited to the following:
    - a. Furnishing and installing new fence;
    - b. Removal and disposal of existing fencing and posts;
    - c. Removal of all vegetation necessary to remove existing fence and install new fence per the Drawings and Specifications;
    - d. Attachment of new fence to the existing fence;
    - e. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified;
  3. Unit of Measurement: Linear Foot
  4. Measurement: Measurement for SUPPLY AND INSTALL NEW FENCING will be per linear foot as indicated in the Bid Form.
  5. Payment: Payment for SUPPLY AND INSTALL NEW FENCING will be made at the contract unit price bid per linear foot as indicated in the Bid Form.

V. Bid Item No. 122. – TRAFFIC CONTROL:

1. Description: This item shall meet the requirements of Section 01570 of the MPW Standard Specifications, MPW Standard Modifications, and Special Provisions. This work is the furnishing of labor, materials and equipment for installing, maintaining, and operating traffic control devices to insure the safety of the public and project personnel.
2. Work required under this section shall include but not be limited to the following:
  - a. Prepare and provide a traffic control plan that meets the approval of all required agencies;
  - b. Provide all traffic control devices and markers;
  - c. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for TRAFFIC CONTROL will be per lump sum as indicated in the Bid Form and as shown on the plans.
5. Payment: Payment for TRAFFIC CONTROL will be made at the contract unit price bid per lump sum as indicated in the Bid Form. Partial payments will be made on the basis of the percentage of the traffic control provided and removed from the project site.

3.2 LIST OF BID ITEMS – ADDITIVE ALTERNATE NO.1.

A. Bid Item No. 201. – CONCRETE APPROACH SLAB:

1. Description: This item shall consist of concrete approach slabs, reinforcing steel, and incidental joint material. Concrete shall be MDT Concrete - Class Structure and have a minimum compressive strength (f'c) of 4,000 psi in 28 days.
2. Work required under this section shall include, but not be limited to the following:
  - a. Preparing subgrade;
  - b. Construction of forms;
  - c. Furnish and install reinforcing steel in approach slabs and connection to end diaphragm;
  - d. Furnish and install expansion joint material and tar paper;
  - e. Submit concrete mix design;
  - f. Submit reinforcing steel shop drawings;
  - g. Furnish, place, and finish concrete;
  - h. Provide necessary quality control testing, including concrete cylinder testing;
  - i. Removal of forms;
  - j. All labor, tools, equipment, materials, royalties and incidentals required to complete the work as specified.
3. Unit of Measurement: Square Yard
4. Measurement: CONCRETE APPROACH SLAB shall be measured for by the neat line area in square yards.
5. Payment: Payment for CONCRETE APPROACH SLAB will be made at the contract unit price bid per square yard as indicated on the Bid Form.

**END OF SECTION**

## **SECTION 01300**

### **SUBMITTALS**

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

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

- A. Drawings and Special 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 and procedural requirements for submitting all submittals, including but not limited to, Shop Drawings, Product Data, Samples, and other miscellaneous submittals.
- B. Related Sections include the following:
  - 1. Division 1 Section "Quality Control and Quality Assurance" for submitting test and inspection reports and Delegated-Design Submittals.
  - 2. Division 1 Section "Contract Closeout" for submitting final pay applications and O&M Manual
- C. Submittals are categorized into two types: Action Submittals and Informational Submittals, as follows:
  - 1. Action Submittals: Written and graphic information submitted by the Contractor that requires Engineer's responsive action. The following are examples of action submittals:
    - a. Shop drawings
    - b. Product data
    - c. Samples
    - d. Operation and Maintenance Manuals
    - e. Site Usage Plan (Contractor's staging – including trailer sitting and material laydown area)
    - f. Payment application
    - g. Other requirements found within the technical specifications
- D. Informational Submittal: Information submitted by the Contractor that does not require the Engineer's responsive action. Submittals may be rejected for not complying with requirements. The following are examples of informational submittals:
  - 1. Shop Drawing Schedule
  - 2. Progress Schedule
  - 3. Schedule of Submittals
  - 4. Statement of Qualifications
  - 5. Construction Photography and Videography
  - 6. Work Plans
  - 7. Traffic Plans



8. Outage Requests
9. Proposed Testing Procedures
10. Test Records and Reports
11. Vendor Training Outlines/Plans
12. Test and Start-Up Reports
13. Certifications
14. Design Data
15. Manufacturer(s) Instructions
16. Record Drawings
17. Record Shop Drawings
18. Submittals required by laws, regulations and governing agencies
19. Warranties, Insurance and Bonds
20. Contract Close-Out Documents
21. Material Data Safety Sheets
22. Other requirements found within the technical specifications

### 1.3 RELATED WORK

- A. Additional requirements may be specified in the General Conditions for the Contract.
- B. Additional submittal requirements may be specified in the respective technical Specification Sections.

### 1.4 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Engineer for Contractor's use in preparing submittals.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities in accordance with the General Conditions.
- C. Submittals Schedule: Submit per the General Conditions
- D. Direct Transmittal from Contractor: Engineer will not accept submittals from anyone but the Contractor.
- E. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal.
  1. Initial Review: Allow 21 calendar days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Allow 21 calendar days for processing each resubmittal.
  3. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.

F. Contractor's Responsibilities

1. All submittals shall be clearly identified as follows:
  - a. Date of Submission
  - b. Project Number
  - c. Submittal Number
  - d. Project Name
  - e. Contractor Identification
    - 1) Contractor
    - 2) Supplier
    - 3) Manufacturer
    - 4) Manufacturer or supplier representative
  - f. Identification of Product
  - g. Reference to Contract Drawing
  - h. Reference to Specification Number, Page, and Paragraph
  - i. Reference to applicable standards, such as AWWA, ASTM, ASHTO, etc
  - j. Indication of Contractor's approval
  - k. Contractor's Certification statement
  - l. Identification of deviations or variances from the Contract Documents, if any
  - m. Reference to previous submittal (for resubmittals)
  - n. Made in America (when required by the Contract Documents)
2. Submittals shall be clear and legible, and of sufficient size for legibility and clarity of the presented data
3. Submittal Log. Maintain a log of all submittals. The submittal log shall be kept accurate and up to date. Provide the submittal log to the Engineer, if requested by the Owner or Engineer. This log should include the following items (as applicable):
  - a. Description
  - b. Submittal Number
  - c. Date transmitted to the Engineer
  - d. Date returned to Contractor (from Engineer)
  - e. Status of Submittal (Reviewed/Reviewed and Noted/etc)
  - f. Date of Resubmittal to Engineer and Return from Engineer (if applicable and repeat as necessary)
  - g. Distribution to subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as required.
  - h. Date material released for fabrication
  - i. Projected (or actual) delivery date
4. Numbering System: Utilize the following submittal identification numbering system:
  - a. The first five digits shall be the applicable Specification Section Number.
  - b. The next three digits shall be the sequential number of each separate item or drawing submitted under each Specification Section, in the chronological order submitted, starting at 1.
  - c. The last character shall be the letter R followed by a digit, if a resubmittal is required, starting with 1 and continuing with sequential numbers. A typical submittal number would be as follows:
    - a) 03300-3-R2
    - b) 03300 = Specification section for Concrete.
    - c) 3 = the third different submittal under this Section.

- d) R2 = the third submission (second resubmission) of that particular submittal.
- 5. Variances
  - a. Notify the Engineer in writing, at the time of submittal, of any variations or deviations in the submittals from the requirements of the Contract Documents per the General Conditions.
  - b. Notify the Engineer in writing, at the time of re-submittal (resubmission), of all variations or deviations from previous submission of that particular shop drawing, except those deviations which are the specific result of prior comments from the Engineer.
- 6. Contractor's Certification
  - a. Each submittal shall have affixed to it the following Certification Statement:
    - 1) "Certification Statement: By this statement, I hereby represent that I have met the requirements of subsection 7.16.A of the General Conditions, satisfied the Contractor's obligations under the Contract Documents with respect to Contractor's review of submittals, and that (enter company name) approves the submittal."
  - b. Each submittal shall bear the above Certification Statement on the cover sheet.
  - c. Each certification statement shall be signed and dated by the individual that reviewed and approved the information prior to submitting the documents to the Engineer.
- G. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities.
- H. Use for Construction: Use only final submittals with mark indicating action taken by Engineer in connection with construction.

## **PART 2 - PRODUCTS**

### **2.1 ACTION SUBMITTALS**

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
  - 1. Number of Copies: Submit five hard copies (paper) of each submittal, unless otherwise indicated. Engineer will return two copies. Mark up and retain one returned copy as a Project Record Document.
  - 2. Electronic Submittal: Contractor may, at their option, provide Action Submittals in an electronic format provided the following conditions are met:
    - a. The submittal contains no pages or sheets larger than 24 x 36 inches
    - b. The entire submittal is included in a single file.
    - c. Electronic files are PDF format (with printing enabled).

- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Include the following information, as applicable:
    - a. Dimensions.
    - b. Identification of products.
    - c. Fabrication and installation drawings.
    - d. Roughing-in and setting diagrams.
    - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
    - f. Shop work manufacturing instructions.
    - g. Templates and patterns.
    - h. Schedules.
    - i. Design calculations.
    - j. Compliance with specified standards.
    - k. Notation of coordination requirements.
    - l. Notation of dimensions established by field measurement.
  2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
  3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 24 by 36 inches (610 by 915 mm).
- C. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
  2. Mark each copy of each submittal to show which products and options are applicable.
  3. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Standard color charts.
    - e. Manufacturer's catalog cuts.
    - f. Wiring diagrams showing factory-installed wiring.
    - g. Printed performance curves.
    - h. Operational range diagrams.
    - i. Mill reports.
    - j. Standard product operating and maintenance manuals.
    - k. Compliance with recognized trade association standards.
    - l. Compliance with recognized testing agency standards.
    - m. Application of testing agency labels and seals.
    - n. Notation of coordination requirements.
- D. Samples: Furnish samples required by the Contract Documents for the Engineer's approval. Samples shall be delivered to the Engineer as specified or directed. Unless specified otherwise, provide at least two samples of each required item. Materials or equipment for which samples are required shall not be used in the work unless and until approved by Engineer.
1. Preparation: Include the following information, as applicable:

- a. Physical examples of the work
  - b. Small cuts or containers of materials
  - c. Complete units of repetitively used products
  - d. Color/texture/patterns swatches
  - e. Specimens for coordination of visual effects, graphic symbols, and other specified units of work
- E. Operation and Maintenance Manuals
  - 1. Submit in assembled manuals as specified in Division 1 Section "Contract Closeout". Such manuals shall include detailed instructions for Owner personnel on safe operation procedures, controls, start-up, shut-down, emergency procedures, storage, protection, lubrication, testing, trouble-shooting, adjustments, repair procedures, and other maintenance requirements.
- F. Site Usage Plan
  - 1. Submit a proposed site staging plan, including but not limited to the location of office trailers, storage trailers and material laydown. Such plan shall be a graphic presentation (drawing) of the proposed locations; and, shall include on-site traffic modifications, and temporary utilities, as may be applicable.
- G. Payment Application
  - 1. If an application form is included in the Contract Documents, use that form unless otherwise approved by the Engineer and Owner. If an application form is not included in the Contract Documents, Contractor may prepare a form for approval.

## 2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
  - 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Engineer will not return copies.
  - 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
  - 3. Test and Inspection Reports: Comply with requirements in Division 1 Section "Quality Control and Quality Assurance."
  - 4. Electronic Submittal: Contractor may, at their option, provide Action Submittals in an electronic format provided the following conditions are met:
    - a. The submittal contains no pages or sheets larger than 24 x 36 inches
    - b. The entire submittal is included in a single file.
    - c. Electronic files are PDF format (with printing enabled).
- B. Shop Drawing Schedule
  - 1. Prepare and submit a schedule indicating when shop drawings are required to be submitted to support the as-planned construction schedule. The submittal schedule shall allow sufficient time for preparation and submittal, review and response, and fabrication and delivery to support the construction schedule.

- C. Progress Schedule
  - 1. Prepare and submit construction schedules and monthly status reports as specified.
- D. Schedule of Submittals
  - 1. Prepare and submit schedule of submittals as specified in the General Conditions.
- E. Statements of Qualifications
  - 1. Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Engineers and owners, and other information specified.
- F. Construction Photography and Videography
  - 1. Provide periodic construction photographs and videography as specified – including but not limited to preconstruction photographs and/or video, monthly progress photos and/or video and post-construction photographs and/or video.
- G. Work Plans
  - 1. Prepare and submit copies of all work plans needed to demonstrate to the Owner that Contractor has adequately thought-out the means and methods of construction and their interface with existing facilities. Work plans and follow-up preparatory meetings shall be conducted for all major work items. All parties involved in the construction of that work item shall attend preparatory meeting.
- H. Traffic Plans
  - 1. Prepare traffic plans where and when required by the Contract Documents and local ordinances or regulations. If Contractor is not already knowledgeable about local ordinances and regulations regarding traffic requirements, become familiar with such requirements and include all costs for preparation and submittal of traffic management plan, as specified. In addition, unless a supplemental payment provision is provided in the bid form, include the cost of all police attendance, when required.
- I. Outage Requests
  - 1. Provide sufficient notification of any outages required (electrical, flow process, etc.) as may be required to tie-in new work into the existing facilities. Unless specified otherwise elsewhere, a minimum of seven calendar days notice shall be provided.
- J. Proposed Testing Procedures
  - 1. Prepare and submit testing procedures proposed to perform testing required by the various technical specifications.
- K. Test Records and Reports
  - 1. Provide copies of all test records and reports as specified in the various technical specifications.
  - 2. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
  - 3. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of

- tests performed before installation of product, for compliance with performance requirements.
4. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
  5. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.
  6. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
  7. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
    - a. Name, address, and telephone number of factory-authorized service representative making report.
    - b. Statement on condition of substrates and their acceptability for installation of product.
    - c. Statement that products at Project site comply with requirements.
    - d. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
    - e. Results of operational and other tests and a statement of whether observed performance complies with requirements.
    - f. Statement whether conditions, products, and installation will affect warranty.
    - g. Other required items indicated in individual Specification Sections.
- L. Vendor Training Outlines/Plans
1. At least two weeks before scheduled training of Owner's personnel, provide lesson plans for vendor training in accordance with the specification for O&M manuals.
- M. Test and Start-up Reports
1. Manufacturer(s) shall perform all pre-start-up installation inspection, calibrations, alignments, and performance testing as specified in the respective technical specifications. Provide copies of all such test and start-up reports.
- N. Certifications
1. Provide various certifications as required by the technical specifications. Such certifications shall be signed by an officer (of the firm) or other individual authorized to sign documents of behalf of that entity.
  2. Certifications may include, but are not limited to:
    - a. Welding certifications and welders qualifications
    - b. Certifications of Installation, Testing and Training for all equipment
    - c. Material Testing reports furnished by an independent testing firm
    - d. Certifications from manufacturer(s) for specified factory testing

- e. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
  - f. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
  - g. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.
  - h. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.
- O. Design Data
- 1. Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- P. Manufacturer(s) Instructions
- 1. Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
    - a. Preparation of substrates.
    - b. Required substrate tolerances.
    - c. Sequence of installation or erection.
    - d. Required installation tolerances.
    - e. Required adjustments.
    - f. Recommendations for cleaning and protection.
- Q. Record Drawings
- 1. No later than Substantial Completion, submit a record of all changes during construction not already incorporated into drawings – in accordance with Division 1 Contract Closeout.
- R. Record Shop Drawings
- 1. Before final payment is made, furnish one set of record shop drawings to the Engineer. These record shop drawings shall be in conformance with the approved documents and should show any field conditions which may affect their accuracy.
- S. Submittals required by laws, regulations and governing agencies
- 1. Prepare and submit all documentation required by state or local law, regulation or government agency directly to the applicable agency. This includes, but is not limited to, notifications, reports, certifications, certified payroll (for projects subject to wage requirements) and other documentation required to satisfy all requirements. Provide to Engineer one hard copy or electronic copy of each submittal made in accordance with this paragraph.



- T. Warranties, Insurance Certificates and Bonds
  - 1. Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
  - 2. Assemble a booklet or binder of all warranties and bonds as specified in the various technical specifications and in accordance with the Division 1 Contract Closeout. Provide two originals to the Engineer.
- U. Contract Close-Out Documents
  - 1. Submit documentation as indicated in Division 1 Contract Closeout.
- V. Material Safety Data Sheets
  - 1. Submit information directly to Owner. If submitted to Engineer, Engineer will not review this information but will return it with no action taken.
- W. Other requirements of the technical Specification Sections
  - 1. Comply with all other requirements of the technical specification sections.

## **PART 3 - EXECUTION**

### **3.1 CONTRACTOR'S REVIEW**

- A. Coordination of Submittal Times: Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work or other related Sections, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required). Coordinate with other submittals, testing, purchasing, fabrication, delivery and similar sequenced activities.
- B. Before submission to the Engineer, review shop drawings as follows:
  - 1. Make corrections and add field measurements, as required
  - 2. Use any color for its notations except red (reserved for the Engineer's notations) and black (to be able to distinguish notations on black and white documents)
  - 3. Include Contractor's Certification statement
  - 4. Provide field measurements (as needed)
  - 5. Coordinate with other submittals
  - 6. Indicate relationships to other features of the work
  - 7. Highlight information applicable to the work and/or delete information not applicable to the work

### **3.2 ENGINEER'S ACTION**

- A. General: Engineer will not review submittals that do not bear required certification statement, signature, and date of the responsible person and will return them without action.
- B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal

with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

1. “Reviewed” – This code is assigned when there are no notations or comments on the submittal. When returned under this code the Contractor may release the equipment and/or material for manufacture.
  2. “Reviewed and Noted” –This code is assigned when a confirmation of notations and comments IS NOT required by the Contractor. The Contractor may release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product.
  3. “Revise and Resubmit” –This combination of codes is assigned when notations and comments are extensive enough to require a resubmittal of the entire package. This resubmittal is to address all comments, omissions and non-conforming items that were noted.
- C. Informational Submittals: Engineer will review each submittal and will not return it, or will reject and return it if it does not comply with requirements.
- D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

#### **END OF SECTION**

## **SECTION 01320**

### **CONSTRUCTION PROGRESS DOCUMENTATION**

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

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

- A. Drawings and Special 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 and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Preliminary Construction Schedule.
  - 2. Contractor's Progress Schedule.
  - 3. Submittals Schedule.
  - 4. Daily construction reports.
- B. Related Sections include the following:
  - 1. Special Provisions "Progress Meetings" for submitting and distributing meeting and conference minutes.
  - 2. Division 1 Section "Submittals" for submitting schedules and reports.
  - 3. Division 1 Section "Quality Control and Quality Assurance" for submitting a schedule of tests and inspections.
  - 4. Division 1 Section "Contract Closeout" for submitting Project Record Documents at Project closeout.

##### **1.3 DEFINITIONS**

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
  - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
  - 2. Predecessor activity is an activity that must be completed before a given activity can be started.
- B. Event: The starting or ending point of an activity.
- C. Float: The measure of leeway in starting and completing an activity.
  - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
  - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.

- 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- D. Fragnet: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- E. Milestone: A key or critical point in time for reference or measurement.
- F. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

#### 1.4 SUBMITTALS

- A. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Engineers and owners, and other information specified.
- B. Preliminary Construction Schedule: Submit two printed copies; one a single sheet of reproducible media, and one a print.
- C. Contractor's Construction Schedule: Submit two printed copies of initial schedule, one a reproducible print and one a blue- or black-line print, large enough to show entire schedule for entire construction period.
- D. Daily Construction Reports: Submit 2 copies at monthly intervals.

#### 1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Progress Schedule, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from parties involved.
  - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

### **PART 2 - PRODUCTS**

#### 2.1 CONTRACTOR'S PROGRESS SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial Completion.
  - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
  3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
  4. Startup and Testing Time: Include time for startup and testing.
  5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Engineer's administrative procedures necessary for certification of Substantial Completion.
- B. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
- C. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- D. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.

## 2.2 PRELIMINARY CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule at the preconstruction conference.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for construction. Include cash requirement prediction based on indicated activities.

## 2.3 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
  2. List of separate contractors at Project site.
  3. Approximate count of personnel at Project site.
  4. High and low temperatures and general weather conditions.
  5. Accidents.
  6. Meetings and significant decisions.
  7. Daily work progress.
  8. Unusual events (refer to special reports).
  9. Stoppages, delays, shortages, and losses.
  10. Meter readings and similar recordings.
  11. Emergency procedures.

12. Orders and requests of authorities having jurisdiction.
13. Change Orders received and implemented.
14. Work Change Directives received.
15. Services connected and disconnected.
16. Equipment or system tests and startups.
17. Partial Completions and occupancies.
18. Substantial Completions authorized.

## **PART 3 - EXECUTION**

### **3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE**

- A. Contractor's Progress Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Progress schedule shall be submitted to the Engineer monthly with the progress payment.
  1. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  2. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Engineer, Owner, separate testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
  1. Post copies in Project meeting rooms and temporary field offices.
  2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

**END OF SECTION**

## **SECTION 01340**

### **REQUESTS FOR INFORMATION (RFI)**

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

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

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

##### **1.2 SUMMARY**

- A. This Section contains the procedures to be followed by Contractor for submitting a Request for Information (RFI) upon discovery of any apparent conflicts, omissions, or errors in the Contract Documents or Drawings or upon having any question concerning Information.
- B. RFI Administrative Requirements
- C. RFI Procedures
- D. RFI Execution
- E. RELATED SECTIONS
  - 1. Division 1 Section "Product Requirements" for product options, substitutions, omissions, and improper descriptions.

##### **1.3 DEFINITIONS**

- A. Request for Information: A document submitted by the Contractor requesting clarification of a portion of the Contract Documents, hereinafter referred to as an RFI.

##### **1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Description: Section provides procedure for Contractors to obtain interpretation or clarification of the Contract Documents, or identify apparent conflicts, omissions, or errors in the Contract Documents.
- B. Responsible Person for Contractor: Submit name of the individual authorized to receive Requests for Information documents, and who is responsible for forwarding Request.
- C. RFI Format: Submit all Requests for Information on the form attached at the back of this Section.

## 1.5 CONTRACTOR'S REQUESTS FOR INFORMATION (RFIs)

- A. Contractor's Requests for Information (RFIs): Should Contractor be unable to determine from the Contract Documents the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of Work is described differently at more than one place in the Contract Documents; the Contractor shall request that the Engineer make an interpretation of the requirements of the Contract Documents to resolve such matters. Contractor shall comply with procedures specified herein to make Requests for Information (RFIs).
- B. Submission of RFIs: RFIs shall be prepared and submitted on a form provided by the Engineer.
1. Forms shall be completely filled in, and if prepared by hand, shall be fully legible after scanning or photocopying.
  2. Each RFI shall be given a discrete, consecutive number starting with 1.
  3. Each page of the RFI and each attachment to the RFI shall bear the following:
    - a. Date of Submission
    - b. Project Number
    - c. Project Name
    - d. RFI Number
    - e. Descriptive Title
  4. Contractor shall sign all RFIs attesting to good faith effort to determine from the Contract Documents the information requested for Information. Frivolous RFIs shall be subject to reimbursement from Contractor to the Owner for fees charged by Engineer, Engineer's consultants and other design professions engaged by the Owner.
- C. Subcontractor-Initiated and Supplier-Initiated RFIs: RFIs from subcontractors and material suppliers shall be submitted through, be reviewed by and be attached to an RFI prepared, signed and submitted by Contractor. RFIs submitted directly by subcontractors or material suppliers will be returned unanswered to the Contractor.
1. Contractor shall review all subcontractor- and supplier-initiated RFIs and take actions to resolve issues of coordination, sequencing and layout of the Work.
  2. RFIs submitted to request clarification of issues related to means, methods, techniques and sequences of construction or for establishing trade jurisdictions and scopes of subcontracts will be returned without Information. Such issues are solely the Contractor's responsibility.
  3. Contractor shall be responsible for delays resulting from the necessity to resubmit an RFI due to insufficient or incorrect information presented in the RFI.
- D. Unacceptable Uses for RFIs: RFIs shall not be used to request the following:
1. Approval of submittals (use procedure specified in Section 01300 - Submittals)
  2. Approval of substitutions (refer to 01600 - Product Requirements)
  3. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the General Conditions)
  4. Different methods of performing Work than those indicated in the Contract Drawings and Specifications (comply with provisions of the General Conditions).
- E. RFI Log: Contractor shall prepare and maintain a log of RFIs, and at any time requested by the Engineer or Owner, the Contractor shall furnish copies of the log showing all outstanding RFIs.



## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION (NOT USED)**

- 3.1 Submit per the General Conditions. Additionally, electronic RFI requests will be accepted. Notification time begins from the date stamp of the Engineer's mail or email received date.
- 3.2 Requested Information: Contractor shall carefully study the Contract Documents, in particular to ensure that information sufficient for Information of requirements of the Contract Documents is not included. RFIs that request Information of requirements clearly indicated in the Contract Documents will be returned without Information.
- A. In all cases in which RFIs are issued to request clarification of issues related to means, methods, techniques and sequences of construction, for example, pipe and duct routing, clearances, specific locations of Work shown diagrammatically, apparent interferences and similar items, the Contractor shall furnish all information required for the Engineer or Owner to analyze and/or understand the circumstances causing the RFI and prepare a clarification or direction as to how the Contractor shall proceed.
- B. If information included with this type RFI by the Contractor is insufficient, the RFI will be returned unanswered.
- 3.3 Response Time: Request clarifications or information immediately upon discovery of need. Submit RFI's in a timely manner allowing full response time to avoid impacting Progress Schedule.
- A. Engineer, whose decision will be final, shall resolve issues and respond to questions of Contractor, in most cases, within fourteen (14) days. Actual time may be lengthened for complex issues, or shortened for expedited situations, as mutually agreed in writing.
- B. After submission of an RFI by Contractor and prior to receipt of the RFI response from Engineer, the Contractor proceeds with affected Work at own risk. Any portion of the Work not constructed in accordance with Engineer interpretation, clarification, instruction or decision is subject to removal and replacement at Contractor expense.
- 3.4 Disputed Requirements: In the event the Contractor believes that a clarification by the Engineer results in additional cost or time, Contractor shall comply with the Contract General Conditions.

## **END OF SECTION**

## **SECTION 01400**

### **QUALITY CONTROL AND QUALITY ASSURANCE**

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

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

- A. Contract Documents including, but not limited to Drawings and Special Provisions, General and Supplementary Conditions, other Division 1 through 16 Specification Sections, and Appendices to the Contract Documents, apply to this Section.

##### **1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

##### **1.3 DEFINITIONS**

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Engineer.
- C. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

#### 1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, and telephone number of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making tests and inspections.
  - 6. Description of the Work and test and inspection method.
  - 7. Identification of product and Specification Section.
  - 8. Complete test or inspection data.
  - 9. Test and inspection results and an interpretation of test results.
  - 10. Ambient conditions at time of sample taking and testing and inspecting.
  - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  - 12. Name and signature of laboratory inspector.
  - 13. Recommendations on retesting and reinspecting.
- C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

#### 1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.

- E. Testing Agency Qualifications: An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.
- F. Preconstruction Testing: Testing agency shall perform preconstruction testing for compliance with specified requirements for performance and test methods.
  - 1. Contractor responsibilities include the following:
    - a. Provide test specimens and assemblies representative of proposed materials and construction. Provide sizes and configurations of assemblies to adequately demonstrate capability of product to comply with performance requirements.
    - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
  - 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Engineer, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- G. Control of Installation
  - 1. Monitor quality control over suppliers, products, services, site conditions, and workmanship, to produce Work of specified quality.
  - 2. Comply with manufacturers' instructions, including each step in sequence.
  - 3. Examine the areas and conditions where Work is to be performed and notify the Owner of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected by the Contractor in a manner acceptable to the Owner.
  - 4. Request clarification from Engineer should manufacturers' instructions conflict with Contract Documents. The clarification shall be received prior to proceeding.
  - 5. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
  - 6. Work shall be performed by persons qualified to produce workmanship of specified quality.

## 1.6 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency or Engineer to perform these services.
  - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspecting they are engaged to perform.
  - 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
  - 1. Contractor shall, engage a qualified testing agency to perform these quality-control services.

- a. Contractor shall not employ the same entity engaged by Owner, unless agreed to in writing by Owner.
  2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  3. Contractor shall, submit a certified written report, in duplicate, of each quality-control service.
  4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Engineer and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  3. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  4. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
  5. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections.
  3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  4. Facilities for storage and field-curing of test samples.
  5. Delivery of samples to testing agencies.
  6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

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

## **PART 3 - EXECUTION**

### **3.1 REPAIR AND PROTECTION**

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
  1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

**END OF SECTION**

## **SECTION 01600**

### **PRODUCT REQUIREMENTS**

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

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

- A. Drawings and Special 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 the following administrative and procedural requirements: selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
  - 1. Division 1 Section "Contract Closeout" for submitting warranties for contract closeout.
  - 2. Divisions 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.

##### **1.3 DEFINITIONS**

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation, shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
  - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties,

appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

- D. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
- E. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

#### 1.4 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form:
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified material or product cannot be provided.
    - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
    - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - e. Samples, where applicable or requested.
    - f. List of similar installations for completed projects with project names and addresses and names and addresses of Engineers and owners.
    - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
    - h. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
    - i. Cost information, including a proposal of change, if any, in the Contract Sum.
    - j. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
    - k. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.



3. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within one week of receipt of a request for substitution. Engineer will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
  - a. Form of Acceptance: Field Order or Change Order.
  - b. Use product specified if Engineer cannot make a decision on use of a proposed substitution within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 1 Section "Submittal Procedures." Show compliance with requirements.

## 1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

## 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
  1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
  5. Store products to allow for inspection and measurement of quantity or counting of units.
  6. Store materials in a manner that will not endanger Project structure.
  7. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  8. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  9. Protect stored products from damage.

## 1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
  - 1. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 1 Section "Closeout Procedures."

## **PART 2 - PRODUCTS**

### **2.1 PRODUCT OPTIONS**

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged, and unless otherwise indicated, that are new at time of installation.
  - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  - 3. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures: Procedures for product selection include the following:
  - 1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the product named.
    - a. Substitutions may be considered.
  - 2. Products: Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
    - a. Substitutions may be considered, unless otherwise indicated.
  - 3. Manufacturers: Where Specification paragraphs or subparagraphs titled "Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
    - a. Substitutions may be considered, unless otherwise indicated.

### **2.2 PRODUCT SUBSTITUTIONS**

- A. Timing: Engineer will consider requests for substitution if received by the Engineer within 30 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Engineer.
- B. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:

1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
2. Requested substitution does not require extensive revisions to the Contract Documents.
3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
4. Substitution request is fully documented and properly submitted.
5. Requested substitution will not adversely affect Contractor's Construction Schedule.
6. Requested substitution has received necessary approvals of authorities having jurisdiction.
7. Requested substitution is compatible with other portions of the Work.
8. Requested substitution has been coordinated with other portions of the Work.
9. Requested substitution provides specified warranty.

## 2.3 COMPARABLE PRODUCTS

- A. Where products or manufacturers are specified by name, submit the following, in addition to other required submittals, to obtain approval of an unnamed product:
  1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
  2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
  3. Evidence that proposed product provides specified warranty.
  4. List of similar installations for completed projects with project names and addresses and names and addresses of Engineers and owners, if requested.
  5. Samples, if requested.

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

### **END OF SECTION**

**SECTION 01700**  
**CONTRACT CLOSEOUT**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and Special 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 and procedural requirements for contract closeout, including, but not limited to, the following:
1. Inspection procedures.
  2. Project record documents.
  3. Final cleaning.
- B. Related Sections include the following:
1. Division 1 Section "Execution Requirements" for progress cleaning of Project site.
  2. Divisions 2 through 16 Sections for specific closeout and special cleaning requirements for products of those Sections.

**1.3 SUBSTANTIAL COMPLETION**

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following or list items below that are incomplete in request. Also refer to the General Conditions for additional submittals and procedures for Substantial Completion.
1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  2. Advise Owner of pending insurance changeover requirements in accordance with the General Conditions.
  3. Submit specific warranties, Performance bonds, maintenance service agreements, final certifications, and similar documents.
  4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  5. Prepare and submit Project Record Documents and/or similar final record information.
  6. Submit test/adjust/balance records.
  7. Terminate and remove temporary facilities from Project site, construction tools, and similar elements.

8. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
  9. Complete final cleaning requirements, including touchup painting.
  10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Following the submittal of the preliminary documents described above, inspection of the Work shall be completed in accordance with the General Conditions.

#### 1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment.
  2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  4. Submit evidence that bonds shall be in effect until one year after the date when final payment becomes due or until completion of the correction period specified, whichever is later.
  5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

#### 1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of areas in sequential order.
  2. Organize items applying to each area by major element.
  3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Engineer.
    - d. Name of Contractor.
    - e. Page number.

## 1.6 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Maintain Record Documents in accordance with the General Conditions.
- B. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is installer, Subcontractor, or similar entity, to prepare the marked-up Record Prints. Record Prints shall, at a minimum, meet the following requirements:
  - 1. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
  - 2. Accurately record information in an understandable drawing technique.
  - 3. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
  - 4. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.
  - 5. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
  - 6. Mark important additional information that was either shown schematically or omitted from original Drawings.
  - 7. Note Work Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
  - 8. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.
- C. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

## PART 2 - EXECUTION

### 2.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
    - a. Clean project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste

- material, litter, broken pipe, sheeting, worn-out parts, rejected materials, concrete, asphalt and other foreign substances.
- b. Remove excess piles of gravel or soil deposited throughout project.
  - c. Final grade in unpaved, graveled, and un-graveled areas with a motor grader.
  - d. Remove all loose rocks, boulders, and coarse gravel pushed into a berm by final grading.
  - e. Restore surface drainage to original condition unless otherwise detailed in the project plans and specifications.
  - f. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
  - g. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
  - h. Remove tools, construction equipment, machinery, and surplus material from Project site.
  - i. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
  - j. Remove labels that are not permanent.
  - k. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
  - l. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
  - m. Replace parts subject to unusual operating conditions.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

## **END OF SECTION**

## **SECTION 01730**

### **EXECUTION REQUIREMENTS**

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

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

- A. Drawings and Special 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 general procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. General installation of products.
  - 2. Coordination of Owner-installed products.
  - 3. Progress cleaning.
  - 4. Starting and adjusting.
  - 5. Protection of installed construction.
- B. Related Sections include the following:
  - 1. Division 1 Section "Contract Closeout" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

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

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

##### **3.1 PREPARATION**

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Engineer not less than two days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Engineer's written permission.



- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

### 3.2 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
- G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

### 3.3 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Remove and properly dispose of excess material accumulated from demolition and construction (such as piles of gravel or soil, broken concrete, debris, papers, rejected materials, worn-out equipment parts, etc.) from the project site at the Contractor's expense. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
  - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).

3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
  1. Remove liquid spills promptly.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
  1. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.
- H. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- K. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

### 3.4 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.

- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section "Quality Requirements."

### 3.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

**END OF SECTION**

## **DIVISION 2**

### **SITE CONSTRUCTION**

## **SECTION 02232**

### **SITE CLEARING**

#### **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. This Section includes the following:
  - 1. Protecting existing trees and vegetation to remain.
  - 2. Removing trees and other vegetation.
  - 3. Clearing and grubbing.
  - 4. Topsoil stripping.
  - 5. Removing above-grade site improvements.
  - 6. Disconnecting, capping or sealing, and abandoning site utilities in place.
  - 7. Disconnecting, capping or sealing, and removing site utilities.
- B. Related Sections include the following:
  - 1. Division 1 Section "Construction and Temporary Facilities" for temporary utilities, temporary construction and support facilities, temporary security and protection facilities, and environmental protection measures during site operations.
  - 2. Division 2 Section "Earthwork" for soil materials, excavating, backfilling, and site grading.

##### **1.3 DEFINITIONS**

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of weeds, roots, and other deleterious materials.

##### **1.4 MATERIALS OWNERSHIP**

- A. Except for materials indicated to be stockpiled or to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from the site.

##### **1.5 SUBMITTALS**

- A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.
- B. Record drawings according to Division 1 Section "Closeout Procedures."
  - 1. Identify and accurately locate capped utilities and other subsurface structural, electrical, and mechanical conditions.

## 1.6 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Improvements on Adjoining Property: Work on adjoining properties is not included in the scope of this project.
- C. Salvageable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
- D. Notify utility locator service for area where Project is located before site clearing.

## PART 2 - PRODUCTS

### 2.1 SOIL MATERIALS

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 2 Section "Earth Work."
  - 1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Provide erosion-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Locate and clearly flag trees and vegetation to remain or to be relocated.
- D. Protect existing site improvements to remain from damage during construction.
  - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

### 3.2 TREE PROTECTION

- A. Erect and maintain a temporary fence around drip line of individual trees or around perimeter drip line of groups of trees to remain. Remove fence when construction is complete.
  - 1. Do not store construction materials, debris, or excavated material within drip line of remaining trees.
  - 2. Do not permit vehicles, equipment, or foot traffic within drip line of remaining trees.
- B. Do not excavate within drip line of trees, unless otherwise indicated.

- C. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
  - 1. Cover exposed roots with burlap and water regularly.
  - 2. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.
  - 3. Coat cut faces of roots more than 1-1/2 inches (38 mm) in diameter with an emulsified asphalt or other approved coating formulated for use on damaged plant tissues.
  - 4. Cover exposed roots with wet burlap to prevent roots from drying out. Backfill with soil as soon as possible.
- D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Engineer.
  - 1. Employ a qualified arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.
  - 2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the qualified arborist.
- E. Transplant trees and vegetation indicated to be relocated to the location designated by the Engineer, in a manner approved by Engineer.
  - 1. Employ a qualified arborist or landscaping expert, licensed in jurisdiction where Project is located, to transplant trees and shrubs.
  - 2. Operation shall be completed in such manner as to protect the root wad of the tree or other vegetation.

### 3.3 UTILITIES

- A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing when requested by Contractor.
  - 1. Verify that utilities have been disconnected and capped before proceeding with site clearing.
- B. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
  - 1. Owner will arrange to shut off indicated utilities when requested by Contractor.
  - 2. Arrange to shut off indicated utilities with utility companies.
- C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Engineer not less than two weeks in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Engineer's written permission.
- D. Excavate for and remove underground utilities indicated to be removed.

### 3.4 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
  - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
  - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
  - 3. Completely remove stumps, roots, obstructions, and debris extending to a depth of 18 inches (450 mm) below exposed subgrade.
  - 4. Use only hand methods for grubbing within drip line of remaining trees.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.
  - 1. Place fill material in horizontal layers not exceeding 8-inch (200-mm) loose depth, and compact each layer to a density equal to adjacent original ground.

### 3.5 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
  - 1. Strip surface soil of unsuitable topsoil, including trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water.
  - 1. Do not stockpile topsoil within drip line of remaining trees.
  - 2. Dispose of excess topsoil as specified for waste material disposal.
  - 3. Stockpile surplus topsoil and allow for respreding deeper topsoil.

### 3.6 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
  - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.

### 3.7 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off Owner's property.

## END OF SECTION



## SECTION 02240

### CRUSHED AGGREGATE SURFACING

#### PART 1- GENERAL

##### 1.1 REFERENCES

- A. AASHTO T99 - Standard Method of Test for Moisture-Density Relations of Soils Using 5.5lb. (2.5 Kg) Rammer and 12-inch (305 mm) Drop.
- B. AASHTO T11 - Materials Finer than No. 200 Sieve in Mineral Aggregates by Washing.
- C. AASHTO T27- Sieve Analysis of Fine and Coarse Aggregates
- D. AASHTO T89-Determining the Liquid Limit of Soils
- E. AASHTO T90 -Determining the Plastic Limit and Plasticity Index of Soils
- F. AASHTO T104 -Standard Method of Test for Soundness of Aggregate by use of Sodium Sulphate or Magnesium Sulfate
- G. ASTM 06938-10- Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth). Replaces ASTM D2922 and D3017.
- H. ASTM C131 - Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- I. ASTM C88 - Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
- J. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- K. ASTM D5821- Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate.

##### 1.2 SUBMITTALS

- A. Submit laboratory test results for crushed top surfacing material 7 days prior to beginning hauling operations, for Engineer's approval. Crushed top surfacing material shall have as a minimum the following laboratory tests completed:
  - 1. Los Angeles Abrasion
  - 2. Sodium Sulfate Soundness
  - 3. Atterberg Limits
  - 4. Fractured Faces
  - 5. Sieve Analysis

6. Proctor

- B. If, at any time during construction, the engineer determines there is a question whether the materials meet specification, the engineer shall have the material's tested. The engineer shall pay the testing cost for these materials if they pass. Testing costs for materials failing to meet specifications shall be deducted from the contract price.
- C. Materials Source: All materials incorporated into this work shall come from a certified source(s)/pit(s) as permitted by the Montana Department of Environmental Quality. Submit name of imported materials suppliers. Provide materials from same source throughout the work. Change of source requires retesting at the Contractor's expense and Engineer's approval.

## PART 2- PRODUCTS

### 2.1 AGGREGATE MATERIALS

Crushed top surfacing: Crushed gravel, stone, or other similar material consisting of hard, durable particles or fragments of stone, free of excess of flat, elongated, soft or disintegrating pieces, silt, lumps of clay, loam, friable or soluble materials, and organic matter; graded in accordance with AASHTO T27; within the following limits:

**TABLE OF GRADATIONS**  
**Percentage by Weights Passing Square**  
**Mesh Sieves**

<u>Sieve</u>	<u>%Passing</u>
1 Inch Sieve	100%
¾ Inch Sieve	97-100%
No.4 Sieve	45-64%
No. 10 Sieve	25-42%
No. 200 Sieve	8-16%

The crushed top surfacing, including added binder or filler, shall meet the following supplemental requirements.

1. Dust Ratio: The portion passing the No. 200 Sieve shall not be greater than 2/3 of the portion passing the No. 40 Sieve.
2. The liquid limit for that portion of the fine aggregate passing a No. 40 Sieve shall not exceed 35 and the plasticity index shall be between 5 and 9 as determined by AASHTO T-89 and T-90. A target plasticity index of seven (7) is desired at laydown and thus, shall be established during crushing operations.
3. At least 20 percent by weight of the aggregate retained on the No. 4 sieve must have at least one mechanically fractured face.
4. A wear factor not exceeding 50% at 500 revolutions.
5. Sodium Sulfate Soundness: 12% loss maximum when aggregate is subjected to 5 cycles.

## 2.2 QUALITY CONTROL

- A. Quality control testing is the responsibility of the Contractor. Testing will include, but may not be limited to, materials tests specified in paragraph 1.2 above, compaction tests for density and moisture content, and field measurements to ensure conformity with the specified typical section. Quality control test intervals are specified in the Special Provisions. Quality assurance field inspection and compaction testing will be performed by the Engineer. These tests are only to verify compliance with contract requirements and do not relieve the Contractor of quality control testing requirements. Quality assurance inspections will be paid for by the Owner.
- B. If, in the opinion of the Engineer, source material deviates significantly in gradation or plasticity from the approved test material, the Engineer may order retesting of the material as specified in Part 1.2 of this section. If the retested material does not meet the specifications herein, the material shall be removed and replaced with suitable material or other means of remedy approved by the Engineer. All costs associated with the approved remedy will be the responsibility of the Contractor.

## PART 3- EXECUTION

### 3.1 GENERAL

Do not place surfacing on a wet, muddy, frozen, or rutted subgrade. Provide a water truck at all times during hauling operations for dust control and to provide water for compaction.

### 3.2 PLACEMENT AND SPREADING

- A. Mix and place the material on the subgrade in two lifts, unless pugmill mixing is utilized. Deposit and spread each lift in a uniform layer, without segregation, to the loose depth that when compacted yields half the specified thickness. Spread material using dump boards, spreader boxes, or vehicles equipped to distribute the material in a uniform layer. The material may be deposited in vehicles equipped to distribute the material in a uniform layer. The material may be deposited in windrows and mixed and spread as described below.
- B. If segregation, moisture or compaction problems exist, or if the material was placed on the subgrade in windrows, thoroughly blade-mix the material to full depth by alternately blading each layer to the center and back to the edges road.
- C. Add water before and during the mixing operations when required in the quantity necessary to prevent segregation of fine and coarse materials. Use a sprinkler or other water spreading device that provides a uniform water distribution without causing a washing effect of the material.
- D. Pugmill mixing: Mix all surfacing aggregate. Uniformly mix aggregate surfacing and water in a central plant pugmill mixer. Proportion all blending material, filler, and binder by weight to within  $\pm 1/2$  of 1% of the specified quantity before mixing. Add the water needed to reach the specified density. Additional water may be added only once to the aggregate surfacing once it's placed on the roadway to replace moisture lost to surface evaporation. If additional water is needed, pick up the mixture and remix it in the pugmill. After pugmilling, transport, place, and spread aggregate surfacing on the roadway. Spread in maximum 6-inch compacted layers to the required grade and typical section.

### 3.3 COMPACTION

- A. Compact each lift of placed material the full width by rolling with suitable tamping equipment or power rollers. Correct all irregularities or depressions that develop during rolling by loosening the material in these places and adding or removing material, as required.
- B. Perform blading and compacting alternately as required or directed, to maintain a smooth, even uniformly compacted surface until the final inspection.
- C. Provide watering and rolling required to obtain a minimum field density of 95 percent of maximum dry density as determined by AASHTO T99 on each lift. No separate compensation is made for rolling and watering in the contract documents.
- D. Perform quality control density testing as specified in the Special Provisions.

### 3.4 SURFACE TOLERANCES

- A. The final surface when finished and tested with a 10-foot template placed on the surface with its center line parallel to the center line of the road, shall not have a surface deviation from the straight edge exceeding 3/8-inch.

**END OF SECTION**

## **SECTION 02300**

### **EARTHWORK**

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

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

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

##### **1.2 SUMMARY**

- A. This Section includes the following:
  - 1. Preparing subgrades for slabs-on-grade and lawns and grasses.
  - 2. Excavating and backfilling for buildings, structures and retaining walls.
  - 3. Drainage course for slabs-on-grade.
  - 4. Subsurface drainage backfill for walls.
- B. Related Sections include the following:
  - 1. Division 2 Section "Site Clearing" for temporary erosion and sedimentation control measures, site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.

##### **1.3 DEFINITIONS**

- A. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- B. Drainage Course: Course supporting the slab-on-grade that also minimizes upward capillary flow of pore water.
- C. Excavation: Removal of material encountered above subgrade elevations and 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 Section 01275 "Measurement and Payment or Contract provisions for changes in the Work.
  - 2. 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.
- D. Fill: Soil materials used to raise existing grades.
- E. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 1 cubic yard or more in volume that exceed a standard penetration resistance of 100 blows/2 inches when tested by an independent geotechnical testing agency, according to ASTM D 1586.

- F. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- G. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- H. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

#### 1.4 SUBMITTALS

- A. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
  - 1. Classification according to ASTM D 2487 of each on-site and borrow soil material proposed for fill and backfill.
  - 2. Laboratory compaction curve according to ASTM D 698 for each on-site and borrow soil material proposed for fill and backfill.
- B. When, in the opinion of the Engineer, the field soil conditions differ from those represented by the material test reports, new samples shall be taken by the Contractor and delivered to the testing agency for classification and laboratory compaction curve testing. All testing shall be based on the appropriate soil test results.

#### 1.5 QUALITY ASSURANCE

- A. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548.

#### 1.6 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated.
  - 1. Notify Engineer not less than two weeks in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Engineer's written permission.
  - 3. Contact utility-locator service for area where Project is located before excavating.
- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

### **PART 2 - PRODUCTS**

#### 2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

- B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM or a combination of these groups; free of rock or gravel larger than 3 inches (75 mm)] in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.
- D. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- E. Bridge End Backfill and Structural Fill:  
Provide Type 1, 2, or 3 Bridge End Backfill in accordance with MDTSS Subsection 701.13.
- F. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- G. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 3/4-inch (37.5-mm) sieve and 0 to 5 percent passing a No. 8 (2.36-mm) sieve.
- H. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a No. 4 (4.75-mm) sieve.
- I. Sand: ASTM C 33; fine aggregate, natural, or manufactured sand.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 2 Section "Site Clearing."
- C. Protect and maintain erosion and sedimentation controls, which are specified in Division 2 Section "Site Clearing," during earthwork operations.
- D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

### 3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
  - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
  - 2. If required, install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

### 3.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

### 3.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized regardless of the character of surface and subsurface conditions encountered.
  - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
  - 2. If rock is encountered within excavations, cease work in the area where rock is discovered until a time and materials change order for the extra work can be agreed upon by the Contractor, Owner and Engineer. The work in the affected area will again proceed after a change order is processed, and no shutdown time or associated additional costs will be awarded other than those agreed upon in the change order.

### 3.5 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch (25 mm). If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
  - 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
  - 2. Pile Foundations: Stop excavations 6 to 12 inches (150 to 300 mm) above bottom of pile cap before piles are placed. After piles have been driven, remove loose and displaced material. Excavate to final grade, leaving solid base to receive concrete pile caps.
  - 3. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch (25 mm). Do not disturb bottom of excavations intended as bearing surfaces.



### 3.6 SUBGRADE INSPECTION

- A. Notify Engineer when excavations have reached required subgrade.
- B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below the building slabs and pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
  - 1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph (5 km/h).
  - 2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons (13.6 tonnes).
  - 3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

### 3.7 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi (17.2 MPa), may be used when approved by Engineer.
  - 1. Fill unauthorized excavations under other construction or utility pipe as directed by Engineer.

### 3.8 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.

### 3.9 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
  - 1. Construction below finish grade including, where applicable, subdrainage, damp proofing, waterproofing, and perimeter insulation.
  - 2. Surveying locations of underground utilities for Record Documents.
  - 3. Testing and inspecting underground utilities.
  - 4. Removing concrete formwork.
  - 5. Removing trash and debris.

6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

### 3.10 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.
2. Under steps and ramps, use Structural Fill.
3. Under building slabs, use Structural Fill.
4. Under footings and foundations, use Structural Fill.
5. Under and adjacent to retaining walls, use Structural Fill.
6. In utility trenches within 5 feet of any retaining wall or foundation, use Structural Fill.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

### 3.11 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

### 3.12 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches (200 mm)] in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Where backfill is to extend higher on one side than on the other, as indicated on the Plans, structural floor beams or other means of restraint shall be installed before such backfill is placed. Should any deflection of the foundation wall result from the Contractor's failure to provide adequate bracing, the Contractor shall remove the backfill or embankment to relieve the deflection, properly brace the wall, and replace the backfill at no additional cost to the Owner.

D. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:

1. Under structures, building slabs and steps, scarify and recompact top 12 inches (300 mm) of existing subgrade and each layer of backfill or fill soil material at 97 percent.
2. Under lawn or unpaved areas, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil material at 85 percent.

### 3.13 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
  1. Provide a smooth transition between adjacent existing grades and new grades.
  2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
  1. Lawn or Unpaved Areas: Plus or minus [1 inch (25 mm)]
- C. Grading inside Building and Structure Lines: Finish subgrade to a tolerance of 1/2 inch (13 mm) when tested with a 10-foot (3-m) straightedge.

