PROJECT MANUAL – BID PACKAGE

BRIDGE REHABILITATION PROJECT

MINNESOTA VALLEY REGIONAL RAIL AUTHORITY (MVRRA) PROJECT

Date: May 3, 2019
MVRRA RAIL REHABILITATION PROJECT

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INVITATION TO BID

May 3, 2019

Project: MVRRA 2019 Bridge Rehabilitation Project
Location: Sibley, Renville and Redwood Counties

To Prospective Bidders:

The Minnesota Valley Regional Rail Authority (MVRRA) is seeking bids for bridge rehabilitation work. The work will consist of furnishing, distributing, installing and repair of 11 bridges between Arlington and Wood Lake.

This Project is being bid as one bid package.

The railroad line is located west of the Twin Cities and runs from Norwood Young America, Minnesota to Hanley Falls, Minnesota and serves 16 Communities in Carver, Sibley, Redwood, Renville, and Yellow Medicine Counties. The line comes off of the Twin Cities & Western Railroad in Norwood Young America, Minnesota.

The line is owned by the Minnesota Valley Regional Rail Authority (Carver, Sibley, Renville, Redwood, and Yellow Medicine counties) and is leased and operated by Minnesota Prairie Line Railroad Incorporated (MPL). The MPL is a wholly owned subsidiary of the Twin Cities & Western Railroad based in Glencoe, Minnesota.

One original hard copy of the Bid Proposal will be received by MVRRA, until 2:00 pm, Central Daylight Time on Tuesday June 4, 2019. MVRRA will only accept sealed bids. The Bid Proposal shall be marked MVRRA – Bridge Rehabilitation Project, and directed to the following address:

Julie Rath
MVRRA Administrator
200 South Mill Street
Redwood Falls, MN 56283

All proposals must be received no later than the above stated time and date. Bids will be publicly opened at the address listed above immediately following the submittal deadline.

The plans and specifications for the construction of this project have been prepared by Bollig Engineering for the MVRRA. The Contract covering the Work will be issued by MVRRA. Copies of the plans, specifications, and other documents covering the Work can be found on MVRRA’s website (www.mvrra.org).

The following general notes and specific information shall govern the bid development and submission process:

1. Definitions:
2. **Interpretation of Plans and Specifications:** Bidders desiring further information or further interpretation of the Plans and Specifications must make request for such information in writing to David McKenzie at Bollig at least five (5) days prior to the bid opening. Answers to all such requests will be given to all Bidders in addendum form, and all addenda will be made a part of the Contract Documents. No other explanation or interpretation will be considered official or binding. Should a Bidder find discrepancies in, or omissions from, the Plans or other Contract Documents, or should the Bidder be in doubt as to their meaning, the Bidder should at once notify David McKenzie at Bollig in order that an addendum may be sent to all Bidders. All questions must be sent via email to dmckenzie@bollig-engineering.com Any required addendum will be posted on the MVRRA website and sent via e-mail to Bidders that supply contact information. Any addendum must be acknowledged on Bidders Proposal. Only electronic sets of plans and specifications will be issued via MVRRA website (www.mvrra.org).

3. **Delivery of Proposals:** It is the Bidder’s responsibility to deliver one complete sets of the Bid Proposal at the proper time and to the proper place. The fact that a Bid Proposal was dispatched will not be considered. The Bidder must have the Bid Proposal actually delivered. **Submittal of Bid Proposal by fax or email will not be accepted.**

A Bidder may withdraw a Proposal before the expiration of the Proposal submittal deadline, without prejudice to the Bidder, by submitting a written request for bid withdrawal to the same contact that accepted your sealed proposal.

4. **Qualifications of Bidders:** Proof of compliance with FRA 213.7(a) and FRA 213.7(c) as attached hereto.

5. **Site Inspection:** Contractors may view the site by contacting Tim Jeske at 320 864 7214 or tjeske@tcwr.net a minimum of 48 hours before the site visit.
Clarifications or further interpretation of the Plans and Specifications resulting from the site inspection will be given to all Bidders in addendum form, and all addenda will be made part of the Contract Documents. No other explanation or interpretation will be considered official or binding.

Contractor must provide all required personal protective equipment (PPE) in order to attend inspection. PPE shall include approved hard hat, safety glasses with side shields, safety toed boots, and reflective vest.

6. **Prevailing Wage Rates:** This project is funded by State Funds and therefore prevailing wage rates are to be paid to any and all employees. The prevailing wage rate schedules are attached as part of the bid package but it is the responsibility of the Contractor to know and verify employee wage rates with the Minnesota Department of Labor and Industry. Request for Classification may be necessary once a contractor has been selected.

7. **Insurance:** Before commencing any Work hereunder, the Contractor shall procure, and shall thereafter maintain in force during the period of this Contract, all at the Contractor's own expense, insurance that complies with the Minnesota Valley Regional Rail Authority Contract for Rail Rehabilitation Project, with insurance companies satisfactory to MVRRA, covering all of the Work and services to be performed by the Contractor and each of the Subcontractors.

Please note carefully that both the Worker's Compensation and Liability coverage must name the MVRRA and MPLI as insured.

The Certificate of Insurance must be approved by the MVRRA before the Contractor will be released to begin the Work.

8. **Payment and Performance Bond:** Contractor will provide payment and performance bond in accordance with Mn/DOT Standard Specifications for Construction (1305).
9. **Contract:** The Contractor, after being awarded the construction contract, shall be expected to sign the Minnesota Valley Regional Rail Authority Contract for Rail Rehabilitation Project and comply with all applicable provisions. A blank copy of this Standard Contract is available upon request.

10. **Construction Schedule:** It is anticipated that the contract will be awarded within 30 days of the receipt of the bids. The Contractor must begin work on July 1, 2019 or within eight (8) Calendar Days after the date of Notice of Contract Approval, whichever is later.

    All rail work completed by October 31, 2019.

Respectfully submitted,

[Signature]

David McKenzie, P.E.

Bollig Engineering Inc.

1700 Technology Drive NE, Suite 124

Willmar MN 56201

dmckenzie@bollig-engineering.com
To the Minnesota Valley Regional Rail Authority:

According to the advertisement of the Minnesota Valley Regional Rail Authority inviting proposals for the bridge rehabilitation improvement project hereinbefore named, and in conformity with the Contract, Plans, Specifications and Special Provisions pertaining thereto, all on file with the Minnesota Valley Regional Rail Authority:

(I)(We) hereby certify that (I am)(we are) the only person(s) interested in this proposal as principal(s); that this proposal is made and submitted without fraud or collusion with any other person, firm or corporation at all; that an examination has been made of the site of the work and the Contract form, with the Plans, Specifications and Special Provisions for the improvement.

(I)(We) understand that the quantities of work shown herein are approximate only and are subject to increase or decrease; that all quantities of work, whether increased or decreased within the limits specified in Mn/DOT 1903, are to be done at the unit prices shown on the attached schedule; that, at the time of opening bids, totals only will be read, but that comparison of bids will be based on the correct summation of item totals obtained from the unit prices bid, as provided in Mn/DOT 1301.

(I)(We) propose to furnish all necessary machinery, equipment, tools, labor and other means of construction and to furnish all materials specified, in the manner and at the time prescribed, all according to the terms of the Contract and Plans, Specifications, and the Special Provisions forming a part of this.

(I)(We) further propose to do all Extra Work that may be required to complete the contemplated improvement, at unit prices or lump sums to be agreed upon in writing before starting such work, or if such prices or sums cannot be agreed upon, to do such work on a Force Account basis, as provided in Mn/DOT 1904.

(I)(We) further propose to execute the form of Contract within 10 days after receiving written notice of award, as provided in Mn/DOT 1306.

(I)(We) further propose to furnish a payment bond equal to the Contract amount, and a performance bond equal to the Contract amount, with the aggregate liability of the bond(s) equal to twice the full amount of the Contract if the contract is less than or equal to five million dollars ($5,000,000.00), or if the contract is in excess of five million dollars ($5,000,000.00) the aggregate liability shall be equal to the amount of the contract, as security for the construction and completion of the improvement according to the Plans, Specifications and Special Provisions as provided in Mn/DOT 1305.

(I)(We) further propose to do all work according to the Plans, Specifications and Special Provisions, and to renew or repair any work that may be rejected due to defective materials or workmanship, before completion and acceptance of the Project by the Minnesota Valley Regional Rail Authority.

(I)(We) agree to all provisions of Minnesota Statutes, Section 181.59.
(I)(We) further propose to begin work and to prosecute and complete the same according to the time schedule set forth in the Special Provisions for the improvement.

(I)(We) assign to the Minnesota Valley Regional Rail Authority all claims for overcharges as to goods and materials purchased in connection with this Project resulting from antitrust violations that arise under the antitrust laws of the United States and the antitrust laws of the State of Minnesota. This clause also applies to subcontractors and first tier suppliers under this Contract.
NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.
LIMITATION ON USE OF CONTRACT FUNDS FOR LOBBYING
Appendix C to Part - Contract
Clause NEW RESTRICTIONS
ON LOBBYING

(a) Definitions. As used in this clause,

"Agency", as defined in 5 U.S.C. 552(f), includes Federal Executive departments and agencies as well as independent regulatory commissions and Government corporations, as defined in 31 U.S.C. 9101(1).

"Covered Federal action" means any of the following Federal actions:
(1) The awarding of any Federal contract;
(2) The making of any Federal grant;
(3) The making of any Federal loan;
(4) The entering into of any cooperative agreement; and,
(5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, load, or cooperative agreement.

Covered Federal action does not include receiving from an agency a commitment providing for the United States to insure or guarantee a loan.

"Indian tribe" and "tribal organization" have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B). Alaskan Natives are included under the definitions of Indian tribes in that Act.

"Influencing or attempting to influence" means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government" means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency" includes the following individuals who are employed by an agency:

(1) An individual who is appointed to a position in the Government under title 5, U.S. Code, including a position under a temporary appointment;
(2) A member of the uniformed services as defined in section 101(3), title 37, U.S. Code;
(3) A special Government employee as defined in section 202, title 18, U.S. Code; and,
(4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, U.S. Code appendix 2.
"Person" means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation" means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment" means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient" includes all contractors and subcontractors at any tier in connection with a Federal contract. The term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed" means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State" means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and a multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibition.

(1) Section 1352 of title 31, U.S. Code provides in part that no appropriated funds may be expended by the recipient of a Federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The prohibition does not apply as follows:

(i) Agency and legislative liaison by Own Employees.

(A) The prohibition on the use of appropriated funds, in paragraph (1) of this section, does not apply in the case of a payment of reasonable
compensation made to an officer or employee of a person requesting or receiving a Federal activities not directly related to a covered Federal action.

(B) For purposes of paragraph (A) of this section, providing any information specifically requested by an agency or Congress is allowable at any time.

(C) For purposes of paragraph (A) of this section, the following agency and legislative liaison activities are allowable at any time only where they are not related to a specific solicitation for any covered Federal action:
   (i) Discussing with an agency (including individual demonstrations) the qualities and characteristics of the person's products or services, conditions or terms of sale, and service capabilities; and,
   (ii) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) For purposes of paragraph (A) of this section, the following agency and legislative liaison activities are allowable only where they are prior to formal solicitation of any covered Federal action:
   (i) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;
   (ii) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and,
   (iii) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Public Law 95-507 and other subsequent amendments.

(E) Only those activities expressly authorized by paragraph (i) of this section are allowable under paragraph (i).

(ii) Professional and Technical Services by Own Employees.

(A) The prohibition on the use of appropriated funds, in paragraph (1) of this section, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a Federal contract or an extension, continuation, renewal, amendment, or modification of a Federal contract if payment is for professional of technical services rendered directly in the preparation submission, or negotiation of any bid, proposal, or application for that Federal contract or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal contract.

(B) For purposes of paragraph (A) of this section, "professional and technical services" shall be limited to advice and analysis directly
applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer), or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation, or reasonably expected to be required by law or regulation, and any other requirements in the actual award documents.

(D) Only those services expressly authorized by paragraph (ii) of this section are allowable under paragraph (ii).

(iii) Reporting for Own Employees.

No reporting is required with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(iv) Professional and technical services by Other than Own Employees.

(A) The prohibition on the use of appropriated funds, in paragraph (1) of this section, does not apply in the case of any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action, if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal contract or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal contract.
For purposes of paragraph (A) of this section, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation, or reasonably expected to be required by law or regulation, and any other requirements in the actual award documents.

Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

Only those services expressly authorized by paragraph (iv) of this section are allowable under paragraph (iv).

(c) Disclosure.

(1) Each person who requests or receives from an agency a Federal contract shall file with that agency a certification, set forth in , that the person has not made, and will not make, any payment prohibited by paragraph (b) of this clause.

(2) Each person who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, Standard Form-LLL, "Disclosure of Lobbying Activities," if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under paragraph (b) of this clause if paid for with appropriated funds.
(3) Each person shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under paragraph (2) of this section. An event that materially affects the accuracy of this information reported includes:

   (i) A cumulative increase of $25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or
   (ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or,
   (iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(4) Any person who requests or receives from a person referred to in paragraph (1) of this section a subcontract exceeding $100,000 at any tier under a Federal contract shall file a certification, and a disclosure form, if required, to the next tier above.

(5) All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the person referred to in paragraph (1) of this section. That person shall forward all disclosure forms to the agency.

(d) Agreement. In accepting any contract resulting from this solicitation, the person submitting the offer agrees not to make any payment prohibited by this clause.

(e) Penalties.

   (1) Any person who makes an expenditure prohibited under paragraph (b) of this clause shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 of each such expenditure.

   (2) Any person who fails to file or amend the disclosure form to be filed or amended if required by this clause, shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 or each such failure.

   (3) Contractors may rely without liability on the representations made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause is to be interpreted to make allowable or reasonable any costs which would be unallowable or unreasonable in accordance with Part 31 or the Federal Acquisition Regulation. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any of the provisions of Part 31 of the Federal Acquisition Regulation.

(End of Clause)
NOTICE OF DEBARMENT

Suspended/Debarred Vendor Report

Minnesota Rules Part 1230.1150, Subpart 6 requires the Office of Procurement to maintain a master list of all suspensions and debarments. The master list must retain all information concerning suspensions and debarments as a public record for at least three years following the end of a suspension or debarment.

The vendors listed below may be currently suspended or debarred, or have a suspension or debarment end date within the past three years. Click the vendor name for complete details.

NOTE: Minnesota Rules Part 1230.1150, Subpart 2, Item B, Subitem (1) also provides that: "Any vendor debarred by the federal government, the state of Minnesota, or any of its departments, commissions, agencies, or political subdivisions, is automatically debarred by the division under the same terms and limits of the original debarment."

Ace Hydro Seeding, Inc.

Asphalt Recycling Solutions, Inc.

Best Electric

C & S Electric, LLC

Country Trucking & Excavating

Dahl Trucking

Devos, LTD

Eagle Deer Reserve Limited

Elmore Truck & Trailer Repair, Inc.

Fibertech, Inc.

Glacier, Inc.
Guaranteed Returns

Honda Electric, Inc.

Hunt's Carpet Service, Inc.

Mack-Hill LLC

Olympic Construction Services

Omni Construction Company

Omni-Midwest, Inc.

Restoration Specialists, Inc.

Road Spec Corporation

RSI Associates, Inc.

Southwest Paving, Inc.

TAC Construction Solutions, Inc.

The Travel Group LLC

Wide Open Services, LLC

NOTE: Minnesota Rules Part 1230.1150, Subpart 2, Item B, Subitem (1) also provides that: "Any vendor debarred by the federal government, the state of Minnesota, or any of its departments, commissions, agencies, or political subdivisions, is automatically debarred by the division under the same terms and limits of the original debarment."
E-VERIFY REQUIREMENTS

The CONTRACTOR agrees and acknowledges that it is aware of Minn. Stat. § 16C.075 regarding e-verification of employment of all newly hired employees to confirm that such employees are legally entitled to work in the United States, and that it will, if and when applicable, fully comply with such statute and impose a similar requirement in any subcontractors.
NOTICE TO
BIDDERS

Minnesota Statutes that require prompt payment to subcontractors: 16A.1245

Prompt payment to subcontractors.

Each state agency contract must require the prime contractor to pay any subcontractor within ten days of the prime contractor's receipt of payment from the state for undisputed services provided by the subcontractor. The contract must require the prime contractor to pay interest of 1-1/2 percent per month or any part of a month to the subcontractor on any undisputed amount not paid on time to the subcontractor. The minimum monthly interest penalty payment for an unpaid balance of $100 or more is $10. For an unpaid balance of less than $100, the prime contractor shall pay the actual penalty due to the subcontractor. A subcontractor who prevails in a civil action to collect interest penalties from a prime contractor must be awarded its costs and disbursements, including attorney's fees, incurred in bringing the action.

HIST: 1990 c 541 s 1

337.10 Building and construction contracts; prohibited provisions.

Subd. 3. Prompt payment to subcontractors. A building and construction contract shall be deemed to require the prime contractor and all subcontractors to promptly pay any subcontractor or material supplier contract within ten days of receipt by the party responsible for payment of payment for undisputed services provided by the party requesting payment. The contract shall be deemed to require the party responsible for payment to pay interest of 1-1/2 percent per month to the party requesting payment on any undisputed amount not paid on time. The minimum monthly interest penalty payment for an unpaid balance of $100 or more is $10. For an unpaid balance of less than $100, the party responsible for payment shall pay the actual penalty due to the party requesting payment. A party requesting payment who prevails in a civil action to collect interest penalties from a party responsible for payment must be awarded its costs and disbursements, including attorney fees incurred in bringing the action. This subdivision does not apply to construction of or improvements to residential real estate as defined in section 326.83, subdivision 17, or to construction of or improvements to attached single-family dwellings, if those dwellings are used for residential purposes and have fewer than 13 units per structure.

HIST: 1997 c 127 s 1; 1998 c 289 s 1,2; 1999 c 116 s 2
Construction Type: Highway and Heavy

Region Number: 08

Counties within region:

- CHIPPEWA-12
- KANDIYOHI-34
- LAC QUI PARLE-37
- LINCOLN-41
- LYON-42
- MCLEOD-46
- MEEKER-47
- MURRAY-51
- PIPESTONE-59
- REDWOOD-64
- RENVILLE-65
- YELLOW MEDICINE-87

Effective: 2018-11-14

This project is covered by Minnesota prevailing wage statutes. Wage rates listed below are the minimum hourly rates to be paid on this project.

All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at a rate of one and one half (1 1/2) times the basic hourly rate.

Violations should be reported to:

Department of Transportation
Office of Construction
Transportation Building MS650
John Ireland Blvd
St. Paul, MN 55155
(651) 366-4209

Refer questions concerning the prevailing wage rates to:

Department of Labor and Industry
## LABOR CODE AND CLASS

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<td>109 UNDERGROUND AND OPEN DITCH LABORER (EIGHT FEET BELOW STARTING GRADE LEVEL)</td>
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<td>110 SURVEY FIELD TECHNICIAN (OPERATE TOTAL STATION, GPS RECEIVER, LEVEL, ROD OR RANGE POLES, STEEL TAPE MEASUREMENT; MARK AND DRIVE STAKES; HAND OR POWER</td>
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21
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<tr>
<td>DIGGING FOR AND IDENTIFICATION OF MARKERS OR MONUMENTS; PERFORM AND CHECK CALCULATIONS; REVIEW AND UNDERSTAND CONSTRUCTION PLANS AND LAND SURVEY MATERIALS). THIS CLASSIFICATION DOES NOT APPLY TO THE WORK PERFORMED ON A PREVAILING WAGE PROJECT BY A LAND SURVEYOR WHO IS LICENSED PURSUANT TO MINNESOTA STATUTES, SECTIONS 326.02 TO 326.15.</td>
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<td>111 TRAFFIC CONTROL PERSON (TEMPORARY SIGNAGE)</td>
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<td>112 QUALITY CONTROL TESTER (FIELD AND COVERED OFF-SITE FACILITIES; TESTING OF AGGREGATE, ASPHALT, AND CONCRETE MATERIALS); LIMITED TO MN DOT HIGHWAY AND HEAVY CONSTRUCTION PROJECTS WHERE THE MN DOT HAS RETAINED QUALITY ASSURANCE PROFESSIONALS TO REVIEW AND INTERPRET THE RESULTS OF QUALITY CONTROL TESTERS. SERVICES PROVIDED BY THE CONTRACTOR.</td>
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<td>202 BOOM TRUCK</td>
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<td>203 LANDSCAPING EQUIPMENT, INCLUDES HYDRO SEEDER OR MULCHER, SOD ROLLER, FARM TRACTOR WITH ATTACHMENT SPECIFICALLY SEEDING, SODDING, OR PLANT, AND TWO-FRAMED FORKLIFT (EXCLUDING FRONT, POSIT-TRACK, AND SKID STEER LOADERS), NO EARTHWORK OR GRADING FOR ELEVATIONS</td>
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<tr>
<td>205 PAVEMENT MARKING OR MARKING REMOVAL EQUIPMENT (ONE OR TWO PERSON OPERATORS); SELF-PROPELLED TRUCK OR TRAILER MOUNTED UNITS.</td>
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**HIGHWAY/HEAVY POWER EQUIPMENT OPERATOR**

**GROUP 2**

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<td>303 CONCRETE PUMP (HIGHWAY AND HEAVY ONLY)</td>
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<td>304 ALL CRANES WITH OVER 135-FOOT BOOM, EXCLUDING JIB (HIGHWAY AND HEAVY ONLY)</td>
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<td>305 DRAGLINE, CRAWLER, HYDRAULIC BACKHOE (TRACK OR WHEEL MOUNTED) AND/OR OTHER SIMILAR EQUIPMENT WITH SHOVEL-TYPE CONTROLS THREE CUBIC YARDS AND OVER MANUFACTURER’S RATED CAPACITY INCLUDING ALL ATTACHMENTS. (HIGHWAY AND HEAVY ONLY)</td>
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<td>306 GRADER OR MOTOR PATROL</td>
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<td>307 PILE DRIVING (HIGHWAY AND HEAVY ONLY)</td>
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<td>308 TUGBOAT 100 H.P. AND OVER WHEN LICENSE REQUIRED (HIGHWAY AND HEAVY ONLY)</td>
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**GROUP 3**

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<td>309 ASPHALT BITUMINOUS STABILIZER PLANT</td>
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<td>310 CABLEWAY</td>
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<td>311 CONCRETE MIXER, STATIONARY PLANT (HIGHWAY AND HEAVY ONLY)</td>
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<td>312 DERRICK (GUY OR STIFFLEG)(POWER)(SKIDS OR STATIONARY) (HIGHWAY AND HEAVY ONLY)</td>
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<td>313 DRAGLINE, CRAWLER, HYDRAULIC BACKHOE (TRACK OR WHEEL MOUNTED) AND/OR SIMILAR EQUIPMENT WITH SHOVEL-TYPE CONTROLS, UP TO THREE CUBIC YARDS MANUFACTURER’S RATED CAPACITY INCLUDING ALL ATTACHMENTS. (HIGHWAY AND HEAVY ONLY)</td>
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<tr>
<td>314 DREDGE OR ENGINEERS, DREDGE (POWER) AND ENGINEER</td>
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<td>315 FRONT END LOADER, FIVE CUBIC YARDS AND OVER INCLUDING ATTACHMENTS. (HIGHWAY AND HEAVY ONLY)</td>
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<td>316 LOCOMOTIVE CRANE OPERATOR</td>
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<td>317 MIXER (PAVING) CONCRETE PAVING, ROAD MOLE, INCLUDING MUCKING OPERATIONS, CONWAY OR SIMILAR TYPE</td>
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<td>318 MECHANIC . WELDER ON POWER EQUIPMENT (HIGHWAY AND HEAVY ONLY)</td>
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<td>320 TANDEM SCRAPER</td>
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<td>322 TUGBOAT 100 H.P AND OVER (HIGHWAY AND HEAVY ONLY)</td>
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<td>323 AIR TRACK ROCK DRILL</td>
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<td>327 BITUMINOUS ROLLERS, RUBBER TIRED OR STEEL DRUMMED (EIGHT TONS AND OVER)</td>
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<td>328 BITUMINOUS SPREADER AND FINISHING MACHINES (POWER), INCLUDING PAVERS, MACRO SURFACING AND MICRO SURFACING, OR SIMILAR TYPES (OPERATOR AND SCREED PERSON)</td>
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<td>329 BROKK OR R.T.C. REMOTE CONTROL OR SIMILAR TYPE WITH ALL ATTACHMENTS</td>
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<td>331 CHIP HARVESTER AND TREE CUTTER</td>
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<td>332 CONCRETE DISTRIBUTOR AND SPREADER FINISHING MACHINE, LONGITUDINAL FLOAT, JOINT MACHINE, AND SPRAY MACHINE</td>
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<td>336 CURB MACHINE</td>
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<td>337 DIRECTIONAL BORING MACHINE</td>
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<td>338 DOPE MACHINE (PIPELINE)</td>
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<td>339 DRILL RIGS, HEAVY ROTARY OR CHURN OR CABLE DRILL (HIGHWAY AND HEAVY ONLY)</td>
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<td>341 ELEVATING GRADER</td>
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<td>342 FORK LIFT OR STRADDLE CARRIER (HIGHWAY AND HEAVY ONLY)</td>
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<td>343 FORK LIFT OR LUMBER STACKER (HIGHWAY AND HEAVY ONLY)</td>
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<td>344 FRONT END, SKID STEER OVER 1 TO 5 C YD</td>
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<td>345 GPS REMOTE OPERATING OF EQUIPMENT</td>
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<td>347 HYDRAULIC TREE PLANTER</td>
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<td>348 LAUNCHER PERSON (TANKER PERSON OR PILOT LICENSE)</td>
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<td>349 LOCOMOTIVE (HIGHWAY AND HEAVY ONLY)</td>
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<td>350 MILLING, GRINDING, PLANNING, FINE GRADE, OR TRIMMER MACHINE</td>
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<td>351 MULTIPLE MACHINES, SUCH AS AIR COMPRESSORS, WELDING MACHINES, GENERATORS, PUMPS (HIGHWAY AND HEAVY ONLY)</td>
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<td>352 PAVEMENT BREAKER OR TAMPPING MACHINE (POWER DRIVEN) MIGHTY MITE OR SIMILAR TYPE</td>
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<td>353 PICKUP SWEEPER, ONE CUBIC YARD AND OVER HOPPER CAPACITY (HIGHWAY AND HEAVY ONLY)</td>
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<td>354 PIPELINE WRAPPING, CLEANING OR BENDING MACHINE</td>
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<td>355 POWER PLANT ENGINEER, 100 KWH AND OVER (HIGHWAY AND HEAVY ONLY)</td>
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<td>356 POWER ACTUATED HORIZONTAL BORING MACHINE, OVER SIX INCHES</td>
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<td>357 PUGMILL</td>
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<td>358 PUMPCRETE (HIGHWAY AND HEAVY ONLY)</td>
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<td>359 RUBBER-TIRED FARM TRACTOR WITH BACKHOE INCLUDING ATTACHMENTS (HIGHWAY AND HEAVY ONLY)</td>
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<td>361 SELF-PROPELLED SOIL STABILIZER</td>
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<td>362 SLIP FORM (POWER DRIVEN) (PAVING)</td>
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<td>363 TIE TAMPER AND BALLAST MACHINE</td>
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<td>364 TRACTOR, BULLDOZER (HIGHWAY AND HEAVY ONLY)</td>
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<td>365 TRACTOR, WHEEL TYPE, OVER 50 H.P. WITH PTO UNRELATED TO LANDSCAPING (HIGHWAY AND HEAVY ONLY)</td>
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<td>366 TRENCHING MACHINE (SEWER, WATER, GAS) EXCLUDES WALK BEHIND TRENCHER (HIGHWAY AND HEAVY ONLY)</td>
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<td>367 TUB GRINDER, MORBARK, OR SIMILAR TYPE</td>
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<td>368 WELL POINT DISMANTLING OR INSTALLATION (HIGHWAY AND HEAVY ONLY)</td>
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**GROUP 5**

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<p>| 369 AIR COMPRESSOR, 600 CFM OR OVER (HIGHWAY AND HEAVY ONLY) |             |            |            |
| 370 BITUMINOUS ROLLER (UNDER EIGHT TONS) |             |            |            |
| 371 CONCRETE SAW (MULTIPLE BLADE) (POWER OPERATED) |             |            |            |
| 372 FORM TRENCH DIGGER (POWER) |             |            |            |
| 373 FRONT END, SKID STEER UP TO 1C YD |             |            |            |
| 374 GUNITE GUNALL (HIGHWAY AND HEAVY ONLY) |             |            |            |
| 375 HYDRAULIC LOG SPLITTER |             |            |            |
| 376 LOADER (BARBER GREENE OR SIMILAR TYPE) |             |            |            |
| 377 POST HOLE DRIVING MACHINE/POST HOLE AUGER |             |            |            |</p>
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<td>379 POWER ACTUATED JACK</td>
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<td>380 PUMP (HIGHWAY AND HEAVY ONLY)</td>
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<tr>
<td>381 SELF-PROPELLED CHIP SPREADER (FLAHERTY OR SIMILAR)</td>
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<td>382 SHEEP FOOT COMPACTOR WITH BLADE . 200 H.P. AND OVER</td>
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<td>383 SHOULDERING MACHINE (POWER) APSO OR SIMILAR TYPE INCLUDING SELF-PROPELLED SAND AND CHIP SPREADER</td>
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<td>384 STUMP CHIPPER AND TREE CHIPPER</td>
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<td>385 TREE FARMER (MACHINE)</td>
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<td>387 CAT, CHALLENGER, OR SIMILAR TYPE OF TRACTORS, WHEN PULLING DISK OR ROLLER</td>
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<td>388 CONVEYOR (HIGHWAY AND HEAVY ONLY)</td>
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<td>389 DREDGE DECK HAND</td>
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<td>393 LEVER PERSON</td>
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<td>394 OILER (POWER SHOVEL, CRANE, TRUCK CRANE, DRAGLINE, CRUSHERS, AND MILLING MACHINES, OR OTHER SIMILAR HEAVY EQUIPMENT) (HIGHWAY AND HEAVY ONLY)</td>
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**TRUCK DRIVERS**

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730 SIGN ERECTOR

FOR RATE CALL 651-284-5091 OR EMAIL DLI.PREVWAGE@STATE.MN.US
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<td>(1708) RAILROAD-HIGHWAY PROVISIONS</td>
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DIVISION S

S-1 CONTACT INFORMATION
Questions regarding this Project, including any questions prior to bidding, shall be directed to Julie Rath, MVRRRA, 507 637 4084 or at Julie@radc.org

S-2 PRE-BID MEETING AND SITE TOUR
Contractors may view the site by contacting Tim Jeske at 320 864 7214 or tieske@tcwr.net a minimum of 48 hours before the site visit. Personal Protective Equipment will be required and will be the responsibility of each individual.

S-3 STANDARDS
The Mn/DOT Standard Specifications for Construction, 2014 edition (using English units), and the current AREMA Manual published by the American Railway Engineering and Maintenance of Way Association shall govern this project.

The Mn/DOT Standard Specifications for Construction, may be augmented with Division II, Division III and Division IV for Rail Rehabilitation Projects. In the case of any discrepancy between the Division II, Division III and Division IV for Rehabilitation Projects and the AREMA Manual, the AREMA Manual will govern.

S-4 USE OF ADHESIVE ANCHORS
The use of adhesive anchors in sustained tension is prohibited. Other application utilizing adhesive anchors, such as metal rail attachment, in a non-direct tensile application is permitted.

S-5 TRACK CHART
The location of this project is shown on Exhibit A Project Location.

S-6 RAILROAD WORKPLACE SAFETY
The Contractor must abide by 49 CFR 214 (Railroad Workplace Safety and bridge safety). The Contractor must also abide by the Federal Railroad Administration Track Safety Standards Compliance Manual Section §213.7 .d the designation of qualified person to supervise certain renewals and inspect track and §213.11 Restoration or renewal of track under traffic conditions.

S-7 (1101) ABBREVIATIONS
The following are hereby added to Mn/DOT 1101:

AREMA The American Railway Engineering and Maintenance of Way Association OTMOther Track Material

S-8 (1202) CONTENTS OF PROPOSAL FORM
The provision of Mn/DOT 1202 is hereby supplemented with the following:

S-8.1 In addition to the bid proposal forms, Contractors are required to submit the following items:
• Proposal Guaranty.
• Schedule of equipment and production rates for the items of work.
• List of previous projects successfully completed in the past three (3) years.
• Human Rights Certificate
• Secretary of State Certificate to do business in Minnesota
S-8.2 A bidder must bid on the entire Project with all of the required documentation submitted with each bid. Multiple bids will not be accepted.

S-9 **(1205) EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK**

The provisions of Mn/DOT 1205 are hereby supplemented with the following:

The Minnesota Prairie Line (MPLI) Railroad operates four (4) trains per week, Monday – Friday, with occasional trains on the weekend between Winthrop and Hanley Falls. Operating speed is 10 miles per hour within the project limits. The Contractor is expected to plan and execute the work around and in consideration of train operations. Train traffic has priority over the Contractor’s operations and the Contractor is expected to have equipment and laborers clear of the track area when the train is operating.

The track Contractor may only work or occupy the track between the hours of 6:00 AM to 6:00 PM. With the approval of the MPLI Railroad, the Contractor may be allowed to leave equipment on the main line during non-working hours. It is the Contractor’s responsibility to obtain any and all such approvals from the MPLI Railroad.

The Contractor will only be allowed to work within designated work limits as identified by MPLI Railroad and the Contractor. The Contractor and the MPLI Railroad will establish work limits, designated by stations, each Thursday for the upcoming week. The Contractor is to abide by all railroad operating rules and special instructions. The Contractor is responsible for obtaining from the railroad, all applicable rules and instructions.

If the Contractor needs to move equipment by rail to another designated area of the project, the MPLI Railroad will require that such move be accompanied by a “pilot”. To secure the services of a “pilot”, the Contractor must give MPLI Railroad five (5) working days of advanced notice. The cost for “pilot” service is the responsibility of the Contractor and not considered an additional cost to the Project.

If the Contractor requests a work train for activities related to the project, the Contractor should contact the MPLI Railroad for rates. The cost for the requested work train is the responsibility of the Contractor and is not considered an additional cost to the Project.

On or about July 2019, the MPLI Railroad will spray the entire main line for weeds. MPLI Railroad makes no guarantees regarding the success of the weed-spraying program. Any additional weed removal required to enable the project work to be completed shall be the responsibility of the Contractor and will not be considered an addition to the Contract amount.

S-10 **(1206) PREPARATION OF PROPOSAL**

The provisions of Mn/DOT 1206 are supplemented and/or modified with the following: S-10.1 The first paragraph of Mn/DOT 1206.2 is hereby changed to read:

The bidder's attention is directed to MN Statute § 161.32 subd. 1c, which provides among other things, that a bid will be rejected if it contains any alterations or erasures that are not corrected as follows:

S-10.1 Delete Section 1206.3.

S-11 **(1209) DELIVERY OF PROPOSALS**

The provisions of Mn/DOT 1209 are hereby supplemented with the following:

S-11.1 Refer to Track Contractor’s Representation section for additional proposal requirements.
WITHDRAWAL OR REVISION OF PROPOSALS

The provisions of Mn/DOT 1210 are hereby deleted and replaced with the following:

Any bidder may withdraw or revise its Proposal after it has been deposited with the Contracting Authority, provided the request for withdrawal or revision is received in writing before the time set for opening proposals.

The Contracting Authority reserves the right to revise the Plans, Specifications, Special Provisions, and Proposal form for any Project at any time prior to the date set for opening the Proposals.

Revisions will be made by Addendum, duly numbered and dated, subject to the following provisions:

1. Each Addendum will be delivered by certified mail, courier service, fax, or other electronic transmission to each prospective bidder who has received a Proposal form prior to the date of Addendum. The Addendum will be included with all Proposal forms issued to bidders after the date of the Addendum.

2. If revisions made by an Addendum require considerable change or reconsideration on the part of the bidder, the date set for opening the Proposals may be postponed, in which case the Addendum will include an announcement of the new date set for opening Proposals.

3. Each bidder shall acknowledge receipt of each Addendum, either in the space provided on the Proposal form or by submitting a letter prior to the time set for opening Proposals.

PUBLIC OPENING OF PROPOSALS

The provisions of Mn/DOT 1212 are hereby deleted and replaced with the following:

Proposals will be opened at the time indicated in the Advertisement for Bids.

REQUIREMENT OF CONTRACT BOND

The provisions of Mn/DOT 1305 are hereby deleted and replaced with the following:

The successful bidder shall furnish a payment bond equal to the contract amount and a performance bond equal to the contract amount as required by Minnesota Statutes, section 574.26. The surety and form of the bonds shall be subject to the approval of the contracting authority.

The contracting authority shall require for all contracts less than or equal to five million dollars ($5,000,000.00), that the aggregate liability of the payment and performance bonds shall be twice the amount of the contract. All contracts in excess of five million dollars ($5,000,000.00) shall have an aggregate liability equal to the amount of the contract.

EXECUTION AND APPROVAL OF CONTRACT

The provisions of Mn/DOT 1306 are modified to the extent the Contract shall be signed, and the Contract Bond delivered, to the offices of MVRRA, 200 South Mill Street, Redwood Falls, MN 56283, to Julie Rath within three (3) days, excluding Saturdays, Sundays and holidays, after the bidder has been advised that his/her bid has been accepted subject to execution and approval of the Contract as required by law, and that notification thereof has been made by letter.

