



PLANS AND SPECIFICATIONS FOR

City of Moorhead Parks Dept. Sewer and Water Installation

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: Thomas E. Trowbridge Printed Name: Thomas E. Trowbridge

Date: 4-26-2019 Reg. No.: 25771

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City of Moorhead Parks Dept. – Sewer and Water Installation

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INSTRUCTIONS TO BIDDERS

Submitting Proposals:

Bid Date: 10:00 A.M. on May 10, 2019
Bid Opening Location: Moorhead City Hall - Basement Lunch Room
Deliver Bids To: Moorhead City Hall - Engineering Dept., 4th Floor or the bid opening location
Sealed Bid Envelopes: Plainly mark "City of Moorhead Parks Dept. – Sewer and Water Installation"
Address to City of Moorhead, Engineering Dept., PO Box 779, Moorhead, MN 56561

All bidders must be on the official plan holders list to be able to submit a bid. The City will allow computer generated/printed proposals.

All bids must be made upon blank forms of proposal attached hereto and the prices of the work proposed shall be given in plain or typed figures. In case of discrepancy between a unit bid price and the extension, the unit price shall govern. The proposal must be signed in ink by the bidder. **All papers bound with or attached to the "Bid Packet" are a necessary part thereof and must not be detached.** The blank spaces in the proposal form must be correctly filled in where indicated for each and every item, with totals and grand totals. Any proposal, which is incomplete, obscure, or irregular, may be rejected. A bid shall be rejected if it contains any alterations or erasures which are not corrected as follows: 1) the alteration or erasure must be crossed out and the correction thereof printed in ink or typewritten adjacent thereto; and 2) the correction must be initialed in ink by the person signing the bid proposal.

Each bidder, when requested by the City, shall submit the following information and data upon 48 hours notice:

1. The location of bidders' permanent place of business.
2. A statement of equipment, which the bidder proposes to use on the project.
3. A financial statement showing assets and liabilities as of a time longer than six months previous to the time of bidding, and financial references.
4. A statement listing projects of a similar nature, which the bidder has actually constructed.
5. A list of the remaining proposed contractors and suppliers not listed in Section 00325, along with proposed materials to be used on the project.

Bidder's Responsibility for Conditions of Work and Site:

Bidders shall make all necessary investigations to satisfy themselves as to the conditions and nature of the soil and other characteristics of the proposed site or sites of the project, and otherwise inform themselves of all facilities or difficulties that may be encountered in the complete execution of all the work included in or implied by the contract, in accordance with the plans and specifications. Bidders are required to examine all drawings and data mentioned in the specifications, contract and proposal as being on file in the office of the City Clerk of Moorhead for examination by bidders. No plea of ignorance of conditions that exist, or of conditions or difficulties that may be encountered in the execution of the work under investigations will be accepted as an excuse for failure or omission on the part of the contract, specifications and plans, or will be accepted as a basis for any claims whatsoever for added compensation. Upon application, all available information in the possession of the City Engineer will be shown to the bidders but the correctness of any such information is not guaranteed.

Unit Quantities:

The schedule of unit quantities contained in the Form of Proposal, although estimated with as much accuracy as possible in advance, is approximate only and is assumed only for the purpose of comparing bids and forming a basic contract price for the work contemplated. The quantities on which payments will be made to the contractor are to be determined by measurements of the work actually performed by the contractor as specified by the contract, plans and specifications. Bidders shall not at any time after the submission of their bids dispute or complain of the aforementioned schedule of quantities or the character of the work to be done, and shall not make any claims for damage for loss of profits because of a difference between the quantities assumed in the Form of Proposal and the quantities of work actually performed.

-END OF SECTION-

PROPOSAL FOR VILLAGE GREEN DRIVE SEWER AND WATER SERVICE INSTALLATION

Spec No.	Item	Unit	Qty	Unit Cost	Total Cost
2021.501	MOBILIZATION	LS	1		
2104.502	SALVAGE TRAFFIC BARRIER	LF	18		
2104.502	SALVAGE CLUSTER BOX UNIT	EA	3		
2104.502	SALVAGE CHAIN LINK FENCE	LF	32		
2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LF	100		
2104.503	REMOVE CURB & GUTTER	LF	20		
2104.518	REMOVE BITUMINOUS PAVEMENT	SY	110		
2211.503	AGGREGATE BASE CLASS 5 , MODIFIED (CV)	CY	15		
2504.604	4" POLYSTYRENE INSULATION	SY	33		
2531.503	CONCRETE CURB & GUTTER - TYPE C (MOUNTABLE)	LF	20		
2540.602	INSTALL CLUSTER BOX UNIT	EA	3		
2557.603	INSTALL CHAIN LINK FENCE	LF	32		
2563.601	TRAFFIC CONTROL	LS	1		
2564.502	INSTALL TRAFFIC BARRIER	LF	18		
2573.501	STORM DRAIN INLET PROTECTION	EA	1		
2503.603	6" PVC SDR 26 PIPE SEWER	LF	225		
2503.602	6" x 24" PVC SADDLE WYE	EA	1		
2504.602	1" CORPORATION STOP	EA	1		
2504.602	1" CURB STOP & BOX	EA	1		
2504.603	1" TYPE K COPPER PIPE	LF	205		
2506.602	6" PVC SANITARY SEWER SERVICE CLEANOUT	EA	2		
TOTAL BID					

FORM OF PROPOSAL SIGNATURE SHEET

Accompanying this proposal is a certified check, cash or bidder's bond in the amount of 5% of the bid which shall serve as a guaranty that, should this proposal be accepted by the City, the undersigned will enter into a Contract with the City for the performance of the work at the unit prices stipulated herein.

The undersigned further agrees that within ten (10) days from the date of "Notice of Award" of this bid, he or they will execute the Contract and furnish to the City of Moorhead, Minnesota, satisfactory Contract Bonds, in conformance with MSA 574.26 for the full amount of the proposal, guaranteeing the faithful performance of the work and the payment of bills; and that, within said ten (10) days, he or they shall furnish evidence or certification of all necessary or required approval of the City Attorney.

The undersigned further agrees that he or they will begin work on this project within fifteen (15) days of the issuance of the Notice to Proceed and shall complete the work as set forth in the Special Provisions.

In submitting this bid, it is understood that the right is reserved by the City to reject any or all bids and to waive informalities. It is further understood that this bid may not be withdrawn for a period of at least **30 days** from the date of the opening of the bids, unless otherwise determined by the City Council.

The Undersigned hereby acknowledges receipt of all addenda:

DATE: _____

FIRM NAME: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

BY: _____

TITLE: _____

SECTION 00325 – CERTIFICATION OF COMPLIANCE OF RESPONSIBLE CONTRACTORS

PART 1 – GENERAL

- 1.1 A contractor responding to this solicitation document shall submit to the City a signed statement under oath by an owner or officer verifying compliance with each of the minimum criteria in Minnesota Statutes, section 16C.285, subdivision 3. The term 'responsible contractor' as used in this solicitation document means a contractor as defined in Minnesota Statutes, section 16C.285, subdivision 2. Any prime contractor or subcontractor that does not meet the minimum criteria in Minnesota Statutes, section 16C.285, subdivision 3 or fails to verify that it meets those criteria is not a responsible contractor and is not eligible to be awarded the construction contract for the project or to perform work on the project. A false statement under oath verifying compliance with any of the minimum criteria shall render the prime contractor or subcontractor that makes the false statement ineligible to be awarded a construction contract on the project and may result in termination of a contract awarded to a prime contractor or subcontractor that submits a false statement. A prime contractor shall submit to the City upon request copies of the signed verifications of compliance from all subcontractors of any tier pursuant to Minnesota Statutes, section 16C.285, subdivision 3, clause 7. Changes to the information listed in the subsequent sections may only be made with the approval of the Engineer.