### 3.14 FIELD QUALITY CONTROL

- A. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Engineer.
- B. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
  1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least 1 test for every 1000 sq. ft. or less of building slab, but in no case fewer than 3 tests.
  2. Foundation Wall Backfill: At each compacted backfill layer, at least 1 test for each [100 feet (30 m)] or less of wall length, but no fewer than 2 tests.
- C. When testing reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

### 3.15 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 correction period elapses, remove finished surfacing, backfill with additional soil 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.

### 3.16 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

**END OF SECTION**

## **SECTION 02378**

### **RIPRAP**

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

##### **1.1 DESCRIPTION**

- A. This work consists of furnishing and placing riprap rock for bank protection, slope protection, drainage structures, and erosion control.

##### **1.2 SUBMITTALS**

- A. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
  - 1. Apparent specific gravity, AASHTO T 85
  - 2. Water absorption, AASHTO T 85
  - 3. Sodium sulfate or magnesium sulfate soundness tests, AASHTO T 104

#### **PART 2 - PRODUCTS**

##### **2.1 RIPRAP**

- A. Furnish riprap at the sizes indicated on the Drawings and Bid Form in accordance with Table 701-21 of the MDT Standard Specifications for Road and Bridge Construction, 2020 Ed.
- B. Furnish hard, durable, angular rock that is resistant to weathering and water action and free of organic or other unsuitable material. Do not use shale, rock with shale seams, rounded stone or boulders from a streambed source, or porous rock that may break into smaller pieces in the process of handling and placing. In no instance will concrete or other debris rock be allowed.
- C. Furnish riprap free of overburden, spoil, sand, dust, organic materials, excessive cracks, mineral lenses and intrusions, or other impurities.
- D. Riprap material must have a minimum specific gravity of 2.4 and a maximum absorption of 4.0% when tested in accordance with AASHTO T 85.
- E. The stone will be accepted on a visual basis by the Engineer. Submit a sample for approval before placing riprap. If the stone is of questionable origin, the Engineer may require a sodium sulfate soundness test to determine its durability.
- F. The riprap shall have a percentage loss of not more than ten percent (10%) after five (5) cycles when tested in accordance with AASHTO T104 when sodium sulfate is used or more than fifteen percent (15%) when magnesium sulfate is used.
- G. The stone will be accepted on a visual basis by the Engineer. Submit a sample for approval before placing riprap.

- H. The riprap must be furnished from a pit or quarry that is approved by the Montana Department of Environmental Quality or demonstrated to be exempt.

## **PART 2 - EXECUTION**

### **2.1 SUBGRADE PREPARATION**

- A. Cut, fill, compact, and grade the subgrade surfaces to the lines and grades as shown on the Drawings prior to placing riprap, filter aggregate, bedding, or geotextiles.
- B. Prepare subgrade surfaces to be reasonably smooth and free of mounds, dips, or windrows.
- C. Install geotextile, conforming to MDT Standard Specifications Sections 622 and 716 to maintain separation of rock material from underlying soil. Place geotextile so that it conforms closely to the subgrade but is not stretched tight. Secure filter fabric by using anchor trenches, stakes, staples, sewing, or any other means necessary according to manufacturer's recommendations.

### **2.2 PLACING RIPRAP**

- A. Place riprap to its full thickness in one operation to avoid displacing the underlying material. Do not place riprap material by methods that cause segregation or damage to the prepared surface. Place or rearrange individual rocks by mechanical or hand methods to obtain a dense uniform blanket with a reasonably smooth surface.

## **PART 3 - MEASUREMENT AND PAYMENT**

### **3.1 GENERAL**

- A. See Section 01275: Measurement and Payment.

**END OF SECTION**

## **SECTION 02458**

### **STEEL PILING**

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

##### **1.1 DESCRIPTION**

- A. This section covers the supply and driving of Steel Bearing Piles.

#### **PART 2 - MATERIALS**

##### **2.1 STEEL H-PILES**

- A. Steel bearing piles shall conform to the requirements of Section 711.10.1 of the MDT Standard Specifications. Piles shall be 50 ksi steel
- B. The concrete abutments shall be supported with 12 x 53 steel H piles. Piles shall be fitted with steel driving point. The piling system is designed for an allowable design capacity of 115 kips per pile. Piles shall be driven to the recommended minimum ultimate capacity of 230 kips without overstressing the pile.

##### **2.2 EVALUATING PILE DRIVING EQUIPMENT**

- A. The Contractor shall select a driving hammer and cushion combination which is capable of installing the selected piling without overstressing the pile material. The Contractor must retain the services of a geotechnical engineer to perform a wave equation analysis to develop an appropriate set of driving criteria based on the proposed pile hammer. The proposed pile hammer will be subject to approval based on the results of the wave equation analysis. The pile hammer shall be approved prior to shipping hammer to project site.

#### **PART 3 - CONSTRUCTION METHODS**

##### **3.1 DRIVING**

- A. Driving steel bearing piles shall conform to the requirements of Section 559.03.1 of the MDT Standard Specifications.
- B. Pile driving location and alignment shall conform to the requirements of Section 559.03.4 of the MDT Standard Specifications.

##### **3.2 END PROTECTION**

- A. Steel piling end protection shall conform to the requirements of Section 559.02.3 of the MDT Standard Specifications.

### 3.3 SPLICING PILES

- A. Splicing steel bearing piles shall conform to the requirements of Section 559.02.04 of the MDT Standard Specifications.

**END OF SECTION**



## SECTION 02709

### TOPSOIL

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. The WORK under this Section includes providing all labor, materials, tools and equipment necessary for furnishing and placing topsoil at the locations shown on the Drawings.

#### PART 2 - PRODUCTS

##### 2.1 MATERIALS

- A. Topsoil furnished by the CONTRACTOR shall consist of a natural friable surface soil consisting of loam, sandy loam, silty loam, silty clay loam, or clay loam, without admixtures of undesirable subsoil, refuse, or foreign materials. It shall be reasonably free from roots, hard clay, coarse gravel, stones larger than one inch in any dimension, noxious weeds, tall grass, brush, sticks, stubble or other material which would be detrimental to the proper development of vegetative growth. Topsoil shall be obtained from naturally well drained sites where topsoil occurs at least 4-inches deep. Topsoil shall not be obtained from bogs, marshes, or wetland.

- B. Topsoil shall conform to the following grading:

Sieve Sizes	Percentage Passing
1-inch	100%
1/2 inch	95% - 100%
No.4	75% - 100%
No.10	60% - 100%
No.200	10% - 60%

- C. Topsoil shall contain not less than 3%, or more than 10% organic matter, by weight as determined by loss-on-ignition of oven-dried samples in accordance with ASTM D2924. Organic material shall be decomposed and free of wood.
- D. The ENGINEER shall be notified on the location from which the CONTRACTOR proposes to furnish topsoil at least 14 calendar days prior to delivery of topsoil to the Project from that location. The topsoil will be tested by the CONTRACTOR for Ph and sieve gradations and then submitted to the ENGINEER before approval will be granted for its use.

- E. Topsoil sources lacking organic matter may be used if, prior to delivery to the Project, sufficient organic matter in the form of pulverized peat moss or rich organic soil from other sources is thoroughly mixed with the topsoil to provide a product meeting the above requirements.
- F. Organic material for incorporation into topsoil, if required, shall be:
  - 1. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 3/4-inch sieve.
  - 2. Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
  - 3. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
  - 4. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
- G. Provide topsoil to the site that has a Ph range of 6.0 to 7.0 after the incorporation of organic material if applicable.

## **PART 3 - EXECUTION**

### **3.1 CONSTRUCTION**

- A. All areas beyond the sidewalk or roadway shoulder that are disturbed during construction which are not covered with pavement, concrete, or base course, shall be graded to a neat, uniform gradeline and appearance, as determined by the ENGINEER, and covered with a neat uniform, three inch minimum thickness of topsoil and seeded or hydroseeded, unless otherwise indicated in the Contract Documents, or directed by the ENGINEER.
- B. The topsoil shall be evenly spread on the designated areas to a depth, which, after settlement and compaction, shall be three inches, or as indicated in the Contract Documents. Spreading shall not be done when the ground or topsoil is frozen, excessively wet, or otherwise in a condition detrimental to the WORK, as determined by the ENGINEER. Roadway surfaces shall be kept clean during hauling and spreading operations.
- C. After spreading has been completed, large clods, stones larger than one-inch in any dimension, roots stumps, and other litter shall be raked up and removed.
- D. The final grading of the topsoil prior to seeding or hydroseeding shall be to a tolerance that will not permit ponding of water in excess of one inch in depth.

- E. Topsoil Finish Grading:
1. The CONTRACTOR shall provide labor personnel experienced with landscaping work that involves fine grading of topsoil for residential or commercial lawns.
  2. The ENGINEER will determine the location of those areas requiring finish Grading.
  3. The CONTRACTOR shall remove and dispose of all excess materials resulting from the finish grading of the topsoil. The WORK required to remove and dispose of this excess material will be considered incidental to other WORK under the contract.

**END OF SECTION**

## SECTION 02824

### FENCING

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. This work consists of furnishing and constructing fencing consisting of barbed wire or a combination of barbed wire and woven wire (farm fence), and gates as shown on the Drawings.

##### 1.2 SUBMITTALS

- A. The Contractor shall provide Manufacturer's product data on all materials used. This includes, but is not limited to, wire, fasteners, post type and material, post treatment, and installation requirements.

#### PART 2 - MATERIALS

##### 2.1 FENCE MATERIAL

- A. Supply 2-point 12 ½ or 13 ½-gauge, class 1, zinc coated barbed wire meeting ASTM A121 requirements. Barbs shall be spaced at a nominal 4-inches or 5-inches apart.
- B. Supply No. 12 ½ Grade 60, class 1, zinc coated woven wire fence material meeting ASTM A 116 requirements. Provide 6-inch stay spacing.
- C. Use 9-gauge soft, class 1, smooth zinc coated wire.
- D. Use minimum 9-gauge "U" shaped staples, 1-3/4 inches long unless otherwise specified.
- E. Use Minimum 12 1/2 -gauge galvanized tie wire. Commercial galvanized fasteners supplied with the wire may be used if approved by the Engineer.

##### 2.2 POSTS

- A. Provide galvanized or painted metal posts and assemblies meeting ASTM A 702 requirements. Provide 7 foot posts for corner, end, gate, pull, braces and brace rails. Provide 6 foot posts for all line posts.
- B. Provide wooden posts from well seasoned, sound, and straight grained Western Larch, Lodgepole Pine, Ponderosa Pine, or Douglas Fir. All wooden line posts shall be 4-inches in diameter and all corner, brace, pull, end, and gate posts shall be 5-inches in diameter. Taper round posts to be driven from 8-inches to 12-inches up from the bottom to a 1-inch diameter point. Taper the post tops to a round top with a minimum 3-inch diameter for line posts and 4-inch diameter for corner, brace, pull, end, and gate posts. Perform all tapering before treatment.

Provide 8 foot wooden posts for corner, end, gate, pull, braces and brace rails. Provide 7

foot wooden posts for all line posts.

Treat the posts with a minimum 5 percent by weight pentachlorophenol solution or chromated copper arsenate (CCA) Type B or C, or Ammoniacal Copper Arsenate (ACA) conforming to AWWA Standards. Assure the treatment penetrates the wood at least 1/2-inch.

## 2.3 GATES

- A. Furnish gates complete with all necessary hinges, latch, and drop-bar locking device for the type of gate specified. Meet AWS specifications and the contract requirements for all welding. Provide 1.90-inch O.D. tubular steel frame metal gates with wire fabric filler. Metal gates shall be 48-inches tall and 16-feet wide, unless otherwise shown on the drawings, and shall have two upright steel braces at the third points. Fill the metal gates with galvanized wire fabric securely fastened to the top, bottom, and ends of the gate frame. All metal parts including wire fabric must be class 1 galvanized material. If gate is being supplied for a barb wire fence application only, the wire fabric filler may be eliminated from the gate.
- B. At the locations shown on the drawings the contractor shall erect farm fence gates. Farm fence gates shall consist of four (4) strands of barb wire placed between two (2) 3-inch diameter wooden posts. Gate posts shall be placed with a 10-foot opening and the farm fence gate shall be fit to the opening between the gate posts. All materials used shall meet the requirements listed above.

## 2.4 MISCELLANEOUS

- A. Furnish deadman and anchor(s) meeting the requirements shown on the details.
- B. Bolts, nuts, fittings, hinges, and all other metal parts used shall be galvanized in meeting the specified ASTM specifications.

# PART 3 - INSTALLATION

## 3.1 FENCE PREPARATION

- A. Fence preparation consists of removal of vegetative and ground surface obstacles prior to actual fence installation. For fence preparation, clear only those portions of brush, shrubs and vegetation interfering with the fence installation. Cut off, trim or mow interfering vegetation without exposing bare soil in, or adjacent to, streams, stream banks, natural drainages or wetlands. Dispose of the resulting debris, slash, branches, etc. in accordance with contract documents. Avoid or minimize injury or damage to remaining vegetation. Do not grub, excavate, grade, or disturb the soil surface, unless in direct conflict with fence wire.

## 3.2 POSTS AND BRACES

- A. Excavate post holes, footing excavations, and anchors as shown in the drawings. Posts may be driven or excavated and backfilled in six-inch lifts and solidly tamped and compacted, plumb within 1/2-inch at the top, and aligned within one inch of alignment. Embedment shall be sufficient to provide 51 inches of posts exposed with tops in a uniform vertical alignment. Bottoms of posts shall not be cut. Repair or replace all

damaged posts at Contractor expense. Treat cut or trimmed areas on posts and braces with three applications of a copper naphthenate solution containing a minimum of 2 percent copper metal or with chromated copper arsenate (CCA) meeting AWPA M4 requirements.

Securely nail braces to terminal and brace posts.

Dampen holes before placing concrete. Assure the concrete has set before placing and stretching the fence wire or attaching gates to the posts and braces.

### 3.3 FENCE WIRE

- A. After the posts, braces, and footings are set, place the woven wire and/or barbed wire, stretch it tightly, and fasten to the posts. Apply tension following the wire manufacturer's recommendations with a mechanical or other approved wire stretcher. Stretching by motor vehicle will not be permitted.

Fence wire shall be wrapped around terminal posts and fastened to itself with at least four turns. Wire shall be placed on the side of the post opposite the site. U-shaped staples shall be driven diagonally across the wood grain so both points do not enter the same grain. Staples on line posts shall be driven snug to permit movement of wire. Staples on all other posts shall be driven tight without damaging the wire.

Place "deadman" as shown in the drawings at grade depressions, alignment angles, and other places where stresses might pull posts from the ground or out of alignment.

Install one metal line post in each 500-foot wood post fence run and in smaller runs between gate post ends for lightening protection. Install one wood post in each 100-foot metal post fence run.

### 3.4 LOCATION

- A. The fence will be placed on the alignment shown in the drawings.

### 3.5 ENTRANCE GATES

- A. The Contractor shall provide openings for all gates at the size and locations shown on the drawings. The Contractor shall install the gates true and plumb.

## **PART 4 - MEASUREMENT AND PAYMENT**

### 4.1 GENERAL

- A. See Section 01275: Measurement and Payment.

## **END OF SECTION**

# **DIVISION 3**

## **CONCRETE**

## **SECTION 03410**

### **PRESTRESSED CONCRETE BEAMS**

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

##### **1.1 DESCRIPTION**

- A. This section covers the precast, prestressed, concrete Trideck beams, Bulb Tee beams or deck panels. Except as otherwise indicated herein, all work shall conform to the requirements of Section 553 of the MDT Standard Specifications.

The work shall consist of furnishing all plant, labor, materials, and equipment for the design, manufacture, transportation, storage, and erection of beams fabricated from precast, prestressed concrete in accordance with the Plans and this Specification.

This item shall consist of the precast prestressed Trideck beams, Bulb Tee beams or deck panels complete, elastomeric bearing pads, connector bars, shims, and all inserts and connector plates for making the connections between the beams.

Variations in deck width or span lengths from those shown on the drawings shall not be permitted.

##### **1.2 FABRICATION DRAWINGS – COUNTY SUPPLIED ITEM**

#### **PART 2 - MATERIALS**

##### **2.1 CONCRETE – COUNTY SUPPLIED ITEM**

##### **2.2 REINFORCING STEEL (Connector bars) – CONTRACTOR SUPPLIED ITEM**

- A. Bar reinforcing shall conform to the applicable requirements of the MDT Standard Specification Section 555.711.01. Reinforcing steel for prestressed members shall be of the deformed type conforming to the requirements of ASTM Specification A-615, Grade 60.

##### **2.3 PRESTRESSING STEEL – COUNTY SUPPLIED ITEM**

- A. All prestressing steel shall be protected against physical damage and shall be protected from rust and corrosion from time of manufacture until encasement in concrete. The use of strands with kinks, bends, nicks, broken wire, or other defects including loose rust shall not be permitted. All strands shall be carefully and thoroughly cleaned when necessary prior to being enclosed in the forms.

The prestressing steel tendons shall be seven-wire 0.5" or 0.6" dia. round stress-relieved strands. Ultimate strength of prestressing steel  $f_s = 270,000$  psi.



Typical stress-strain curves shall be furnished by the manufacturer of the strand for each individual shipment of prestressing to the fabrication plant. One certified copy of the stress-strain curve shall be delivered to the plant inspector.

## 2.4 PRECAST PRESTRESSED BEAMS AND DECK PANELS – COUNTY SUPPLIED ITEM

- A. Fabrication and construction of precast units shall conform to AASHTO, LRFD Bridge Design Specification (Seventh Edition). Fabrication of metal inserts for connection of precast units shall conform to the requirements of AWS D12.1, “Recommended Practices for Welding Reinforcing Steel, Metal Inserts and Connections in Reinforced Concrete Construction”.

Prestressing shall be performed by the pretension method.

## 2.5 STRUCTURAL STEEL – COUNTY SUPPLIED ITEM

- A. Structural steel shall conform to the applicable requirements of the MDT Standard Specification, Section 711.02.

## 2.6 BEARING PADS – COUNTY SUPPLIED ITEM

- A. Elastomeric bearing pads, fiber reinforced, and steel reinforced bearing pads shall be plain bearing of nominal  $60 \pm 5$  durometer hardness, Shore A, which may be molded individually, cut from previously molded strips or slabs, or extruded and cut to length. the bearing pads shall meet the requirements of Section 14.7.6.2, “Material Properties”, AASHTO LRFD (Seventh Edition) and the elastomer portion of the elastomeric compound shall be 100 percent virgin chlorophene (neoprene).

Preparation of the concrete bearing surface on which elastomeric bearing pads are to be installed shall be furnished according to the MDT Standard Specifications, Section 552.03.12.

## 2.7 NONSHRINK GROUT – CONTRACTOR SUPPLIED ITEM

- A. An approved non-shrink grout shall be used for filling the joints between adjacent precast deck units. The product shall be listed on the MDT QPL. The type of grout shall be as recommended by the supplier of the precast beams. Prior to application, the joints between deck and end wall units shall be thoroughly cleaned out, and all loose material, dirt, debris, dust, etc, shall be removed from surfaces with which the grout will be in contact by washing with water. The grout shall then be applied while the deck joints are still damp or as otherwise recommended by the manufacturer of the material used. Grout placed during cold weather shall follow applicable sections of the cold weather concrete specifications.

## 2.8 DECK SEALER – CONTRACTOR SUPPLIED ITEM

- A. All exposed deck surfaces of the prestressed beams shall be coated with a high performance clear silane penetrating sealer after installation is complete per manufacturer’s recommendations.. Use Hydrozo 100, Baracade Silane 40 IPA, Protectosil CHEM-TRETE 40 VOC, Hydrozo Silane 40 VOC sealer or other approved silane. The product shall be listed on the MDT QPL.

## 2.9 ACCEPTANCE REQUIREMENTS

### A. Workmanship and Tolerances

All tolerances shall be applied with respect to the theoretical positions and dimensions shown on the plans and approved fabrication drawings.

The tolerances listed below represent the total allowable tolerance that will be accepted in the finished product. Tolerances allowed in other manufacturing sequences shall not be accumulated to supersede any individual tolerance. Members having dimensions outside of the tolerance limits shall be subject to rejection. Any acceptance of an individual dimension in excess of the tolerance shall not constitute a waiver of the requirement that the remainder of the work be within the tolerances specified.

Length of beam end to end measured at centerline of beam, top or bottom flange	$\pm \frac{3}{4}"$
Centerline to centerline at end bearing plates	$\frac{1}{8}"$ per 10' but not greater than $\frac{1}{2}"$
Depth of flanges, fillets and web	$\pm \frac{1}{4}"$
Beam and panel ends, deviation from square horizontal or designated skew vertical	$\pm \frac{1}{4}"$ $\frac{1}{8}"$ per foot of beam height or $\frac{1}{2}"$ , whichever is less
Side insert, center to center and center to beam end	$\pm \frac{1}{2}"$
Horizontal alignment (deviation from a parallel to centerline of the member measured on the bed, immediately after release of prestress)	$\frac{1}{8}"$ per 10 ft. of beam length, but not greater than $\frac{1}{2}"$
Camber differential between adjacent beams	$\frac{1}{4}"$ per 10 ft. of span to a maximum of $\frac{3}{4}"$ on adjoining top surfaces
Tendon position	$\pm \frac{1}{4}"$ in center of gravity of strand group and individual tendons
Position of deflection points for deflected strands	$\pm 6"$
Centerline of bearing plates to end of beam	$\pm \frac{1}{4}"$
Bearing plates (deviation from a plane perpendicular to the vertical axis of beam)	$\pm \frac{1}{16}"$

Stirrup bars (longitudinal spacing)

$\pm 1"$

## **PART 3 - CONSTRUCTION METHODS**

### **3.1 STORAGE AND TRANSPORTATION**

- A. Extreme care shall be exercised in handling and moving precast prestressed concrete members. Precast girders and slabs shall be transported in an upright position and the points of support and directions of the reactions with respect to the member shall be approximately the same during transportation and storage as when the member is in its final planned position. If the Contractor deems it expedient to transport or store precast units in other than this position, it shall be done at his own risk after notifying the inspector in writing of his intention to do so.

Care shall be taken during storage, hoisting, and handling of the precast units to prevent cracking or damage.

Lifting of beams and panels shall be done only by use of the lifting eyes. During lifting of the members, spreaders shall be used between slings to eliminate the horizontal component of the lifting force applied to the member, except that when the angle between the sling and the top of the member exceeds 45 degrees, a spreader will not be required.

Prestressed members shall not be moved from the casting yard until the specified ultimate compressive strength (28-day strength) of the concrete has been attained and the plant inspector has been notified of the intent to transport the member.

Units damaged by improper storage or handling shall be replaced by the Contractor at his expense.

### **3.2 INSTALLATION**

- A. The Contractor shall determine the surface condition and camber of each prestressed member and submit a schedule indicating the order and location that each member will be placed to provide the most regular surface condition to the Engineer. Shims equal in dimension to the bearing plate with a new thickness 1/8 inch or greater may be utilized to level and adjust the members such that adjoining top surfaces match within the tolerances specified. All shims shall be galvanized, stainless steel, or equivalent. Methods of loading and jacking adjacent members to meet the tolerances shall be used only with approval of the Engineer.

### **3.3 WELDING**

- A. Unless otherwise specified, welding shall conform to the requirements of the current edition of the AASHTO specifications, American Welding Society specifications, and the plans. Welding electrodes shall conform to the requirements for mild steel, ASTM A-233, AWS A 5.1.

Fabrication of metal units for connection of precast units shall conform to the requirements of AWS D 12.1.

3.4 FINISH

- A. Finishing shall be in accordance with the Plans and MDT Standard Specifications, Section 552.03.12.

**END OF SECTION**

# **APPENDIX A**

## **GEOTECHNICAL EVALUATION**

1. Geotechnical Report

These drawings, referred to as Geotechnical Evaluation (GE) sheets represent the geotechnical report for the project and were prepared by SK Geotechnical Corporation. The purpose of the geotechnical evaluation was to assist Great West Engineering (Great West) in designing foundations, and in preparing plans and special provisions for the project.

In the event the information in the GE sheets conflicts with the information in the plans and special provisions, the plans and special provisions govern.

2. Project

Lewis and Clark County is planning to replace an existing bridge over Sevenmile Creek along Head Lane Road on the northwest side of Helena, Montana. The new bridge will be a single-span, pre-stressed tri-deck beam bridge with an overall span length of 54 feet. The structure will be supported on two end bents supported on driven pile foundations. Additionally, the plans indicate the road profile will be raised up to 5 feet above existing gravels.

3. Site Conditions

The project is located approximately 3 miles west of Helena, Montana in Lewis and Clark County along Head Lane Road. The ground surface at the site is relatively flat, and gently slopes into the Sevenmile Creek Drainage. Surface vegetation consists of grass as well as some larger shrubs and small trees near the bank. A geotechnical reconnaissance by a geotechnical engineer was not included in our scope of services.

A detailed evaluation of the geologic history of the site was not performed, but readily available geologic maps indicate the geology consists of recent alluvium deposits underlain by the Spokane Formation. Because of the existing bridge, previous developments, which have since been removed, demolished, and/or buried, may be situated on the site and are considered existing fill.

4. Field Exploration

**Boring Locations.** The boring locations were selected by our personnel in the office and were staked in the field by our drill crew. The locations of the soil borings are shown on the Boring Location Sketch. The locations were referenced to the centerline of the existing bridge abutments.

**Boring Elevations.** The ground surface elevations at the borings were interpolated from the available contour map provided by Great West. The contour interval was 1 foot, thus, the accuracy should be considered ± 1 foot.

**Boring Procedures.** The borings were performed on the date indicated on the boring logs with a core and auger CME 75HT drill rig. Sampling and testing in the borings was performed in general accordance with the latest version of the following ASTM procedures.

- D 1452 Soil Investigation and Sampling by Auger Borings
- D 1586 Penetration Test and Split-Barrel Sampling of Soils
- D 1587 Thin-walled Tube Sampling of Soils
- D 2487 Classification of Soils for Engineering Purposes
- D 2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)

5. Laboratory Procedures

Laboratory tests were performed on select samples to assist in characterizing the engineering properties of the soils. The laboratory tests were performed in general accordance with the latest version of the following ASTM procedures.

- C 117 Materials finer than 75 micron (No. 200) sieve in mineral aggregate by washing
- C 136 Sieve analysis of fine and coarse aggregates (based on the material sample in the ring-lined samples and bulk samples. Cobbles are not represented.)
- D 1140 Amount of materials in soils finer than 75 micron (No. 200)
- D 2216 Laboratory determination of water content of soil and rock
- D 4318 Liquid limit, plastic limit, and plasticity index of soils

6. Legend

- ASTM American Society for Testing and Materials
- MDTSS Montana Department of Transportation Standard Specifications
- AASHTO American Association of State Highway and Transportation Officials
- OSHA Occupational Safety and Health Administration
- ☛ Standard penetration test boring
- pcf pounds per cubic foot
- psf/ft pounds per square foot per foot of depth
- BPF blows per foot

7. Geotechnical Summary and Conclusions

**Soils and Bedrock.** Two soil borings were performed at the proposed bridge replacement. Boring ST-1 was performed near the existing south bridge abutment, and Boring ST-2 was performed north of the bridge abutment. Boring ST-1 encountered alluvial clayey sand and poorly graded sand to about 17 1/2 feet followed by silty gravel with sand to 21 1/2 feet. Siltite bedrock was then encountered to the boring termination depth of about 39 1/2 feet. Boring ST-2 encountered about 7 1/2 feet of silty clayey sand fill over native sandy silty clay and clayey sand to a depth of about 19 feet. Argillite bedrock was then encountered to a depth of 22 1/2 feet followed by siltite bedrock to the boring termination depth of about 39 feet.

Penetration resistances in the native sands ranged from 4 to 21 BPF, indicating the sands are very loose to medium dense. Penetration resistances in the native gravels was 24 BPF, indicating the gravels are medium dense. Penetration resistances ranged from 50 blows for 6 inches of penetration in the bedrock, indicating the bedrock is medium to moderately hard by bedrock hardness standards.

**Groundwater.** Groundwater was encountered in Boring ST-1 at a depth of 6.8 feet, and in Boring ST-2 at a depth of 6.7 feet, as well. We anticipate groundwater will generally be near and fluctuate with the current level of Sevenmile Creek.

**Conclusions.** To reduce the risk of settlement and to better protect against scour, it is our opinion a driven pile foundation system is the preferred method of support for the new bridge. We recommend using HP 12 x 53 pile. Recommendations related to pile capacities, estimated lengths, and driveability considerations are addressed further in this report.

8. General Recommendations

**Basis of Recommendations.** The analyses and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the sketch. Variations will occur away from the borings, the nature and extent of which do not become evident until additional exploration or construction is conducted. A reevaluation of the recommendations in this report should be made after performing on-site observations during construction to note the characteristics of any variations. The variations may result in additional foundation costs, and it is suggested a contingency be provided for this purpose. It is recommended SK Geotechnical be retained to perform the observation and testing program for the foundation phase of this project. This will allow correlation of the soil conditions encountered during construction to the soil borings, and will provide continuity of professional responsibility.

**Review of Design.** This report is based on the design of the proposed structure as related to us for preparation of this report. It is recommended we be retained to review the geotechnical aspects of the designs and specifications. With the review, we will evaluate whether changes in design have affected the validity of the recommendations, and whether our recommendations have been correctly interpreted and implemented in the design and specifications.

**Groundwater Fluctuations.** Water level observations were obtained in the borings at the times and under the conditions stated on the boring logs. These data were interpreted in the text of this report. The period of observation was relatively short, and fluctuation in the groundwater level may occur due to rainfall, flooding, irrigation, spring thaw, drainage, and other seasonal and annual factors not evident at the time the observations were made. Design drawings and specifications and construction planning should recognize the possibility of fluctuations.

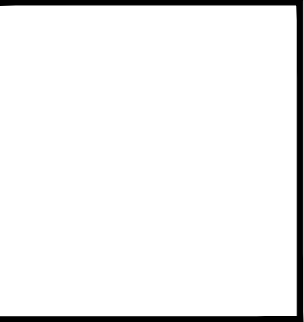
**Use of Report.** This report is for the exclusive use of Great West Engineering and other members of the design team to design the proposed structure and prepare construction documents. In the absence of our written approval, we make no representation and assume no responsibility to other parties regarding this report. The data, analyses and recommendations may not be appropriate for other structures or purposes. We recommend parties contemplating other structures or purposes contact us.

**Level of Care.** Services performed by SK Geotechnical Corporation personnel for this project have been conducted with that level of care and skill ordinarily exercised by members of the profession currently practicing in this area under similar budget and time restraints. No warranty, express or implied, is made.

DRAWN BY: D. Purkett
PREPARED BY: D. Purkett
REVIEWED BY: D.Hutzenbiler
DATE: 10/08/2024
PROJECT NO.: 23 – 4375G
REV:
REV:
REV:

PROJECT:  
Head Lane Bridge over Sevenmile Creek  
3 Miles Northwest of Helena, Montana  
Lewis and Clark County, Montana

PREPARED FOR:  
Great West Engineering  
2501 Belt View Drive  
Helena, Montana 59601  
ATTN: Karl Yakawich, PE

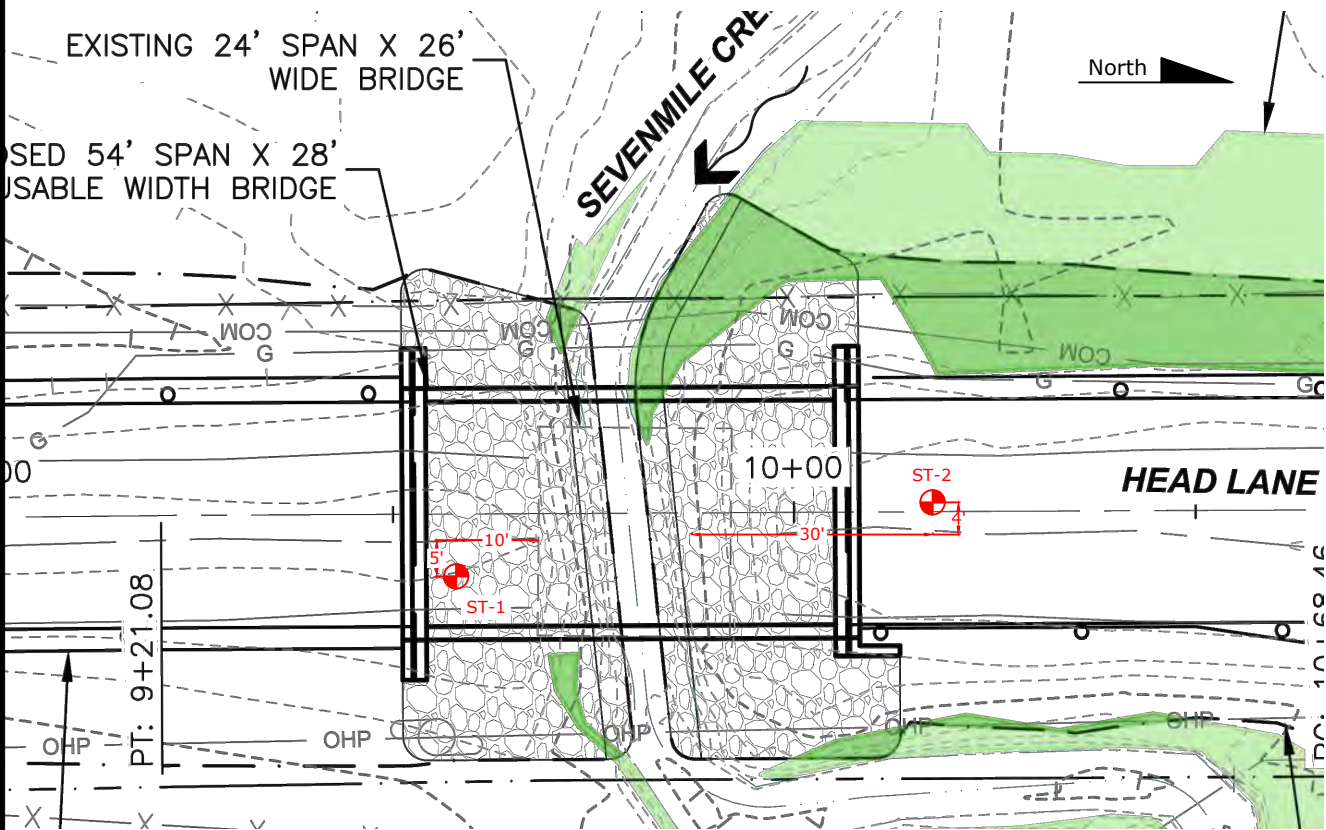




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9. Boring Location Sketch



10. Pile Foundation Recommendations

Type: HP 12x53 Steel Pile, with driving points

Bent	Bottom of Cap Elevation	Pile Cap Embedment (feet)	Top of Pile Elevation	Nominal Pile Capacity (kips)	Factored Resistance (kips)*	Design Tip Elevation	Estimated Length (feet)	Recommended Furnished Length (feet)
North	3932.2	1.5	3933.7	230	115	3910.0	23.7	27
South	3932.2	1.5	3933.7	230	115	3910.0	23.7	27

\*Includes a resistance factor of 0.5, per AASHTO LRFD 2020

Pile lengths are inherently variable and depend on many factors such as soil or bedrock strength, depth to dense stratum, soil disturbance, and time-dependent effects. Pay items should be included for splicing and additional pile length, and a contingency should be provided.

**AASHTO Site Class:** Site Class D, stiff soil profile. We have not included performing site specific seismic hazard evaluation, slope stability, liquefaction, or more detailed seismic hazard analysis in our scope of services.

**Minimum Pile Tip Elevation:** North abutment - 3914.0  
South abutment - 3911.0

**Settlement:** Anticipated settlement of driven pile will be less than 1/2-inch. Settlement of soil behind bridge end will be more, estimate 1 to 2 inches.

**Pile Hammer:** Provide hammer capable of driving pile to minimum nominal (ultimate) capacity without damaging the pile. Submit pile hammer data for wave equation analysis, review, and approval. Per MDTSS 559.03.2

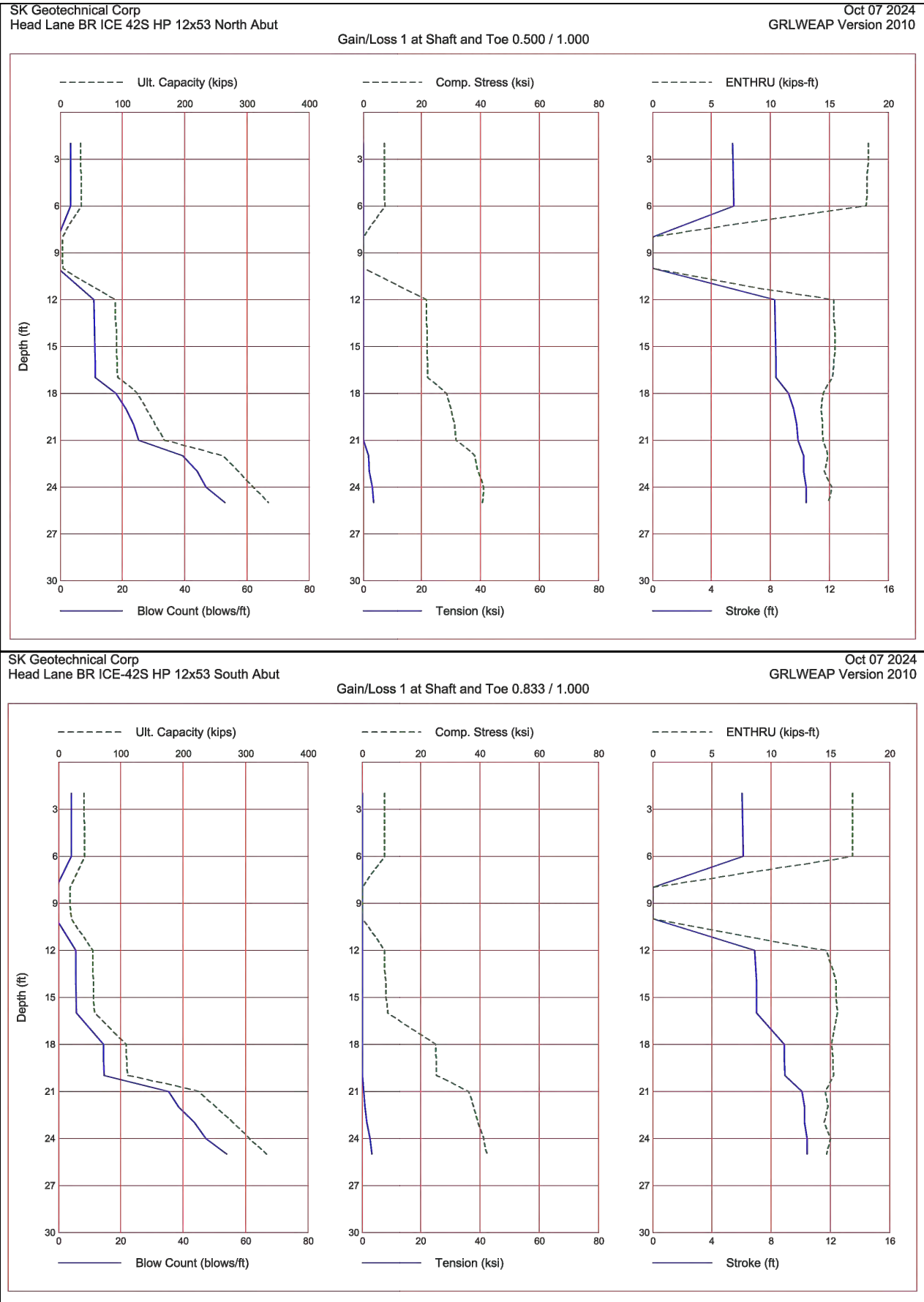
**Minimum Yield Strength:** 50 ksi per MDTSS 711.10.1

**Toe Protection:** Steel driving point.

**Abutment Depth:** Minimum of 5 feet of earth cover behind wall and 2 feet in front of wall.

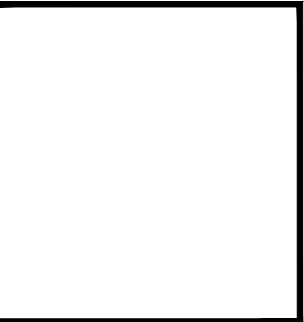
**Concrete:** Type I/II cement

11. GRL Weap Graphs- ICE 42-S Open End Diesel Hammer, 42,000 Foot-Pounds



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PREPARED BY: D. Purkett
REVIEWED BY: D. Hutzenbiller
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PROJECT NO.: 23-4375G
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REV:

PROJECT: Head Lane Bridge over Sevenmile Creek 3 Miles Northwest of Helena, Montana Lewis and Clark County, Montana	PREPARED FOR: Great West Engineering 2501 Belt View Drive Helena, Montana 59601 ATTN: Karl Yakawich, PE
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12. Backfill Material Requirements

Provide Type 1, 2, or 3 Bridge End Backfill in accordance with MDTSS Subsection 701.13. Place in conformance with moisture and density requirements of MDTSS Section 203.

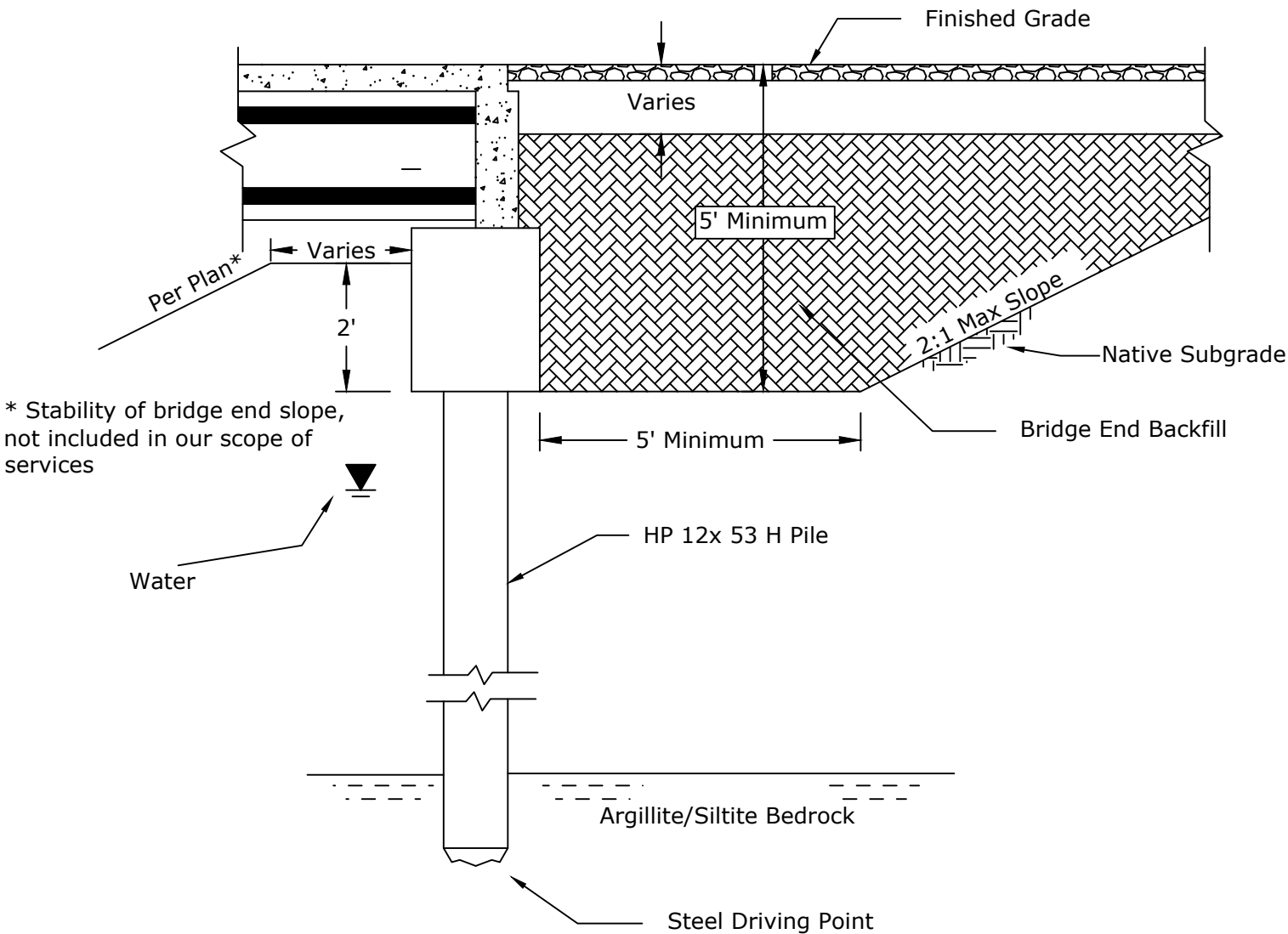
13. Lateral Earth Pressure Parameters

Parameter/Material	Bridge End Backfill
Active Equivalent Fluid Pressure, psf/ft	35
Passive Equivalent Fluid Pressure, psf/ft	n/a
Coefficient of Friction	n/a

14. Construction

- OSHA Soil Type:** Soil Type C
- Dewatering:** Likely for excavations extending near or below current creek level.
- Driving Criteria:** Wave equation analysis, per MDTSS 559.03.3.A.1.
- Observations:** Complete driving record for each pile, including hammer stroke, depth, and blow count.
- Concrete Testing:** Slump, air, and four compressive test cylinders per specification.
- Compaction Testing:** Backfill placed behind bridge ends and approach embankments.
- Cold Weather Construction:**  
No fill or backfill should be placed on frozen soils.  
No frozen soils should be used as fill or backfill.  
Remove all snow or ice from cut and fill areas prior to additional grading.

15. Pile Cap Detail



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PREPARED BY: D. Purkett	REVIEWED BY: D. Hutzenbier	REV:	REV:
		REV:	REV:

PROJECT: Head Lane Bridge over Sevenmile Creek 3 Miles Northwest of Helena, Montana Lewis and Clark County, Montana	PREPARED FOR: Great West Engineering 2501 Belt View Drive Helena, Montana 59601 ATTN: Karl Yakawich, PE
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Standard D 2487  
Classification of Soils for Engineering Purposes  
(Unified Soil Classification System)

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup>				Soil Classification	
				Group Symbol	Group Name <sup>B</sup>
Coarse-Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines <sup>C</sup>	$C_u \geq 4$ and $1 \leq C_c \leq 3$ <sup>E</sup>	GW	Well graded gravel <sup>F</sup>
			$C_u < 4$ and/or $1 > C_c > 3$ <sup>E</sup>	GP	Poorly graded gravel <sup>F</sup>
		Gravels with Fines More than 12% fines <sup>C</sup>	Fines classify as ML or MH	GM	Silty gravel <sup>F, G, H</sup>
		Fines classify as CL or CH	GC	Clayey gravel <sup>F, G, H</sup>	
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines <sup>D</sup>	$C_u \geq 6$ and $1 \leq C_c \leq 3$ <sup>E</sup>	SW	Well graded sand <sup>I</sup>
			$C_u < 6$ and/or $1 > C_c > 3$ <sup>E</sup>	SP	Poorly graded sand <sup>I</sup>
Sands with Fines More than 12% fines <sup>D</sup>		Fines classify as ML or MH	SM	Silty sand <sup>G, H, I</sup>	
	Fines classify as CL or CH	SC	Clayey sand <sup>G, H, I</sup>		
Fine-Grained Soils 50% or more passes the No. 200 sieve	Sils and Clays Liquid Limit less than 50	Inorganic	PI > 7 and plots on or above "A" line <sup>J</sup>	CL	Lean clay <sup>K, L, M</sup>
			PI < 4 or plots below "A" line <sup>J</sup>	ML	Silt <sup>K, L, M</sup>
	Sils and Clays Liquid limit 50 or more	Organic	Liquid limit – oven dried < 0.75	OL	Organic clay <sup>K, L, M, N</sup>
			Liquid limit – not dried		Organic silt <sup>K, L, M, O</sup>
			PI plots on or above "A" line	CH	Fat clay <sup>K, L, M</sup>
			PI plots below "A" line	MH	Elastic silt <sup>K, L, M</sup>
Organic	Liquid limit – oven dried < 0.75	OH	Organic clay <sup>K, L, M, P</sup>		
	Liquid limit – not dried			Organic silt <sup>K, L, M, Q</sup>	
Highly Organic Soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

- <sup>A</sup> Based on the material passing the 3" (75 mm) sieve.

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>C</sup> Gravels with 5 to 12% fines require dual symbols

GW-GM well-graded gravel with silt

GW-GC well-graded gravel with clay

GP-GM poorly graded gravel with silt

GP-GC poorly graded gravel with clay

<sup>D</sup> Sands with 5 to 12% fines require dual symbols.

SW-SC well-graded sand with clay

SP-SM poorly graded sand with silt

SP-SC poorly graded sand with clay

<sup>E</sup>  $C_U = D_{60} / D_{10}$

$C_C = (D_{30})^2 / (D_{10} \times D_{60})$

If soil contains  $\geq 15\%$  sand, add "with sand" to group name.

If fines classify as CL-ML, use dual symbol GC-GM or SC-SM.
- <sup>H</sup> If fines are organic, add "with organic fines" to group name.

<sup>I</sup> If soil contains  $\geq 15\%$  gravel, add "with gravel" to group name.

<sup>J</sup> If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay.

<sup>K</sup> If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel", whichever is predominant.

<sup>L</sup> If soil contains  $\geq 30\%$  plus No. 200 predominantly sand, add "sandy" to group name.

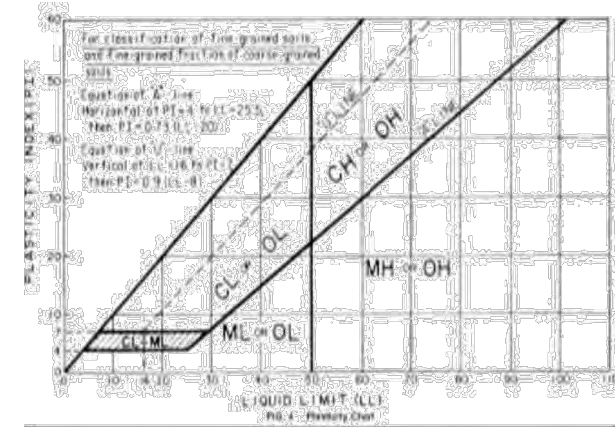
<sup>M</sup> If soil contains  $\geq 30\%$  plus No. 200 predominantly gravel, add "gravelly" to group name.

<sup>N</sup>  $PI \geq 4$  and plots on or above "A" line.

<sup>O</sup>  $PI < 4$  or plots below "A" line.

<sup>P</sup> PI plots on or above "A" line.

<sup>Q</sup> PI plots below "A" line.