EXTRA WORK

The second paragraph of Mn/DOT 1403 is hereby deleted and the following is substituted
therefore:

All Extra Work requires the approval of the Engineer or designated MVRRA representative.

**S-17**

**(2563) TRAFFIC CONTROL**

The provisions of 1404 are supplemented as follows:

The Contractor shall, at the pre-construction conference, designate a Work Zone Safety Coordinator who shall be responsible for safety and traffic control management in the Project work zone. The Work Zone Safety Coordinator shall be either an employee of the Contractor such as a superintendent or a foreman, or an employee of a firm which has a subcontract for overall work zone safety and traffic control management for the Project. The responsibilities of the Work Zone Safety Coordinator shall include, but not be limited to:

- Coordinating all work zone traffic control operations of the Project, including those of the Contractor, subcontractors and suppliers.

- Establishing contact with local school district, government, law enforcement, and emergency response agencies affected by construction before work begins.

- Maintaining a record of all known crashes within a work zone. This record should include all available information, such as: time of day, probable cause, location, pictures, sketches, weather conditions, interferences to traffic, etc. These records shall be made available to the Engineer upon request.

The Contractor shall inspect, on a daily basis, all traffic control devices, which the Contractor has furnished and installed, and verify that the devices are placed in accordance with the Traffic Control Layouts, these Special Provisions, and/or the MN MUTCD. Any discrepancy between the placement and the required placement shall be immediately corrected. The person performing the inspection shall be required to make a daily log. This log shall also include the date and time any changes in the stages, phases, or portions thereof go into effect. The log shall identify the location and verify that the devices are placed as directed or corrected in accordance with the Plan. All entries in the log shall include the date and time of the entry and be signed by the person making the inspection. The Engineer reserves the right to request copies of the logs as he deems necessary.

**Measurement and Payment:**

No measurement will be made of the various Items that constitute Traffic Control but all such work will be construed to be included in the single Lump Sum payment under Item Traffic Control.

**S-18**

**(1407) FINAL CLEANUP**

The provisions of Mn/DOT 1407 are supplemented as follows:

Before final acceptance, the Contractor shall remove from the Right of Way and from other ground occupied in connection with the work all surplus and discarded materials, equipment, rubbish and temporary structures. The Contractor shall leave all parts of the work, included borrow pits, in a condition acceptable to the Engineer. The Contractor shall consider the cost of final cleanup as incidental to other items. The property shall be left in a condition at least equal to that existing before the work was completed, as determined by the Engineer.
All scrap rail, Other Track material (OTM) and ties shall become the property of the Contractor, except for those materials listed in salvage material section. It is the responsibility of the Contractor to remove these materials from the work area and neatly stockpile the materials in a location designated by the railroad. These stockpiled materials shall be removed from the stockpiled area prior to requesting final payment for the Project.

S-18.1 If the Contractor is required to dispose of treated wood, the following shall apply: TREATED WOOD DISPOSAL
This work consists of disposing of treated wood in accordance with the following:

(A) Description of Services

For each site the Contractor shall:

- Describe the method of material pickup and the expected material condition, i.e.: specific length, etc.
- Describe the method of waste material transport and waste material disposal site.
- Dispose treated wood in a MPCA permitted lined solid waste landfill (not a demolition landfill).
- The Contractor has the option to chip creosote treated wood on site. After the wood is chipped on site, it can be transported off site and incinerated at a MPCA permitted incinerator. Call 651-294-3790 for a list of incinerators permitted to burn creosoted treated wood. This applies to creosote treated wood only.
- Within 30 days after the treated wood is transported off site, the Contractor shall provide the Project Engineer with disposal records. Records include manifests, scale tickets, and invoices. Records shall indicate type of treated wood, quantity, date and location of disposal.

S-19 (1502) PLANS AND WORKING DRAWINGS
The provisions of Mn/DOT 1502 are supplemented as follows:

At least ten (10) days prior to the commencement of construction MVRRA and MPLI will conduct a pre-construction conference to discuss track work, standards and specifications, schedules, train operating rules and any other matters pertinent to this specific Project. The meeting will be attended by representatives from the Contractor, MPLI Railroad, road authorities, MVRRÁ, and Mn/DOT. At the time of the meeting the Contractor should be prepared to discuss work plans and schedule.

S-20 (1505) COOPERATION BY CONTRACTORS
The provisions of Mn/DOT 1505 are supplemented as follows:

The Contractor is expected to coordinate its work with the Railroad and any and all local road authorities. The Contractor, the Railroad and the Engineer shall meet at least one (1) time per week to discuss Project and railroad scheduling. The Contractor shall cooperate specifically, but not limited to, the following projects and operations:

- Crossties, track raise, ballast, and surfacing by MPLI.

The Contractor shall give three (3) weeks notice to any road authority impacted by construction activities to enable said road authorities. It is understood that the Contractor will be responsible for the proper traffic control and detours.
S-21  **(1506) SUPERVISION BY CONTRACTOR**

The provisions of Mn/DOT 1506 are supplemented as follows:

At the Preconstruction Conference the Contractor shall designate in writing who the competent superintendent and competent individual (if different) will be for this Project. These persons can only be changed throughout the duration of the Project by submission of written authorization to the Engineer by the Contractor. The submittal of these persons shall be done before any work is performed on this Project.

The Contractor will be subject to an hourly charge for failure to comply with the requirements of Mn/DOT 1506. Non-Compliance charges, for each incident, will be assessed at a rate of $100 per hour, for each hour or portion thereof, during which the Engineer determines that the Contractor has not complied. No charge will be made if the deficiency is corrected within one (1) hour of notification.

An incident of Non-Compliance will be defined as the receipt of a written work order by the Contractor with instructions to correct a deficiency.

S-22  **(1507) UTILITY PROPERTY AND SERVICE**

Construction operations in the proximity of utility properties shall be performed in accordance with the provisions of MnDOT 1507, except as modified below:

S-22.1 The provisions of MnDOT 1507.1 B are hereby deleted and the following substituted therefore:

B  Gopher State One Call

The Contractor shall:

(1) Mark the proposed excavation in accordance with the Minnesota State Statute 216D color code before contacting "Gopher State One Call." The Contractor shall mark proposed excavation area with white paint and white flags or in lieu of white flags, white stakes may be used. The Contractor must adhere to all requirements of Gopher State One Call in addition to the following:

The white markings must delineate the actual excavation area where the locating of underground facilities is required. All flags and stakes shall display the name, and phone number of the Contractor. All areas of proposed excavation shall be considered “practical” for the use of white markings, pursuant to Minnesota Statutes §216D.05 (2).

(2) Call "Gopher State One Call" at least 48 hours (excluding Saturdays, Sundays, and holidays) before starting excavation operations.

(3) The Contractor shall acquire a Positive Response confirmation from MnDOT for all proposed excavations when the Gopher State One Call has indicated MnDOT utilities may be affected. The Contractor may call MnDOT Electrical Services Section (ESS) Dispatch Locating to confirm the status of Utility infrastructure owned by MnDOT. MnDOT Electrical Services Section (ESS) Dispatch Locating can be contacted at the following phone numbers; (651) 366 -5750 or (651) 366-5751. The Contractor shall be responsible for all damage to MnDOT owned Utility infrastructure if a Positive Response confirmation has not been acquired from MnDOT. The Contractor is required to comply with the provisions of Minnesota Statutes chapter 216D when performing Excavation as defined in Minnesota Statutes §216D.01 (subdivision 5), and will be responsible for damages to facilities in accordance with Minnesota Statutes §216D.06.
S-22.2 If the Contractor is negligent in adhering to MnDOT 1507.1 B, he will be subject to a daily charge assessed at a rate of $500.00 per excavation area per day for each day or any portion thereof with which the Engineer determines that the Contractor has not complied.

S-22.3 All utilities that relate to this Project are classified as "Level D," unless the Plans specifically state otherwise. This utility quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guidelines for the Collection and depiction of existing subsurface utility data."

S-22.4 By bidding on this Contract, the bidder agrees that it shall use the Plan to identify the location of MnDOT drainage facilities as satisfying the requirements of Minnesota Statutes Ch. 216D and Minnesota Rules 7560.0250 with respect to MnDOT’s storm water drainage facilities.

S-22.5 The following utility owners have existing facilities that may be affected by the work under this Contract, all of which they intend where necessary to relocate or adjust in advance of or concurrently with the Contractor’s operations.

There are buried fiber optic lines parallel to the rail line.

S-23 (1511) INSPECTION OF WORK

The provisions of Mn/DOT 1511 are supplemental as follows:

In addition to the right to inspect the work, MVRRA and/or Mn/DOT or their respective representative reserves the right to review Contractor’s daily work reports, material invoices and other records to ensure compliance with the Contract documents and plans. Contractor shall keep all records in a location that would allow for the inspection and copying of said records during regular business hours.

S-24 (1513) RESTRICTIONS ON MOVEMENT AND STORAGE OF HEAVY LOADS AND EQUIPMENT

The Contractor shall haul Materials and move and store equipment in accordance with the Highway Traffic Regulation Act and applicable provisions of Minnesota Rules when using public Roads or completed Structures, base courses, and pavements within the Project that are open to traffic and becoming a part of the permanent improvement.

The Contractor shall comply with legal load restrictions and with special restrictions required by the Contract when hauling or storing Materials and moving or storing equipment on Structures, completed Subgrades, base courses, and pavements within the Project, under construction or completed but not yet open to traffic.

The Contractor shall complete and place a cab card in each vehicle used for hauling bituminous mixture, aggregate, batch concrete, and grading material (including borrow and excess) before starting work. This cab card shall identify the truck or tractor and trailer by Minnesota or prorated license number and shall contain the tare, maximum allowable legal gross mass, supporting information, and the signature of the owner. The Contractor shall make the card available to the Engineer upon request. The Contract Unit Prices include Contractor-related costs in providing, verifying, and spot checking the cab card information, including weighing empty and loaded trucks on certified commercial scales.

The Contractor shall not operate equipment mounted on crawler tracks or steel-tired wheels on or across concrete, steel, or bituminous surfaces unless otherwise
approved by the Engineer. The Contract requirements may impose special restrictions on speed, load distribution, surface protection, and other precautions.

When construction operations require crossing an existing pavement, Bridges, or completed portions of the Pavement Structure with otherwise prohibited equipment or loads, the Contractor shall use Department-approved methods of load distribution or bridging at no additional cost to the Department.

The Contractor will not be relieved of liability for damages resulting from the operation and movement of construction equipment because of the issuance of a special permit, or by adherence to any other restrictions imposed.

Unless otherwise required by the Contract or approved by the Engineer, the Contractor shall temporarily store or park construction Materials and equipment on a Bridge deck during Bridge construction in accordance with the limits of this section, established to reflect typical design live loads. The Contractor shall store Materials and equipment limited as follows:

(1) No stockpiles weighing greater than 65,000 lb per 1,000 ft² [31,702 kg per 100 m²],
(2) No individual stockpiles of Materials (including pallets of products, reinforcing bar bundles, and aggregate piles) weighing greater than 25,000 lb per 100 ft² [12,200 kg per 10 m²],
(3) No single vehicle or equipment exceeding 80,000 lb [36,300 kg], and
(4) No combination of more than 200,000 lb [90,700 kg] of vehicles, Materials, and other equipment per span with lengths greater than 40 ft [12.2 m].

If loading exceeds the above defined limits, the Contractor shall submit the proposed loads and structural analysis of the deck and beams certified by a Professional Engineer to the Bridge Engineer for the Bridge Engineer’s review within a minimum of 7 calendar days before placement of loads.

**S-25**

**(1514) MAINTENANCE DURING CONSTRUCTION**

The provisions of Mn/DOT 1514 are supplemented with the following:

The requirement to maintain roadways and structures shall also include the requirement to keep the railroad track and associated signals in satisfactory condition at all times. Any defects identified during inspection of the track or signal systems shall be immediately repaired and said defects shall be immediately reported to the Railroad. At the request of Railroad and/or Project Engineer, the Contractor shall accompany the Railroad during any and all inspections of the track and related systems.

In addition to the Contractor’s requirements for sweeping as required under MnDOT 2051 (Maintenance and Restoration of Haul Roads), the Engineer may require additional sweeping of roads adjacent to the construction site to provide safe conditions for the traveling public, environmental reasons, local regulatory requirements or as otherwise directed by the Engineer.

Payment for additional sweeping ordered by the Engineer will be made as specified below. (This price represents a shared cost.)

Pick Up Broom W/Operator.................................................................$55.00 per hour
Self Propelled Pavement Broom W/Operator ..............................................$30.00 per hour

**S-26**

**(1517) CLAIMS FOR COMPENSATION ADJUSTMENT**

The provisions of Mn/DOT 1517 are hereby supplemented with the following:
S-26.1 NOTICE OF CLAIM
At the time the Contractor gives written notice of the claim, the Contractor and MVRRA shall immediately begin to keep and maintain complete and specific records to the extent possible. The records shall consist of, but are not limited to, cost and schedule records concerning the details of the perceived claim.

Unless otherwise agreed to in writing, the Contractor shall continue with and carry on the work and progress during the pendency of any claim, dispute, decision or determination by the Engineer, and any arbitration proceedings.

S-26.2 SUBMISSION OF CLAIMS
The Contractor shall submit the claim to the Engineer no later than 60 Calendar Days after receiving written notice from the Engineer that direct damages (money or time due) resulting from the claim has occurred in the opinion of the Engineer. If, in the opinion of the Contractor, the direct damages have not fully occurred, the Contractor shall provide written justification detailing why the direct damages have not fully occurred. This written justification shall be submitted to the Engineer no later than 30 Calendar Days from receiving the notice from the Engineer. If proper justification is not given as required within the 30 Calendar Day requirement or the claim is not submitted to the Engineer within 60 Calendar Days after receiving notice from the Engineer that the direct damages have occurred, the Contractor waives all claims for additional compensation in connection with the work already performed.

The contents of the claim shall be in accordance with Mn/DOT 1517 and shall also include all scheduling documentation related to the claim.

The Engineer shall have access to the Contractors records involved in the claim and, when so requested, shall furnish the Engineer copies of claim documentation.

The Contractor shall promptly furnish any clarification and additional information or data requested in writing by the Engineer.

All claims shall be submitted through the Contractor. Submission of claims directly from subcontractors shall constitute a waiver of that portion of the claim.

S-26.3 DECISION ON CLAIMS
The Department intends to resolve claims at the lowest possible administrative level. Upon receipt of the claim, the Engineer will make a written decision in relation to any claim presented by the Contractor within the following time frames:

(A) For an adjustment in compensation, or other contractual dispute between the parties where the amount in controversy is $75,000.00 or less, 60 Calendar Days from the receipt of the Contractor's claim;

(B) For an adjustment in compensation, or other contractual dispute between the parties where the amount in controversy is more than $75,000.00, 90 Calendar Days from the receipt of the Contractor's claim.

unless the Contractor and the Engineer otherwise stipulate in writing to a later time, if the Engineer does not make a decision or determination within these time frames, the claim shall be deemed denied.

When the Contract has established a dispute resolution process, that moves the dispute through various levels of both organizations, this process shall also be completed within the above time period.

S-26.4 MEDIATION
Notwithstanding the formal claims procedures set forth in this Special Provision, the parties may at any time enter into nonbinding mediation by mutual agreement. If the parties agree to mediation, then the time requirements set forth above in Section S-25.3 (A) and (B) are
suspended until the mediation is completed. The time and place for mediation, as well as selection of the mediator, shall be established by mutual agreement. The mediator’s costs shall be divided equally between the Contractor and MVRRA. This payment shall be accomplished by the Contractor paying in full all costs and fees for the mediator and then submit the bill to the Engineer for 50 percent reimbursement. Either party may terminate mediation at any time.

S-26.5 RIGHTS OF ARBITRATION

The decision of the Engineer in relation to the Contractor's claim shall be deemed final unless the Contractor commences a legal action within the time prescribed by law or unless the Contractor invokes arbitration as prescribed hereafter in these Special Provisions. Nothing herein contained shall be so construed as to preclude the Contractor from commencing a legal action in relation to claims for a single issue in excess of $75,000.00 but the Contractor's sole legal remedy in relation to claims of $75,000.00 or less shall be arbitration as prescribed hereafter in these Special Provisions. If the claim amount is in excess of $75,000, the Contractor and MVRRA may mutually agree to arbitration.

If the Contractor seeks to arbitrate a claim of $75,000 or less, the Contractor shall submit a written request for arbitration to the MVRRA Claims Representative within 30 Calendar Days after the Contractor’s receipt of the Engineer's decision. Failure to reasonably conform with this time requirement waives the right to arbitration. The scope of the arbitration proceeding shall be limited to the claim(s) that the Contractor previously presented to the Engineer for decision.

S-26.6 ARBITRATION OF CLAIMS AND DISPUTES

(A) For purposes of this section, a claim for adjustment in compensation shall mean an aggregate of operative facts which give rise to the rights which the Contractor seeks to enforce. Stated another way, a claim is the event, transaction, or set of facts that give rise to a claim for compensation. Any Contractor having a claim in excess of $75,000.00 may waive or abandon the dollar amount in excess of $75,000.00 so as to bring the claim within the scope of this section. However, the arbitration award shall not exceed $75,000.00. Various damages claimed by the Contractor for a single claim may not be divided into separate proceedings to create claims within the $75,000.00 limit.

(B) More than one separate claim may be presented at each arbitration hearing if agreed to by MVRRA, the Contractor, and the Arbitrator.

(C) Selection of the Arbitrator/ Optional Use of the American Arbitration Association:
   a. Selection of the arbitrator shall be conducted by one representative of the MVRRA and one representative of the Contractor. A single person shall represent the prime and all subcontractors involved in the claim. Separate representation for subcontractors during the selection of the arbitrator is not allowed.
   b. The parties may mutually agree to have the arbitration process administered by the American Arbitration Association (“AAA”).
   c. The arbitration shall be administered by a single arbitrator.
   d. The parties shall select an arbitrator by mutual agreement, or, if the parties have agreed to use the AAA to administer the process, shall select an arbitrator from a list of arbitrators provided by the Association in accordance with the Association’s procedures.

(D) Arbitration Proceedings and Decision
   a. All arbitration of claims shall be conducted in Gaylord, Minnesota, or another mutually agreed upon location.
b. Regardless of whether the parties have agreed to use AAA to administer the process, the arbitration proceeding shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect and in accordance with the requirements below. The arbitration procedures set-forth in this Special Provision shall take precedence over conflicting American Arbitration Association requirements.

c. If mutually agreed to by both parties, the arbitration proceeding shall follow the Fast Track rules of the American Arbitration Association.

d. Unless otherwise agreed to by the parties, the arbitration hearing shall be bifurcated into a liability phase and, if needed, a valuation phase. No evidence or testimony regarding the value of the claim shall be presented during the liability phase.

e. The Contractor shall first present evidence to support the claim. The Department will then present evidence supporting its defense. Witnesses shall submit to questions or examinations. The arbitrator has the discretion to vary this procedure and shall afford a full and equal opportunity to all parties to be heard. Exhibits, when offered by either party, may be received in evidence by the arbitrator.

f. The arbitrator shall entertain motions, including motions that dispose of all or part of a claim or that may expedite the proceedings.

g. There shall be no ex parte communication between any party and an arbitrator.

h. When satisfied that the presentation of the parties is complete, the arbitrator shall declare the liability phase of the arbitration hearing closed. The arbitrator shall then determine whether MVRRA is liable.

i. If the MVRRA is found to be liable, the arbitration proceeding shall continue before the same arbitrator to resolve all damages issues. The proceedings for this portion of the arbitration shall follow the procedures outlined in Section S-25.6(D)e of this Special Provision.

j. Within three Calendar Days after the close of the damages portion of the hearing, each party shall submit to the arbitrator their last best offers. The arbitrator shall be limited to awarding only one of the two figures submitted. In no event shall a claim award in arbitration exceed $75,000.

k. The decision or award of the arbitrator shall be:

i. In writing showing the basis for the decision or award. The arbitrator shall use the Contract and Minnesota law, or, in the absence of Minnesota law on the issue(s), other persuasive authority, as the basis for the decision.

ii. Final and binding on both the Department and the Contractor.
The award shall have the same finality as is accorded awards under the Uniform Arbitration Act, Minnesota Statutes Chapter 572.

(E) Arbitration Costs
a. Each party to the arbitration shall bear its own costs and fees assessed by the American Arbitration Association or independent arbitrator which shall be divided equally between the parties to the arbitration. This payment will be accomplished by the Contractor paying in full all costs and fees for the arbitrator and then submit the bill to the Engineer for 50 percent reimbursement.

b. Each party shall bear its own preparation costs.

S-27 (1601) SOURCE OF SUPPLY AND QUALITY
The provisions of Mn/DOT 1601 are supplemented as follows:

Source of Supply and Quality: Mn/DOT 1604 is supplemented as follows: All costs of shop inspection at plants outside the United States shall be borne by the Contractor. Such costs shall be deducted from monies due or to become due the Contractor.

Partial Payment: All provisions for partial payments shall apply to domestic materials only. No payments shall be made to the Contractor for materials manufactured outside of the United States until such materials have been delivered to the job site.

S-28 (1602) NATURAL MATERIAL SOURCES
The provisions of Mn/DOT 1602 are supplemented with the following:

S-28.1 The expansion of any existing natural material sources, or the creation of new Natural Material Sources, will be subject to the requirements of the Farmland Protection Act of 1981 (FPPA or the ACT).

Coordination to comply with FPPA shall be the responsibility of the Contractor. Contact the Soil Conservation Service (SCS) office for the county in which the source is located for further information.

S-29 (1603) MATERIALS: SPECIFICATIONS, SAMPLES, TESTS, AND ACCEPTANCE
The provisions of Mn/DOT 1603 are supplemented with the following:

S-29.1 The first sentence of Mn/DOT 1603.1 is hereby deleted and replaced with the following:

All materials that are subject to definite Specification requirements will be inspected and may be tested by MVRRA at any time prior to being incorporated permanently in the work.

S-29.2 The second sentence of Mn/DOT 1603.1 is modified by adding AREMA (American Railway Engineering and Maintenance of Way Association) as the standard which will govern all track and signal construction.

S-30 (1606) STORAGE OF MATERIALS
The provisions of Mn/DOT 1606 are hereby supplemented with the following:

S-30.1 The Contractor is hereby advised that the only materials that will be allowed to be stockpiled within Project Limits are materials which will be incorporated into the Project and then only in the quantity needed. Materials cannot be stockpiled which are for use on other projects. This specification applies to manufactured and natural materials (including material stockpiled for crushing).
S-30.2 If the Contractor elects to crush excavated materials within the Project Limits, the quantity of crushed material will be limited to only the quantity required for this Project. The Contractor will not be allowed to crush materials other than those found within the Project Limits, unless approved in writing by the Engineer. The Contractor will not be allowed to remove crushed material from the Project Limits, unless approved in writing by the Engineer.

S-31 (1701) LAWS TO BE OBSERVED (CULTURAL RESOURCES)
The provisions of MnDOT 1701 are modified and/or supplemented with the following:

S-31.1 It will be MVRRA's responsibility to obtain a Cultural Resources Unit (CRU) determination of effect letter for MnDOT owned or leased Natural Material Sources if listed in the Construction Plan. It will also be MVRRA's responsibility to obtain a CRU Unit determination of effect letter for all Right of Way needed for this Project.

S-31.2 If the Contractor operations require the excavation and disposal of material off MnDOT Right of Way, the Contractor is advised of the following:

MnDOT (CRU) will review the proposed excavation/disposal area to determine the effect to historic properties. The MnDOT CRU will obtain State Historic Preservation Office (SHPO) comment only when required by the current Section 106 Programmatic Agreement between the FHWA and SHPO, or, if no federal funds are involved, when required by the Minnesota Historic Sites Act and the Field Archaeology Act of Minnesota. The Contractor must request a review from the CRU, at Contractor's expense, before any material taken from the area can be used on State Projects or any disposal can be made in the area. This review may take up to 45 calendar days after receipt of the request (this time period includes up to 30 days for tribal consultation when necessary). Any time delays are the responsibility of the Contractor and are not a basis for claim for damages due to delay of Contract.

A) Required reviews may be obtained by contacting MnDOT's Cultural Resources Unit at:

Cultural Resources Unit
Office of Environmental Services Minnesota
Department of Transportation 395 John Ireland Blvd.
Mail Stop 620
St. Paul Minnesota 55155-1899
Telephone: 651-366-3612
Fax: 651-366-3603
Email: culturalresources.dot@state.mn.us

and the request must have a description of the project or disposal area as follows;

1. S.P. number and road number
2. Legal location, including a precise location on a plat map (Township, range, section, county)
3. Location of area on a 7.5 minute 1:24,000 USGS topographic quadrangle map, with map name identified and pit, disposal, excavation area or embankment drawn to scale on the map.
4. Size of the area (in acres)
5. Current or past land use (e.g. agricultural)
6. Is excavation or disposal in a new area or an existing one?
7. If existing pit, is there a state pit number?
8. If existing pit, is the excavation or disposal to stay within existing pit margins?
9. What is the approximate thickness of the fill to be disposed of?
10. Is the excavation or fill going to be matched into the
1. Plot any buildings within one-fourth mile of the excavation and/or disposal site area, along with a description of their apparent purpose (e.g. houses, barns) and their approximate age. Photographs of the buildings may be needed.

10. MVRRRA Project Engineer name and telephone number.

11. Contact information for Contractor, name and telephone number.

B) The Contractor shall give the Project Engineer a copy of the MnDOT CRU determination of effect letter. If this letter states that there are no historic properties affected, no further action is required by the Contractor.

C) When the MnDOT CRU requires a Cultural Resource Field Survey, the Contractor shall secure professional services to conduct a survey and prepare a report for the MnDOT CRU.

1. A list of qualified acceptable Archaeologists will be furnished to the Contractor by the MnDOT CRU, upon request.

2. When a Cultural Resource Field Survey is required, Contract time will be adjusted in accordance with MnDOT 1806 for any suspension of work required to comply with these requirements. No monetary claims due to delays or loss of time for off-site construction activity will be allowed.

3. The cost of the cultural resources survey and report are the Contractors responsibility.

The Contractor will NOT be given permission to use the proposed material resources site, disposal site, or embankment/excavation site until such time as the MnDOT CRU grants its permission.

S-32 *(1701) LAWS TO BE OBSERVED (WETLANDS)*

The provisions of MnDOT 1701 are modified and/or supplemented with the following:

S-32.1 If the Contractor operations involve the excavation and/or disposal of material off MVRRRA or public Right of Way, the Contractor is advised of the following.

MN Statutes Sections 103G.2212 and 103G.241 stipulate that an agent or employee of another may not

1) drain, excavate, or fill a wetland, wholly or partially; or
2) construct, reconstruct, remove, or make any change in any reservoir, dam, or the course, current, or cross-section of any public water;

unless the agent or employee has obtained a signed statement from the property owner stating that any permit or wetland replacement plan required for the work has been obtained, or that a permit or replacement plan is not required; AND this statement is mailed to the appropriate office with jurisdiction over the wetland or public water prior to initiating the work.

The "Landowner Statement and Contractor Responsibility For Work in Wetlands or Public Waters" can be found at: [http://www.bwsr.state.mn.us/wetlands/forms/Contractor_Responsibility.doc](http://www.bwsr.state.mn.us/wetlands/forms/Contractor_Responsibility.doc), The Contractor shall provide the Engineer with a copy of the completed "Landowner Statement and Contractor Responsibility for Work in Wetlands or Public Waters" for the excavation and/or disposal site.
prior to initiating the work.

**S-33** *(1701) LAWS TO BE OBSERVED (DATA PRACTICES)*

The provisions of Mn/DOT 1701 are supplemented with the following:

S-33.1 Bidders are advised that all data created, collected, received, maintained, or disseminated by the Contractor and any subcontractors in performing the work contained in this Contract are subject to the requirements of MN Statute Chapter 13, the Minnesota Government Data Practices Act (MGDPA). The Contractor shall comply with the requirements of the MGDPA in the same manner as the Department. The Contractor does not have a duty to provide access to public data to the public if the public data are available from the Department, except as required by the terms of the Contract.

**S-34** *(1706) EMPLOYEE HEALTH AND WELFARE*

The provisions of Mn/DOT 1706 are supplemented with the following:

S-34.1 All construction operations shall be conducted in compliance with applicable laws, regulations and industry standards as described in Mn/DOT 1706. The Contractor shall be considered to be fully responsible for the development, implementation and enforcement of all safety requirements on the Project, notwithstanding any actions MVRRA may take to help ensure compliance with those requirements.

S-34.2 The Contractor shall submit a written safety program to the Engineer at the pre-construction conference addressing safety issues for all Project activities. This program shall contain name(s) of person(s) responsible for all safety requirements and this Contractor’s Designee(s) shall be available at all times that work is being performed. The Contractor’s designee(s) shall be responsible for correcting violations on the Project as observed by the Engineer or his/her representative.

S-34.3 The Contractor shall not use any motor vehicle equipment on this Project having an obstructed view to the rear unless:

(A) The vehicle has a reverse signal alarm which is audible above the surrounding noise level; or

(B) The vehicle is backed up only when an observer signals that it is safe to do so.

S-34.4 A $500.00 monetary deduction (per incident) will be assessed by MVRRA for violations of safety standards and requirements that have the potential for loss of life and/or limb of Project personnel or the public. The areas of special concern include, but are not limited to excavation stability protection, fall protection, protection from overhead hazards, vehicle backup protection, confined space safety, blasting operations, and personal safety devices.

S-34.5 None of the monetary deductions listed above shall be considered by the Contractor as allowance of noncompliance incidents of these safety requirements on this Project.

**S-35** *(1708) RAILROAD-HIGHWAY PROVISIONS*

S-35.1 The provision of Mn/DOT 1708.5 is deleted.

**S-36** *(1710) TRAFFIC CONTROL DEVICES*

All traffic control devices and methods shall conform to the Minnesota Manual on Uniform Traffic Control Devices (MN MUTCD), Minnesota Standard Signs Manual, the Traffic Engineering Manual, and the following:
In accordance with the MN MUTCD all sign supports shall be crashworthy. Signs installed on barricades, barricade sign combinations, and all other portable supports shall be crashworthy. This includes all new and used Category I and Category II devices.

The Contractor shall provide the Project Engineer a Letter of Compliance stating that all of the Contractors Category I and II Devices are NCHRP 350. The Letter of Compliance must also include approved drawings of the different signs and devices and shall be provided to the Project Engineer at the Pre-construction meeting.

S-37 (1712) PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE

S-37.1 The Contractor is hereby notified that there may be rare plant, native plant communities, or significant natural features in the project area. Impact or disturbance to these features shall be avoided to the greatest extent possible. Refer to the attached letter from the Minnesota Department of Natural Resources for further information.

S-38 (1714) RESPONSIBILITY FOR DAMAGE CLAIMS; INSURANCE

The provisions of MnDOT 1714 are hereby deleted and replaced with the following:

The Contractor shall indemnify, defend, and save harmless MVRRA, its officers, and its employees from all suits, actions, and claims of any character brought because of injuries or damages received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of the Contractor; or because of any claims arising or amounts recovered from infringements of patent, trademark, or copyright; or because of any claims arising or amounts recovered under the Workers' Compensation Act, or under any other law, ordinance, order, or decree.

MVRRA may retain for its use money that is due the Contractor under this or any other contract with the Department, as the Department deems necessary to protect its interests with respect to any suits, actions, or claims arising on account of the Contractor's operations or in consequence of any act, neglect, omission, or misconduct of the Contractor; or, in case no money is due, the Contractor's Sureties may be held liable until those suits, actions, or claims have been settled and suitable evidence to that effect has been furnished to the MVRRA.

The Contractor shall identify a contact person for damage complaints from the public, and shall maintain a log of such complaints and any action taken by the Contractor. This log shall be available to the Engineer at his request.

A Workers’ Compensation Insurance

Contractor shall provide workers’ compensation insurance for all employees and shall require any subcontractors to provide workers’ compensation insurance in accordance with the statutory requirements of the State of MN and must include:

a. Part 2, Employers’ Liability including Stop Gap Liability for monopolistic states. Minimum limits:
   - $100,000 – Bodily Injury by disease per employee
   - $500,000 – Bodily Injury by disease aggregate
   - $100,000 – Bodily Injury by accident

b. Coverage C: All States Coverage

c. If applicable, USL&H, Maritime, Voluntary and Foreign Coverage

d. Waiver of subrogation in favor of the Department
If Contractor is self-insured for its obligation under the Workers’ Compensation Statutes in the jurisdiction where the project is located, a Certification of the Authority to Self-Insure such obligations shall be provided.

The Contractor must require Subcontractors to file evidence of insurance with the Contractor

B Commercial General Liability Insurance
The Contractor shall maintain insurance to cover liability from operations under the contract, whether such operations are by the Contractor, subcontractor or by anyone directly or indirectly employed under the Contract.

Minimum Limits of Liability
$2,000,000 – Per Occurrence
$2,000,000 – Annual Aggregate
$2,000,000 - Annual Aggregate applying to Products and Completed Operations
$50,000 – Fire Damage
$5,000 – Medical Expense (any one person per occurrence) Coverages
- Premises and Operations Bodily Injury and Property Damage
- Personal and Advertising Injury
- Products and Completed Operations Liability
- Contractual Liability as provided in ISO form CG 00 01 12 04 or its equivalent
- Pollution exclusion with standard exception as per ISO Commercial General Liability Coverage Form – CG 00 01 12 04 or equivalent
- Explosion, Collapse and Underground (XCU) perils
- Broad Form PD
- Independent Contractors – Let or Sublet work
- Waiver of subrogation in favor of the Department
- Department named as an Additional Insured, by endorsement, ISO Forms CG 2010 and CG 20 37 or their equivalent for claims arising out of the Contractor’s negligence or the negligence of those for whom the Contractor is responsible.

C Railroad Protective Insurance
Contractor shall maintain insurance to cover liability arising out of the operations, use, or maintenance of all owned, non-owned, and hired automobiles.

Coverages
- Owned Automobiles
- Non-owned Automobiles
- Hired Automobiles
- Waiver of subrogation in favor of the Department

Minimum Limit of Liability
$2,000,000 – Per Occurrence Combined Single Limit for Bodily Injury and Property Damage
$6,000,000 Aggregate – Physical damage to Property

Umbrella or Excess Liability Insurance
An Umbrella or Excess Liability insurance policy may be used to supplement the Contractor’s policy limits to satisfy the full policy limits required by the Contract.

D Additional Conditions
Contractors’ policy(ies) shall be primary and non-contributory insurance to any other valid and collectible insurance available to the Department with respect to any claim arising out of the Contract.

Evidence of subcontractor insurance shall be filed with the Contractor.
The Contractor is responsible for payment of Contract related insurance premiums and deductibles.

Insurance companies must have an AM Best rating of A- (minus) and a Financial Size Category of VII or better, and be authorized to do business in the State of Minnesota.

Certificates of Insurance acceptable to MVRRA shall be submitted prior to commencement of work under the Contract. Such Certificates and the required insurance policies shall contain a provision that coverage afforded under these policies shall not be cancelled without at least thirty (30) days advance written notice to MVRRA.

E Notice to the Contractor

The failure of the Contractor to obtain Certificate(s) of Insurance for the policies or renewals thereof or failure of the insurance company to notify MVRRA of the cancellation of policies required under this Contract shall not constitute a waiver by the MVRRA to the Contractor to provide such insurance.

MVRRA will reserve the right to terminate the Contract in accordance with 1808 if the Contractor is not in compliance with the insurance requirements and MVRRA retains all rights to pursue any legal remedies against the Contractor. In the event of a claims dispute, all insurance policies must be open to inspection by MVRRA, and copies of policies must be submitted to MVRRA’s authorized agent upon written request.

S-39 (1717) AIR, LAND, AND WATER POLLUTION

The provisions of Mn/DOT 1717 are supplemented and/or modified with the following:

S-39.1 DISCOVERY OF CONTAMINATED MATERIALS AND REGULATED WASTES

If during the course of the Project, the Contractor unexpectedly encounters any of the following conditions indicating the possible presence of contaminated soil, contaminated water, or regulated waste, the Contractor shall immediately stop work in the vicinity, notify the Engineer, and request suspension of work in the vicinity of the discovery area, in accordance with Mn/DOT 1803.4.

A documented inspection and evaluation will be conducted prior to the resumption of work. The Contractor shall not resume work in the suspected area without authorization by the Engineer.

(A) Indicators of contaminated soil, ground water or surface water include, but are not limited to the following:

1. Odor including gasoline, diesel, creosote (odor of railroad ties), mothballs, or other chemical odor.
2. Soil stained green or black (but not because of organic content), or with a dark, oily appearance, or any unusual soil color or texture.
3. A rainbow color (sheen) on surface water or soil.

(B) Indicators of regulated wastes include, but are not limited to the following:

1. Cans, bottles, glass, scrap metal, wood (indicators of solid waste and a possible dump)
2. Concrete and asphalt rubble (indicators of demolition waste).
3. Roofing materials, shingles, siding, vermiculite, floor tiles, transite or any fibrous material (indicators of demolition waste that could contain asbestos, lead or other chemicals).
4. Culverts or other pipes with tar-like coating, insulation or transite (indicators of asbestos).
5. Ash (ash from burning of regulated materials may contain lead,
asbestos or other chemicals).