PART 2 – PRIME CONTRACTOR

- 2.1 In submitting this bid, the bidder certifies that they intend to act as the prime contractor in the construction of this project, and that at the time of the submission of the proposal they intend to complete all work with their own forces with the exception of the contract items identified to be completed by subcontractors as identified in Part 3 of this form below. The bidder further certifies that they meet the definition of a 'responsible contractor' as defined in Minnesota Statutes, section 16C.285, subdivision 2.

PART 3 – SUBCONTRACTORS

- 3.1 The undersigned bidder hereby certifies that the following is a complete and accurate listing of subcontractors proposed to be used in the construction of this project at the time this proposal was submitted, and that the bidder has received signed verifications of compliance with Minnesota Statutes, section 16C.285, subdivision 3 from each of the proposed subcontractors. Bidder further certifies that should any additional subcontractors be proposed for this project subsequent to submittal of this bid, that bidder shall first obtain the required certification of compliance as a responsible contractor from the proposed subcontractor. Bidder shall keep a copy of all responsible contractor certification forms on file in said bidder's office until final payment has been made, and shall supply copies of the certification forms to the Engineer upon request.

Name of First-Tier Subcontractor

I hereby certify that I am an officer or owner of _____, hereinafter referred to as CONTRACTOR, and that as of the date this bid was submitted, CONTRACTOR is in compliance with each of the minimum criteria in Minnesota Statutes, section 16C.285, subdivision 3.

BY: _____ DATE: _____

TITLE: _____

-END OF SECTION-

SECTION 00330 – CERTIFICATION OF COMPLIANCE OF RESPONSIBLE CONTRACTORS

PART 1 – GENERAL

- 1.1 The following information must be completed and submitted with the bid. Failure to complete and submit this form with the bidding documents may result in rejection of the bid. Changes to the information listed in the subsequent sections may only be made with the approval of the Engineer.

PART 2 – SUPPLIERS

- 2.1 The undersigned bidder hereby certifies that the materials suppliers identified below are the suppliers whose quotes were relied upon in the preparation of this bid proposal for the material items requested below. Bidder further certifies that no changes will be made to the proposed materials suppliers identified below without the express, written approval of the Engineer. Bidder shall keep a copy of all of the materials suppliers' quotes on which this proposal was made on file in said bidder's office until final payment has been made, and may be required to show this information to the Engineer in the event that they propose to change suppliers after the bidding date. Bidder shall require their first-tier subcontractors to do the same.

Material	Name of Material Supplier

I hereby certify that I am an officer or owner of _____, hereinafter referred to as CONTRACTOR, and that as of the time this bid was submitted, the materials suppliers identified above were the suppliers whose quotes this BID PROPOSAL was based upon.

BY: _____ DATE: _____

TITLE: _____

-END OF SECTION-

**FORM OF CONTRACT
CITY OF MOORHEAD, MINNESOTA**

City of Moorhead Parks Dept. – Sewer and Water Installation

THIS AGREEMENT made and entered into this _____ day of _____, by and between the City of Moorhead, Minnesota, hereinafter called the "City" and _____, hereinafter called the "Contractor".

WITNESS that the City and the Contractor, for the consideration hereinafter stated agrees as follows:

ARTICLE I. The Contractor agrees to provide all the materials, equipment, labor, and services necessary for the complete construction of all work shown on the drawings and described in the specifications prepared by the City Engineer of Moorhead for the following:

City of Moorhead Parks Dept. – Sewer and Water Installation

and to do everything required by this agreement and the Contract Documents.

ARTICLE II. The Contractor agrees that the work contemplated by this Contract shall be completed by the dates as listed in the Special Provisions, both substantial and final.

ARTICLE III. The City agrees to pay and the Contractor agrees to receive and accept the prices bid for the unit or lump sum items as set forth in the conformed copy of the Form of Proposal hereto attached, which prices shall conform to those in the accepted Contractor's proposal on file in the office of the City Clerk of Moorhead, the aggregate of which prices, based on the approximate schedule of quantities is estimated to be \$_____.

ARTICLE IV. The Contract Documents shall consist of the following component parts:

1. Advertisement for Bids
2. Instruction to Bidders
3. Form of Proposal
4. General Conditions
5. Special Provisions
6. Specifications
7. Plans and Drawings which are attached to the specifications.
8. This instrument

THIS INSTRUMENT, together with the documents hereinabove mentioned, for the Contract, and all documents are as fully a part of the Contracts as is attached hereto or herein repeated.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed as of the day and year first above written

(Company Names

Company Name

By:

Name

Title

Date:

In the Presence of:

Name

Title

The City of Moorhead, Minnesota

Johnathan Judd, Mayor

Christina Volkers, City Manager

Attest:

Lance Beachem, City Clerk

Approved by City Council on: 9/14/15

The Contractor is required to complete this work schedule form before final approval of the contract bid will be accepted.

The dates on the work schedule can be changed after the start of the project only because of adverse weather conditions, unavoidable delays in materials delivery, design changes in the project, or other justifiable reason subject to the approval of the City Engineer.

<u>Major Work Item</u>	<u>Starting Date</u>	<u>Estimated Completion Date</u>
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Proposed Schedule will be submitted to the City of Moorhead Engineering Department 3 days prior to the pre-construction meeting.

If a section contains more than one work area, a starting date and an estimated completion date should be provided for each area within the section.

The above schedule does not in any way alleviate the Contractor's responsibility to complete the project section by the date specified in the Special Provisions.

Contractor's Signature

Title

Performance Bond

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

CONTRACTOR (Name and Address):

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

OWNER (Name and Address):

CONTRACT

Date:
Amount:
Description (Name and Location):

BOND

Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____
Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____
Name and Title:
(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____
Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____
Name and Title:

EJCDC No. 1910-28-A (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

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

2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.

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

3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and

3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in paragraph 3.1; and

3.3. The OWNER has agreed to pay the Balance of the Contract Price to:

3.3.1. The Surety in accordance with the terms of the Contract;

3.3.2 Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or

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

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or

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

4.4.1 After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or

4.4.2 Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied

liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

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

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

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

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

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.

12.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY--Name, Address and Telephone)
AGENT or BROKER: OWNER'S REPRESENTATIVE (Engineer or other party):

Payment Bond

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

CONTRACTOR (Name and Address):

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

OWNER (Name and Address):

CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

EJCDC No. 1910-28-B (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:
 - 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2. Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the addresses described in paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.
3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until:
 - 4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the addresses described in paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2. Claimants who do not have a direct contract with the CONTRACTOR:
 1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR had indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to the Surety and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.
5. If a notice required by paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety, that is sufficient compliance.
6. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 6.1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 6.2. Pay or arrange for payment of any undisputed amounts.
7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the Work.

9. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

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

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

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

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a Subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the CONTRACTOR and the CONTRACTOR's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

15.3. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY--Name, Address and Telephone)
AGENCY or BROKER: OWNER'S REPRESENTATIVE (Engineer or other party):

NON-COLLUSION AFFIDAVIT

The following Non-Collusion Affidavit shall be executed by the bidder:

State Project No: _____

Federal Project No: _____

City Project No: _____

STATE OF MINNESOTA)
) ss
COUNTY OF CLAY)

I, _____, being first duly sworn, do depose
(Name of Person Signing this Affidavit)

and say:

- (1) that I am the authorized representative of:

(Individual name, 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 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 the 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

Certification of Compliance with the Minnesota Worker's Compensation Law

Name: _____ Doing Business As: _____
Print your full name Business name, if different than yours

Address: _____
Mailing Address City State Zip

Telephone Number: _____ Type of business: _____
(Example: bldg construction; trucking)

Worker's Compensation Insurance Company Name:

Print full name of Insurance Company (Not your Agent)

Policy Number: _____
Full number

Dates of Coverage: _____ through _____
Starting date Ending date

-OR-

I certify that I am not required to carry worker's compensation insurance because:

(check one)

_____ I am a sole proprietor or partner and I have no employees.

_____ I have no employees who are covered by the worker's compensation law. (Only employees specifically exempted by statute are not covered by the worker's compensation law. These included: Spouse; Parent; Children, regardless of age; and farm labor employees of a family farm that spent less than \$8,000 for labor in the previous calendar year. All other workers whose work activity is controlled by the employer must be covered.)

I understand that the information provided about will be verified by the Minnesota Department of Labor and Industry, and that I am subject to a \$1,000 penalty if the information provided is false. I certify that the information proved is accurate and complete.

Signed by: _____ Date: _____

This Form must Be Completed and Submitted with Your Proposal

Withholding Affidavit for Contractors**IC-134**

This affidavit must be approved by the Minnesota Department of Revenue before the state of Minnesota or any of its subdivisions can make final payment to contractors.

Please type or print clearly. This will be your mailing label for returning the completed form.

Type or print

Company name		Daytime phone ()	Minnesota tax ID number
Address		Total contract amount \$	Month/year work began
City	State	Zip Code	Amount still due \$
			Month/year work ended

Project information

Project number	Project location		
Project owner	Address	City	State Zip code
Did you have employees work on this project? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, who did the work?			

Contractor type

Check the box that describes your involvement in the project and fill in all information requested.

☐ **Sole contractor**
☐ **Subcontractor**

Name of contractor who hired you

Address

☐ **Prime contractor**—If you subcontracted out any work on this project, all of your subcontractors must file their own IC-134 affidavits and have them certified by the Department of Revenue *before* you can file your affidavit. For each subcontractor you had, fill in the information below and attach a copy of each subcontractor's certified IC-134. If you need more space, attach a separate sheet.

Business name

Address

Owner/Officer

Sign here

I declare that all information I have filled in on this form is true and complete to the best of my knowledge and belief. I authorize the Department of Revenue to disclose pertinent information relating to this project, including sending copies of this form, to the prime contractor if I am a subcontractor, and to any subcontractors if I am a prime contractor, and to the contracting agency.

Contractor's signature

Title

Date

Mail to: MN Dept. of Revenue, Withholding Division, Mail Station 6610, St. Paul, MN 55146-6610

Certificate of Compliance

Based on records of the Minnesota Department of Revenue, I certify that the contractor who has signed this certificate has fulfilled all the requirements of Minnesota Statutes 290.92 and 290.97 concerning the withholding of Minnesota income tax from wages paid to employees relating to contract services with the state of Minnesota and/or its subdivisions.

Department of Revenue approval

Date

Instructions for Form IC-134

Who must file

If you are a prime contractor, a contractor or a subcontractor who did work on a project for the state of Minnesota or any of its local government subdivisions — such as a county, city or school district — you must file Form IC-134 with the Minnesota Department of Revenue.

This affidavit must be certified and returned before the state or any of its subdivisions can make final payment for your work.

If you're a prime contractor and a subcontractor on the same project

If you were hired as a subcontractor to do work on a project, and you subcontracted all or a part of your portion of the project to another contractor, you are a prime contractor as well. Fill out both the subcontractor and prime contractor areas on a single form.

When to file

The IC-134 cannot be processed until you finish the work. If you submit the form before the project is completed, it will be returned to you unprocessed.

If you are a subcontractor or sole contractor, send in the form when you have completed your part of the project.

If you are a prime contractor, send in the form when the entire project is completed and you have received certified affidavits from all of your subcontractors.

How to file

If you have fulfilled the requirements of Minnesota withholding tax laws, the Department of Revenue will sign your affidavit and return it to you.

If any withholding payments are due to the state, Minnesota law requires certified payments before we approve the IC-134.

Submit the certified affidavit to the government unit for which the work was done to receive your final payment. If you are a subcontractor, submit the certified affidavit to your prime contractor to receive your final payment.

Where to file

Mail to:

MN Dept. of Revenue
Withholding Tax Division
Mail Station 6610
St. Paul, MN 55146-6610

Minnesota tax ID number

You must fill in your Minnesota tax ID number on the form. You must have a Minnesota tax ID number if you have employees who work in Minnesota.

If you don't have a Minnesota ID number, you must apply for one. Call (651) 282-5225 or 1-800-657-3605.

If you prefer, you can get an application (Form ABR) from our web site, or by calling or writing us.

If you have no employees and did all the work yourself, you do not need a Minnesota tax ID number. If this is the case, fill in your Social Security number in the space for Minnesota tax ID number and explain who did the work.

Use of information

The Department of Revenue needs all the information to determine if you have met all state income tax withholding requirements. If all required information is not provided, the IC-134 will be returned to you for completion.

All information on this affidavit is private by state law. It cannot be given to others without your permission, except to the Internal Revenue Service, other states that guarantee the same privacy and certain government agencies as provided by law.

Information and assistance

If you need help or more information to complete this form, call (651) 282-9999 or 1-800-657-3594.

Additional forms are available on our website at www.taxes.state.mn.us or by calling (651) 296-4444 or 1-800-657-3676. You can also write for forms at the following address:

Minnesota Tax Forms
Mail Station 1421
St. Paul, MN 55146-1421

TTY users may contact the department through the Minnesota Relay Service at 1-800-627-3529.

We'll provide information in an alternative format upon request to persons with disabilities.

Exemption from Surety Deposits for Non-Minnesota Contractors

SD-E

Please type or print clearly. This will be your mailing label for returning the form to you.