Laboratory Tests			
DD	Dry density, pcf	WD	Wet density, pcf
LL	Liquid limit	PL	Plastic limit
P <sub>200</sub>	% passing 200 sieve	MC	Natural moisture content, %
MDD	Maximum dry density (Proctor), pcf	OMC	Optimum moisture content (Proctor), %
qu	Unconfined compressive strength, psf	UCS	Unconfined compressive strength, psi
qp	Pocket penetrometer strength, tsf		

Descriptive Terminology

Particle Size Identification

Boulders ..... over 12"  
Cobbles ..... 3" to 12"  
Gravel  
    coarse ..... 3/4" to 3"  
    fine ..... No. 4 to 3/4"

Sand  
    coarse ..... No. 4 to No. 10  
    medium ..... No. 10 to No. 40  
    fine ..... No. 40 to No. 200  
Silt ..... No. 200 to .005 mm  
Clay ..... less than .005 mm

**Relative Density of Cohesionless Soils**  
very loose ..... 0 to 4 BPF  
loose ..... 5 to 10 BPF  
medium dense ..... 11 to 30 BPF  
dense ..... 31 to 50 BPF  
very dense ..... over 50 BPF

**Consistency of Cohesive Soils**  
very soft ..... 0 to 1 BPF  
soft ..... 2 to 3 BPF  
rather soft ..... 4 to 5 BPF  
medium ..... 6 to 8 BPF  
rather stiff ..... 9 to 12 BPF  
stiff ..... 13 to 16 BPF  
very stiff ..... 17 to 30 BPF  
hard ..... over 30 BPF

**Moisture Content (MC) Description**  
rather dry      MC less than 5%, absence of moisture, dusty  
moist            MC below optimum, but no visible water  
wet              Soil is over optimum MC  
waterbearing   Granular, cohesionless or low plasticity soil with free water, typically near or below groundwater table  
  
very wet        Cohesive soil well over OMC, typically near or below groundwater table

**Drilling Notes**  
Standard penetration test borings were advanced by 3¼" or 4¼" ID hollow-stem augers, unless noted otherwise. Standard penetration test borings are designated by the prefix "ST" (split tube). Hand auger borings were advanced manually with a 2 to 3" diameter auger to the depths indicated. Hand auger borings are indicated by the prefix "HA."

**Sampling.** All samples were taken with the standard 2" OD split-tube sampler, except where noted. TW indicates thin-walled tube sample. CS indicates California tube sample. BS indicates bulk sample.

**BPF.** Numbers indicate blows per foot recorded in standard penetration test, also known as "N" value. The sampler was set 6" into undisturbed soil below the hollow-stem auger. Driving resistances were then counted for second and third 6" increments and added to get BPF. Where they differed significantly, they were separated by backslash (/). In very dense/hard strata, the depth driven in 50 blows is indicated.

**WH.** WH indicates the sampler penetrated soil under weight of hammer and rods alone; driving not required.

**Note.** All tests were run in general accordance with applicable ASTM standards.



Bedrock Descriptors

Order of Descriptors

Bedrock Type  
Color  
Grain Size (if applicable)  
Plasticity  
Stratification/Foliation (as applicable)  
Moisture  
Rock Field Hardness

Example Rock Log

SANDSTONE, gray, fine-grained, thickly bedded, slightly weathered, hard field hardness.

Color

Munsell Color Chart

Grain Size

Coarse-grained ..... Individual grains can be easily distinguished by eye  
Fine-grained ..... Individual grains can be distinguished with difficulty

Plasticity

Nonplastic .....  $PI < 4$  ..... will not ball together  
Slightly plastic .....  $4 \leq PI \leq 7$  ..... somewhat balls together, cannot roll thread to 1/8"  
Low plasticity .....  $PI > 7, LL < 35$  ..... roll thread to 1/8"  
Medium plasticity .....  $PI > 7, 35 \leq LL < 50$  ..... roll thread to 1/8", 1" ribbon  
High plasticity .....  $PI > 7, LL \geq 50$  ..... roll threat to 1/8", 1 1/2" ribbon or larger

Stratum Thickness

Thickly bedded ..... 3'-10'  
Medium bedded ..... 1'-3'  
Thinly bedded ..... 2"-12"  
Very thinly bedded ..... < 2"

Moisture

Dry ..... oven dried  
Rather dry ..... 0%-5%, no apparent moisture, dusty  
Moist ..... under optimum moisture content, visible moisture, but no free water  
Wet ..... over optimum moisture content, visible free water, usually also waterbearing  
Waterbearing ..... below water table, produces free water

Rock Field Hardness

Very soft      Can be carved with knife; can be excavated readily with point of rock hammer; can be scratched readily by fingernail  
  
Soft            Can be grooved or gouged readily by knife or point of rock hammer; can be excavated in fragments from chips to several inches in size by moderate blows of the point of a rock hammer  
  
Medium        Can be grooved or gouged 0.05" deep by firm pressure of knife or rock hammer point; can be excavated in small chips to pieces about 1" maximum size by hard blows of the point of a rock hammer  
  
Moderately hard    Can be scratched with a knife or pick; gouges or grooves to 0.25" can be excavated by hard blow of rock hammer; hand specimen can be detached by moderate blows  
  
Hard           Can be scratched with a knife or sharp pick only with difficulty; hard hammer blows required to detach hand specimen  
  
Very hard      Cannot be scratched with a knife or sharp rock hammer point; breaking of hand specimens requires several hard blows of a rock hammer



2511 Holman Avenue  
P. O. Box 80190  
Billings, MT 59108-0190  
Phone: 406.652.3930  
Fax: 406.652.3944

## LOG OF BORING

PROJECT: 23-4375G GEOTECHNICAL EVALUATION Proposed Head Lane Bridge over Sevenmile Creek Helena, Lewis and Clark County, Montana				BORING: <b>ST-1</b> LOCATION: See Attached Sketch			
DRILLED BY: E. Hollibaugh		METHOD: CME 75HT, Auto, 3 1/4" HSA		DATE: 12/19/23		SCALE: 1" = 4'	
Elev.	Depth	Symbol	Description of Materials	BPF	WL MC	qp (tsf)	Remarks
3934.5	0.0		FILL: Silty Gravel with Sand, fine- to coarse-grained, reddish brown, rather dry.	50-5 1/2",set	3.7		Boring surface elevation measured with commercial grade GNSS system. Frozen to about 1 foot
3932.5	2.0		CLAYEY SAND, low plasticity, trace gravel, brown, moist, loose. (Alluvium)				
		SC		10	8.0		
3927.0	7.5		POORLY GRADED SAND, fine-grained, dark gray, waterbearing, very loose. (Alluvium)				
		SP		4	26.3		
3922.5	12.0		CLAYEY SAND with GRAVEL, low plasticity, fine-to coarse-grained, few clay seams, gray to brown, waterbearing, medium dense. (Alluvium)				
		SC		12	20.7		Added bentonite slurry to control sand heave LL=27, PL=17, PI=10 P <sub>200</sub> = 36.6%
3917.0	17.5		SILTY GRAVEL with SAND, fine- to coarse-grained, grayish brown, waterbearing, medium dense. (Alluvium)				
		GM		24	8.7		
3913.0	21.5		SILTITE, reddish brown, intensely fractured, waterbearing, soft to medium field hardness.				
				50-4",set	9.3		
				50-3"	12.9		

23-4375G

ST-1 page 1 of 2



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## LOG OF BORING

PROJECT: 23-4375G GEOTECHNICAL EVALUATION Proposed Head Lane Bridge over Sevenmile Creek Helena, Lewis and Clark County, Montana				BORING: <b>ST-1 (cont.)</b> LOCATION: See Attached Sketch			
DRILLED BY: E. Hollibaugh		METHOD: CME 75HT, Auto, 3 1/4" HSA		DATE: 12/19/23		SCALE: 1" = 4'	
Elev.	Depth	Symbol	Description of Materials	BPF	WL MC	qp (tsf)	Remarks
3902.5	32.0		Siltite Continued..				
				50-3 1/2",set	24.2		
3895.1	39.4			50-5",set	16.9		
			END OF BORING				
			Water observed at a depth of 6.8' with 9' of hollow-stem auger in the ground.				
			Dry cave-in depth of 6.4' immediately after withdrawal of auger.				
			Boring then backfilled.				

23-4375G

ST-1 page 2 of 2





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LOG OF BORING

PROJECT: 23-4375G GEOTECHNICAL EVALUATION Proposed Head Lane Bridge over Sevenmile Creek Helena, Lewis and Clark County, Montana				BORING: ST-2 LOCATION: See Attached Sketch			
DRILLED BY: E. Hollibaugh		METHOD: CME 75HT, Auto, 3 1/4" HSA		DATE: 12/19/23		SCALE: 1" = 4'	
Elev. 3934.9	Depth 0.0	Symbol	Description of Materials	BPF	WL MC	qp (tsf)	Remarks
			FILL: Silty Clayey Sand, slightly plastic, fine- to coarse-grained, trace gravel, brownish red, rather dry, loose.	50-3½"	4.4		Frozen to about 1 foot
				8	7.1		
3927.4	7.5		SANDY SILTY CLAY, slightly plastic, few organics, sand seams, dark gray to black, very wet, soft. (Alluvium)	2	41.3		
3921.9	13.0	CL ML					
			CLAYEY SAND with GRAVEL, low plasticity, fine-to coarse-grained, seams fine sands, gray waterbearing, medium dense. (Alluvium)	21	27.5		Added bentonite slurry to control sand heave
3915.9	19.0	SC					
			ARGILLITE, dark gray, intensely fractured, waterbearing, medium to moderately hard field hardness.	50-4"	9.9		
3912.4	22.5		SILTITE, reddish brown, intensely fractured, waterbearing, soft to medium field hardness.	50-3"	12.4		
				50-3",set	12.4		



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LOG OF BORING

PROJECT: 23-4375G GEOTECHNICAL EVALUATION Proposed Head Lane Bridge over Sevenmile Creek Helena, Lewis and Clark County, Montana				BORING: ST-2 (cont.) LOCATION: See Attached Sketch			
DRILLED BY: E. Hollibaugh		METHOD: CME 75HT, Auto, 3 1/4" HSA		DATE: 12/19/23		SCALE: 1" = 4'	
Elev. 3902.9	Depth 32.0	Symbol	Description of Materials	BPF	WL MC	qp (tsf)	Remarks
			Siltite Continued..	50-4"	18.9		
3895.7	39.2			50-2",set	26.9		
			END OF BORING				
			Water observed at a depth of 6.6' with 14' of hollow-stem auger in the ground.				
			Water down 7' immediately after withdrawal of auger.				
			Boring then backfilled.				

# **APPENDIX B**

## **PERMITS**

Revised: 5/12/2021 310 Form 270 and Instructions may be downloaded from: <a href="http://dnrc.mt.gov/licenses-and-permits/stream-permitting">http://dnrc.mt.gov/licenses-and-permits/stream-permitting</a>	<b>CD/AGENCY</b>		Application # <u>Click to enter text.</u>		Date Received <u>          </u>	Date <u>          </u>
	<b>USE ONLY</b>		Date Accepted <u>          </u>	Date <u>          </u>	Initials <u>          </u>	Initials <u>          </u>
Date FW: to <u>          </u> FWP <u>          </u> Date <u>          </u>						
<i>This space is for all Department of Transportation and SPA 124 permits (government projects).</i>						
Project Name <u>Click to enter text.</u>						
Control Number <u>Click to enter text.</u> Contract Letting Date <u>          </u> Date <u>          </u>						
MEPA/NEPA Compliance <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, #C5 of this application does not apply.						

## JOINT APPLICATION FOR PROPOSED WORK IN MONTANA'S STREAMS, WETLANDS, FLOODPLAINS & OTHER WATER BODIES

**This is a standardized application to apply for one or all local, state, or federal permits listed below.**

- Refer to instructions to determine which permits apply and submit a signed application to each applicable agency.
- Incomplete applications will result in the delay of the application process.
- The applicant is responsible for obtaining all necessary permits and landowner permission before beginning work.
- **Other laws may apply.**

	<u>PERMIT</u>	<u>AGENCY</u>	<u>FILL OUT SECTIONS</u>	<u>FEE</u>
	310 Permit	Local Conservation District	A - E and G	Inquire locally
X	SPA 124 Permit	Department of Fish, Wildlife and Parks	A - E and G	No fee
X	318 Authorization 401 Certification	Department of Environmental Quality	A - E and G	\$250 (318); \$400 - \$20,000 (401)
	Navigable Rivers Land Use License, Lease, or Easement	Department of Natural Resources and Conservation, Trust Lands Management Division	A - E and G	\$50, plus additional fee
X	Section 404 Permit, Section 10 Permit	U. S. Army Corps of Engineers (USACE)	A - G F1-8	Varies (\$0 - \$100)
X	Floodplain Permit	Local Floodplain Administrator	A - G	Varies by city/county (\$25 - \$500+)

### A. APPLICANT INFORMATION

**APPLICANT NAME** (person responsible for project): Lewis & Clark County (Dan Karlin)

Has the landowner consented to this project? ☒ Yes ☐ No

Mailing Address: 3402 Cooney Drive, Helena, MT 59602

Physical Address: 3402 Cooney Drive, Helena, MT 59602

Cellphone: (406) 447 - 8034 Home Phone: N/A E-Mail: dkarlin@lccountymt.gov

**LANDOWNER NAME** (if different from applicant): Same as Applicant

Mailing Address:

Physical Address: Click here to enter physical address or N/A.

Cellphone: Click here to enter or N/A. Home Phone: Click here to enter or N/A. E-Mail:

**CONTRACTOR/COMPANY NAME** (if applicable): TBD

**PRIMARY CONTACT NAME:**

Mailing Address: Click here to enter name or N/A.

Physical Address: Click here to enter name or N/A.

Cellphone:            Home Phone:            E-Mail:

## B. PROJECT SITE INFORMATION

1. NAME OF **STREAM** or **WATER BODY** at project location Sevenmile Creek  
Project Address/Location: Head Lane (~1.4 miles north along Head Ln from the Country Club Avenue intersection)  
Nearest Town Helena, MT  
County Lewis and Clark Geocode: 05-1887-10-4-01-01-0000  
NE 1/4 of the SE 1/4 of, Section 10 Township 10 North, Range 4 West  
Latitude 46°38'12.42" North Longitude 112°5'4.04" West Refer to section B1 in the instructions.
2. Is the proposed activity within **SAGE GROUSE** areas designated as general, connected, or core habitat?  
Yes ☐ No ☒ Attach consultation letter if required. Refer to section B2 in the instructions.
3. Is this a **STATE NAVIGABLE WATERWAY**? The state owns beds of certain navigable waterways.  
Yes ☐ No ☒ If yes, send a copy of this application to the appropriate DNRC land office. Refer to section B3 in the instructions.
4. **WHAT IS THE CURRENT CONDITION** of the proposed project site? Describe the existing bank condition, bank slope, height, nearby structures, and wetlands. What vegetation is present? Refer to section B4 in the instructions.

Head Lane is a County maintained gravel local road and is a primary connector from the City of Helena north to the Scratchgravel Hills. The Head Lane Bridge is a single-span timber bridge on a concrete column foundation system. The current bridge was constructed in 1982. The bridge has a total span of 24.5 feet, a total clear span of 23.5 feet, a total width of 24.5 feet, and a useable width of 24 feet. The clear opening between the bottom of the stringers and the streambed is approximately 4.5 feet. The bridge is located on a long tangent section of Head Lane, which is oriented south to north in this section. The roadway at the bridge has been slightly built up through the floodplain and is relatively flat at the bridge but increases in grade to the north. Adjacent property to the west of the bridge consists of property controlled by Fort Harrison – which is home to the Montana National Guard and the VA Medical Center. To the east of the bridge is largely undeveloped private lands, with active agricultural operations. The nearest residence to the bridge is located about 1300 feet northwest.

The Sevenmile Creek channel base width is approximately 6 feet in the vicinity of the bridge, with a bankfull width of 9 feet and 6 foot bankfull benches. The channel in the bridge vicinity is in fair condition, with relatively steep 1:1 banks present. Banks are vegetated with a combination of riparian thickets and saplings intermixed with emergent grasses and sedges. No bank or abutment protection is currently in place on the bridge. The alignment of the stream is poor, and the channel does a hard 90 degree bend downstream of the bridge and runs along the road fill slope. It is possible that the stream was historically rerouted at some point in the past to facilitate a “square” stream crossing at the Head Lane crossing.

Wetlands occur on all four quadrants of the bridge/creek crossing, with the most expansive wetlands occurring north of Sevenmile Creek on either side of Head Lane. South of Sevenmile Creek, wetlands are generally limited to a relatively narrow fringe along the steep banks (see the Aquatic Resources Map in Aquatic Resources Report attached).

## C. PROPOSED PROJECT OR ACTIVITY INFORMATION

1. **TYPE OF PROJECT** (check all that apply) Refer to section C1 in the instructions.
  - ☐ **Agricultural and Irrigation Projects:** Diversions, Headgates, Flumes, Riparian fencing, Ditches, etc.
  - ☐ **Buildings/Structures:** Accessory Structures, Manufactured Homes, Residential or Commercial Buildings, etc.
  - ☐ **Channel/Bank Projects:** Stabilization, Restoration, Alteration, Dredging, Fish Habitat, Vegetation or Tree Removal, or any other work that modifies existing channels or banks.
  - ☒ **Crossings/Roads:** Bridge, Culvert, Fords, Road Work, Temporary Access, or any project that crosses over or under a stream or channel.
  - ☐ **Mining Projects:** All mining related activity, including; Placer Mining, Aggregate Mining, etc.
  - ☐ **Recreation related Projects:** Boat Ramps, Docks, Marinas, etc.
  - ☐ **Other Projects:** Cistern, Debris Removal, Excavation/Pit/Pond, Placement of Fill, drilling or directional boring, Utilities, Wetland Alteration. Other project type not listed here \_\_\_\_\_

2. **IS THIS APPLICATION FOR** an annual maintenance permit? ☐ Yes ☒ No  
(If yes attach annual plan of operation to this application) – Refer to section C2 in the instructions.

**3. WHY IS THIS PROJECT NECESSARY? STATE THE PURPOSE OR GOAL** of the proposed project. Refer to section C3 in the instructions.

The deck and substructure are in satisfactory condition while the superstructure is in poor condition. The superstructure, consisting of timber stringers, appears minimally treated and it is apparent that the timber materials are near the end of their useful life. The lack of wingwalls on the bridge means the bridge ends are projecting into the road fill creating issues with increased deterioration due to moist conditions and contact with earthen material, which is apparent on the exterior stringers. There are several stringers with large open checks. Additionally, one stringer has failed in the wheel line of the bridge.

The Head Lane Bridge is currently posted at 5-tons for all traffic. This posting currently restricts county road maintenance vehicles, concrete trucks, agricultural equipment, fire trucks and other heavy vehicles from crossing the bridge safely. Due to the existing bridge condition, public traffic exceeding the posted limits must detour approximately 8.7 miles (bridge end to bridge end). The Sufficiency Rating (SR) is below 50, which according to MDT, constitutes considering full replacement of the bridge. If the bridge is not replaced, the superstructure deterioration will create a greater safety concern and additional liability for the County. A new structure at this location will ensure residents, business owners and employees, military personnel, agricultural users, and recreational users will have continued access to the area for years to come.

**4. PROVIDE A BRIEF DESCRIPTION** of the proposed project plan and how it will be accomplished. Refer to section C4 in the instructions.

The preferred alternative for the Head Lane Bridge is full bridge replacement with a new, 54-foot single span, prestressed, precast, concrete tri-deck beam superstructure with a driven pile foundation (see Bridge Plans Attached). The replacement structure will be located in essentially the same location as the existing bridge. The useable bridge width will be 28 feet and the overall length will be increased to 54 feet. The increased width will allow for safe two-way travel and meet anticipated future ADT requirements for this roadway. The increased span will allow for the proper placement of riprap and environmentally friendly spill-through channel configuration. All bridge work will be completed with only minimal interference to the stream. Work in the streambed vicinity is anticipated to include removing the existing abutments and keying in new riprap. The roadway approaches will be vertically aligned to provide a smooth transition to the new bridge deck elevation which is projected to be approximately 5 feet above the existing roadway. Due to this considerable road raising and the design speed of the road, which is currently 45 MPH, roadwork is projected to extend 350 feet north of the bridge and 250 feet south of the bridge. The roadway width at the bridge will be 28 feet with a crown to provide adequate drainage. The new roadway improvements are anticipated to be located within the County right-of-way. During construction, the roadway at the bridge will be closed and traffic will be redirected to a marked detour route around the project site. The construction of the bridge is anticipated to occur over a period of 75 to 90 days.

**5. WHAT OTHER ALTERNATIVES were considered to accomplish the stated purpose of the project?** Why was the proposed alternative selected? Refer to section C5 in the instructions.

Several bridge alternatives were explored including; no action, repair/rehabilitation and replacement options. As the original structure requires complete replacement of the timber superstructure (and subsequently deck) and other safety improvements, it is in the best interest of the County to replace the bridge rather than conduct repairs or rehabilitation. A new structure would have a minimum useful life of 75 years and require substantially less maintenance than the existing structure, which is comprised largely of timber components. Precast, prestressed concrete and steel girder bridges with concrete decks were found to be the most feasible superstructure options. Driven pile and concrete spread footing foundations were explored as substructure alternatives. The analysis determined that precast, prestressed concrete superstructure with driven pile bents as the most economical and technically feasible option. The selected alternative will provide a number of benefits, specifically: ease of maintenance, increased hydraulic capacity, ability to carry legal vehicular loads and enhanced public safety.

**6. NATURAL RESOURCE BENEFITS OR POTENTIAL IMPACTS. Please complete the information below to the best of your ability.**

\* Explain any temporary or permanent changes in erosion, sedimentation, turbidity, or increases of potential contaminants. What will be done to minimize those impacts?

Contract documents for construction will require contractors to follow the requirements of the permits, any specified construction window, and adhere to Best Management Practices (BMP's) during construction to protect natural stream and aquatic resources. One of the most important environmental considerations for this project includes minimizing the effects of

sedimentation in the creek from construction. Unfortunately, temporary adverse effects to water quality cannot be completely avoided. However, in a project such as this, additional steps will be taken to keep silt and sedimentation in the creek to a minimum.

A wetland delineation was performed in October of 2023 in order to map and mitigate (as necessary) potential wetland impacts. The Contractor will be required, to the extent feasible, to avoid wetlands in and around the project site that may be affected by construction activities. The Contract will require the Contractor to minimize wetland disturbance wherever possible and implement BMPs to avoid impacts such as material inputs and sedimentation to wetlands or Sevenmile Creek. These BMPs include straw wattles and silt fences. Equipment will be operated as much as possible from the road grade and top of bank.

- Will the project cause temporary or permanent impacts to fish and/or aquatic habitat? What will be done to protect the fisheries?

Sevenmile Creek is classified as R3UBG (Riverine, Upper Perennial, Unconsolidated Bottom, Intermittently Exposed) by the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) map.

Silt and debris in Sevenmile Creek could adversely affect fish habitat; therefore, a bridge replacement/rehabilitation alternative that impacts the streambed and banks as little as possible is desirable. Some bridge designs can constrict the natural channel flow of the creek, increase erosion and affect bedload movement both upstream and downstream of the structure. Therefore, single-span bridges with natural stream bottoms are desirable for waterways such as Sevenmile Creek.

The contractor will erect silt fence (or other FWP preferred methods) along the stream banks to prevent silt and construction debris from entering the stream. Care will be taken when removing the existing bridge in order to minimize any adverse effects to the streambed and banks. Disturbed areas will be seeded to prevent erosion and promote re-vegetation. Alternatives such as single-span bridges, open bottom culverts, or other configurations with allowances that hold native bed material will help reduce streambed impacts. To minimize silt and erosion problems typically associated with bridge construction, construction will likely be scheduled during the late summer or early fall when flows are minimal and minimize disturbance on any native fish and aquatic organism species.

- What will be done to minimize temporary or permanent impacts to the floodplain, wetlands, or riparian habitat?

Construction disturbances will be concentrated within the immediate area of the existing bridges and road alignment. Efforts will be made to preserve vegetation that does not need to be disturbed for project implementation. Best management practices (including equipment inspection and/or cleaning) will be used to prevent the introduction or spread of weeds during construction. The same best management practices listed in Section C6 will also be used to prevent disturbance to floodplains, wetlands and riparian habitat.

The replacement of the Head Lane Bridge will require the acquisition of a County Floodplain Permit. The purpose of the floodplain permit, administered by the County Floodplain Administrator with assistance from the Montana DNRC, is to prevent new construction from adversely affecting the 50 and 100-year floodplains in the County. The permit states that the replacement structure may not raise or lower the 100-year floodplain elevation more than six inches upstream or downstream of the bridge. Thus, the acquisition of a County Floodplain Permit serves as mitigation for this issue.

- What efforts will be made to decrease flooding potential upstream and downstream of project?

The new bridge structure will reduce the amount of scour and erosion occurring on site, reducing potential flood damage while improving hydraulic efficiency. Current design standards will be met with the proposed bridge structure. There are no impacts anticipated to the bank and flow conditions upstream and downstream of the site,



- Explain potential temporary or permanent changes to the water flow or to the bed and banks of the waterbody. What will be done to minimize those changes?

The existing structure has a shorter span and tall abutments that encroach on the existing stream channel. The new structure will convey the upstream channel geometry through the bridge opening, providing for more natural flow and less erosion.

- How will existing vegetation be protected and its removal minimized? Explain how the site will be revegetated. Include weed control plans.

Efforts will be made to preserve vegetation that does not need to be disturbed for project implementation. Best management practices (including equipment inspection and/or cleaning) will be used to prevent the introduction or spread of weeds during construction. Disturbance areas, including road fill, will be reseeded with native grass mixture to promote revegetation.

## D. CONSTRUCTION DETAILS

**1. PROPOSED CONSTRUCTION DATES.** Include a project timeline. Start date 8/15/2025  
Finish date 11/15/2025 How long will it take to complete the project? 60 days Is any portion of the work already completed? ☐ Yes ☒ No (If yes, describe previously completed work.)  
Refer to section D1 in the instructions.

**2. PROJECT DIMENSIONS.** Describe length and width of the project. Refer to section D2 in the instructions.

The replacement structure will be located in essentially the same location as the existing bridge. The useable bridge width will be 28 feet and the overall length will be increased to 54 feet. The roadway approaches will be vertically aligned to provide a smooth transition to the new bridge deck elevation which is projected to be approximately 5 feet above the existing roadway. Due to this considerable road raising and the design speed of the road which is currently 45 MPH, roadwork is projected to extend 260 feet north of the bridge and 360 feet south of the bridge. Additionally, due to the design speed of the roadway and to increase life of the bridge, an asphalt overlay of the bridge deck and approaches will occur. The roadway width at the bridge will be 28 feet with a crown to provide adequate drainage. The new roadway improvements are anticipated to be located within the County right-of-way

Construction will take place during low flow, and the new bridge will be installed on a similar alignment as the existing structure.

**3. EQUIPMENT.** List all equipment that will be used for this project. How will the equipment be used on the bank and/or in the water? Note: All equipment used in the water must be clean, drained and dry. Refer to section D3 in the instructions.

Standard road and bridge equipment (excavators, road graders, dump trucks, concrete trucks, cranes, rollers, pumps) will likely be utilized to complete the new bridge. Equipment entry into the creek will be minimized, and equipment will work from the road approaches when possible. Work will be completed during low flow in the creek.

Will equipment from out of state be used? YES ☐ NO ☐ UNKNOWN ☒

Will the equipment cross west over the continental divide to the project site? YES ☐ NO ☐ UNKNOWN ☒

Will equipment enter the Flathead Basin? YES ☐ NO ☐ UNKNOWN ☒

**4. MATERIALS.** Provide the total quantity and source of materials proposed to be used or removed. Note: This may be modified during the permitting process therefore it is **recommended you do not purchase materials until all permits are issued.** List soil/fill type, cubic yards and source, culvert size, rip-rap size, any other materials to be used or removed on the project. Refer to section D4 in the instructions.

Mobilization	LS	1
Removal of Existing Bridge	LS	1
Imported Structural Backfill	CY	50
Cast In Place Concrete	CY	37
Install Prestressed Concrete Trideck Beams	LS	1
Supply Prestressed Concrete Trideck Beams	LS	1
Furnish Steel H Piles	LF	270
Drive Steel H Piles	LF	237
Random Riprap, MDT Class II	CY	325
Roadway Excavation and Embankment	CY	2157
1" Minus Crushed Aggregate	CY	330
W830 Bridge Barrier Rail	LF	114
Box Beam Guardrail	LF	324
Guardrail Approach Section	EA	4
Box Beam Terminal Section	EA	4

Type 3 Object Markers and Posts	EA	4
Soil Erosion and Pollution Control	LS	1
Seed and Mulch	LS	1

\*The above quantities are all of the materials to be used for this project, and not Bank to Bank or OHWM related.

## E. REQUIRED ATTACHMENTS

- PLANS AND/OR DRAWINGS** of the proposed project. **Include:**
  - Plan/Aerial view
  - an elevation or cross section view
  - dimensions of the project (height, width, depth in feet)
  - location of storage or stockpile materials dimensions and location of fill or excavation sites
  - drainage facilities
  - location of existing/proposed structures, such as buildings, utilities, roads, or bridges
  - an arrow indicating north
  - Site photos
- ATTACH A VICINITY MAP OR A SKETCH** which includes: The water body where the project is located, roads, tributaries, other landmarks. Place an "X" on the project location. Provide written directions to the site. This is a plan view (looking at the project from above).
- ATTACH ANNUAL PLAN OF OPERATION** if requesting a **Maintenance 310 Permit**.
- ATTACH AQUATIC RESOURCE MAP.** Document the location and boundary of all waters of the U.S. in the project vicinity, including wetlands and other special aquatic sites. Show the location of the ordinary high-water mark of streams or waterbodies. **if requesting a Section 404 or Section 10 Permit.** Ordinary high-water mark delineation included on plan or drawings and/or a separate wetland delineation.

## F. ADDITIONAL INFORMATION FOR U.S. ARMY CORPS OF ENGINEERS (USACE) SECTION 404, SECTION 10 AND FLOODPLAIN PERMITS.

*Section F should only be filled out by those needing Section 404, Section 10, and/or Floodplain permits. Applicants applying for Section 404 and/or Section 10 permits complete F 1- 8. Applicants applying for Floodplain permits, complete all of Section F. Refer to section F in the instructions.*

FOR QUESTIONS RELATING TO SECTION F, QUESTIONS 1-8 PLEASE CONTACT THE USACE BY TELEPHONE AT 406-441-1375 OR BY E-MAIL [MONTANA.REG@USACE.ARMY.MIL](mailto:MONTANA.REG@USACE.ARMY.MIL).

1. Identify the specific **Nationwide Permit(s)** that you want to use to authorize the proposed activity. Refer to section F1 in the instructions.

### Nationwide Permit 14 – Linear Transportation Projects Permit

2. Provide the **quantity of materials** proposed to be used in waters of the United States. What is the length and width (or square footage or acreage) of impacts that are occurring within waters of the United States? How many cubic yards of fill material will be placed below the ordinary high-water mark, in a wetland, stream, or other waters of the United States? Note: Delineations are required of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Refer to section F2 in the instructions.

A wetland boundary has been established based on an October 2023 wetland delineation performed by a Great West ecologist, trained in identifying wetland species. From this assessment the anticipated impacts to wetlands are **0.048 acres**. Stream impacts, mainly the result of riprap placement, is expected to be approximately **361.64 SF or 0.0083 Acres**. The quantity of MDT Class II riprap below the OHWM is 39 CY.

3. How will the proposed project avoid or minimize **impacts to waters of the United States**? Attach additional sheets if necessary. Refer to section F3 in the instructions.

The contractor will erect silt fence (or other FWP preferred methods) along the stream banks to prevent silt and construction debris from entering the stream. Care will be taken when removing the existing bridge in order to minimize any adverse effects to the streambed and banks. Equipment will be operated as much as possible from the road grade and top of bank. To minimize silt and erosion problems typically associated with bridge construction, construction will likely be scheduled during the late summer or early fall when flows are minimal. Riprap is required to protect the new abutments. The extents of riprap are the minimum amount necessary to protect the abutments. The new structure will convey the upstream channel geometry through the bridge opening, providing for more natural flow and less erosion.

4. Will the project impact greater than 0.10-acre of wetland and/or more than 300 linear feet of stream or other waters? If yes, describe how the applicant is going to **compensate (mitigation bank, in-lieu fee program, or permittee responsible)** for these unavoidable impacts to waters of the United States. Refer to section F4 in the instructions.

Both wetland and stream impacts are below the threshold of mitigation.

5. Is the activity proposed within any component of the **National Wild and Scenic River System**, or a river that has been officially designated by Congress as a “**study river**”? Refer to section F5 in the instructions.

☐ Yes ☒ No

6. Does this activity require permission from the USACE because it will alter or temporarily or permanently occupy or use a **USACE authorized civil works project? (Examples include USACE owned levees, Fort Peck Dam, and others)**? Refer to section F6 in the instructions.

☐ Yes ☒ No

7. List the **ENDANGERED AND THREATENED SPECIES** and **CRITICAL HABITAT(s)** that might be present in the project location. Refer to section F7 in the instructions.

Based on review of USFWS IPaC database, Grizzly Bear (Threatened), Canada Lynx (Threatened), North American Wolverine (Threatened) and Monarch Butterfly (Proposed Threatened) have the potential to occur at the proposed site location. There are no critical habitats at this proposed site location.

8. List any **HISTORIC PROPERTY(S)** that are listed, determined to be eligible or are potentially eligible (over 50 years old) for listing on the National Register of Historic Places.” Refer to section F8 in the instructions.

As a general rule, all bridges that are 50 years or older are considered eligible for listing on the National Register of Historic Places. The Head Lane Bridge was originally constructed in 1982, and therefore, does qualify for the National Register.

As the existing bridge does not meet the criteria for the National Register of Historic Places, historical mitigation efforts are not necessary. Other sites noted by SHPO in the area include buildings at the historic Head Ranch, which are located 1500 feet south of the bridge site. These are not anticipated to be impacted during construction. There are other potential sites listed in the SHPO report, but specific locations of these are not currently known. Should the proposed impacts be in conflict with any historic sites, proper historic mitigation efforts will be performed and inventoried as required.

9. List **all applicable local, state, and federal** permits and indicate whether they were issued, waived, denied, or pending. Note: All required local, state, and federal permits, or proof of waiver must be issued prior to the issuance of a floodplain permit. Refer to section F9 in the instructions.

SPA 124 Permit – pending

Lewis and Clark County Floodplain Permit – pending

310 Permit - pending

318 Authorization - pending

10. List the **NAMES AND ADDRESSES OF LANDOWNERS** adjacent to the project site. This includes properties adjacent to and across from the project site. (Some floodplain communities require certified adjoining landowner lists).

NAME OF **Adjacent Landowner**:

U.S. Department of the Army – Seattle District, 2150 Williams St, Helena, MT 59602

Flying E Ranch LLC, 3939 Head Lane, Helena, MT 59602-9628

11. **Floodplain Map Number** **FIRM Panel 30049C2139E** Refer to section F11 in the instructions.

12. Does this project comply with **local planning or zoning regulations**? Refer to section F12 in the instructions.

☒ Yes   ☐ No

## G. SIGNATURES/AUTHORIZATIONS

Some agencies require original signatures. **After completing the form**, make the required number of copies and **then sign each copy**. Send the copies with original signatures and additional information required directly to each applicable agency.

The statements contained in this application are true and correct. The applicant possess' the authority to undertake the work described herein or is acting as the duly authorized agent of the landowner. The applicant understands that the granting of a permit does not include landowner permission to access land or construct a project. Inspections of the project site after notice by inspection authorities are hereby authorized. Refer to section G in the instructions.

APPLICANT (Person responsible for project):

Print Name: Lewis & Clark County



11/1/24

Signature of Applicant

Date

LANDOWNER:

Print Name: Lewis & Clark County



11/1/24

Signature of Landowner

Date

\*CONTRACTOR'S PRIMARY CONTACT (if applicable):

Print Name: Lewis & Clark County

\_\_\_\_\_  
Signature of Contractor/Agent

\_\_\_\_\_  
Date

\*Contact agency to determine if contractor signature is required.



**DEPARTMENT OF THE ARMY**  
U.S. ARMY CORPS OF ENGINEERS, OMAHA DISTRICT  
MONTANA REGULATORY OFFICE  
100 NEILL AVENUE  
HELENA, MONTANA 59601-3329

November 25, 2024

SUBJECT: Nationwide Permit Verification; Lewis & Clark County (Great West Engineering) - Bridge Replacement - Seven Mile Creek (Lewis & Clark County), File Number NWO-2022-00290-MT

Lewis & Clark County  
Attn: Dan Karlin  
3402 Cooney Drive  
Helena, MT 59602

Dear Mr. Karlin:

This letter is in response to your November 4, 2024, Pre-construction Notification (PCN), requesting Department of the Army (DA) Nationwide Permit (NWP) verification for the above-referenced project. The project site is located at Latitude 46.636783°, Longitude -112.084456°, on Sevenmile Creek, within Section 10, Township 10 N, Range 4 W, Helena, Lewis and Clark County, Montana.

**Description of activity requiring verification:**

1. Permanently impact 0.0083 acre below the ordinary highwater mark to place 39 cubic yards of MDT Class II riprap for the installation of a new bridge.
2. Permanently impact 0.048 acre of wetland for the installation of a new bridge.
3. The work will be completed as detailed in the joint application received on November 4, 2024, submitted by Great West Engineering on behalf of the applicant.

The U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged and fill material into waters of the United States under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) and structures or work in, over, and under navigable waters of the United States under Section 10 of the Rivers and Harbors Act (RHA) (33 U.S.C. 403). The Corps' regulations are published in the Code of Federal Regulations at 33 CFR parts 320 through 332. NWPs are defined in the Federal Register published on December 27, 2021 (86 FR 73522) and January 13, 2021 (86 FR 2744). Based on a review of the information you furnished and available to us, we have determined the above referenced work requires DA authorization under Section 404 of the CWA.

Based upon the information you provided, we hereby verify that the work described above, is authorized by NWP 14 Linear Transportation Projects. Please note that

deviations from the original plans and specifications of your project could require additional authorization from this office. The NWP(s) and associated Regional and General Conditions are enclosed and can be accessed on our website at: <https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Montana>. Failure to comply with the General and Regional Conditions of this NWP, or the project-specific special conditions of this authorization, may result in the suspension or revocation of your authorization, and you may be subject to appropriate enforcement action. You shall comply with all terms and conditions associated with this NWP.

The Montana Department of Environmental Quality has provided the enclosed CWA Section 401 water quality certification for this NWP which includes General Conditions, all of which must be complied with for that certification to remain valid. This does not eliminate the need to obtain other permits that may be required by that agency.

Unless this NWP is suspended, modified, or revoked, it is valid until **March 14, 2026**. It is incumbent upon you to remain informed of changes to this NWP. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization as per 33 CFR 330.6(b). Any project specific conditions listed in this letter continue to remain in effect after the NWP verification expires unless the district engineer removes those conditions.

To assist in your compliance with NWP General Condition 30, enclosed is a "Compliance Certification" form, which shall be signed and returned within 30 days of completion of the project, including any required mitigation. Your signature on this form certifies that you have completed the work in accordance with the terms and conditions of the NWP. Activities completed under the authorization of an NWP which was in effect at the time the activity was completed continue to be authorized by that NWP.

Authorizations under this NWP do not relieve permittees from obtaining permits or other authorizations from any required federal, state, or local agency.

If you have any questions, please contact Kayla Urbanowski via email at [kayla.urbanowski@usace.army.mil](mailto:kayla.urbanowski@usace.army.mil), by mail at the address above, or by phone at 406-441-1375 x1364.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Kayla U', followed by a horizontal flourish line.

Kayla Urbanowski  
Regulatory Project Manager



3 Enclosures

1. Compliance Certification
2. NWP 14 Linear Transportation Projects Fact Sheet with Regional Conditions
3. CWA Section 401 Water Quality Certification

cc via email: Casey Bereszniwicz (cbereszniwicz@greatwesteng.com)

**COMPLIANCE CERTIFICATION**

**USACE File Number:** NWO-2022-00290-MT

**Permit Type:** NWP 14 Linear Transportation Projects

**Name of Permittee:** Lewis & Clark County- Attn: Dan Karlin

**County:** Lewis and Clark County, Montana

**Date of Issuance:** November 25, 2024

**Project Manager:** Kayla Urbanowski

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to [Montana.Reg@usace.army.mil](mailto:Montana.Reg@usace.army.mil) or the following address:

**CORPS OF ENGINEERS, OMAHA DISTRICT  
MONTANA REGULATORY OFFICE  
100 NEILL AVENUE  
HELENA, MONTANA 59601-3329**

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the conditions of this permit, you are subject to permit suspension, modification, or revocation.

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I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

\_\_\_\_\_  
Signature of Permittee

\_\_\_\_\_  
Date



December 14, 2020

Sage L. Joyce  
Montana State Program Manager  
U.S. Army Corps of Engineers, Omaha District  
10 West 15th Street, Suite 2200  
Helena, Montana 59626-9705

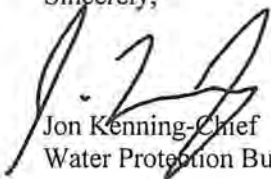
Re: Montana Department of Environmental Quality 401 Water Quality Certification of Proposed Army Corps of Engineers 2020 Nationwide Permits, General Conditions, and Regional Conditions

Dear Ms. Joyce:

The attachment to this letter (Parts A-E) constitutes the Montana Department of Environmental Quality's position on the subject Nationwide Permits. It should not result in an undue burden to either of our agencies, while still providing adequate water quality protection. Also, please find enclosed the Montana Department of Environmental Quality's December 5, 2000, guidelines for materials for stream bank stabilization as referenced in the attached certification.

We look forward to continuing the close cooperation and coordination between our two agencies. Please do not hesitate to contact myself (444-0240 JKenning@mt.gov) or Keenan Storrar (444-2734 Keenan.Storrar@mt.gov) if you have any questions.

Sincerely,



Jon Kenning-Chief  
Water Protection Bureau

Cc: Toney Ott - U.S. EPA, 8WD-CWS w/ Attachments

## **Water Quality Certification in Accordance With Section 401 of the Clean Water Act for the 2020 Nationwide Permits in Montana**

40 CFR § 121.7(d)(2)(i) Montana Department of Environmental Quality (DEQ) does not have project specific information that is required in the 'JOINT APPLICATION FOR PROPOSED WORK IN MONTANA'S STREAMS, WETLANDS, FLOODPLAINS, AND OTHER WATER BODIES'. Without this information, DEQ cannot identify specific waterways impacted by the project including wetlands and tributary streams or confirm the status of waterways impacted by the project.

### **A. Certification with General Conditions**

DEQ is granting Section 401 Water Quality Certification (certification) with the General Conditions listed in Section E for Nationwide Permits 1-11, 14-20, 22-28, 30-36, 38, 41, 46-49.<sup>1</sup>

### **B. Special Conditions for Specific Nationwide Permits**

1) DEQ is granting certification of Nationwide Permit #12 [Oil or Natural Gas Pipeline Activities], Nationwide Permit C (#pending) [Electric Utility Line and Telecommunications Activities], and Nationwide Permit D (#pending) [Utility Line Activities for Water and Other Substances] for projects that do not a) disturb the bed and banks of waterbodies or b) cause a violation of short-term water quality standards for total suspended sediment and turbidity resulting from stream-related construction activities because a static or vibratory plow is used and/or Horizontal Directional Drilling technology is implemented. DEQ denies certification for all other projects that qualify under this Nationwide Permit.<sup>1</sup>

2) DEQ is granting certification of Nationwide Permit #13 [Bank Stabilization], Nationwide Permit #21 [Surface Coal Mining Activities], Nationwide Permit #29 [Residential Developments], Nationwide Permit #37 [Emergency Watershed Protection and Rehabilitation], Nationwide Permit #39 [Commercial and Institutional Developments], Nationwide Permit #40 [Agricultural Activities], Nationwide Permit #42 [Recreational Facilities], Nationwide Permit #43 [Stormwater Management Facilities], Nationwide Permit #44 [Mining Activities], Nationwide Permit #45 [Repair of Uplands Damaged by Discrete Events], and Nationwide Permit #50 [Underground Coal Mining Activities] for all projects equal to or less than 300 linear feet.<sup>1</sup>

### **C. Waiver**

Nationwide Permit #54 [Living Shorelines], Nationwide Permit A (#pending) [Seaweed Mariculture Activities], Nationwide Permit B (#pending) [Finfish Mariculture Activities] are waived as these Nationwide Permits only apply to coastal shorelines and the Great Lakes.

### **D. Denial**

Nationwide Permit #51 [Land Based Renewable Energy Generation Facilities], Nationwide Permit #52 [Water Based Energy Renewable Energy Generation Facilities], Nationwide #53 [Removal of Low Head Dams], Nationwide Permit E (#pending) [Water Reclamation and Reuse Facilities] are denied for the five year cycle.<sup>1</sup>

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<sup>1</sup> MCA 75-5 et seq.; MCA 75-7 et seq.; MCA 87-5 et. seq.; ARM 17.30 et. seq.

## E. General Conditions for Nationwide Permits

The following general conditions apply to all certified Nationwide Permits as provided in A and B above:

- 1) DEQ Water Protection Bureau – Discharge Permitting Program must be notified by the permittee for all activities requiring USACE pre-construction notification (PCN)\*\*. Notification shall be at least 30 days prior to the commencement of the activity and include (a) the permittee name and contact information, (b) the project name, (c) the Nationwide Permit(s) used for the project, (d) the Township, Range and Section, (e) the project or regulated activity location in decimal latitude and longitude to the millionth degree (six significant figures to the right of the decimal point) (f) the volume of the discharge, (g) the biological, chemical, physical, and radiological characteristics of the discharge, (h) a description of the existing environment at the site of the discharge, (i) the size of the area affected, (j) the location or locations at which the discharge may enter state waters. Notification of must be submitted by mail to DEQ or electronically through DEQ's Fees, Applications, and Compliance Tracking System (FACTS) website at: <http://deq.mt.gov/Public/FACTS><sup>2,3</sup> **\*\*For all projects where a Federal Agency is an applicant, that agency must provide notification and submit a Joint Application to DEQ, regardless of USACE pre-construction notification requirements.**<sup>3</sup>
- 2) This certification does not authorize the placement or construction of septic/leach systems or other sewage treatment facilities in wetlands.<sup>3</sup>
- 3) This certification does not authorize construction of dams, except for aquatic restoration projects and temporary dams associated with construction activity.<sup>3</sup>
- 4) This certification requires that materials used in stream bank or shore stabilization projects adhere to the Montana Department of Environmental Quality's December 5, 2000 guidelines for materials for stream bank stabilization. Tires may not be used to stabilize any banks in state waters.<sup>3</sup>
- 5) This certification requires that all equipment be inspected for oil, gas, diesel, anti-freeze, hydraulic fluid and other petroleum leaks. Equipment cannot continue operating in or near the water if a leak is discovered. All such leaks will be properly repaired prior to equipment being allowed on the project site. Leaks that occur after the equipment is moved to the project site will be fixed that same day or the next day or be removed from the project area. If equipment is to be operated in or near water, a spill containment kit shall be available at the project site and DEQ shall be notified of spills.<sup>3</sup>
- 6) This certification requires that all permittees shall, to the maximum extent practicable, incorporate and construct design features that eliminate bridge deck run-off containing sediment, salt, or other pollutants from discharging directly into state water. To the extent practicable, bridge deck run-off, should be directed to a detention basin of unspecified size prior to continuing into state waters.<sup>3</sup>
- 7) This certification requires that riprap projects, to the extent practicable, avoid the use of geotextile fabric as riprap bedding material. To the extent practicable, riprap voids shall incorporate approximately 30-50% fines/soil and dormant plant material and/or root-stock.<sup>3</sup>

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<sup>2</sup> During FACTS development phase, notifications shall be sent to: [DEQWPBPublicComments@mt.gov](mailto:DEQWPBPublicComments@mt.gov)

<sup>3</sup> MCA 75-5 et seq.; MCA 75-7 et seq.; MCA 87-5 et. seq.; ARM 17.30 et. seq.

8) The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over a river is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/2-acre.<sup>4</sup>

9) Restored riparian areas shall be stable and should consist of native species.<sup>4</sup>

#### **F. Reopener Clause**

DEQ reserves the right to add or alter terms and conditions as appropriate to carry out its responsibilities with respect to water quality throughout the five year Nationwide Permit Cycle.<sup>4</sup>

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<sup>4</sup> MCA 75-5 et seq.; MCA 75-7 et seq.; MCA 87-5 et. seq.; ARM 17.30 et. seq.



## **Policy on Streambank Stabilization**

This policy outlines the guidelines for approved materials to be used for streambank stabilization in Montana. This policy and a draft Environment Assessment were provided to the public for comment via public notice MT-00-10 issued September 18, 2000. Comments were accepted until October 17, 2000. The draft Environmental Assessment is adopted as the final Environmental Assessment with the Responses to Comments incorporated.

Signed into policy 12/05/00 by Bonnie Lovelace, Chief, Water Protection Bureau and 12/06/00 by Jan Sensibaugh, Administrator, Permitting & Compliance Division.

### **GUIDELINES FOR MATERIALS FOR STREAMBANK STABILIZATION**

The following guidelines represent the efforts of a work group composed of Conservation District representatives, natural resource consultants, environmental interests, and state and federal regulatory agencies. They are suggested by the Montana Department of Environmental Quality and not necessarily endorsed by all the work group members. These guidelines are only for use in areas where the use of high-density, angular rock is not practicable. (The term "practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes [40 CFR 230.3(q)]). Sandstone or broken concrete may be acceptable alternatives to high-density, angular rock in certain situations, although local regulation may prohibit their use. The use of any river training device/structure may directly or cumulatively alter the ecology of Montana rivers and streams. Cumulative impact considerations may preclude the use of any river training device.

Bank stabilization projects are sometimes authorized under the following jurisdictions: Local Conservation District - Natural Streambed & Land Conservation Act (31O); Montana Department of Fish Wildlife and Parks - Stream Protection Act (SPA 124); County Floodplain Administrator - Floodplain Permit; U.S. Army Corps of Engineers - Section 404/10 Permit; Montana Department of Environmental Quality - 75-5-318, MCA Authorization; Montana Department of Natural Resources and Conservation - Navigable Rivers Land Use License/Easement.

The following optional design concepts should be considered in conjunction with the guidelines to minimize environmental/aesthetic concerns:

- Utilize rock only in the lower\* portion or toe of the riprap with woody structures/features, biodegradable fabric, etc. in the upper\* portions.  
\* The elevation at which the mean annual flow occurs is the division between "upper" and "lower."
- Incorporate soil in the upper portions of the project with appropriate woody (usually willow) plantings as near average water elevations as possible and herbaceous plantings elsewhere.
- Provide a temporary or permanent buffer strip (streamside area where protection promotes growth and sustenance of woody vegetation) along the project length to provide for vegetation stability where grazing or recreational use may impact plant growth.
- Preferably, plantings should be on slopes of 3:1 or flatter and irrigated, if possible.