6. Sandblast residue (could contain lead).

7. Treated wood including, but not limited to products referred to as green treat, brown treat and creosote (treated wood disposal is regulated).

8. Chemical containers such as storage tanks, drums, filters and other containers (possible sources of chemical contaminants).

9. Old basements with intact floor tiles or insulation (could contain asbestos), sumps (could contain chemical waste), waste traps (could contain oily wastes) and cesspools (could contain chemical or oily wastes).

S-39.2 Mn/DOT 1717.2 A2 is hereby deleted and replaced with the following:

**A2 During Construction**

The Contractor shall implement the Project's Storm Water Pollution Prevention Plan. The Contractor shall schedule and install temporary and permanent sediment and erosion control measures, construct ponds and drainage facilities, finish earth work operations, place topsoil, establish turf, and conduct other Contract work in a timely manner to minimize erosion and sedimentation. All exposed soil areas with continuous positive slopes that are within 60 m (200 feet) of a public water shall have temporary or permanent erosion protection within 24 hours after the construction activity in that portion of the site has temporarily or permanently ceased and connection is established to the public water. All other positive slopes to constructed surface waters, such as permanent storm water treatment ponds, curb and gutter systems, storm sewer inlets, temporary or permanent drainage ditches, or other storm water conveyance systems, shall have temporary erosion protection or permanent cover for the exposed soil areas as soon as practicable but no later than 14 days after construction activity has temporarily or permanently ceased in that area. For those drainage areas that have a discharge point within 1 mile and flows to an impaired or Special Waters shall have temporary erosion protection or permanent cover for the exposed soil areas as soon as practicable but no later than 7 days after construction activity has temporarily or permanently ceased in that area. Impaired and Special Waters are defined as those listed and referenced in the NPDES Permit.

Positive slopes adjacent to public waters and wetlands will be stabilized at the close of each day when weather forecasts for rain that evening, and/or overnight including weekends. Once work is completed it will be stabilized permanently as soon as practical but no later than seven days.

Exposed soil areas do not include; stockpiles or surcharge areas of sand, gravel, aggregate, concrete, bituminous, or road bed and surfacing material. A perimeter sediment barrier may be necessary to minimize loss when these are within the 60 m (200 feet) of existing surface waters or the property edge.

The bottom of temporary or permanent drainage ditches or swales constructed to drain water from a construction site must be stabilized with erosion control measures for the last 60 m (200 feet), or more when conditions warrant, from the property edge or from the point of discharge to any existing surface water. Stabilization shall be completed within 24 hours after the construction activity in that portion of the ditch has temporarily or permanently ceased. Ditch stabilization will continue concurrently with construction activities but no later than 14 days after construction activities have permanently or temporarily ceased. Any, culvert pipe or storm sewer pipe that is within the cumulative distance is not part of this distance. Ditch checks may be provided where necessary to slow water flow and capture sediment.

Temporary or permanent ditches used as treatment systems will not
need to be stabilized but must provide the proper Best Management Practices for the treatment system.

Pipe outlets shall be provided with temporary or permanent energy dissipation within 24 hours of connecting the pipe to any constructed or existing surface waters.

The Contractor shall limit the surface area of erodible soil that can be exposed to possible erosion at any one time when the permanent erosion control features are not completed and operative.

All liquid and solid wastes generated by concrete washout operations must be contained and not have the opportunity to come in contact with the surface waters or ground water. This includes the ditches, slopes to ditches, curb and gutter/storm sewer systems, and ponds. Areas where there are sandy soils, karsts, and high ground water the washout facility must have an impermeable liner. Liquid and solid wastes must be disposed of properly. A concrete washout sign must be installed adjacent to each washout facility to notify personnel.

S-39.3 Mn/DOT 1717.2E is hereby deleted and replaced with the following:

**E Site Plans**

The Engineer may require the Contractor to submit a site plan, in writing, detailing proposed erosion control and sediment control measures and a schedule indicating starting and completion times for construction operations working in water bodies and/or in direct proximity to waters of the state.

Contractor shall not start work in the affected areas until the schedule and site plan have been accepted by the Engineer and all materials and equipment for the activity are on site.

S-39.4 EXTREME WEATHER EVENT

If localized flooding is caused by an extreme weather event and results in discharge into surface water, by deliberate pumping or diverted flow, the Contractor shall provide for end of trench or pipe filtration or treatment systems. The filtration/treatment system shall be capable of preventing visibly turbid discharge from entering surface water. This work shall be completed in accordance with applicable laws pertaining to discharge into surface waters and as directed by the Engineer. The Contractor will receive compensation as Extra Work in accordance with Mn/DOT 1904.

S-40 (1717) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

Pollution of natural resources of air, land and water by operations under this Contract shall be prevented, controlled, and abated in accordance with the rules, regulations, and standards adopted and established by the Minnesota Pollution Control Agency (M.P.C.A.), and in accordance with the provisions of MnDOT 1717, these Special Provisions, and the following:

S-40.1 By signing the Proposal and completing the NPDES permit application, the Contractor is a co-permitee with the Department to ensure compliance with the terms and conditions of the General Storm Water Permit (MN R100001) and is responsible for those portions of the permit where the operator is referenced. This Permit establishes conditions for discharging storm water to waters of the State from construction activities that disturb 0.4 hectares [1 acre] or more of total land area. A copy of the "General Permit Authorization to Discharge Storm Water Associated with a Construction Activity Under the National Pollutant Discharge Elimination System (NPDES)/State Disposal System Permit Program" is available at http://www.pca.state.mn.us/water/stormwater/stormwater-c.html or by calling 651-296-3890.

(A) The Contractor shall apply and pay for the NPDES Permit on this Project. Payment for the application shall be incidental to the Contract and no direct compensation will
be made. The Department will provide the Contractor with the application form with Sections 1 thru 3 and 5 thru 14 completed, as part of the Contract document package. The Contractor shall fill out the Contractor's portion (Section 4 and Section 15), complete the application process, and post the Permit and MPCA's letter of coverage onsite.

A NPDES Permit Declaration form will be sent to the Contractor with the Contract award packet. A copy of the signed permit application and a signed Permit Declaration form must be returned with the Contract and Bond. Submittal of the copy of the signed permit application and Permit Declaration is mandatory for Contract approval. No work which disturbs soil and/or work in waters of the state will be allowed on this Project until the NPDES Permit is in effect and the Department has received the required documentation.

S-40.2 The Contractor shall be solely responsible for complying with the requirements listed in Part II.B and Part IV of the General Permit.

The Contractor shall be responsible for providing all inspections, documentation, record keeping, maintenance, remedial actions, and repairs required by the permit. All inspections, maintenance, and records required in the General Permit Paragraphs IV.E, shall be the sole responsibility of the Contractor. The word "Permittee" in these referenced paragraphs shall mean "Contractor". Standard forms for logging all required inspection and maintenance activities shall be used by the Contractor. All inspection and maintenance forms used on this Project shall be turned over to the Engineer every two weeks for retention in accordance with the permit.

The Contractor shall have all logs, documentation, inspection reports on site for the Engineer's review and shall post the permit and MPCA's letter of coverage on site. The Contractor shall immediately rectify any shortcomings noted by the Engineer. All meetings with the MPCA, Watershed District, WMO, or any local authority shall be attended by both the Engineer and the Contractor or their representatives. No work required by said entities, and for which the Contractor would request additional compensation from MVRRA, shall be started without approval from the Engineer. No work required by said entities and for which the changes will impact the design or requirements of the Contract documents or impact traffic shall be started without approval from the Engineer.

The Contractor shall immediately notify the Engineer of any site visits by Local Permitting Authorities performed in accordance with Part V.H.

S-40.3 Emergency Best Management Practices must be enacted to help minimize turbidity of surface waters and relieve runoff from extreme weather events. It is required to notify the MPCA Regional Contact Person within 2 days of an uncontrolled storm water release. The names and phone numbers of the MPCA Regional Contract personnel can be found at: http://www.pca.state.mn.us/water/stormwater/stormwater-c.html. The Contractor is reminded that during emergency situations involving uncontrolled storm water releases that the State Duty Officer must be contacted immediately at 1-800-422-0798 or 1-651-649-5451.

S-40.4 The Contractor shall review and abide by the instructions contained in the permit package. The Contractor shall hold MVRRA harmless for any fines or sanctions caused by the Contractor's actions or inactions regarding compliance with the permit or erosion control provisions of the Contract Documents.

S-40.5 The Contractor is advised that Section 1 of the NPDES application form makes reference to a Storm Water Pollution Prevention Plan (SWPPP). This Projects’ SWPPP is addressed throughout MnDOT’s Standard Specifications for Construction, as well as this Project’s Plan and these Special Provisions. The following table identifies NPDES permit requirements and cross-references where this Contract addresses each requirement.
<table>
<thead>
<tr>
<th>NPDES Permit Requirements</th>
<th>Cross-Reference within this Contract</th>
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<tr>
<td>Obtain NPDES Permit;</td>
<td>MnDOT 1701, 1702; and 1717</td>
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<tr>
<td>Permit Compliance;</td>
<td>Special Provisions:</td>
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<tr>
<td>Submit Notice of Termination</td>
<td>1717 (Air, Land &amp; Water Pollution),</td>
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<td></td>
<td>1717 (National Pollutant Discharge Elimination System (NPDES) Permit)</td>
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<tr>
<td>Certified Personnel in Erosion / Sediment Control Site Management</td>
<td>MnDOT 1506, 1717, and 2573;</td>
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<tr>
<td>Develop a Chain of Command</td>
<td>Special Provisions:</td>
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<td></td>
<td>1717 (Air, Land &amp; Water Pollution),</td>
</tr>
<tr>
<td>Project / Weekly Schedule (for Erosion / Sediment Control)</td>
<td>MnDOT 1717 and 2573;</td>
</tr>
<tr>
<td>Completing Inspection / Maintenance Log / Records</td>
<td>Special Provisions:</td>
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<td></td>
<td>1717 (Air, Land &amp; Water Pollution),</td>
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<tr>
<td>Project Specific Construction Staging</td>
<td>The Plans;</td>
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<td></td>
<td>MnDOT 1717;</td>
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<td>Special Provisions:</td>
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<td></td>
<td>1717 (Air, Land &amp; Water Pollution),</td>
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<td>1806 (Determination and Extension of Contract Time)</td>
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<tr>
<td>Temporary Erosion / Sediment Control</td>
<td>The Plans;</td>
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<td></td>
<td>MnDOT 2573 and 2575</td>
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<td>Maintenance of Devices / Sediment removal</td>
<td>The Plans;</td>
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<tr>
<td>Removal or Tracked Sediment</td>
<td>MnDOT 1717 and 2573;</td>
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<tr>
<td>Removal of Devices</td>
<td>Special Provisions:</td>
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<td></td>
<td>1514 (Maintenance During Construction),</td>
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<td></td>
<td>1717 (Air, Land &amp; Water Pollution),</td>
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<td>Dewatering</td>
<td>MnDOT 2105.3B and 2451.3C;</td>
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<td>May also require DNR Permit</td>
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<tr>
<td>Temporary work not shown in the Plans Grading areas (unfinished acres exposed to erosion)</td>
<td>MnDOT 1717, 2573, and 2575;</td>
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<td>Special Provisions:</td>
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<td></td>
<td>1717 (Air, Land &amp; Water Pollution),</td>
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<tr>
<td>Permanent Erosion / Sediment Control and Turf Establishment</td>
<td>The Plans;</td>
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<tr>
<td></td>
<td>MnDOT 1717, 2573, and 2575;</td>
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<td></td>
<td>Special Provisions:</td>
</tr>
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<td></td>
<td>1717 (Air, Land &amp; Water Pollution),</td>
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**S-41 (1718) FURNISHING RIGHT OF WAY**

No work shall be performed by the Contractor outside the existing Right of Way without the authority of the Project Engineer. Work within the right of way shall not impact, damage or change the existing drainage facilities.

**S-42 IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

By signing this bid form, the bidder will be deemed to have stipulated as follows:

(1) That any facility to be utilized in the performance of this Contract, unless such
Contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub. L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub. L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 C.F.R. Part 15), is not listed on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 C.F.R. 15.20.

(2) That the state transportation department shall be promptly notified prior to Contract award of the receipt by the bidder of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility to be utilized for the Contract is under consideration to be listed on the EPA List of Violating Facilities.

S-43  (1802) TRAINING FOR CONSTRUCTION TRUCK OPERATORS

Operators of construction trucks hauling construction materials such as borrow, aggregate base, asphalt mixtures and concrete paving mixtures are encouraged to become certified as a Level I Construction Truck Operators (CTO).

This one-day session taught in various Mn/DOT Districts features classroom and hands-on educational experiences. The objective of the CTO Training is to make the driver aware of the Federal and State requirements and regulations regarding the construction truck and driver, and the safe driving techniques that will result in the safe operation of the construction truck. Presenters include Minnesota State Patrol, Minnesota Department of Transportation and the Minnesota Safety Center.

This training is co-sponsored by the Minnesota State Patrol, the Minnesota Highway Safety Center, the Minnesota Trucking Association, the Minnesota Asphalt Pavement Association and the Minnesota Department of Transportation.

Additional information about this certification program can be obtained by contacting any of the following:

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<tr>
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<th>PHONE #</th>
<th>FAX #</th>
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</thead>
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<tr>
<td>Minnesota Asphalt Pavement Association:</td>
<td>651-636-4666</td>
<td>651-636-4790</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:info@mnapa.org">info@mnapa.org</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minnesota Department of Transportation:</td>
<td>Toll Free: 1-888-472-3389</td>
<td>651-405-6082</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:motorcarrier@dot.state.mn.us">motorcarrier@dot.state.mn.us</a></td>
<td>651-405-6060</td>
<td></td>
</tr>
<tr>
<td>Website: <a href="http://www.dot.state.mn.us/cvo/index.html">http://www.dot.state.mn.us/cvo/index.html</a></td>
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<tr>
<td>E-mail: tj <a href="mailto:sakry@stcloudstate.edu">sakry@stcloudstate.edu</a></td>
<td>320-255-4732</td>
<td></td>
</tr>
<tr>
<td>Website: <a href="http://mnsafetycenter.org">http://mnsafetycenter.org</a></td>
<td></td>
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<tr>
<td>Minnesota State Patrol:</td>
<td>Toll Free: 1-888-472-3389</td>
<td>651-405-6082</td>
</tr>
<tr>
<td>Website: <a href="http://www.dps.state.mn.us/patrol/comveh/index.htm">http://www.dps.state.mn.us/patrol/comveh/index.htm</a></td>
<td>651-405-6171</td>
<td></td>
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<tr>
<td>Minnesota Trucking Association:</td>
<td>651-646-7351</td>
<td>651-641-8995</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:john@mntruck.org">john@mntruck.org</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Website: <a href="http://www.mntruck.org">www.mntruck.org</a></td>
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</table>

S-44  (1803) PROSECUTION OF WORK

The provisions of Mn/DOT 1803 are supplemented and/or modified with the following: S-44.1 Mn/DOT 1803.2 is supplemented as follows:

If in the opinion of the Engineer, the Contractor falls behind the progress schedule, the Contractor shall take such steps as may be necessary to improve progress to meet the
Contract completion date. At the request of the Engineer, Contractor shall submit a revised Project schedule that demonstrates the manner in which the Contractor intends to accelerate the work to meet the project completion date.

S-44.2 Mn/DOT 1803.3 is supplemented as follows:

Contractor shall conduct work in a manner and sequence that will avoid interference with train traffic. Contractor is expected to coordinate its work with the Railroad on a weekly basis. Unless prior approval is obtained from the Railroad, the Contractor shall only occupy the main line during the agreed upon designated times. All work must be performed within the designated and agreed to work limits and is not permitted on other areas of the track unless approved in advance by the Railroad and the Engineer.

S-45 \((1806)\) DETERMINATION AND EXTENSION OF CONTRACT TIME
The Contract Time will be determined in accordance with the provisions of Mn/DOT 1806 and the following:

S-45.1 Construction operations shall be started on June 1, 2018 or within eight (8) Calendar Days after the date of Notice of Contract Approval, whichever is sooner. Construction operations shall not commence prior to Contract Approval.

S-46 \((1807)\) FAILURE TO COMPLETE THE WORK ON TIME
The provisions of Mn/DOT 1807 are supplemented as follows:

S-46.1 For informational purposes only, bidders are advised that in addition to the requirements of Mn/DOT 1807, other Sections of these Special Provisions, as shown below, contain requirements for assessment of monetary deductions to this Contract:

| 1506 | SUPERVISION BY CONTRACTOR |
| 1507 | UTILITY PROPERTY AND SERVICE |
| 1706 | EMPLOYEE HEALTH AND WELFARE |
| 1717 | AIR, LAND AND WATER POLLUTION |
| 1803 | PROSECUTION OF WORK |
| 49 | TRANSPORTATION, PART 214 RAILROAD WORKPLACE SAFETY |

S-46.2 The liquidated damages set forth in Mn/DOT 1807 and monetary deductions as set forth above may apply equally, separately, and may be assessed concurrently.

S-47 \((1904)\) EXTRA AND FORCE ACCOUNT WORK
The provisions of Mn/DOT 1904 are supplemented and/or modified with the following:

S-47.1 The Contractor is required to submit force account work itemized statements of costs in accordance with Mn/DOT 1904 to the Engineer on Mn/DOT form TP-21659 (Summary of Daily Force Account). Copies of this form can be obtained from the Engineer.

S-47.2 The following sentence shall be added to the second paragraph of Mn/DOT 1904:

"Under no circumstance will the negotiated unit price for Extra Work which is performed by a subcontractor include a Prime Contractor allowance which exceeds that provided for in 1904(4), Paragraph 3."

S-48 \((1910)\) FUEL ESCALATION CLAUSE
The provisions of MnDOT 1910 are hereby deleted and replaced with the attached Fuel Escalation Clause.
S-49  **CONSTRUCTION SURVEYING (2011)**

The provisions of MnDOT 1508 are hereby modified and supplemented as follows:

S-49.1 **GENERAL SURVEY SPECIFICATIONS**

This Contract provides for the Contractor to accomplish the Construction Surveying for this Project. MnDOT 1508 is herewith modified to the extent that the Contractor shall meet all the requirements of, and provide all the services listed in, MnDOT 1508 which would otherwise be provided by MnDOT. Furthermore, in accordance with MnDOT 1401, the Contractor is advised that the Contract may not fully describe every detail or make specific allowances for all probable exceptions and contingencies related to the Construction Surveying requirements for this Project. Additional best management practices (BMP's) for Construction Surveying are identified in Appendix A of the MnDOT Surveying and Mapping Manual, in addition to the requirements shown below:

S-49.3 **METHOD OF MEASUREMENT**

No measurements will be taken for Construction Surveying.

S-49.4 **BASIS OF PAYMENT**

No direct payment will be made to the Contractor for Construction Surveying, as all surveying work including materials, equipment, labor, office work, and any incidental costs required by the Contract is considered incidental to the Project.

S-50  **MOBILIZATION (2021)**

The provisions of MnDOT 2021 are hereby deleted and replaced with the following:

2021.1 **DESCRIPTION**

Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the Project site; for the establishment of all Contractor's offices and buildings or other facilities necessary for work on the Project. Mobilization may include bonding, permit, and demobilization costs. When the proposal does not have a lump sum item for Mobilization, all costs incurred by the Contractor for Mobilization shall be incidental to other work.

2021.5 **BASIS OF PAYMENT**

Mobilization shall be paid as a Lump Sum with 50% allowed after Notice to Proceed and the balance after field work begins.

S-51  **REMOVING PAVEMENT AND MISCELLANEOUS STRUCTURES (2104)**

Abandoned structures and other obstructions shall be removed from the Right of Way and disposed of in accordance with the provisions of Mn/DOT 2104, except as modified below:

All removal and disposal operations shall be incidental work and no direct compensation will be made therefore. The removal of any unforeseen obstruction requiring in the opinion of the Engineer equipment or handling substantially different from that employed in excavation operations, will be paid for as Extra Work as provided in MnDOT 1403.
S-51.1 All removals shall be disposed of by the Contractor outside the Right of Way in accordance with Mn/DOT 2104.3C3 to the satisfaction of the Engineer.

S-52 **(2104) HAUL SALVAGED MATERIALS**

MnDOT 2104 is supplemented as follows:

This work shall consist of loading and hauling salvaged materials, not required for installation elsewhere under this Contract, to the designated storage area(s) and depositing said materials thereat in a manner satisfactory to the Engineer.

The designated storage area is located in Morton, MN. Temporary stockpile and staging areas in Winthrop and Gibbon will be available. Exact limits will be determined by the Contractor and MVRRA.

It shall be the Contractor's responsibility to neatly stockpile the material at the storage site with his forces as directed by the Engineer.

S-52.1 All removal and disposal operations shall be incidental work and no direct compensation will be made therefore. The removal of any unforeseen obstruction requiring in the opinion of the Engineer equipment or handling substantially different from that employed in excavation operations, will be paid for as Extra Work as provided in Mn/DOT 1403.

S-52.2 All removals shall be disposed of by the Contractor outside the Right of Way in accordance with Mn/DOT 2104.3C3 to the satisfaction of the Engineer.

S-53 **(2104) REMOVE AND HAUL TREATED WOOD**

If the Contractor is required to dispose of treated wood, the provisions of Mn/DOT 2104 are supplemented with the following:

S-53.1 The Contractor can elect to reuse the treated wood for its original intended purpose. The Contractor shall furnish a completed Transfer of Ownership form to the Engineer prior to removing any treated wood from the Project limits. The Transfer of Ownership form is available at the following website: [http://www.dot.state.mn.us/environment/regulated-materials/pdf/treated-wood-transfer.pdf](http://www.dot.state.mn.us/environment/regulated-materials/pdf/treated-wood-transfer.pdf).

S-53.2 If the Contractor cannot or elects not to re-use the treated wood for its original intended purpose, but must be disposed, the following shall apply:

(A) The Contractor shall dispose of all waste treated wood in a MPCA permitted Minnesota solid waste or industrial landfill. The Contractor shall not dispose of waste treated wood in a demolition landfill. Within 30 days after the treated wood is transported to the landfill, the Contractor shall provide the Engineer with shipping manifests, scale tickets and invoices. Shipping manifests shall include, but are not limited to, the following information: specify treated wood as the type of waste, quantity of wood, date of hauling and disposal, and location of disposal.

(B) The Contractor has the option to chip creosote treated wood on site instead of hauling it to a landfill. After the wood is chipped on site, the Contractor shall transport the chipped wood off site to a MPCA permitted incinerator that is permitted to burn creosote treated wood. Call 651.366.3630 for list of incinerators permitted to burn creosoted treated wood. This applies to creosote treated wood only.

S-53.3 Measurement and payment for the removal and disposal of treated wood will be made only when specifically included for payment as such in the Proposal and as listed in the Plans. All other removal and disposal of treated wood operations shall be incidental work and no direct
compensation will be made therefor.

S-54  **(2211) AGGREGATE BASE**

Aggregate base courses shall be constructed in accordance with the provisions of Mn/DOT 2211 except as modified below:

Compaction shall be achieved by the "Quality Compaction Method".

S-55  **(2572) PROTECTION AND RESTORATION OF VEGETATION**

The provisions of Mn/DOT 2572 are supplemented and/or modified with the following:

S-55.1 The first paragraph after Mn/DOT 2572.3A(5) under Protecting and Preserving, is revised to read as follows:

The Contractor shall not place temporary structures, store material, or conduct unnecessary construction activities within a distance of 8 m (26 feet) outside the drip line of trees designated to be preserved without approval from the Engineer.

S-55.2 The second paragraph of Mn/DOT 2572.3A2 Clean Root Cutting, is revised to read as follows:

The Contractor shall immediately and cleanly cut damaged and exposed roots. Trees designated for protection shall have damaged roots cut back to sound healthy tissue and shall have topsoil immediately placed over the exposed roots. The Contractor shall immediately cover root ends that are exposed by excavation activities with 150 mm (6 inches) of topsoil as measured outward from the cut root ends. Exposed cut oak roots shall be immediately (within 5 minutes) treated with a wound dressing material consisting of latex paint or shellac. The Contractor shall limit cutting to a minimum depth necessary for construction and shall use a vibratory plow or other approved root cutter prior to excavation.

S-55.3 The third sentence of Mn/DOT 2572.3A8 Destroyed or Disfigured Vegetation, is revised to read as follows:

The Engineer will assess damages of trees and landscaping at not less than the appraisal damages as determined by the current edition of the “Guide for Plant Appraisal – Council of Tree and Landscape Appraisers” published by the International Society of Arboriculture.

S-56  **(2573) STORM WATER MANAGEMENT**

The provisions of MnDOT 2573 are supplemented and/or modified with the following:

S-56.1 The second paragraph of MnDOT 2573.3A1 Erosion Control Supervisor is revised to read as follows:

The Erosion Control Supervisor shall be a responsible employee of the prime Contractor and/or duly authorized by the prime Contractor to represent the prime Contractor on all matters pertaining to the NPDES construction storm water permit compliance. The Erosion Control Supervisor shall have authority over all Contractor operations which influence NPDES permit compliance including grading, excavation, bridge construction, culvert installation, utility work, clearing/grubbing, and any other operation that increases the erosion potential on the Project. In addition, the Erosion Control Supervisor shall implement the Contractor’s quality control program and other provisions in accordance
with 1717.2 and be available to be on the Project within 24 hours at all times from initial disturbance to final stabilization as well as perform the following duties:

S-56.2 The second paragraph of MnDOT 2573.3 A5, Vehicle Tracking onto Paved Surfaces, is revised to read as follows:

The Contractor is responsible for insuring paved streets are clean at the end of each working day or more often as necessary to provide safety to the traveling public. Tracked sediment on paved surfaces must be removed by the Contractor within 24 hours of discovery, in accordance with 1717.2. Payment for street sweeping to provide safe conditions for the traveling public, environmental reasons or regulatory requirements shall be as provided in accordance with 1514.

S-56.3 The first sentence of MnDOT 2573.3E2 is revised to read as follows:

The bioroll shall be installed and anchored with wood stakes. The stakes shall be at a minimum nominally 25 mm x 50 mm (1 inch x 2 inch) and a minimum of 400 mm (16 inches) long with a pointed end.

S-56.4 The first paragraph of MnDOT 2573.3J Filter Log Installation is revised to read as follows:

**J Filter Log Installation**

Filter logs shall be placed in accordance with the Plan. Straw and wood fiber filter logs shall be staked in place with wood stakes. Wood stakes shall be at a minimum 25 x 51 mm (1 x 2 inch) nominal size by 400 mm (16 inches) long. The stakes shall be driven through the back half of the log at an angle of approximately 45 degrees with the top of the stake pointing upstream. When more than one log is needed for length, the ends shall be overlapped 150 mm (6 inches) with both ends staked. Staking shall be every 0.3 m (1 foot) along the log unless precluded by paved surface or rock.

S-56.5 MnDOT 2573.5 Basis of Payment, is revised to read as follows:

Payment for storm water management and sediment control items will be compensation in full for all labor, materials, equipment, and other incidentals necessary to complete the work as specified, including the costs of maintenance and removal as required by the Contract. The Contractor will receive compensation at the appropriate Contract prices, or in the absence of a Contract bid price, according to the following unit prices, or in the absence of a Contract price and unit price, as Extra Work. In the absence of a Contract item for Erosion Control Supervisor, this work shall be considered incidental.

S-56.6 MnDOT 2573.5 E, Unit Prices, is revised to read as follows:

The Department will pay the following unit prices for temporary sediment control items in the absence of a Contract bid price:

1. Bale Barrier ................................................................................................................ $13.45/m ($4.10 per linear foot)
2. Silt Fence, Heavy Duty ................................................................................................. $10/m ($3.00 per linear foot)
3. Flotation Silt Curtain, Type: Still Water, ............... 1.2 m (4 foot) depth.$54.10/m ($16.50 per linear foot)
4. Sediment Trap Excavation ......................................................................................... $7.20/m³ ($5.50 per cubic yard)
5. Bituminous Lined Flume ............................................................................................... $6.00/m² ($5.00 per square yard)
6. Silt Fence, Type Machine Sliced ................................................................................ $6.50/m ($2.00 per linear foot)
7. Sediment Removal, Backhoe ..................................................................................... $175 per hour
8. Filter Log, Type Straw Bioroll .................................................................................... $1.00/m ($3.00/foot)
9. Filter Log, Type Rock Log ......................................................................................... $16.50/m ($5.00/foot)
10. Flocculent Sock ........................................................................................................ $300 each

S-57

(2575) CONTROLLING AND ESTABLISHING VEGETATION
The provisions of MnDOT 2575 are hereby modified and/or supplemented with the following:

S-57.1 MnDOT 2575.3D paragraph 2 and table 2575-2 are hereby deleted and replaced with the following:

The Contractor shall sow the seed uniformly at the rate of application specified in Table 3876-5.

S-57.2 MnDOT 2575.4D is hereby deleted and replaced with the following:

D Seed
When a bulk rate seed mixture is specified as shown in table 3876-5, the measurement will be made on that bulk mass. When a PLS rate seed mixture is specified as shown in table 3876-5, the measurement will be made on the PLS mass.

S-57.3 MnDOT 2575.5C is hereby deleted and replaced with the following:

C Seed
When a seed mixture is specified at a bulk rate as shown in table 3876-5, the payment will be made on that bulk mass. When a seed mixture is specified at a PLS rate as shown in table 3876-5, the payment will be made on the PLS mass.

Payment for seed not meeting germination and purity or PLS requirements of 3876 shall be subject to 1503. When components are missing from the specified mixture the affected seeded areas shall be reseeded with the missing components by the Contractor at no additional cost to the Department.

S-58 (2575) RAPID STABILIZATION SPECIFICATIONS

This work shall consist of operations necessary to rapidly stabilize small critical areas, to prevent off site sedimentation and/or to comply with permit requirements. The work may be performed at any time during the Contract and will be conducted on small areas that may or may not be accessible with normal equipment. This work shall be done in accordance with the applicable MnDOT Standard Specifications, the details shown in the Plan, and the following:

S-58.1 BASIS OF PAYMENT
In the absence of a Contract bid price, the Department will pay the following unit prices for Rapidly Stabilizing Small Scattered Critical Areas directly abutting Waters of the State during rough grading and as required in the NPDES permit. These unit prices shall be construed to include mobilizations for this activity.

<table>
<thead>
<tr>
<th>Rapid Stabilization</th>
<th>Pre-Approve Prices</th>
<th>Approved price reflects small quantities. Quantities installed per Project visit are assumed to require approximately 0.4 to 0.8 ha [1 to 2 acres] of coverage.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method 1</td>
<td>$900/ha ($400/acre)</td>
<td></td>
</tr>
<tr>
<td>Method 2</td>
<td>$2220/ha ($898/acre)</td>
<td></td>
</tr>
<tr>
<td>Method 3</td>
<td>$149.50/m³ ($566/M gallon)</td>
<td></td>
</tr>
<tr>
<td>Method 4</td>
<td>$3.00/m² ($2.50/SY)</td>
<td>Approved price reflects small quantities. Quantities installed per Project visit are assumed to require approximately 11.4 to 34 m³ [3000 to 9000 gallons] of product slurry.</td>
</tr>
<tr>
<td>Method 5</td>
<td>$48.60/metric ton ($45/ton)</td>
<td>Approved price reflects small quantities. Quantities installed per Project visit are assumed to require approximately 9 to 18 metric tons [10 to 20 tons] of riprap.</td>
</tr>
</tbody>
</table>
S-59  (3138) AGGREGATE FOR SURFACE AND BASE COURSES

The provisions of MnDOT 3138 are hereby modified as follows:

S-59.1 The second paragraph of MnDOT 3138.2B Gradation Tables 3138-1 and 2, is revised to read as follows:

If Class 7 is substituted for Classes 1, 3, 4, 5, or 6, it shall meet the gradation requirements of the substituted class (Table 3138-1); except that, for Class 5 and 6, up to 5 percent by mass (weight) of the total composite mixture may exceed 25.0 mm (1 inch) sieve but 100 percent must pass the 37.5 mm (1.5 inch) sieve. Surfacing aggregate mixtures containing salvaged materials shall meet the gradation requirements of the materials specified in the Plan. All gradations will be run on the composite mixture before extraction of the bituminous material.

S-59.2 TABLE 3138-1 in MnDOT 3138.2B Gradation Tables 3138-1 and 2, is hereby deleted and replaced with the following:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Class 1 ( (A) )</th>
<th>Class 2</th>
<th>Class 3 ( (A) )</th>
<th>Class 4 ( (A) )</th>
<th>Class 5 ( (A) ) ( (B) )</th>
<th>Class 6 ( (A) ) ( (B) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 mm ( (3 \text{ inches}) )</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>50 mm ( (2 \text{ inches}) )</td>
<td>--</td>
<td>--</td>
<td>100</td>
<td>100</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>37.5 mm ( (1{1/2} \text{ inches}) )</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>25.0 mm ( (1 \text{ inch}) )</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>19.0 mm ( (3/4 \text{ inch}) )</td>
<td>100</td>
<td>100</td>
<td>--</td>
<td>--</td>
<td>90-100</td>
<td>90-100</td>
</tr>
<tr>
<td>9.5 mm ( (3/8 \text{ inch}) )</td>
<td>65-95</td>
<td>65-90</td>
<td>--</td>
<td>--</td>
<td>50-90</td>
<td>50-85</td>
</tr>
<tr>
<td>4.75 mm ( (No. 4) )</td>
<td>40-85</td>
<td>35-70</td>
<td>35-100</td>
<td>35-100</td>
<td>35-80</td>
<td>35-70</td>
</tr>
<tr>
<td>2.00 mm ( (No. 10) )</td>
<td>25-70</td>
<td>25-45</td>
<td>20-100</td>
<td>20-100</td>
<td>20-65</td>
<td>20-55</td>
</tr>
<tr>
<td>425 µm ( (No. 40) )</td>
<td>10-45</td>
<td>12-30</td>
<td>5-50</td>
<td>5-35</td>
<td>10-35</td>
<td>10-30</td>
</tr>
<tr>
<td>75 µm ( (No. 200) )</td>
<td>8.0-15.0</td>
<td>5.0-13.0</td>
<td>5.0-10.0</td>
<td>4.0-10.0</td>
<td>3.0-10.0</td>
<td>3.0-7.0</td>
</tr>
</tbody>
</table>

(A) When salvaged materials are substituted for another class of aggregate, it shall meet the gradation requirements of the class being replaced except as amended in 3138.2 B.

(B) The gradation requirements for aggregates containing 60% or more crushed quarry rock may be amended with the concurrence of the Project Engineer and the Grading and Base Engineer.
The first paragraph of MnDOT 3138.3 Sampling and Testing, is hereby deleted and replaced with the following:

Samples for testing to determine compliance with the aggregate gradation specifications for base and shoulder surfacing shall be obtained from the roadway at a time when the material is ready for compaction. However, Class 1, 2, and 7 shoulder surfacing aggregates may be sampled from a stockpile, tested, and accepted before roadway placement, provided that:

(a) No more than 25 percent of the stockpile samples fail to meet gradation requirements.
(b) The average of all stockpile tests meets requirements.
(c) The Contractor mixes the material during placement to the satisfaction of the Engineer.

The fifth paragraph of MnDOT 3138.3 Sampling and Testing, is revised to read as follows:

The stockpile shall be sampled at the rate of one field gradation test per 1,000 metric tons (tons) of aggregate used on the Project.

**S-60 FINAL ESTIMATE AND FINAL PAYMENT**

The following provisions shall apply to preparation of the Final Estimate and execution of Final Payment under this Contract:

**S-60.1 FINAL ESTIMATE**

State Law provides that the final estimate will be made within 90 days after completion of all work required under this Contract. If, however, the total value of the Contract exceeds $2,000,000.00, the 90-day requirement will not apply and the time allowed for making such final estimate shall be 180 days after the work under this Contract has been, in all things, completed to the satisfaction of the Commissioner.

In addition, the Contractor shall complete and submit the Minnesota Department of Revenue Withholding Affidavit for Contractors IC-134 form prior before final payment can be made.

**S-60.2 FINAL PAYMENT**

If this Contract contains a "Disadvantage Business Enterprise or Targeted Group Business" goal, the following requirement shall apply:

"Before final payment is made, the Contractor shall also complete an affidavit showing the total dollar amounts of work performed by disadvantaged business enterprise (DBE) and targeted group business (TGB)."
Division SP  Project Construction Details

1.0  MOBILIZATION

DESCRIPTION

Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the Project site; for the establishment of all Contractor's offices and buildings or other facilities necessary for work on the Project. Mobilization may include bonding, permit, and demobilization costs. When the proposal does not have a lump sum item for Mobilization, all costs incurred by the Contractor for Mobilization shall be incidental to other work.

BASIS OF PAYMENT

Mobilization shall be paid as a Lump Sum with 50% allowed after Notice to Proceed and the balance after field work begins.

2.0  BRIDGE WORK

DESCRIPTION

Bridge work shall consist of providing rehabilitation services as shown in Exhibit B. The work shall be done per these specifications and to AREMA and FRA standards. All material shall be new.

The Contractor will be responsible for preparing a detailed list of material needed for the project.

All timber salvaged from the work shall be property of the Contractor and properly disposed of. Disposal shall follow the details shown in Section 53.