Contractor information

Contractor			Total contract amount \$	Minnesota ID number
Address			Contact person	Daytime phone ()
City	State	Zip Code	Contract starting date	Projected completion date
Business type (check one):			<input type="checkbox"/> Corporation <input type="checkbox"/> Partnership	<input type="checkbox"/> S corporation <input type="checkbox"/> Sole proprietor

Project information

Name of business or government agency			Contact person	Daytime phone ()
Contract owner's address	City	State	Zip Code	Project number
Project location address	City	State	Zip code	

Reason for exemption

I request exemption from surety deposits under Minnesota law (MS 290.9705) for the following reason (check one and complete the information requested):

- ☐ I have a cash surety or a bond secured by an insurance company licensed in Minnesota. The bond must be 8 percent of the total contract amount. **Attach a copy of the bonding agreement.**
- | | | | |
|-----------------|-------|----------|--|
| Bonding company | | | Bonding agent |
| Address | | | Daytime phone
() |
| City | State | Zip code | Period of bond (month/day/year)
From / / To / / |
- ☐ I have done construction work in Minnesota during the past three calendar years and have fully complied with Minnesota law regarding Minnesota income, sales and withholding taxes.
- ☐ I am performing work for a government agency and have a payment and performance bond.
- ☐ I am performing work for a government agency and have a cash surety issued by a state bank, national bank, or savings and loan association doing business in Minnesota.

Sign here

I declare this information is true and complete to the best of my knowledge and belief. I authorize the Department of Revenue to send a copy of this form to the contract owner and discuss this case and related taxes with the bonding company.

Contractor's signature	Title	Date
------------------------	-------	------

Mail to: MN Dept. of Revenue, Mail Station 6501, St. Paul, MN 55146-6501

Department of Revenue Approval

The above-named out-of-state contractor is exempt from the surety requirements of Minnesota Statute 290.9705 for this project.

Department of Revenue approval

Date

Instructions for Form SD-E

Before you start

You must have a Minnesota tax ID number from the Department of Revenue to request this exemption.

If you don't have one, apply for one by calling (651) 282-5225 or 1-800-657-3605. An application form (Form ABR) is also available on our website at www.taxes.state.mn.us.

How to apply

To apply for an exemption from Minnesota surety deposits, file Form SD-E before the project is started. You must file a separate application for each project that is over, or expected to go over, \$100,000.

Mail this form and any required attachments to the address on the front.

If you're approved

If we approve the exemption, we'll sign the bottom of this form and return it to you. Make a copy for your records and give the original to the business for whom you are doing the work.

If you're not approved

If we determine you're not eligible for exemption, 8 percent of each payment made to you must be withheld by the business for whom you are doing the work and deposited with the Department of Revenue.

To apply for a refund, complete Form SD-R, *Refund of Surety Deposits for Non-Minnesota Contractors*. When the project is complete, and we determine that you have complied with Minnesota income, withholding and sales tax laws, you'll receive a refund plus interest at the current rate required by law.

Use of information

All information on this form is required except for your phone number.

All information is private by state law. It cannot be given to others without your permission, except to the Internal Revenue Service, other states that guarantee the same privacy, the contract owner or bonding company, and certain government agencies as provided by law.

Information and assistance

If you need help or additional information to fill out this form, call (651) 282-9999 or 1-800-657-3594. A fact sheet on surety deposit requirements (Fact Sheet #12) is also available upon request.

TTY users may contact the department through the Minnesota Relay Service. Call 1-800-627-3529; ask for 1-800-657-3594.

We'll provide information in an alternative format upon request to persons with disabilities.

CITY OF MOORHEAD GENERAL CONDITIONS

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SECTION I
BIDDING REQUIREMENTS AND CONDITIONS

1-1 Contents of Proposal Form:

The proposal form will state the location and description of the contemplated construction, and will include a schedule of items showing the estimated quantities of the various kinds and classes of work for which bid prices are invited. The proposal form will state the time in which the work must be completed, the amount and nature of the Proposal Form required, and the date, time and place of the opening of Proposals.

Bound within the proposal forms will be any Special Provisions and other supplementary requirements. **All papers therefrom or altered without specific authorization.** For Federal Aid projects, the entire specification booklet shall be submitted with the proposal form. For other projects, the proposal form submittal shall include the List of Proposed Subcontractors and Materials Suppliers, the Non-Collusion Affidavit and the Certification of Compliance with Minnesota Worker's Compensation Law. Plans, specifications, and other documents designated in the Proposal are also a part thereof, whether attached or not, and whether or not they are required to be submitted with the bid proposal.

1-2 Unit Quantities:

The schedule of unit quantities contained in the Proposal Form, although estimated with as much accuracy as possible in advance, is approximate only and is assumed only for the purpose of comparing bids and forming a basic contract price for the work contemplated. The quantities on which payments will be made to the contractor are to be determined by measurements of the work actually performed by the contractor as specified by the contract, plans and specifications. Bidders shall not at any time after the submission of their bids dispute or complain of the aforementioned schedule of quantities or the character of the work to be done, and shall not make any claims for damage for loss of profits because of a difference between the quantities assumed in the Proposal Form and the quantities of work actually performed.

1-3 Examination of Proposed Work:

Bidders shall make all necessary investigations to satisfy themselves as to the conditions and nature of the soil and other characteristics of the proposed site or sites of the project, and otherwise inform themselves of all facilities or difficulties that may be encountered in the complete execution of all the work included in or implied by the contract, in accordance with the plans and specifications.

Bidders are required to examine all drawings and data mentioned in the specifications, contract and proposal as being on file in the office of the City Engineer of Moorhead for examination by bidders. No plea of ignorance of conditions that exist, or of conditions or difficulties that may be encountered in the execution of the work under any contract, as a result of failure to make necessary examinations and investigations or omission on the part of the contract, specifications and plans, will be accepted as an excuse for failure or as a basis for any claims whatsoever for added compensation. Upon application, all available information in the possession of the City Engineer will be shown to the bidders but the correctness of any such information is not guaranteed.

1-4 Submitting Proposals:

All bids must be made upon blank forms of proposal attached hereto and the prices of the work proposed shall be given in plain or typed figures. The Contractor may substitute computer generated proposals in accordance with MnDOT 1206.3. The proposal must be signed in ink by the bidder. **All papers bound with or attached to the proposal form are a necessary part thereof and must not be detached.** The blank spaces in the proposal form must be correctly filled in where indicated for each and every item, with totals and grand totals. Any proposal that is incomplete, obscure, or irregular may be rejected. A bid shall be rejected if it contains any alterations or erasures which are not corrected as follows: 1) The alteration or erasure must be crossed out and the correction thereof printed in ink or typewritten adjacent thereto; and 2) The correction must be initialed in ink by the person signing the bid proposal. All bids, when properly made and signed, shall be placed in a sealed envelope which envelope shall be plainly marked with the project name and Eng. No. and addressed to: the Office of the City Engineer, City of Moorhead; PO Box 779; Moorhead, MN 56561.

1-5 Contractor Resume:

Each bidder, when requested by the City, shall submit the following information and data upon 48 hours notice:

- A) The location of bidder's permanent place of business.

- B) A statement of equipment, which the bidder proposes to use on the project
- C) A financial statement showing assets and liabilities as of a time longer than 6 months previous to the time of bidding, and financial references.
- D) A statement listing projects of a similar nature, which the bidder has actually constructed.
- E) A list of subcontractors, materials, and suppliers to be used on the project.