(Note: Numerous documents with more detailed information are available. Contact the Natural Resource Conservation Service or the Department of Natural Resources and Conservation for their "Stream Project Manual.")

## COMPLIANCE CERTIFICATION

Project: (Please attach copy of the completed "Joint Application for Proposed Work in Montana's Streams, Wetlands, Floodplains, and Other Water Bodies.")

Upon completion of project activity, sign this certificate and return it to the following address:

Montana Department of Environmental Quality  
Permitting & Compliance Division/Water Protection Bureau  
Box 200901  
Helena, MT 59620-0901

Please answer the following questions:

1. What is the source of the concrete rubble?
2. What is the type of concrete rubble (curb/gutter, foundation, etc.)?
3. What was the cost of the rubble?  
(The recipient of the rubble cannot be compensated for accepting the rubble without a landfill license.)

I hereby certify that the project work performed is in compliance with all applicable permits and in compliance with the "Guidelines for Materials for Streambank Stabilization."

---

Signature of Project Owner

Date

I hereby certify that I provided the concrete rubble used in the project and that I did not compensate the owner for accepting the rubble.

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Signature of Concrete Rubble Provider

Date





US Army Corps  
of Engineers®  
Omaha District

## **Nationwide Permit Fact Sheet** **Montana Regulatory Office**

Effective Date: February 25, 2022

Expiration Date: March 14, 2026

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### **Nationwide Permit 14 (NWP 14) – Linear Transportation Projects**

Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, driveways, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge of dredged or fill material cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge of dredged or fill material cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

**Notification:** The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge of dredged or fill material in a special aquatic site, including wetlands. (See general condition 32.)

(Authorities: Sections 10 and 404)

**Note 1:** For linear transportation projects crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Linear transportation projects must comply with 33 CFR 330.6(d).

**Note 2:** Some discharges of dredged or fill material for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

**Note 3:** For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

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### **2021 Nationwide Permit General Conditions**

**Note:** To qualify for NWP authorization, the prospective permittee must comply with the following

U.S. ARMY CORPS OF ENGINEERS – Omaha District |  
<https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Montana/>

general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of [33 CFR 330.1 through 330.6](#) apply to every NWP authorization. Note especially [33 CFR 330.5](#) relating to the modification, suspension, or revocation of any NWP authorization.

**1. Navigation.** (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work here in authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

**2. Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

**3. Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

**4. Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

**5. Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

**6. Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

**7. Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

**8. Adverse Effects from Impoundments.** If the activity creates an impoundment of water, adverse

effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

**9. Management of Water Flows.** To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

**10. Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

**11. Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

**12. Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

**13. Removal of Temporary Structures and Fills.** Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

**14. Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

**15. Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

**16. Wild and Scenic Rivers.** (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

**17. Tribal Rights.** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

**18. Endangered Species.** (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See [50 CFR 402.02](#) for the definition of “effects of the action” for the purposes of ESA section 7 consultation, as well as [50 CFR 402.17](#), which provides further explanation under ESA section 7 regarding “activities that are reasonably certain to occur” and “consequences caused by the proposed action.”

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see [33 CFR 330.4\(f\)\(1\)](#)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or

degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their worldwide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa/> respectively.

**19. Migratory Birds and Bald and Golden Eagles.** The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

**20. Historic Properties.** (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see [33 CFR 330.4\(g\)\(1\)](#)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriated documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see [33 CFR 330.4\(g\)](#)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include



background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see [36 CFR 800.3\(a\)](#)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under [36 CFR 800.2\(c\)](#) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C.306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

**21. Discovery of Previously Unknown Remains and Artifacts.** Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

**22. Designated Critical Resource Waters.** Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

**23. Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see [33 CFR 332.3\(e\)\(3\)](#)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of

minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of [33 CFR part 332](#).

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see [33 CFR 332.3\(b\)\(2\) and \(3\)](#)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see [33 CFR 330.1\(e\)\(3\)](#)). (See also [33 CFR 332.3\(f\)](#).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of [33 CFR 332.4\(c\)\(2\) through \(14\)](#) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see [33 CFR 332.3\(k\)\(3\)](#)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see [33 CFR 332.4\(c\)\(1\)\(ii\)](#)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see [33 CFR 332.4\(c\)\(1\)\(ii\)](#)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at [33 CFR 332.3\(b\)](#). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be



environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

**24. Safety of Impoundment Structures.** To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

**25. Water Quality.** (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see [33 CFR 330.4\(c\)](#)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

**26. Coastal Zone Management.** In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see [33 CFR 330.4\(d\)](#)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

**27. Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see [33 CFR 330.4\(e\)](#)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

**28. Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

**29. Transfer of Nationwide Permit Verifications.** If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

\_\_\_\_\_  
(Transferee)

\_\_\_\_\_  
(Date)

**30. Compliance Certification.** Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by [33 CFR 332.3\(l\)\(3\)](#) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

**31. Activities Affecting Structures or Works Built by the United States.** If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph(b)(10) of general condition 32. An activity that requires [section 408 permission](#) and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

**32. Pre-Construction Notification.** (a) *Timing.* Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer’s receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is “no effect” on listed species or “no potential to cause effects” on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see [33 CFR 330.4\(f\)](#)) and/or section 106 of the National Historic Preservation Act (see [33 CFR 330.4\(g\)](#)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee’s right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in [33 CFR 330.5\(d\)\(2\)](#).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4)(i) A description of the proposed activity; the activity’s purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear

feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification:* The nationwide permit pre-construction notification form ([Form ENG 6082](#)) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination:* (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity’s compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity’s adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity’s compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies’ concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at [33 CFR 330.5](#).

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the [Magnuson-Stevens Fishery Conservation and Management Act](#).

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.



## 2021 District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at [33 CFR 332.3\(k\)](#). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration

of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

## **2021 Further Information**

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

## Nationwide Permit Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term “discharge” means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water’s surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria ([36 CFR part 60](#)).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that



depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at [33 CFR part 329](#).

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

**Preservation:** The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

**Re-establishment:** The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

**Rehabilitation:** The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

**Restoration:** The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

**Riffle and pool complex:** Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

**Riparian areas:** Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

**Shellfish seeding:** The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

**Single and complete linear project:** A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

**Single and complete non-linear project:** For non-linear projects, the term “single and complete project” is defined at [33 CFR 330.2\(i\)](https://www.ecfr.gov/current/title-33/chapter-I/subchapter-B/part-330/subpart-2/section-330.2(i)) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in an NWP authorization.

**Stormwater management:** Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

**Stormwater management facilities:** Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

**Stream bed:** The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

**Stream channelization:** The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

**Structure:** An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

**Tidal wetland:** A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

**Tribal lands:** Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

**Tribal rights:** Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

**Vegetated shallows:** Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

**Waterbody:** For purposes of the NWPs, a waterbody is a "water of the United States." If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see [33 CFR 328.4\(c\)\(2\)](https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Montana/))



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Omaha District

## 2021 Nationwide Permits Regional Conditions Omaha District State of Montana

The following Nationwide Permit (NWP) regional conditions will be used in the State of Montana. The issuance of the NWPs was announced in the January 13, 2021, issue of the Federal Register (86 FR 2744) and December 27, 2021, issue of the Federal Register (86 FR 73522). Regional conditions are placed on NWPs to ensure projects result in no more than minimal adverse impacts to the aquatic environment and to address local resources concerns.

### **A. PRECONSTRUCTION NOTIFICATION REQUIREMENTS APPLICABLE TO ALL NWPs OR LIMITED REVOCATION OF NWPs**

For all NWPs, permittees must notify the Corps in accordance with General Condition 32 Preconstruction Notification (PCN) requirements for regulated activities located within or comprised of the following:

#### **1. Wetlands Classified as Peatlands:**

For purposes of this condition, peatlands are permanently or seasonally waterlogged areas with a surface accumulation of peat (organic matter) 30 centimeters (12 inches) or more thick. Under cool, anaerobic, and acidic conditions, the rate of organic matter accumulation exceeds organic decay. Any peat-covered areas, including fens, bogs, and muskegs, are all peatlands.

- a. PCN required for NWP 3, 5, 6, 20, 27, 32, and 38.
- b. All NWPs not listed above are revoked for use in peatlands.

#### **2. Waters Adjacent to Natural Springs:**

PCN required for any regulated activity located within 100 feet of the water source in natural spring areas. For the purpose of this condition, a spring water source is defined as any location where there is flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source of waters. Springs do not include drain tile outlets.

#### **3. Bank Stabilization Activities:**

PCN required for any regulated activity that involves bank stabilization impacting an area greater than 1/10 of an acre below the Ordinary High-Water Mark or includes features that extend out from the existing bank line greater than 25% of the bankfull channel width.

#### **4. Stream Channelization and Relocation Projects:**

PCN required for any regulated activity that involves permanent stream channelization or relocation of an existing perennial stream channel. For the purpose of this condition, stream channelization is defined as "the manipulation of a stream's course, condition, capacity or location that causes more than minimal interruption of normal stream processes." Examples of stream channelization include, but are not limited to straightening, relocating, shifting, tubing (i.e., placement of a culvert in an open channel for construction purposes).

#### **5. Tribal Reservations and Tribal Trust Lands:**

PCN and coordination with the Tribal Authority required for all NWPs requested by applicants other than the Tribal Authority for use within the reservation boundaries and tribal trust lands of Indian Country in Montana.

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**6. Specific Waterways:**

PCN required for any regulated activity within the following waterways and their impoundments:

- |  |                     |
|--|---------------------|
| - Bitterroot River                                   | - Milk River        |
| - Clark Fork River (tributary to the Columbia River) | - Missouri River    |
| - Flathead Lake                                      | - Yellowstone River |
| - Flathead River                                     |                     |

**B. BEST MANAGEMENT PRACTICES**

**Required Best Management Practices:**

In addition to the Regional Conditions above, additional required best management practices apply to NWP's within the Omaha District. These are available at:

<https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Nation-Wide-Permit-Information/>

**1. Suitable Material:**

Permittees are reminded of General Condition No. 6 which prohibits use of unsuitable material. A list of materials prohibited or restricted as fill material in waters of the United States can be found at:

<http://www.nwo.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/2034/Article/12320/prohibited-restricted-materials.aspx>

**2. Bank and Shoreline Stabilization Activities:**

The following additional requirements apply to all bank and shoreline stabilization:

- a. The revetment must conform to the existing bankline, unless such work is determined by the Corps to be biologically or geomorphically beneficial for the system; must not extend above the top of the bank (i.e., no new levees); and the slopes must be flatter than the angle of repose for the selected revetment material (i.e., rock riprap normally needs to be placed on a slope flatter than 1.5 Horizontal to 1 Vertical (1.5H:1V).
- b. The revetment must not wholly or partially block flows from entering a side channel or an overflow channel.

**3. Placement and Removal of Temporary Fills:**

Temporary fills in wetlands must be placed on a horizontal marker layer, such as fabric or certified weed-free straw, to delineate the pre-project ground elevation and facilitate complete fill removal and site restoration.

**4. Erosion and Sediment Control Blanket:**

All erosion control blanket or fabric used in or adjacent to waters of the United States must be comprised of degradable material to ensure decomposition. Do not use material that includes stabilized netting or stabilized open mesh, as these products take a long time to degrade, and they can trap small animals, birds, amphibians and fish. This prohibition also applies to mesh materials used for wattles, rolled materials, and bank wraps. Erosion control blanket or fabrics that break down within 24 months are acceptable. Non-degradable blankets or fabric may be allowed on a case-specific basis if it will be buried beneath riprap or structures and it is not likely to be exposed. Non-degradable blanket or fabric that becomes exposed within waters of the United States must be removed.

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**5. NWP-3 – Maintenance and NWP-45 – Repair of Uplands Damaged by Discrete Events**  
**Definition of “Discrete Event”:**

The definition of “discrete event,” as used in these permits, includes, but is not limited to, unexpected natural and human-caused events such as fires, storms, landslides, avalanches, earthquakes, accidents, debris or ice jams, and floods. For the purpose of the NWPs, discrete event floods are stream flow events that overflow the OHWM.

**6. Outfall Structures and Associated Intake Structures:**

Inlet screens for intakes in the Yellowstone River or the Missouri River in Blaine, Chouteau, Custer, Dawson, Fergus, Garfield, McCone, Petroleum, Phillips, Prairie, Richland, Roosevelt, Valley and Wibaux Counties must be installed on all pump intakes with a screen mesh opening size no larger than 1/4 inch. Water intake velocities must not exceed 1/2 foot per second through the mesh. Intakes must be located in the deepest water available and be elevated off the bottom of the riverbed.

**7. Culvert Countersink Depth:**

For all NWPs in jurisdictional streams and a stable stream bed, culvert stream crossings shall be installed with the culvert invert set below the natural stream channel flow line according to the table below. This regional condition does not apply in instances where the lowering of the culvert invert would allow a headcut to migrate upstream of the project into an unaffected stream reach or result in lowering the elevation of the stream reach.

<b>Culvert Type</b>	<b>Drainage Area</b>	<b>Minimum Distance Culvert Invert Shall Be Lowered Below Stream Flow Line</b>
All culvert types	< 100 acres	Not required
Pipe diameter <8.0 ft	100 to 640 acres	1/2-ft
Pipe diameter <8.0 ft	>640 acres	1-ft
Pipe diameter > 8.0 ft	All drainage sizes	20% of pipe diameter
Box culvert	All drainage sizes	1-ft

- a. The stream flow line shall be defined as the longitudinal average of the low flow stream channel.
- b. The slope of the culvert should be parallel to the slope of the stream flow line.
- c. The culvert invert depression depth shall be measured at the culvert inlet for culverts installed at a slope less than the slope of the stream flow line.
- d. Riprap inlet and outlet protection shall be placed to match the height of the culvert invert.



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Omaha District - State of Montana**

**C. REGIONAL CONDITIONS APPLICABLE ONLY TO THE SPECIAL RIVER MANAGEMENT ZONE OF THE UPPER YELLOWSTONE RIVER**

Special River Management Zone (SRMZ) of the Upper Yellowstone River is defined within the Special Area Management Plan (SAMP) as the 48-mile reach of the upper Yellowstone River (River Miles 531.8 to 483.6) from upstream of Emigrant River downstream to a few miles below the Shields River and Mission Creek confluences (0.7 mile downstream from the bridge at the community of Springdale). It includes secondary channels, side channels, and the main (primary) channels, and adjacent wetlands within the channel migration zone (CMZ) or, in absence of a CMZ, within areas flooded by the 100-year discharge. The SMRZ is located entirely within Park County, Montana.

In addition to the Regional Conditions and Best Management Practices above, additional Regional Conditions apply within the SRMZ described above. These are available at:

<https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Nation-Wide-Permit-Information/>

**1. Notification – All NWP's:**

Permittees must notify the Corps in accordance with General Condition 32 (PCN) for any regulated activity in waters of the United States within the SRMZ. This includes all activities within the Yellowstone River, the portions of tributaries within the SRMZ, and wetlands within the SRMZ.

**2. Emergency Work:**

Activities requiring a Department of the Army (DA) Permit that is necessary to prevent imminent loss of life or property is allowed within the SRMZ. Contact the Corps as soon as reasonably possible by telephone at 406-441-1375 and/or by Fax at 406-441-1380. Contact may also be made in person or by sending an e-mail to: [Montana.Reg@usace.army.mil](mailto:Montana.Reg@usace.army.mil). All such work will be fully reviewed under the SAMP provisions.

**3. NWP's Revoked for Use:**

The following NWP's have been revoked for all waters and activities within the 48-mile SRMZ:

**NWP 17 - Hydropower Projects**

**NWP 21 - Surface Coal Mining Activities**

**NWP 29 - Residential Developments**

**NWP 39 - Commercial and Institutional Developments**

**NWP 42 - Recreational Facilities**

**NWP 43 - Stormwater Management Facilities**

**NWP 44 - Mining Activities**

**NWP 44 - Mining Activities**

**NWP 45 - Repair of Uplands Damaged by Discrete Events**

**NWP 49 - Coal Remining Activities**

**NWP 50 - Underground Coal Mining Activities**

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**4. Activities Requiring Individual Permit Review:**

The following project activities are not authorized under an NWP in the SRMZ. These projects typically have more than minimal adverse impacts and must be reviewed under standard (individual) permit procedures.

- a. New dams, new diversions, and/or new impoundments for any purpose.
- b. Construction of ponds and new artificial stream channels, unless they are necessary and appropriate elements of a stream or wetland restoration project.
- c. Hydraulic dredging and mining and mechanical excavation to obtain aggregate, fill material, or minerals, including gold. Processing of material for the purpose of obtaining select minerals or a specific gradation of material, where only a portion of the sediment or alluvium is removed and the remainder returned to the SRMZ, is not allowed under an NWP in the SRMZ.

**5. Bank Stabilization Activities - All NWPs:**

For bank stabilization activities associated with any NWP, including maintenance of bank stabilization, the following Regional Conditions apply:

For bank revetments such as riprap, root wads, bioengineered revetments, or combination revetments, a through e apply:

- a. Revetments must conform to the existing eroded or eroding bankline, unless such work is determined by the Corps to be biologically or geomorphically beneficial for the upper Yellowstone River.
- b. Revetment slopes must be flatter than the angle of repose for the selected revetment material. For example, rock riprap normally needs to be placed on a slope flatter than 1.5H:1V.
- c. Revetments are only permissible under NWPs if they are parallel to and near the lateral boundaries of the SRMZ.
- d. Revetments must not extend above the elevation of the adjacent natural bank height (i.e., no new levees).
- e. Revetments must not wholly or partially block flows from entering a side channel, secondary channel, or an overflow channel, unless such work is determined by the Corps to be necessary for maintaining or restoring the geomorphic integrity of the upper Yellowstone River.

For bank stabilization structures that project into the stream, such as weirs, barbs, vanes, or hard points, f. through k. apply:

- f. Bank stabilization structures must not wholly or partially block flows from entering a side channel, secondary channel, or an overflow channel, unless such work is determined by the Corps to be necessary for maintaining or restoring the geomorphic integrity of the upper Yellowstone River.
- g. Bank stabilization structures are only permissible under NWPs if they result in an effective bankline that is approximately parallel to and near the lateral boundaries of the CMZ.



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- h. Bank stabilization structures must be keyed into the bank far enough to prevent flanking.
- i. Bank stabilization structures cannot occupy more than 10% of the bankfull channel area. Bankfull channel area pertains to the specific primary or secondary channel in question and is not the aggregate channel area of all primary and secondary channels in multi-channel reaches.
- j. Bank stabilization structures must not present hazardous obstructions to boating, floating, or other river uses.
- k. Bank stabilization structures that are low in elevation, project only a short distance out from the bank, and angle upstream are more likely to qualify for NWP's because they typically result in less adverse impact on aquatic resources than structures that are tall, long, and point downstream.

**6. Temporary Bank Stabilization – All NWP's.**

Temporary bank stabilization is prohibited during seasonal high flows.

**7. Sediment Management – All NWP's:**

Sediment removal is allowable only to maintain function of existing facilities and structures, or as necessary to maintain or restore the geomorphic integrity of the upper Yellowstone River. Diversion or removal of sediment or alluvium from the river channel and adjacent wetlands for other purposes is not allowed in the SRMZ under any NWP.

**8. Temporary Vegetation Impacts – All NWP's:**

Limit clearing of riparian or wetland vegetation to the absolute minimum necessary. Where temporary riparian or wetland vegetation impacts are unavoidable, mow or cut off the vegetation above the ground, leaving the topsoil and root mass intact. Restore temporarily disturbed areas to original contours and use seeding and planting as necessary to re-establish desirable vegetative cover, utilizing native species in areas where native species were impacted.

**9. NWP-11 – Temporary Recreational Structures:**

Temporary recreational structures can be installed no earlier than seven (7) calendar days in advance of an event and must be removed no later than seven (7) calendar days after the event concludes.

**10. NWP-12 – Oil or Natural Gas Pipeline Activities; NWP-57 – Electric Utility Line and Telecommunications Activities; and NWP-58 – Utility Line Activities for Water and Other Substances.**

Trench excavation and backfill for utility lines is prohibited within the Ordinary High Water Mark of main and secondary flow channels and in adjacent wetlands.

**11. NWP-13 – Bank Stabilization:**

Construction of temporary or permanent levees is prohibited. Only bank stabilization that is parallel to and adjacent to the valley wall and/or SRMZ boundary is allowed. All other bank stabilization must be reviewed under standard (individual) permit procedures. Bank stabilization along existing roads, ditches, fills, and structures already located along the valley wall is allowed under this Permit.

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**12. NWP-14 – Linear Transportation Projects.**

The construction of new transportation facilities in waters of the U.S. is prohibited under this NWP and must be reviewed under standard (individual) permit procedures. The expansion, modification, improvement, replacement, reconstruction, and upgrading of existing transportation facilities are allowed under this NWP within the SRMZ.

**13. NWP- 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities:**

The construction of water control structures, dikes, berms, current deflectors, bank stabilization, and ponds is prohibited within the CMZ of the upper Yellowstone River unless it is demonstrated the proposed features contribute to the restoration or rehabilitation of previously lost or impaired functions of the upper Yellowstone River and adjacent aquatic areas.

**14. NWP-30 – Moist Soil Management for Wildlife:**

Fire breaks within the CMZ of the upper Yellowstone River must be reclaimed and restored within six (6) months after the fire event ends.

**15. NWP-33 – Temporary Construction, Access, and Dewatering:**

Construction of temporary levees and other structures or fills in waters of the U.S. that prevent or reduce overbank flow is prohibited.

**16. NWP 40 – Agricultural Activities:**

Only those activities associated with the reduction of existing adverse impacts on the upper Yellowstone River may be authorized by this NWP. Examples of potentially allowable projects include work associated with livestock management; moving livestock watering areas off the river or out of the CMZ; removal of irrigation systems from the CMZ; and the removal or conversion of irrigation systems from flood irrigation to sprinkler irrigation.



**Community Development and Planning  
Lewis and Clark County**

316 N. Park Ave. Room 230 Helena, MT 59623  
Phone: 406-447-8374 Fax: 406-447-8398  
e-mail: [planning@lccountymt.gov](mailto:planning@lccountymt.gov)



**FLOODPLAIN DEVELOPMENT PERMIT  
FLDP 2024-007  
Head Lane Bridge Over Sevenmile**

January 23, 2025

Dan Karlin  
Lewis and Clark County Public Works  
3402 Cooney Drive  
Helena, MT 59602

**Re: Floodplain Development Permit (FLDP 2024-007) Head Lane**

**Decision: APPROVED January 24, 2025**

The Floodplain Development Permit (FLDP) application has been reviewed by the Lewis and Clark County Community Development and Planning Department (CD&P) for the replacement of the Head Lane bridge in Lewis and Clark County. **The applicant is responsible for contacting the Lewis and Clark County Floodplain Administrator when floodplain development is going to begin.**

This FDP shall be valid until January 24, 2026. All work must be completed prior to this expiration date. The Applicant may submit a written request to extend the duration of the Floodplain Development Permit, but this extension request must be received by CD&P a minimum of thirty (30) days prior to this permits expiration date.

The enclosed Lewis and Clark County Floodplain Certificate of Compliance form must be submitted within thirty (30) days of the project's completion. This form, along with a post-construction as-built survey, must be provided to CD&P to show compliance with the permit requirements. **See Post Project Conditions** for more information. If you have any questions, please contact the Lewis and Clark County Floodplain Administrator.

Please see the following pages for detailed information regarding the FLDP.

### **Findings of Fact**

- A. Section 76-5-101, et seq., MCA establishes the minimum requirements for county floodplain regulations.
- B. The current Lewis and Clark County Floodplain Ordinance was updated November 7, 2024, and effective on December 7, 2024.

### **Intent of Review**

The purpose of the FLDP application is to review the plans and information, and to determine if the project, as proposed, meets the purpose and requirements of the Lewis and Clark County Floodplain Ordinance. An FLDP will be granted or denied by the Floodplain Administrator based on whether the proposed establishment, alteration, or substantial improvement of an artificial obstruction or non-conforming use meets the requirements of the Lewis and Clark County Floodplain Ordinance.

### **Description of Project**

The application for an FLDP was submitted November 1, 2024, with the final technical information being submitted January 7, 2025. The Applicant is seeking approval replace a single span bridge over Sevenmile. The Applicant submitted plans for the proposed floodplain development to the Lewis and Clark Conservation District, FWP, US Army Corps of Engineers, and DEQ. The Applicant is responsible for all materials and equipment as outlined in the application.

### **Location of Proposed Project**

The project site is located on Head Lane over Sevenmile Creek. Please refer to the Joint Application submitted on November 1, 2024, for longitude and latitude information.

### **Legal Notice, Public Comments, and Review Period**

As a part of this review, notice of a 15-day public comment period was published in the Independent Record, sent to all adjacent property owners, and given to all agencies with potential jurisdiction over the proposed project. No comments were received.

### **Compliance with Lewis and Clark County Floodplain Ordinance:**

Based on the information contained in the application, and as required by the Lewis and Clark County Floodplain Ordinance, the following criteria were evaluated with respect to the project:

- 1. All construction shall substantially conform to the plans dated October 22, 2024, stamped by Karl Yakawich, P.E.
- 2. The bridge replacement should meet the following requirements:
  - a. The project must be designed and constructed to ensure the improvements will not increase the Base Flood Elevation greater than the allowable limits as stamped by Jonathan Weaver, P.E.

- b. The bridge low chord will adhere to proposed elevation as submitted in the Floodplain No-rise stamped by Jonathan Weaver, P.E.
  - c. The existing elevations outside of the floodplain will not be impacted by the proposed development.
  - d. Any conditions set by the US Army Corps of Engineers as part of NWP-14 submitted on November 25, 2024, will be met.
  - e. Any conditions set by Montana Fish, Wildlife, and Parks as part of Stream Protection Act 124 Permit dated December 2, 2024, will be met.
  - f. Any conditions set by Montana Department of Environmental Quality as part of 318 Authorization dated December 2, 2024, will be met.
  - g. Work will conform to the size and scope as submitted on Sheet 1-13 stamped by Karl Yakawich, P.E.
  - h. The use of fill is limited to the size and quantity as stated in the Joint Application dated November 1, 2024.
  - i. The only materials permissible shall conform to the submitted Joint Application dated November 1, 2024.
  - j. The total width of the bridge will conform to the submitted Joint Application dated November 1, 2024.
  - k. The proposed development can withstand the hydrodynamic and hydrostatic forces as stamped by Jonathan Weaver, P.E.
  - l. All equipment to be used in the water must be clean, drained, and dry.
  - m. Any excavated material will be stored outside of the floodway and floodplain.
  - n. All other materials and equipment for the proposed work will be stored outside of the floodway and floodplain.
  - o. The materials and equipment are readily removable during the limited time available after flood warning.
3. Any excess material not used for the development must be disposed of outside of the 100-year floodplain.

**Additional Factors for Consideration:**

- 1. The danger to life and property due to increased flood heights, increased floodwater velocities or alterations in the pattern of flood flow. *The proposed development will adhere to the allowable limits of the base flood elevation as stamped by Jonathan Weaver, P.E.*
- 2. The danger that materials may be swept onto other lands downstream to the injury of others. *The proposed bridge design and materials will be properly anchored.*
- 3. Minimize stream channel alterations. *The design maintains existing channel alignment.*
- 4. Minimize effects on fish and aquatic habitat. *The project will install silt fences and proceed with work during the summer to avoid major disturbances.*
- 5. The carrying capacity of the altered location or relocated watercourse is maintained. *The proposed construction is designed to provide more natural stream flow.*
- 6. Minimize temporary or permanent impacts to the floodplain, wetlands, or riparian habitat. *The proposed construction will be designed to minimize any impact on the floodplain as shown in the submitted technical materials.*

7. Minimize erosion, sedimentation, or turbidity. *The construction project will include erosion control measures, silt fences and revegetation.*
8. The availability of alternative locations not subject to flooding where the proposed maintenance/upgrades will occur. *No alternatives available.*
9. Minimize vegetation disturbance, protect existing vegetation, and weed control. *Vegetative reseeding will be done to the disturbed areas.*
10. The safety of access to property in times of flooding for ordinary and emergency services. *Access will not be compromised with the approximate 2.22 feet of freeboard.*
11. Such other factors as are in harmony with the purposes of these regulations, the Montana Floodplain and Floodway Management Act, and the National Flood Insurance Program.

**Decision:**

The requested project follows the provisions of the Lewis and Clark County Floodplain Ordinance, including, but not limited to, Sections 9.2.1, 9.2.2, 9.4.1, 10.2.1, 10.2.2, 10.2.7, and 10.2.9 of the Ordinance. The FLDP for Lewis and Clark County Public Works is approved and subject to the following conditions:

**Post Project Conditions**

1. Within thirty (30) days of the completion of the project, the Applicant shall provide a Floodplain Certificate of Compliance form, along with as-built survey with the final base bridge elevations, base flood elevations, fill slope, and low chord elevations to demonstrate that the project has been completed in accordance with both the Lewis and Clark County Floodplain Ordinance and the design plans submitted with the application. Work that may be conducted in the floodplain is limited in size and scope to the work described in the application.
2. Within thirty (30) days of completion of the project, the Applicant shall notify the Floodplain Administrator and provide an opportunity to schedule a final post-construction site visit.

**Withdrawal of Approval**

The Floodplain Administrator may withdraw this approval if he/she determines that the information provided by the Applicant, and upon which such a decision was based, is inaccurate.

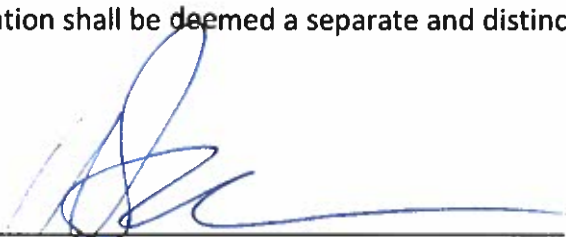
**Appeals**

Appeals of any Decision made by the Floodplain Administrator may be made to the Lewis and Clark County Board of Commissioners within thirty (30) days of the date of the Decision.

As noted above, your FLDP will expire on January 24, 2026, and all work must be completed prior to this expiration date. Please note that a one (1) year extension of this FLDP approval is possible upon written request and fee payment to CD&P thirty (30) days prior to expiration of this FLDP. Violation of the provisions of the Floodplain Ordinance, or failure to comply with any of the requirements, shall constitute a misdemeanor and may be treated as a public nuisance. Any person who violates this Ordinance or fails to comply with any of its requirements shall,



upon conviction thereof, be fined not more than \$100 per day. Each day's continuance of a violation shall be deemed a separate and distinct offense.



Worby McNamee, CFM  
Lewis and Clark County Floodplain Administrator

1/23/2025  
Date

cc: Jonathan Weaver, Professional Engineer, Great West, 2501 Belt View Drive, Helena, MT 59601  
DNRC, Attn: Traci Sears, 1539 Eleventh Ave., Helena, MT 59601

**Lewis and Clark County  
Floodplain Permit Compliance Report**

Permit Number: \_\_\_\_\_

Name(s) of Permittee: \_\_\_\_\_

Permittee Address: \_\_\_\_\_

\_\_\_\_\_

Project address or location: \_\_\_\_\_

\_\_\_\_\_

Within thirty (30) days following the completion of the activity authorized or required by the above-referenced permit, the permittee shall sign this certification and return it to the following address with any attached documentation including but not limited to:

☐

Elevation Certificates

☐

Flood Proofing Certificate

☐

Pictures/Other

Community Development and Planning  
Attn: Floodplain Administrator  
316 N. Park Avenue, Room 230  
Helena, MT 59623

.....  
I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of said permit. I understand that the Floodplain Administrator may inspect the project for compliance. I further understand that if the work does not meet the terms of the permit, I will take all measures necessary to correct the deficiency.

\_\_\_\_\_  
Name (print)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

-----  
Floodplain Administrator:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date Received





# **Montana Fish, Wildlife & Parks**

## **Stream Protection Act (SPA 124) Permit**

Date:

Applicant Name:

Address:

Permit #:

Waterbody:

Project Name:

Project Description:

**Montana Fish, Wildlife & Parks has reviewed the proposed project. The project is approved provided it is carried out in accordance with the information supplied in the application, all general conditions listed on page 3 of this permit, and any special conditions listed below.**

**Expiration:** This permit is valid for     year(s) from the date of issuance.

**Timing Restrictions:** No     Yes     if yes see below.

No in-stream work between     and     .

**Special Conditions:**

**318 Authorization Review**


**I have reviewed the above project on behalf of the Montana Department of Environmental Quality (DEQ) pursuant to the Montana Water Quality Act Short-term Water Quality Standards for Turbidity 75-5-318 MCA:**

This project **will not** increase turbidity if completed according to the conditions listed in the 310 or 124 permit. Therefore, application to DEQ for a 318 authorization **is not** required.

Impacts to the physical and biological environment from turbidity generated as a result of this project are uncertain. Therefore, the applicant must contact the Montana Department of Environmental Quality, 1520 East Sixth Avenue, Box 200901, Helena, MT 59620-0901, (406 444-3080) to determine project specific narrative conditions required to meet short-term water quality standards and protect aquatic biota.

Turbidity generated from this project is expected to be short-term and have only temporary and minor impacts on the physical and biological environment. Therefore, compliance with the conditions stated in the attached letter outlining ***DEQ's Short Term Water Quality Standard for Turbidity Related to Construction Activity***, as well as other conditions listed in the 310 or 124 permit, are appropriate for this project.

Issuing Biologist:

Signature: 

### **Stream Protection Act 124 Permit General Conditions**

1. Complete work affecting a streambed or stream bank in an expeditious manner to avoid unnecessary impacts to the stream.
2. Limit the clearing of vegetation to that which is absolutely necessary for construction of the project. Take precautions to preserve existing riparian vegetation. Salvage and reuse native vegetation where possible.
3. Install and maintain erosion control measures where appropriate to protect aquatic resources. Do not clear and grub land adjacent to streams prior to installing proper erosion and sedimentation controls. Conduct all work in a manner that minimizes turbidity and other disturbances to aquatic resources.
4. Plan temporary construction facilities to:
  - a. Minimize disturbance to stream banks, stream bank vegetation, and the streambed by locating staging or storage facilities at least 50' horizontally from the highest anticipated water level during construction;
  - b. not restrict or impede fish passage in streams; and
  - c. not restrict any flow anticipated during use.
5. Provide sediment controls for drainage from topsoil stockpiles, staging areas, access roads, channel changes, and instream excavations.
6. Isolate work zones from flowing and standing waters to prevent turbid water and sediments from being discharged into streams or other drainages that flow directly into the stream. Divert flowing waters around the work zone.
7. Do not spill or dump material into streams. Store and handle petroleum products, chemicals, cement and other deleterious materials in a manner that will prevent their entering streams.
8. Do not permit wash water from cleaning concrete-related equipment or wet concrete to enter streams.
9. Do not operate mechanized equipment in any stream or flowing water unless special authorization is obtained. If special authorization is granted, the following conditions apply:
  - a. Powerwash all equipment allowed in a stream prior to entering the stream channel.
  - b. Clean and maintain all equipment so that petroleum-based products and hydraulic fluids do not leak or spill into the waterway.
10. Reclaim streambeds and stream banks as closely as possible to their pre-disturbed condition.
11. Restore disturbed stream banks to their natural or pre-disturbed configuration to match adjacent ground contours or as specified in the project plans. Stabilize, reseed, and re-vegetate disturbed areas. Install and maintain long-term biodegradable erosion-control measures to protect these areas until adequate vegetation has been established.
12. Restore temporary access routes and any temporarily disturbed areas to original conditions, including original contours and vegetation.
13. Dispose of any excess material generated from the project above the ordinary high water mark and in an area not classified as a wetland.

**SHORT-TERM WATER QUALITY STANDARD  
FOR TURBIDITY RELATED TO  
CONSTRUCTION ACTIVITY  
(318 Authorization)**

Dear Applicant:

This 318 authorization is the result of your recent application for a 310 permit from your local Conservation District or a 124 permit from Montana Fish, Wildlife and Parks. This authorization is valid for the time frame noted on your permit.


**This is not your 310 or 124 permit and no construction activity should occur until you have received a valid 310 or 124 permit as well as any other permits that apply to this proposed construction activity.**

This authorization is the result of an Operating Agreement between the Montana Department of Environmental Quality (DEQ), and Montana Fish, Wildlife and Parks (FWP).

The applicant agrees to comply with the conditions stated below, as well as other conditions listed in the 310 or 124 permit issued for this project. Signatures of the applicant and FWP are required to validate this authorization.

1. Construction activity in or near the watercourse are to be limited to the minimum area necessary, and conducted so as to minimize increases in suspended solids and turbidity that could degrade water quality and adversely affect aquatic life outside the immediate area of operation.
2. The use of machinery in the watercourse shall be avoided unless absolutely necessary.
3. All disturbed stream banks and adjacent areas created by the construction activity shall be protected with erosion control measures during construction. These areas shall be reclaimed with appropriate erosion control measures and revegetated to provide long-term erosion control.
4. Any excess material generated from this project must be disposed of above the ordinary high water mark, in an area not classified as a wetland, and in a position not to cause pollution of State waters.
5. Clearing of vegetation will be limited to that which is absolutely necessary for construction of the project.
6. This authorization does not authorize a point source surface water discharge. MPDES permit is required for said discharge.
7. Open cut creek crossings will not be allowed in flowing water. Stream water must be diverted around the open cut area (pump, flume etc.)
8. The applicant must conduct all activities in full and complete compliance with all terms and conditions of all permits required for this activity issued pursuant to the Montana Natural Streambed and Land Preservation Act (310 permit), the Stream Protection Act (124 permit) the Federal Clean Water Act (404 Permit), any MPDES permits for dewatering or storm water control in the construction area and any valid Memorandum of Agreement and Authorization (MAA) negotiated for this activity.

The FWP representative has determined that this project is within the scope of the programmatic Environmental Assessment prepared by DEQ and FWP for the issuance of narrative turbidity standards.

 \_\_\_\_\_ Date: 12/2/2024  
FWP Representative's Signature

\_\_\_\_\_ Date: \_\_\_\_\_  
Applicant's Signature

Name and location of project: Head Lane Bridge Replacement, Sevenmile Creek, Helena, MT



930 W Custer Ave  
Helena, MT 59602

December 2nd, 2024

Dan Karlin  
Lewis and Clark County  
3402 Cooney Dr  
Helena, MT 59602

Dear Mr. Karlin,

Your project to replace the Head Lane bridge on Sevenmile Creek has been approved (FWP-CEA-FSH-R4-24-041) by the Montana Department of Fish, Wildlife and Parks. Montana state law also requires you to have a permit from the Montana Department of Environmental Quality (known as a "318" permit) to allow short term water turbidity during project construction.

Normally, the "318" permit from the Montana DEQ requires a separate application and fee of \$250. However, an inter-agency agreement allows the Department of Fish, Wildlife & Parks to issue these permits at no cost, as long as a set of eight standard conditions are met.

Enclosed are two copies of the Montana DEQ "318" permit for your project. If the conditions are acceptable, please sign and return one copy to our office and keep one for your files. Please call me at (406) 495-3263 if you have any questions.

Sincerely,

Nathan Jaksha  
Fisheries Biologist  
406-495-3263

# **APPENDIX C**

## **PRESTRESSED CONCRETE BEAM SHOP DRAWINGS**



BILLINGS, MONTANA

TITLE

HEAD LANE BRIDGE REPLACEMENT  
STA. 9+79.62 - MDT BRIDGE ID: 03440  
LEWIS AND CLARK COUNTY, MONTANA

PROJECT NUMBER MT-MCEP-CG-25-043

OWNER


LEWIS AND CLARK COUNTY PUBLIC WORKS

NUMBER

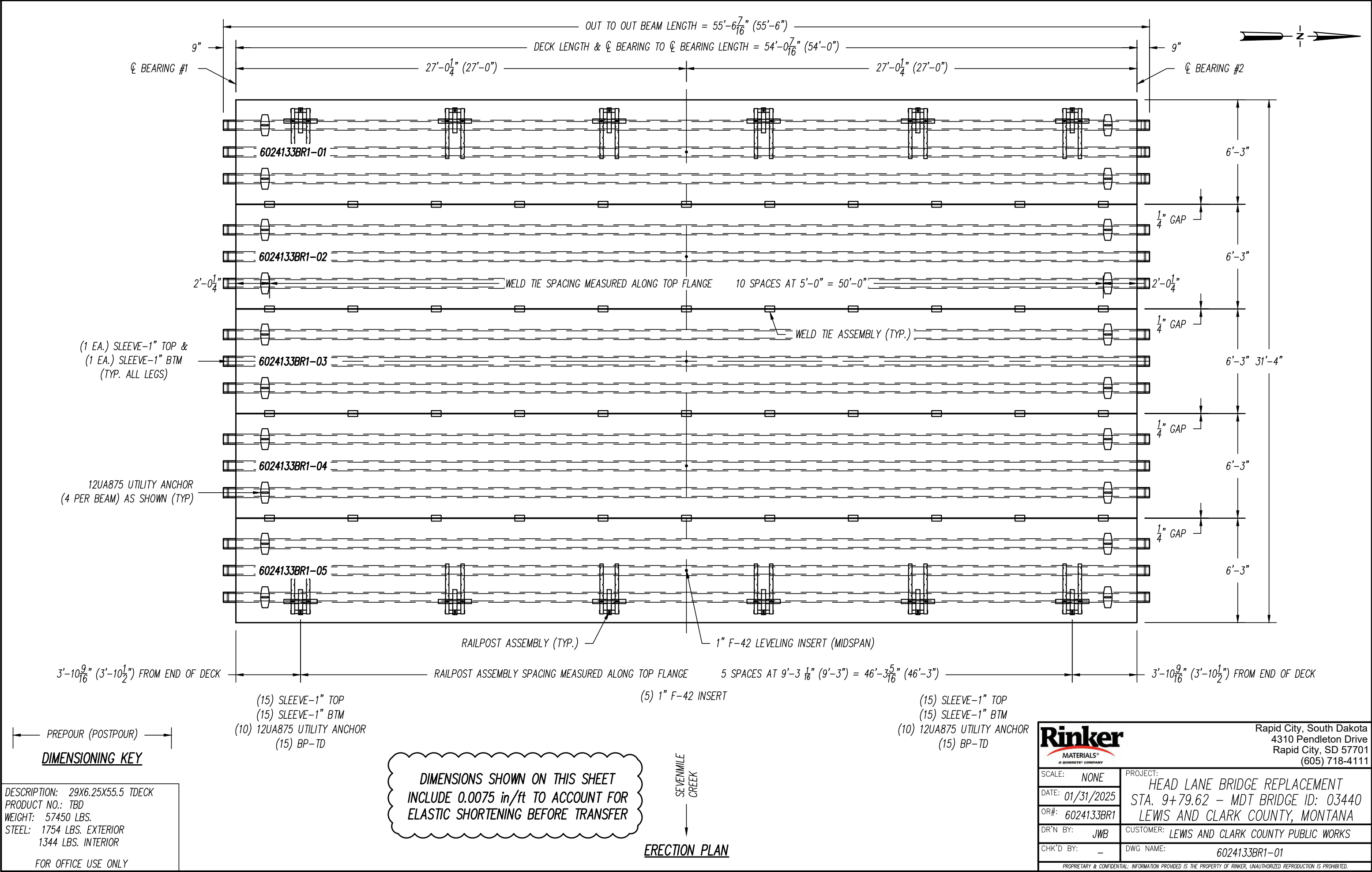
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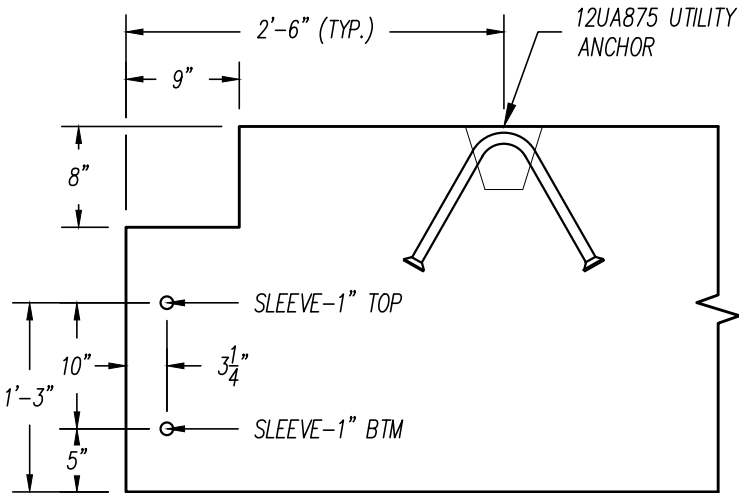
PROJECT PRODUCTION NOTES

- 1) MIX DESIGN 7000 PS AIR
- 2) MIX DESIGN 7000 PS AIR SHALL HAVE AN AIR CONTENT OF  $5\% \pm 1\%$ .
- 3) TOP SURFACES OF ALL BEAMS ARE TO HAVE A TRANSVERSE ROUGH BROOM FINISH (PER MDT 552.03.11).
- 4) CUT BACK ALL STRAND WITH 1" MAXIMUM PROJECTION.
- 5) ALL BEAMS TO HAVE SQUARE BEAM ENDS.
- 6) STRUCTURAL REINFORCEMENT NOTE: ALL WELDED REINFORCEMENT TO MEET MDT SUPPLEMENTAL SPECIFICATIONS 624.03.1.3 [ANSI/AASHTO/AWS D1.5, D1.1, D1.4]; THIS INCLUDES ANY SACRIFICIAL STEEL WELDED TO ANY STRUCTURAL REINFORCEMENT. ANY SACRIFICIAL STEEL EITHER INDEPENDENT FROM OR ONLY CONNECTED TO STRUCTURAL REINFORCEMENT THRU NON-WELDED CONNECTIONS (SUCH AS WIRE-TIED) IS OMITTED FROM THIS REQUIREMENT.
- 7) ALL WELD CONNECTIONS FOR STEEL HARDWARE TO MEET MDT SUPPLEMENTAL SPECIFICATIONS 624.03.1.4 [ANSI/AASHTO/AWS D1.5, D1.1, D1.4].
- 8) STRAND CUTTING PROCEDURE SHALL BE AS FOLLOWS:  
TO RELEASE THE STRAND LOAD – APPLY HEAT OVER A 7" LENGTH BY WAVING THE TORCH BACK AND FORTH UNTIL A SINGLE WIRE IN THE 7 WIRE STRAND BREAKS.  
AFTER A SINGLE WIRE IN THE STRAND BREAKS, CUT THE ENTIRE SEVEN WIRE STRAND CABLE AT A SINGLE POINT.