BASIS OF Payment

Bridge work shall be paid as a Lump Sum per each bridge completed per the detailed scope of work as shown in Exhibit B. The work shall include all material, labor, equipment and miscellaneous work to complete the work.
<table>
<thead>
<tr>
<th>Milepost</th>
<th>Length</th>
<th>Location</th>
<th>Replace Caps</th>
<th>Replace Stringers</th>
<th>Replace Bridge ties</th>
<th>Shift Bent</th>
<th>Shim/epoxy plies</th>
<th>RipRap</th>
<th>Replace headwall/wing wall</th>
<th>Drift Removal</th>
<th>Misc</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>64.77</td>
<td>east of Arlington</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>70.74</td>
<td>east of Hwy 19 near Gaylord</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>107.07</td>
<td>west of Fairfax</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>112.00</td>
<td>River bridge</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>112.52</td>
<td>Slough bridge</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>113.90</td>
<td>west of Hwy 71</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>117.97</td>
<td>North Redwood</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>118.00</td>
<td>west of Redwood</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>119.22</td>
<td>west of Redwood</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>139.36</td>
<td>east of Wood Lake</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>140.03</td>
<td>east of Wood Lake</td>
<td>1</td>
<td>21</td>
<td>40</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

| Total   |        |             | 28            | 64               | 1,177         | 2,200      | 3               | 51     | 100                         | 7            | 2    | 1 |
Exhibit B

Detailed Scope of Bridge Work
<table>
<thead>
<tr>
<th>Bridge Number</th>
<th>Mile Post</th>
<th>Section Number</th>
<th>Inspection Date</th>
<th>Bridge Member</th>
<th>Finding Notes</th>
<th>Priority</th>
<th>Repair Description</th>
<th>Monitor Frequency</th>
<th>Date Monitored/Initials</th>
<th>Date Monitored/Initials</th>
<th>Date Monitored/Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>64.77</td>
<td>64.77</td>
<td>1</td>
<td>05/29/2018</td>
<td>Other</td>
<td>Drift</td>
<td>3</td>
<td>Remove: Drift from bridge as necessary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70.74</td>
<td>70.74</td>
<td>1</td>
<td>08/29/2018</td>
<td>Bent 2 Cap</td>
<td>Exception (turning under chord 1, vertical split)</td>
<td>3</td>
<td>Replace: Cap on Bent 2 (turning under chord 1, vertical split)</td>
<td></td>
<td>180</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>70.74</td>
<td>1</td>
<td>08/29/2018</td>
<td>Bent 5 Pile 1</td>
<td>1&quot; Gap over Pile</td>
<td>3</td>
<td>Shim or Epoxy: Over Pile 1 of Bent 5</td>
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Koppers Railroad Structures Inc.

Date Printed: 11/28/2018
## Monitoring Report

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**Twin Cities & Western R.I. Co.**

**Line: Minnesota Prairie Line**

Koppers Railroad Structures Inc.

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Koppers Railroad Structures Inc.  
Date Printed: 11/28/2018
## Monitoring Report

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## Twin Cities & Western R.I. Co.

**Line:** Minnesota Prairie Line

### Monitoring Report

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**Koppers Railroad Structures Inc.**

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Koppers Railroad Structures Inc.  

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Koppers Railroad Structures Inc.  

Date Printed: 11/20/2018
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## Monitoring Report

**Line:** Minnesota Prairie Line

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**Koppers Railroad Structures Inc.**

**Date Printed: 11/29/2018**
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**MNDOT STANDARD TRACK STANDARDS**

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Division II

Construction Details

2000  Grade Crossing – Renew Blacktop

Description of Work

Work will consist of the complete renewal of designated grade crossings within the limits specified. Work will include the removal of the existing crossing, construction of new track, ballast/surface/line, installation of concrete surface material and general cleanup. A schedule of work items and locations will be provided. The Road Authority will be responsible for saw cutting the roadway surface and traffic control.

2000.1 Coordination of Work with Road Authority

a. All grade crossing projects will require close coordination and cooperation with the Road Authority. The Contractor shall consider such coordination in its work, scheduling its work with the Road Authority and keeping the Road Authority advised so appropriate arrangements can be made for detours and road closure.

b. At least three (3) weeks advance notice shall be given to the Road Authority prior to the start of construction.

2000.2 Railroad – Highway Profile

a. An agreed upon profile, railroad and highway, shall be established between the Railroad and the Road Authority prior to construction. Prior to construction the Railroad, Contractor and Road Authority shall meet on-site to discuss the scope of work, standards and specifications, schedules, train operations and any other pertinent matters.

b. Where crossings involve two or more tracks, the top of rails of all tracks should be brought to the same plane where practical.

c. Crossings not installed to the specified grade shall be removed and re-installed to proper grade at the Contractors expense. The contractor will also be responsible for any additional cost to the Road Authority, Mn/DOT Inspector, Railroad and other Contractors. Any additional cost billed to the project will be deducted from any moneys due the Contractor.

2000.3 Remove Existing Crossing

a. Roadway surface shall be saw-cut prior to removing the crossing surface. The cut should be made at least 4 feet from nearest rail.

b. At multiple track crossings, where distance between inside rails is 20 feet or less, all roadway surface material between tracks should be removed.

2000.4 Excavation

a. The crossing area should be excavated 24 +/- inches below the roadway surface, 1-foot minimum beyond the end of ties and for a distance of 20 feet beyond the crossing ends.
b. If a rail joint falls within the 20-foot distance, excavation should extend a minimum of 5 feet beyond the joint.

c. When soil conditions warrant, the sub-grade shall be excavated to a depth necessary to remove all unstable sections and water pockets. The finished grade and cross section shall consist of a smooth sub-grade surface and shall be free-draining.

d. When practical, crossing ends shall be cleaned and sloped away from the crossing ends both directions along the track and roadway to provide proper drainage of the crossing ends.

e. If appropriate, material removed during excavation may be spread along the railroad right-of-way in previously disturbed areas only. Care must be taken to avoid obstructing natural or manmade waterways and impacting or burying vegetation.

f. At locations where the crossing doesn't have a signal system in place excavation should allow for the placement of black four (4) inch PVC pipe for future signal systems. The PVC pipe should be installed per railroad instructions.

2000.5 Substandard Sub-grade

a. At locations where unstable sub-grade conditions were removed, sub-ballast shall be installed to the specified line and grade.

b. Sub-ballast should be placed the full width of the area excavated, bladed, and compacted to 95% density in layers not less than three (3) inches and not exceeding six (6) inches in depth when compacted. Water should be added as necessary to facilitate compaction.

c. Sub-ballast should be compacted to the specified grade and cross section limits. The completed sub-grade should provide for a solid foundation and shall be free-draining.

d. The finished grade should consist of a smooth sub-grade surface conforming to the prescribed elevation and shall allow for the minimum ten (10) inches of ballast required below the tie.

e. Material shall be a stabilizing aggregate used most commonly in highway construction including crushed stone and natural or crushed gravels. Sub-ballast material must meet the requirements of Mn/DOT class 5 aggregate, as outlined in Section 3010 of this document.

2000.6 Filter Fabric

a. Geo-textile fabric for separation/stabilization shall be installed between the sub-grade and the ballast section.

b. The fabric should be installed the full width and length of the area excavated. Longitudinal and transverse joints should overlap a minimum of 24 inches.

c. If practical, fabric should extend under the roadway surface, traveled way, 15 ft. each way from centerline of track.

2000.7 Drainage

a. Perforated pipe, having a four (4) inch diameter, is required at all locations where the roadway grade descends toward the crossing or when appropriate
drainage cannot be obtained during normal excavation.

b. Drainage pipe shall be installed on the sub-grade surface as shown in Section 4020 of this document. Outlets must be extended to carry the water a sufficient distance from the roadbed.

2000.8 Ties
a. New ties shall be installed throughout the area excavated. Ties through the crossing surface area and for 5 ties beyond each end shall be 7" x 9" x 10'. All other ties shall be grade 5.

b. Tie installation should start off centerline of roadway to ensure that crossing surface is centered with road.

c. Ties shall be installed on 18" centers throughout the area excavated.

2000.9 Tie Plates
All ties must be fully plated. Plates must be centered on the tie with the shoulder having a full even bearing against the base of rail.

2000.10 Rail
Continuous welded rail shall extend at least 20 feet beyond each end of the crossing.

2000.11 Field Welds
a. All bolt holes and bond holes shall be eliminated by cropping. Rail should be at least 27 feet in length after cropping. Rail ends must be inspected for defects before welding.

b. All welding operations must be performed by a qualified welder.

c. Welders must follow the detailed manufacturer’s instructions for the specific welding process being used without deviation.

d. Field welds must be completed in accordance with the current A.R.E.M.A. specifications.

e. Welds shall be of good quality providing for good track alignment (vertical/horizontal) through the weld and satisfactory riding characteristics.

f. CWR must be installed so that all field welds are centered in the crib area

2000.12 Compromise Joints, Bolts, Washers
a. Compromise bars shall accurately fit the rails for which they are intended and shall provide a true alignment of the gage and running surfaces of the two (2) rails being connected.

b. When cutting rail an approved rail saw must be used. Rail must not be torched.

c. Bolt holes must be drilled. Torching of bolt holes will not be permitted.

d. Rail ends shall match and if required, should be corrected by welding and/or grinding.

e. All joints must be fully bolted with washers and properly tightened.

2000.13 Spike Track
a. A standard track gage shall be used at all times, checking the gage every 4th tie. All ties shall be spiked to standard 4' 8½" gage.
b. Track spikes shall be started and driven vertically and square with the tie and driven as to allow 1/8" – 3/16" space between the spike head and base of rail. In no case shall the spikes be overdriven or straightened while being driven.

c. The removal of track spikes, once driven, shall be avoided. When re-spiking, every hole where a spike has been removed must be plugged with treated tie plugs of proper size to completely and tightly fill the spike hole.

d. All 10-foot ties should have four (4) rail-holding spikes per tie plate.

2000.14 Anchor Track
All ties through the crossing area and for a minimum distance of 15 feet beyond each crossing end should be fully box-anchored.

2000.15 Surface/Line/Dress Track
a. Track shall be placed in good alignment prior to surfacing to minimize the movement necessary for final line.

b. Tamping shall be performed by an approved on-track tamper of the vibratory or squeeze type. Both ends of the tie shall be tamped simultaneously.

c. The tamper shall be equipped with its full complement of tamping tools. The tool ends shall have sufficient area to assure proper compaction.

d. Curved track should be surfaced to ½" superelevation unless otherwise specified. The outer rail shall be raised to provide the proper spiral and elevation.

e. Following completion of the original tamping as many train movements, as time will permit, should be allowed to move over the track to induce any initial settlement, and the track should then be re-tamped to obtain optimum track stability. The tamper shall make a minimum of two (2) passes.

f. Track shall be thoroughly tamped. All ties shall have a full even bearing against the base of rail.

g. Final surface shall provide for a true and uniform surface throughout the crossing area.

h. Where crossings involve two or more tracks, the top of rails of all tracks should be brought to the same plane where practical.

i. Ballast must be dressed and evenly distributed. Cribs should be filled to within two (2) inches from the top of the ties.

2000.16 Crossing Surface
a. Medians, boulevards and sidewalks should have the same surface material installed to provide one continuous crossing surface. The crossing surface shall extend a minimum of one (1) foot beyond the edge of shoulder, back of curb, or edge of sidewalk.

b. Surface shall be installed in accordance with the manufacturer’s specifications.

2000.17 General Cleanup
The area shall be cleaned up with all ties and debris properly disposed of. Rail and OTM will remain the property of the contractor.

2000.18 Measurement and Payment
Work shall be paid per track foot of crossing surface properly completed, including performing all work functions specified. Unit price to include material, equipment, tools, supplies, labor, and supervision necessary to complete the work.

2010 Grade Crossings – Renew (public) Gravel

Description of Work

Work will consist of the complete renewal of designated grade crossings within the limits specified. Work includes removal of existing crossing, construction of new track, ballast/surface/line, installation of full-plank surface and general cleanup. Work will also include placing barricades provided by the local road authority. A schedule of work items and locations will be provided.

2010.1 Coordination of Work with Road Authority

a. All crossing projects will require close coordination and cooperation with the Road Authority.

b. The Contractor shall consider such coordination in its work, scheduling the work with the Road Authority and keeping the Road Authority advised of all crossing activities so appropriate arrangements can be made for detours and road closure.

c. At least three (3) weeks advance notice shall be given to the Road Authority prior to the start of construction.

2010.2 Railroad- Highway Profile

Where crossings involve two or more tracks, the top of rails of all tracks should be brought to the same plane.

2010.3 Excavation

a. The crossing area shall be excavated 24 +/- inches below the roadway surface, 1-foot minimum beyond the end of ties and for a distance of 20 feet beyond the crossing ends.

b. If a rail joint falls within the 20-foot distance, excavation should extend a minimum of 5 feet beyond the joint.

c. When soil conditions warrant, the sub-grade shall be excavated to a depth necessary to remove all unstable sections and water pockets. The finished grade and cross section shall consist of a smooth sub-grade surface and shall be free-draining.

d. Crossing ends shall be cleaned and sloped away from the crossing ends both directions along the track and roadway to provide proper drainage of the crossing ends.

e. Excavation material removed from the crossing zone should be stockpiled on the road and later used for approach material.

2010.4 Substandard Sub-grade

a. At locations where unstable sub-grade conditions were removed, sub-ballast shall be installed to the specified line and grade.

b. Sub-ballast should be placed the full width of the area excavated, bladed, and compacted to 95% density in layers not less than three (3) inches and not exceeding six (6) inches in depth when compacted. Water should be added as necessary to facilitate compaction.
c. Sub-ballast should be compacted to the specified grade and cross section limits. The completed sub-grade should provide for a solid foundation and shall be free-draining.

d. The finished grade should consist of a smooth sub-grade surface conforming to the prescribed elevation and must allow for six (6) inches of ballast below the tie.

e. Material shall be a stabilizing aggregate used most commonly in highway construction including crushed stone and natural or crushed gravels. Sub-ballast material must meet the requirements of Mn/DOT class 5 aggregate, as outlined in Section 3010 of this document.

2010.5 Filter Fabric

a. Geotextile fabric for separation/stabilization shall be installed between the sub-grade and the ballast section.

b. The fabric should be installed the full width and length of the area excavated.

2010.6 Drainage

a. Perforated pipe, having a four (4) inch diameter, is required at all locations where the roadway grade descends toward the crossing or when appropriate drainage cannot be obtained during normal excavation.

b. When required, drainage pipe shall be installed on the sub-grade surface as shown in Section 4020 of this document. Outlets must be extended to carry the water a sufficient distance from the roadbed.

2010.7 Install Ties

a. Ties shall be installed on 18" centers throughout the area excavated.

b. Installation of ties to start off centerline of road to ensure that crossing surface is centered with road.

2010.8 Tie Plates

Plates must be centered on the tie with the shoulder having a full even bearing against the base of rail. The rail, tie and plate shall be cleaned of all dirt and foreign material.

2010.9 Install Rail

a. When installing in-kind, rail shall be laid in a manner that will provide the best "match". Care shall be exercised in matching adjoining rails to prevent lipped or uneven rail ends.

b. When upgrading to 100# rail or greater, any joints that fall within 20 feet of the crossing ends shall be welded.

2010.10 Field Welds

a. All bolt holes and bond holes shall be eliminated by cropping. Rail should be at least 27 feet in length after cropping. Rail ends must be inspected for defects before welding.

b. All welding operations must be performed by a qualified welder.

c. Welders must follow the detailed manufacturer’s instructions for the specific welding process being used without deviation.
d. Field welds must be completed in accordance with the current A.R.E.M.A. specifications.
e. Welds shall be of good quality providing for good track alignment (vertical/horizontal) through the weld and satisfactory riding characteristics.
f. CWR must be installed so that all field welds are centered in the crib area

2010.11 Joints, Bolts, Washers
a. Compromise bars shall accurately fit the rails for which they are intended and shall provide a true alignment of the gage and running surfaces of the two (2) rails being connected.
b. When cutting rail an approved rail saw must be used. Rail must not be torched.
c. Bolt holes must be drilled. Torching of bolt holes will not be permitted.
d. Rail ends shall match and if required, should be corrected by welding and/or grinding.
e. All joints must be fully bolted with washers and properly tightened.

2010.12 Spike Track
a. Track must be spiked to standard 4' 8 ½" gage and spiking must conform to the existing spiking pattern.
b. A standard track gage shall be used at all times, checking the gage every 4th tie. All ties shall be spiked to standard 4' 8½" gage.
c. Track spikes shall be started and driven vertically and square with the tie and driven as to allow 1/8" – 3/16" space between the spike head and base of rail. In no case shall the spikes be overdriven or straightened while being driven.
d. The removal of track spikes, once driven, shall be avoided. When re-spiking, every hole where a spike has been removed must be plugged with treated tie plugs of proper size.

2010.13 Surface/Line/Dress Track
a. Tamping shall be performed by an approved on-track tamper of the vibratory or squeeze type. Both ends of the tie shall be tamped simultaneously.
b. The tamper shall be equipped with its full complement of tamping tools. The tool ends shall have sufficient area to assure proper compaction.
c. Curved track should be surfaced to ½" superelevation unless otherwise specified. The outer rail shall be raised to provide the proper spiral and elevation.
d. Track shall be thoroughly tamped. All ties shall have a full even bearing against the base of rail.
e. Final surface shall provide for a true and uniform surface throughout the crossing area.
f. Where crossings involve two or more tracks, the top of rails of all tracks should be brought to the same plane where practical.
g. Ballast must be dressed and evenly distributed. Cribs should be filled to within two (2) inches from the top of the ties.

2010.14 Install Plank
a. When installing plank, the top of plank should be within 1/4 inch of top of rail.
b. Plank shall be installed 2½" – 3" from the rail.
c. At skewed crossings, plank shall be installed in accordance with the roadway alignment to ensure that the surface extends at least 1 ft. beyond the edge of roadway.

d. Plank should be fastened with Screw Spikes. Ten (10) inch spikes should be used for 80# rail and under, eleven (11) inch for 85/90# and twelve (12) inch for rail sections of 100# and heavier.

e. Plank should be spiked in accordance with the spiking pattern shown in Section 4050 of this document.

2010.15 **Approach Work**

Excavation material should be spread and compacted on both approaches to re-open the road. When required, additional approach material will be furnished.

2010.16 **General Clean-up**

The area shall be cleaned up with all ties and debris properly disposed of. Rail and OTM will remain the property of the contractor.

2010.17 **Measurement and Payment**

Shall be paid per track foot of crossing surface properly completed. Unit price to include all materials, equipment, tools, supplies, labor, and supervision necessary to complete the work.

2020 **Grade Crossings – Renew Private**

**Description of Work**

Work will consist of the complete renewal of residential and commercial crossings within the limits specified. Work will include removal of existing crossing, construction of new track, ballast/surface/line, installation of full-plank surface and general cleanup. Work will also include placing barricades provided by the local road authority. A schedule of work items and locations will be provided.

2020.1 **Coordination of Work with Private Party**

a. Work will require close coordination and cooperation with the Private party affected by the closure.

b. The work shall be planned so that the crossing will be open during non-working hours. To temporarily re-open the crossing, plank should be temporarily installed and approaches bladed/compacted. Roadway profile shall permit safe passage for emergency vehicles and low-clearance vehicles.

2020.2 **Excavation**

a. The crossing area shall be excavated 22 - 24 inches below the roadway surface, 1-foot minimum beyond the end of ties and for a distance of 20 feet beyond the crossing ends.

b. If a rail joint falls within the 20-foot distance, excavation should extend a minimum of 5 feet beyond the joint.

c. When soil conditions warrant, the sub-grade shall be excavated to a depth necessary to remove all unstable sections and water pockets. The finished grade and cross section shall consist of a smooth sub-grade surface and shall be free-draining.

d. Crossing ends shall be cleaned and sloped away from the crossing ends both
directions along the track and roadway to provide proper drainage of the crossing ends.

e. Excavation material removed from the crossing zone should be stockpiled on the road and later used for approach material.

2020.3 Substandard Sub-grade

a. At locations where unstable sub-grade conditions were removed, sub-ballast shall be installed to the specified line and grade.

b. Sub-ballast should be placed the full width of the area excavated, bladed, and compacted to 95% density in layers not less than three (3) inches and not exceeding six (6) inches in depth when compacted. Water should be added as necessary to facilitate compaction.

c. Sub-ballast should be compacted to the specified grade and cross section limits. The completed sub-grade should provide for a solid foundation and shall be free-draining.

d. The finished grade should consist of a smooth sub-grade surface conforming to the prescribed elevation.

e. Material shall be a stabilizing aggregate used most commonly in highway construction including crushed stone and natural or crushed gravels. Sub-ballast material must meet the requirements of Mn/DOT class 5 aggregate, as outlined in Section 3010 of this document.

2020.4 Filter Fabric

a. Geotextile fabric for separation/stabilization shall be installed between the sub-grade and the ballast section.

b. The fabric should be installed the full width and length of the area excavated.

2020.5 Drainage

a. Perforated pipe, having a four (4) inch diameter, is required at all locations where the roadway grade descends toward the crossing or when appropriate drainage cannot be obtained during normal excavation.

b. Drainage pipe shall be installed on the sub-grade surface as shown in Section 4010 of this document. Outlets must be extended to carry the water a sufficient distance from the roadbed.

2020.6 Install Ties

a. Ties shall be installed on 18" centers throughout the area excavated.

b. Installation of ties to start off centerline of road to ensure that crossing surface is centered with road.

2020.7 Tie Plates

Plates must be centered on the tie with the shoulder having a full even bearing against the base of rail.

2020.8 Install Rail

a. Rail shall be laid in a manner that will provide the best "match". Care shall be exercised in matching adjacent rails to prevent lipped or uneven rail ends.

b. When upgrading to 100# rail or greater, any joints that fall within 10 feet of the crossing ends shall be welded.
2010.9 Field Welds
a. All bolt holes and bond holes shall be eliminated by cropping. Rail should be at least 27 feet in length after cropping. Rail ends must be inspected for defects before welding.
b. All welding operations must be performed by a qualified welder.
c. Welders must follow the detailed manufacturer’s instructions for the specific welding process being used without deviation.
d. Field welds must be completed in accordance with the current A.R.E.M.A. specifications.
e. Welds shall be of good quality providing for good track alignment (vertical/horizontal) through the weld and satisfactory riding characteristics.
f. CWR must be installed so that all field welds are centered in the crib area

2020.10 Joints, Bolts, Washers
a. Compromise bars shall accurately fit the rails for which they are intended and shall provide a true alignment of the gage and running surfaces of the two (2) rails being connected.
b. When cutting rail an approved rail saw must be used. Rail must not be torched.
c. Bolt holes must be drilled. Torching of bolt holes will not be permitted.
d. Rail ends shall match and if required, should be corrected by welding and/or grinding.
e. All joints must be fully bolted with washers and properly tightened.

2020.11 Spike Track
a. Track must be spiked to standard 4' 8 ½" gage and spiking must conform to the existing spiking pattern.
b. A standard track gage shall be used at all times, checking the gage every 4th tie. All ties shall be spiked to standard 4' 8½" gage.
c. Track spikes shall be started and driven vertically and square with the tie and driven as to allow 1/8" – 3/16" space between the spike head and base of rail. In no case shall the spikes be overdriven or straightened while being driven.
d. The removal of track spikes, once driven, shall be avoided. When re-spiking, every hole where a spike has been removed must be plugged with treated tie plugs of proper size.

2020.12 Surface/Line/Dress Track
a. Tamping shall be performed by an approved on-track tamper of the vibratory or squeeze type. Both ends of the tie shall be tamped simultaneously.
b. The tamper shall be equipped with its full complement of tamping tools. The tool ends shall have sufficient area to assure proper compaction.
c. Curved track should be surfaced to ½" superelevation unless otherwise specified. The outer rail shall be raised to provide the proper spiral and elevation.
d. Track shall be thoroughly tamped. All ties shall have a full even bearing against the base of rail.
e. Final surface shall provide for a true and uniform surface throughout the crossing area.
f. Where crossings involve two or more tracks, the top of rails of all tracks should be brought to the same plane where practical.

g. Ballast must be dressed and evenly distributed. Cribs should be filled to within two (2) inches from the top of the ties.

2020.13 Install Plank

a. When installing plank, the top of plank should be within 1/4 inch of top of rail.
b. Plank shall be installed 2½" – 3" from the rail.
c. At skewed crossings, plank shall be installed in accordance with the roadway alignment to ensure that the surface extends beyond the edge of roadway.
d. Plank should be fastened with Screw Spikes. Ten (10) inch spikes should be used for 80# rail and under, eleven (11) inch for 85/90# and twelve (12) inch for rail sections of 100# and heavier.
e. Plank shall be spiked in accordance with the spiking pattern shown in Section 4050 of this document.

2020.14 Approach Work

When crossing work is completed, all excavated material should be spread and compacted on both approaches to re-open the road. When required, additional approach material will be furnished.

2020.15 General Clean-up

The area shall be cleaned up and bladed with all ties and debris properly disposed of. Rail and OTM will remain the property of the contractor.

2020.16 Measurement and Payment

Shall be paid per track foot of crossing surface properly completed. Unit price to include all materials, equipment, tools, supplies, labor, and supervision necessary to complete the work.

2030 Re-plank Crossings

Description of Work

Work will consist of installing a full-plank surface at designated crossings. Work will include approach work as needed. A schedule of work items and locations will be provided.

2030.1 Install Plank

a. When installing plank, the top of plank should be within 1/4 inch of top of rail. Plank shall be installed 2½" – 3" from the rail.
b. Plank should be fastened with Screw Spikes. Ten (10) inch spikes should be used for 80# rail and under, eleven (11) inch for 85/90# and twelve (12) inch for rail sections of 100# and heavier.
c. Plank shall be spiked in accordance with the spiking pattern shown in Section 4050 of this document.

2030.2 Approach Work

Public crossings – Approaches should be finished to provide adequate rideability
Field crossings – Approaches must be completed to provide for adequate
rideability and proper clearances for vehicles and machinery. Ballast and/or borrowed material should be used for approaches. When required, additional approach material will be provided.

2030.3 Measurement and Payment
Shall be paid per track foot of crossing surface properly completed. Unit price to include all materials, equipment, tools, supplies, labor, and supervision necessary to complete the work.

2040 Re-Gage Track
Description of Work
Work will consist of re-gaging track at locations where gage generally exceeds 57½". Work includes the removal of track spikes and tie plates, plugging ties, re-installing plates and re-gaging track to standard 4' 8½" gage. A schedule of work items and locations will be provided.

2040.1 General Requirements
a. The rail showing the most uniform line will be used as the line rail and the other rail will be gaged to it. Track shall be gaged to standard 4' 8½" gage.
b. All spikes and tie plates shall be removed from the ties so the tie plugs can be properly installed.
c. Tie plugs shall be driven down the entire length of the spike hole and all excess material adzed off so that the tie plate will seat properly.
d. All ties must be adzed as necessary to provide a full and uniform bearing for the plate. All ties must be plated, adding plates as needed.
e. Track spikes shall be started and driven vertically and square with the tie and driven as to allow 1/8" – 3/8" space between the spike head and base of rail. Care must be taken to avoid overdriving the spikes.
f. Spikes shall be staggered so that both inside spikes are on the same side of the tie and the outside spikes are on the opposite side of the tie.
g. When spiking up joints, two (2) spikes should be installed on the "field side" with one (1) spike installed on the "gage side". Spikes shall not be placed within 2" of the end of joint bars or in joint bar slots.
h. All sound ties shall be fully plated and spiked.

2040.2 Measurement and Payment
Shall be paid for each track foot of track properly re-gaged in accordance with the requirements specified. Unit cost to include all material, tools, supplies, labor, equipment and supervision necessary to complete the work.

2050 Tie Program
Description of Work
Work will consist of furnishing and installing new ties under existing track. Work also includes tie distribution and disposal of scrap ties. A schedule of quantities and locations will be provided.

2050.1 Stockpile Ties
When a temporary stockpile area is required, ties must not be piled closer than 10 feet from nearest rail, 100 feet from road crossings or in drainage area's. At road crossings, ties shall be piled in a manner to allow unobstructed vision for motorist.

2050.2 Straighten Ties

All skewed ties shall be straightened, properly spaced and square to the line of rail. In straightening ties, care must be taken to avoid damage to ties.

2050.3 Install Ties

a. Tie tongs or other suitable devices shall be used for handling and installing ties. Ties shall be handled in such a manner to avoid bruising or breaking.

b. Ties shall be installed square to the line of rail with the ends the same distance from centerline of track and spaced uniformly with the ties on either side.

2050.4 Install Tie Plates

a. All tie plates shall be removed from scrap ties and all re-usable plates re-installed.

b. Plates must be centered on the tie with the shoulder having a full even bearing against the base of rail. The tie and tie plate shall be cleaned of all dirt and foreign material.

2050.5 Spike Track

a. A standard track gage or approved gauge-spiker shall be used for gauging track. When a gauge-spiker is used the gage shall be checked daily to assure proper gage is maintained.

b. Gage should be checked at all locations where ties have been installed. Track shall be spiked to standard 4' 8 ½" gage, ± ¼ inch. When gaging bent-rail, the rail shall be brought to gage as close as practical.

c. When spiking up new ties, the spiking pattern should conform to the existing spike pattern.

d. Track spikes shall be started and driven vertically and square with the tie and driven as to allow 1/8" – 3/8" space between the spike head and base of rail. Care must be taken to avoid overdriving the spikes.

e. Spikes shall be staggered so that both inside spikes are on the same side of the tie and the outside spikes are on the opposite side of the tie.

f. When spiking up joints, two (2) spikes should be installed on the "field side" with one (1) spike installed on the "gage side".

g. Spikes shall not be placed within 2" of the end of joint bars or in joint bar slots.

h. The removal of track spikes in new ties, once driven, shall be avoided. When re-spiking, every hole where a spike has been removed must be plugged with a treated tie plug and re-spiked in the same hole.

2050.6 Install Rail Anchor

a. Both rails shall be box-anchored to the same tie and anchored in accordance with the anchor pattern shown in Section 4060, Figure 1, of this document.

b. Anchors shall be applied to sound ties only and must not be applied to ties adjacent to joints. The anchor pattern should be adjusted accordingly, staying at least one tie off the joint. In any case, each rail should have the specified
number of anchors.
c. All anchors not in contact with the tie must be re-set. When relocating anchors, they must be removed and reapplied and not driven down the rail.
d. The number of anchors that would normally be applied to the track over the length of the bridge should be applied to additional ties on both ends of the bridge.

2050.7 Measurement and Payment

Work shall be paid for each cross tie properly installed, including performing all work functions specified. Unit price to include all material, tools, supplies, labor, equipment and supervision necessary to complete the work.

2060 Turnout Program

Description of Work

Work will consist of furnishing and installing new ties under existing track. Work also includes tie distribution and disposal of scrap ties. A schedule of work items and locations will be provided.

2060.1 Straighten Ties

All skewed ties shall be straightened, properly spaced and square to the line of rail. In straightening ties, care must be taken to avoid damage to ties.

2060.2 Install Ties

a. Tie tongs or other suitable devices shall be used for handling and installing ties. Ties shall be handled in such a manner to avoid bruising or breaking.
b. Switch ties shall be installed in the position for which they were intended and not cut off to fit.
c. Ties shall be installed in line with the line side of the turnout, square to the line of rail, and spaced in accordance with the design and standards of the turnout involved. Ties should be installed with the heart-side down.
d. Switch ties shall be spaced uniformly with the ties on either side.

2060.3 Install Tie Plates

a. All tie plates shall be removed from scrap ties and all re-usable plates re-installed.
b. Plates must be centered on the tie with the shoulder having a full even bearing against the base of rail. The tie and tie plate shall be cleaned of all dirt and foreign material.

c.

2060.4 Spike Track

a. A standard track gage shall be used at all times. Turnout must be spiked to standard 4’ 8½” gage, ¼ +- inch. Gage should be checked every 3rd tie.
b. When spiking up new ties, the spiking pattern should conform to the existing spike pattern. One additional spike should be installed on the gage side of the curved closure rail.
c. Track spikes shall be started and driven vertically and square with the tie and
driven as to allow 1/8" – 3/8" space between the spike head and base of rail. Care must be taken to avoid overdriving the spikes.

d. Spikes shall be staggered so that both inside spikes are on the same side of the tie and the outside spikes are on the opposite side of the tie.

e. When spiking up joints, two (2) spikes should be installed on the "field side" with one (1) spike installed on the "gage side".

f. Spikes shall not be placed within 2" of the end of joint bars or in joint bar slots.

g. The removal of track spikes in new ties, once driven, shall be avoided. When re-spiking, every hole where a spike has been removed must be plugged with a treated tie plug and re-spiked in the same hole.

2060.5 Install Anchor

Every 3rd tie shall be box-anchored, wherever possible, with all four (4) rails anchored to the same tie. Rail anchors should be applied on the gage side of rail except where clearance is restricted, in which case the anchors may be installed from the field side. On the turnout side, ties should be box-anchored to the clearance point.

2060.6 Measurement and Payment

Work shall be paid for each switch tie properly installed, including performing all work functions specified. Unit price to include all material, tools, supplies, labor, equipment and supervision necessary to complete the work.

2070 Pre-raise Track

Description of Work

This work will consist of raising track by mechanized method. A schedule of work items and locations will be provided.

2070.1 Requirements

a. The tamper shall be equipped with its full complement of tamping tools. The tamping tools shall have sufficient head and face area to properly compact the ballast under the tie.

b. All ties must be tamped with the exception of those ties marked for replacement.

c. A minimal three (3) inch raise is required with all track properly lined and surfaced.

d. All pre-raised track shall be safety tied, spiked and proper runoffs provided before trains are allowed to operate over the segment.

2070.2 Measurement and Payment

Shall be paid per track foot properly surfaced and lined in accordance with the requirements specified. Unit price to include all tools, supplies, labor, equipment, and supervision necessary to complete the work.

2080 Ballast Distribution

Description of Work

Work will consist of distributing ballast within the specified limits. A schedule of work items and locations will be provided.

2080.1 General Requirements

a. All preliminary scheduled work such as bank restoration, cut widening,
ditching, culvert renewal and tie replacement shall be completed before ballast is distributed.

b. Ballast shall be distributed in such a manner to assure that the track is fully ballasted.

c. During distribution care must be exercised to avoid unloading ballast over open-deck bridges, crossings or in areas where other work is not completed or planned.

2080.2 Measurement and payment

Shall be paid per net ton of ballast distributed. Unit price to include two (2) locomotive units, two (2)-man train crew, equipment, tools, supplies, labor and supervision necessary to complete the work.

2090 Surface and Align Track

Description of Work

Work will consist of raising, lining and dressing track as specified. Work also includes tamping up and re-spiking all "down" ties and driving down of high spikes. A schedule of work items and locations will be provided.

2090.1 General Requirements

a. Tamping shall be performed by a high-production tamper.

b. The tamper shall be equipped with its full complement of tamping tools. The tamping tools shall have sufficient head and face area to properly compact the ballast under the tie.

c. When tamping in tandem, the machines should be the same type and have identical tamping heads to produce uniform compaction.

d. Surfacing shall provide for a minimal three (3) inch raise with the exception of those segments where smoothing operations will be performed.

e. Track shall be brought to true surface and alignment. A tolerance of ¼" for x-level, profile and alignment will be allowed. Surface-bent rail will be taken into consideration when measuring track.

f. Care must be taken in the lining of track to avoid creating irregular alignment. All tracks should have true alignment, with all swings and doglegs corrected at the contractor's expense.

g. Care must be taken when surfacing turnouts thru the frog area. Turnouts shall be surfaced in a manner that will ensure that all switch ties come up with the rail. The run-off on the turnout side should be tamped out to the "clearance" point.

h. Curves should be surfaced to ½" superelevation unless otherwise specified.

2090.2 Dress Track

Ballast must be dressed and evenly distributed immediately after surfacing. Ballast shall be dressed to provide for a minimum of six (6) inch shoulders. Cribs shall be filled to within two inches from the top of the ties.

2090.3 Quality Control

a. All ties pulled loose from the rail shall be cleaned off, tamped and re-spiked.
b. The reverse holes may be used when re-spiking existing ties. All new ties shall be plugged and re-spiked in the same hole.

c. All "high" spikes must be driven down. 2090.4 Measurement and Payment

Shall be paid per track foot of track properly surfaced, lined, and dressed, including performing all work functions specified. Unit price to include all tools, supplies, labor, equipment and supervision necessary to complete the work.

2100 Joint Bars – Replace

description of work

This work will consist of replacing center-broken/worn joint bars. A schedule of work items and locations will be provided.

2100.1 General Requirements

a. Bolts shall be tightened in the proper sequence to properly seat joints, beginning at the center of the joint and working both ways to the end.

b. Joint bars shall be applied so that bars are not cocked between the base and head of rail.

c. All joints must have the required no. of bolts, washers and nuts, with all joints properly tightened.

d. All joint ties that had spikes removed shall be plugged and re-spiked.

e. All scrap material should be picked up and stockpiled at the nearest station.

2100.2 Measurement and Payment

Work shall be paid for each joint properly repaired, including performing all work functions specified. Unit price to include all material, equipment, tools, supplies, labor, and supervision necessary to complete the work.

2110 Joint Bar Program

description of work

Work will consist of tightening all joints by mechanized method. Work will also include the replacement of broken/worn bars and replacement of bolts as needed. A schedule of work items and locations will be provided.