1-6 Substitute Materials:

Wherever in the specifications any material, device or equipment is referred to by trade name, catalog reference or a combination of both is followed by the words "or approved equal", that material, device or equipment shall refer to the grade or quality required and shall in no way eliminate materials or products of equally desirable characteristics which will meet the requirements of the specifications. The words "approved equal" shall mean suitable, acceptable, proper or satisfactory in the judgment of the Owner and the Engineer.

SECTION II AWARD AND EXECUTION OF CONTRACT

2-1 Award of Contract:

The award of contract, if it be awarded, will be made within 60 calendar days after the opening of proposals to the lowest responsible bidder who complies with all prescribed requirements. The successful bidder will be notified by letter, mailed to the address shown on his proposal that his bid has been accepted subject to execution and approval of the contract as required by law.

2-2 Assignment of Contract:

The contract covered by these specifications shall not be assigned or transferred in any manner, and any assignment or transfer thereof, except by operation of law and except by the consent of the City council expressed by resolution, shall fully end and terminate such contract and shall make the same null and void as to any other or further performance thereof by the contractor or his assigns without any other act on the part of the City, and the City, through its proper authorities, may at once proceed to relet such contract, or may, at its discretion, proceed to complete the same as the agent and at the expense of such contractor and his sureties.

2-3 Requirement of Contract Bond:

Upon entering into a contract with the City for the performance of any work, the Contractor shall furnish a contractor's bond in conformance with MSA 574.26 satisfactory to the City as security for the faithful performance of this contract, and for the payment of all persons or firms performing labor or furnishing material in connection with this contract, each in the sum of 100% of the contract price.

SECTION III SCOPE OF WORK

3-1 Intent of Contract:

The intent of the Contract is to provide for construction and completion of the Project in every detail as described in the Plans and Specifications. It is also intended and will be expected that the work be prosecuted diligently and pressed vigorously to early completion, with due regard being given to public interests, as well as to the obligations and right of all other parties concerned. By the terms of the Contract, the Contractor assumes full responsibility for performance of the work and agrees to furnish all labor, materials, equipment, tools, supplies, transportation, and other incidentals necessary or convenient to successful completion of the project.

Realizing that it would not be practical to fully describe every detail or to make specific allowances for all probable exceptions and contingencies, it is intended that the Engineer have sufficient executive authority to administer the Contract with discretion, within its general scope, so as to rule out apparent discrepancies, fulfill intentions, and allow for the exigencies of construction, on the basis of engineering judgment, giving careful consideration to all matters encumbering successful performance and completion of the project.

3-2 Extra Work and Alterations:

The Contractor shall notify the Engineer of any extra work or proposed alternatives or substitutions and request authorization prior to beginning work on such items. Any work completed without written authorization from the Engineer shall be considered unauthorized work. No unauthorized changes or deviations from the plans and

specifications or special provisions will be permitted; and any such changes or deviations must be rectified by the Contractor on detection of such change or changes at his own expense no matter how far the work may have progressed beyond that point. If, however, the City may deem it expedient to accept work so changed or incorrectly performed, an equitable adjustment will be made with a proper deduction from the contract price for such unsatisfactory work.

Errors or omissions in the plans and specifications covering the work shall not constitute a cause or reason for claiming additional compensation unless agreed to in writing by the Engineer. In all cases of discrepancies in the plans and specifications, the matter shall be submitted to the Engineer at once for his decision. The Engineer, without invalidating the contract, may order necessary changes made or extra work performed. The Engineer shall order all changes, deductions, or additions in writing and he shall be the sole judge of the value of such changes and the adjustments to be made by adding to or deducting from the contract price.

3-3 Clean Up:

The Contractor shall at all times keep the site of the project free from accumulation of waste materials or rubbish caused by his employees or work and at the completion of the work, he shall remove all his rubbish from and about the project as well as his tools, equipment, scaffolding, and surplus materials and shall leave his work clean and ready for use. In case of dispute, the City may remove the rubbish and surplus materials and charge the cost to the Contractor in such amount as the Engineer shall determine to be just. Maintaining a clean and well kept site shall be considered one of the requirements of the MPCA General Stormwater Permit.

3-4 Maintenance of Traffic:

Unless otherwise provided, the road while undergoing improvement shall be kept open to all traffic, at the expense of and by the Contractor as outlined below.

The Contractor shall provide adequate signs and barricades for traffic control as specified in the most current version of the "Manual on Uniform Traffic Control Devices" and Temporary Traffic Control Zone Layouts Field Manual. Access for residents along the area under construction shall be kept open whenever possible. Residents shall be notified before their access is shut off so that they may make other parking arrangements for their vehicles and thus provide themselves a limited access to the area.

The traffic flow shall be maintained and controlled to the satisfaction of the Engineer throughout the length of the job. The contractor shall cooperate in good faith with the City in attempting to maintain a somewhat regular flow of traffic around and through the construction area. A single lane for local traffic only shall be maintained in the construction area whenever possible to allow access to driveways.

SECTION IV CONTROL OF WORK

4-1 Engineer's Authority:

The City Engineer of Moorhead shall be and act as Engineer for the City in the performance of this contract. He shall be the sole judge and arbitrator as to the quantity and quality of all materials and workmanship used or required under this contract, and in all matters of doubt or dispute as to the requirements or meaning of the plans or details prepared or to be prepared from time to time as the work progresses, or as to the meaning of any of the clauses, terms or words used in the specifications, and his decision shall be final and binding on all parties concerned. The Contractor and his agents must conform to the Engineer's requirements in all matters pertaining to the work, and shall obey all reasonable legal orders, demands, or requests. Should the Contractor or any of his agents fail to do so, the Engineer may stop or suspend the work, or he may, for any cause which he may deem sufficient, dismiss any workman, foreman, or superintendent from the project, and no person so dismissed shall be again employed upon the work without the sanction of the Engineer. The decision of the Engineer shall be final and conclusive in all matters of estimate or other questions which may arise and shall be a condition to the right of the Contractor to receive any money under this agreement.

4-2 Coordination of Plans and Specifications:

The specifications, plans, general and special conditions, special provisions, and all supplementary documents herein are essential parts of the contract and a requirement occurring in one is as binding as though occurring in all. In case of discrepancies, the Special Provisions shall govern over the plans, the plans shall govern over the

City General Specifications, and the City General Specifications shall govern over specifications incorporated by reference, including the MnDOT Standard Specifications for Construction.

4-3 Cooperation By Contractors:

The Contractor shall cooperate with the Engineer, utility owners, and other contractors, to the mutual interest of all parties doing work on the project and as may be in the public interest to have the work of certain contracts and agencies performed concurrently rather than consecutively.

The Contractor shall coordinate his work with that of utility owners so that removal and rearrangement operations may progress in a reasonable manner, that duplication of work may be reduced to a minimum, and that services rendered by those parties will not be unnecessarily interrupted.