 <p><b>Rinker</b> MATERIALS® A QUORTEL® COMPANY</p>	<p>Rapid City, South Dakota 4310 Pendleton Drive Rapid City, SD 57701 (605) 718-4111</p>
	<p>SCALE: NONE</p> <p>DATE: 01/31/2025</p> <p>OR#: 6024133BR1</p> <p>DR'N BY: JWB</p> <p>CHK'D BY: —</p>





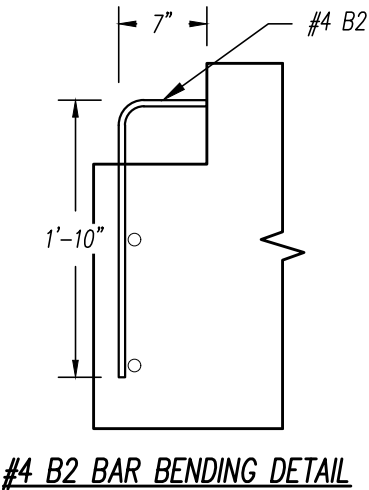
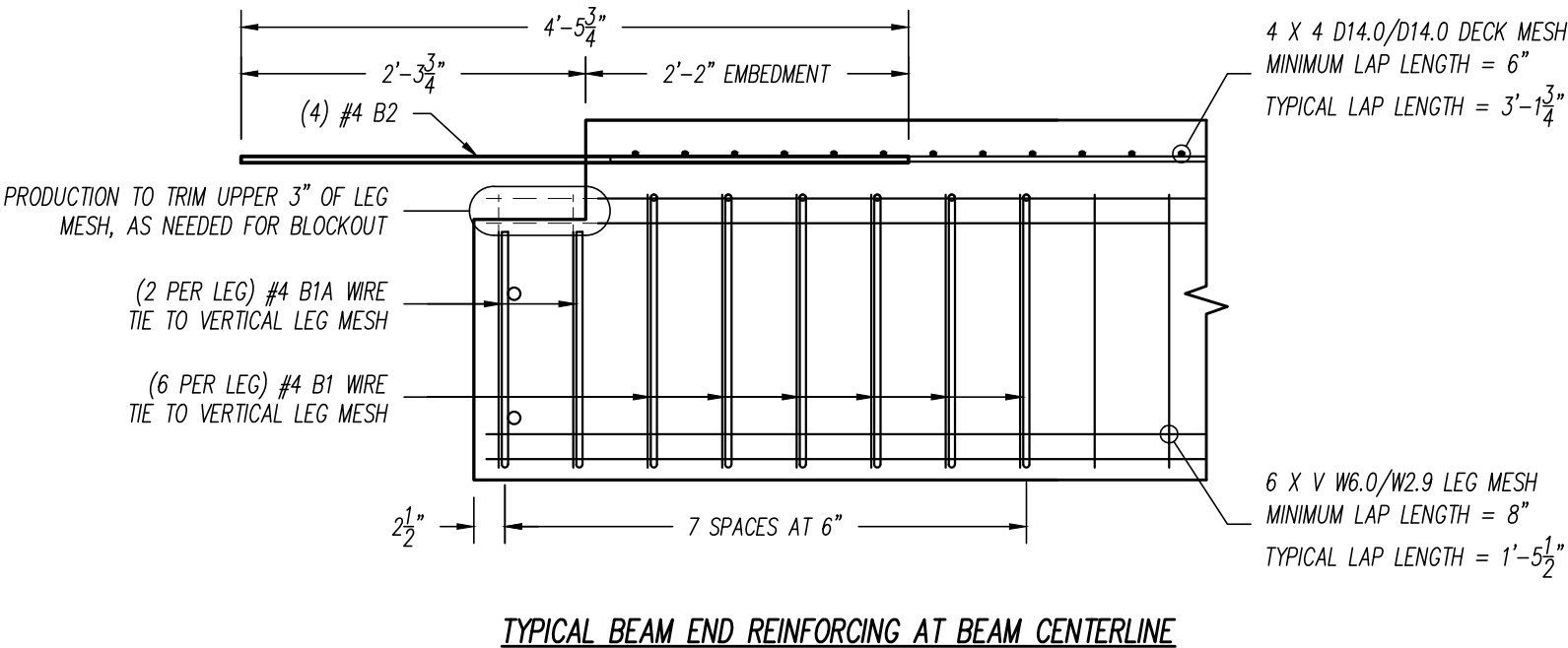
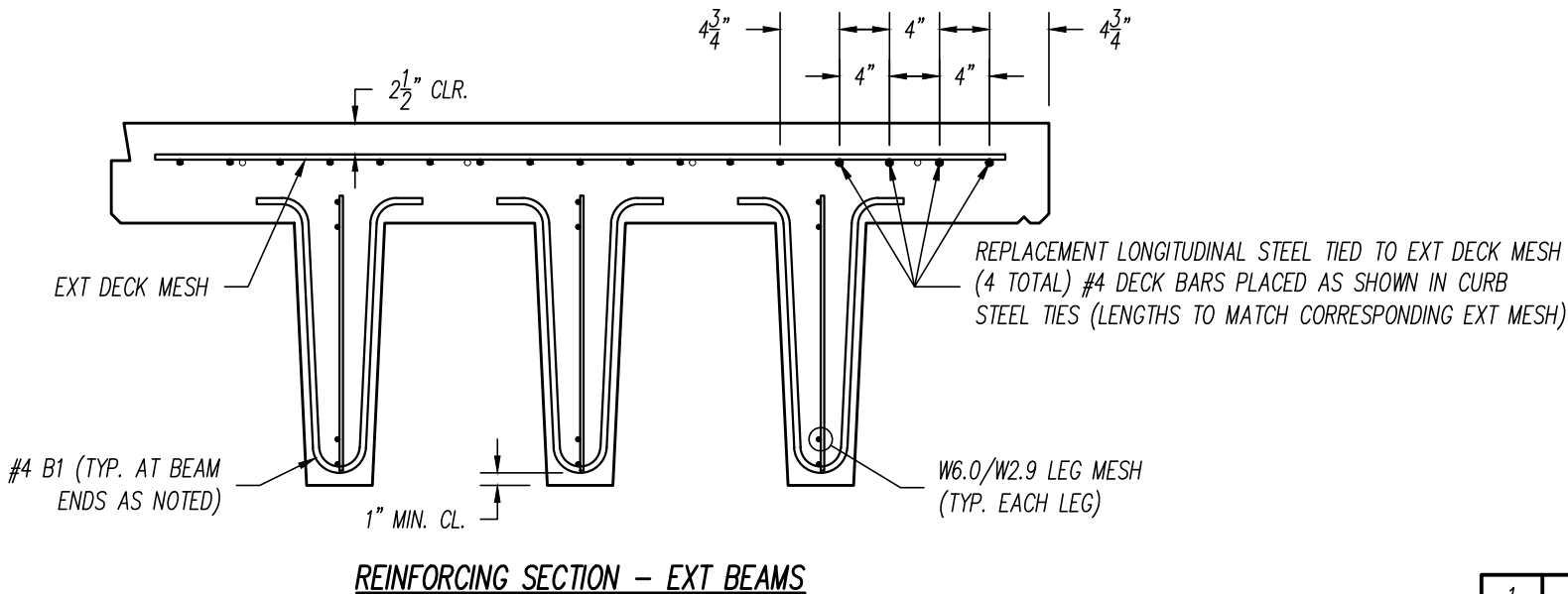
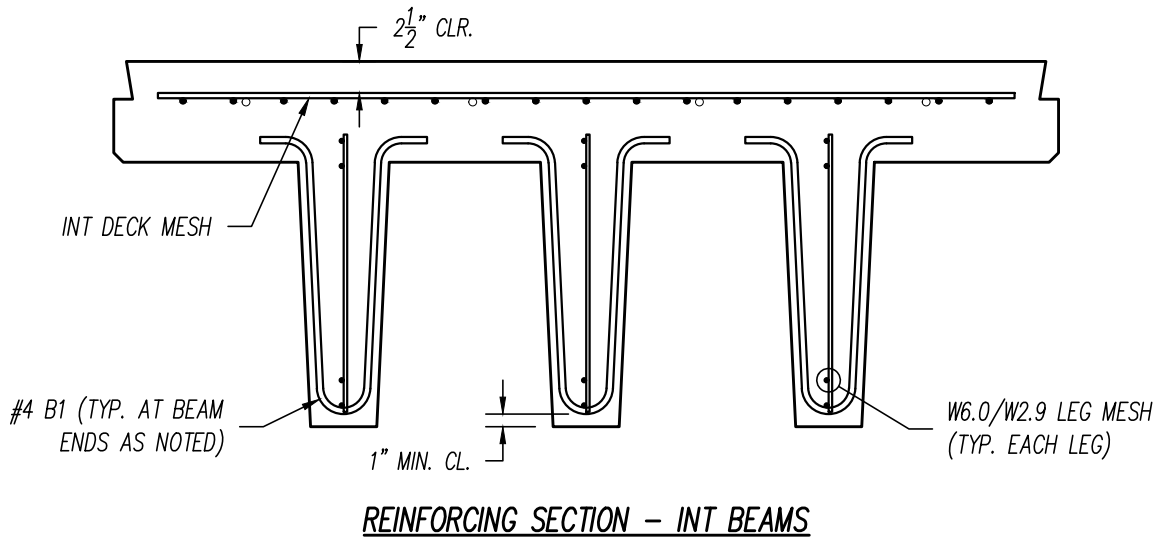
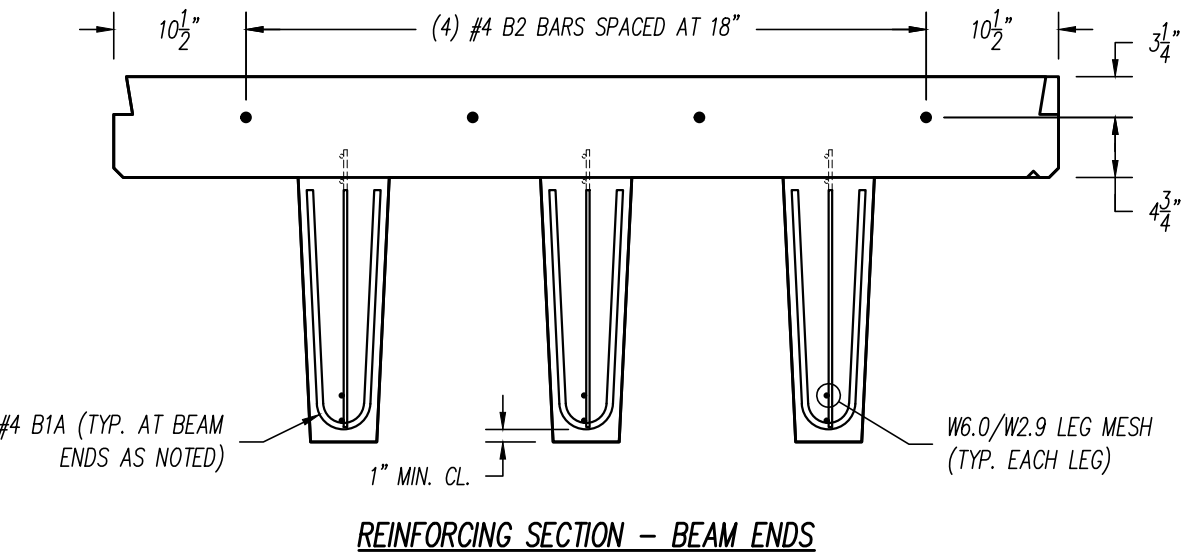


TYPICAL BEAM END DETAIL AT C OF BEAM

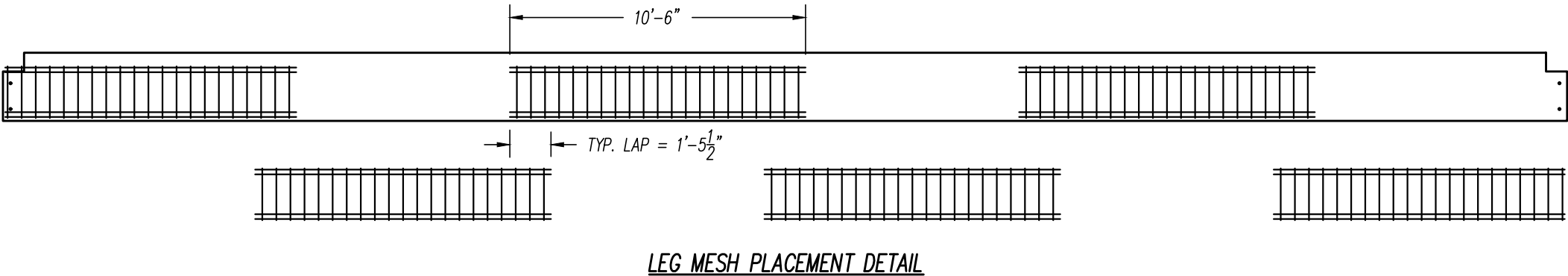
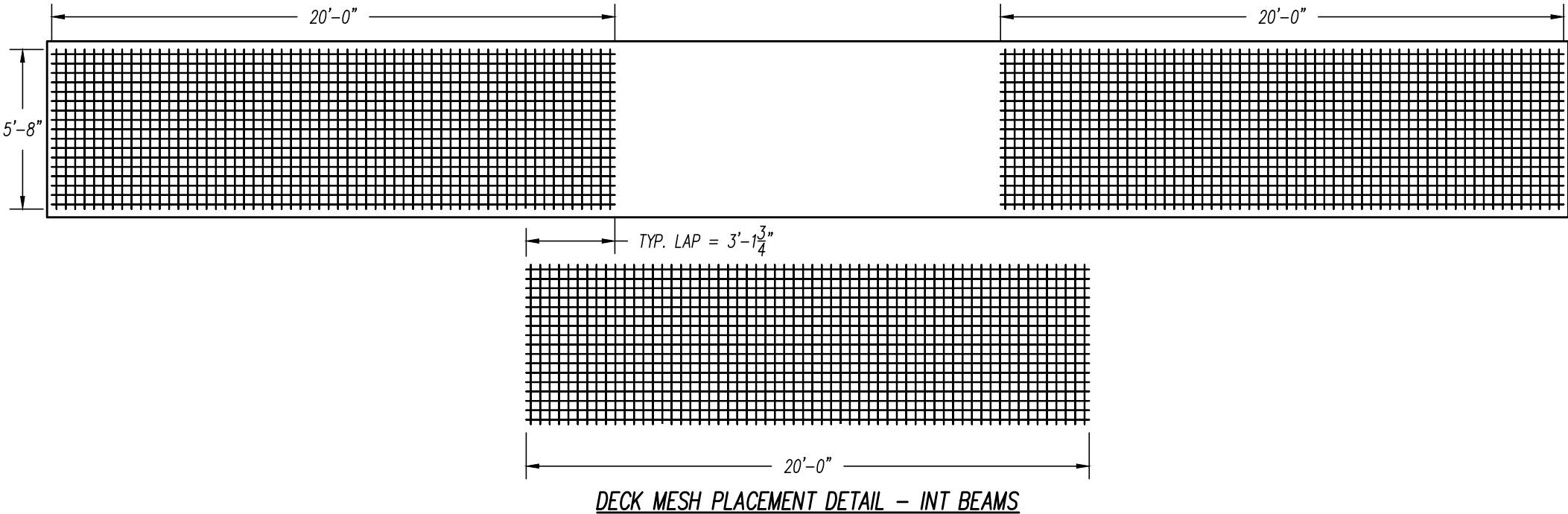
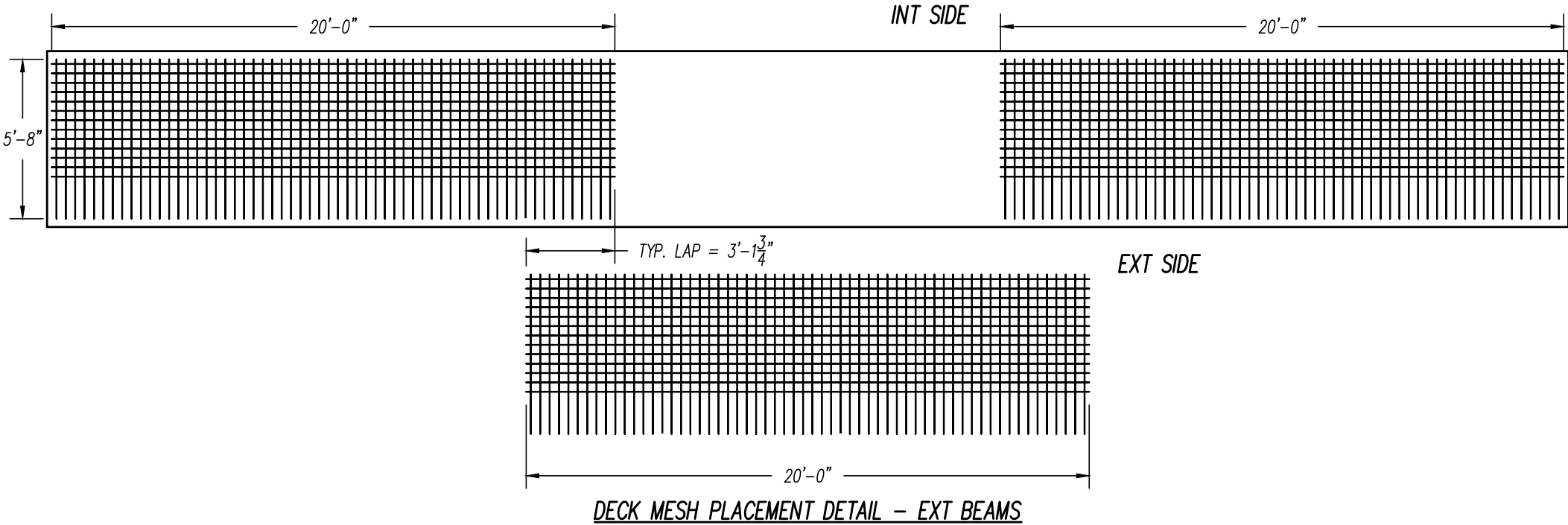
FOR TYPICAL BEAM SECTIONS SEE DRAWING 6024133BR1-09

1	ADJUSTED HEIGHT OF SLEEVE-1" TOP	02/27/2025	JWB
REV:	DESCRIPTION:	DATE:	BY:

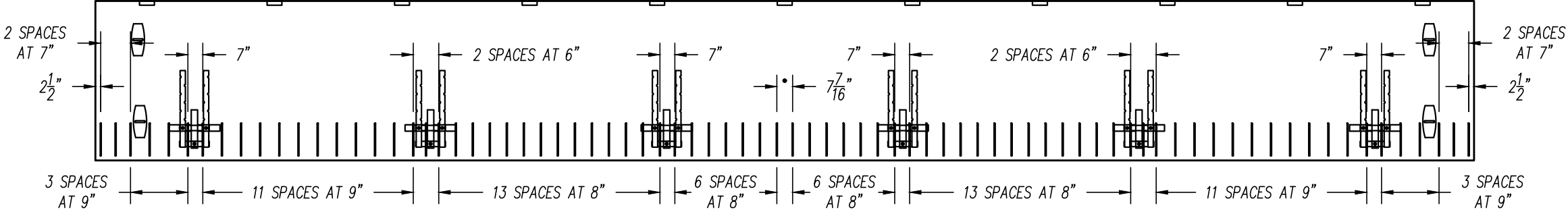
<div><div><div>Rinker</div><div>MATERIALS®</div><div>A QUORRETS® COMPANY</div></div><div>Rapid City, South Dakota 4310 Pendleton Drive Rapid City, SD 57701 (605) 718-4111</div></div>	
SCALE: NONE	PROJECT: HEAD LANE BRIDGE REPLACEMENT
DATE: 01/31/2025	STA. 9+79.62 – MDT BRIDGE ID: 03440
OR#: 6024133BR1	LEWIS AND CLARK COUNTY, MONTANA
DR'N BY: JWB	CUSTOMER: LEWIS AND CLARK COUNTY PUBLIC WORKS
CHK'D BY: –	DWG NAME: 6024133BR1-02
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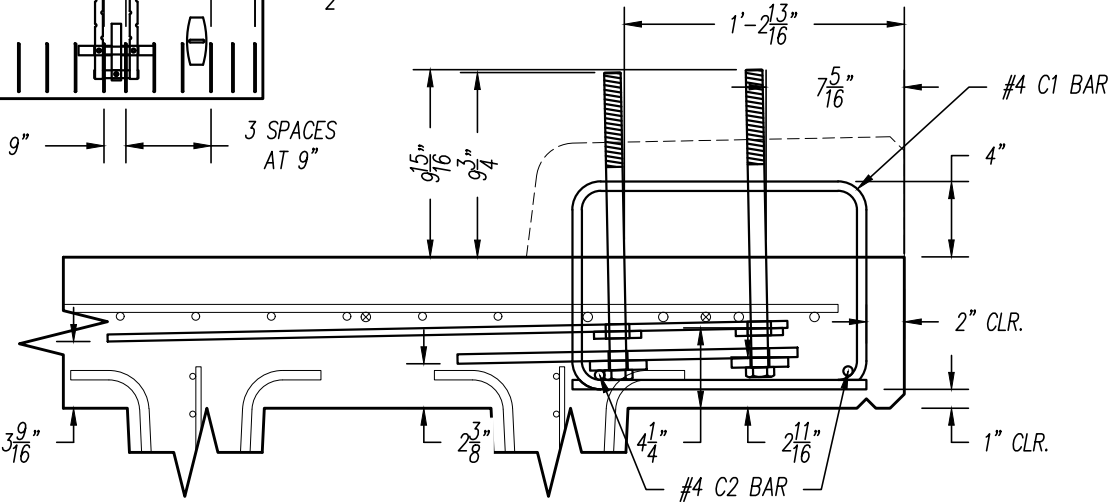
<div><div><div>Rinker</div><div>MATERIALS®</div><div>A QUIKRETE® COMPANY</div></div></div>		<div>Rapid City, South Dakota 4310 Pendleton Drive Rapid City, SD 57701 (605) 718-4111</div>	
SCALE: NONE		PROJECT: HEAD LANE BRIDGE REPLACEMENT STA. 9+79.62 – MDT BRIDGE ID: 03440 LEWIS AND CLARK COUNTY, MONTANA	
DATE: 01/31/2025			
OR#: 6024133BR1			
DR'N BY: JWB			
CHK'D BY: —			
CUSTOMER: LEWIS AND CLARK COUNTY PUBLIC WORKS		DWG NAME: 6024133BR1-03	
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SCALE:	NONE	PROJECT:	HEAD LANE BRIDGE REPLACEMENT
DATE:	01/31/2025		STA. 9+79.62 – MDT BRIDGE ID: 03440
OR#:	6024133BR1		LEWIS AND CLARK COUNTY, MONTANA
DR'N BY:	JWB	CUSTOMER:	LEWIS AND CLARK COUNTY PUBLIC WORKS
CHK'D BY:	—	DWG NAME:	6024133BR1-04
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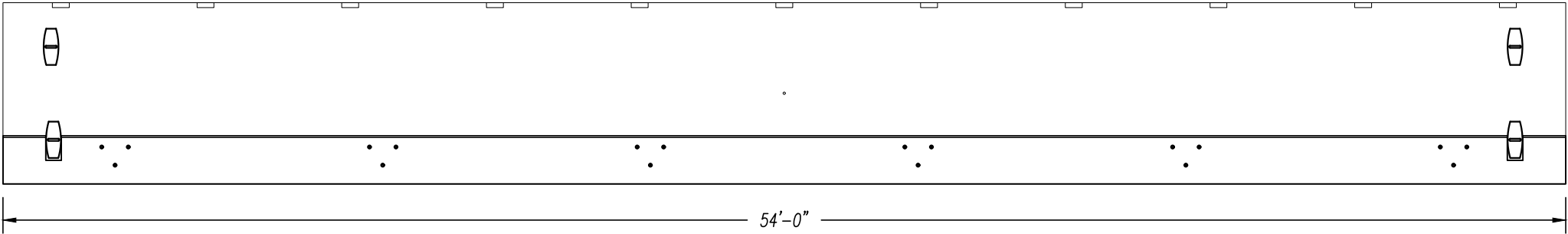


#4 C1 SPACING FOR BEAM 6024133BR1-01 & -05

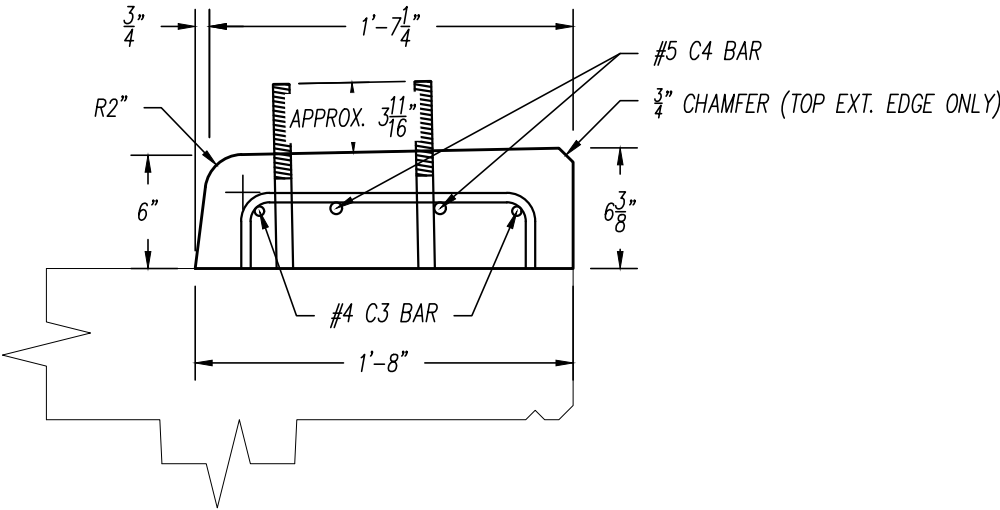


C1 BAR, C2 BAR, & RPA ANCHORS & BOLTS SECTION DETAIL

BEAM POUR

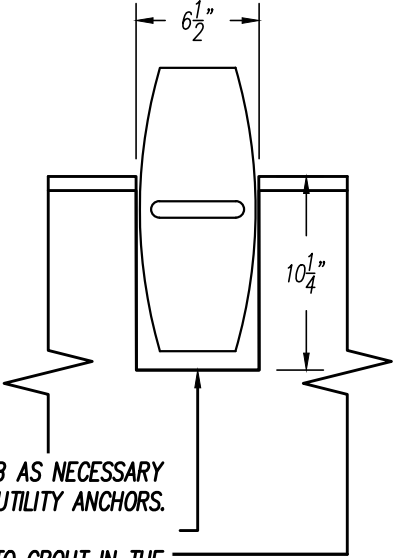


CURB FOR BEAM 6024133BR1-01 & -05



C3 BAR, C4 BAR, & CURB SECTION DETAIL

CURB POUR




BLOCKOUT CURB AS NECESSARY AROUND UTILITY ANCHORS.  
CONTRACTOR TO GROUT IN THE FIELD AFTER BEAMS ARE SET.

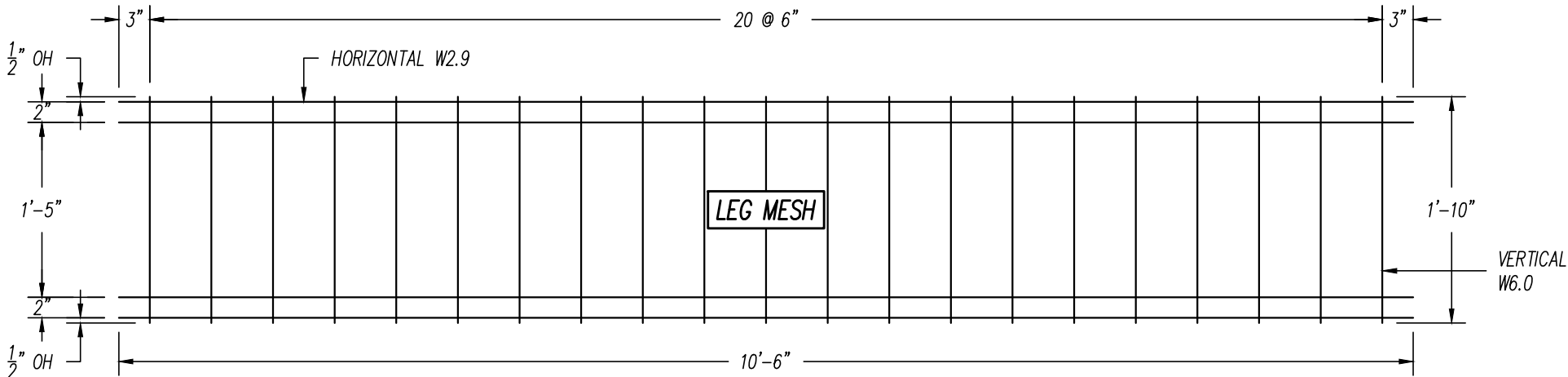
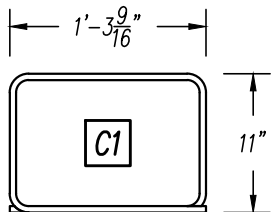
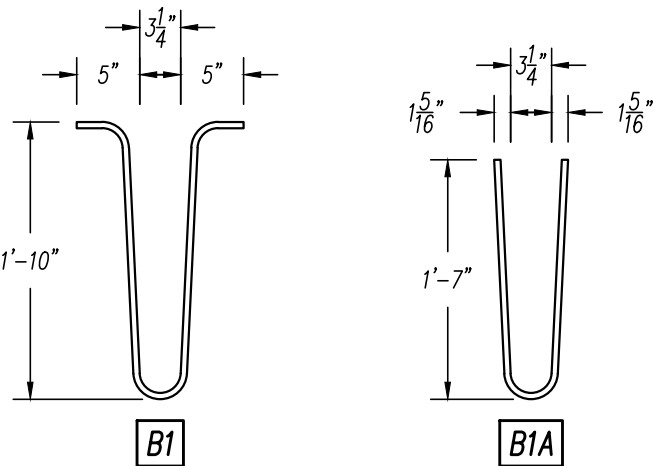
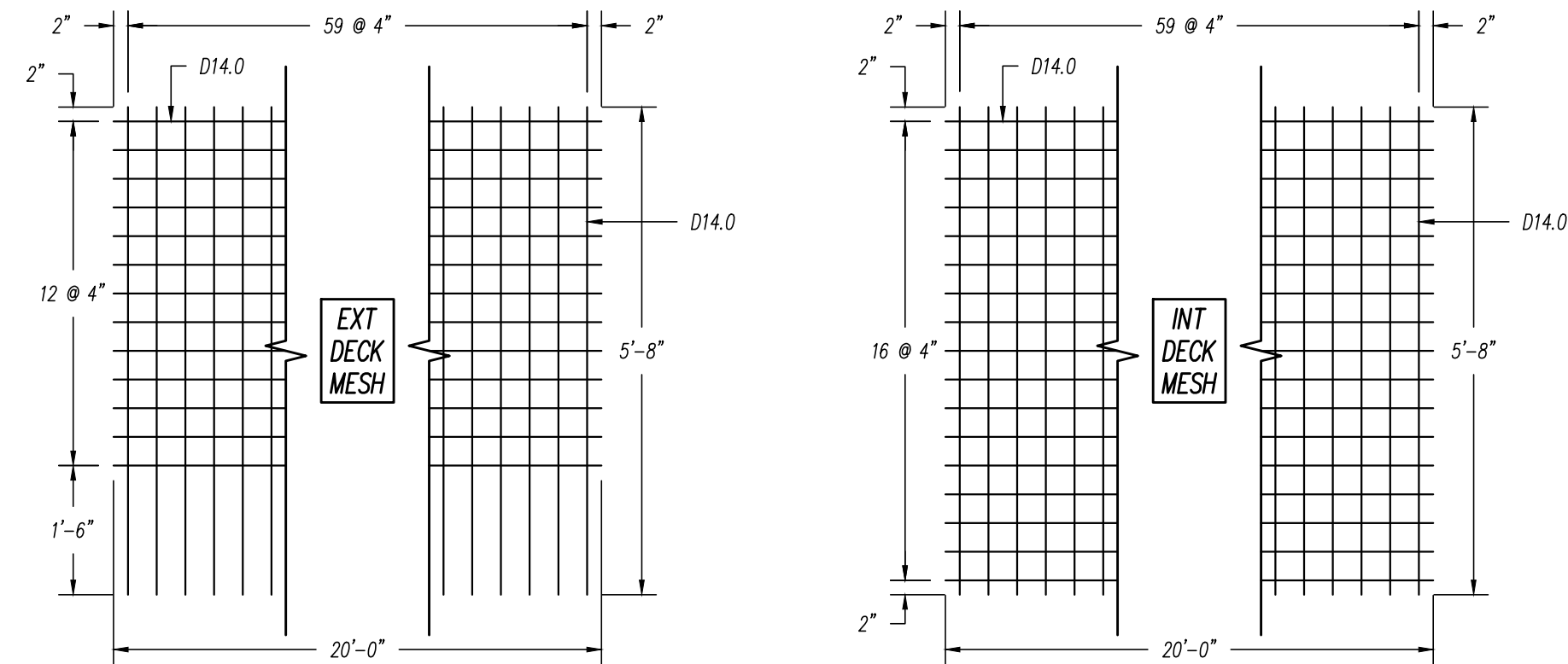
DESCRIPTION: 1.67X0.50-0.53X54 CURB  
PRODUCT NO.: TBD  
WEIGHT: 6835 LBS.  
STEEL: 205 LBS.

FOR OFFICE USE ONLY

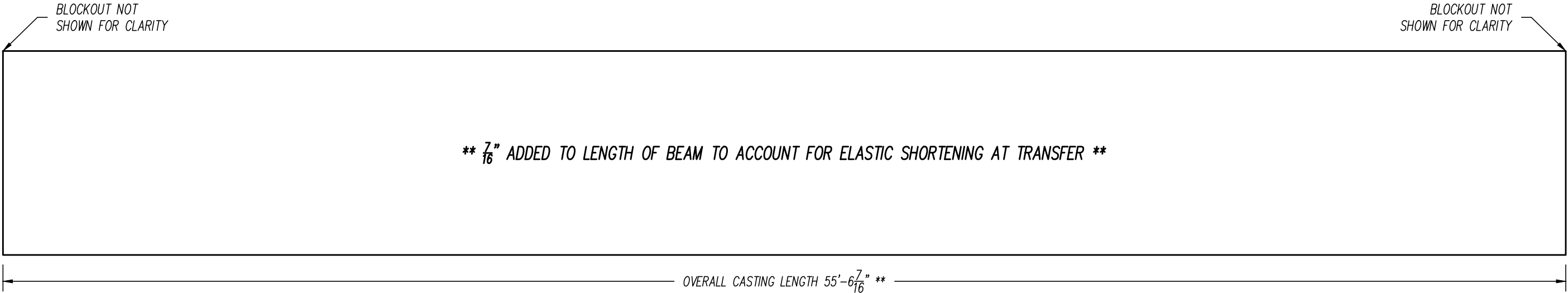
<b>Rinker</b> MATERIALS® <small>A CONCRETE® COMPANY</small>		Rapid City, South Dakota 4310 Pendleton Drive Rapid City, SD 57701 (605) 718-4111	
SCALE:	NONE	PROJECT:	HEAD LANE BRIDGE REPLACEMENT
DATE:	01/31/2025		STA. 9+79.62 - MDT BRIDGE ID: 03440
OR#:	6024133BR1		LEWIS AND CLARK COUNTY, MONTANA
DR'N BY:	JWB	CUSTOMER:	LEWIS AND CLARK COUNTY PUBLIC WORKS
CHK'D BY:	-	DWG NAME:	6024133BR1-05
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REINFORCING QUANTITIES (QUANTITY SHOWN IS PER ITEM)														
		BAR MARK												
		INT DECK MESH	EXT DECK MESH	EXT DECK MESH REPLA. STEEL (FULL)	LEG MESH	B1	B1A	B2	C1	C2	C3	C4		
BAR SIZE		4X4 D14.0/D14.0	4X4 D14.0/D14.0	#4	6xV W6.0/W2.9 V = 1/2", 2", 17", 2", 1/2"	#4	#4	#4	#4	#4	#4	#5	REBAR WEIGHT (LBS.)	MESH WEIGHT (LBS.)
BAR WEIGHT PER FT. (LBS.) OR SHEET WEIGHT PER SHEET (LBS.)		323.944	285.833	0.668	12.005	0.668	0.668	0.668	0.668	0.668	0.668	1.043		
BAR LENGTH		20'-0" X 5'-8"	20'-0" X 5'-8"	20'-0"	1'-10" X 10'-6"	4'-4 1/4"	3'-5 3/8"	4'-5 3/4"	5'-3 11/16"	20'-0"	20'-0"	20'-0"		
BENT OR STRAIGHT		STR	STR	STR	BENT	BENT	BENT	STR	BENT	STR	STR	STR		
BAR OR SHEET WEIGHT (LBS.)		323.944	285.833	13.360	12.005	2.909	2.303	2.992	3.545	13.360	13.360	20.860		
BEAM MARK	6024133BR1-01	0	3	12	18	36	12	8	80	6	0	0	680.4	1073.6
	6024133BR1-02	3	0	0	18	36	12	8	0	0	0	0	156.3	1187.9
	6024133BR1-03	3	0	0	18	36	12	8	0	0	0	0	156.3	1187.9
	6024133BR1-04	3	0	0	18	36	12	8	0	0	0	0	156.3	1187.9
	6024133BR1-05	0	3	12	18	36	12	8	80	6	0	0	680.4	1073.6
	CURB (2)	0	0	0	0	0	0	0	0	0	6	6	205.3	0.0
TOTAL		9.0	6.0	24.0	90.0	180.0	60.0	40.0	160.0	12.0	12.0	12.0	2240.3	5711.0
MODIFY REINFORCING AS REQUIRED TO CLEAR BLOCKOUTS, EMBEDMENTS, ETC.														
BAR LENGTHS OVER 20'-0" WILL INCLUDE 2'-0" MINIMUM LAP FOR EACH LAP SPLICE REQUIRED (LAP LENGTH MAY BE LARGER THAN 2'-0")														
ALL DIMENSIONS ARE OUT TO OUT														
ALL REBAR IS GRADE 60														
ALL REBAR IS PLAIN, EXCEPT AS NOTED WITH "E" IS EPOXY COATED.														
ALL WELDED REINFORCEMENT TO MEET MDT SUPPLEMENTAL SPECIFICATIONS 624.03.1.3 [ANSI/AASHTO/AWS D1.5, D1.1, D1.4]														

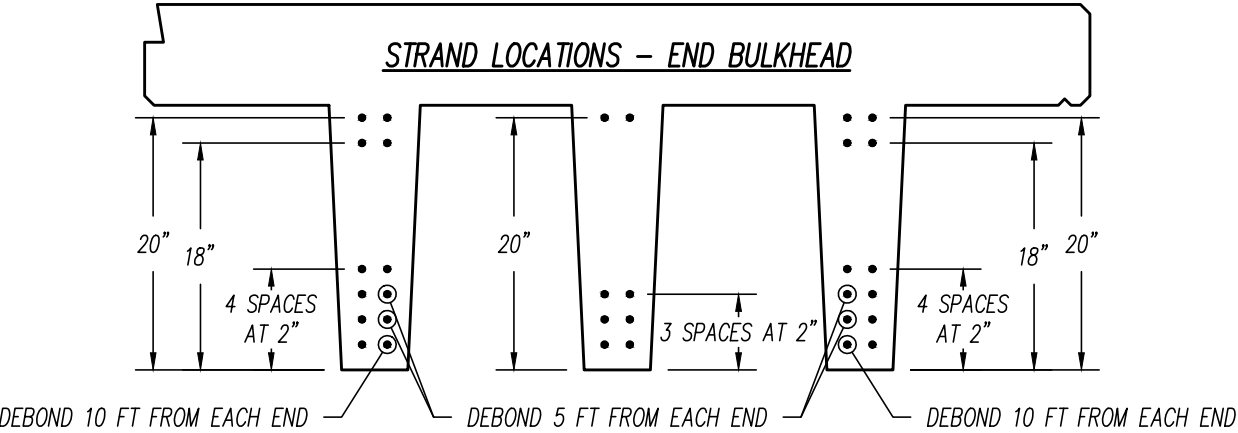
 <p><b>Rinker</b> MATERIALS® A QUIKRETE® COMPANY</p>		<p>Rapid City, South Dakota 4310 Pendleton Drive Rapid City, SD 57701 (605) 718-4111</p>	
SCALE: NONE	PROJECT: HEAD LANE BRIDGE REPLACEMENT		
DATE: 01/31/2025	STA. 9+79.62 – MDT BRIDGE ID: 03440		
OR# 6024133BR1	LEWIS AND CLARK COUNTY, MONTANA		
DR'N BY: JWB	CUSTOMER: LEWIS AND CLARK COUNTY PUBLIC WORKS		
CHK'D BY: —	DWG NAME: 6024133BR1-06		
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SCALE:	NONE	PROJECT:	HEAD LANE BRIDGE REPLACEMENT
DATE:	01/31/2025		STA. 9+79.62 – MDT BRIDGE ID: 03440
OR#:	6024133BR1		LEWIS AND CLARK COUNTY, MONTANA
DR'N BY:	JWB	CUSTOMER:	LEWIS AND CLARK COUNTY PUBLIC WORKS
CHK'D BY:	—	DWG NAME:	6024133BR1-07
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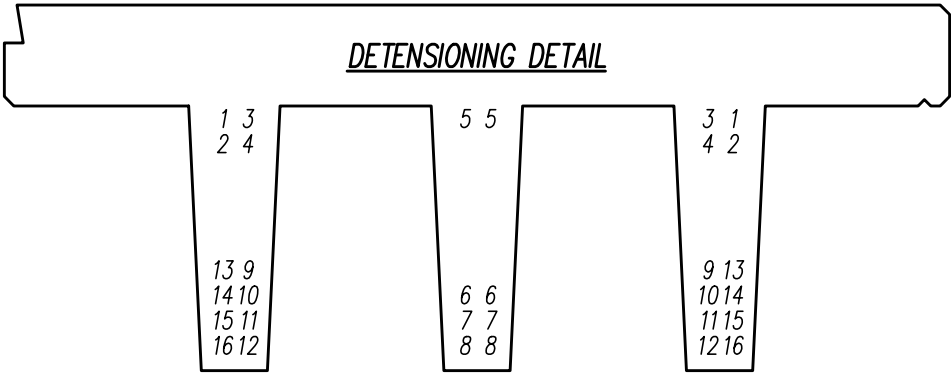
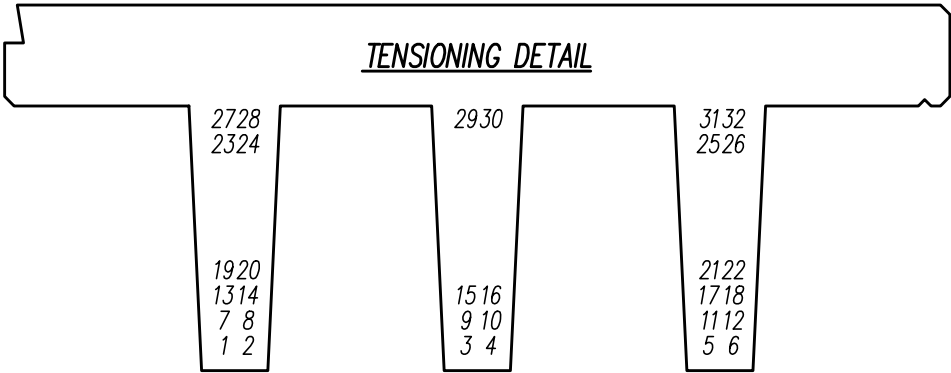


BEAM LAYOUT – NOT TO SCALE



STRAND REQUIRED  
32 = STRAIGHT  
0 = HARPED  
-----  
32 = TOTAL

BED LENGTH = 160'-8"  
1 OR 2 BEAMS PER ROUND  
12  $\frac{3}{16}$ " = GROSS ELONGATION  
(MEASURED ELONGATION AFTER 5000 LBS. PRELOAD INCLUDING  $\frac{1}{2}$ " FOR LIVE END SEATING)  
  
11  $\frac{11}{16}$ " = NET ELONGATION (AFTER RELEASE OF STRESSING JACK FROM STRAND)  
32400 LBS = GROSS FORCE (FINAL GAGE READING)  
RELEASE STRENGTH = 5500 psi  
28 DAY STRENGTH = 7000 psi  
  
ESTIMATED CAMBER AT RELEASE = 1"



**Rinker**  
MATERIALS  
A QUORRETEC COMPANY

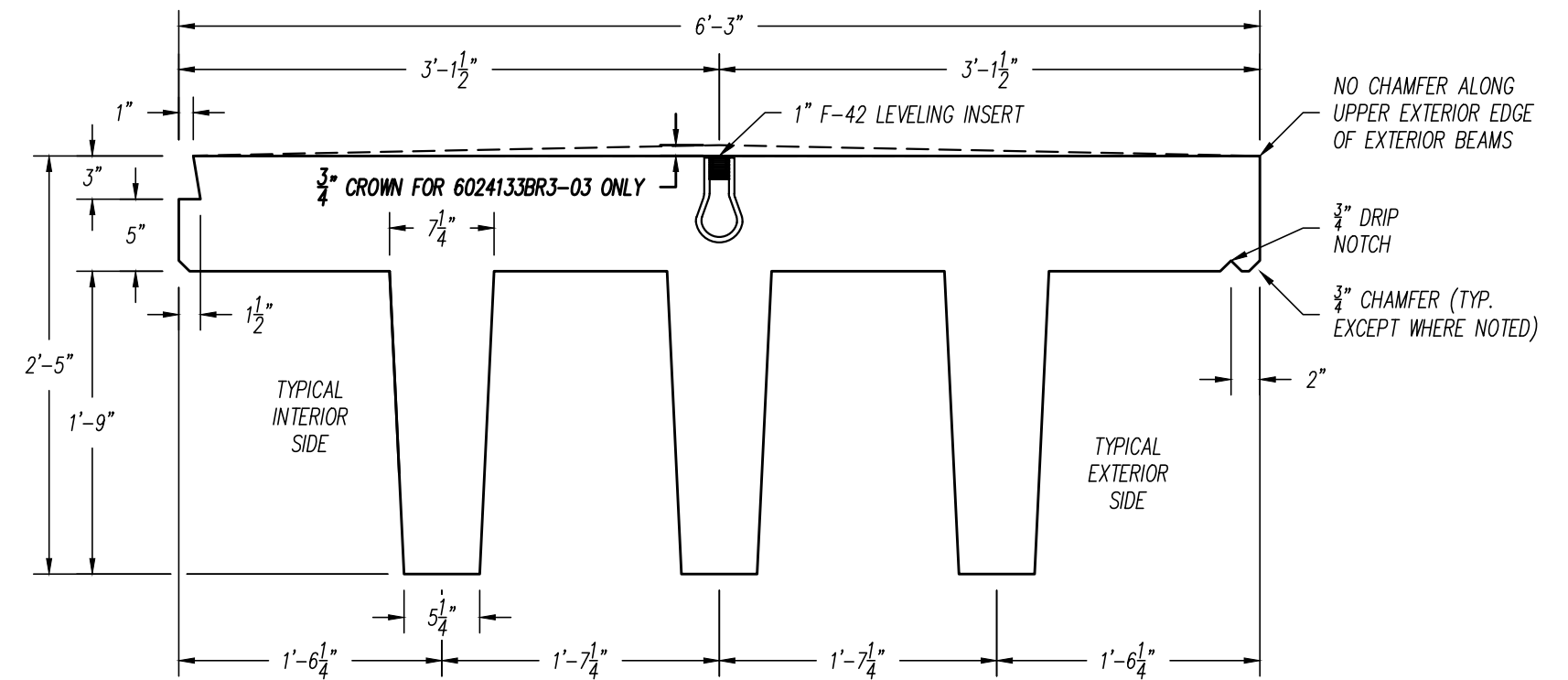
Rapid City, South Dakota  
4310 Pendleton Drive  
Rapid City, SD 57701  
(605) 718-4111

SCALE: NONE	PROJECT: HEAD LANE BRIDGE REPLACEMENT STA. 9+79.62 – MDT BRIDGE ID: 03440 LEWIS AND CLARK COUNTY, MONTANA
DATE: 01/31/2025	
OR#: 6024133BR1	CUSTOMER: LEWIS AND CLARK COUNTY PUBLIC WORKS
DR'N BY: JWB	
CHK'D BY: —	
DWG NAME: 6024133BR1-08	
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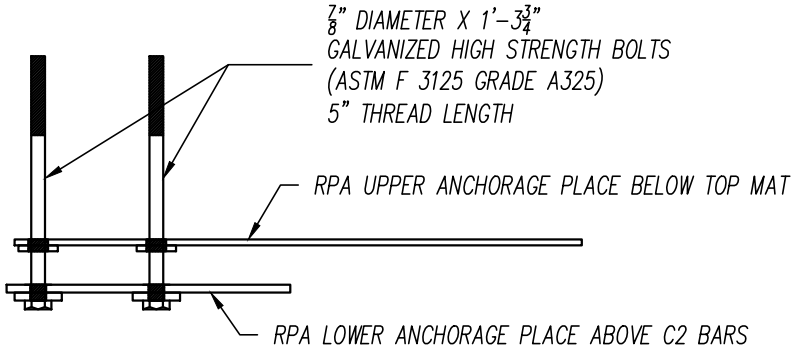
NOTES

- 1) USE  $\frac{1}{2}$ " DIA. PRESTRESS STRAND (270 ksi) LOW LAX AS MANUFACTURED PER ASTM SPEC. A-416 BY INSTEEL OR SUMIDEN WIRE (U.S.).  $F_i = 202.5$  ksi
- 2) BEAM REINFORCING STEEL WILL BE SUPPORTED WITH 1" SLAB BOLSTERS - (GALVANIZED).
- 3) DEFORMATIONS ON SWEDGED BOLTS ARE TO BE MADE WITHOUT REMOVING METAL.
- 4) AN APPROVED LOAD CELL WILL BE AVAILABLE FOR CHECKING STRESSES DURING FABRICATION.
- 5) BEAM WEIGHTS ARE APPROXIMATE ONLY.
- 6) STRAND TENSIONING: SINGLE STRAND (ANY SEQUENCE).