2110.1 Requirements

a. All center-broken and worn bars shall be replaced.

b. Bolts shall be tightened in the proper sequence to properly seat joints, beginning at the center of the joint and working both ways to the end.

c. Joint bars shall be applied so that bars are not cocked between the base and head of rail.

d. All joints must have the required no. of bolts, washers and nuts, with all joints properly tightened.

e. All track bolts shall be tightened with an approved on-track bolt machine. Bolts should be tightened to 20,000 - 30,000 lbs.

f. All joint ties that had spikes removed shall be plugged and re-spiked.
g. Scrap material shall be picked up and stockpiled at the nearest station.

2110.2 Measurement and Payment

Work shall be paid per mile of track properly completed, including performing all work functions specified. Unit price to include all material, tools, supplies, labor, equipment, and supervision necessary to complete the work.

2120 Rail Repair

Description of Work

This work will consist of replacing defective and surface-bent rails. Work to include material distribution and scrap pick-up. A schedule of work items and locations will be provided.

2120.1 Requirements

a. All defective rails should be replaced prior to a scheduled Tie program.

b. Repair rail should be the same rail section of the rail being replaced. All rails should be straight, free of defects and in standard lengths.

c. Whenever possible, full-length rail shall be installed to remove shorter rails and eliminate joints.

d. Any rail cutting shall be accomplished by a rail saw. All bolt holes shall be drilled with an approved rail drill. The use of a torch for cutting rail or torching bolt holes is strictly prohibited.

e. When rail has been replaced, ties shall be plugged and re-spiked, joints fully bolted and tightened and all anchors re-applied.

f. All scrap and material shall be picked up and stockpiled at the nearest station.

2120.2 Measurement and Payment

Work shall be paid for each rail properly installed in accordance with the requirements specified. Unit price to include all material, tools, supplies, labor, equipment, and supervision necessary to complete the work.

2130 Rail Relay - Conventional

Description of Work

Work will consist of the removal of rail and OTM within the limits specified and the installation of no. 1 relay rail, tie plates, joint bars, bolt/washers, tie plugs, spikes and anchors. Work also includes straightening any skewed ties, distribution of materials and general cleanup. A schedule of work items and locations will be provided.

2130.1 Stockpile, Distribute Rail

a. Rail shall be stored straight and level on a firm base with each tier stripped in four (4) places to prevent bending.

b. Care must be taken during the handling of rail to avoid kinking or dropping of
rail. Any rail dropped must not be installed.

c. Rail should be checked for defects before installed.

2130.2 Straighten Ties

All skewed ties shall be straightened square to rail prior to laying rail.

2130.3 Plug/Adze Ties

a. Ties shall be plugged with treated tie plugs.
b. Ties shall be adzed as necessary to provide a full and uniform bearing for the plate. Excessive adzing must be avoided.

2130.4 Tie Plates

Plates must be installed to cant the rail inward and centered on the tie with the shoulder having a full even bearing against the base of rail.

2130.5 Install Rail

a. Rail should be transposed and any bond wires removed.
b. The gage side rail should be laid first, gaging to the line rail, after which the line rail shall be laid and gaged to the new rail.
c. Care shall be exercised in matching adjacent rails to prevent lipped or uneven joints.
d. Rail shall be installed one at a time without bumping or striking and with the ends square. To insure proper expansion, rail ends must be brought squarely together against the proper shim. Shims must not be removed until at least six (6) rails ahead have been laid and joints are fully bolted.
e. Rail joints should be applied and fully bolted with washers and properly tightened before rail is spiked up.
f. On tangent track, joints should be staggered 1/3 rail and stagger must not exceed twelve (12) inches either direction. In laying rail on curves, a 38-foot rail should be installed at proper intervals in the low rail and in the low rail side on tangents adjacent to the curve to maintain the proper stagger throughout the curve.
g. An approved rail thermometer shall be used to ascertain the temperature of the rail and in making the reading it shall be placed on the rail base on the shady side of the rail. The rail temperature shall be checked every hour.
h. Metal or fiber shims shall be placed between the rail ends to insure proper space allowance for expansion.
i. Expansion shall be provided as indicated in the following table:

<table>
<thead>
<tr>
<th>Rail Temperature</th>
<th>Expansion Shim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 85</td>
<td>None</td>
</tr>
<tr>
<td>66 to 85</td>
<td>1/8&quot; every other joint</td>
</tr>
<tr>
<td>46 to 65</td>
<td>1/8&quot; at each joint</td>
</tr>
<tr>
<td>26 to 45</td>
<td>1/4&quot; at each joint</td>
</tr>
</tbody>
</table>

j. Rail shall be laid with proper expansion allowed and all bolting, spiking, tamping and anchoring completed as work proceeds.
k. Rail should maintain the proper stagger throughout, except where necessary to adjust the joints for turnouts, bridges, crossings and insulated joints. Closure rail shall not be less than 15 feet in length.

l. Joints should not be located within 6 feet from point of switch, 10 feet from end of bridge and 20 feet from end of public crossing. Any joints falling within those limits shall be field-welded.

m. When cutting rail an approved rail saw must be used. Rail shall not be torched.

2130.6 Rail Joints

a. Joint bars should be applied so that bars are not cocked between the base and head of rail.

b. Compromise bars shall accurately fit the rails for which they are intended and shall provide a true alignment of the gage and running surfaces of the two (2) rails being connected.

c. Bolt holes must be drilled. Torching of bolt holes will not be permitted.

d. Bolts should be tightened in the proper sequence to properly seat joints, beginning at the center of the joint and working both ways to the end.

e. Final tightening of all track bolts should be completed with an approved on-track bolt machine. Bolts should be tightened to 20,000 - 30,000 lbs.

f. All joints must be fully bolted (6 bolts) with washers. At least ½ inch of the threads should be outside of the nut when properly tightened.

g. Rail ends shall match and if required, should be corrected by welding and/or grinding.

2130.7 Spike Track

a. Track must be gauged at every 4th tie. When using a gauge-spiker the gage must be checked daily to insure proper gage is maintained.

b. Spiking pattern is inside-spike east. Spikes shall be staggered so that both inside spikes are on the same side of the tie and the outside spikes are on the opposite side of the tie. Spikes shall not be placed within 2" of the end of joint bars.

c. Track spikes shall be started and driven vertically and square with the tie and driven as to allow 1/8" – 3/16" space between the spike head and base of rail. In no case shall the spikes be overdriven or straightened while being driven.

d. The removal of track spikes, once driven, shall be avoided. When re-spiking, every hole where a spike has been removed must be plugged with treated tie plugs of proper size.

2130.8 Anchor Track

a. Both rails shall be box-anchored to the same tie and anchored in accordance with the anchor pattern shown in Section 4060, Figure 2, of this document.

b. Anchors shall be applied to sound ties only and must not be applied to ties adjacent to joints. The anchor pattern may be adjusted accordingly, anchoring only sound ties and staying at least one tie off the joint. In any case each standard length rail must have 16 anchors.

c. All anchors not in contact with the tie must be re-set. When relocating anchors, they must be removed and reapplied and not driven down the rail.
d. The number of anchors that would normally be applied to the track over the length of the bridge should be applied to additional ties on both ends of the bridge.
e. In turnouts, every 3rd tie should be box-anchored, wherever possible, with all four (4) rails anchored to the same tie. Rail anchors should be applied on the gage side of rail except where clearance is restricted, in which case the anchors may be installed from the field side. On the turnout side ties should be box-anchored to the clearance point.

2130.9 Field Welds
a. All bolt holes and bond holes shall be eliminated by cropping. Minimum rail length should be 27 feet after cropping.
b. Rail ends shall be inspected for defects before welding.
c. All field welds shall be completed by a qualified welder.
d. Welders must follow the detailed manufacturer’s instructions for the specific welding process being used without deviation.
e. Field welds must be completed in accordance with the current A.R.E.M.A. specifications.
f. Welds shall be of good quality providing for good track alignment (vertical/horizontal) through the weld and satisfactory riding characteristics.

2130.10 Crossings
a. All joints that fall within 20 feet of a public crossing shall be field-welded.
b. All crossing plank should be removed and re-installed to match the new rail. Treated softwood shims should be used to match the new rail section.
c. When installing plank, the top of plank should be within 1/4 inch of top of rail. Plank should be installed 2½” – 3” from the rails. Contractor to furnish 12” spikes.

2130.11 Daily Planning
a. No more rail shall be laid in one day than can be properly taken care of during the day it is laid.
b. All rail laid down on any given day shall be fully bolted, spiked, tamped and anchored at the end of the day's work.

2130.12 General Clean-up
a. All scrap material along the track shall be picked up immediately after the relay is completed.
b. Clean-up work to include removing and disposing of all empty spike kegs, anchor bags, rubbish and other waste from the work.

2130.13 Measurement and Payment
Work shall be paid per track foot of rail properly installed, including performing all work functions specified. Unit price to include all material, tools, supplies, labor, equipment and supervision to complete the work.

2140 Rebuild Roadbed
Description of Work
Work will consist of removing existing track, re-building the sub-grade, spread ballast and re-installing track. A schedule of work items and locations will be provided.

2140.1 **Remove Track and Grade work**

a. Track should be removed as carefully as possible to include rails, ties and fastenings.

b. Roadbed should be excavated and/or bladed a minimum of 12" below the bottom of existing ties or to a depth necessary to remove unstable soil conditions and water pockets. If appropriate, all excavated materials should be spread and contoured into the existing topography.

c. Roadbed and track shoulders should be sloped away from center of track and drainage ditches shaped as required to allow proper drainage of track.

d. The finished grade should consist of a smooth and true sub-grade surface free of rutting or surface irregularities, which could pocket water.

2140.2 **Sub-ballast**

a. Sub-ballast should be placed the full width of the area excavated, bladed, and compacted to 95% density in layers not less than three (3) inches and not exceeding six (6) inches in depth when compacted.

b. Compaction must be obtained by the use of portable compactors or the use of off-track equipment heavily loaded.

c. Sub-ballast should be compacted to the specified grade and cross section limits. The completed sub-grade should provide for a solid foundation and shall be free-draining.

d. The finished grade should consist of a smooth sub-grade surface conforming to the prescribed elevation and should allow for a minimum of six (6) inches of ballast below the tie.

e. Sub-ballast material shall be a stabilizing aggregate used most commonly in highway construction including crushed stone and natural or crushed gravels. Sub-ballast material must meet the requirements of Mn/DOT class 5 aggregate, as outlined in Section 3010 of this document.

2140.3 **Install Track**

a. Geo-textile fabric shall be installed in the area excavated at the sub-grade/ballast interface. Longitudinal and transverse joints shall overlap a minimum of two (2) feet. Care must be taken to avoid damage to fabric.

b. Prior to installing track, ballast shall be placed to bottom of existing ties.

c. All re-usable track material removed shall be re-installed with replacement material installed as needed.

d. Track should be lined before ballast distribution.

e. Ballast should be distributed and track surfaced during the Surfacing Program.

2140.4 **Measurement and Payment**

Shall be paid per track foot of track properly re-installed in accordance with the requirements specified. Unit price to include all tools, supplies, labor, equipment and supervision necessary to complete the work.

2150 **Turnout Construction**
Description of Work
Work will consist of constructing a new turnout on a prepared roadbed. Construction shall comply with the plans and specifications provided for the number turnout involved.

2150.1 General Requirements
a. If plans aren't provided construction shall comply with A.R.E.M.A. plans and specifications.

b. Material shall consist of new, relay or reconditioned material required for a complete and fully operational turnout. Material shall conform to the latest A.R.E.M.A. Specifications.

2150.2 Switch Ties
a. Tie tongs or other suitable devices shall be used for handling and installing ties. Ties shall be handled in such a manner to avoid bruising or breaking.

b. Switch ties shall be installed in the position for which they were intended and not cut off to fit.

c. Ties shall be installed in line with the line side of the turnout, square to the line of rail, and spaced in accordance with the design and standards of the no. turnout involved. Ties should be installed with the heart-side down.

2150.3 Tie Plates
Plates must be centered on the tie with the shoulder having a full even bearing against the base of rail.

2150.4 Joints
a. Bars must be free of defects or alterations.

b. All joints must have the required no. of bolts, washers and nuts, with all joints properly tightened. At least ½ inch of the threads should be outside of the nut after tightened.

c. Bolts shall be tightened in the proper sequence to properly seat joints, beginning at the center of the joint and working both ways to the end. Joint bars shall be applied so that bars are not cocked between the base and head of rail.

2150.5 Spike Track
a. A standard track gage shall be used at all times, gaging every 3rd tie. Turnout must be spiked to standard 4' 8½" gage.

b. The spiking pattern should conform to the existing spike pattern. One additional spike should be installed on the gage side of the curved closure rail.

c. Track spikes shall be started and driven vertically and square with the tie and driven as to allow 1/8" – 3/8" space between the spike head and base of rail. Care must be taken to avoid overdriving the spikes.

d. Spikes shall be staggered so that both inside spikes are on the same side of the tie and the outside spikes are on the opposite side of the tie.

e. The removal of track spikes in new ties, once driven, shall be avoided. When re-spiking, every hole where a spike has been removed must be plugged with a treated tie plug and re-spiked in the same hole.

2150.6 Install Anchor
Every 3rd tie shall be box-anchored, wherever possible, with all four (4) rails anchored to the same tie. Rail anchors should be applied on the gage side of rail except where clearance is restricted, in which case the anchors may be installed from the field side. On the turnout side ties should be box-anchored to the clearance point.

2050.7 Surface Track
a. Tamping shall be performed by an approved on-track tamper of the vibratory or squeeze type. Both ends of the tie shall be tamped simultaneously.

b. The tamper shall be equipped with its full complement of tamping tools. The tamping tools shall have sufficient head and face area to properly compact the ballast under the tie.

c. Surfacing shall provide for a minimum of six (6) inches of ballast below tie.

d. Track shall be brought to true surface and alignment.

e. Care must be taken when surfacing turnouts thru the frog area. Turnouts shall be surfaced in a manner that will ensure that all switch ties come up with the rail.

2050.8 Dress Track
Ballast must be dressed and evenly distributed immediately after surfacing. Ballast shall be dressed to provide for a minimum of six (6) inch shoulders. Cribs shall be filled to within two(2) inches from the top of the ties.

2050.9 Quality Control
a. All ties pulled loose from the rail shall be cleaned off, tamped, plugged and re-spiked in the same holes. All "high" spikes must be driven down.

2150.10 Measurement and Payment
Shall be paid for each complete turnout delivered to the job site and properly installed. Unit price to include all material, equipment, tools, supplies, labor and supervision necessary to complete the work.

2160 New Track Construction
Description of Work
Work will consist of constructing a new track on a prepared roadbed. Construction shall comply with the plans and specifications provided.

2160.1 General Requirements
a. Roadbed – Build in accordance A.R.E.M.A Specifications. Minimum width should be 22 feet.

b. Profile Grade – shall be limited to a maximum of 1.5%.

c. Curvature – shall not exceed 6 degrees. A minimum tangent length of 50 feet must be placed in between reversing curves. Whenever possible, turnouts shall not be placed in a curve.

2160.2 Material Storage
When a temporary stockpile area is required, material must not be piled closer than 10 feet from nearest rail, 100 feet from road crossings or in locations which impairs drainage. At road crossings, material shall be piled in a manner to allow unobstructed vision for motorist.
2160.3 Install Ties

a. Tie tongs or other suitable devices shall be used for handling and installing ties. Ties shall be handled in such a manner to avoid bruising or breaking.

b. Ties shall be installed square to the line of rail with the ends the same distance from centerline of track and spaced uniformly with the ties on either side.

c. Tie spacing to be on 20" centers.

2160.4 Install Tie Plates

Plates must be centered on the tie with the shoulder having a full even bearing against the base of rail. The tie and tie plate shall be cleaned of all dirt and foreign material.

2160.5 Install Rail

a. Care must be taken during the handling of rail to avoid kinking or dropping of rail.

b. Rail should be checked for defects before installed.

c. Rail should be transposed and any bond wires removed.

d. The gage side rail should be laid first, gaging to the line rail, after which the line rail shall be laid and gaged to the new rail.

e. Care shall be exercised in matching adjacent rails to prevent lipped or uneven joints. Rails having different wear exceeding 1/16" shall not be intermixed.

f. Rail shall be installed one at a time without bumping or striking and with the ends square. To insure proper expansion, rail ends must be brought squarely together against the proper shim. Shims must not be removed until at least six (6) rails ahead have been laid and joints are fully bolted and tightened.

g. If approved, stretches of rail not over 10 in number may be bolted together in the center of the track and then lined into place, using care to maintain the expansion allowance uniformly.

h. Rail joints should be applied and fully bolted with lock washers and tightened before rail is spiked up.

i. On tangent track, joints shall be staggered 1/3 rail and stagger must not exceed twelve (12) inches either direction. In laying rail on curves, a 38-foot rail should be installed at proper intervals in the low rail and in the low rail side on tangents adjacent to the curve to maintain the proper stagger throughout the curve.

j. An approved rail thermometer shall be used to ascertain the temperature of the rail and in making the reading it shall be placed on the rail base on the shady side of the rail. The rail temperature shall be checked every hour.

k. Metal or fiber shims shall be placed between the rail ends to insure proper space allowance for expansion. Expansion shall be provided as indicated in the following table:

<table>
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</tr>
<tr>
<td>26 to 45</td>
<td>1/4&quot; at each joint</td>
</tr>
</tbody>
</table>

1. Rail shall be laid with proper expansion allowed and all bolting, spiking and anchoring completed as work proceeds.

m. Rail should maintain the proper stagger throughout, except where necessary to adjust the joints for turnouts, bridges, crossings and insulated joints. Closure rail shall not be less than 15 feet in length.

n. When cutting rail an approved rail saw must be used. Rail shall not be torched.

o. All mismatched rail ends must be corrected by welding and/or grinding.

2160.6 Rail Joints

a. Bolts shall be tightened in the proper sequence to properly seat joints, beginning at the center of the joint and working both ways to the end. Joint bars shall be applied so that bars are not cocked between the base and head of rail.

b. Final tightening of all track bolts shall be completed with an approved on-track bolt machine. Bolts should be tightened to 20,000 - 30,000 lbs.

c. All joints must have the required no. of bolts, washers and nuts, with all joints properly tightened. At least ½ inch of the threads should be outside of the nut after tightened.

2160.7 Spike Track

a. A standard track gage or approved gauge-spiker shall be used for gauging track. When a gauge-spiker is used the gage shall be checked daily to assure proper gage is maintained.

b. Track should be gaged every 4th tie and spiked to standard 4' 8 ½" gage.

c. The spiking pattern should be inside spike "east".

d. Track spikes shall be started and driven vertically and square with the tie and driven as to allow 1/8" – 3/8" space between the spike head and base of rail. Care must be taken to avoid overdriving the spikes.

e. Spikes shall be staggered so that both inside spikes are on the same side of the tie and the outside spikes are on the opposite side of the tie.

f. When spiking up joints, two (2) spikes should be installed on the "field side" with one (1) spike installed on the "gage side".

g. Spikes shall not be placed within 2" of the end of joint bars or in joint bar slots.

h. The removal of track spikes in new ties, once driven, shall be avoided. When re-spiking, every hole where a spike has been removed must be plugged with a treated tie plug and re-spiked in the same hole.

2160.8 Install Rail Anchor

a. Both rails shall be box-anchored to the same tie and anchored in accordance with the anchor pattern shown in Section 4060, Figure 1, of this document.

b. Anchors must not be applied to ties adjacent to joints. The anchor pattern should be adjusted accordingly, staying at least one tie off the joint. In any
case, each rail should have the specified number of anchors.

c. All anchors not in contact with the tie must be re-set. When relocating anchors, they must be removed and re-applied and not driven down the rail.

d. The number of anchors that would normally be applied to the track over the length of the bridge should be applied to additional ties on both ends of the bridge.

2160.9 Surface Track

a. Tamping should be performed by a high-production tamper.

b. The tamper shall be equipped with its full complement of tamping tools. The tamping tools shall have sufficient head and face area to properly compact the ballast under the tie.

c. Surfacing shall provide for a minimum of six (6) inches of ballast below tie.

d. Track shall be brought to true surface and alignment.

e. Care must be taken when surfacing turnouts thru the frog area. Turnouts shall be surfaced in a manner that will ensure that all switch ties come up with the rail.

f. Curves should be surfaced to ½" superelevation unless otherwise specified.

2160.10 Dress Track

Ballast must be dressed and evenly distributed immediately after surfacing. Ballast shall be dressed to provide for a minimum of six (6) inch shoulders. Cribs shall be filled to within two(2) inches from the top of the ties.

2060.11 Quality Control

a. All ties pulled loose from the rail shall be cleaned off, tamped, plugged and re-spiked in the same holes.

b. All "high" spikes must be driven down.

2160.12 Measurement and Payment

Shall be paid per track foot of new track properly constructed. Unit price to include material, labor, equipment, supervision and any other associated cost necessary to complete the work.

2170 Install Corrugated Culvert

2170.1 General Requirements

a. The culvert should be installed to make the alignment of the culvert coincide as nearly as possible with that of the stream to give the water a straight entrance into the culvert and a direct exit.

b. Pipe shall be of full circle, riveted type, with lap joint construction.

c. Field joints shall be made with bands. Coupling bands shall be of the same base metal as that of the pipe.

2170.2 Preparation of Foundation

Where a trench is required, it shall be excavated only to a width sufficient to permit
thorough tamping of the backfill material under the haunches and around the pipe. Trench width should be as follows;

a. For pipe 48 inches and under in diameter, the trench shall not exceed the external diameter by more than 12 inches on each side.

b. For pipe greater than 48-inch diameter, it shall not exceed the external diameter by more than 24 inches on each side, except where unsuitable material is encountered.

c. Where the foundation at the established grade is unstable;
   1. The unstable material shall be removed to a minimum depth of 18 inches and to one pipe diameter on both sides of installation and replaced with well-compacted selected backfill material, preferably of a granular nature.
   2. An approved material should be placed in successive layers over the full width of the fill section, leveled and fully compacted. The thickness of each layer shall not exceed 8 inches before compaction.

d. Under new fills where settlement is expected, pipe should be laid or constructed with sufficient camber so that there will be no dips or depressions in the culvert when subsidence has stopped.

2170.3 Installation

a. The best alignment provides for a straight entrance and a direct exit. The alignment should coincide as nearly as possible with that of the stream.

b. The culvert should be given the same gradient as the stream.

c. To reduce sediment buildup in the culvert the culvert should be installed with the bottom of culvert 2 – 4 inches above the streambed.

d. Each culvert shall be laid true to the established line and grade and shall have a firm bearing throughout the entire length. The culvert should usually be given the same gradient as the streambed.

e. If two or more lines are to be laid parallel to each other, they shall be spaced to permit thorough tamping. Pipes up to 72 inches in diameter shall be separated by a distance of at least ½ of the diameter of the pipe, with a minimum of 1 foot. Larger sizes shall be separated a minimum of 3 feet.

f. Riveted corrugated metal pipe shall be laid with the outside laps of the circumferential joints pointing upgrade and with the longitudinal joints on the sides. The ends shall be spaced approximately ¼ inch apart and connected with bands bolted firmly in place.

g. Riveted corrugated metal pipe having a diameter 48 inches or more may be strutted in a manner to increase the vertical axis approximately 5%. The struts shall remain in place until the backfill has been consolidated around the pipe.

2170.4 Backfill

a. Culvert shall be backfilled with select material, free from large lumps, clods or rocks. Material shall be deposited in layers not exceeding 6 inches in depth and thoroughly compacted so that on each side of the pipe there shall be a berm of thoroughly compacted or undisturbed soil at least as wide as the diameter of the pipe or to the trench sides.

b. Each layer shall be moistened to near optimum density of not less than 90%. Special care shall be taken to compact the soil under the pipe and along the sides
thereof. This method

of placement shall be continued until the top of pipe is covered with at least 12 inches of soil. Compaction around middle 1/3 of large pipes should be reduced if inward horizontal deflection of pipe is noted.

c. The backfill should be thoroughly tamped and compacted to a minimum 90% density as determined by ASTM D-698.

2170.5 Measurement and Payment

Shall be paid as Lump Sum per each location. Unit cost to include all material, labor, equipment, and supervision necessary to complete the work.

2180 Install Concrete Culvert

2180.1 General Requirements

a. In shallow fills the span may have to be increased to provide the predetermined area. For pipe culverts, where practical, the cover should be a minimum of 2½ ft. below the bottom of tie.

b. For main line track a minimum diameter of 24 inches is recommended, while for highway crossings and unimportant track, the minimum diameter may be reduced to 18 inches.

c. The culvert should be installed to make the alignment of the culvert coincide as nearly as possible with that of the stream to give the water a straight entrance into the culvert and a direct exit.

2180.2 Preparation of Foundation

a. The foundation shall be of uniform density and shall be either be carefully shaped to fit the lower 1/3 of the outside circumference of rigid pipe or the backfill should be tamped under the pipe haunches.

b. The sub grade should be undercut and replaced with compacted granular material, if necessary, so that a firm foundation is provided. The trench bottom should be cambered longitudinally to provide for expected settlement. Pipe should be laid on a camber so that, if settlement occurs, the desired flow line will ultimately be attained.

c. Where a trench is required, it shall be excavated only to a width sufficient to permit thorough tamping of the backfill material under the haunches and around the pipe. Trench width should be as follows;

1. For pipe 48 inches and under in diameter, the trench shall not exceed the external diameter by more than 12 inches on each side.

2. For pipe greater than 48-inch diameter, it shall not exceed the external diameter by more than 24 inches on each side, except where unsuitable material is encountered. Where feasible, trench walls shall be vertical.

d. Where the foundation at the established grade is unstable, the unstable material shall be removed for a depth equal to the pipe diameter up to a maximum of 3 feet for the full length of the pipe and for a width of at least one diameter on each side of the pipe and the excavation backfilled with a well compacted granular material.
2180.3 Installation

a. The best alignment provides for a straight entrance and a direct exit. The alignment should coincide as nearly as possible with that of the stream.
b. The culvert should be given the same gradient as the stream.
c. To reduce sediment buildup in the culvert the culvert should be installed with the bottom of culvert 2 – 4 inches above the streambed.
d. Each culvert shall be laid true to the established line and grade, except where camber is specified, and shall have a firm bearing throughout the entire length.
e. If two or more lines are to be laid parallel to each other, they shall be spaced to permit thorough tamping. Pipes up to 72 inches in diameter shall be separated by a distance of at least ½ of the diameter of the pipe, with a minimum of 1 foot. Larger sizes shall be separated a minimum of 3 feet.
f. Pipe laying shall begin at the downstream end of the culvert with the groove or bell end of each section placed upstream. Pipe shall be laid with the tongue or spigot firmly inserted into the groove or bell. Recesses shall be excavated for all bells.
g. All joints shall be sealed with the outside of the joint filled with sufficient mortar to form a bead around the pipe. The inside of the pipe shall be wiped clean and finished smoothly. After initial hardening of the mortar, the outside of the pipe should be protected from the weather.
h. To prevent separations suitable ties should be installed to prevent this separation.
i. Each culvert shall be laid true to the established line and grade and shall have a firm bearing throughout the entire length. The culvert should usually be given the same gradient as the streambed.
j. Under new fills where settlement is expected, pipe should be laid or constructed with sufficient camber so that there will be no dips or depressions in the culvert when subsidence has stopped.

2180.4 Backfill and Embankment

a. Culvert shall be backfilled with select material, free from large lumps, clods or rocks. Material shall be deposited in layers not exceeding 6 inches in depth and thoroughly compacted so that on each side of the pipe there shall be a berm of thoroughly compacted or undisturbed soil at least as wide as the diameter of the pipe or to the trench sides.
b. Each layer shall be moistened to near optimum density of not less than 90%. Special care shall be taken to compact the soil under the pipe and along the sides thereof. This method of placement shall be continued until the top is covered with at least 12 inches of soil.
c. Where pipe is to be placed on a shaped sub grade extreme care shall be taken not to over excavate the shaped surface so that point loading shall not occur on the pipe bottom.

2180.5 Measurement and Payment

Shall be paid as Lump Sum per each location. Unit cost to include all material, labor, equipment, and supervision necessary to complete the work.
2190 Brush Cutting

Description of Work

Work will consist of the cutting and disposal of brush along the Railroad right of way. A schedule of work items and locations will be provided.

2190.1 General Requirements

a. Brush shall be cut on either side of the track for a minimum distance of 20' from nearest rail. Brush should be cut to within 12" of the ground.

b. All cut material should be placed at least 25' from track to allow for normal railroad operations or disposed of as directed by the Project Engineer.

c. At crossings, brush shall be cleared from the railroad right of way for the distance specified in Division IV, Sections 4070 – 4090, of this document.

d. All cut material should be removed or placed in a manner to allow unobstructed vision for motorist.

e. Brush shall not to be disposed of in any manner, which impairs natural drainage.

2190.2 Measurement and Payment

On-track Equipment – Shall be paid per mile of track properly cleared. Unit price to include all equipment, tools, supplies, labor, and supervision necessary to complete the work.

Crossings – Shall be paid Lump Sum per location. Unit price to include all equipment, tools, supplies, labor, and supervision necessary to complete the work.

2200 Timber Bridges

Description of Work

Work will consist of general bridge repair. Work will include removal of material as specified, installation of new material and general cleanup. A schedule of work items and locations will be provided.

2200.01 General Requirements

Workmanship shall be of the best quality and completed in accordance with standard railroad practices and in general accordance with current A.R.E.M.A. Specifications. When there is a conflict A.R.E.M.A. Specifications will govern.

2200.02 Ties

a. Tie replacement
   Ties shall be installed square to the line of rail with the ends the same distance from centerline of track and spaced uniformly with the ties on either side.

b. Renew Deck
   Ties shall be installed on 12” centers and square to the line of rail with the ends the same distance from centerline of track.
2200.03 Guard Timbers

a. Timbers shall be of the same size and laid to line.

b. Ties should be held securely in their proper spacing with guard timbers spiked to every tie.

c. Where both guard timbers and inner guardrails are used they should be so spaced that a derailed truck will strike the inner rail and not the timber.

2200.04 Stringers

a. Stringers shall be installed to provide an even bearing on supports.

b. Stringers that are one panel in length shall be so placed that knots near the edges will be in the top portion of the stringers. Stringers that are two panels in length shall be so placed that knots near the edges will be in the compression edges and that lapped joints will be staggered over the supports.

c. Outside stringers shall have butt joints, with interior stringers lapped to take bearing over the full width of the floor beam or cap at each end.

d. Shimming of stringers to provide proper surface and crosslevel should be done with a single shim under each chord, whenever possible.

2200.05 Caps

a. Caps shall be sized to provide a uniform depth and placed so as to obtain an even and uniform bearing over the tops of the supporting posts or piles and to secure an even alignment of their ends.

b. Where drift bolts are used for making the connection, the caps and tops of piles shall be bored the same diameter as the drift bolt and to a depth of 3 inches less than its length. Drift bolts shall not extend not less than (9 inches) into the posts or piles. The drift bolts shall be located approximately in the center of each post or pile.

c. Where straps and bolts are used, holes shall be bored the same diameter as the bolt and 1/8” less than the diameter of the drive spikes.

2200.06 Piles

Piles shall be installed in accordance with the current A.R.E.M.A. Specifications.

2200.07 Posts

a. Posts in framed bents shall be sawed to proper length (vertical or batter) and shall have an even bearing on caps and sills. Posts should be boxed, in addition to toenailing to prevent buckling.

b. Posting of the outside piles shall not be permitted on bridges on curves where bents exceed 12 feet in height or on tangents where bents are over 20 feet in height.

2200.08 Sills

Sills shall have a true and even bearing on foundation piles, timber grillages, mats or pedestals. They shall be drift-bolted to the piles, with the bolts
extending into the piles not less than (9 inches).

When possible, all earth shall be removed from around the sills so that there will be free air circulation around them.

2200.09 Framing

General Lumber and timber shall be accurately cut and framed, true and exact to a close fit, in such a manner that the joints will have even bearing over the entire contact surfaces. No shimming will be permitted in making joints, nor will open joints be accepted.

2200.10 Bracing

a. Sash and sway bracing, tower bracing and girts shall bear firmly against the piles and timbers to which secured. Piling shall not be trimmed or cut to facilitate the framing of sway or longitudinal bracing. Where necessary, filler blocks shall be used between the pile and brace to establish the bracing in a true plane.

b. Built-up fillers will not be permitted and each filler shall be a single piece of creosoted lumber of like kind to that in the brace with a width of not less than 6 inches and a length not less than 12 inches.

2200.11 Bulkheads

Bulkheads at the ends of trestles shall be sufficient height and width to retain properly the shoulders of embankments and to provide a berm sufficient to prevent loss of embankment from beneath the bulkhead. When necessary, bulkhead piles or dead-men buried in the embankment shall be provided to support the bulkhead. Bulkhead planks shall be a minimum of 4 inches in width.

2200.12 Fastenings

a. All fasteners, including bolts, dowels, lag screws, timber connectors and other types of fasteners shall be installed in accordance with A.R.E.M.A. Specifications and drawn up securely.

b. Holes for dowels or drift bolts shall be bored 1/16 inch smaller than the nominal diameter of the dowel or bolt used; holes shall not be bored deeper than the length of dowel or bolt. Holes for machine bolts and rods other than dowels or drift bolts shall be bored the same size as the nominal diameter of the bolt or rod used.

c. Holes for lag screws shall be bored with a bit not larger than the body of the screw at the base of the thread. Holes for drive spikes should be bored 1/8 inch less than the nominal diameter of the spikes.

d. Screw type fasteners shall be screwed into place for the entire length of the fastening.

e. Driving with a maul or other tool will not be permitted. Nails and spikes shall be driven with just sufficient force to set the heads flush with the surface of the wood. Deep or frequent hammer marks in exposed wood surfaces shall be considered evidence of poor work quality and may be cause for rejection of the
piece or member.

2200.13 Field Treatment

a. All field cuts (except pile cut-offs), daps, field bored holes, and abrasions in treated piles and timbers shall be carefully trimmed and coated with at least two applications of copper naphthenate or another compatible preservative material meeting AWPA Standard M4, with a minimum time lapse of 2 hours between applications.

b. When holes are bored in treated piles, the entire hole shall be pressure treated or swabbed with a preservative material and sealing compound before placing the bolt. All unused holes shall be plugged at each end with tight fitting treated wooden plugs.

2200.14 Inner Guard Rails.

Steel track rails not higher than or more than 2 inches lower than the running rail shall be installed. Rail should be installed 10 inches from the running rail, measured between the near sides of head. Guardrails shall be fully bolted and every other tie plated and spiked. Guardrails shall extend a minimum of 50 feet beyond the bridge ends and beveled, bent down or otherwise protected against direct impact.

2200.15 Measurement and Payment

Work shall be paid per track foot of bridge deck properly completed and per each bridge cap properly installed, including performing all work functions specified. Unit price to include all material, tools, supplies, labor, equipment, supervision and any other associated costs to complete the work.

2300 Treated Wood Disposal

If the Contractor is required to dispose of treated wood the following shall apply: TREATED WOOD DISPOSAL

This work consists of disposing of treated wood in accordance with the following:

(A) Description of Services

For each site the Contractor shall:

• Describe the method of material pickup and the expected material condition, i.e.: specific lengths, etc.

• Describe the method of waste material transport and waste material disposal site.

• Dispose treated wood in a MPCA permitted lined solid waste landfill (not a demolition landfill).

• The Contractor has the option to chip creosote treated wood on site. After the wood is chipped on site, it can be transported off site and incinerated at a MPCA permitted incinerator. Call 651.366.3630 for list of incinerators permitted to burn creosoted treated wood. This applies to
creosote treated wood only.

- Within 30 days after the treated wood is transported off site, the Contractor shall provide the Project Engineer with disposal records. Records include manifests, scale tickets, and invoices. Records shall indicate type of treated wood, quantity, date, and location of disposal.
### DIVISION III

#### MATERIAL

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<th>Page</th>
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<td>Turnout Construction</td>
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<td>Corrugated Culvert</td>
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<td>3100</td>
<td>Concrete Culvert</td>
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</tr>
<tr>
<td>3200</td>
<td>Timber Bridges</td>
<td>9</td>
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</tbody>
</table>
3000 Ballast

Description of Work

Work will consist of furnishing and delivering railroad ballast to the project line as specified. The supplier is responsible for furnishing and loading the ballast cars.

3000.1 Supplier

Ballast shall be furnished from reliable sources capable of producing and delivering an acceptable product in accordance with the progress schedule.

3000.2 Ballast shall conform to the following specifications:

a. Granite or Quartzite Spec.4 or Spec.4A ballast shall be furnished.

b. Trap rock or limestone will not be considered or accepted. Ballast shall not contain shale, slate, slag or unsound chert. Ballast must be free of cementing properties.

c. Prepared ballast shall be clean, graded crushed rock composed of hard, dense, angular particle structure providing sharp corners and cubicle fragments with a minimum of flat and elongated pieces.

d. Ballast must have high wear and abrasive qualities to withstand the impact of traffic loads without excessive degradation.

e. Prepared ballast must be free from injurious amounts of deleterious substance and conforming to the gradation and testing values as outlined in the A.R.E.M.A. specifications.

f. The following ballast gradations apply:

<table>
<thead>
<tr>
<th>Size No.</th>
<th>Nom. Size</th>
<th>2 ½&quot;</th>
<th>2&quot;</th>
<th>1 ½&quot;</th>
<th>1&quot;</th>
<th>¾&quot;</th>
<th>½&quot;</th>
<th>3/8&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1 ½&quot; x ¾&quot;</td>
<td>100</td>
<td>90 – 100</td>
<td>20 – 55</td>
<td>0 – 15</td>
<td>0 – 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4A</td>
<td>2&quot; x ¾&quot;</td>
<td>100</td>
<td>90 – 100</td>
<td>60 – 90</td>
<td>10 – 35</td>
<td>0 – 10</td>
<td>0 – 3</td>
<td></td>
</tr>
</tbody>
</table>

3000.3 Production and Handling

a. The aggregate facility shall be of such design to permit production without excessive working of the materials.

b. The capacity of the production facility should be adequate to efficiently produce the anticipated daily loadings providing sufficient stockpiles to facilitate loadings without delays.

c. Stockpiling and other production and handling shall be managed by the producer to minimize segregation of the finished product. Stockpiling operations shall minimize as practical the breakage or excessive fall in stockpiling operations and the movement of wheeled or tracked machines over stockpiles shall be limited.