When separate contracts are let within the limits of any one project, each contractor shall conduct his work so as not to interfere with or hinder the progress or completion of the work being performed by other contractors. Contractors working on the same project shall cooperate with each other as directed. Each contractor shall assume all liability, financial or otherwise, in connection with his contract and shall save the city harmless from all damages and claims arising from any delay, inconvenience, or loss experienced by him because of the presence and operations of other contractors working within the limits of the same project.

Should a dispute arise between contractors or other agencies doing work on the project as to their mutual rights or obligations, the Engineer will act as referee, when requested to do so or upon his own motion, and his decision as to the rights and obligations of the interested parties shall be final.

4-4 Supervision by Contractor:

The Contractor shall give his personal superintendence to the work or have at the site of the work at all times a competent foreman, superintendent or other representative satisfactory to the City and having authority to act for the Contractor in receiving and executing orders and instructions from the City or its authorized representatives.

4-5 Existing Utility Lines:

It shall be the sole responsibility of the contractor to investigate the location of all existing public and private utility lines including telephone conduits, gas, water and sewer mains, power and heating conduits, Cable TV, the house or building services to all such utilities, which may be in place at the site of or along the line of his operations. No existing public utility lines, including house or building services shall be disturbed by the operations of the contractor except those which are specifically designated in the plans and special provisions, without the express permission of the Engineer. In case any of the aforementioned public or private utilities are broken or injured in any way by the contractor's operations, the owner of the utility shall be notified immediately and the damage repaired at the expense of the contractor. Existing utility lines may or may not be shown on the construction plans, but whether they are shown or not will in no way relieve the contractor from his responsibility to take whatever precautions are necessary for their protection. Any delays or inconveniences caused by the existing utilities shall not be considered as a basis for extra compensation by the Contractor. The Contractor shall utilize the Gopher OneCall notification system in addition to contacting adjacent private property owners in advance of beginning underground utility work or excavation operations.

4-6 Survey and Stakes:

All survey and stakes for alignment and grade will be made and set by the City Engineer or his delegated representative unless otherwise specifically provided in the technical specifications or special provisions.

The Contractor shall give the Engineer at least two 2 working days (Monday-Friday) notice before requiring the survey crew to be on a project site to commence construction staking. This minimum notice is required whenever the Contractor prepares to commence work on any portion of the contract, or at any new place, as well as at any place where work has been relinquished or stopped for any cause.

If there is no portion of the contract with the initial construction staking complete so that the Contractor is unable to proceed with construction, then at the discretion of the Engineer, the Contractor may be granted a temporary suspension of the working days or an extension of the completion date of the contract. No other compensation

will be granted. The working days count will be started as soon as the staking is complete on any portion of the contract.

All work done under this contract shall be built in accordance with the line and grade shown on the plans or as given by the Engineer.

The Contractor is responsible for the preservation of all stakes and marks in their proper positions, and in case any of them are lost, destroyed or obliterated after once having been given, he shall at once notify the Engineer, and all expense incurred by the City in replacing the same may be charged against the Contractor and deducted from the estimates solely according to the judgment of the Engineer. Any delays in construction due to the time it takes to replace stakes shall not be considered as a justifiable delay and thus no allowance will be made in either working day or completion date schedules.

The Contractor is responsible for the preservation of all survey monuments (block corners, property pins, PC's, PT's, etc.) existing on the project site during construction. If the Contractor should remove any survey monuments, whose removal was not required by the plans, then the City shall withhold from the contract estimates all expenses incurred from having the survey monuments replaced by a registered land surveyor as required by law.

4-7 Inspection of Work:

The City and its representative shall at all times have access to the work wherever it is in preparation or progress and the contractor shall provide proper facilities for such access and inspection.

The City shall have the right to reject materials or workmanship which does not conform to the plans and specifications and all defective work shall be satisfactorily corrected, and rejected materials shall be removed from the premises without charge to the City. If the contractor does not correct such condemned work and remove rejected materials within a reasonable time, as fixed by written notice; the City may remove them and charge the expense to the Contractor.

The work will be conducted under the general direction of the City Engineer and is subject to inspection by his authorized inspectors to ensure strict compliance with the terms of these Contract Documents. No inspector is authorized to change any provisions of the plans or specifications without written authorization of the Engineer, nor shall the presence or absence of an inspector relieve the contractor from any requirement of the contract.

4-8 Materials: Specifications, Samples, Tests and Acceptance

Shop Drawings shall be submitted prior to either manufacture or delivery of materials to the construction site. If the Contractor proposes to substitute materials on an "or equal" basis, the request shall be made in writing, and the proposed substitution items shall be clearly identified as such in the shop drawing submittal, which shall contain all appropriate specification documentation needed to evaluate the substitution. The determination of whether or not the product meets the specifications as an "or equal" product shall be at the sole discretion of the Engineer. If evaluated and found to be an "or equal product" a written approval letter from the Engineer will be issued for the substitution of materials as per the request.

All materials shall be tested as detailed in MNDOT Standard Specifications for Construction 2005 Edition, Special Provisions and MNDOT Schedule for Materials Control. The testing of construction materials will be the responsibility of the Owner unless otherwise specified in the specifications. The Owner shall have the authority to stop work in order to correct or replace such items that have failing test results.

The contractor shall be responsible for all costs associated with the failing tests, including but not limited to labor, equipment, and materials required for correction or replacement of failing work, additional testing required to determine the extent of failing work, or repeated testing of failing work.

4-9 Acceptance of Work:

Upon written notice from the Contractor that all work has been completed, the Engineer will make an inspection of the entire project. If any work is found unsatisfactory or incomplete, a list of discrepancies (punchlist) will be issued in writing and another inspection will be made after receiving notice that the discrepancies have been corrected.

Neither acceptance by the City, the final payment, or any provisions in the Contract Documents shall relieve the Contractor of the responsibility for negligence or faulty materials or workmanship within the extent and period required by law and upon written notice, he shall remove any defects due thereto and pay for any damage to other work resulting there from which shall appear within twelve (12) months after the date of completion and acceptance. The City Council of Moorhead shall interpret the day of completion and acceptance as being the day on which the work is accepted and final payment approved.

Correction Period:

If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents or any subsequent agreement, any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions: (i) correct such defective work, or, if it has been rejected by Owner, remove it from the site and replace it with work that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other work or the work of others resulting there from. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective work corrected or the rejected work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

In special circumstances where a particular item of equipment is placed in continuous service before substantial completion of all the work, the correction period for that item may start to run from an earlier date if so provided in the specifications or by written amendment.

Where defective work (and damage to other work resulting there from) has been corrected, removed or replaced under this paragraph 4-8, the correction period hereunder with respect to such work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

SECTION V
LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

5-1 Laws to be Observed:

The Contractor shall keep fully informed of all Federal and State Laws; all local laws, ordinances and regulations, and all orders and decrees of bodies and tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. He shall at all times observe and comply with all applicable laws, ordinances, regulations, orders and decrees; and shall protect and indemnify the City and its representatives against all claims and liabilities arising from or based on violations committed by himself or his employees.