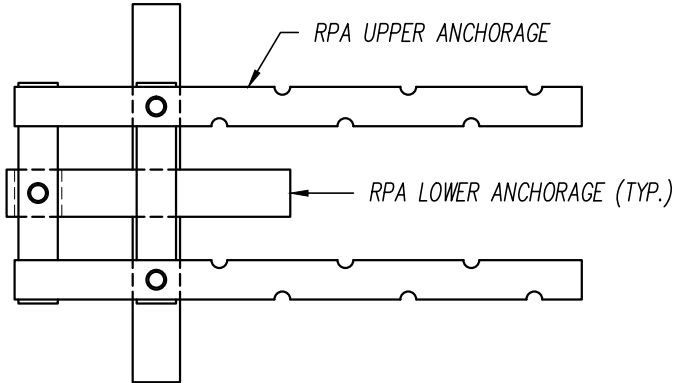


TYPICAL BEAM SECTION

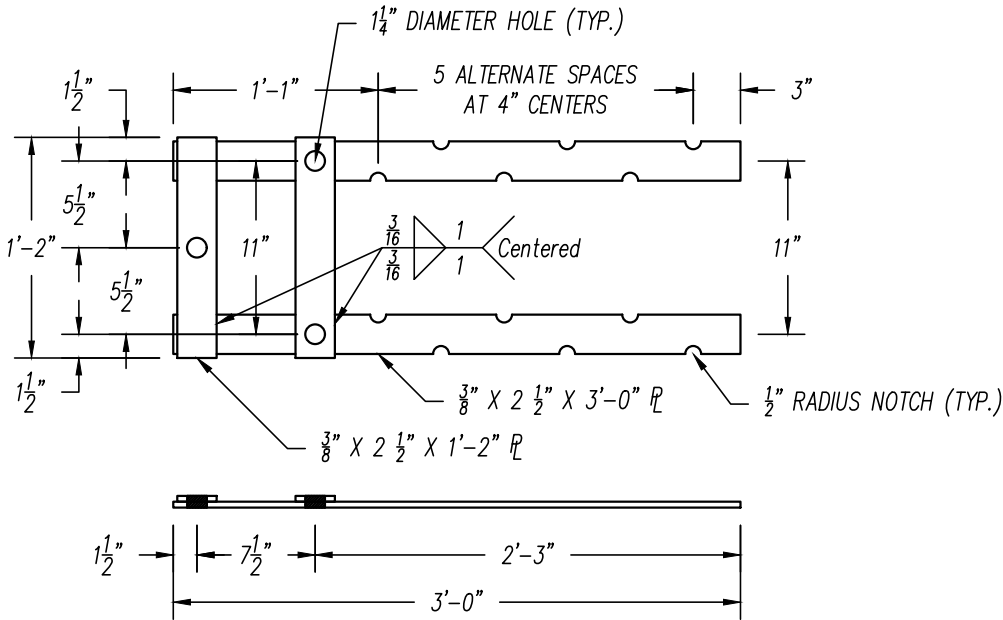
 <p><b>Rinker</b> MATERIALS® A QUINCY COMPANY</p>	Rapid City, South Dakota 4310 Pendleton Drive Rapid City, SD 57701 (605) 718-4111									
	<table border="1"> <tr> <td>SCALE: NONE</td> <td>PROJECT: HEAD LANE BRIDGE REPLACEMENT</td> </tr> <tr> <td>DATE: 01/31/2025</td> <td>STA. 9+79.62 – MDT BRIDGE ID: 03440</td> </tr> <tr> <td>OR#: 6024133BR1</td> <td>LEWIS AND CLARK COUNTY, MONTANA</td> </tr> <tr> <td>DR'N BY: JWB</td> <td>CUSTOMER: LEWIS AND CLARK COUNTY PUBLIC WORKS</td> </tr> <tr> <td>CHK'D BY: —</td> <td>DWG NAME: 6024133BR1-09</td> </tr> </table>	SCALE: NONE	PROJECT: HEAD LANE BRIDGE REPLACEMENT	DATE: 01/31/2025	STA. 9+79.62 – MDT BRIDGE ID: 03440	OR#: 6024133BR1	LEWIS AND CLARK COUNTY, MONTANA	DR'N BY: JWB	CUSTOMER: LEWIS AND CLARK COUNTY PUBLIC WORKS	CHK'D BY: —
SCALE: NONE	PROJECT: HEAD LANE BRIDGE REPLACEMENT									
DATE: 01/31/2025	STA. 9+79.62 – MDT BRIDGE ID: 03440									
OR#: 6024133BR1	LEWIS AND CLARK COUNTY, MONTANA									
DR'N BY: JWB	CUSTOMER: LEWIS AND CLARK COUNTY PUBLIC WORKS									
CHK'D BY: —	DWG NAME: 6024133BR1-09									



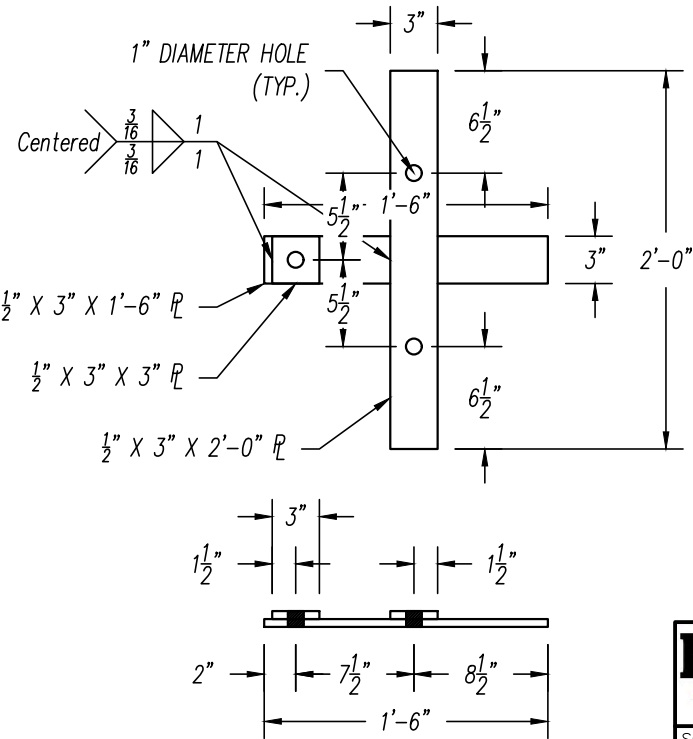
PRECAST RAILPOST ASSEMBLY SIDE VIEW



PRECAST RAILPOST ASSEMBLY TOP VIEW



RPA UPPER ANCHORAGE



RPA LOWER ANCHORAGE

<b>Rinker</b> MATERIALS® A QUORRETT COMPANY		Rapid City, South Dakota 4310 Pendleton Drive Rapid City, SD 57701 (605) 718-4111	
SCALE:	NONE	PROJECT:	HEAD LANE BRIDGE REPLACEMENT
DATE:	01/31/2025		STA. 9+79.62 – MDT BRIDGE ID: 03440
OR#:	6024133BR1		LEWIS AND CLARK COUNTY, MONTANA
DR'N BY:	JWB	CUSTOMER:	LEWIS AND CLARK COUNTY PUBLIC WORKS
CHK'D BY:	—	DWG NAME:	6024133BR1-10
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BEARING ASSEMBLIES AND MISCELLANEOUS HARDWARE QUANTITIES

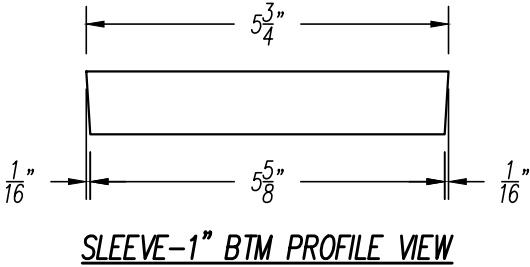
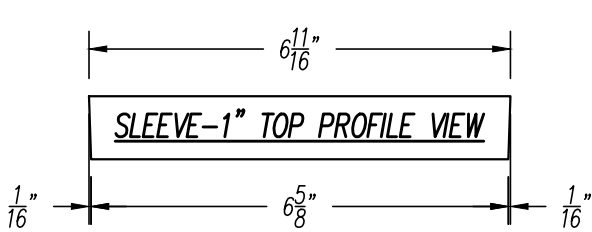
ITEM DESIGNATION	LOOSE OR EMBEDDED	ITEM DESCRIPTION	BEAM MARK						TOTALS	DATE		
			6024133BR1-01	6024133BR1-02	6024133BR1-03	6024133BR1-04	6024133BR1-05	CURB (2)		ORDERED	READY TO SHIP	SHIPPED
BAR	LOOSE	$\frac{3}{4}$ " X 2" X 3 $\frac{1}{2}$ " BAR – A36	5.5	11	11	11	5.5	0	44			
BP-TD	LOOSE	$\frac{3}{4}$ " X 5" X 6" NEOPRENE ELASTOMERIC BEARING PAD – 60 DUROMETER – AASHTO M251	6	6	6	6	6	0	30			
$\frac{1}{8}$ " SHIM-TD	LOOSE	$\frac{1}{8}$ " X 5" X 6" GALVANIZED PLATE	6	6	6	6	6	0	30			
$\frac{1}{4}$ " SHIM-TD	LOOSE	$\frac{1}{4}$ " X 5" X 6" GALVANIZED PLATE	6	6	6	6	6	0	30			
WELD TIE	EMBEDDED	$\frac{3}{8}$ " X 2" X 2" X 7" ANGLE WITH (2) H.A.S. – A36	11	22	22	22	11	0	88			
1" F-42	EMBEDDED	1" DIAMETER F-42 LEVELING INSERT (MIDSPAN)	1	1	1	1	1	0	5			
SLEEVE-1" TOP	EMBEDDED	1" DIAMETER X 6 $\frac{11}{16}$ " GALVANIZED PIPE SLEEVE – BEVELED	6	6	6	6	6	0	30			
SLEEVE-1" BTM	EMBEDDED	1" DIAMETER X 5 $\frac{3}{4}$ " GALVANIZED PIPE SLEEVE – BEVELED	6	6	6	6	6	0	30			
12UA875	EMBEDDED	12UA875 UTILITY ANCHOR	4	4	4	4	4	0	20			
RPA UPPER ANCHORAGE	EMBEDDED	RAILPOST ASSEMBLY UPPER ANCHORAGE	6	0	0	0	6	0	12			
RPA LOWER ANCHORAGE	EMBEDDED	RAILPOST ASSEMBLY LOWER ANCHORAGE	6	0	0	0	6	0	12			
RPA BOLT	EMBEDDED	$\frac{7}{8}$ " DIA. X 1'-3 $\frac{3}{4}$ " GALVANIZED HIGH STRENGTH BOLT – ASTM F 3125 GRADE A 325 – 5" THREAD	18	0	0	0	18	0	36			


NOTES

BEARING PADS SHALL MEET MDT SPECIFICATION 711.14

ALL PLATE HARDWARE TO MEET AASHTO M 270 GRADE 36

ALL WELD CONNECTIONS FOR BRIDGE STEEL ITEMS TO MEET MDT SUPPLEMENTAL SPECIFICATIONS 624.03.1.4 [ANSI/AASHTO/AWS D1.5, D1.1, D1.4]



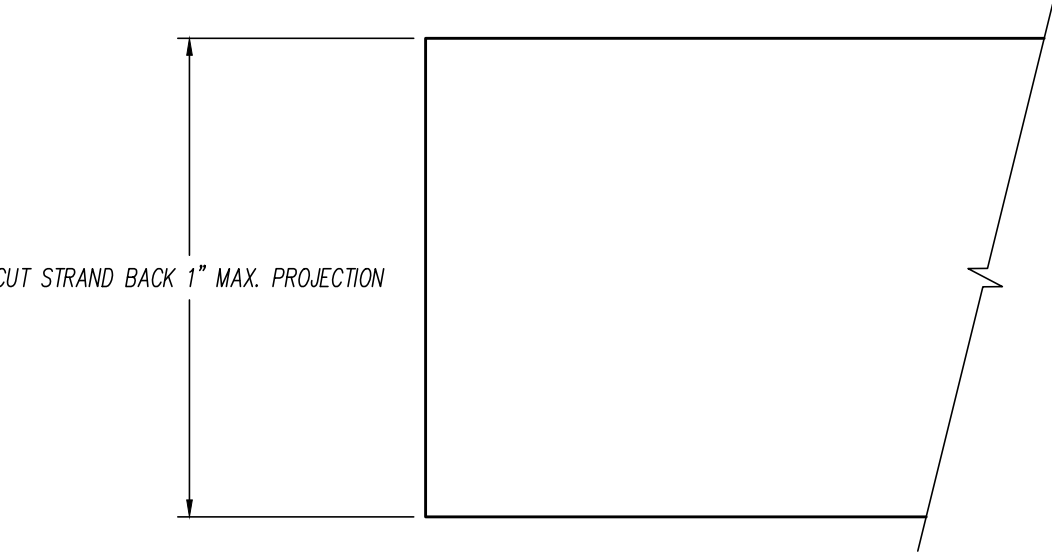
1	ADJUSTED SLEEVE-1" TOP DETAIL & DESCRIPTION	02/27/2025	JWB
REV:	DESCRIPTION:	DATE:	BY:
		Rapid City, South Dakota 4310 Pendleton Drive Rapid City, SD 57701 (605) 718-4111	
SCALE:	NONE	PROJECT: HEAD LANE BRIDGE REPLACEMENT	
DATE:	01/31/2025	STA. 9+79.62 – MDT BRIDGE ID: 03440	
OR#:	6024133BR1	LEWIS AND CLARK COUNTY, MONTANA	
DR'N BY:	JWB	CUSTOMER: LEWIS AND CLARK COUNTY PUBLIC WORKS	
CHK'D BY:	—	DWG NAME: 6024133BR1-11	
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NOTES:

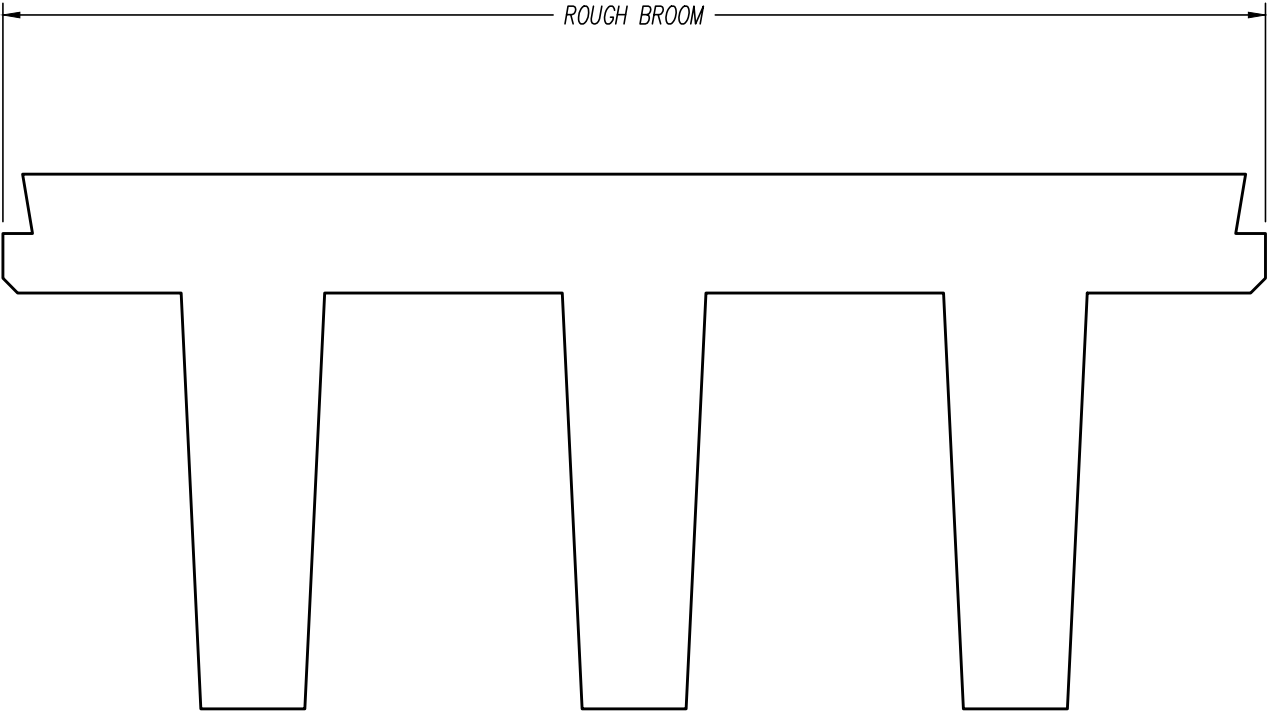
ANY BUG HOLE WITH A DIMENSION IN EXCESS OF 1/2" MUST BE FILLED.

OTHER FINISHING MAY BE REQUIRED, DEPENDING ON QUALITY OF FORMWORK, CONSOLIDATION OF CONCRETE, ETC.

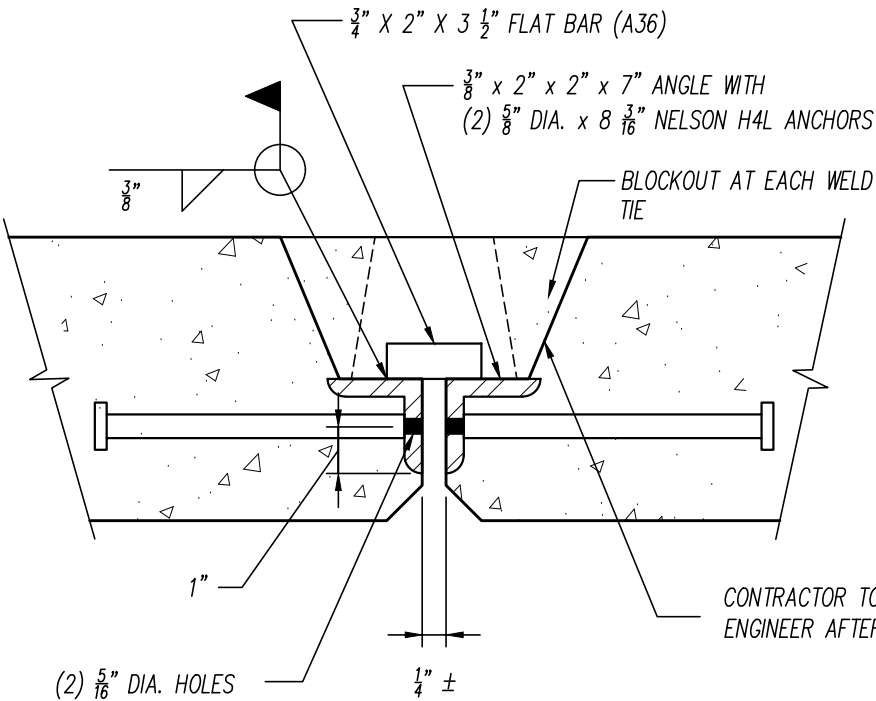
SACK AFTER CUTTING STRAND.



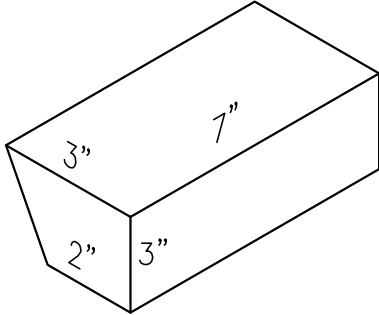
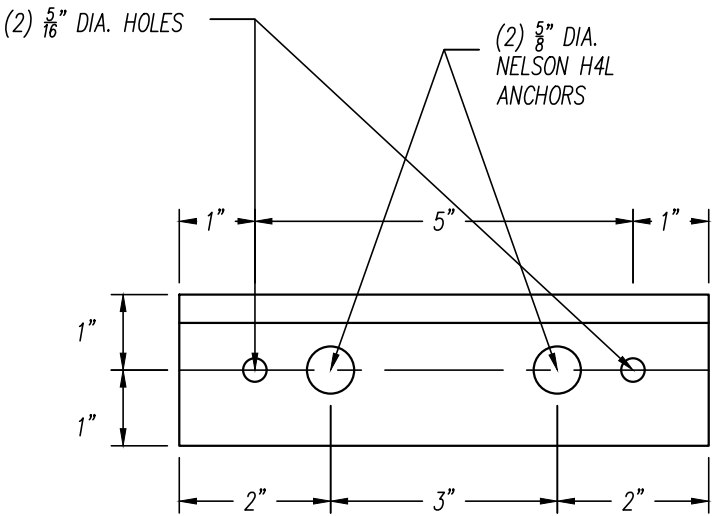
AT BEAM ENDS



TYPICAL FINISHING DETAILS



WELD TIE CONNECTION DETAIL



<b>Rinker</b> MATERIALS® A QUORRETT® COMPANY		Rapid City, South Dakota 4310 Pendleton Drive Rapid City, SD 57701 (605) 718-4111	
SCALE:	NONE	PROJECT:	HEAD LANE BRIDGE REPLACEMENT
DATE:	01/31/2025		STA. 9+79.62 – MDT BRIDGE ID: 03440
OR#:	6024133BR1		LEWIS AND CLARK COUNTY, MONTANA
DR'N BY:	JWB	CUSTOMER:	LEWIS AND CLARK COUNTY PUBLIC WORKS
CHK'D BY:	—	DWG NAME:	6024133BR1-12
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A. Maximum Allowable camber difference as specified in PCI Quality Control Manual Section 6.4.4 is limited to  $1/4"$  per 10 ft. ( $3/4"$  max). This is a production tolerance only. This tolerance may not apply to beams that have a span-to-span depth ratio approaching or exceeding 30.



B. Installation tolerances are specified in the project plans. If the differential is more than allowed by plan notes, this tolerance can be achieved by the contractor by several methods including but not limited to the following: lifting the end of a deck and stitch welding at points along the deck to meet specifications, loading a deck unit to bring it into tolerance prior to welding, or in some situations shimming the end of the deck unit.

*Application of any method to install deck units to meet this specification is completely the Contractor's responsibility and needs to be approved by the manufacturer and the Project Engineer prior to performing the work.*

NOTE: These methods apply for the following:  
Double Tee Deck Units  
Wide Flange Bulb Tee Deck Units  
Trideck Deck Units

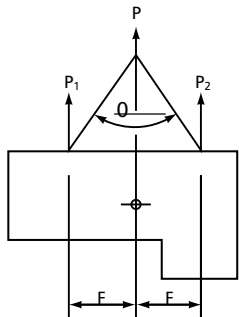
 <p><b>Rinker</b> MATERIALS® A QUINCY COMPANY</p>	Rapid City, South Dakota 4310 Pendleton Drive Rapid City, SD 57701 (605) 718-4111	
	SCALE: <i>NONE</i>	PROJECT: <i>HEAD LANE BRIDGE REPLACEMENT STA. 9+79.62 – MDT BRIDGE ID: 03440 LEWIS AND CLARK COUNTY, MONTANA</i>
DATE: <i>01/31/2025</i>	OR#: <i>6024133BR1</i>	
DR'N BY: <i>JWB</i>	CUSTOMER: <i>LEWIS AND CLARK COUNTY PUBLIC WORKS</i>	
CHK'D BY: <i>—</i>	DWG NAME: <i>6024133BR1-13</i>	
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General and Technical Information



Calculating Sling/Anchor Loads  
Applies to Swift Lift; Fleet-Lift and Utility Anchors

The table shows multiplication factors that are used in a simplified method to determine the increased load transferred from the sling to the anchor when using multi-leg slings. As the fleet angle (θ) increases, the sling load increases and transfers an even larger to the anchor.



**Warning:** Avoid the use of Fleet Angles greater than 120° as their use can overload and fall anchors causing a premature failure resulting in property damage, serious personal injury or death.

- P = Actual weight of precast element including adhesion
- θ = Fleet angle
- F = Multiplication factor
- P x F = Effective weight of precast element
- P1 = P2 = Anchor load using 2-leg sling
- P1 = P2 = P x F/2 anchors

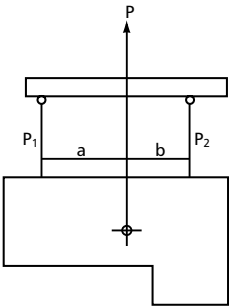
Fleet Angle "θ"	Multiplication Factor "F"
0°	1.00
16°	1.01
30°	1.04
45°	1.08
60°	1.16
75°	1.26
90°	1.41
105°	1.64
120°	2.00

Calculating Sling/Anchor Loads  
Applies to Swift Lift; Fleet-Lift and Utility Anchors

When anchors are not located equally about the center of gravity of the precast element, calculate the applied anchor loads statically.

The load will always balance under the crane hook. Calculate anchor loads as follows:

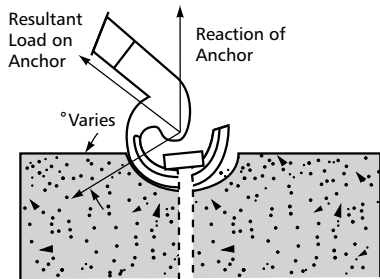
$P_1 = P \times b/a + b$   
 $P_2 = P \times a/a + b$



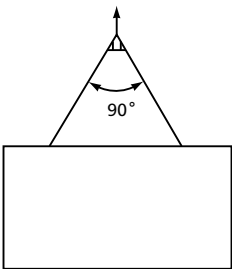
Rigging For Traveling Over Rough Ground

When a precast element is to transported over rough ground, use a 60° "V" type rigging. This will help reduce dynamic loads.

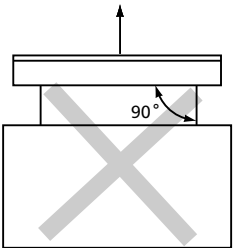
When using forklift to transport precast elements over rough ground, Dayton Superior recommends that the user reduce the anchor safe working load by 50%. This safe working load reduction will help offset the effects of any dynamic loads that might occur.



Load Diagram Compressive Force in Concrete



Right



Wrong

General and Technical Information

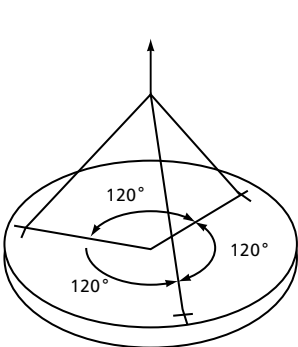


Rigging

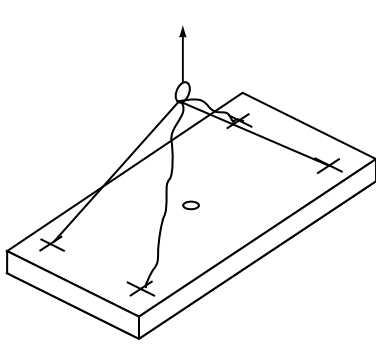
As with all lifting systems, the selection of the proper lifting anchor is based on several factors. One of the most important is the accurate determination of the load that will be applied to each anchor. When using certain rigging arrangements it is impossible to accurately determine the load that is applied to each anchor. This is due to the tolerances in sling lengths and the location of the lifting anchors in the precast concrete element. In order to eliminate this problem, and make certain that the applied loads are equalized to each of the lifting anchors, an equalizer (spreader) beam and rollers blocks are used.

The use of equalizer beams and roller blocks permits a qualified person to determine the exact load distribution. When an equalizer beam and roller blocks are used in the plant, they must also be used in the field. If the user is in doubt about the field use of an equalizer beam and roller blocks, then only two anchors should be assumed to be load carrying.

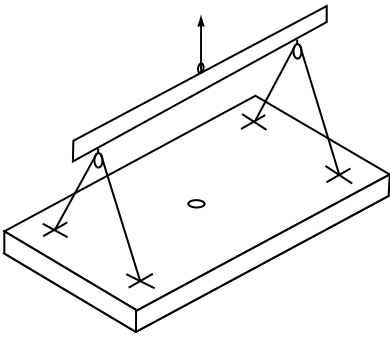
Several typical rigging arrangements are shown below along with a determination as to the number of anchors that will be load carrying.



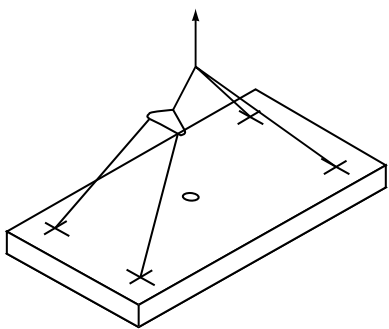
**Illustration R1**  
3 anchors will carry load when used on round precast concrete elements with the anchors spaced 120° apart.  
2 anchors will carry load when used on square or rectangular precast elements.



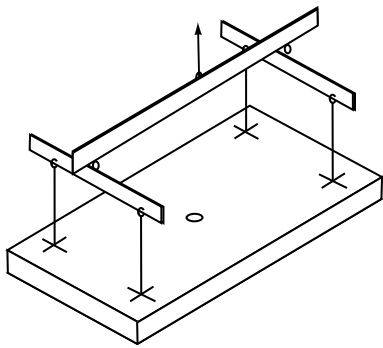
**Illustration R2**  
2 anchors will carry load when using 4 individual slings. The other 2 anchors will act to balance the precast concrete element.



**Illustration R3**  
4 anchors will carry load when using 2 individual slings running over 2 roller blocks supported by an equalizer beam.



**Illustration R4**  
4 anchors will carry load when using 4 individual slings in conjunction with the Dayton Superior T-46 Spreader Beam with Twin 7-1/2-ton Shackles.



**Illustration R5**  
2 anchors will carry load when using 4 individual slings attached to a 3 beam equalizer beam. This rigging arrangement should be used when angle pulls need to be avoided.

The above assumes that the anchors are spaced equally about the center of gravity of the precast concrete element and that the center of lift is directly above the center of gravity. Failure to locate the center of lift directly over the center of gravity will cause the precast element to tilt.



Utility Anchor System



Utility Anchor System

The Dayton Superior Utility Anchor System is designed to economically simplify the lifting and handling of precast concrete elements. Its economics, ease of use and versatility will be a welcome addition to your precast operations.

Key Advantages

- High strength – up to 24,000 lbs. SWL
- No special lifting hardware required
- Uses a standard hook or clevis
- Easy to install and use
- Utilizes reusable 90° and 45° polyurethane recess plugs
- Eliminates “through holes” in the precast element
- An economical and versatile system – applicable to any precast concrete element

Added Benefit

Utility contractors can use the utility anchor effectively as a pulling iron. When used as a pulling iron, the safe working loads may be increased by 33%, based on the use of a 3 to 1 factor of safety.

The design of the Dayton Superior Utility Anchor Utility System assures the precaster of an economical, user-friendly system for lifting and handling precast concrete elements.

Utilize the Utility Anchor System to:

- Remove precast elements from their forms
- Handle in the precast yard
- Load for shipment
- Unload and place at the job site

The precaster is able to do it all without the need for any special lifting equipment or hardware. Simply use a standard hook or shackle to connect slings to the utility anchor for a safe lift.

The Utility Anchor System uses a polyurethane recess plug to create a void in the concrete. The concrete void created for the P-75-H utility anchor is sufficiently large to accept the following:

- 1) 6-ton Grade 8 alloy hook or

2) 7-ton forged alloy shackle

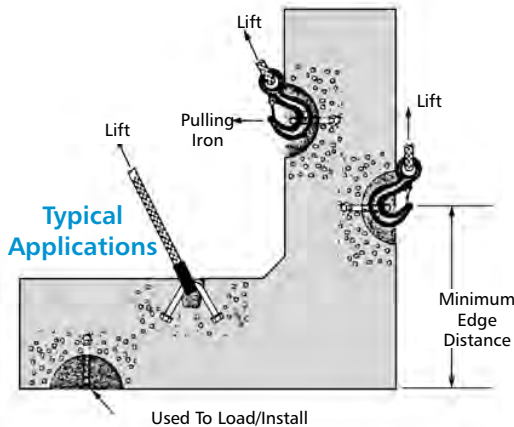
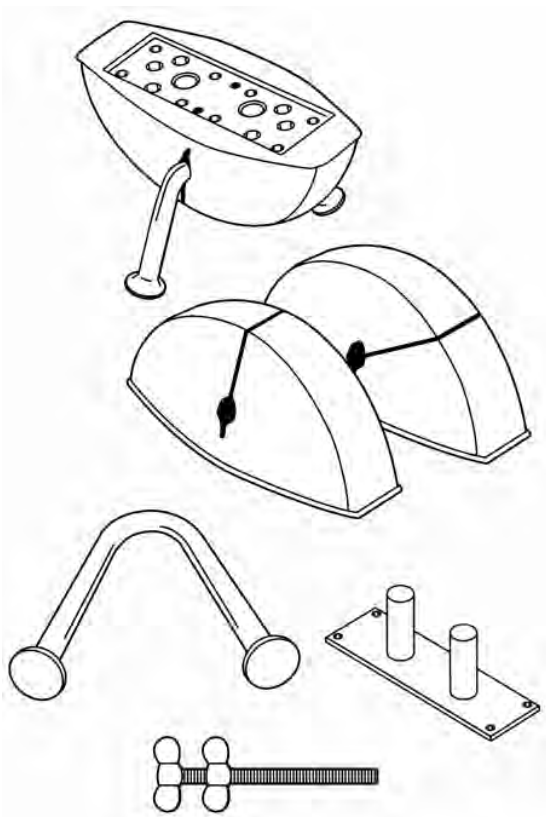
For the P-75-S Utility Anchors:

- 3) 15-ton cast/alloy hook or
- 4) 15-ton forged alloy shackle

DO NOT use larger hooks or shackles; they will apply additional and unintended loads to the utility anchor and could cause a premature failure of the concrete or anchor.

Anchor Placement

Placement of the Utility Anchor is dependent on the structural shape of the precast element. Utility anchors are not designed for thin edge installation. Always maintain minimum edge distances. For special conditions, contact the nearest Dayton Superior Technical Service Department for assistance.



Utility Anchor  
Lifting System

Utility Anchor  
Lifting System

Utility Anchor System

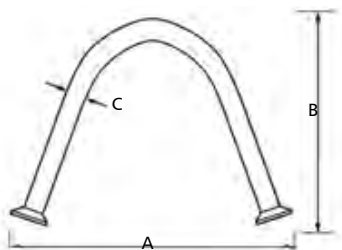


P-75 and P-75-H Utility Anchor

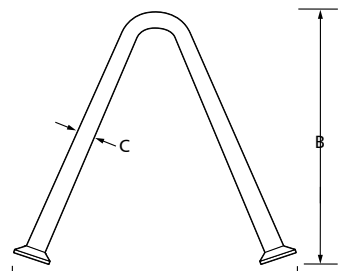
The Dayton Superior Utility Anchors are available in three diameters and a series of lengths for specific concrete thickness. The utility anchor can be set in either a 90° or a 45° anchor orientation using the appropriate setting plug.

P-75 and P-75-H Utility Anchor						
Anchor	Type	Product Code No.	A	B	C	End Shape
P-75	4UA444	121877	5-1/4"	3-1/8"	0.444"	Swift Lift
	5UA444	123442	6"	3-3/4"	0.444"	Swift Lift
	6UA444	121888	7-3/8"	4-3/4"	0.444"	Swift Lift
	5UA671	123441	6 7/16"	3-3/4"	0.671"	Swift Lift
	6UA671	121889	7-3/8"	4-3/4"	0.671"	Swift Lift
	8UA671	121891	9-3/4"	6-3/4"	0.671"	Swift Lift
P-75-H	12UA875	124738	15-7/8"	11"	0.875"	Swift Lift

Anchor	Type	Product Code No.	Minimum Panel Thickness	Safe Working Load Tension 90	Safe Working Load Shear 90	Safe Working Load Tension/Shear 45	Minimum Edge Distance
P-75	4UA444	121877	4"	3,200	5,800	2,260	9"
	5UA444	123442	5"	3,860	7,710	2,730	11"
	6UA444	121888	5 5/8"	4,460	9,460	3,150	15"
	5UA671	123441	5"	4,560	8,430	3,220	11"
	6UA671	121880	5 5/8"	7,320	15,780	5,170	15"
	8UA671	121801	7 5/8"	10,830	18,850	7,660	20"
P-75 H	12UA875	124738	12"	24,000	24,000	24,000	30"



P-75 Utility Anchor



P-75-H Utility Anchor

**To Order:**  
Specify: (1) quantity, (2) name, (3) product code.  
**Example:**  
200, P-75 Utility Anchors, 5UA444.

Note:

- 1) Compressive strength of normal weight concrete to be 4,000 psi at time of initial lift.
- 2) Safe working loads provide an approximate factor of safety of 4 to 1.
- 3) Utility anchors to be installed at 90° to surface of the concrete.
- 4) Shear safe working loads are based on loading in the direction of the top of the precast concrete element.

P-75-C Utility Anchor with Clip

The Dayton Superior Utility Anchor with Clip is designed to allow the Utility Anchor to be secured to the wire mesh cage. This product utilizes the P-75 Utility Anchors with 2 wire clips welded to opposite legs of the anchor. These wire clips are positioned to hold the utility anchor with Void to the wire mesh in the proper position in the wall for lifting your precast product. Both the 5UA and 6UA anchors in 0.444 and 0.671 diameters for 9" wire spacing are in stock. Other anchor and wire spacing are readily available from our Parsons KS plant.

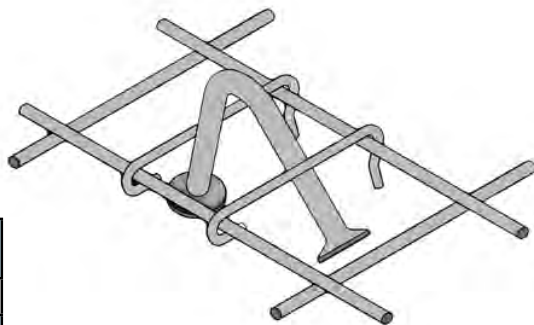
To Order:

Specify: (1) quantity, (2) name, (3) product code (4) anchor size, (5) wire spacing (6) wall thickness.

Example:

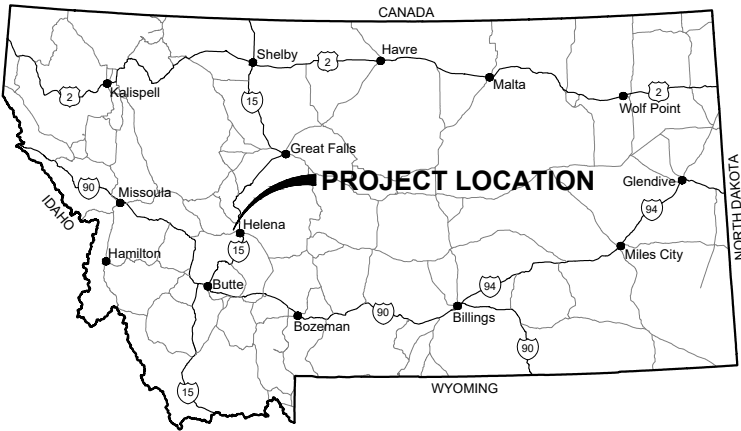
200, P-75-C, #121443, 5UA444 anchor, 9" wire spacing, 5" wall.

Product Code	Utility Anchor	Wire Clip Lengths	Wall Thickness
123443	5UA444	9"	5"
121890	5UA671	9"	5"
121892	6UA444	9"	
121893	6UA671	9"	
127446	8UA671	9"	8"



# CONSTRUCTION PLANS

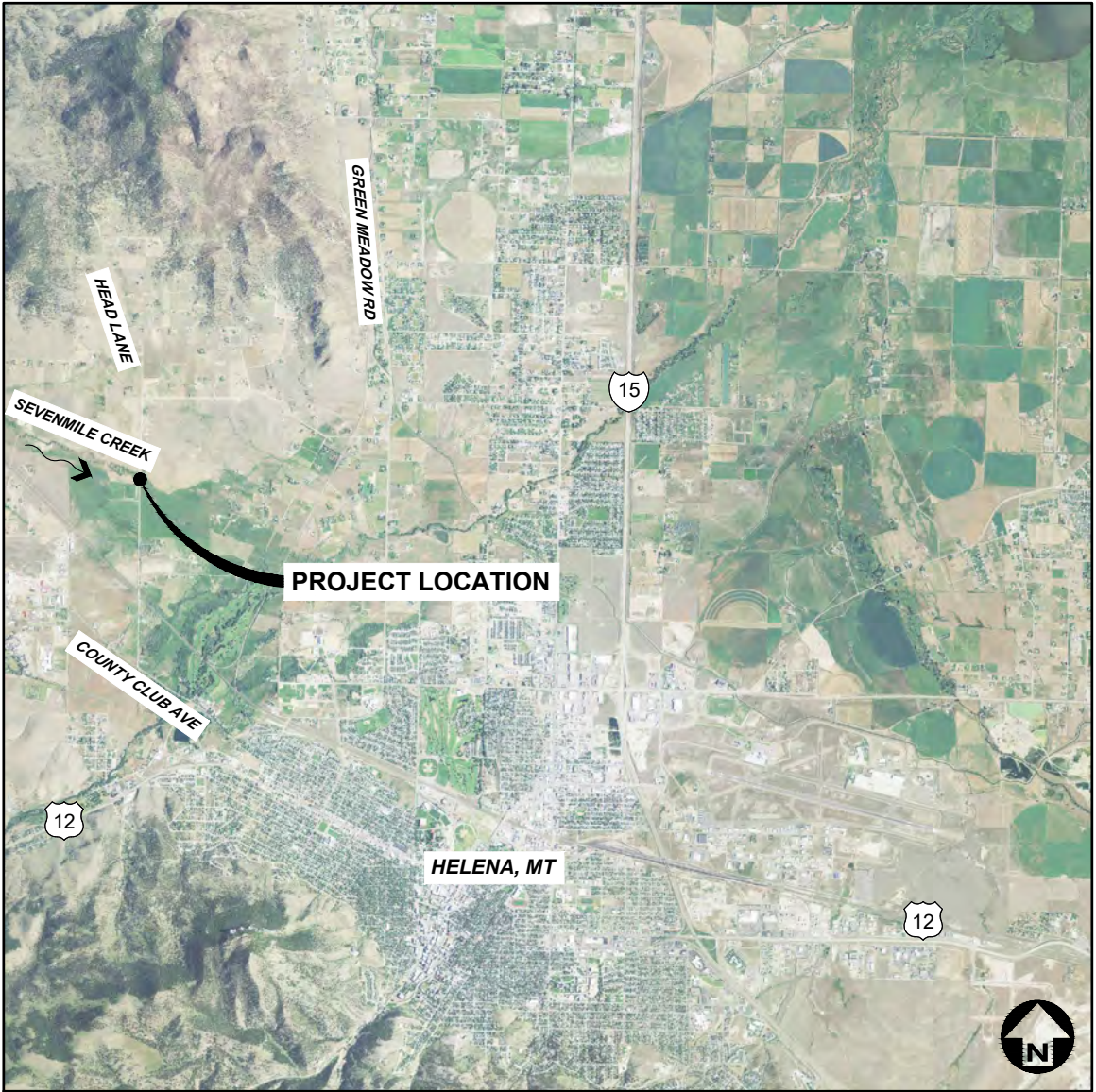




# LEWIS AND CLARK COUNTY HEAD LANE BRIDGE REPLACEMENT

MDT BRIDGE ID: 03440

LATITUDE: 46°38'12.43" NORTH, LONGITUDE: 112°5'4.11" WEST



NOT TO SCALE

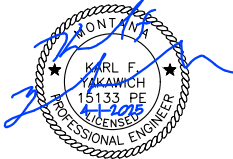
PLANS PREPARED FOR:

LEWIS & CLARK COUNTY



APPROVED BY:

KARL YAKAWICH, P.E.  
GREAT WEST ENGINEERING



QA/QC BY:

RYAN ELLIOTT, P.E.  
GREAT WEST ENGINEERING

PLANS PREPARED BY:

JORDAN CODDINGTON, E.I.



## SHEET INDEX

PROJECT: 1-17277  
DATE: APRIL 1, 2025

SHEET 1	COVER
SHEET 2	LEGEND & GENERAL NOTES
SHEET 3	HEAD LANE PLAN & PROFILE
SHEET 4	BRIDGE PLAN & ELEVATION
SHEET 5	FOUNDATION & RIPRAP LAYOUT
SHEET 6	ABUTMENT PLAN & ELEVATION
SHEET 7	BRIDGE DETAILS
SHEET 8	BRIDGE DETAILS
SHEET 9	APPROACH SLAB DETAILS
SHEET 10	HEAD LANE CROSS-SECTIONS
SHEET 11	HEAD LANE CROSS-SECTIONS
SHEET 12	HEAD LANE CROSS-SECTIONS
SHEET 13	HEAD LANE CROSS-SECTIONS
SHEET 14	HEAD LANE CROSS-SECTIONS

MDT STANDARD DRAWINGS  
SBR-W830 STANDARD BRIDGE RAIL TYPE W830



EXISTING HEAD LANE BRIDGE PROFILE  
LOOKING DOWNSTREAM



EXISTING HEAD LANE BRIDGE  
LOOKING NORTH

MCEP PROJECT #: MT-MCEP-CG-25-043

NO.	REVISION DESCRIPTION	BY	DATE	SET NO.
△				SHEET NO. <b>1</b>
△				
△				
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Y:\Shared\Helena Projects\1-17277-L&C Bridge On-Call 2017\TO 20 - Head Lane Bridge Design\CADD 1-17277-TO20-02-Legend and General Notes.dwg

ABBREVIATIONS

⊙	AT	LPG	LIQUID PROPANE GAS
Δ	ANGLE OF DEFLECTION, DELTA ANGLE	LT	LEFT
<PT	ANGLE POINT	MAX	MAXIMUM
AB	ANCHOR BOLT	MD	MEASURE DOWN
ABDN	ABANDON	MFD	MANUFACTURED
AC	ASBESTOS CONCRETE	MFR	MANUFACTURE, MANUFACTURER
ADDN	ADDITIONAL	MH	MANHOLE
ADJ	ADJACENT	MIN	MINIMUM
AFF	ABOVE FINISHED FLOOR	MISC	MISCELLANEOUS
ALT	ALTERNATE	MJ	MECHANICAL JOINT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MOV	MOTOR OPERATED VALVE
APPROX	APPROXIMATE	MPWSS	MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS
APVD	APPROVED	N	NORTH
ARCH	ARCHITECTURE, ARCHITECTURAL	NE	NORTHEAST
ASPH	ASPHALT	NG	NATURAL GAS
AVE	AVENUE	NIC	NOT IN CONTRACT
AVG	AVERAGE	NO	NUMBER
BFV	BUTTERFLY VALVE	NOM	NOMINAL
BLDG	BUILDING	NTS	NOT TO SCALE
BLK	BLOCK	NW	NORTHWEST
BLVD	BOULEVARD	OC	ON CENTER
BM	BEAM, BENCHMARK	OD	OUTSIDE DIAMETER
BOT	BOTTOM	OF	OVERFLOW
BRG	BEARING	OH	OVERHEAD
BRKT	BRACKET	OHP	OVERHEAD POWER
BVC	BEGIN VERTICAL CURVE	OHT	OVERHEAD TELEPHONE
C-C	CENTER TO CENTER	OPNG	OPENING
CHAN	CHANNEL	PC	POINT OF CURVATURE
CHK	CHECK	PCC	POINT OF COMPOUND CURVATURE
CI	CAST IRON	PE	PLAIN END, POLYETHYLENE
CIPC	CAST-IN-PLACE CONCRETE	PERP	PERPENDICULAR
CIRC	CIRCULAR	PI	POINT OF INTERSECTION
CJ	CONSTRUCTION JOINT, CONTROL JOINT	PL	PROPERTY LINE
CL	CENTER LINE	PNL	PANEL
CLR	CLEAR, CLEARANCE	PRC	POINT OF REVERSE CURVATURE
CMP	CORRUGATED METAL PIPE	PREFAB	PREFABRICATED
CMU	CONCRETE MASONRY UNITS	PRELIM	PRELIMINARY
CO	CLEANOUT	PREP	PREPARE, PREPARATION
COL	COLUMN	PROP	PROPERTY
CONC	CONCRETE	PRV	PRESSURE REDUCING VALVE
CONSTR	CONSTRUCTION	PSF	POUNDS PER SQUARE FOOT
CONT	CONTINUE, CONTINUED, CONTINUOUS	PSI	POUNDS PER SQUARE INCH
CONTR	CONTRACTOR	PT	POINT, POINT OF TANGENCY
COORD	COORDINATE	PVC	POLYVINYL CHLORIDE
CP	CONTROL PANEL, CONTROL POINT	PVI	POINT OF VERTICAL INTERSECTION
CPLG	COUPLING	PVMT	PAVEMENT
CTR	CENTER	R, RAD	RADIUS
CTV	CABLE TELEVISION	RC	REINFORCED CONCRETE
CU	CUBIC, COPPER	RCP	REINFORCED CONCRETE PIPE
CF	CUBIC FEET	RD	ROAD
CULV	CULVERT	RDCR	REDUCER
CY	CUBIC YARD	REBAR	REINFORCEMENT BAR
DET	DETAIL	REF	REFERENCE
DI	DUCTILE IRON, DRAIN INLET	REINF	REINFORCE
DIA, ∅	DIAMETER	REQD	REQUIRED
DIAG	DIAGONAL	RR	RAILROAD
DIM	DIMENSION	RST	REINFORCING STEEL
DR	DRIVE	RT	RIGHT
DWG	DRAWING	R/W	RIGHT-OF-WAY
E	EAST	S	SOUTH, SANITARY SEWER
EA	EACH	SAN	SANITARY
EL, ELEV	ELEVATION	SCH	SCHEDULE
ELB	ELBOW	SD	STORM DRAIN
ELEC	ELECTRIC, ELECTRICAL	SDWK	SIDEWALK
ENCLOS	ENCLOSE	SE	SOUTHEAST
ENGR	ENGINEER	SECT	SECTION
EOP	EDGE OF PAVEMENT	SF	SQUARE FOOT
EQ	EQUAL, EQUALLY	SHT	SHEET
EQ SP	EQUALLY SPACED	SIM	SIMILAR
EQUIP	EQUIPMENT	SLP	SLOPE
EQUIV	EQUIVALENT	SPEC	SPECIFICATION
EVC	END VERTICAL CURVE	SQ	SQUARE
EW	EACH WAY	SSTL	STAINLESS STEEL
EXC	EXCAVATE	STA	STATION
EXP	EXPANSION	SS	SANITARY SEWER SERVICE
EXP JT	EXPANSION JOINT	STD	STANDARD
EXST	EXISTING	ST	STREET
FCV	FLOW CONTROL VALVE	STL	STEEL
FD	FLOOR DRAIN	STRUCT	STRUCTURE
FDN	FOUNDATION	SW	SOUTHWEST
FES	FLARED END SECTION	SYM	SYMMETRICAL
FET	FLARED END TERMINAL	TB	THRUST BLOCK
FF	FINISHED FLOOR	TBC	TOP BACK OF CURB
FG	FINISH GRADE	TBM	TEMPORARY BENCH MARK
FHYD	FIRE HYDRANT	TEL	TELEPHONE
FJ	FLANGE JOINT	TEMP	TEMPORARY
FL	FLOW LINE	THRU	THROUGH
FLEX	FLEXIBLE	TYP	TYPICAL
FM	FORCEMAIN	UG	UNDERGROUND
FT	FOOT, FEET	UGP	UNDERGROUND POWER
FO	FIBER OPTIC	UGT	UNDERGROUND TELEPHONE
FTG	FOOTING, FITTING	UTIL	UTILITY
G	NATURAL GAS	V	VALVE, VOLT
GA	GAGE, GAUGE	VB	VALVE BOX
GAL	GALLON	VERT	VERTICAL
GALV	GALVANIZED	VOL	VOLUME
GND	GROUND	W	WEST, WATER
GVL	GRAVEL	WTR	WATER
HB	HOSE B/B	WD	WOOD
HDPE	HIGH DENSITY POLYETHYLENE	W/	WITH
HOR, HORIZ	HORIZONTAL	W/O	WITHOUT
HWY	HIGHWAY	WL	WETLAND
HYD	HYDRANT	WM	WIRE MESH, WATER METER
ID	INSIDE DIAMETER	WS	WATERSTOP, WATER SURFACE, WATER SERVICE
IE	INVERT ELEVATION	WT	WEIGHT
IN	INCH	WV	WATER VALVE
INV	INVERT	WWF	WELDED WIRE FABRIC
JB	JUNCTION BOX	WWM	WELDED WIRE MESH
JT	JOINT	XFMR	TRANSFORMER
K	RATE OF VERTICAL CURVATURE	X-ING	CROSSING
LBS	POUNDS	XS	CROSS SECTION
LF	LINEAR FEET	YD	YARD
LN	LANE		

LEGEND

EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION
-----	-----	MAJOR CONTOUR	⊙	⊙	STUMP
-----	-----	MINOR CONTOUR	☁	☁	SHRUB/BUSH
----- OHT -----	----- OHT -----	OVERHEAD TELEPHONE	☀	☀	TREE--CONIFER
----- UGT -----	----- UGT -----	UNDERGROUND TELEPHONE	☀	☀	TREE--DECIDUOUS
----- CTV -----	----- CTV -----	CABLE TELEVISION	~~~~~	~~~~~	TREE LINE
----- FO -----	----- FO -----	FIBER OPTIC	⊙	⊙	COMMUNICATION MANHOLE
----- G -----	----- G -----	NATURAL GAS	⊞	⊞	COMMUNICATION VAULT
----- OHP -----	----- OHP -----	OVERHEAD POWER	⊞	⊞	TELEPHONE RISER
----- UGP -----	----- UGP -----	UNDERGROUND POWER	⊞	⊞	CABLE TV RISER
----- S -----	----- S -----	SANITARY SEWER	⊞	⊞	NATURAL GAS METER
----- SS ----- SS ----- S -----	----- SS ----- SS ----- S -----	SANITARY SEWER SERVICE	⊞	⊞	NATURAL GAS RISER
----- FM -----	----- FM -----	SANITARY SEWER FORCEMAIN	⊞	⊞	NATURAL GAS VALVE
----- SD -----	----- SD -----	STORM DRAIN	⊞	⊞	LIGHT POLE
-----	-----	STORM CULVERT	⊞	⊞	STREET LIGHT POLE
----- W -----	----- W -----	WATER	⊞	⊞	POWER RISER
----- WS ----- WS ----- S -----	----- WS ----- WS ----- S -----	WATER SERVICE	⊞	⊞	PAD MOUNTED TRANSFORMER
----- X ----- X ----- X -----	----- X ----- X ----- X -----	CHAINLINK FENCE	⊞	⊞	POWER VAULT
-----	-----	BARBED WIRE FENCE	⊞	⊞	UTILITY POLE
-----	-----	WOOD FENCE	⊞	⊞	GUY WIRE
-----	-----	PAVED ROAD	⊞	⊞	SANITARY MANHOLE
-----	-----	GRAVEL ROAD	⊞	⊞	SANITARY CLEANOUT
-----	-----	PROPERTY/LOT LINE	⊞	⊞	SANITARY LAMPHOLE
-----	-----	PROPERTY EASEMENT	⊞	⊞	STORM MANHOLE
-----	-----	PROPERTY SETBACK	⊞	⊞	STORM ROUND INLET
-----	-----	RIGHT-OF-WAY	⊞	⊞	STORM SQUARE INLET
-----	-----	CITY LIMIT/DISTRICT BOUNDARY	⊞	⊞	STORM CATCH BASIN
-----	-----	RAILROAD	⊞	⊞	11.25' ELBOW
-----	-----	DITCH	⊞	⊞	22.50' ELBOW
-----	-----	WATER EDGE	⊞	⊞	45' ELBOW
-----	-----	WETLAND	⊞	⊞	90' ELBOW
-----	-----	BUILDING	⊞	⊞	TEE
-----	-----	BENCHMARK	⊞	⊞	CROSS
-----	-----	CONTROL POINT	⊞	⊞	CAP
-----	-----	PROPERTY PIN	⊞	⊞	FIRE HYDRANT
-----	-----	BORING	⊞	⊞	GATE VALVE
-----	-----	MONITORING WELL	⊞	⊞	REDUCER
-----	-----	TEST PIT	⊞	⊞	WATER METER
-----	-----	BOLLARD	⊞	⊞	WELL
-----	-----	MAIL BOX	⊞	⊞	CURB STOP
-----	-----	SIGN	⊞	⊞	FROST FREE HYDRANT

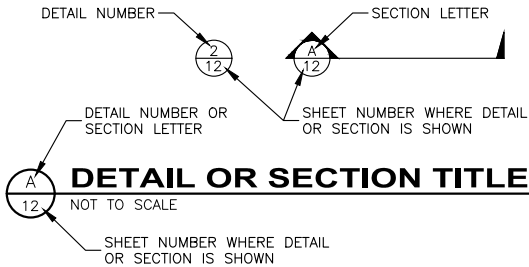
GENERAL NOTES:

1. THIS IS A STANDARD LEGEND AND ABBREVIATION LIST. THEREFORE, NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED ON THIS PROJECT.
2. UNLESS MODIFIED BY THE CONTRACT DOCUMENTS, ALL WORK WILL CONFORM TO THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, SEVENTH EDITION, APRIL 2021 (REFERRED TO COLLECTIVELY AS MPWSS).
3. EXISTING UNDERGROUND UTILITIES SHOWN ARE FROM THE BEST INFORMATION AVAILABLE. THIS INFORMATION IS APPROXIMATE AND MAY BE INCOMPLETE. FOR ACCURATE LOCATION, THE CONTRACTOR SHALL CONTACT, PRIOR TO EXCAVATION, THE UTILITIES UNDERGROUND LOCATION CENTER AT: 1-800-424-5555.