3000.4 Ballast Cars

a. The manufacturer is responsible for furnishing the required supply of ballast cars. Cars must be center/side opening cars and/or belly-dumps. Center/side opening, MK type, ballast cars are preferred.

b. The manufacturer shall assure the fitness of the cars for loading and unloading.
ballast and shall arrange to clean cars of all deleterious materials, repair leaks and other like operations, as necessary.

3000.5 Facility Inspection

a. The railroad company and Mn/DOT reserve the right to visit the producers' facility during usual business hours, unscheduled, for the following purposes.
   1. Observe sampling and testing procedures to assure compliance with the requirements of specifications.
   2. Obtain representative samples of the prepared material being produced and shipped.
   3. Review plant inspection methods, quality control procedures, and equipment and examine test results of current and previous tests.

3000.6 Compliance

a. Ballast may be accepted by a Certified Test Report in lieu of normal sampling and testing. Suppliers shall be required to furnish Certified Test Reports to the Mn/DOT inspector when so requested.

b. Mn/DOT reserves the right to require samples and to test the material for compliance irrespective of prior certification by the supplier.

3000.7 Acceptance

Approval of preliminary samples shall not constitute acceptance of the material represented. Only the materials actually delivered for the work will be considered, and their acceptance or rejection will be based on the results of the random tests and inspections made by the Mn/Dot inspector during the course of the Project.

3000.8 Unacceptance

a. In the event any two (2) individual samples fail to meet the gradation requirement; immediate corrective action shall be taken to restore the production process to acceptable quality. The Mn/DOT inspector shall be advised in writing, within 3 days, of the corrective action being taken.

b. Mn/DOT reserves the right to reject all shipments in non-compliance.

The number of tons shall be determined by one of the following methods:

a. Certified scale weights as determined by track scales, truck scales, or belt scales when loaded directly into rail cars.

b. Average weight agreements as mutually agreed upon by Mn/DOT and the producer. The average net weight for each type and series of rail car shall be determined to establish the average weight agreement per car.

3000.10 Measurement and Payment

Ballast shall be measured on a per net ton basis and payment shall be made on the number of tons of acceptable ballast furnished. Unit price to include material, testing, car lease, and transportation, loading expense, tax and any other associated cost.

3010 Sub-ballast

3010.1 Specifications

a. Material shall be a stabilizing aggregate used most commonly in highway
construction including crushed stone and natural or crushed gravels. Sub-ballast material must meet the requirements of Mn/DOT class 5 aggregate.

b. Sub-ballast material should conform to the following:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>1&quot;</th>
<th>3/4&quot;</th>
<th>3/8&quot;</th>
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<th>No. 200</th>
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<tr>
<td>% Passing</td>
<td>100</td>
<td>90 – 100</td>
<td>50 – 90</td>
<td>35 – 80</td>
<td>20 – 65</td>
<td>10 – 35</td>
<td>3 – 10</td>
</tr>
</tbody>
</table>

3010.2 Measurement and Payment

Sub-ballast shall be measured on a per net ton basis and payment shall be made on the number of tons of acceptable material furnished. Unit price to include material, tax and any associated cost to deliver the material to the job site.

3020 Grade Crossing - Blacktop

3020.1 Ties

a. Ties shall be new, treated hardwood, and must be treated as outlined in A.R.E.M.A specifications.

b. Ties through the crossing surface area and for 5 ties beyond each end shall be 7" x 9" x 10'. All other ties should be grade 5.

3020.2 Tie Plates

a. Tie plates shall be double-shoulder with minimum dimensions of 7 ¾" x 13". Tie plates should be new or no.1 relay and must be designed for the rail section used. Plate width shall not exceed 7 ¼".

b. All plates should have a 1:40 cant.

3020.3 Rail

a. The rail section shall be new or no.1 relay, control-cooled, and 112# or greater.


c. Head free and Torsion-Resisting type rail sections will not be considered or accepted.

d. Rail for each CWR string must be matched to have the same height and width of head within 1/16 inch.

3020.4 Compromise Bars, Bolts, Washers

a. Material must meet the requirements as outlined in A.R.E.M.A. specifications.

b. Bars must be free of defects or alterations.

c. Bars must be of the proper design and dimension for the rail to which it is applied.

d. Each pair shall match and be the same type.

e. Bolts must be the required length. At least ½ inch of the threads should be outside of the nut when properly tightened.

3020.5 Track Spikes

Spikes shall be new 5/8" x 6".

3020.6 Rail Anchors

All ties through the crossing area and for 10 feet beyond each end of the crossing should be fully anchored with "drive-on" type anchors.
3020.7 Ballast shall conform to the following specifications:
   a. Granite or Quartzite Spec.4 or Spec.4A ballast shall be furnished.
   b. Trap rock or limestone will not be considered or accepted. Ballast shall not contain shale, slate, slag or unsound chert. Ballast must be free of cementing properties.
   c. Prepared ballast shall be clean, graded crushed rock composed of hard, dense, angular particle structure providing sharp corners and cubicle fragments with a minimum of flat and elongated pieces.
   d. Ballast must have high wear and abrasive qualities to withstand the impact of traffic loads without excessive degradation.
   e. Prepared ballast must be free from injurious amounts of deleterious substance and conforming to the gradation and testing values as outlined in the A.R.E.M.A. specifications.
   f. The following ballast gradations apply:

<table>
<thead>
<tr>
<th>Size No.</th>
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<td>10 – 35</td>
<td>0 – 10</td>
<td>0 – 3</td>
<td></td>
</tr>
</tbody>
</table>

3020.8 Crossing Surface
   Surface shall be concrete/rubber with panels 8 or 9 feet in length. Tie spacing shall be 18".

3030 Grade Crossing – Gravel (public & private)

3030.1 Ties
   a. Ties must be treated as outlined in A.R.E.M.A specifications.
   b. Ties shall be new, treated hardwood; 7-inch grade ties not less than 8' 6" in length.

3030.2 Tie Plates
   a. Tie plates shall be good no.1 quality and shall not be deformed or have more than 5% weight loss due to wear. All plates should have a 1:40 cant.
   b. Re-punched plates should not have holes punched closer than 1 ¼", center – center, with outer edge of hole no closer than ½" from end of plate or 1" from edge.
   c. Plates should have a minimum of four (4) spike holes and shall be designed for the rail section used.
   d. Plates should have minimum dimensions of 7" x 10" (rail base under 5 1/8"), 7" x 11" (rail base 5 1/8" – 5 3/8") and 7 ¾" x 13" (rail base 5 3/8" or more). Width of plate shall not exceed 7 ¾".
   e. All rail sections 112# or greater shall have double-shoulder plates.

3030.3 Rail
   b. Rail must be the same rail section as adjoining rails, unless otherwise specified.
   c. Rail sections 100# or greater shall be control-cooled.
d. Head free and Torsion-Resisting type rail sections will not be considered or accepted.

e. Rail for each CWR string must be matched to have the same height and width of head within 1/16 inch.

3030.4 Joint Bars, Bolts, Spring Washers

a. Material must meet the requirements as outlined in A.R.E.M.A. specifications.

b. Bars must be proper size and design and free of defects or alterations.

c. Bolts must be the required length. At least ½ inch of the threads should be outside of the nut when properly tightened.

3030.5 Track Spikes

Track spikes shall be new and used for the rail section intended. 9/16" x 5½" spikes must be used for rail sections of 90# or under, 5/8" x 6" spikes for rail sections of 100# and heavier.

3030.6 Ballast

a. Granite or Quartzite ballast shall be used.

b. Prepared ballast shall be crushed rock composed of hard, strong, and durable particles, free from injurious amounts of deleterious substance and conforming to the requirement of A.R.E.M.A. Specifications.

c. The following ballast gradations apply.

<table>
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<th>Size No.</th>
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<th>2&quot;</th>
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3030.7 Timber Plank, Fastenings

a. Plank shall be full-depth.

b. Plank shall be fully treated and meet the requirements as outlined in A.R.E.M.A. specifications.

c. Planks shall be straight, free of decay, large knots or splits, or other defects that may impair their strength or durability.

d. Plank should be fastened with Screw Spikes. Ten (10) inch spikes should be used for 80# rail and under, eleven (11) inch for 85/90# and twelve (12) inch for rail sections of 100# and heavier.

3040 Joint Bar and Rail Repair

3040.1 General Requirements

a. Material must meet the requirements as outlined in A.R.E.M.A. specifications.

b. Bars must be free of defects or alterations.

c. Bars must be of the proper design and dimension for the rail to which it is applied.

d. Each pair shall match and be the same type.

e. Bolts must be the required length. At least ½ inch of the threads should be outside of the nut when properly tightened.
3050 Rail Relay - Conventional

3050.1 Tie Plates
   a. Tie plates shall be double-shoulder and should conform to the rail section being used. Plates shall have minimum dimensions of 7 ¾" x 13". Plate width shall not exceed 7 ¾".
   b. Tie plates shall be good no.1 quality and should not be deformed or have more than 5% weight loss due to wear. All plates should have a 1:40 cant.

3050.2 Rail
   a. The same rail section must be installed. Rail shall be standard 39-foot lengths, no.1 relay, control-cooled and 112# or greater.
   b. Rail must meet the requirements for no.1 relay as outlined in the A.R.E.M.A. Specifications.
   c. The rail shall have the standard # of bolt holes. Bolt holes shall be drilled in accordance with A.R.E.M.A Specifications and should be circular with no more than 1/8" wear.
   d. Rail must not have any bond holes within the joint bar area.
   e. Rail should have similar tread wear within 1/16 inch.
   f. Head free and Torsion-Resisting type rail sections will not be considered or accepted

3050.3 Joint Bars, Bolts, Washers
   a. All material shall conform to current A.R.E.M.A. specifications.
   b. Bars must be free of defects or alterations.
   c. Joint bars must be of the proper design and dimension for the rail to which it is applied.
   d. Bars shall match and be the same type.
   e. Each joint should have four (4) bolts. At least ½ inch of the threads should be outside of the nut when bolt is properly tightened.

3050.4 Track Spikes
   Spikes shall be new 5/8" x 6".

3050.5 Rail Anchors
   Anchors should be "drive-on" type anchors.

3060 Tie Program

3060.1 Cross Ties
   a. Ties shall be new, treated hardwood; 7-inch ties not less than 8' 6" in length.
   b. Ties shall be straight, properly seasoned, dimensionally correct and properly treated. Ties shall be free of defects that may impair their strength or durability.
   c. Ties shall meet the requirements as outlined in A.R.E.M.A.

Specifications. 3060.2 Tie Plates
   a. Tie plates must be designed for the rail section used and should have a 1:40 cant.
   b. Tie plates shall be good no.1 quality and shall not be deformed or have more than 5% weight loss due to wear.
c. Re-punched plates should not have holes punched closer than 1 ¼”, center – center, with outer edge of hole no closer than ½” from end of plate or 1” from edge.

d. Plates should have a minimum of four (4) spike holes and shall be designed for the rail section used.

e. Plates shall have minimum dimensions of 7” x 10” (rail base under 5 1/8”), 7” x 11” (rail base 5 1/8” – 5 3/8”) and 7 ¾” x 12” (rail base 5 3/8” or more). Width of plate shall not exceed 7 ¾”.

3060.3 Track Spikes

Track spikes shall be new and used for the rail section intended. 9/16” x 5½” spikes must be used for rail sections of 90# or under, 5/8” x 6” spikes for rail sections of 100 # and heavier.

3060.4 Rail Anchors

Anchors shall be "drive-on" type anchors.

3070 New Track Construction

3070.1 General Requirements

a. Material shall meet the requirements as outlined in A.R.E.M.A. Specifications

b. Ties – shall be new, treated hardwood, 7-inch ties not less than 8’ 6” in length.

c. Tie Plates – should be double-shoulder and shall conform to the rail section being used. Plates shall have minimum dimensions of 7 ¾” x 12”. Plate width shall not exceed 7 ¾”.

d. Rail Section – shall be 112# or greater.

e. Joint Bars – shall fit the rail section used.

f. Bolts – should extend at least ½” outside the nut when properly tightened.

g. Lock Washers – proper size for the bolt used.

h. Track Spikes – Track spikes shall be new and 5/8” x 6”.

i. Rail Anchors – should be "drive-on" type.

3080 Turnout Construction

3080.1 General Requirements

a. Material shall meet the requirements as outlined in A.R.E.M.A. Specifications.

b. No. Turnout – Main Line turnouts shall be #11 with inside turnouts #10.

c. Frog – Self-guarded frogs will not be permitted on the main line.

d. Switch ties – shall be new fully treated hardwood, having cross section dimensions of 7” x 9” and must be of proper lengths.

f. Rail Section – shall be 112# or greater.

g. Joint Bars – shall fit the rail section used.
h. Bolts – should extend at least ½" outside the nut when properly tightened.

i. Lock Washers – proper size for the bolt used.

j. Track Spikes – Track spikes shall be new and 5/8" x 6".

k. Rail Anchors – should be "drive on" type.

3090  
Corrugated Culvert
a. Live load shall be Cooper E 80 and shall include 50% of the live load for impact. If distance from structure to bottom of tie is 10 feet the load is 1,000 lbs/sq.ft, 12 feet is 800 lbs/sq.ft, and 15 feet is 600 lbs/sq.ft. and 20 feet is 300 lbs/sq.ft.

b. Culvert openings should have sufficient capacity to avoid heading. The location of the inlet and alignment through the embankment should be designed to minimize incidence of eddy currents.

c. When required, aprons and/or curtain walls should be placed to minimize erosion.

d. For main line track a minimum diameter of 24 inches is recommended, while for highway crossings and unimportant track, the minimum diameter may be reduced to 18 inches.

e. Corrugations shall not be less than 2 ¼" nor more than 2 ¾" center – center. The corrugations shall have a depth of not less than ½".

f. Pipe shall be of full circle, riveted type, with lap joint construction.

3100  
Concrete Culvert
a. Pipe should have a minimum strength of D=1350 (class III) even if an analysis indicates that a lower D-load is satisfactory. Class V RCP may be used for all sizes up to a height of cover of 14 feet. Minimum live load including impact should be 1,000 PSF.

b. Type may be either bell and spigot or tongue and groove. When bell type is used, a shallow excavation shall be made underneath the bell of sufficient depth so that the bell doesn't rest on the bedding.

c. For standard pipe the mixture shall be rich, dense and designed for the minimum strength required.

d. For standard pipe the uniform load should be 2,000 lbs/sq.ft. with a minimum shell thickness of 5" for 48" pipe and 6" for 60" pipe.

e. For extra strength pipe the uniform load should be 4,000 lbs/sq.ft. with a minimum shell thickness of 6 ¼" for 48" pipe and 8 ¼" for 60" pipe.

f. Pipe should cure 30 – 45 days before using. Two layers of steel reinforcement are preferred. Culverts shall be thoroughly cured and shall not be shipped until it has hardened fully.

g. Extra strength reinforced pipe shall be used.

h. In shallow fills the span may have to be increased to provide the predetermined area. For pipe culverts, where practical, the cover should be a minimum of 2½ ft. below the bottom of tie.
3200  Timber Bridges

3200.01 Specifications for Structural Lumber

The Contractor shall provide commercial stress grades of lumber and timber that meet the stress requirements as outlined in the current A.R.E.M.A. Specifications. Stress graded material meeting grading rules developed from ASTM D 2555 and ASTM D 245, Methods for Establishing Structural Grades of Lumber as tabulated by the National Design Specification for Wood Construction (NDS) will be acceptable as meeting stress requirements.

NOTE: The Standard Grading and Dressing Rules of the West Coast Lumber Inspection Bureau, the Standard Grading Rules for Western Lumber of the Western Wood Products Association, the Standard Grading Rules for Southern Pine of the Southern Pine Inspection Bureau and the American Lumber Standards are in conformance with the basic provisions of ASTM D 2555 AND ASTM D 245.

3200.02 Specifications for Glued Laminated Lumber

Glued Laminated Lumber is an engineered, stress-rated product of a timber laminating plant, comprising assemblies of suitably selected and prepared wood laminations securely bonded together with adhesives. The thickness of each lamination shall not exceed 2 inches. They may be comprised of pieces and joined to form any length, of pieces placed or glued edge to edge to make wider ones. Members shall be designed in accordance with the engineering formulas used for solid sawn wood members and those specifications outlined in the current A.R.E.M.A. Specifications.

3200.03 General Requirements

a. Timber shall be handled, transported, and stored by methods that will not be detrimental to any portion that will remain in the completed structure. Care shall be exercised to avoid splitting or damaging the surfaces and edges, and in the case of treated timber, to avoid puncturing the treated surface.

b. All ties, guard timbers, bracing, caps, stringers, piles and lumber shall be new and treated in accordance with A.R.E.M.A. Specifications.

c. Hardware shall be new and meet the requirements as outlined in the A.R.E.M.A. Specifications.

d. All material shall be removed from railroad property and properly disposed of.

3200.04 Ties

a. Tie Replacement – ties shall be sized to provide uniform depth with adjacent ties.

b. Renew Deck – Ties shall be 8” x 8” x 10’ installed on 12” centers.

3200.05 Guard Timbers

Plank should be 4” x 8” and in standard lengths.

3200.06 Stringers

Stringers shall be sized to provide uniform depth with adjacent stringers.
3200.07 **Caps**
Caps shall be sized to provide a uniform depth. Caps shall be 14” x 14” x 14’.

3200.08 **Bracing**
Bracing shall be standard size. Sway bracing should be no less than 4” x 8”.

3200.09 **Piles**

a. First class piles shall be used. Piles shall be of sound wood, free from defects which may impair their strength or durability as piles such as decay, red heart, or insect attack. Piles may be of any species that will satisfactorily withstand driving without breaking and support the superimposed loads. Species in common use include Pine, Tamarack, Douglas Fir, Oak, Elm, or Hard Maple, Norway (Red) Pine, Jack Pine, Ponderosa Pine, Southern Yellow Pine.

b. Sizes
1. The ratio of “out of round” of maximum to minimum diameter at the butt or the tip of any pile shall not exceed 1.2.
2. The circumference at the butt may not exceed the circumference at 3 feet from the butt by more than 8 inches.

c. Minimum circumference standards

A.R.E.M.A. Table 1.9.2.2.A. – minimum tip circumferences.
A.R.E.M.A. Table 1.9.2.2.B. – minimum butt circumferences.

(A.R.E.M.A Table 1.9.2.2.A.)

<table>
<thead>
<tr>
<th>Pile Length</th>
<th>Required Minimum Circumference 3 ft. from Butt (in.)</th>
<th>Minimum Tip Circumference (in.)</th>
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<tr>
<td>100</td>
<td>16.0 16.0 16.0 16.0 16.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: Where the taper applied to the butt circumference calculate to a circumference at the tip of less than 16 inches, the individual values have been increased to 16 inches to assure a minimum of 5 inch tip diameter for purposes of driving.
d. Straightness

1. Piles shall have a gradual taper from the point of butt measurement to the tip.

2. A line drawn from the center of the butt to the center of the tip shall lie wholly within the body of the pile. The distance from such a line to the center of the pile at any point shall not exceed 1 percent of the length of the pile.

3. Bends may be permitted within the upper 75 percent of the length of the pile (measured from the butt end) provided the deviation of the centerline of the pile from a line stretched from the center of the pile above the bend to the center of the pile below the bend does not exceed 4 percent of the length of the bend and in no case exceeds 2 ½ inches from straightness in any 5 feet. Within the lower 25 percent of the length of the pile but in no case less than 10 feet (measured from the tip end), the deviation in any bend, as determined above, shall not exceed 1 inch.

3200.10 Fastenings

a. Nails, Spikes and Drift Bolts shall be made of wrought iron or rolled steel. Where special heads are not specified, the manufacturer’s standard heads will be acceptable. Nails and spikes used for fastening timbers shall be, preferably, of a type having grooved, barbed or otherwise deformed shanks for greater holding power.

b. Through Bolts shall be made of wrought iron or rolled steel with U.S. standard square or hexagon heads and nuts.

c. All hardware, including nails, spikes, and timber connectors, shall be galvanized either by the hot-dip process in accordance with ASTM A 153 or by the mechanical process in accordance with ASTM A
d. Cast washers shall be made of malleable or gray iron and properly proportioned to develop the full strength of the bolt. Unless otherwise shown in the Plans, the diameter of the washer or the minimum side dimension of a square washer shall be at least 3.5 times the diameter of the bolt on which it is used, and its thickness equal to the diameter of the bolt. The diameter of the hole shall be 1/8 inch larger than the diameter of the bolt.

e. Plate washers shall be made of wrought iron or rolled steel. The outside diameter shall not be at least 3.5 times the diameter of the bolt on which it is used, and they shall not be less than ¼ “ thick. The diameter of the hole shall be 1/8 inch larger than the diameter of the bolt.
Division

IV Track

Plans, Figures

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4030 Concrete Surface - Installation..................................................................................3
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4010 Excavation Limits – Hard Surfaced Roads

- Excavate min. 20’
- Saw-cut 4’ from rail
- 22” – 24”
- Min. 10” Ballast

Division IV – Track Plans, Figures
Sidewalk

1’ min.

C/L Roadway

1’ min.

Shoulder

CWR to extend min. 20’

10’ ties to extend at least 5 ties beyond crossing ends

Grade 5 ties

Grade 5 ties

CWR to extend min. 20’

Pipe to be connected at each end of xing surface

Min. 10’

4” Perforated Pipe

10” Tie

Min. 10” Ballast

Sub-grade

Fabric
4030  Concrete Surface - Installation

Sidewalk

Min. 1'

Shoulder

Min. 1'

Crossing Angle 60° and over

Min. 1'

Crossing Angle less than 60°
Plank Surface Installation

Crossing Angle 60° and over

Crossing Angle less than 60°
Tie Program
Box-anchor every 4th tie, 10 anchors per 33 ft rail

Figure 1

Rail Relay
Every 3rd tie, 16 anchors per 39 ft rail

Figure 2

Heavy Grade Area’s
Every other tie – 12 forward and 4 back-up

Figure 3
**4070 Approach Sight Lines**

On the approach to a grade crossing with no train activated warning devices or Stop sign present, a motorist would need to be able to see an approaching train in sufficient time to bring the vehicle to a safe, controlled stop at least (15 ft.) short of the near rail, if necessary.

This would require an unobstructed field of vision along the approach sight triangle, the extent of which is dependent upon the maximum allowable train speed and vehicle speed. Wherever possible, sight line deficiencies should be improved by removing vegetation within the affected area. The Railroad is required to clear any vegetation from their property that obstructs a motorist view of an approaching train.

Sight line deficiencies should be improved by removing all vegetation within the right-of-way for the distance specified. Vegetation includes any weeds, bushes, shrubbery, and trees having a trunk diameter of 6 inches or less.

### Vehicle Speed

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<th>Train Speed</th>
<th>10 MPH</th>
<th>20 MPH</th>
<th>30 MPH</th>
<th>40 MPH</th>
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**Track Sight Distance** – Distance to be cleared along Railroad R-O-W

(Example – If the posted speed limit is 40 MPH and maximum timetable speed is 30 MPH, a motorist should have a clear, unobstructed line of sight 310 ft. down the track)

Area to be cleared along Railroad R-O-W to allow a moving vehicle to safely proceed across a grade crossing.

**4080 Approach Sight Lines – road parallel to track**

On the approach to a grade crossing with no train activated warning devices or Stop sign present, a motorist would need to be able to see an approaching train in sufficient time to
bring the vehicle to a safe, controlled stop at least (15 ft.) short of the near rail, if necessary.

This would require an unobstructed field of vision along the approach sight triangle, the extent of which is dependent upon the maximum allowable train speed and vehicle speed.

Wherever possible, sight line deficiencies should be improved by removing vegetation within the affected area. The Railroad is required to clear any vegetation from their property that obstructs a motorist view of an approaching train.

Sight line deficiencies should be improved by removing all vegetation within the right-of-way for the distance specified. Vegetation includes any weeds, bushes, shrubbery, and trees having a trunk diameter of 6 inches or less.

### Vehicle Speed

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<th>Train Speed</th>
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**Track Sight Distance** – Distance to be cleared along Railroad R-O-W

(Example – If the maximum timetable speed is 30 MPH, a motorist making a turning maneuver across the track should have a clear, unobstructed line of sight 435 ft. down the track)

---

**Area to be cleared along Railroad R-O-W to allow a turning vehicle to safely proceed across a grade crossing**

**4090 Clearing Sight Lines**

At all crossings, except those with gates, a driver stopped (15 ft.) short of the near rail must be able to see far enough down the track, in both directions, to determine if sufficient time exists for moving their vehicle safely across the track(s) prior to the arrival of a train.

The required “clearing” sight distance along both directions of the track, from the stopped position of the vehicle, is dependent upon the maximum allowable train speed and the acceleration characteristics of a “design” vehicle.
The Railroad is required to clear all vegetation within the sight triangle for the distance specified. Vegetation includes any weeds, bushes, shrubbery, and trees having a trunk diameter of 6 inches or less.

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<td>1350'</td>
<td>1620'</td>
<td>1880'</td>
<td>2160'</td>
</tr>
<tr>
<td>65'</td>
<td>285'</td>
<td>570'</td>
<td>715'</td>
<td>855'</td>
<td>1140'</td>
<td>1425'</td>
<td>1710'</td>
<td>1980'</td>
<td>2275'</td>
</tr>
<tr>
<td>75'</td>
<td>300'</td>
<td>600'</td>
<td>755'</td>
<td>900'</td>
<td>1200'</td>
<td>1495'</td>
<td>1795'</td>
<td>2085'</td>
<td>2395'</td>
</tr>
<tr>
<td>85'</td>
<td>315'</td>
<td>630'</td>
<td>790'</td>
<td>945'</td>
<td>1260'</td>
<td>1570'</td>
<td>1885'</td>
<td>2185'</td>
<td>2510'</td>
</tr>
<tr>
<td>95'</td>
<td>330'</td>
<td>660'</td>
<td>825'</td>
<td>990'</td>
<td>1320'</td>
<td>1645'</td>
<td>1975'</td>
<td>2285'</td>
<td>2625'</td>
</tr>
<tr>
<td>105'</td>
<td>345'</td>
<td>690'</td>
<td>865'</td>
<td>1035'</td>
<td>1380'</td>
<td>1715'</td>
<td>2060'</td>
<td>2390'</td>
<td>2745'</td>
</tr>
<tr>
<td>115'</td>
<td>360'</td>
<td>715'</td>
<td>890'</td>
<td>1075'</td>
<td>1435'</td>
<td>1790'</td>
<td>2150'</td>
<td>2490'</td>
<td>2860'</td>
</tr>
<tr>
<td>125'</td>
<td>375'</td>
<td>745'</td>
<td>940'</td>
<td>1120'</td>
<td>1495'</td>
<td>1860'</td>
<td>2235'</td>
<td>2590'</td>
<td>2980'</td>
</tr>
</tbody>
</table>

### Track Sight Distance

Distance to be cleared along track.

(Example – If the maximum timetable speed is 30 MPH, a motorist stopped at the crossing must have an unobstructed view of 725 ft. down the track. The minimum Sight Distance increases with the angle of crossing. (Example – Where the distance from the south x-buck to 6 ft. beyond the north rail is 75 ft. the minimum sight distance is 900 ft.)

Area to be cleared along Railroad R-O-W to allow a Stopped vehicle to safely proceed across grade crossing.
Twin Cites & Western Railroad Co.
Minnesota Prairie Line Railroad
(TWCR/MPLI)

Procedures for the Installation,
Adjustment, Maintenance and
Inspection of CWR

Effective June 16, 2010 pending FRA Approval
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Appendix 6

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Appendix 7

CWR Joint Inventory Log
Appendix 8
This document details the TCWR/MPLI policy on installing, adjusting, maintaining and inspecting Continuous Welded Rail (CWR) track. Each chapter details how the Railroad applies its standards and procedures to comply with FRA standards. The following requirements apply to CWR on all main tracks and sidings.

Chapter 1 CWR Installation Procedures
Rail length that exceeds 400 feet is considered CWR. Rail installed as CWR remains CWR, regardless of whether a joint or plug is installed into the rail at a later time.

1.1 Desired Rail Neutral Temperature
Rail neutral temperature (RNT) is the temperature at which a rail is neither in tension nor compression. Designated rail laying temperatures have been established to provide a high rail neutral temperature to prevent track buckling. When laying or adjusting CWR on the Twin Cities Western Railroad use 95°F, plus or minus 5°F.

1.2 Temperature Differential
The difference between the designated rail laying temperature and the actual rail temperature taken at the time of installation is called the temperature differential. CWR laying and adjusting procedures have been established to compensate for this temperature difference. Appendix 3

1.3 Installing CWR
Follow these general instructions when installing CWR:

Take the rail temperature and calculate the expansion required before making adjustments. Appendix 3

Record the rail laying temperature, location and date on the Record of Neutral Temperature of Welded Rail as Laid. These records may be retained in an electronic format per 213.241. Appendix 1

Rail does not need to be adjusted when the actual rail temperature exceeds the designated rail laying temperature.

Use rail heaters or rail expanders to adjust the rail to the correct length when the actual rail temperature is less than the designated rail laying temperature. Heat the rail evenly and uniformly so that the rail expansion occurs evenly and uniformly throughout its length. If rail is laid at a temperature more than 40°F below the designated rail laying temperature, rail must be adjusted or a speed restriction of 25 mph must be placed prior to rail temperature above designated rail laying temperature. When tight rail conditions exist, be governed by Chapter 7.1.
Chapter 2 Rail Anchoring Requirements

Where the anchoring function is otherwise provided, rail anchors may be omitted. Anchors may not be applied where they will interfere with signal or other track appliances, where they are inaccessible for adjustment or inspection or on rail opposite a joint. Anchor pattern may be varied as reasonable to avoid placing anchors against deteriorated ties.

Installation

The following anchoring requirements apply to CWR installation on all main tracks and sidings. These anchoring requirements also apply to all tracks other than main tracks or sidings operating at speeds above 10 MPH.

2.1 Standard Box Pattern

When installing CWR, box anchor every other tie except as outlined in Section 2.2.

2.2 Solid Box Pattern

When installing CWR, box anchor every effective tie at specific locations listed below to provide additional restraint against rail.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnouts</td>
<td>Anchor every tie for 200’ in each direction.</td>
</tr>
<tr>
<td>Rail crossings</td>
<td></td>
</tr>
<tr>
<td>Joints where CWR abuts jointed rail</td>
<td></td>
</tr>
<tr>
<td>Bolted joint installed during CWR installation when using heater, rail</td>
<td>Within 60 days, weld joint, OR install joint with 6 bolts, OR anchor</td>
</tr>
<tr>
<td>stretcher or sufficient ambient temperature.</td>
<td>every tie for 200’ in each direction.</td>
</tr>
</tbody>
</table>

2.3 Bridge Pattern

When installing CWR, follow these bridge anchoring requirements:

1. Ballast deck bridges should be anchored with the same pattern as in section 2.1 and 2.2.

2. Open deck bridges should be anchored according to Appendix 4
Maintenance or Rail Repair

2.4 Existing Anchor Patterns

On CWR installations completed before January 1, 1998, existing anchoring may remain if rail is restrained to prevent track buckles, but rail must be adjusted (by increasing or decreasing the length of rail or by lining on curves) or anchors added to rail if restraint is not sufficient.

2.5 Anchor Pattern after Repair

When repairs result in a joint being added to CWR, the anchor pattern shall match the existing pattern in track. At least every other tie will be box anchored for a distance of 200 feet in each direction unless anchoring is otherwise provided or if it would conflict with Appendix 4. When repairs are made to a pulled apart joint or failed joint bar, the adjustment or addition of anchors will be as prescribed in the following table.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Action</th>
</tr>
</thead>
</table>
| Bolted joint in CWR experiencing service failure (stripped joint) or failed bar(s) with gap* present | 1. Weld joint,  
OR  
2. Remediate joint conditions (per Chapter 6.5), replace bolts (new, in-kind or stronger), and weld joint within 30 days,  
OR  
3. Replace failed bar(s), install 2 additional bolts and adjust anchors,  
OR  
4. Replace failed bars, bolts (if broken or missing) and anchor every tie for 200' in both directions,  
OR  
5. Add rail |
Chapter 3 Preventive Maintenance on Existing CWR Track

Performing track buckling maintenance can reduce the risk of buckles. When tight rail conditions exist, be governed by Chapter 7.1.

3.1 Maintaining Desired Rail Installation Temperature Range

A record of rail neutral temperature will be maintained where rail has pulled apart, broken or been cut for defect removal. Record the length of the rail end gap and rail temperature in addition to the other required information on the Estimating Rail Neutral Temperature (Appendix 7) for determining RNT and record on CWR Maintenance Record Form (Appendix 5).

Rail that has pulled apart, broken or been cut for defect removal at rail temperatures at or below 60°F must be readjusted to within the RNT minus 20° of the safe range. If the rail has not been readjusted to at least RLT -20° before rail temperatures exceed the values in the TABLE below, a speed restriction of 25 mph will be placed with daily inspection made during the heat of the day.

<table>
<thead>
<tr>
<th>Rail break or cut Temperature (°F)</th>
<th>Rail temperature (°F) at which to readjust or apply slow order</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>135</td>
</tr>
<tr>
<td>50</td>
<td>130</td>
</tr>
<tr>
<td>40</td>
<td>125</td>
</tr>
<tr>
<td>30</td>
<td>120</td>
</tr>
<tr>
<td>20</td>
<td>115</td>
</tr>
<tr>
<td>10</td>
<td>110</td>
</tr>
<tr>
<td>0</td>
<td>105</td>
</tr>
<tr>
<td>-10</td>
<td>100</td>
</tr>
<tr>
<td>-20</td>
<td>95</td>
</tr>
<tr>
<td>-30</td>
<td>90</td>
</tr>
<tr>
<td>-40</td>
<td>85</td>
</tr>
</tbody>
</table>
Locations where the neutral temperature has been lowered below the safe zone by adding rail must be adjusted to RLT-20 F degrees or higher within 365 days of the date of the addition (broken rail/pull apart). If rail is added for any reason, measure and record the amount of rail added so that adjustments can be made, if necessary.* This measurement may be made by the use of reference marks. The use of reference marks includes:

- Marking the locations where rail is to be cut
- Marking the rail outside the limits of the joint bars
- Measure the distance between the reference marks and mark it on the rail or otherwise record it
- Install the rail and re-measure the distance between reference marks
- Fill out Rail Adjustment Record and CWR maintenance Form

Refer to Placing Rail Reference Marks Document if needed: Appendix 2

When welding rail ends together, the required weld gap or rail consumption must be taken into consideration when determining the amount of rail adjustment.

*Where rail has been added to re-establish the desired RLT note on reports.

3.2 De-Stressing Rail

Rail can be de-stressed by cutting rail out or by re-aligning a curve. When cutting rail out, use this procedure:

1. Use a designated safe procedure to cut rail. It’s possible that the rail is under compression and may move unexpectedly. Cut rail to be de-stressed.

2. Remove or reposition anchors or clips for a minimum of 200 feet in both directions from the cut or up to a restriction that prevents rail movement.

3. Wait until the rails stop moving. The rail ends may need to be trimmed more than one time to allow for expansion.

4. Take the rail temperature.

5. If the actual rail temperature is lower than the RNT (plus or minus 5°F), use Appendix 3 to determine the rail length to be removed based on the total distance the anchors or clips have been removed.

6. Weld the joint or apply joint bars.

7. Replace the rail anchors or clips.
Chapter 4 Monitoring Curve Movement Following Track Surfacing and Lining

4.1 Recording of Curves

Before surfacing and lining a curve on main tracks, record curve if it is more than 3° and the rail temperature is more than 50°F below the designated rail laying temperature (or is forecasted to be in the next 24 hours).

To record a curve prior to surfacing and lining, indicate at least 3 reference points uniformly spaced around the curve. These reference points shall be no more than 200 feet apart.

4.2 Inspecting for Curve Movement

Inspect for curve movement periodically after the work, especially during periods of large temperature changes. Where curve has been recorded per Section 4.1 and curve has shifted inward more than a maximum of 3 inches, the curve must be lined out. If curve is not lined out or de-stressed a speed restriction of 25 mph or less must be placed. When tight rail conditions exist, be governed by Chapter 7.1.

Chapter 5 Placing Temporary Speed Restrictions on Account of Track Work

Place a temporary speed restriction anytime the roadbed or ballast section is disturbed as required in Section 5.4, except where the maximum authorized speed of the track is equal to or less than the required restriction.

5.1 General Requirements

Speed restrictions ensure safe train operations until the affected track stabilizes. Restrictions need to stay in place to allow the ballast to consolidate, rail compressive forces to equalize and the sub grade to compact. Take more restrictive measures when conditions warrant. Track must be inspected before removing speed restrictions.