5-2 Permits and Public Utilities:

The City shall apply for and pay all application and licensing fees for the permits as listed in the Special Provisions. The Contractor shall take out and pay for all other permits, licenses or fees and shall give all notices necessary for the prosecution of the work in accordance with the provisions of all laws and ordinances. He shall make the necessary arrangements for the use of, and shall pay for any and all utilities service which may be necessary to the prosecution of the work or as may be specified in the special provisions. In case it is necessary to use City water, the Contractor must obtain a written permit (prior to commencing work) from the General Manager of Moorhead Public Service which will specifically set forth the locations of the hydrants or mains to be used or tapped. In lieu of such permit, it shall be incumbent upon the Contractor to install and pay for private service or services adjacent to the work. In no case, however, shall the Contractor make use of any private service without the consent of the owner thereof.

5-3 Patent Fees and Royalties:

Contractor shall pay all license fees and royalties and assume all costs incident to use in the performance of the work or the incorporation in the work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Engineer, Engineer's Consultants and the officers, directors, employees, agents and other consultants of each and any of them from and against all claims, costs, losses and damages arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the work of any invention, design, process, product or device not specified in the Contract Documents.

5-4 Indemnification:

5-4.1: To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Engineer, Engineer Consultants and the officers, directors, employees, agents and other consultants of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) caused by, arising out of or resulting from the performance of the work, provided that any such claim, cost, loss or damage: (i) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself), including the loss of use resulting there from, and (ii) is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of a person or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such person or entity.

5-4.2: In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 5-4.1 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any such Subcontractor, Supplier or other person or organization under worker's compensation acts, disability benefit acts or other employee benefit acts.

5-4.3: The indemnification obligations of Contractor under paragraph 5-4.1 shall not extend to the liability of Engineer and Engineer's Consultants, officers, directors, employees or agents caused by the professional negligence, errors, or omissions of any of them.

5-5 Contractor's Responsibility:

The whole of the work and everything pertaining thereto, which is specified or reasonably implied in these contract documents, shall be at the sole cost and risk of the Contractor from its commencement until its final acceptance by the City. The Contractor shall cause the least possible inconvenience to the public and to private individuals and residents in the vicinity of the work, and shall render them all reasonable assistance, whenever so required on account of his operations. He shall not permit any materials, stones, or rubbish to be deposited, thrown, or scattered upon or to remain upon any private or adjoining grounds without the owner's consent, nor cause or suffer to exist any unnecessary obstructions anywhere, and he shall provide watch guards whenever needed, and shall also provide all requisite signal lights, fences, temporary barricades, guards, and crosswalks, for the safety and convenience of the public and the residents or others in the vicinity of the work. The contractor shall refer to the Manual on Uniform Traffic Control Devices for streets and highways. He shall devote his special attention to keep all hydrants and water valves clear and easy to access, and all crossings as free, open, safe, and unobstructed as possible.

Use of Premises:

Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, right-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding. Contractor shall to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, Engineer's Consultant and anyone directly or indirectly employed by any of them from and against all claims, costs, losses and damages arising out of or resulting from any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

During the progress of the Work, Contractor shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, the Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials. Contractor shall leave the site clean and ready for occupancy by Owner at Substantial Completion of the Work. Contractor shall restore to original condition all property not designated for alteration by the Contract Documents.

Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

5-6 Withholding of State Income Tax:

Before final payment is made for the work on this project, the contractor must make a satisfactory showing that he has complied with the provisions of Minnesota Statutes Annotated 290.92 requiring the withholding of State Income Tax for wages paid employees on this project. Receipt by the Moorhead City Clerk of a Certificate of Compliance from the Commissioner of Taxation will satisfy the requirement. The contractor is advised that before such certificate can be issued, he must first place on file with the Commissioner of Taxation an affidavit that he has complied with the provisions of M.S.A. 290.92.

The Commissioner of Taxation, Centennial Building, St. Paul, Minnesota, will supply the required affidavit form on request.

5-7 Insurance:

The Contractor shall take out and maintain during the life of this contract, Worker's Compensation Insurance covering all persons employed by him at the site of the project and, in case any of the work is sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation Insurance unless the latter's employees are covered by the protection offered by the Contractor.

The Contractor shall maintain, during the life of this contract, a public liability insurance policy with liability limits as stated in Section 00800 of the specifications.

Before any work is started or before any equipment, including trucks and automobiles, is used in the performance of this contract, the Contractor shall furnish the City with satisfactory evidence that all operations to be performed are properly covered by appropriate insurance outlined in this paragraph.

5-8 Safety and Accident Prevention:

In the performance of this contract, the contractor shall comply with all applicable Federal, State, and Local laws governing safety, health, and sanitation. The contractor shall provide all safeguards, safety devices, and protective equipment and take any other needed actions, on his own responsibility necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

The Contractor and all subcontractors shall give special attention to MS 182 and Minnesota Department of Labor and Industry's MN/OSHA Standards 5205 and 5207. The contractor is responsible for compliance with this Act except that the Engineer shall be responsible for personal safety equipment of his employees and for specifications that conflict with safety standards. The Contractor will immediately inform the Engineer of any such specifications to minimize delays in correcting.

SECTION VI

PROSECUTION AND PROGRESS

6-1 Subletting of Contract:

The Contractor shall notify the Engineer in writing of the names of the subcontractors proposed for the principal parts of the work, and shall not employ any subcontractor that the City objects to as incompetent or unfit. All agreements for subletting of work shall be bonafide subcontracts for component portions of the work and not in any way for the purpose of evading or circumventing the requirement and provisions of the Contract Documents. In no case shall the total of all subcontracts exceed 60% of the total contract price for the work.

The Contractor agrees to be fully responsible to the City for all acts or omissions of his subcontractors and of anyone employed directly or indirectly by him or them and this contract obligation shall be in addition to the liability imposed by law upon the Contractor.

The Contractor shall bind every subcontractor, and every subcontractor must agree to be bound, by the terms of the plans and specifications, general conditions and special provisions as far as applicable to his work, unless otherwise specifically noted in writing and approved by the Engineer.

6-2: Hours of Operation:

The Contractor shall not begin work prior to 7:00 a.m., nor work later than 7:00 p.m. without the express written consent of the Engineer. When so authorized to work outside the normal hours of operation, the Contractor shall make every reasonable effort to minimize impacts of construction activity such as noise, dust, heavy traffic, etc.

6-3: Sunday and Holiday Work:

The Contractor shall not do any construction work on Sundays or legal holidays on this project except by approval of the Engineer. The contractor shall make such request of the Engineer at least two (2) working days (Monday-Friday) in advance of proposed Sunday or Holiday work.

6-4: Failure to Complete the Work on Time:

Time being an essential element of the Contract, it is hereby agreed that the Contractor shall insure that the work is done in an expeditious manner. The City will not reduce the progress payment **retainage below 5% until final completion on any contract where it is deemed that the Contractor did not make satisfactory progress.**

SECTION VII

MEASUREMENT AND PAYMENT

7-1 Measurement of Quantities:

Measurement of quantities shall be done in conformance with Specification 1901 of the MnDOT Standard Specifications for Construction.

7-2 Compensation for Increased or Decreased Quantities:

There shall be no adjustment in unit price for increased or decreased quantities under this contract.