PROJECT NOTES:

1. CONTRACTOR SHALL SEED ALL DISTURBED AREAS AFTER CONSTRUCTION USING THE SEED MIX PER THE SPECIAL PROVISIONS.
2. ALL CONSTRUCTION SIGNING AND TRAFFIC CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR, REFER TO SPECIAL PROVISIONS.
3. THE CONTRACTOR SHALL PROVIDE TYPE 3 BARRICADES ON BOTH SIDES OF THE WORK AREA PER MUTCD GUIDELINES. BARRICADES AND SIGNAGE ARE INCIDENTAL TO THE MOBILIZATION BID ITEM. REFER TO SPECIAL PROVISIONS.
4. TEMPORARY FENCING MAY BE NECESSARY DURING CONSTRUCTION AND MAY REQUIRE COORDINATION WITH ADJACENT LANDOWNERS BY THE CONTRACTOR. ALL FENCING REMOVAL, SALVAGE, REPLACEMENT, AND TEMPORARY FENCING IS INCLUDED IN THE FENCING BID ITEM. CONTRACTOR TO MAINTAIN TEMPORARY FENCING UNTIL CONTRACTOR HAS COMPLETED FINAL FENCING. COORDINATE WORK WITH COUNTY.
5. NO SUITABLE RIPRAP IS PRESENT ON SITE FOR SALVAGE. ALL RIPRAP MATERIAL SHALL BE COMMERCIALY SOURCED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF A PROJECT SIGN MEETING MCEP REQUIREMENTS AS SHOWN ON THE MCEP SUPPLEMENTAL GENERAL CONDITIONS IN PROJECT MANUAL (EXHIBIT 8-A).
7. CONTRACTOR SHALL COORDINATE WITH COUNTY DURING ALL PHASES OF PROJECT, REFERENCE SP-12 (SEQUENCING) IN THE SPECIAL PROVISIONS.

GENERAL DESIGN DESIGNATIONS:



LEWIS AND CLARK COUNTY

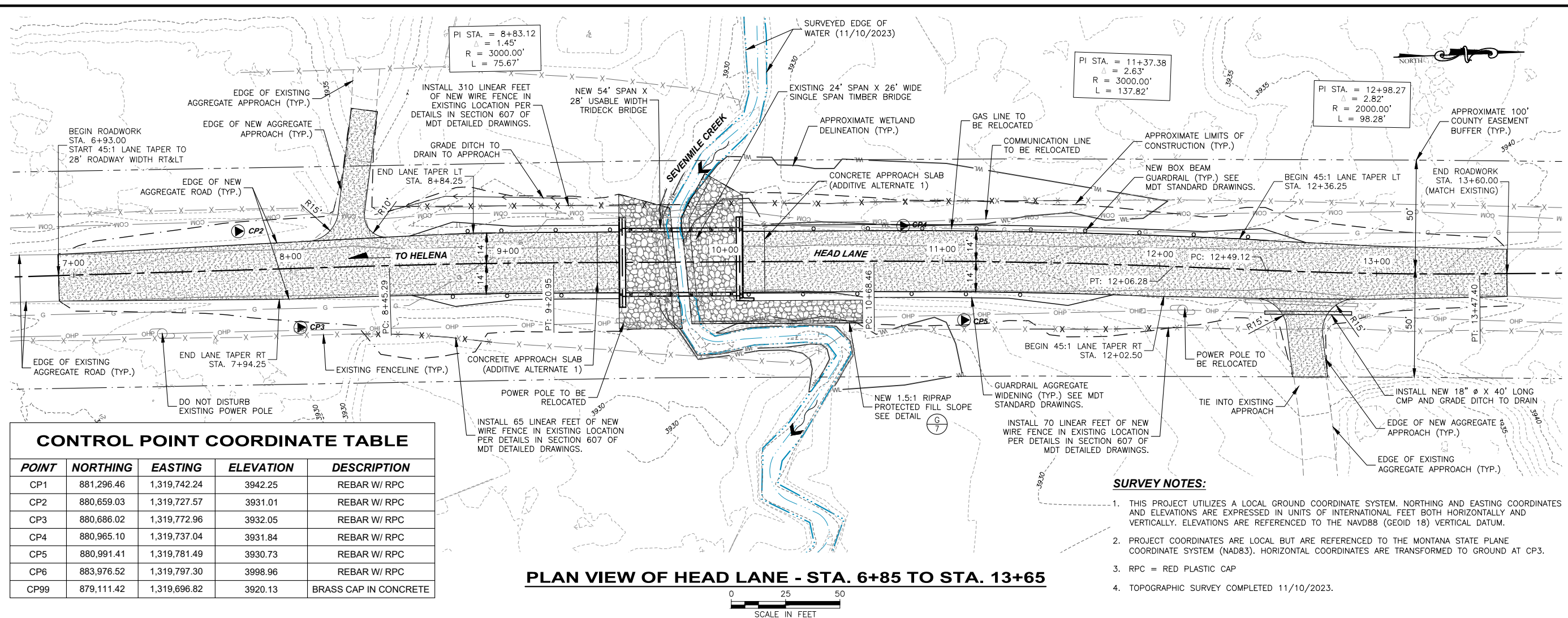
HEAD LANE BRIDGE REPLACEMENT

LEGEND & GENERAL NOTES

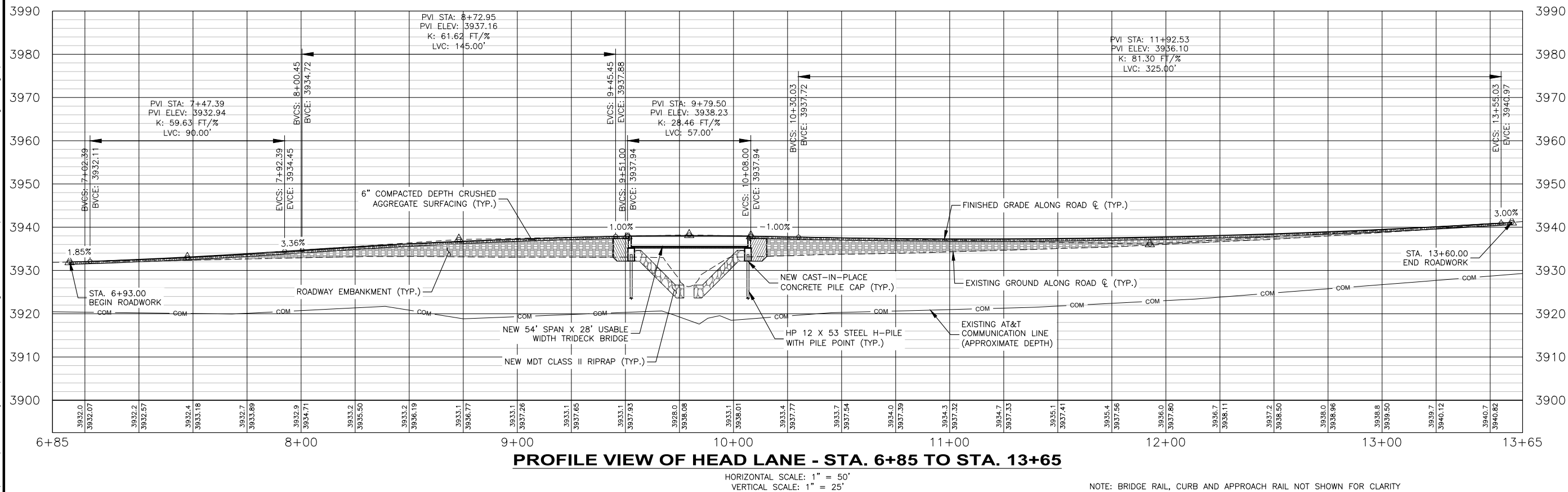
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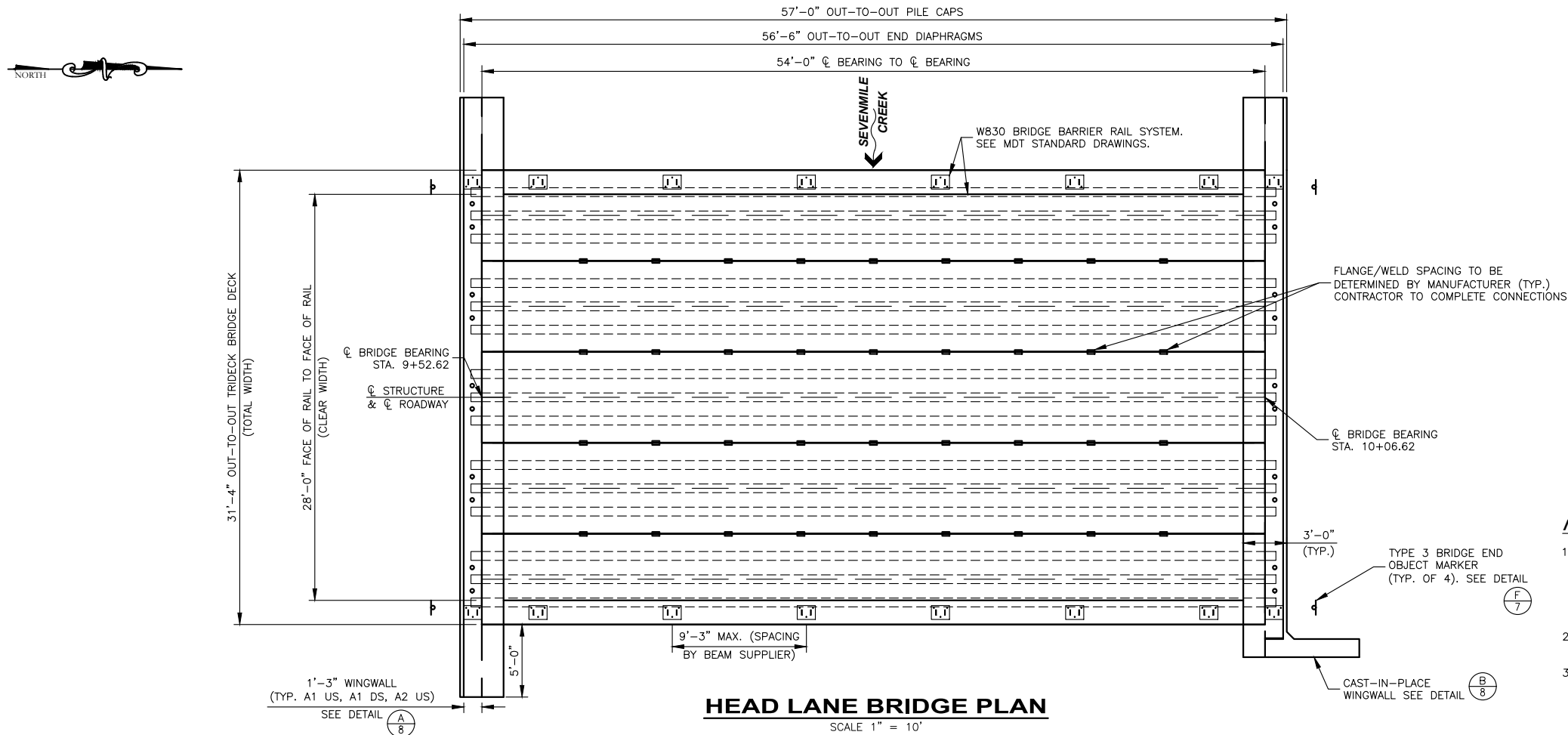
OF 14



CONTROL POINT COORDINATE TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP1	881,296.46	1,319,742.24	3942.25	REBAR W/ RPC
CP2	880,659.03	1,319,727.57	3931.01	REBAR W/ RPC
CP3	880,686.02	1,319,772.96	3932.05	REBAR W/ RPC
CP4	880,965.10	1,319,737.04	3931.84	REBAR W/ RPC
CP5	880,991.41	1,319,781.49	3930.73	REBAR W/ RPC
CP6	883,976.52	1,319,797.30	3998.96	REBAR W/ RPC
CP99	879,111.42	1,319,696.82	3920.13	BRASS CAP IN CONCRETE



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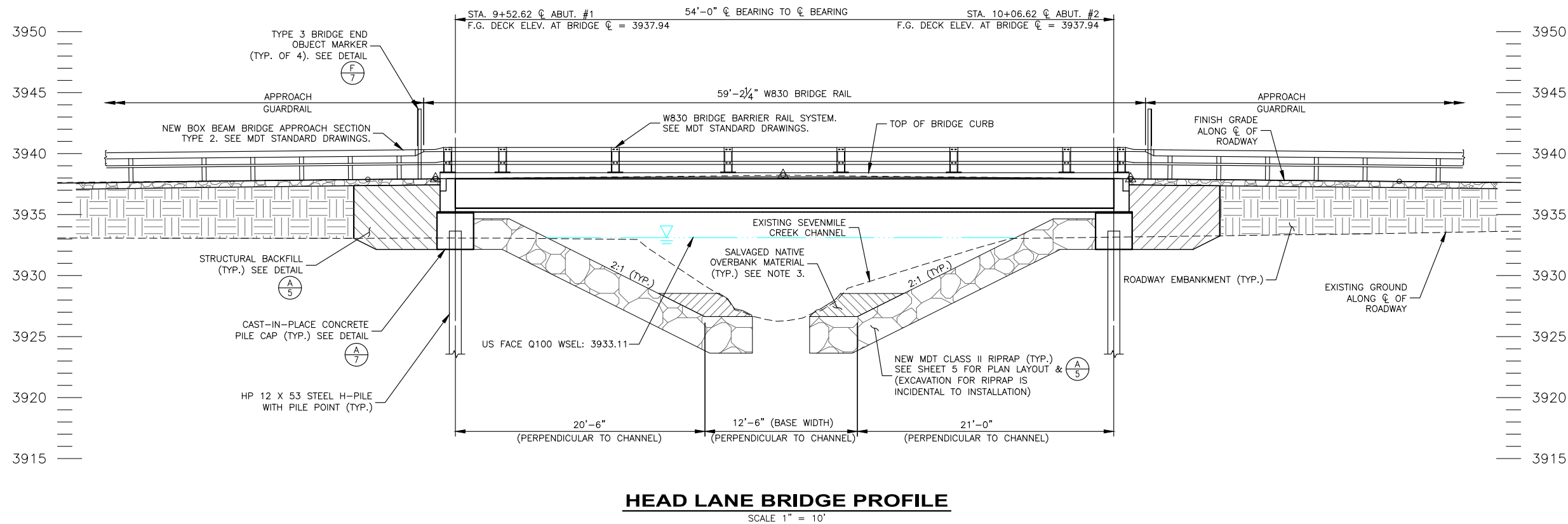


ABUTMENT #1

ABUTMENT #2

**NOTES:**

- DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CURRENT EDITION. BRIDGE SUPERSTRUCTURE SHALL BE DESIGNED BY THE SUPPLIER FOR HL-93 LOADING WITH A 30 PSF ALLOWANCE FOR FUTURE OVERLAYS, INCLUDING DEFLECTION CRITERIA. DESIGN SHALL BE CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MONTANA.
- AFTER ERECTION OF THE BRIDGE AND GROUTING IS COMPLETE AND DRY, CONTRACTOR SHALL CLEAN BRIDGE DECK AND APPLY SILANE SEALER.
- DURING STRUCTURE AND RIPRAP EXCAVATION, CONTRACTOR TO STOCKPILE EXISTING NATIVE OVERBANK MATERIAL. AFTER RIPRAP IS INSTALLED, PLACE NATIVE OVERBANK MATERIAL TO THE APPROXIMATE PRE-EXISTING BANK CONDITIONS AND MATCH BANK LINES UPSTREAM AND DOWNSTREAM OF THE NEW STRUCTURE. ALL WORK ASSOCIATED WITH NATIVE OVERBANK MATERIAL STOCKPILE AND PLACEMENT IS INDIRECT TO THE REMOVAL OF EXISTING BRIDGE BID ITEM.



LEWIS AND CLARK COUNTY

HEAD LANE BRIDGE REPLACEMENT

BRIDGE PLAN & ELEVATION

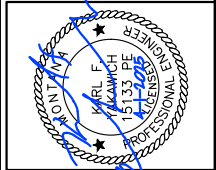
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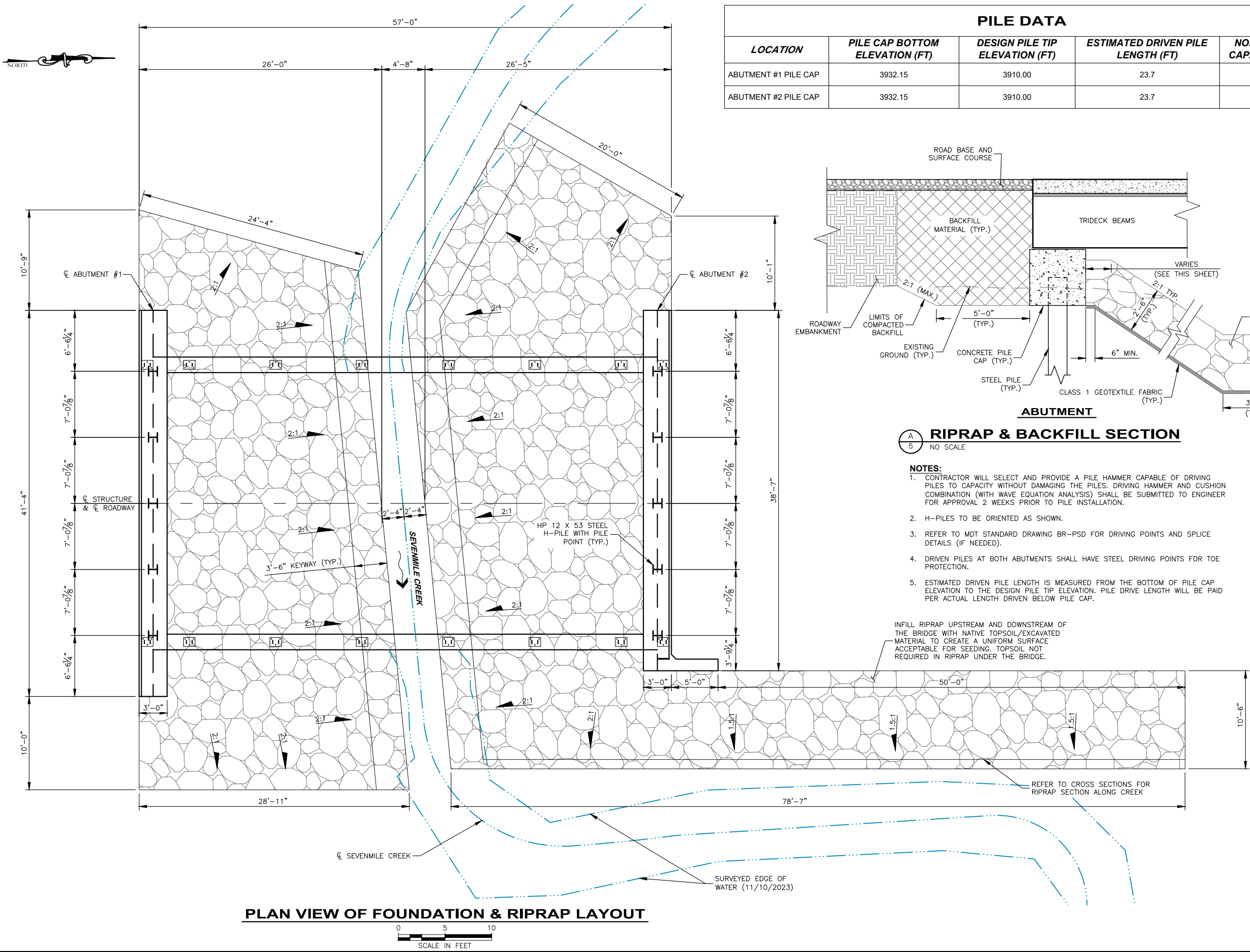
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PROJECT: 1-17277	DESIGNED: JRC	DRAWN: JRC	CHECKED: RME	APPROVED: KY	DATE: APRIL 1, 2025
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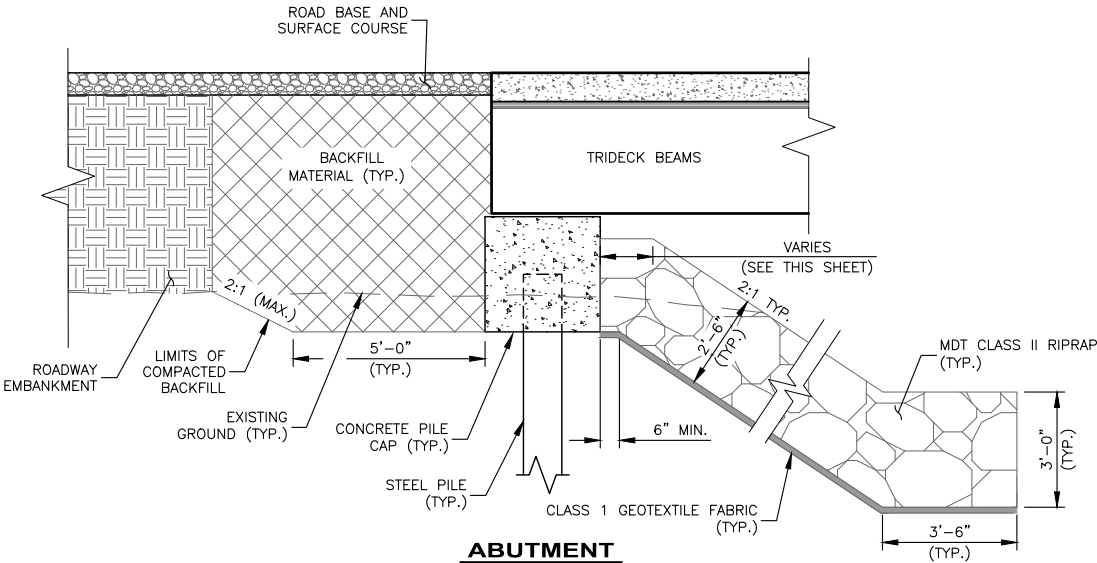




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PILE DATA				
LOCATION	PILE CAP BOTTOM ELEVATION (FT)	DESIGN PILE TIP ELEVATION (FT)	ESTIMATED DRIVEN PILE LENGTH (FT)	NOMINAL PILE CAPACITY (KIPS)
ABUTMENT #1 PILE CAP	3932.15	3910.00	23.7	230
ABUTMENT #2 PILE CAP	3932.15	3910.00	23.7	230



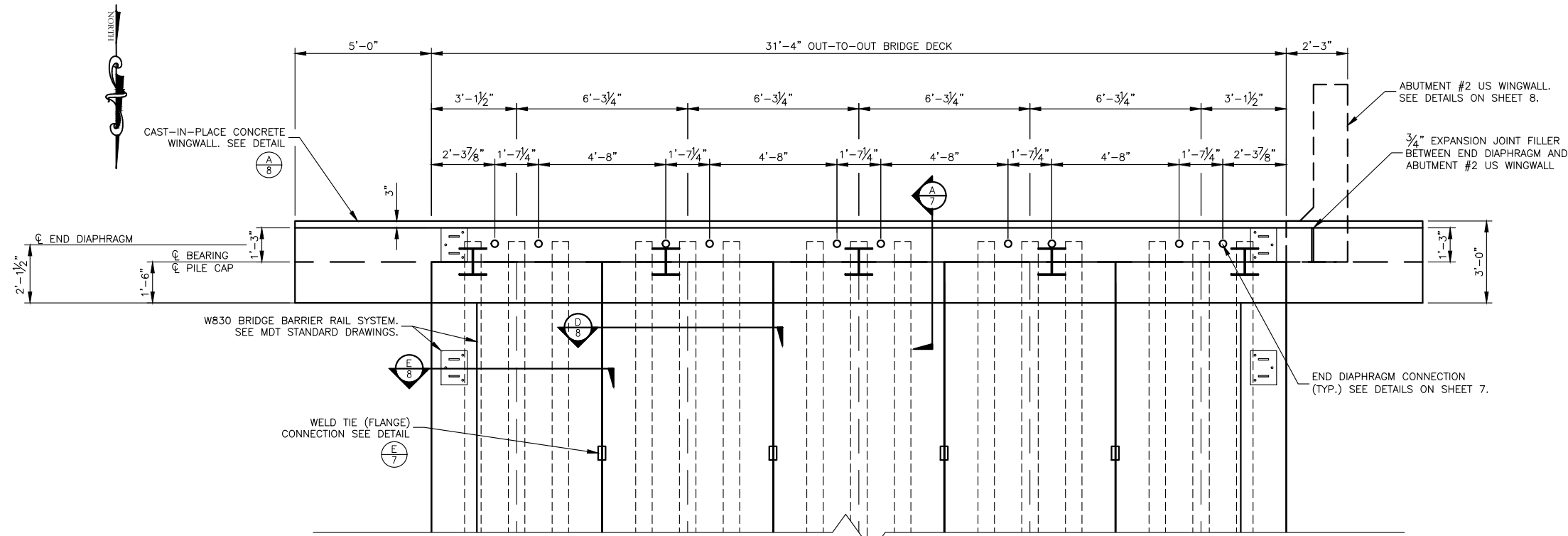
**ABUTMENT RIPRAP & BACKFILL SECTION**

- NOTES:**
- CONTRACTOR WILL SELECT AND PROVIDE A PILE HAMMER CAPABLE OF DRIVING PILES TO CAPACITY WITHOUT DAMAGING THE PILES. DRIVING HAMMER AND CUSHION COMBINATION (WITH WAVE EQUATION ANALYSIS) SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO PILE INSTALLATION.
  - H-PILES TO BE ORIENTED AS SHOWN.
  - REFER TO MDT STANDARD DRAWING BR-PSD FOR DRIVING POINTS AND SPLICE DETAILS (IF NEEDED).
  - DRIVEN PILES AT BOTH ABUTMENTS SHALL HAVE STEEL DRIVING POINTS FOR TOE PROTECTION.
  - ESTIMATED DRIVEN PILE LENGTH IS MEASURED FROM THE BOTTOM OF PILE CAP ELEVATION TO THE DESIGN PILE TIP ELEVATION. PILE DRIVE LENGTH WILL BE PAID PER ACTUAL LENGTH DRIVEN BELOW PILE CAP.

INFILL RIPRAP UPSTREAM AND DOWNSTREAM OF THE BRIDGE WITH NATIVE TOPSOIL/EXCAVATED MATERIAL TO CREATE A UNIFORM SURFACE ACCEPTABLE FOR SEEDING. TOPSOIL NOT REQUIRED IN RIPRAP UNDER THE BRIDGE.

PROJECT: 1-17277	DESIGNED: JRC	DRAWN: JRC	CHECKED: RME	APPROVED: KY	DATE: APRIL 1, 2025
LEWIS AND CLARK COUNTY					
HEAD LANE BRIDGE REPLACEMENT					
FOUNDATION & RIPRAP LAYOUT					
SHEET NO.					
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OF 14					

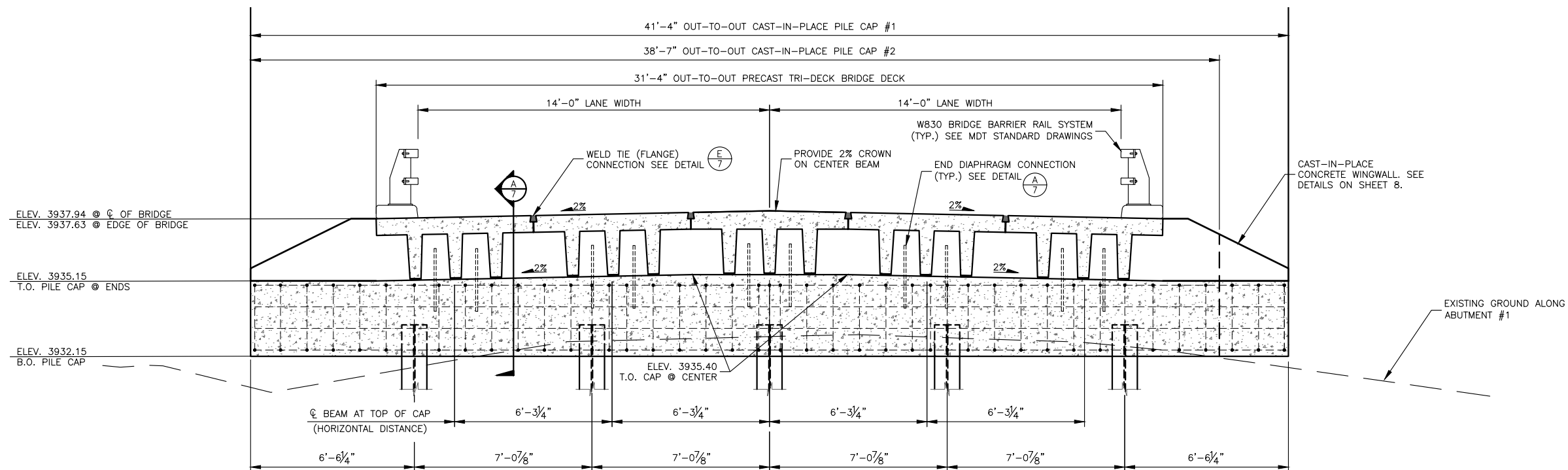
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**HEAD LANE BRIDGE - ABUTMENT PLAN**

SCALE 1/4" = 1'-0"

**NOTE:**  
ABUTMENT #1 PLAN SHOWN. ABUTMENT #2 PLAN  
SIMILAR WITH A SLIGHTLY DIFFERENT WINGWALL  
CONFIGURATION. SEE DETAILS ON SHEET 8. END  
DIAPHRAGM CONNECTION SPACING IS IDENTICAL.

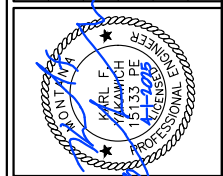


**HEAD LANE BRIDGE - ABUTMENT ELEVATION**

SCALE 1/4" = 1'-0"

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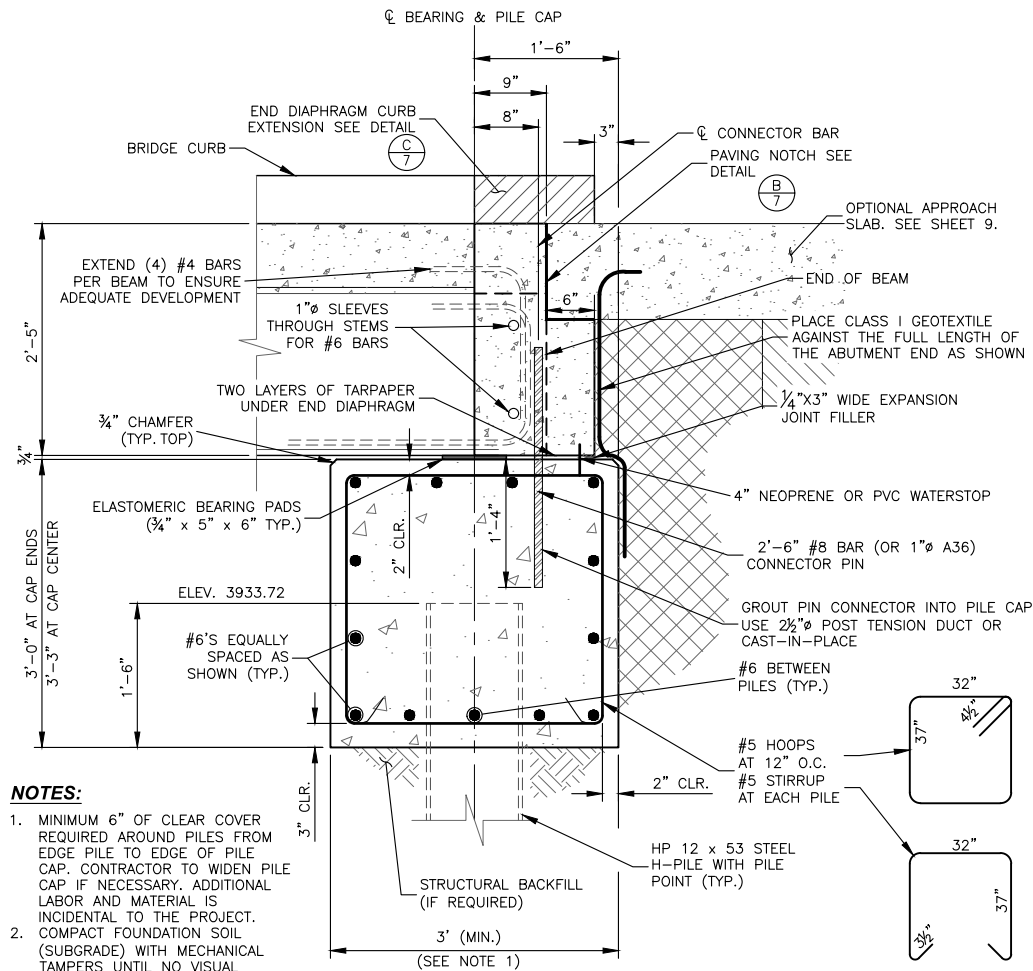
PROJECT: 1-17277	DESIGNED: JRC	DRAWN: JRC	CHECKED: RME	APPROVED: KY	DATE: APRIL 1, 2025
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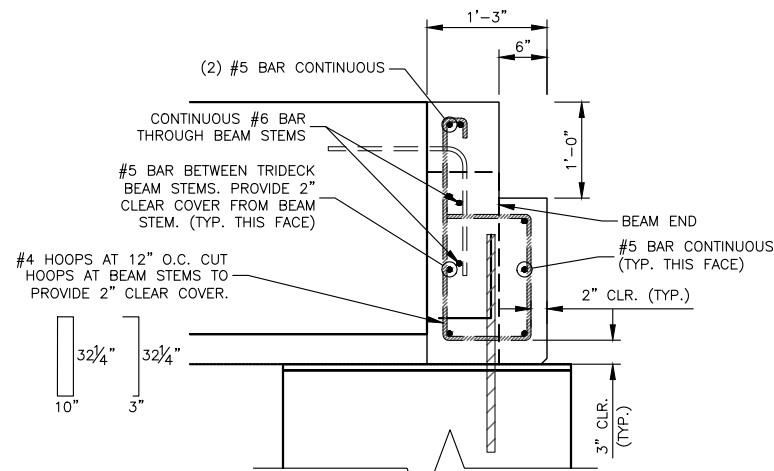
**LEWIS AND CLARK COUNTY**  
**HEAD LANE BRIDGE REPLACEMENT**  
**ABUTMENT PLAN & ELEVATION**

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OF 14

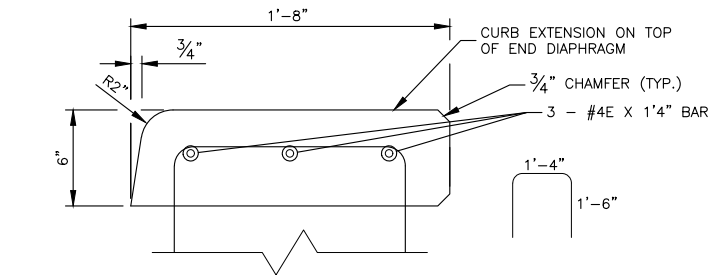
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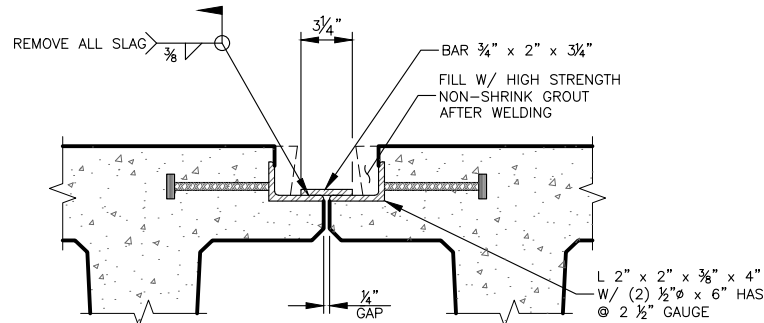
**A**  
**7** **ABUTMENT/CONCRETE PILE CAP SECTION**  
1/2" = 1'-0"



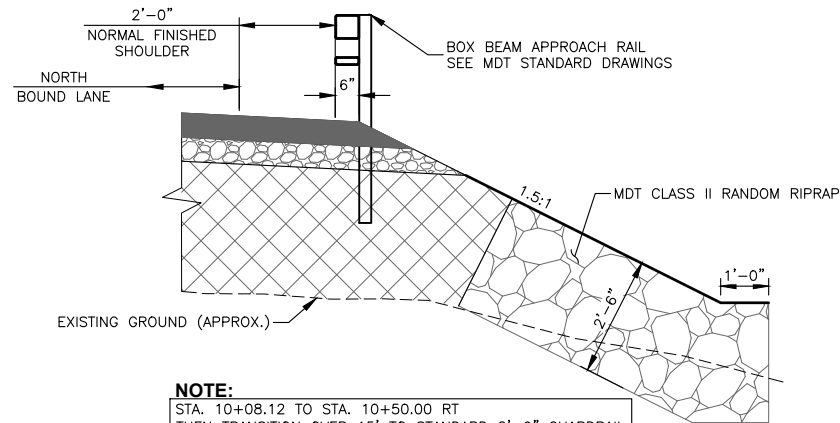
**B**  
**7** **END DIAPHRAGM REINFORCEMENT**  
NOT TO SCALE



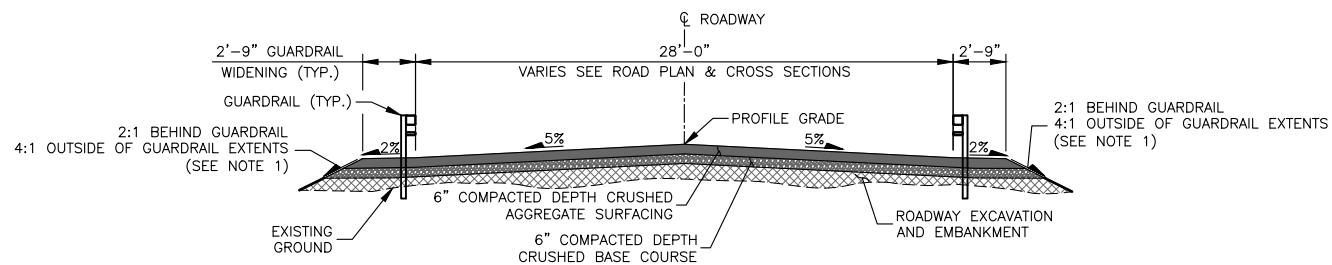
**C**  
**7** **END DIAPHRAGM CURB EXTENSION**  
NO SCALE



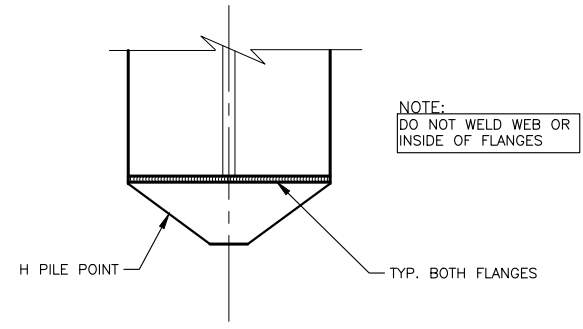
**E**  
**7** **WELD TIE DETAIL**  
SCALE 1" = 1'-0"



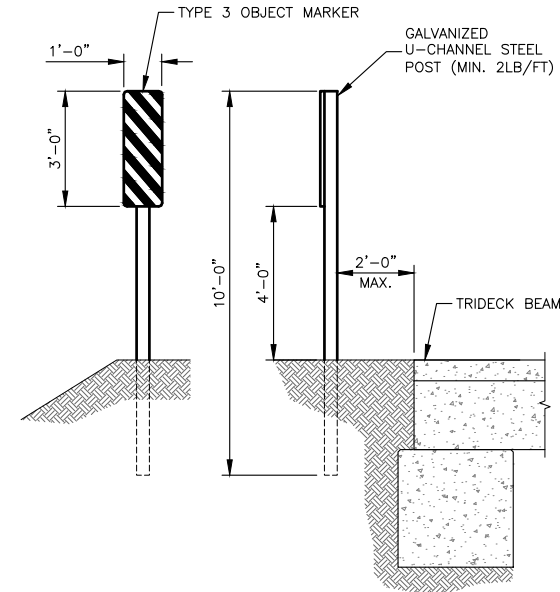
**G**  
**7** **GUARDRAIL WIDENING (NE CORNER)**  
NO SCALE



**H**  
**7** **TYPICAL ROADWAY SECTION**  
NO SCALE  
1. SEE ROADWAY CROSS-SECTIONS FOR DEVIATIONS AND TRANSITIONS



**D**  
**7** **PILE POINT DETAIL**  
NO SCALE

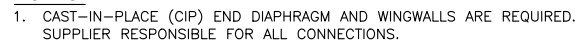


**F**  
**7** **TYPE 3 OBJECT MARKER DETAIL**  
NO SCALE

REVISION DESCRIPTION		NO.	PROJECT: 1-17277	DESIGNED: JRC	DRAWN: JRC	CHECKED: RME	APPROVED: KY	DATE: APRIL 1, 2025

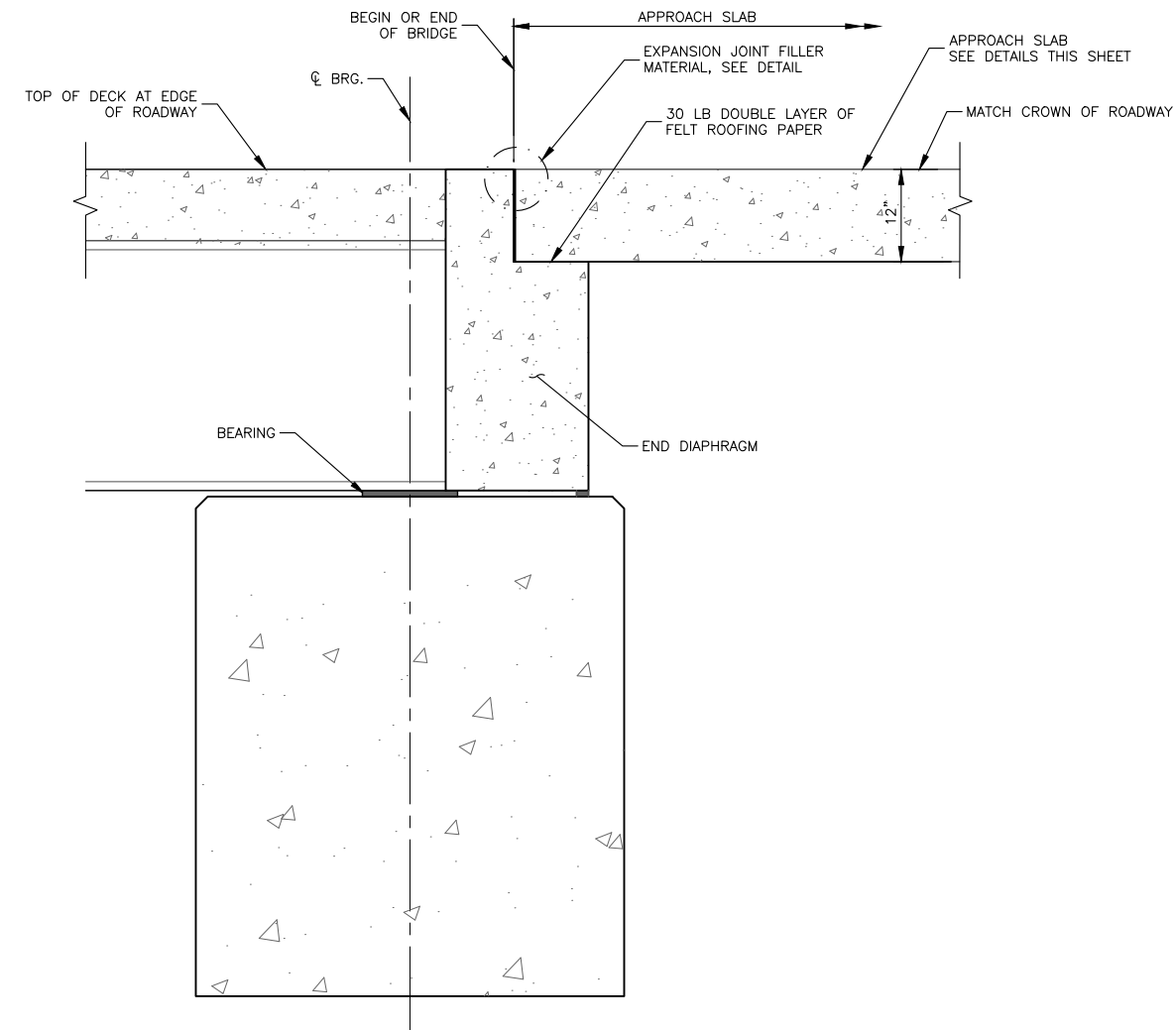
**LEWIS AND CLARK COUNTY**  
**HEAD LANE BRIDGE REPLACEMENT**  
**BRIDGE DETAILS**

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OF 14



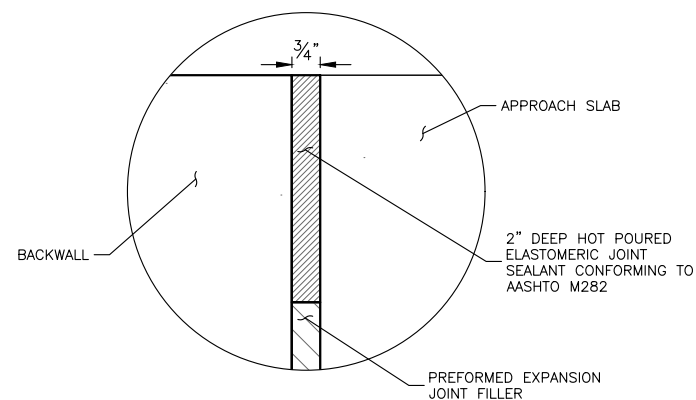


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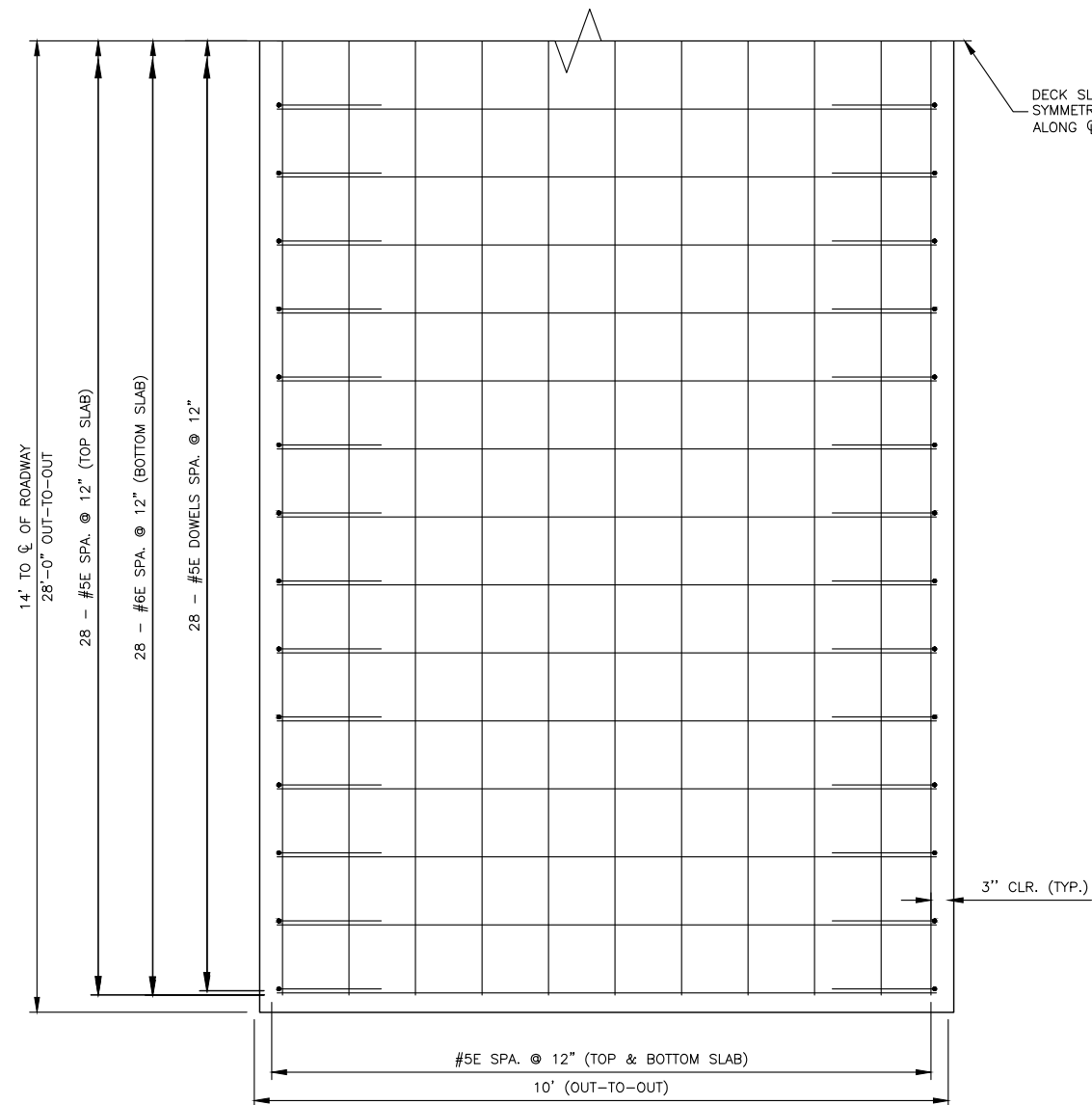
**BRIDGE END DETAILS**