5.2 Responsibility for Placing Speed Restrictions

During the work, removing speed restriction or before returning the track to service, the supervisor or foreman in charge must ensure that:

Gage, surface and alignment have been established.

Crib and shoulder ballast is in place or lateral constraint is otherwise provided. The rail is anchored per Sections 2 or 3.
5.3  **Speed Restriction Length**

To minimize running rail and other dynamic forces, trains must have time to brake and adjust slack before entering the disturbed track. For heavy grades, sharp curves or substandard track conditions, extend speed restrictions farther from the work limits, if needed.

5.4  **Speed Restrictions for Track Work**

When the following track work has been performed, place a speed restriction that complies with the guidelines below. *Take more restrictive measures when conditions warrant.*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Maximum Speed</th>
<th>Minimum Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out-of-face installation of ties</td>
<td>10 mph freight</td>
<td>4 trains</td>
</tr>
<tr>
<td>Undercutting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laying track/switch panels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constructing track</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Out-of-face surfacing and lining</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spot Maintenance</td>
<td>10 mph freight</td>
<td>1 train</td>
</tr>
<tr>
<td>• Installing ties (no more than 5 ties in 39 ft and no more than 3 consecutive ties)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Surfacing/lining (maximum length of 1320 Feet)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chapter 6 Rail Joint Inspections

CWR Joint means any joint directly connected to CWR.

6.1  **Frequency of Inspections**

CWR joints shall be inspected on foot minimally twice a year. These inspections will occur in the spring and in the fall. *See Appendix 8*

6.3  **Identification of Joints**

Each CWR joint requiring action as outlined in section 6.5 shall be identified in the field with a highly visible marking. In addition, such joints shall also be identified as to location by specifying the subdivision, milepost and rail (north, south, etc.).
Switches, Track Crossings; Lift Rail Assemblies or Other Transitions Devices on Moveable Bridges

Joints within or adjacent to switches, track crossings, lift rail assemblies or other transition devices on moveable bridges are exempt from the periodic joint inspection requirements provided they are inspected monthly during the required monthly walking inspection of these devices.

Therefore, inspect these locations on a minimum monthly basis and include in the inspection and report on the following:

At switches:
- All joints from and including the insulated joints at the signals governing movement entering and leaving the control point or interlocking.
- If there are no signals at the switch location, include as a minimum all joints from the point of the switch to the heel of the frog.

At cross-overs:
- All joints in track between switches. At track crossings:
  - All joints from and including the insulated joints at the signals governing movement entering and leaving the control point or interlocking.
  - If there are no signals at the track crossings, include as a minimum all joints that are between or connected to the crossing frogs.

At lift rail assemblies or other transition devices on movable bridges:
- All joints immediately attached to the rail assembly or transition device.

Should a cracked or broken joint bar be discovered during the monthly inspection of any of the above locations, a Fracture Report must be completed as per section 6.7.
6.4 Rail Joint Conditions

When inspecting CWR joints on foot in track listed in 6.1, inspectors must watch for (but not be limited to) the following rail joint conditions outlined in the table below. When such conditions are found, the appropriate action must be taken as outlined.

<table>
<thead>
<tr>
<th>Rail joint condition</th>
<th>Action¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visible cracks in joint bar</td>
<td>Replace bar</td>
</tr>
<tr>
<td>Loose bolts</td>
<td>Tighten bolts</td>
</tr>
<tr>
<td>Bent bolts</td>
<td>Replace bolts OR Re-inspect as per 6.2</td>
</tr>
<tr>
<td>Missing bolts ²</td>
<td>Replace bolts</td>
</tr>
<tr>
<td>Tie(s) not effectively supporting joint</td>
<td>Tamp tie(s) OR Replace or repair tie(s)</td>
</tr>
<tr>
<td></td>
<td>OR Conduct follow-up inspections every other week until repaired/removed</td>
</tr>
<tr>
<td>Broken or missing tie plate(s)</td>
<td>Replace tie plate(s) OR Conduct follow-up inspections every other week until repaired/removed</td>
</tr>
<tr>
<td>Deteriorated insulated joint</td>
<td>Replace/repair joint OR Conduct follow-up inspections every other week until repaired/removed</td>
</tr>
<tr>
<td>Rail end batter (More than 3/8&quot; in depth and more than 6&quot; in length measured with a 24” straight-edge)</td>
<td>Repair by welding joint or removing rail OR Conduct follow-up inspections every other week until repaired/removed</td>
</tr>
<tr>
<td>Rail end mismatch reaches limits specified by 49 CFR 213.115</td>
<td>Weld or grind</td>
</tr>
<tr>
<td>Longitudinal rail movement greater than 2&quot;</td>
<td>Add or adjust rail anchors, tighten bolts, add or remove rail at appropriate time OR Conduct follow-up inspections every other week until repaired/removed</td>
</tr>
<tr>
<td>Wide rail gap greater than 1.5&quot;</td>
<td>Adjust rail gap and secure joint OR Conduct follow-up inspections every other week until repaired/removed</td>
</tr>
<tr>
<td>Joint vertical movement (profile) that exceeds 75% of the allowable threshold for the designated class of track³</td>
<td>Surface joint OR Conduct follow-up inspections every other week until repaired/removed</td>
</tr>
</tbody>
</table>
Joint lateral movement (in a curve or spiral) that reaches 3/4"³

Correct lateral movement
OR
Conduct follow-up inspections every other week until repaired/removed

1. Action may also consist of placing a speed restriction or removing the track from service.
2. A minimum of 2 bolts per rail must be in place at each joint.
3. Joint lateral and vertical movement is the apparent visible movement measured at the joint.

6.5 Embedded Joints

Permanently Embedded Locations

Where such locations exist, it is not necessary to disassemble or remove the track structure (e.g., remove pavement or crossing pads) to conduct an inspection of CWR joints. Make every effort, to the extent practicable, to inspect the visible portion of joints in these structures.

Temporarily Buried Locations

Joints may sometimes be temporarily buried (e.g., where ballast or similar material is in the middle of the track and along the track) and therefore unavailable for inspection. Where CWR joints are buried (e.g., by ballast), wait for the completion of the track work before conducting joint bar inspections.

6.6 Inspection Records

CWR Inventory Log from On-Foot Periodic and Follow-up Inspections, Appendix 8

Document each on-foot periodic and follow-up inspection on the date of the inspection by noting the following information:

- Date
- Limits of the inspection
- Location and nature of CWR joint conditions specified in section 6.5
- Corrective or Remedial action
- Name and signature of inspector

Joint Bar Fracture Report, Appendix 6

Track subject to inspections under 213.119(H)(6)(i), must have a Fracture Report completed for every cracked or broken CWR joint bar that is discovered during the course of an inspection conducted to comply with:

- Track Inspections (213.233),
- Inspections of switches, turnouts, track crossings, lift rail assemblies or other transition devices on moveable bridges (213.235),
CWR for Appendices

- Periodic and Follow-Up CWR Joint Inspections (213.119(g)). The Fracture Report shall be prepared on the date the cracked or broken joint bar is discovered. Refer to Joint Bar Fracture Report Form, Appendix 6
Chapter 7 Extreme Weather Inspections

For purposes of forecasting or initiating extreme weather inspections and conversions of rail temperature in relation to ambient temperatures use the following conversions:

- In hot weather rail temperature is equal to ambient temperature plus 50°F.
- In cold weather rail temperature is equal to ambient temperature.

7.1 Hot Weather Inspections

On main tracks hot weather inspections should be performed as directed. Perform inspections during the heat of the day - primarily between 12 noon and 6 p.m. Inspectors will inspect for signs of tight rail conditions, including:

- Kinky or wavy rail
- Rail canting or lifting out of tie plates
- Shiny marks on the base of the rail indicating that the rail is running through anchors and spikes
- Gaps in ballast at the ends of ties
- Churning ballast and ties

When tight rail conditions are present such as above, a speed restriction of 25 mph or less must be placed or track removed from service until repair or adjustment is made.

Inspectors will pay special attention to the following locations:

- Recently disturbed track
- Track at the bottom of sags
- Locations where heavy braking occurs
- Fixed track structures, such as turnouts and bridges
- Locations where rail has been repaired or welds made

7.2 Cold Weather Inspections

On main tracks, cold weather inspections must be performed as directed or when the rail temperature is forecast to drop -10°F.

Inspectors will inspect for:

- Broken rails
- Pull-aparts
- Wide gap between rail-ends
- Cracked or broken joint bars (conventional and insulated)

- Bent bolts
- Curve movement
- Canted rail
Chapter 8 Training

All employees responsible for the inspection, installation, adjustment or maintenance of CWR track must complete training on CWR procedures every calendar year. In addition, they shall be provided a copy of these procedures and accompanying documents. Twin Cites & Western Railroad will maintain lists of those employees qualified to supervise restorations and inspect track in CWR territory. The qualified employee lists will be made available to the FRA upon request. Training programs will address the following:

- CWR installation procedures
- Rail anchoring requirements when installing CWR
- Preventive maintenance on existing CWR track
- Monitoring curve movement following track surfacing and lining
- Placing temporary speed restrictions on account of track work
- Rail joint inspections
- Insufficient ballast
- Extreme weather inspections
- Recordkeeping

Chapter 9 Recordkeeping

9.1 Report of CWR Installations

Rail temperature, location and date of CWR installations must be recorded on the prescribed form and must be retained for at least one year after installation. Refer to Record of Heat Control during Laying CWR, Appendix 1

9.2 Report Maintenance Work in CWR

Because track maintenance can disturb the lateral and longitudinal resistance of the track, CWR Maintenance Record Form (Appendix 5) must be completed and kept until corrections or adjustments are made:

- Rail that is added for any reason, including repair of broken or defective rail, pull-aparts and welding of rail joints.
- Where curve has been recorded and has shifted inward more than a maximum of 3 inches.
- CWR installation or maintenance work that does not conform to these written procedures.
- A record of rail neutral temperature will be maintained where rail has pulled apart, broken or been cut for defect removal. Appendix 5

Track Maintenance Supervisors must monitor these records to ensure necessary corrections and adjustments are made.
Appendix 1

Record of Neutral Temperature of Welded Rail as Laid Rail Adjustment Record

<table>
<thead>
<tr>
<th>Rail between Line Segment</th>
<th>Subdivision</th>
<th>Date</th>
<th>Record No.</th>
<th>Rail Length</th>
<th>Neutral Temperature of Welded Rail as Laid</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reminder: Carefully record the temperature of the rail and weld temperature on both sides of the web on the rail near both ends of the string.

- CWR for Appendices
- Record of Neutral Temperature of Welded Rail as Laid Rail Adjustment Record

Appendix 1

<table>
<thead>
<tr>
<th>Match Marks</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. Rail Temperature at time of adjustment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Amount of rail added or replaced:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. Rail was cut in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Rail Temperature at time of adjustment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Adjustment made to which rail:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Show specific data recorded on rail:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Weight of Rail:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Curve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. WP Where Adjustment Occurred:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Reason for adjustment:</td>
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<td></td>
</tr>
</tbody>
</table>

Other

Service failure, broken rail

- Appendix 1

- CWR for Appendices
- Record of Neutral Temperature of Welded Rail as Laid Rail Adjustment Record

---

159
Appendix 2

Placing Rail Reference Marks

Placing rail reference marks is a method of measuring the amount of rail added or subtracted in CWR territory.

Reference marks must be utilized prior to cutting CWR for any reason. Use the following guidelines when placing reference marks.

- Use a permanent metal marker or paint stick (not soapstone) to record reference marks.
- Reference marks should be at least 3' from where the cut is made so that joint bars will not cover the marks.
- The distance between reference marks, gang number and date must be written on the field side web of the rail.
- Record rail that has been added as a plus (+) measurement and rail removed as a minus (-) measurement.
- When rail has been added to the track, you may reverse the anchors on 10 ties to indicate the specific location. If anchors are reversed, ensure they are installed correctly after rail has been removed.
- Document the location through production reporting and arrange for later adjustment if needed.
- Any rail added during temporary repairs must be removed when making permanent repairs.

When adding a replacement rail to repair a rail defect that has not separated, determine where to cut the rail to ensure that the cuts align with the tie cribs. Measure at least 3 feet from each rail cut mark, before the rail is cut, and place reference marks on the web of the rail to record the total distance between the reference marks.
In the example below, when the rail was cut, the rail gapped open 1 ½". The replacement rail was installed and after the joint bars were applied the distance between the reference marks is now 28 feet 1 ½ inches. Document the 1 ½" added as a (+) measurement. The 1 ½" of rail added must be removed when the permanent repair is made.

In cases of pull-a-parts and service failures where the rail has gapped open, the distance marked on the web of the rail must not include the gap in the rail. The reference marks should always indicate the original distance, (amount of rail) between the marks before the break or pull-apart occurred. In this example the gap is 1 ½” wide and the break is crooked.

To properly apply reference marks, measure back from one end of the break at least 3 feet and mark the rail. Measure in the other direction from the opposite end of the break the length of replacement rail plus an additional 3 feet and mark the rail. In this example there is 27’ of rail between the reference marks. Record this on the web of the rail along with the date and gang #.
Mark the rail to place the saw cuts for the replacement rail in the cribs.

Once the repair is completed, measure the distance between the reference marks and record the measurement on the web of the rail.
Appendix 3
Rail Movement for Different Temperature Differentials

<table>
<thead>
<tr>
<th>Temperature Differential (°F)</th>
<th>400 feet</th>
<th>600 feet</th>
<th>800 feet</th>
<th>1,000 feet</th>
<th>1,200 feet</th>
<th>1,400 feet</th>
<th>1,600 feet</th>
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<tr>
<td>5</td>
<td>¼</td>
<td>½</td>
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<td>1/2</td>
<td>1/2</td>
<td>1/2</td>
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<tr>
<td>10</td>
<td>¼</td>
<td>¾</td>
<td>¾</td>
<td>1</td>
<td>1-1/2</td>
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<td>2-1/4</td>
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<td>3</td>
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<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>70</td>
<td>2-1/4</td>
<td>3-1/4</td>
<td>4-1/4</td>
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<td>6-1/2</td>
<td>7-3/4</td>
<td>8-3/4</td>
</tr>
</tbody>
</table>

Movement formula for various lengths of rail; Rail length (feet) X 12 X Temperature Difference °F from Preferred Rail Laying Temperature (PRLT) X 0.0000065 = movement in inches.
Example: 1000 ft unanchored rail at a 50 °F temp change
1000 x 12 x 50 x 0.0000065 x 50 °F = 4.02 inches
Appendix 4: Track Standard Drawing
Rail Anchor Patterns for CWR on Open Deck Bridges
Appendix 5
CWR Maintenance Record Form
(Circle or Enter the Required Information)

1. Subdivision: _______________

2. Employee Name __________________________

3. Mile Post____.____  Rail: L / R (Face increasing Mile Post to determine)

4. Date of failure/repair______ / _____ / ______

5. Track Type
   Every other wood tie anchored (EOTA) □
   Every wood tie anchored (ETA) □

6. Anchor/Fastener condition
   Average □
   Weak □
   Strong □

7. Rail Size/ Rail Weight _________

8. Rail gap width (inches) _________

9. Rail temperature at time of break/cut (F°) ________ Estimated Rail
   Gap per Appendix 7 __

10. Amount of rail added or removed _________

11. Date adjusted or corrected_____/____/____(Employee Name) ________________________

Comments: ________________________________________________________________
______________________________________________________________
______________________________________________________________
# Appendix 6: Joint Bar Fracture report

<table>
<thead>
<tr>
<th>CWR JOINT BAR</th>
<th>TYPE OF INSPECTION</th>
</tr>
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<tbody>
<tr>
<td>FRACTURE REPORT</td>
<td>□ PERIODIC JOINT INSPECTION (213.119[g][5][l])</td>
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<tr>
<td></td>
<td>□ TRACK INSPECTION (213.233)</td>
</tr>
<tr>
<td></td>
<td>□ TURNOUT INSPECTION (213.235)</td>
</tr>
<tr>
<td></td>
<td>□ OTHER INSPECTION</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RAILROAD:</th>
<th>SUBDIVISION:</th>
<th>MILEPOST:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE FOUND: /</td>
<td>ANNUAL MGT:</td>
<td>TRACK #:</td>
</tr>
<tr>
<td>TRACK CLASS:</td>
<td>RAIL SECTION(S): /</td>
<td></td>
</tr>
</tbody>
</table>

□ TANGENT  □ CURVE_____ □ LOW/INNER RAIL RAIL SECTION(S): /
degrees □ HIGH/OUTER RAIL

ANNUAL JOINT INSPECTION FREQUENCY FOR THIS SEGMENT: DATE OF LAST JOINT INSPECTION:
□ 1x  □ 2x  □ 3x  □ 4x  □ OTHER: / 20

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<tr>
<th>BAR TYPE</th>
<th>□ STANDARD</th>
<th>□ INSULATED</th>
<th>□ COMPROMISE</th>
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<tbody>
<tr>
<td>(check all that apply)</td>
<td>NUMBER OF HOLES:</td>
<td>4 5 6 7 8</td>
<td></td>
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<table>
<thead>
<tr>
<th>FIELD SIDE BAR</th>
<th>GAGE SIDE BAR</th>
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</thead>
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<tr>
<td>BROKEN THROUGH</td>
<td>BROKEN THROUGH</td>
</tr>
<tr>
<td>CHOOSE ONE: CENTER  □ INNER BOLT HOLE  □ OTHER</td>
<td></td>
</tr>
<tr>
<td>CRACKED Check location(s) and record length(s):</td>
<td>CRACKED Check location(s) and record length(s):</td>
</tr>
<tr>
<td>□ TOP CENTER  _______ inches</td>
<td>□ TOP CENTER  _______ inches</td>
</tr>
<tr>
<td>□ BOTTOM CENTER  _______ inches</td>
<td>□ BOTTOM CENTER  _______ inches</td>
</tr>
<tr>
<td>□ INNER BOLT HOLE  _______ inches</td>
<td>□ OTHER BOLT HOLE  _______ inches</td>
</tr>
<tr>
<td>□ OTHER BOLT HOLE  _______ inches</td>
<td>□ OTHER (describe)  _______ inches</td>
</tr>
<tr>
<td>□ OTHER (describe)  _______ inches</td>
<td></td>
</tr>
</tbody>
</table>

GAP BETWEEN RAIL ENDS  _______ INCHES

RAIL END BATTER OR RAMP

| □ NORTH or | □ EAST RAIL END  INCHES HIGH  INCHES LONG |
| □ SOUTH or | □ WEST RAIL END  INCHES HIGH  INCHES LONG |

TREAD MISMATCH  _______ INCHES

JOINT VERTICAL MOVEMENT  _______ INCHES

IF JOINT IN CURVE or SPIRAL:

GAGE RAMP  _______ INCHES OUT  _______ INCHES LONG
GAGE MISMATCH  _______ INCHES

JOINT LATERAL MOVEMENT  _______ INCHES
Appendix 7: Estimated Rail Neutral Temperature

1. The following tables show estimated Rail Neutral Temperatures (RNT) for CWR based on the Effective Rail Gap at a pull apart or rail break and the rail temperature, for 5-1/2 rail base, and for wood ties anchored every other tie (EOTA) and wood ties anchored every tie (ETA).

2. The Effective Rail Gap is equal to the rail gap created by the pull apart or rail break net of the rail added or removed during the repair:
   - if no rail added or removed during the repair,
     \[
     \text{Effective Rail Gap} = \text{rail gap created by the pull apart or rail break (in inches)}.
     \]
   - if rail is added during the repair,
     \[
     \text{Effective Rail Gap} = \text{rail gap created by the pull apart or rail break (in inches)} - \text{rail added during the repair (in inches)}.
     \]
   - if rail is removed during the repair,
     \[
     \text{Effective Rail Gap} = \text{rail gap created by the pull apart or rail break (in inches)} + \text{rail removed during the repair (in inches)}.
     \]

3. Where the estimated Rail Neutral Temperature is less than \((PRLT - 20°F)\) the rail must be readjusted before the rail temperature exceed the values in table shown in section 3.1.
<table>
<thead>
<tr>
<th>Effective Rail Gap</th>
<th>Rail Temp</th>
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<td>106</td>
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Estimated Rail Neutral Temperature for Wood Ties EOTA 5°C in Base Rail
Appendix 8: CWR Joint Inventory Log

<table>
<thead>
<tr>
<th>No.</th>
<th>CWR</th>
<th>Type of Joint</th>
<th>Date of Inspection</th>
<th>Inspected By</th>
<th>Action Taken</th>
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<tbody>
<tr>
<td>1</td>
<td>555</td>
<td>Single Joint</td>
<td>12/01/2023</td>
<td>John Smith</td>
<td>Repair</td>
</tr>
<tr>
<td>2</td>
<td>556</td>
<td>Double Joint</td>
<td>12/02/2023</td>
<td>Jane Doe</td>
<td>Replace</td>
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<tr>
<td>3</td>
<td>557</td>
<td>Coupling</td>
<td>12/03/2023</td>
<td>Mike Brown</td>
<td>Monitor</td>
</tr>
<tr>
<td>4</td>
<td>558</td>
<td>Tee Joint</td>
<td>12/04/2023</td>
<td>Sarah Lee</td>
<td>Inspect</td>
</tr>
<tr>
<td>5</td>
<td>559</td>
<td>Branch Joint</td>
<td>12/05/2023</td>
<td>David White</td>
<td>Assess</td>
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</table>
Project Supervision

Contractor shall have a supervisor in charge of work that meets the qualifications specified in FRA 213.7(a) – qualified persons to supervise certain renewals, FRA 213.7 (c) – person qualified under 213.7(a) that inspect continuous welded-rail (CWR) track or supervise the installation, adjustment and maintenance of CWR track in accordance with the written procedures of the track owner and FRA 213.11 – restoration or renewal of track under traffic conditions. Minimum qualifications are as follows;

213.7(a) – Each person designated under 213.7(a) shall have;

1) At least--
   a) 1 year of supervisory experience in railroad track maintenance; or
   b) A combination of supervisory experience in track maintenance and training from a course in track maintenance or from a college level educational program related to track maintenance.

2) Demonstrated to the owner that he or she—
   a) Knows and understands the requirements of this part;
   b) Can detect deviations from those requirements; and
   c) Can prescribe appropriate remedial action to correct or safely compensate for those deviations.

213.7 (c) – Individuals designated under paragraphs (a) or (b) of this section that inspect continuous welded rail (CWR) track or supervise the installation, adjustment, and maintenance of CWR track in accordance with the written procedures of the track owner shall have:

1) Current qualifications under either paragraph (a) or (b) of this section;

2) Successfully completed a comprehensive training course specifically developed for the application of written CWR procedures issued by the track owner;

3) Demonstrated to the track owner that the individual:
   (i) Knows and understands the requirements of those written CWR procedures;
   (ii) Can detect deviations from those requirements; and
   (iii) Can prescribe appropriate remedial action to correct or safely compensate for those deviations; and

4) Written authorization from the track owner to prescribe remedial actions to correct or safely compensate for deviations from the requirements in those procedures and successfully completed a recorded examination on those procedures as part of the qualification process.

The Project Engineer reserves the right to determine the acceptability of the Contractor's designated supervisor and may require the Contractor to replace the Project Supervisor if deemed unacceptable. This right will remain in force for the duration of the contract.
The provisions set forth in Mn/DOT 1910 are hereby deleted, and the following is substituted therefore:

These provisions provide for compensation adjustments in the cost of motor fuels (diesel and gasoline) consumed in prosecuting the Contract work. The Engineer will calculate the Fuel Cost Adjustments. Payments or credits will be applied to partial and final payments for work items set forth herein.

For this purpose, the Department will establish a Base Fuel Index (BFI) for fuel to be used on the Project. The Base Fuel Index will be the average of the high and low rack prices shown for No. 2 ultra low sulfur fuel oil in the "OPIS Energy Group" tabulation titled "RackFax, Minneapolis, MN, OPIS Direct Gross No. 2 Distillate Fuels" for the day of the Contract letting.

A Current Fuel Index (CFI) in cents per gallon will be established for each month. The CFI will be the average of the high and low rack prices shown for No. 2 ultra low sulfur fuel oil in the "OPIS Energy Group" tabulation titled "RackFax, Minneapolis, MN, OPIS Direct Gross No. 2 Distillate Fuels" averaged for the beginning and ending dates of the monthly period being adjusted.

The Engineer will compute the ratio of the Current Fuel Index to the Base Fuel Index (CFI/BFI) each month. If that ratio falls between 0.85 and 1.15, no fuel adjustment will be made that month. If the ratio is less than 0.85, a credit to the Department will be computed. If the ratio is greater than 1.15, additional payment to the Contractor will be computed.

Credit or additional payment will be computed as follows:

1. The Engineer will estimate the quantity of work done in that month under each of the Contract items listed below.
2. The Engineer will compute the gallons of fuel used in that month for each of the Contract items listed below by applying the unit fuel usage factors shown.
3. The Engineer will summarize the total gallons (Q) of fuel used in that month for the applicable items.
4. The Engineer will determine the Fuel Cost Adjustment (FCA) from the following formulas:

   If the Current Fuel Index (CFI) is greater than the Base Fuel Index (BFI), the following formula shall be used to determine the amount of Fuel Cost Adjustment to be paid to the Contractor:

   \[ FCA = \left[ \frac{CFI}{BFI} - 1.15 \right] \times Q \times BFI \]

   If the Current Fuel Index (CFI) is less than the Base Fuel Index (BFI), the following formula shall be used to determine the amount of Fuel Cost Adjustment to be credited to the Department.

   \[ FCA = \left[ \frac{CFI}{BFI} - 0.85 \right] \times Q \times BFI \]

   Where FCA = Fuel Cost Adjustment (cents)
   CFI = Current Fuel Index (cents per gallon)
   BFI = Base Fuel Index (cents per gallon)
Q = Monthly total gallons of fuel

**Basis of Payment**

A Fuel Cost Adjustment payment to the Contractor will be made as a lump sum each payment period based on the last published CFI. A Fuel Cost Adjustment credit to the Department will be deducted as a lump sum each payment period from any monies due the Contractor. Upon completion of the work under the Contract, any difference between the estimated quantities previously paid and the final quantities will be determined. The CFI in effect on the day of completion of the Contract will be applied to the quantity differences in accordance with the procedures set forth above.

**Schedule of Work Items**
(Only items shown will be considered for compensation adjustments.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Gallons of Fuel per Unit</th>
<th>Unit</th>
<th>Gallons of Fuel per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Earthwork:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2105.501</td>
<td>Common Excavation</td>
<td>Cu. Yd</td>
<td>0.17</td>
<td>m³</td>
</tr>
<tr>
<td>2105.503</td>
<td>Rock Excavation</td>
<td>Cu. Yd</td>
<td>0.27</td>
<td>m³</td>
</tr>
<tr>
<td>2105.505</td>
<td>Muck Excavation</td>
<td>Cu. Yd</td>
<td>0.17</td>
<td>m³</td>
</tr>
<tr>
<td>2105.507</td>
<td>Subgrade Excavation</td>
<td>Cu. Yd</td>
<td>0.17</td>
<td>m³</td>
</tr>
<tr>
<td>2105.515</td>
<td>Unclassified Excavation</td>
<td>Cu. Yd</td>
<td>0.23</td>
<td>m³</td>
</tr>
<tr>
<td>2105.521</td>
<td>Granular Borrow (EV)</td>
<td>Cu. Yd</td>
<td>0.17</td>
<td>m³</td>
</tr>
<tr>
<td></td>
<td>Granular Borrow (CV)</td>
<td>Cu. Yd</td>
<td>0.19</td>
<td>m³</td>
</tr>
<tr>
<td></td>
<td>Granular Borrow (LV)</td>
<td>Cu. Yd</td>
<td>0.14</td>
<td>m³</td>
</tr>
<tr>
<td>2105.522</td>
<td>Select Granular Borrow (EV)</td>
<td>Cu. Yd</td>
<td>0.17</td>
<td>m³</td>
</tr>
<tr>
<td></td>
<td>Select Granular Borrow (CV)</td>
<td>Cu. Yd</td>
<td>0.19</td>
<td>m³</td>
</tr>
<tr>
<td></td>
<td>Select Granular Borrow (LV)</td>
<td>Cu. Yd</td>
<td>0.14</td>
<td>m³</td>
</tr>
<tr>
<td>2105.523</td>
<td>Common Borrow (EV)</td>
<td>Cu. Yd</td>
<td>0.17</td>
<td>m³</td>
</tr>
<tr>
<td></td>
<td>Common Borrow (CV)</td>
<td>Cu. Yd</td>
<td>0.19</td>
<td>m³</td>
</tr>
<tr>
<td></td>
<td>Common Borrow (LV)</td>
<td>Cu. Yd</td>
<td>0.14</td>
<td>m³</td>
</tr>
<tr>
<td>2105.535</td>
<td>Topsoil Borrow (EV)</td>
<td>Cu. Yd</td>
<td>0.17</td>
<td>m³</td>
</tr>
<tr>
<td></td>
<td>Topsoil Borrow (CV)</td>
<td>Cu. Yd</td>
<td>0.19</td>
<td>m³</td>
</tr>
<tr>
<td></td>
<td>Topsoil Borrow (LV)</td>
<td>Cu. Yd</td>
<td>0.14</td>
<td>m³</td>
</tr>
<tr>
<td>2106.607</td>
<td>Common Embankment (CV)</td>
<td>Cu. Yd</td>
<td>0.19</td>
<td>m³</td>
</tr>
<tr>
<td>2106.607</td>
<td>Granular Embankment (CV)</td>
<td>Cu. Yd</td>
<td>0.19</td>
<td>m³</td>
</tr>
<tr>
<td>2106.607</td>
<td>Select Granular Embankment (CV)</td>
<td>Cu. Yd</td>
<td>0.19</td>
<td>m³</td>
</tr>
<tr>
<td></td>
<td>Select Granular Embankment Modified (%) (CV)</td>
<td>Cu. Yd</td>
<td>0.19</td>
<td>m³</td>
</tr>
<tr>
<td>2106.607</td>
<td>Excavation – Rock</td>
<td>Cu. Yd</td>
<td>0.27</td>
<td>m³</td>
</tr>
<tr>
<td>2106.607</td>
<td>Excavation – Muck</td>
<td>Cu. Yd</td>
<td>0.17</td>
<td>m³</td>
</tr>
<tr>
<td>(2) Aggregate Base:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2211.501</td>
<td>Aggregate Base</td>
<td>Ton</td>
<td>0.55</td>
<td>t</td>
</tr>
<tr>
<td>2211.502</td>
<td>Aggregate Base (LV)</td>
<td>Cu. Yd</td>
<td>0.77</td>
<td>m³</td>
</tr>
<tr>
<td>2211.503</td>
<td>Aggregate Base (CV)</td>
<td>Cu. Yd</td>
<td>0.99</td>
<td>m³</td>
</tr>
<tr>
<td>2211.607</td>
<td>Open Graded Aggregate Base (CV)</td>
<td>Cu. Yd</td>
<td>0.99</td>
<td>m³</td>
</tr>
<tr>
<td>(3) Aggregate Shouldering:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2221.501</td>
<td>Aggregate Shouldering</td>
<td>Ton</td>
<td>0.55</td>
<td>t</td>
</tr>
<tr>
<td>2221.502</td>
<td>Aggregate Shouldering (LV)</td>
<td>Cu. Yd</td>
<td>0.77</td>
<td>m³</td>
</tr>
</tbody>
</table>
### Aggregate shouldering (CV)

<table>
<thead>
<tr>
<th>Description</th>
<th>Cu. Yd</th>
<th>m³</th>
<th>1.29</th>
</tr>
</thead>
<tbody>
<tr>
<td>2221.503</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### (4) Concrete Pavements:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cu. Yd</th>
<th>m³</th>
<th>1.28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Concrete</td>
<td>0.98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Concrete HE</td>
<td>0.98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Concrete</td>
<td>0.027*t</td>
<td>m²</td>
<td>0.00128*t</td>
</tr>
</tbody>
</table>

### (5) Bituminous Pavements:

<table>
<thead>
<tr>
<th>Description</th>
<th>Ton</th>
<th>t</th>
<th>0.99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type ( ) Wearing Course Mixture ( )</td>
<td>0.90</td>
<td>t</td>
<td>0.99</td>
</tr>
<tr>
<td>Type ( ) Non-Wearing Course Mixture ( )</td>
<td>0.90</td>
<td>t</td>
<td>0.99</td>
</tr>
<tr>
<td>Type ( ) ( ) Course ( ), (t)&quot; Thick</td>
<td>0.051*t</td>
<td>m²</td>
<td>0.0024*t</td>
</tr>
</tbody>
</table>

### (6) Pipe:

<table>
<thead>
<tr>
<th>Description</th>
<th>Lin. Ft.</th>
<th>m</th>
<th>2.30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe Culvert</td>
<td>0.70</td>
<td>m</td>
<td>2.30</td>
</tr>
<tr>
<td>Pipe Arch Culvert</td>
<td>0.70</td>
<td>m</td>
<td>2.30</td>
</tr>
<tr>
<td>Pipe Culvert Des 3006</td>
<td>0.70</td>
<td>m</td>
<td>2.30</td>
</tr>
<tr>
<td>Pipe Culvert</td>
<td>0.70</td>
<td>m</td>
<td>2.30</td>
</tr>
<tr>
<td>Pipe Sewer</td>
<td>0.70</td>
<td>m</td>
<td>2.30</td>
</tr>
<tr>
<td>Pipe Arch Sewer</td>
<td>0.70</td>
<td>m</td>
<td>2.30</td>
</tr>
<tr>
<td>Pipe Sewer Des 3006</td>
<td>0.70</td>
<td>m</td>
<td>2.30</td>
</tr>
<tr>
<td>Pipe Sewer</td>
<td>0.70</td>
<td>m</td>
<td>2.30</td>
</tr>
</tbody>
</table>

* = thickness (in inches or mm)

**Note:** No price adjustments will be made on fuel used for drying and heating aggregates.

***No price adjustment will be made for pipes less than 12" in diameter or jacked pipes.
EQUAL EMPLOYMENT OPPORTUNITY (EEO) SPECIAL PROVISIONS

This section of Special Provisions contains the Equal Employment Opportunity (EEO) rules and regulations for highway construction projects in Minnesota which are federally and/or State funded.

The source of funding determines which EEO regulations and goals (Federal and/or State goals) apply to a specific project. When a project contains funding from both Federal and State sources, both sets of regulations apply, and the Minnesota Department of Transportation (Mn/DOT) monitors and reviews projects at both levels.

If the project contains any Federal funding, and has a total dollar value exceeding $10,000, Federal EEO regulations and goals apply (pages 2, 6, 7-8, 9-14, 15, 16-17, 22-26, 27-38). The Mn/DOT Office of Civil Rights monitors and reviews these projects on behalf of the Federal Highway Administration (FHWA), under Federal statutes (23 USC 140) and rules (23 CFR 230).

If the project contains any State funding, and has a total dollar value exceeding $100,000, State EEO regulations and goals apply (pages 2, 3, 4, 5, 6, 9-14, 16-22). Mn/DOT's Office of Civil Rights monitors and reviews these projects in conjunction with the Minnesota Department of Human Rights under Minnesota Statutes §363A.36 and its accompanying rules.

Mn/DOT has established a single review and monitoring process which meets both Federal and State requirements.

Please note that Pages 23-38 of these Special Provisions may be omitted from projects with no Federal funding.

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NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(23 USC 140, 23 CFR 230 and Minnesota Statute 363A.36)

1. The offerer's or bidder's attention is called to the "Minnesota Affirmative Action Requirements" (EEO Page 4), the “Specific Federal Equal Employment opportunity Responsibilities” (EEO Pages 7-8), the "Standard Federal and State Equal Employment Opportunity Construction Contract Specifications" (EEO Pages 9-14), the "Equal Opportunity Clause" (EEO Page 15) and "Required Contract Provisions - Federal-Aid Construction Contracts" (EEO Pages 27-37).

2. The goals and timetables for minority and women participation, expressed in percentage terms of hours of labor for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as shown on EEO Pages 16-17.

These goals are applicable to all the Contractor's construction work (whether or not it is State or State assisted, Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the regulations in 41 CFR Part 60-4, and/or Minnesota Statutes §363A.36 and its accompanying rules shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a) for Federal or federally assisted projects, and Minnesota Statutes §363A.36, and its accompanying rules for State or State assisted projects, and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and women employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority and women employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4 for Federal or federally-assisted projects and/or Minnesota Statutes §363A.36 and its accompanying rules for state or state-assisted projects. Compliance with the goals will be measured against the total work hours performed.

3. If the contract is federally funded, the Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within ten working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. If the contract is state funded, the Contractor shall provide written notification to the Compliance Division, Minnesota Department of Human Rights, Army Corps of Engineers Centre, 190 E 5th Street, Suite 700, St. Paul, Minnesota 55101 within ten working days of award of any construction subcontract in excess of $100,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the Subcontractor; employer identification number of the Subcontractor; estimated dollar amount of the subcontract; estimated starting and
completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the county or counties of the State of Minnesota where the work is to be performed.
NOTICE TO ALL PRIME AND SUBCONTRACTORS PRE-AWARD REPORTING REQUIREMENTS

In order to ensure compliance with Federal and State laws and regulations (23 USC 140, and 23 CFR 230, and Minnesota Statutes §363A.36) and to ensure Mn/DOT’s ability to monitor and enforce compliance efforts, the following requirements apply if the apparent low bid exceeds $ 5,000,000.00:

1) The Apparent Low Bidder (“ALB”) must provide to Mn/DOT the “EEO-8 Form” (also entitled “EEO Compliance Review Report”), which must provide detail on the contractor’s total company workforce in the State of Minnesota during the twelve month period preceding July 30th of the previous year (Office and/or clerical personnel need not to be included).

2) The ALB must provide to Mn/DOT a work plan for meeting the minority and women employment goals established by the Minnesota Department of Human Rights, for the project in question. The work plan must include, at a minimum (1) how the ALB will incorporate its current minority and women employees in the ALB’s efforts to meet the established goals; and (2) a contingency plan if the ALB has determined that its current workforce is not sufficient in order to achieve the established employment goals. If the ALB relies in whole or in part upon unions as a source of employees, then the ALB must (1) include a list of established organizations that are likely to yield qualified minority and women candidates if those union(s) are unable to provide a reasonable flow of minority and women candidates in their work plan; and (2) document the method by which these organizations will refer candidates to the ALB for employment opportunities. All bidders are hereby notified that the U.S. Department of Labor has determined that a contractor will not be excused from complying with the Federal and State laws and regulations cited above based solely on the fact that a contractor has a collective bargaining agreement with a union providing for the union to be the exclusive source of referral and that the union failed to refer minority employees. A contractor may obtain a list of organizations likely to yield qualified minority and women candidates from the Mn/DOT Office of Civil Rights.

3) The ALB must provide to Mn/DOT the ALB’s total workforce and labor projections for the project (represented in hours), the ALB’s projected total number of minority hours for the project, and the ALB’s projected total number of women hours for the project. The details must include the trade(s) that will be utilized in order to complete the project.

The ALB must submit documents as required to comply with this section no later than five business days after the date that bids for the contract are opened. The five day period starts the business day following the date that bids were opened. The required documents must be received prior to Contract Award, and must be sent to the Mn/DOT Office of Civil Rights – 395 John Ireland Blvd., Mail Stop 170 St. Paul, MN 55155-1899. Submittal of the documents described in (1), (2) and (3) is required for contract award to the ALB. The submitted documents will be used as a tool to assist contractors in meeting employment goals; the content itself will not be evaluated for the purpose of determining contract award.
MINNESOTA AFFIRMATIVE ACTION REQUIREMENTS

1. It is hereby agreed between the parties to this contract that Minnesota Statutes, Section §363A.36, and its accompanying rules are incorporated into any contract between these parties based upon this specification or any modification of it. A copy of Minnesota Statutes, Section §363A.36, and its accompanying rules is available upon request from the contracting agency. The Contractor hereby agrees to comply with the rules and relevant orders of the Minnesota Department of Human Rights issued pursuant to the Minnesota Human Rights Act.

2. It is hereby agreed between the parties to this contract that this agency requires that the Contractor meet affirmative action criteria as provided for by Minnesota Statutes §363A.36 and its accompanying rules. It is the intent of the Minnesota Department of Transportation to fully carry out its responsibility for requiring affirmative action, and to implement sanctions for failure to meet these requirements. Failure by a contractor to implement an affirmative action plan, meet project employment goals for minority and women employment or make a good faith effort to do so may result in revocation of his/her Certificate of Compliance or suspension or revocation of the contract (Minnesota Statutes §363A.36).

3. Under the affirmative action obligation imposed by the Human Rights Act, Minnesota Statutes, Section §363A.36, contractors shall take affirmative action to employ and advance in employment minority, female, and qualified disabled individuals at all levels of employment. Affirmative action must apply to all employment practices, including but not limited to hiring, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor shall recruit, hire, train and promote persons in all job titles, without regard to race, color, creed, religion, sex, national origin, marital status, status with regard to public assistance, physical or mental disability, sexual orientation or age except where such status is a bona fide occupational qualification. These affirmative action requirements of the Minnesota Human Rights Act are consistent with but broader than the Federal requirements as covered in this contract.

4. Affirmative Action for disabled workers. The Contractor shall not discriminate against any employee or applicant for employment because of a physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified disabled individuals without discrimination based upon their physical or mental disability in all employment practices such as employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training (including apprenticeship). In the event of the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with Minnesota Statutes, section §363A.36 and the rules and relevant orders of the Minnesota Department of Human Rights pursuant to the Minnesota Human Rights Act.

5. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the commissioner of the Minnesota Department of Human Rights. Such notices shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment minority, women and qualified disabled employees and applicants for employment, and the rights of applicants and employees. A poster entitled "Contractor Non-discrimination is the Law" may be obtained from: Compliance Unit, Minnesota Department of Human Rights, Army Corps of Engineers Centre, 190 E. 5th Street, Suite 700, St. Paul, Minnesota 55101. (651) 296-5663, TTY 296-1283, Toll Free 1-800-657-3704.

6. The Contractor shall notify each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Minnesota Statutes, section §363A.36 of the Minnesota Human Rights Act, and is committed to take affirmative action to employ and advance in employment minority, women and qualified physically and mentally disabled individuals.
APPROPRIATE WORK PLACE BEHAVIOR
ON Mn/DOT CONSTRUCTION PROJECTS UTILIZING STATE FUNDS

It is the Minnesota Department of Transportation’s (Mn/DOT’s) policy to provide a workplace free from violence, threats of violence, harassment and discrimination. Mn/DOT has established a policy of zero tolerance for violence in the workplace. Contractors who perform work on Mn/DOT construction projects, or local government entities or public agencies utilizing state funds on highway construction projects, shall maintain a workplace free from violence, harassment and discrimination (See definitions, below).

Definitions:
1. Violence is the threatened or actual use of force which results in or has a high likelihood of causing fear, injury, suffering or death. Employees are prohibited from taking reprisal against anyone who reports a violent act or threat.
2. Harassment is the conduct of one employee (toward another employee) which has the purpose or effect of 1) unreasonably interfering with the employee’s work performance, and/or 2) creating an intimidating, hostile or offensive work environment. Harassment is not legitimate job-related efforts of supervisor to direct/evaluate an employee or to have an employee improve work performance.
   A. Unlawful discriminatory harassment is harassment which is based on these characteristics: race, color, creed, religion, national origin, sex, disability, age, marital status, status with regard to public assistance or sexual orientation. Managers, supervisors and employees shall not take disciplinary or retaliatory action against employees who make complaints of sexual harassment.
   Sexual harassment is unwelcome sexual advances, requests for sexual favors, or sexually motivated physical contact, or other verbal or physical conduct or communication of a sexual nature, when submission to that conduct or communication is 1) made a term or condition, either explicitly or implicitly, of obtaining employment; or 2) is used as a factor in decisions affecting an individual’s employment; or 3) when that conduct or communication has the purpose or effect of substantially interfering with an individual’s employment or creating an intimidating, hostile or offensive work environment, and the employer knows or should have known of the existence of the harassment and fails to take timely and appropriate action.
   Examples include but are not limited to insulting or degrading sexual remarks or conduct; threats, demands or suggestions that status is contingent upon toleration or acquiescence to sexual advances; displaying in the workplace sexually suggestive objects, publications or pictures, or retaliation against employees for complaining about the behavior cited above or similar behaviors.
   B. General harassment is harassment which is not based on the above characteristics. Examples may include, but are not limited to: physically intimidating behavior and/or threats of violence; use of profanity (swearing), vulgarity; ridiculing, taunting, belittling or humiliating another person; inappropriate assignments of work or benefits; derogatory name calling.
3. Discrimination includes actions which cause a person, solely because of race, color, creed, religion, national origin, sex, disability, age, marital status, status with regard to public assistance or sexual orientation to be subject to unequal treatment.

Prime Contractors who work on Mn/DOT projects shall ensure that their managers, supervisors, foremen/women and employees are familiar with Mn/DOT’s policy on appropriate work place behavior; and shall ensure that their subcontractors are familiar with this policy. Managers, supervisors and foremen/women will respond to, document, and take appropriate action in response to all reports of violence, threats of violence, harassment or discrimination. Failure to comply with this policy may result in cancellation, termination or suspension of contracts or subcontracts currently held and debarment from further such contracts or subcontracts as provided by statute. If you need additional information or training regarding this policy, please contact the Office of Civil Rights at (651) 366-3073.
NOTICE TO ALL PRIME AND SUBCONTRACTORS
REPORTING REQUIREMENTS

1. In order to monitor compliance with Federal Statutes 23 USC 140 and 23 CFR 230, and Minnesota Statutes §363A.36, all prime contractors and subcontractors are required to complete a Mn/DOT Monthly Employment Compliance Report each month for each project (Form EEO-13, sample copy at EEO Pages 20-21.) Prime contractors are also required to complete a Contractor Employment Data Report (Form EEO-12, sample copy at EEO Pages 18-19) once prior to work commencing on the project, unless one has been completed already within the calendar year.

The prime contractor of each project collects Monthly Employment Compliance Reports from each subcontractor who performed work during the month, and completes a Monthly Employment Compliance Report on its own work force. For the month of July only, an EEO-13 is required for each payroll period within the month of July. The prime contractor submits the EEO-13 forms to the Mn/DOT Project Engineer by the 15th day of the subsequent month.

Failure to submit the required reports in the allowable time frame will be cause for the imposition of contract sanctions.

It is the intent of Mn/DOT to implement monitoring measures on each project to ensure that each prime contractor and subcontractor is promoting the full realization of equal employment opportunities. Any project may be scheduled for an in depth on-site contract compliance review. During the scheduled on-site review, the Contractor will be required to provide to Mn/DOT documentation of its "good faith efforts" as shown in EEO Pages 10-13, at 7 a-p of this contract.

2. If a Federally funded project requires On-the-Job-Training (OJT) participation, information is provided in the contract and can be located by referring to the Table of Contents for Division S. (OJT is also listed as a bid line item under Trainees.) When a contract requires OJT participation, the Prime Contractor shall submit a training plan as indicated in the Proposal. The training plan shall include the job classification titles of trainees, planned training activities and the approximate start date of trainees.

3. When a Contractor selects a trainee applicant for OJT, the Contractor completes an On the Job Training Program- Trainee Assignment form (sample copy at EEO Page 23) and submits it to the Contract Compliance Specialist (CCS) assigned to the project for approval. The CCS notifies the Contractor and Project Engineer when the applicant is approved.

4. Hours of work performed by OJT employees shall be documented on a monthly basis on the Certification of On- The-Job Training Hours form, (Mn/DOT Form No. 21860, sample copy at EEO Page 24). The Contractor shall submit the original and one copy to the Project Engineer, and one copy to the CCS assigned to the project.

Do not remove forms from this contract. Please duplicate forms from the copies in this contract, or the Mn/DOT Office of Civil Rights will provide these forms upon request. Please call the Office of Civil Rights, (651) 366-3073.
STANDARD FEDERAL AND STATE EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS
(41 CFR 60-4.3 and Minnesota Statutes 363A.36)

Unless noted, the following apply to both Federal/federally assisted projects and State/state assisted projects. Item 3 applies to Federal/federally assisted projects only.

1. As used in these specifications:
   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
   b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
   d. "Minority" includes:
      (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
      (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
      (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
      (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 ($100,000 for State projects) the provisions of these specifications and the Notice which contains the applicable goals for minority and women participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4, 5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work on the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or
Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7(a) to (p) of these specifications (itemized as 4[a] to [o], Minnesota Rules 5000.3535). The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minorities and utilization the Contractor should (shall, for State or state assisted projects) reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor shall make substantially uniform progress toward its goals in each craft during the period specified. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Federal goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any office of Federal Contract Compliance programs or from Federal procurement contracting officers. State goals are published periodically in the State Register in notice form, and may be obtained from the Minnesota Department of Human Rights or the Minnesota Department of Transportation Office of Civil Rights. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union, with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications and Executive Order 11246 and its associated rules and regulations for Federal or federally assisted projects, and Minnesota Statutes, Section §363A.36 of the Minnesota Human Rights Act, or the rules adopted under the Act for State or state assisted projects.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained according to training programs approved by the Minnesota Department of Human Rights, the Minnesota Department of Labor and Industry, or the United States Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with
these specifications must be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following (referred to in Minnesota Rules 5000.3535 as items 4(a) to (o):

(a) Ensure and maintain, or for State or state assisted projects make a good faith effort to maintain, a working environment free of harassment, intimidation, and coercion at all sites and in all facilities at which the Contractor's employees are assigned to work. For Federal or federally assisted projects, the Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or women individuals working at such sites or in such facilities.

(b) Establish and maintain a current list of minority and women recruitment sources, provide written notification to minority and women recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

(c) Maintain a current file of the names, addresses, and telephone numbers of each minority and woman off-the-street applicant and minority or woman referral from a union, a recruitment source, or community organization and of what action was taken with respect to each individual. If the individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the Contractor may have taken.

(d) Provide immediate written notification to the commissioner of the Minnesota Department of Human Rights for State or state assisted projects, or the director of the Office of Federal Contract Compliance for Federal or federally assisted projects, when the union, or unions with which the Contractor has a collective bargaining agreement, has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

(e) Develop on-the-job training opportunities and/or participate in training programs for the areas which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the State of Minnesota for State or state assisted projects or the Department of Labor, for Federal or federally assisted projects. The Contractor shall provide notice of these programs to the sources compiled under (b).

(f) Disseminate the Contractor's equal employment opportunity policy by providing notice of the policy to unions and training programs and requesting
their cooperation in assisting the Contractor in meeting its equal employment opportunity obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and women employees at least once a year; and by posting the company equal employment opportunity policy on bulletin boards accessible to all employees at each location where construction work is performed.

(g) Review, at least annually, the company's equal employment opportunity policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions; including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the first day of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(h) Disseminate the Contractor's equal employment opportunity policy externally by including it in any advertising in the news media, specifically including minority and women news media, and providing written notification to and discussing the Contractor's equal employment opportunity policy with other contractors and subcontractors with whom the Contractor does or anticipates doing business.

(i) Direct its recruitment efforts, both oral and written, to minority, women, and community organizations; to schools with minority and women students; and to minority and women recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

(j) Encourage present minority and women employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and women youth, both on the site and in other areas of a Contractor's work force.

(k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3. (This requirement applies only to Federal and federally assisted projects.)

(l) Conduct, at least annually, an inventory and evaluation at least of all minority and women personnel for promotional opportunities; and encourage these employees to seek or to prepare for, through appropriate training, such opportunities. (This is Item 4(k) in Minnesota Rules.)

(m) Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually
monitoring all personnel and employment-related activities to ensure that the equal employment opportunity policy and the Contractor's obligations under these specifications are being carried out. (This is item 4(l) in Minnesota Rules.)

(n) Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes. (This is item 4(m) in Minnesota Rules.)

(o) Document and maintain a record of all solicitations or offers for subcontracts from minority and women construction contractors and suppliers, including circulation of solicitations to minority and women contractor associations and other business associations. (This is item 4(n) in Minnesota Rules.)

(p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's equal employment opportunity policies and affirmative action obligations. (This is item 4(o) in Minnesota Rules.)

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7(a) to (p) for Federal or federally assisted projects, and 4(a)-(o) for State or state assisted projects). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7(a) to (p) or 4(a) to (o) of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and women work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor however, is required to provide equal employment opportunity and to take affirmative action for all minority groups both male and female, and all women both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order for Federal or federally assisted projects, or Minnesota Rules for State or state assisted projects, if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order or Minnesota Rules part 5000.3520 if a specific minority group is under-utilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, creed, religion, sex, or national origin. Minnesota Statutes §363A.36, part
5000.3535 (Subp. 7) also prohibits discrimination with regard to marital status, status with regard to public assistance, disability, age, or sexual orientation.

11. The Contractor shall not enter into any subcontract with any person or firm debarred from government contracts under the federal Executive Order 11246 or a local human rights ordinance, or whose certificate of compliance has been suspended or revoked pursuant to Minnesota Statutes, Section §363A.36.

12. The Contractor shall carry out such sanctions for violation of these specifications and of the equal opportunity clause, including suspension, termination, and cancellation of existing contracts as may be imposed or ordered pursuant to Minnesota Statutes, Section §363A.36, and its implementing rules for State or state assisted projects, or Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs for Federal or federally assisted projects. Any contractor who fails to carry out such sanctions shall be in violation of these specifications and Minnesota Statutes, Section §363A.36, or Executive Order 11246 as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications (paragraph 4 in Minnesota Rules 5000.3535), so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of these Specifications or Minnesota Statutes, Section §363A.36 and its implementing rules, or Executive Order 11246 and its regulations, the commissioner or the director shall proceed in accordance with Minnesota Rules part 5000.3570 for State or state assisted projects, or 41 CFR 60-4.8 for Federal or federally assisted projects.

14. The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the company equal employment opportunity policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Minnesota Department of Human Rights or the Government, and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (for example, mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing provided in this part shall be construed as a limitation upon the application of other state or federal laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents.
EQUAL OPPORTUNITY CLAUSE
(41 CFR Part 60-1.4 b, 7-1-96 Edition)

The applicant hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

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

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoffs or termination; rates of pay or other forms of compensation; and, selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the State Highway Agency (SHA) setting forth the provisions of this nondiscrimination clause.

2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

3. The Contractor will send to each labor union or representative of workers with which the Contractor has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. The Contractor will comply with all provisions of Executive Order 11246, Equal Employment Opportunity, dated September 24, 1965, and of the rules, regulations (41 CFR Part 60), and relevant orders of the Secretary of Labor.

5. The Contractor will furnish all information and reports required by Executive Order 11246 and by rules, regulations, and orders of the Secretary of Labor, pursuant thereto, and will permit access to its books, records, and accounts by the Federal Highway Administration (FHWA) and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

6. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract, or with any of such rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts or federally-assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

7. The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraph (1) through (7) in every subcontract or purchase order so that such provisions will be binding upon each subcontractor or vendor, unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246. The Contractor will take such action with respect to any subcontract or purchase order as the Secretary of Labor, SHA, or the Federal Highway Administration (FHWA) may direct as a means of enforcing such provisions, including sanctions for noncompliance. In the event a contractor becomes a party to litigation by a subcontractor or vendor as a result of such direction, the contractor may request the SHA to enter into such litigation to protect the interest of the State. In addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to
Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.
## Minority and Women Employment Goals

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<th>County</th>
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<td>Wabasha</td>
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<tr>
<td>Yellow Medicine</td>
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<td>6.9%</td>
</tr>
<tr>
<td>2. Employment Data</td>
<td>b) Social Security #</td>
<td>c) New Hire (Y or N)</td>
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<tr>
<td>27.</td>
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</tbody>
</table>
This form should be submitted at the Pre-Con to the Project Engineer prior to the start of your first Mn/DOT construction project for the calendar year. (Prime and Subs)

1. **Contractor Name** and Address self-explanatory.

2. **Employment Data** information will coincide with your employment records.
   
   2a. **Name** should be listed First Name, Middle Initial, and Last Name. This will enable Mn/DOT EEO staff to readily identify individuals on all projects.
   
   2b. **Social Security Number** self-explanatory.
   
   2c. **New Hire** is to be indicated with a “Y” for Yes or an “N” for No. “New Hire” is an employee who has not worked for you in any capacity or on any other project within the current calendar year.
   
   2d. **Ethnicity** can be indicated by Black (B), Hispanic (H), American Indian/Alaskan Native (AI), Asian/Pacific Islander (AP), or White (W).
   
   2e. **Gender** is to be indicated with an “M” for Males or an “F” for Females.
   
   2f. **Trade/Foreman, Supervisors, Managers** self-explanatory. List trade that applies unless the employee fits one of the other three categories.
   
   2g. **Level** “A” is for an Apprentice, “J” is for a Journey Worker, and “T” is for a Mn/DOT approved Trainee.

If you have questions about filling out this form, contact the Office of Civil Rights at (651) 366-3073. (Please make copies as you need them.)

This information can be submitted electronically via the web, through Mn/DOT’s Work force Information Tracking Initiative (WITI) Program. To open a free account to gain access to WITI or to find out more about this possibility please contact Mn/DOT’s Office of Civil Rights at (651) 366-3321.
## Minnesota Department of Transportation
### Office of Civil Rights
#### Monthly Employment Compliance Report
### EEO-13

<table>
<thead>
<tr>
<th>1. SP</th>
<th>3. Contractor Name:</th>
<th>4. Prime Subcontractor</th>
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</tbody>
</table>

- **SP#**
- **Federal Tax ID:** (check one)
- **County or City**
- **Street Address:**
- **City, State Zip**

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<thead>
<tr>
<th>2. Reporting Period to 5. Dollar Amount of Contract:</th>
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<table>
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<tr>
<th>6. Percent of Completion:</th>
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### Employment Data
1. Name: Last, First Middle Initial
2. Social Security #
3. New Hire (Y or N)
4. Ethnicity
5. Gender (M or F)
6. Trade/Foreman, Supervisors, Managers
7. Level (A, J or T)
8. Hours Worked This Period

### Contract Goals

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<thead>
<tr>
<th>MINNESOTA GOALS</th>
<th>%OBTAINED</th>
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<tbody>
<tr>
<td>Minority</td>
<td>%</td>
</tr>
<tr>
<td>Women</td>
<td>%</td>
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</tbody>
</table>

### Prepared by: (Signature)

### Reviewed by: (Signature)

<table>
<thead>
<tr>
<th>Print Name:</th>
<th>Title:</th>
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</thead>
<tbody>
<tr>
<td>Print Name:</td>
<td>Title:</td>
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</table>

<table>
<thead>
<tr>
<th>Phone:</th>
<th>Fax:</th>
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</thead>
<tbody>
<tr>
<td>Phone:</td>
<td>Fax:</td>
</tr>
</tbody>
</table>
INSTRUCTIONS FOR EEO-13
MONTHLY EMPLOYMENT COMPLIANCE REPORT

1.-5. Self-explanatory – State Project #, county project is located in, are you a prime or sub, and contract value.

1. Percent of Completion is the estimated percentage of work completed including this reporting period.

2. Employment Data information will coincide with your employment records. All professional, supervisory and managerial hours actually worked on the project site must be included, whether or not they appear on the certified payroll.

7a. Name should be listed Last Name, First Name, and Middle Initial. This will enable Mn/DOT EEO staff to readily identify individuals on all projects.


7c. New Hire is to be indicated with a “Y” for Yes or an “N” for No. “New Hire” is an employee who has not worked for you in any capacity or on any other project within the current calendar year.

7d. Ethnicity can be indicated by Black (B), Hispanic (H), American Indian/Alaskan Native (AI), Asian/Pacific Islander (AP), or White (W).

7e. Gender is to be indicated with an “M” for Males or an “F” for Females.

7f. Trade/Foreman, Supervisors, Managers list the trade that applies unless the employee fits one of the other three categories.

7g. Level “A” is for an Apprentice, “J” is for a Journey Worker, and “T” is for a Mn/DOT approved Trainee.

7h. Hours Worked for This Period will be all hours worked by the individual, for each trade, during the specified reporting period.

3. Contract Goals are the percent of total project hours to be worked by minority and women employees. The goals are determined by the geographic location and source of funding for the project. Projects in excess of $100,000 with any State funding must meet the State Employment Goals. Projects in excess of $10,000 with any Federal funding must meet the Federal Employment Goals. (See chart on EEO Pages 15-16.) Minority and women employee hours shall be distributed evenly throughout the length of the project and in every trade and craft that performs work on the project.

% Obtained is the percent of the total project hours worked by minority and women employees, up to and including this reporting period.

4. Prepared by Contractor Designee is the signature of the prime or subcontractor’s EEO officer/designee.

5. Reviewed by Project Engineer is the signature of the Mn/DOT staff monitoring the project.

If you have questions about filling out this form, contact the Office of Civil Rights at (651) 366-3073. (Please make copies as you need them.)

This information can be submitted electronically via the web, through Mn/DOT’s Work force Information Tracking Initiative (WITI) Program. To open a free account to gain access to WITI or to find out more about this possibility please contact Mn/DOT’s Office of Civil Rights at (651) 366-3321.
# EEO COMPLIANCE REVIEW REPORT

Total Company Workforce in the State of Minnesota  
(For 12 Month Period Preceding July 30th of the previous year)

Name and Address of Contractor

________________________________________

Name and Title of Corporate Officer

________________________________________

Name of EEO Officer

________________________________________

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<tr>
<th>Job Categories</th>
<th>Total Employees</th>
<th>Total Minorities</th>
<th>Blacks</th>
<th>Asian/Pacific Is.</th>
<th>American Indian</th>
<th>Hispanic</th>
<th>On-the-Job Trainees</th>
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<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>M</td>
<td>F</td>
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<tr>
<td>Foremen/Women</td>
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<td>Clerical (field)</td>
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<td>Equipment Operators</td>
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<tr>
<td>Cement Masons</td>
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<td>Electricians</td>
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<tr>
<td>Pipefitters &amp; Plumbers</td>
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<td>Painters</td>
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<td>Laborers</td>
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<td><strong>Total</strong></td>
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<tr>
<td><strong>On-the-Job Trainees</strong></td>
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</table>
JOBS REPORTING

(a) Pursuant to Minn. Stat. Sec. 16A.633, subd. 4, State Entity is required to report the number of jobs created or retained by the Project. To enable State Entity to comply with Minn. Stat. Sec. 16A.633, subd. 4, the Public Entity is required to report the number of jobs created or retained by the Project to State Entity as set forth below.

(b) The Public Entity shall require all of its contractors to report the information below to the Public Entity. The Public Entity shall then report to State Entity. Information can be recorded by State Entity in an Excel document that can be downloaded into the report by Minnesota Management and Budget. Each report must contain the following:

1. The name of the Project.
2. The State Entity’s contract number, if applicable.
3. Reporting period. The appropriate biennium is to be selected.
4. The Agency Number. This will complete the next column with Agency Name.
5. Legal Citation for the Authorization.
6. Department ID responsible for the Project.
7. The Appropriation for the Project.
8. The Appropriation Amount.
9. Project Start Date.
10. Project Completion Date.
11. The County where the Project is located or, if it is located in more than one county, where it is primarily located.
12. Funding Source for Project. The selection will be Trunk Highway Bonds, General Obligation Bonds or General Fund.
13. Job Type. Jobs should be classified as either (i) engineering/professional, (ii) construction, or (iii) other. Manager and supervisor jobs shall be classified as category (i), (ii) or (iii) based on the nature of the work those individuals spent the majority of their time overseeing.
14. Hourly Wages. Jobs should be classified according to the hourly pay ranges below. Overhead or indirect costs or the value of pensions or other benefits should not be included in wages.

   (i) less than $10.00,
   (ii) $10.01 to $15.00,
   (iii) $15.01 to $20.00,
   (iv) $20.01 to $25.00,
   (v) $25.01 to $30.00,
   (vi) $30.01 to $35.00,
   (vii) $35.01 to $40.00, or
   (viii) more than $40.00.

15. Jobs.

   a. Jobs should be classified as either (i) jobs created or (ii) jobs retained; they will not be counted as both. A “job created” is a new position created and filled, or an existing unfilled
position that is filled, because of the Project. A “job retained” means a job at a specific wage level that existed prior to beginning the Project that would have been lost but for the Project. Only jobs in Minnesota should be counted.

b. Jobs should be expressed in “full-time equivalents” (FTE). In calculating an FTE, the number of hours worked during the Reporting Period should be divided by 2,080 (the number of hours representing a full work schedule in a Reporting Period). Jobs should be reported regardless of when the Project or an individual’s employment began or ended. Jobs are to be calculated based on hours worked in the current Reporting Period only, so that reporting is not cumulative.

c. Jobs should not be separated into full-time, part-time, temporary, seasonal, etc. Instead, all hours should be totaled and converted into FTEs as indicated above.

(c) Each contractor will report its workforce and the workforce of its subcontractors active during the Reporting Period. This includes employees actively engaged in the Project who work on the jobsite, in the Project office, in the home office or telecommute from home or other alternative office location. This includes, but is not limited to, any engineering personnel, inspectors, sampling and testing technicians, and lab technicians performing work directly in support of the Project. This does not include material suppliers such as steel, culverts, and guardrail and tool suppliers. Only hours that relate to time spent on the Project should be reported.

(d) The Public Entity must incorporate these reporting requirements into its contracts with its contractors (in part so that contractors can add the requirements to their contracts with subcontractors and impose deadlines on reporting by subcontractors).

(e) To distinguish the jobs reported by contractors that were funded by the Grant, the Public Entity must multiply the job numbers reported by each contractor in each category above by the percentage of total Project costs funded by the Grant (e.g., if the Grant was 40% of total Project costs, the Public Entity should multiply the jobs numbers given in each category by 40% to arrive at the number of jobs funded by the Grant) and it is those numbers that should be reported to State Entity.
MVRRA/MPL Material Reclaimed

The following material shall be retained by MPL/MVRRA. The material shall be neatly stockpiles in Morton MN at a location designated by MPL. MPL will mark which material shall be reclaimed. MPL and Contractor shall provide to MVRRA a written list of all material stockpiled.

None
To the Minnesota Valley Regional Rail Authority

The undersigned has examined the plans, specifications and the location of work described in the proposal package and is fully informed as to the scope of the work and understands that the quantities shown are approximate in nature and may be increased, decreased or omitted.

The undersigned proposes to furnish all necessary machinery, tools, material, labor, and miscellaneous items and supervision to complete the work fully as outlined in the bid package.

We hereby certify that (I am)(we are) the only person(s) interested in this proposal as principal(s); that this proposal is made and submitted without fraud or collusion with any other person, firm or corporation at all; that an examination has been made of the site of the work and the Contract form, with the Plans, Specifications and Special Provisions for the improvement

(I)(We) further propose to furnish a payment bond equal to the Contract amount, and a performance bond equal to the Contract amount, with the aggregate liability of the bond(s) equal to twice the full amount of the Contract if the contract is less than or equal to five million dollars ($5,000,000.00), or if the contract is in excess of five million dollars ($5,000,000.00) the aggregate liability shall be equal to the amount of the contract, as security for the construction and completion of the improvement according to the Plans, Specifications and Special Provisions as provided in Mn/DOT 1305.

(I)(We) further propose to do all work according to the Plans, Specifications and Special Provisions, and to renew or repair any work that may be rejected due to defective materials or workmanship, before completion and acceptance of the Project by the Minnesota Valley Regional Rail Authority.

(I)(We) agree to all provisions of Minnesota Statutes, Section 181.59.

(I)(We) further propose to begin work and to prosecute and complete the same according to the time schedule set forth in the Special Provisions for the improvement.

(I)(We) assign to the Minnesota Valley Regional Rail Authority all claims for overcharges as to goods and materials purchased in connection with this Project resulting from antitrust violations that arise under the antitrust laws of the United States and the antitrust laws of the State of Minnesota. This clause also applies to subcontractors and first tier suppliers under this Contract.
The bidder shall commence work on June 11, 2018 or within eight (8) Calendar Days after the date of Notice of Contract Approval, whichever is later. Construction operations shall not commence prior to Contract Approval. All rail work shall be completed by September 15, 2018. All work for the entire Project must be completed on or before October 31, 2018.

The undersigned understands that all pay items listed will have a unit price filled in by the bidder, extended and totaled to form a complete bid. The bid will be awarded to the lowest, responsible bidder.

The undersigned understands that the following items are required submittals with the bid:

1. Title Sheet of the Proposal
2. The completed “Schedule of Prices”, with all changes made in ink and initialed.
3. Proposal, with signature and all addenda acknowledged
4. Form CM 32-34 (EEO Clause)
5. Non-Collusion Declaration
6. Bid Bond
7. Schedule of equipment proposed to be used on the project
8. List of previous rail relay projects completed in the past 5 years. List to include length of relay, location, company, and contact person and information.
9. Proposed starting date
10. Secretary of State Certificate to do business in Minnesota.
11. Proof of compliance with FRA 213.7(a) and 213.7(c)

Submittal of one original hard copy of the Bid Proposal is required by 2:00 pm, Central Standard Time on June 4, 2019. The Bid Proposal should be marked MVRRA - Rail Replacement Project, and directed to the following address.

Julie Rath
MVRRA Administrator
200 South Mill Street
Redwood Falls, MN 56283
Bids will be publicly opened at the address listed above immediately following the submittal deadline. The bidder understands that the Rail Authority reserves the right to reject any and all bids.

COMPANY NAME: ________________________________

COMPANY ADDRESS: ________________________________

BIDDERS NAME: ________________________________
TITLE: ______________

BIDDERS SIGNATURE: ________________________________
DATE: ______________
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<th></th>
<th>Description</th>
<th>U/M</th>
<th>Quantity</th>
<th>Unit Price</th>
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<td>BASE BID TOTAL</td>
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Contract award will be based on the lowest responsible base bid total. Alternate work will be awarded only if MVRRA has sufficient budget.

Contractor______________________________
# Schedule of Contractor’s Equipment

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<tr>
<th>Name</th>
<th>Model Number</th>
<th>Age</th>
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## Previous Contracts in Last 5 Years

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<th>Owner</th>
<th>Location</th>
<th>Type of Work</th>
<th>Contact Person (include email or phone)</th>
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**Proposed Start Date**

____________________________
PERFORMANCE ON PREVIOUS CONTRACTS

THE FOLLOWING CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS SHALL BE EXECUTED BY THE BIDDER.

The bidder hereby certifies the he/she has___, has not___, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114 or 11246, and that he/she has __, has not __, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

__________________________
(Company)

By: ____________________________

__________________________
(Title)

Date: __________________________

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41CFR 60-1.7(b)(1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are exempt from the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.
NON-COLLUSION AFFIDAVIT

The following Non-Collusion Affidavit shall be executed by the bidder:

State Project No.  MVRRA 2018-01

County of__________________________

I, , do state under penalty of__________________________
(name of person signing this affidavit)
perjury under 28 U.S.C. 1746 of the laws of the United States:

(1) that I am the authorized representative of __________________________
(name of person, partnership or corporation submitting this proposal)
and that I have the authority to make this affidavit for and on behalf of said bidder;

(2) that, in connection with this proposal, the said bidder has not either directly or indirectly entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding;

(3) that, to the best of my knowledge and belief, the contents of this proposal have not been communicated by the bidder or by any of his/her employees or agents to any person who is not an employee or agent of the bidder or of the surety on any bond furnished with the proposal and will not be communicated to any person who is not an employee or agent of the bidder or of said surety prior to the official opening of the proposal, and

(4) that I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Signed: ____________________________
(bidder or his authorized representative)

Letting Date: ____________________________
MINNESOTA VALLEY REGIONAL RAIL AUTHORITY

PROPOSAL BOND

KNOW ALL MEN BY THESE PRESENTS, that We,

________________________________________, as Principal, and,
________________________________________, as Surety, are jointly and severally held and firmly
bound unto the Minnesota Valley Regional Rail Authority (MVRRA), as Obligee, in the sum
of five percent (5%) of the total amount of the proposal price.

The CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall be
awarded a contract, upon the accompanying proposal dated________________for
the performance of MVRRA PROJECT ________________________________

________________________________________

and shall, within the time stated in the proposal, enter into a contract for the
performance of the work and give bond as required by law, then this obligation shall
be void; otherwise, the Principal and Surety shall pay unto the Obligee the amount of
this bond, not as a penalty, but as liquidated damages sustained by the Obligee as the
result of such failure on the part of the Principal to execute said contract and bond.

SIGNATURES

Date, 20________________________  ____  (Name of
Contractor/Principal)

By:_______

________________________________________
(Officer)

By:_______

________________________________________
(Officer)

______________________________
Name of Surety

By:______________________________  (Attorney-in-Fact)

(Surety Corporate Seal)
ACKNOWLEDGEMENT IN A REPRESENTATIVE CAPACITY
(Corporation, LLC, Partnership or Other Entity)

STATE OF __________________________

COUNTY OF _______________________

This instrument was acknowledged before me on ____________________ by ______________________________.

(date) (name)

and ______________________________ as ______________________________ and ______________________________

(name) (title) (title)

of ______________________________.

(name and designation of party on behalf of whom the instrument was executed)

Notary Signature: ______________________________

Title: Notary

Commission Expiration: ______________________________

(Notary Stamp/Seal)

ACKNOWLEDGEMENT IN AN INDIVIDUAL CAPACITY

STATE OF __________________________

COUNTY OF _______________________

This instrument was acknowledged before me on ____________________ by ______________________________.

(date) (name)

Notary Signature: ______________________________
Title: Notary

Commission Expiration: ____________________________

(Notary Stamp/Seal)
ACKNOWLEDGEMENT OF SURETY

STATE OF ______________________
COUNTY OF ______________________

This instrument was acknowledged before me on ___________ by ___________.

(date) (name)

as Attorney-in-Fact of _________________________________.

(name of surety)

Notary Signature: ________________________________
Title: Notary
Commission Expiration: ________________________________

(Notary Stamp/Seal)

NOTICE TO PERSONAL SURETIES: Bond will not be accepted unless accompanied by a sworn financial
statement of each of the sureties.

NOTICE TO CORPORATE SURETIES: This bond will not be accepted unless executed by a Minnesota
agent, or a duly licensed non-resident-producer, or attorney-in-fact
whose name and address must be noted below.

Full Name of Surety Company ________________________________
Home Office Address (Street) ________________________________
City, State and Zip Code ________________________________
Name of Attorney-in-Fact ________________________________
Name of Local Agent and Agency or Non-Resident Producer and Agency ________________________________
Address of Local Agency or Non-Resident Producer Agency (street) ________________________________
City, State and Zip Code ________________________________

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