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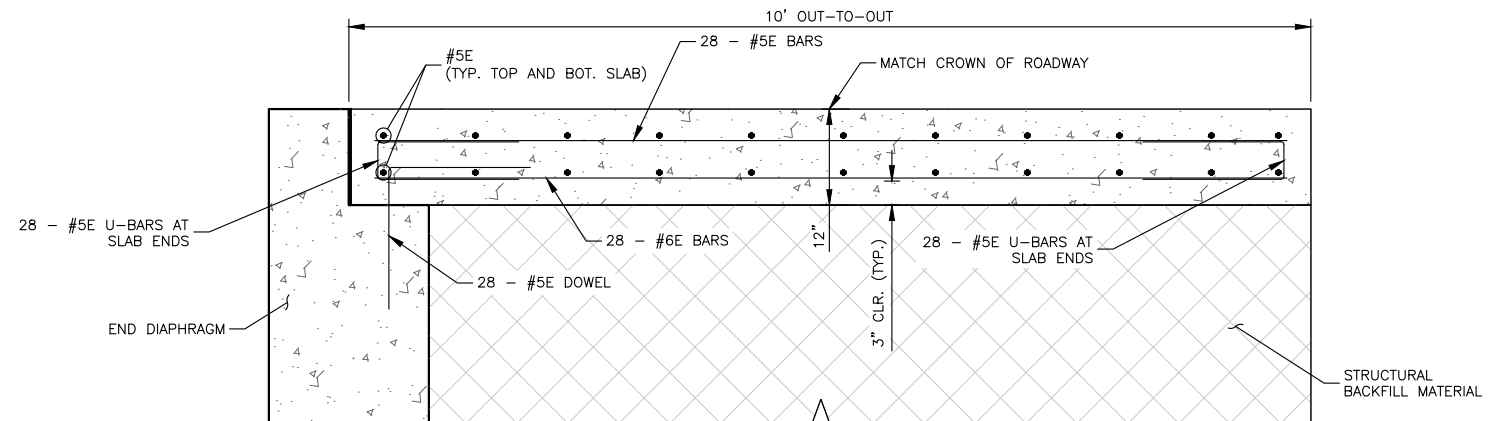
**EXPANSION JOINT FILLER**

NO SCALE



**APPROACH SLAB DETAILS - PLAN**

SCALE: 3/8" = 1'-0"



**APPROACH SLAB DETAILS - ELEVATION**

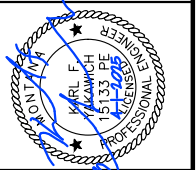
SCALE: 1" = 1'-0"

**NOTES:**

1. APPLIES TO ABUTMENTS #1 & #2
2. THE TOTAL DECK THICKNESS AT THE END OF THE SLAB EXTENSION VARIES DUE TO THE ROADWAY CROWN
3. USE CONCRETE - CLASS STRUCTURE LOW SLUMP FOR APPROACH SLABS
4. INCLUDE THE COST OF EXCAVATION NECESSARY FOR PLACING THE APPROACH SLAB, CONCRETE, REINFORCING STEEL, ADJOINING JOINT MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO COMPLETE THE ITEM IN THE UNIT PRICE BID PER SQUARE YARD OF APPROACH SLAB - CONCRETE

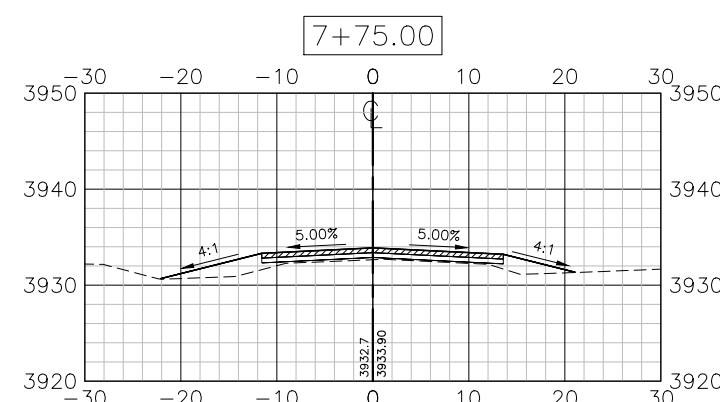
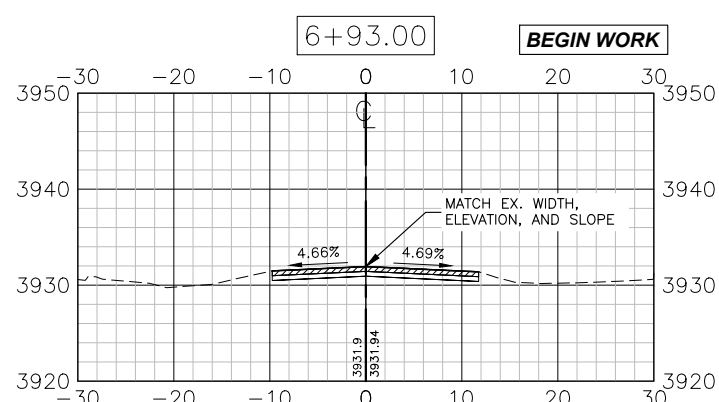
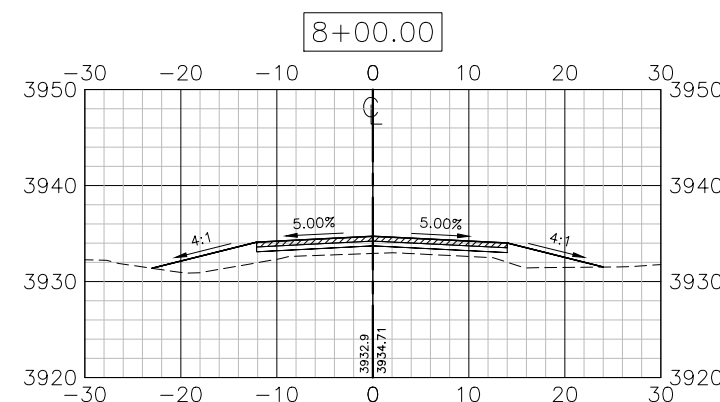
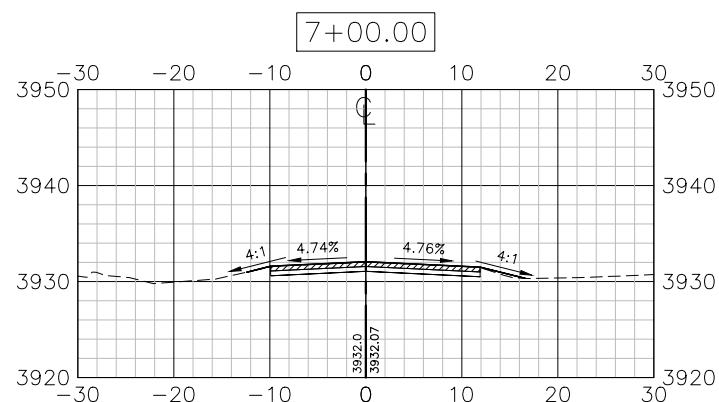
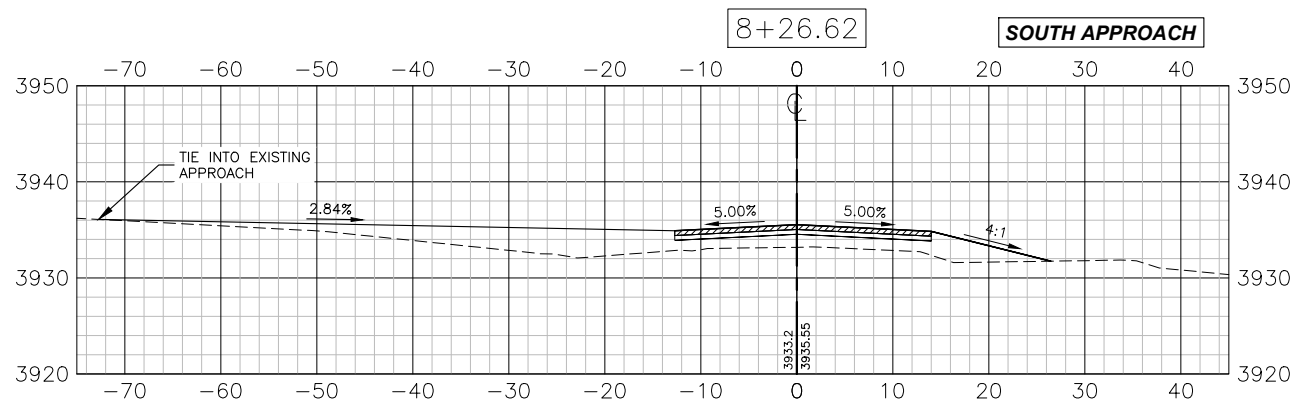
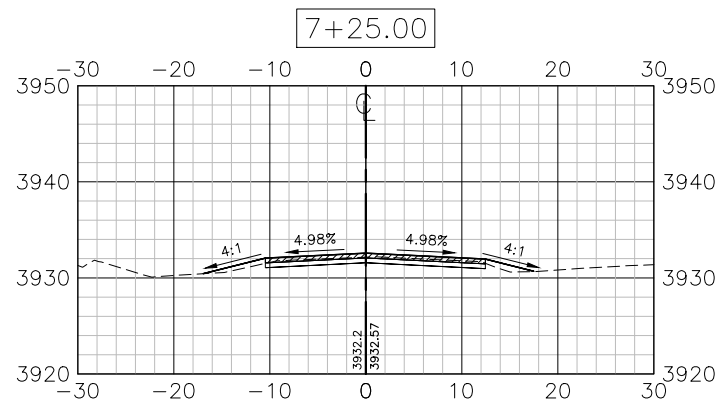
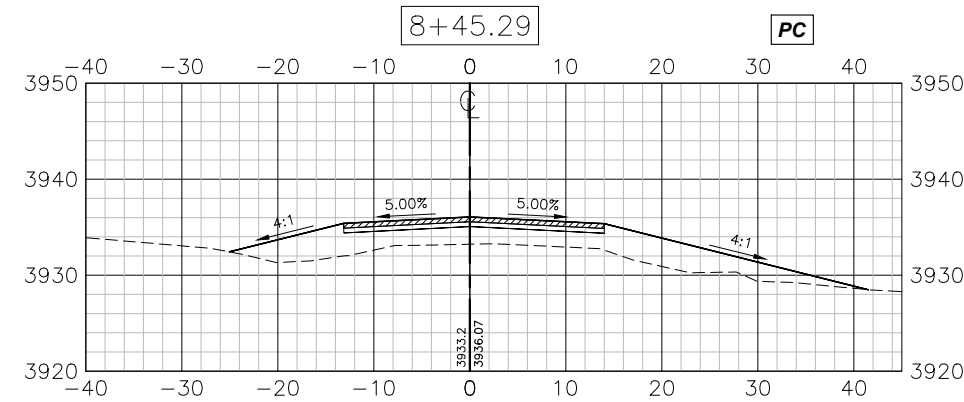
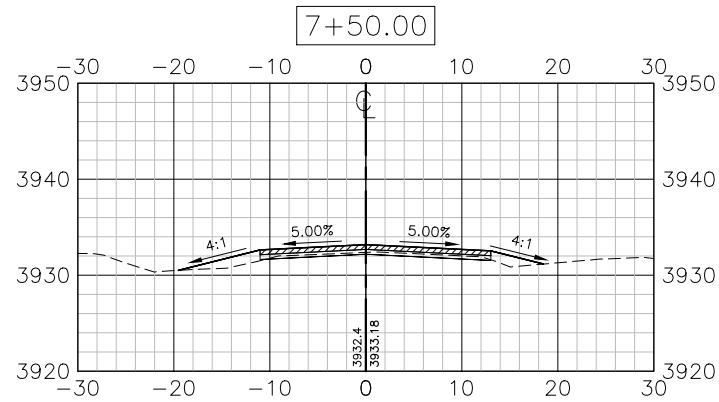
NO.	REVISION DESCRIPTION	BY	DATE
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PROJECT: 1-17277	DESIGNED: JRC	DRAWN: JRC	CHECKED: RME	APPROVED: KY	DATE: APRIL 1, 2025
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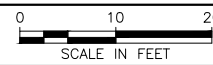


**LEWIS AND CLARK COUNTY**  
**HEAD LANE BRIDGE REPLACEMENT**  
**APPROACH SLAB DETAILS**

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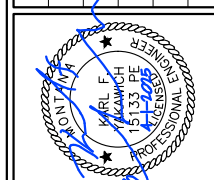


HEAD LANE CROSS-SECTIONS



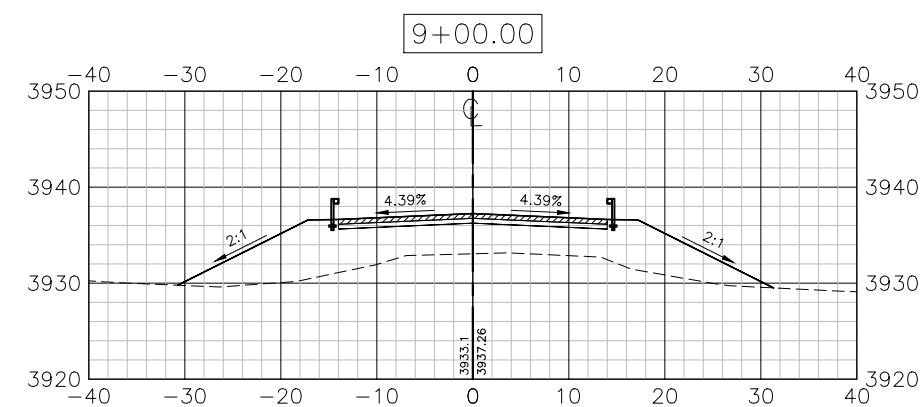
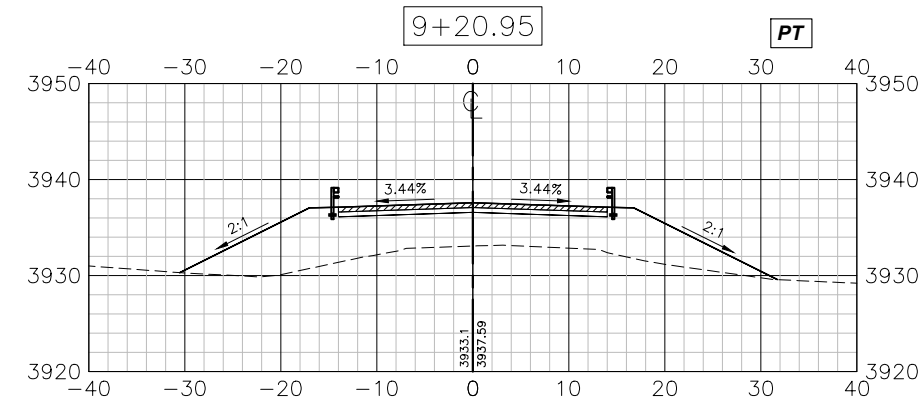
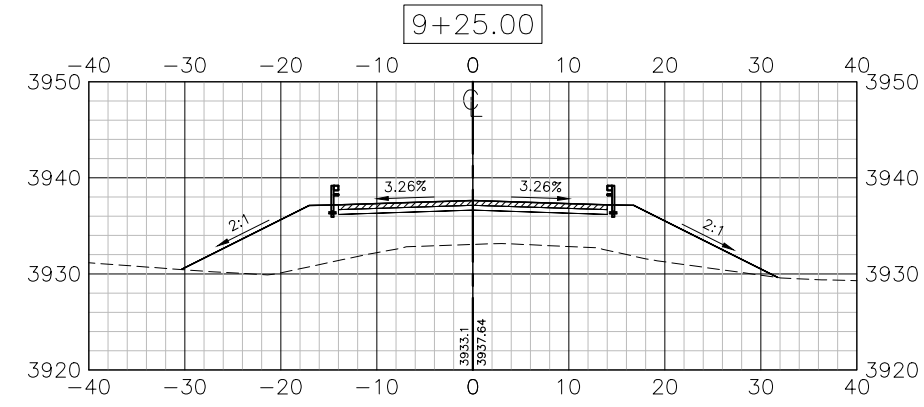
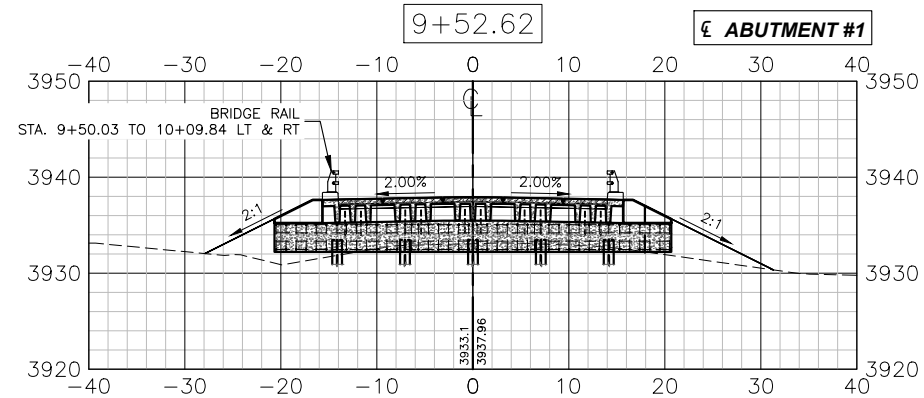
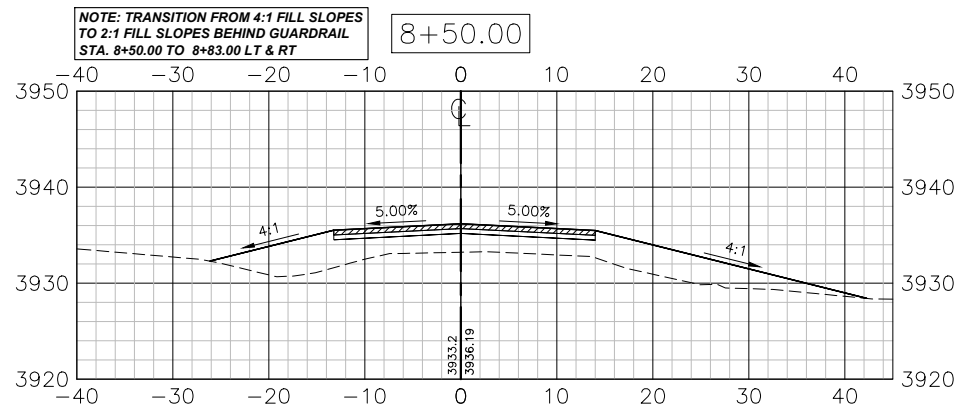
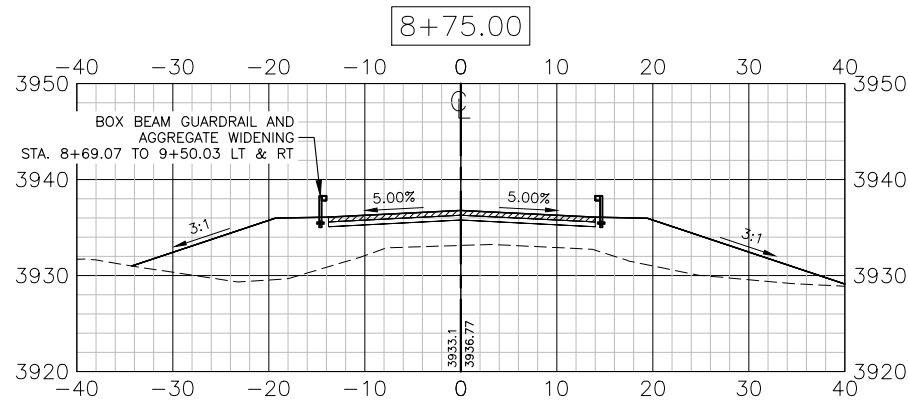
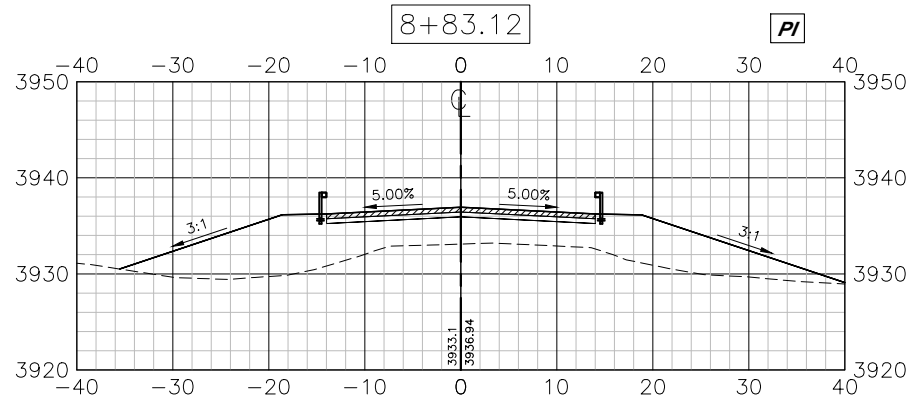
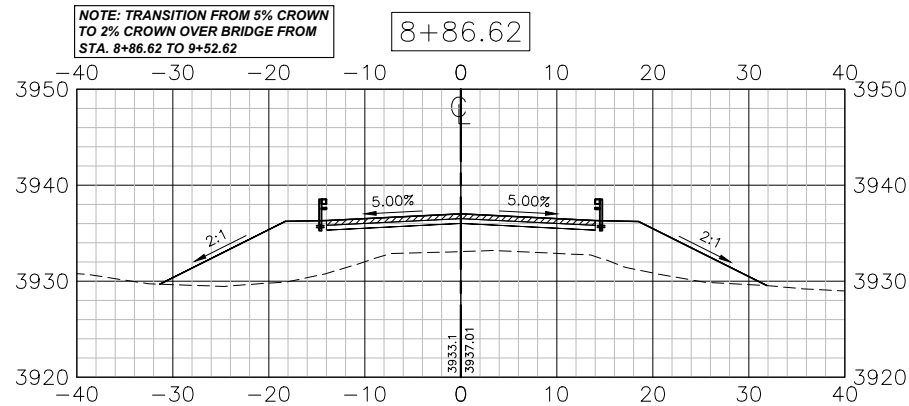
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PROJECT: 1-17277	DESIGNED: JRC	DRAWN: JRC	CHECKED: RME	APPROVED: KY	DATE: APRIL 1, 2025
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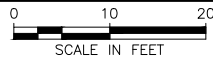


LEWIS AND CLARK COUNTY  
HEAD LANE BRIDGE REPLACEMENT  
HEAD LANE CROSS-SECTIONS

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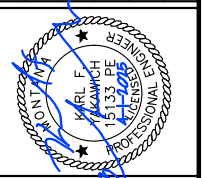


# HEAD LANE CROSS-SECTIONS



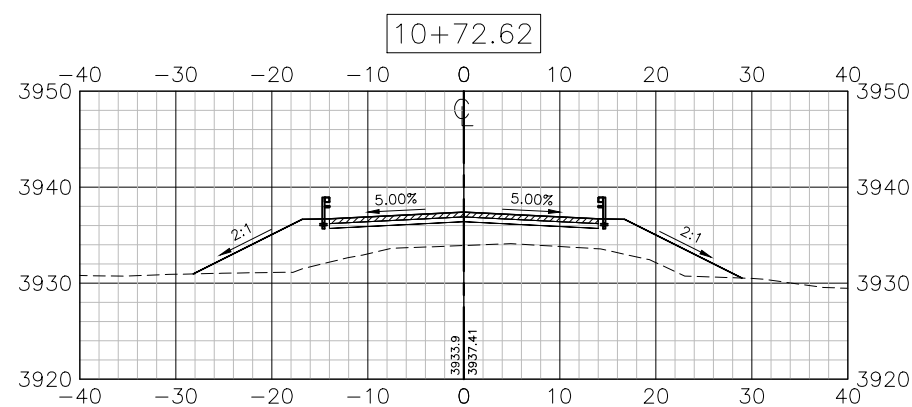
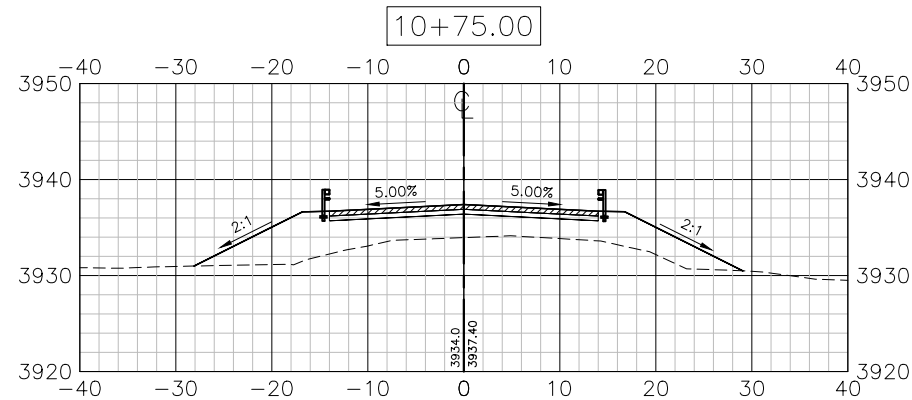
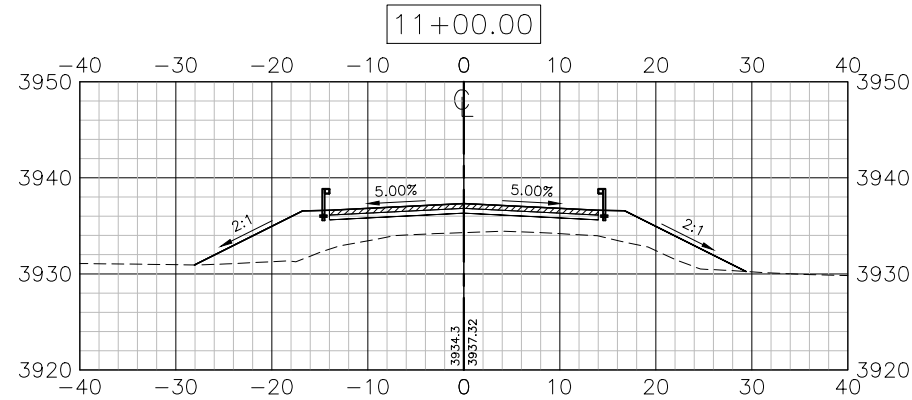
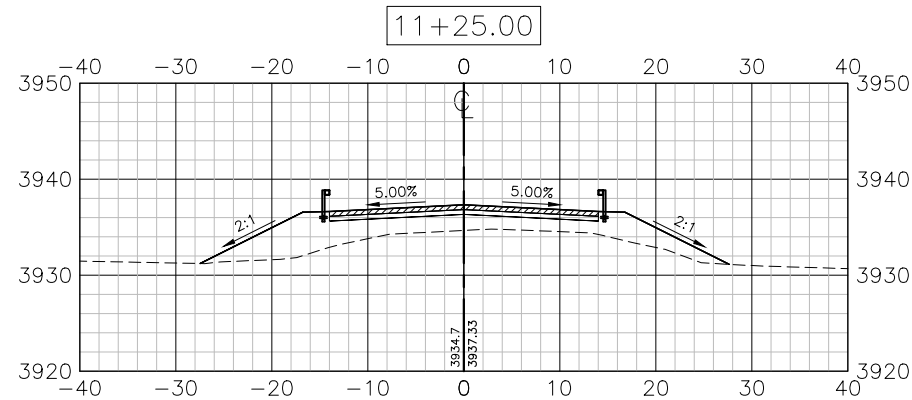
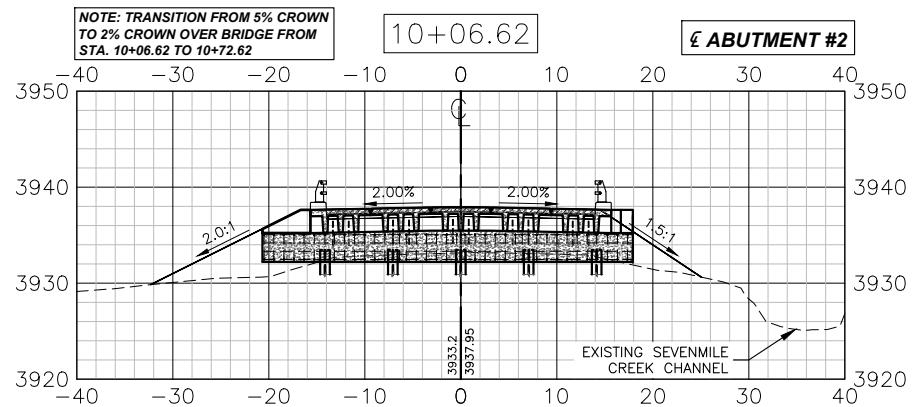
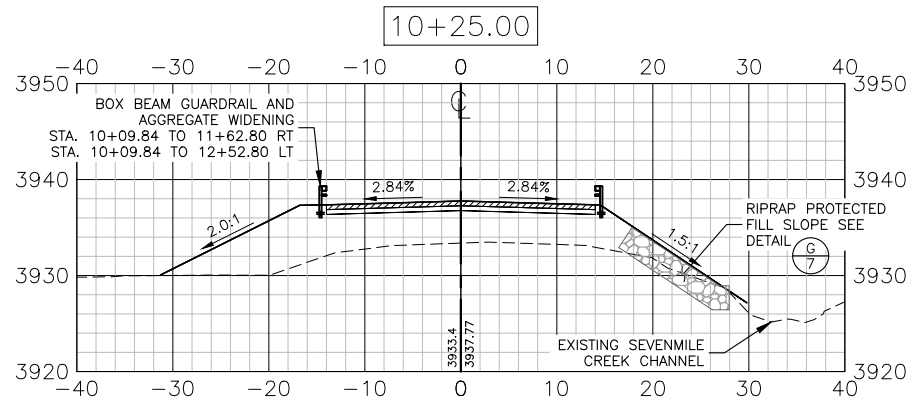
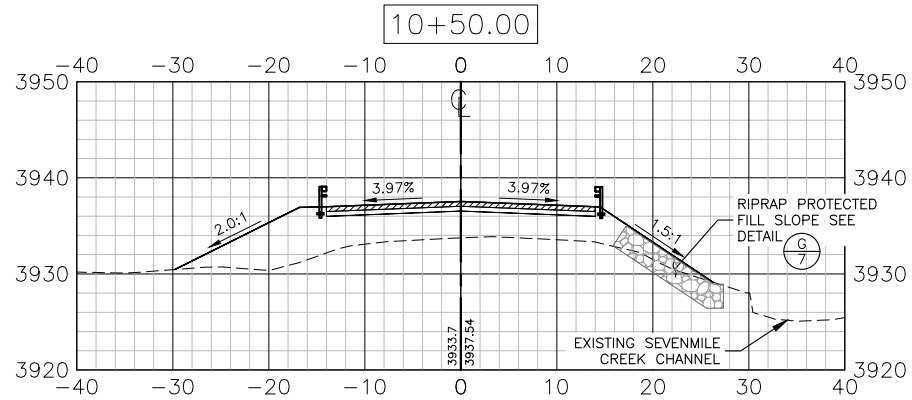
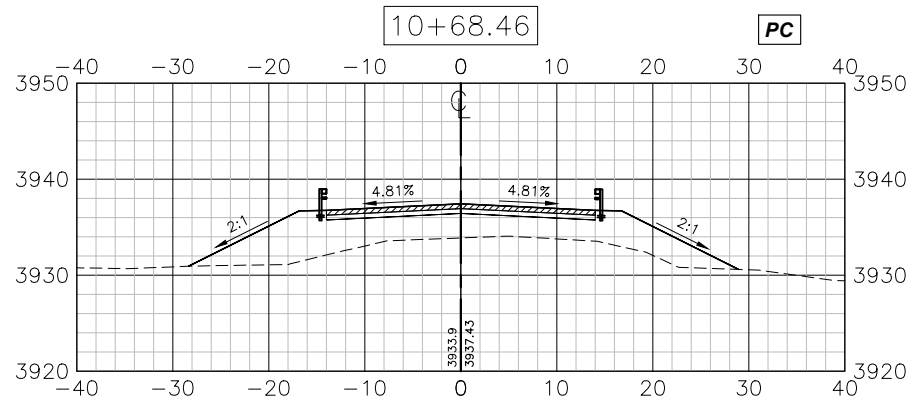
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PROJECT: 1-17277	DESIGNED: JRC	DRAWN: JRC	CHECKED: RME	APPROVED: KY	DATE: APRIL 1, 2025
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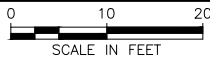


## LEWIS AND CLARK COUNTY HEAD LANE BRIDGE REPLACEMENT HEAD LANE CROSS-SECTIONS

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HEAD LANE CROSS-SECTIONS



LEWIS AND CLARK COUNTY

HEAD LANE BRIDGE REPLACEMENT

HEAD LANE CROSS-SECTIONS

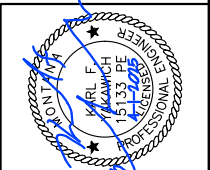
SHEET NO.

12

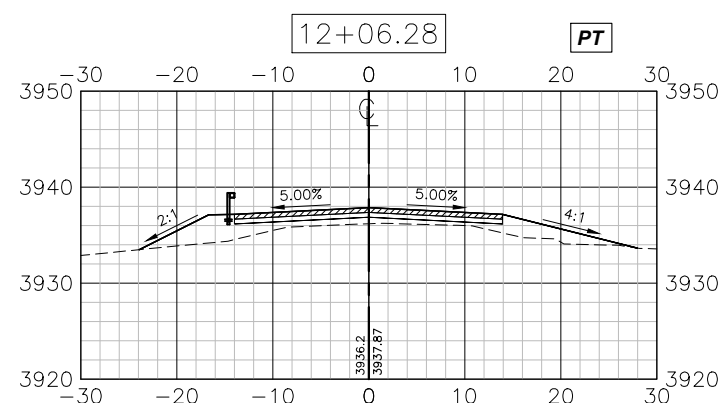
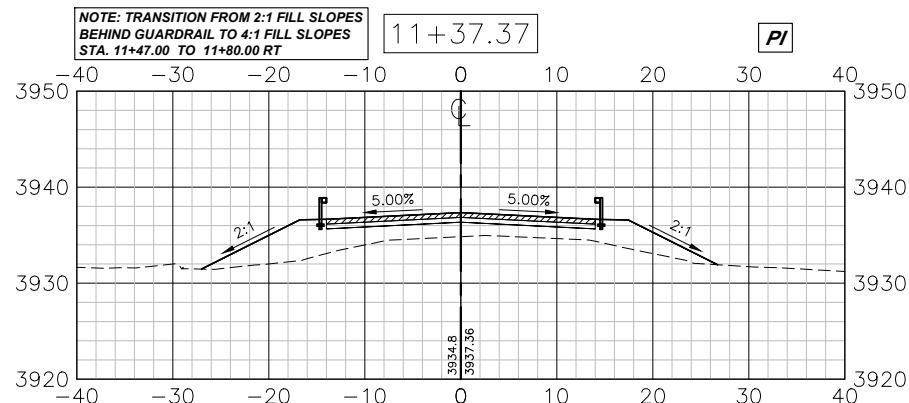
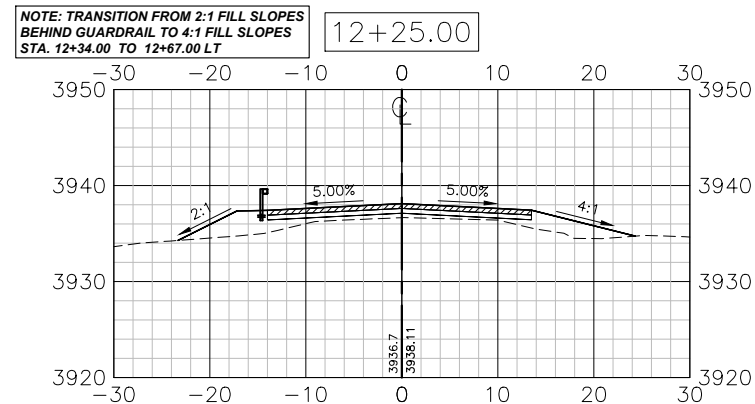
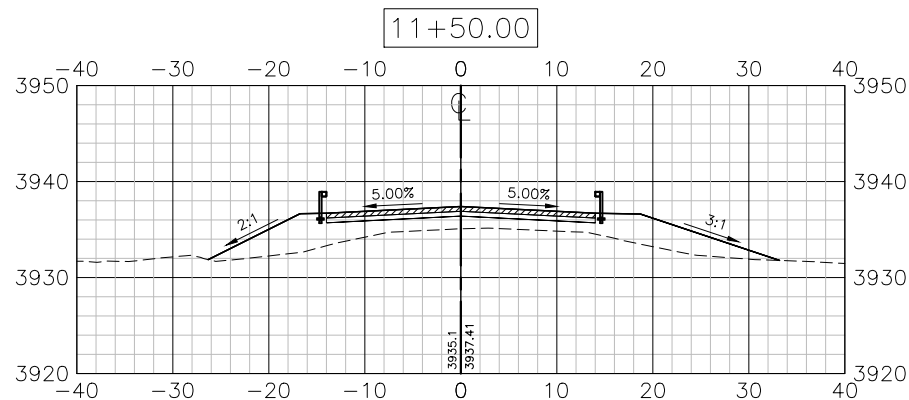
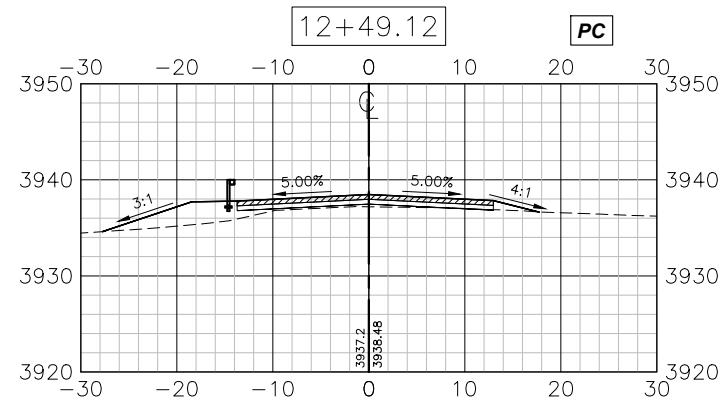
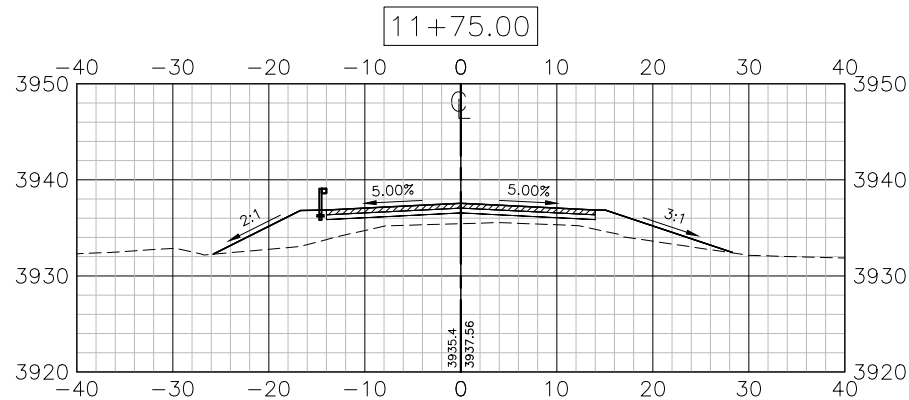
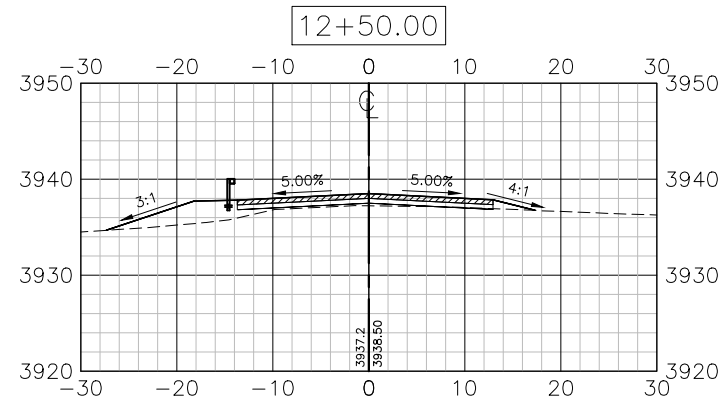
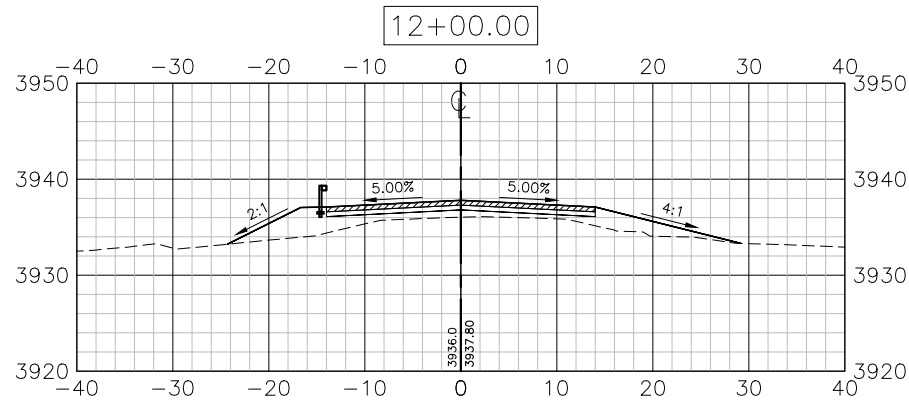
OF 14

NO.	REVISION DESCRIPTION	BY	DATE
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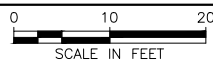
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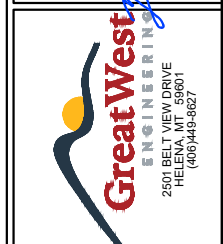
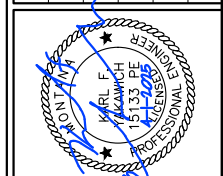


# HEAD LANE CROSS-SECTIONS



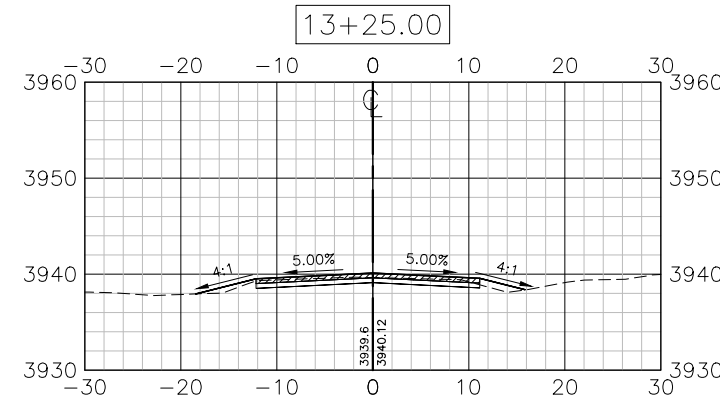
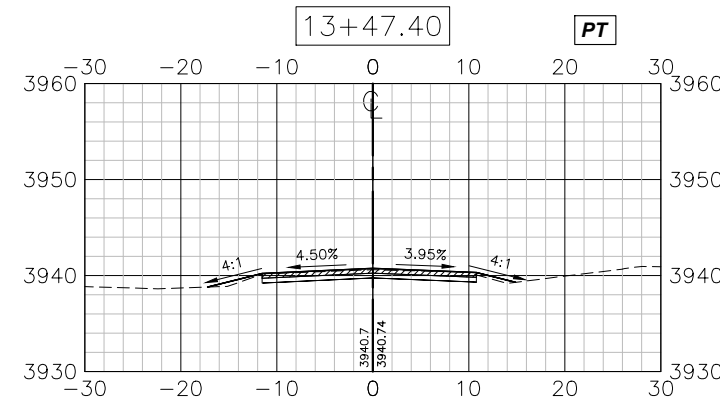
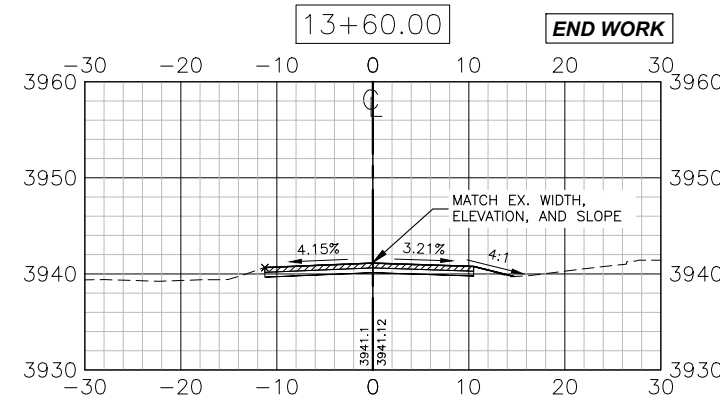
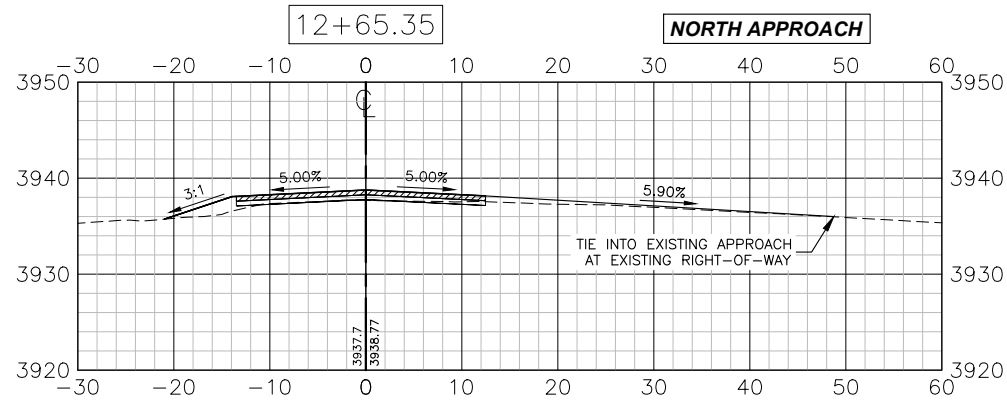
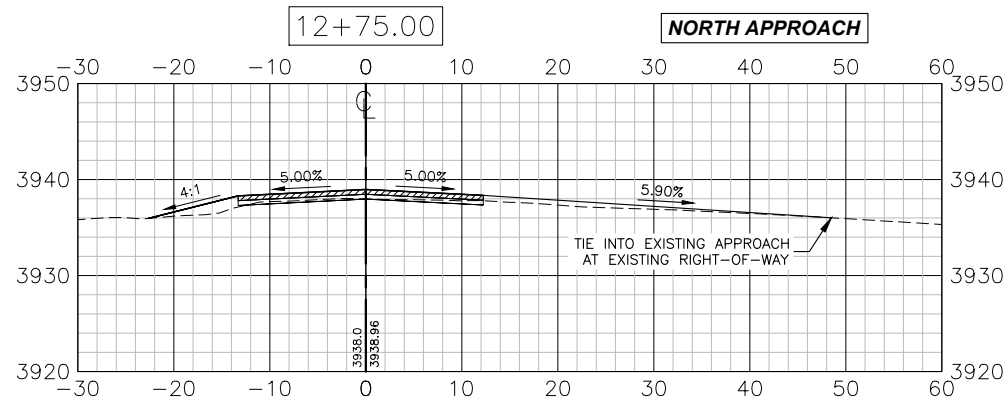
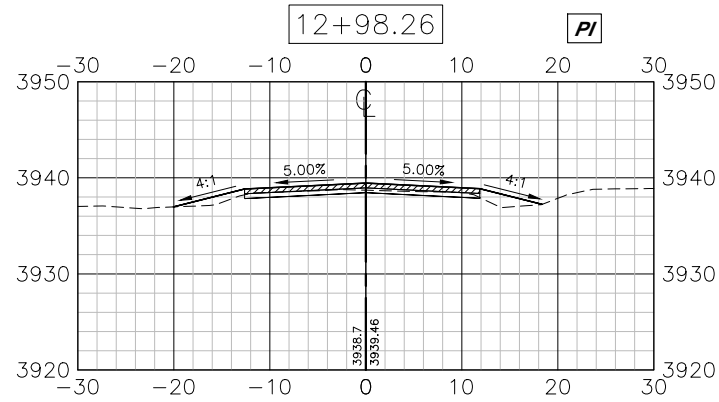
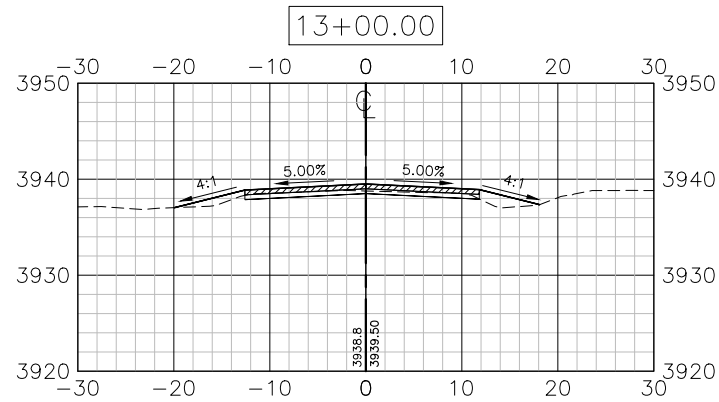
NO.	REVISION DESCRIPTION	BY	DATE
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PROJECT: 1-17277	DESIGNED: JRC	DRAWN: JRC	CHECKED: RME	APPROVED: KY	DATE: APRIL 1, 2025
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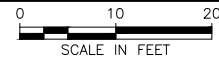


## LEWIS AND CLARK COUNTY HEAD LANE BRIDGE REPLACEMENT HEAD LANE CROSS-SECTIONS

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HEAD LANE CROSS-SECTIONS



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PROJECT: 1-17277	DESIGNED: JRC
DRAWN: JRC	CHECKED: RME
APPROVED: KY	DATE: APRIL 1, 2025

LEWIS AND CLARK COUNTY

**HEAD LANE BRIDGE REPLACEMENT**

HEAD LANE CROSS-SECTIONS

SHEET NO.

**14**

OF 14



**Water/Wastewater ▪ Transportation ▪ Grant Services ▪ Solid Waste ▪  
Structural ▪ Bridges ▪ Natural Resources ▪ Planning**

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