7-3 Partial Payments:

Once each month, the contractor will receive a progress payment at the rate of 100% of the value of undisputed work actually done and materials in place, less all legal forfeitures and deductions including, but not limited to a 5% retainage. Payments may also be made for acceptable materials stored on the site of the project for incorporation into the finished work on the basis of 100% of the invoice of such materials, but likewise subject to legal forfeitures and deductions. The estimates upon which these payments are to be made will be prepared by the Engineer either by measurements or by estimation as he may find most convenient or practicable. They must be considered as only approximate and are not to be taken or construed as an acceptance of the work so estimated. Before receiving such estimates, however, the contractor or his authorized representative shall make and file with the City Clerk of Moorhead an affidavit that all work and labor to date, on which the estimate is based, has been fully paid.

7-4 Acceptance and Final Payment:

After the entire work, including all punchlist items, shall have been completed in strict accordance with the provisions of the plans and the contract documents, the Contractor shall make a written request to the Engineer to conduct the Final Inspection. Upon such request, the Engineer shall make a final inspection of the entire project and, if found acceptable, shall within 30 days thereafter prepare a final estimate which shall be based on accurate measurements of all work performed and shall then submit such estimate together with his recommendations to the City Council for their approval, and full payment shall then be made, less any partial estimates already paid and legal deductions or forfeitures for the satisfaction of liens or similar claims. Before receiving such final estimate, the Contractor shall nevertheless make and file with the City Clerk an affidavit that all claims for all work and labor performed and materials furnished to this contract have been fully paid.

-END OF SECTION-

CITY OF MOORHEAD INSURANCE REQUIREMENTS

Contractor's Liability Insurance

The Contractor shall purchase and maintain such liability and other insurance as is appropriate for the work being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance and furnishing of the work and Contractor's other obligations under the Contract Documents, whether it is to be performed or furnished by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform or furnish any of the work, or by anyone for whose acts any of them may be liable:

- 1.1 claims under workers' compensation, disability benefits and other similar employee benefit acts;
- 1.2 claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
- 1.3 claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
- 1.4 claims for damages insured by customary personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or (ii) by any other person for any other reason;
- 1.5 claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting there from; and
- 1.6 claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

The policies of insurance so required by this Section 00800 to be purchased and maintained shall:

- 1.7 with respect to insurance required by paragraphs 1.3 through 1.6 inclusive, include as additional insured's (subject to any customary exclusion in respect of professional liability) Owner, Engineer, Engineer's Consultants, and any other persons or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insured's, and include coverage for the respective officers and employees of all such additional insured's;
- 1.8 include the specific coverage and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
- 1.9 include completed operations insurance;
- 1.10 include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 5-3, 5-5 and 5-4.1 through 5-4.3 of Section 00700, General Conditions;
- 1.11 contain a provision or endorsement that the coverage afforded will not be cancelled, materially changed or renewal refused until at least thirty days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to paragraph 1.14 will so provide);
- 1.12 remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective work in accordance with Paragraph 4-8 of Section 00700, General Conditions;
- 1.13 with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter).

- 1.14 Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain in accordance with Section 00800.

Bonds and Insurance

The following are your instructions with respect to the requirements for Bonds and insurance to be included in the Contract Documents for the project:

Bonds:

- A. Bid Security is to be provided by each Contractor in the amount of five percent (5%) of the maximum Bid price and will be in the form of Certified or bank cashier's check drawn to the order of "City of Moorhead". The bidder may submit a Bidder's Bond written through an insurance agency or cash in the same in lieu of a certified check.
- B. Construction Performance Bond and Construction Payment Bond each in an amount equal to the Contract Price are required.

Liability Insurance

The limits of liability for the liability insurance required by Section 00800, Insurance Requirements, shall provide coverage for not less than the following amounts or greater where required by law or regulations and the coverage under Section 00800 shall be as follows:

- A. Workers' Compensation, etc. under Paragraphs 1.1 and 1.2 of Section 00800, Insurance Requirements:
- | | |
|--|-----------|
| i. State: | Statutory |
| ii. Applicable Federal (e.g. Longshoreman's) | Statutory |
| iii. Employer's Liability: | \$500,000 |
- B. Comprehensive or Commercial General Liability under Paragraphs 1.3 through 1.5, Section 00800, Insurance Requirements, (including Premises-Operations; Independent Contractor's Protection; Products Liability and Completed Operations; Broad Form Property Damage):
- | | |
|---|-------------|
| i. General Aggregate (except Products-Completed Operations) | \$2,000,000 |
| ii. Products-Completed Operations Aggregate | \$2,000,000 |
| iii. Personal/Advertising Injury (per Person/Organization) | \$1,000,000 |
| iv. Each Occurrence (Bodily Injury/Property Damage) | \$1,000,000 |
| v. Limit per Person Medical Expense | \$5,000 |
| vi. Personal Injury Liability Coverage will include Claims arising out of Employment. | |
| vii. Exclusions of property in Contractor's care, custody or control will <u>not</u> be eliminated. | |
| viii. Property Damage Liability Insurance will provide coverage for explosion, collapse and underground damage. | |
- C. Contractual Liability under Paragraph 1.10 of Section 00800:
- | | |
|---|-------------|
| i. General Aggregate | \$2,000,000 |
| ii. Each Occurrence (Bodily Injury/Property Damage) | \$1,000,000 |
- D. Automobile Liability under Paragraph 1.6 of Section 00800, Insurance Requirements: Combined single limit of \$1,000,000 for bodily injury and property damage.
- E. Liability coverage for Owner, Engineer, Engineer's Consultants and others listed in the Supplementary Conditions will be provided (subject to customary exclusions for professional liability) by endorsement as additional insured's on Contractor's Liability Policy

-END OF SECTION-

CITY OF MOORHEAD SPECIFICATIONS AIR & WATER POLLUTION

GENERAL REQUIREMENTS

(1717) Air and Water Pollution: 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, and in accordance with the MPCA General Stormwater Permit and the provisions of MnDOT 1717 and 1803.5 as modified below:

The Contractor shall sign the NPDES Permit in conjunction with the City on this Project. The City will apply and pay for the NPDES Permit. The Application and Inspection Log for the General Stormwater Permit for Construction Activity (MN R100001) has been included in the proposal for this project.

By signing the Proposal and completing the permit, the Contractor is a co-permittee with the City to ensure compliance with the terms and conditions of the General Stormwater Permit (MN R100001) and is responsible for those portions of the permit where the Contractor is referenced. This Permit establishes conditions for discharging stormwater to waters of the State from construction activities that disturb one or more acres of total land area. A copy of the "General Permit Authorization to Discharge Stormwater Associated with a Construction Activity under the National Pollutant Discharge Elimination System (NPDES)/State Disposal System Permit Program" may be obtained from the M.P.C.A. web site.

The Contractor shall be solely responsible for complying with the requirements of Part IV (Construction Activity Requirements) of the General Permit where "Permittee", "Owner" or "Operator" is referenced until a Notice of Termination has been completed and approved.

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 Paragraph IV.E., shall be the sole responsibility of the Contractor. The words "Permittee", "Owner" or "Operator" in these referenced paragraphs shall mean "Contractor". Standard forms for logging all required inspection and maintenance activities have been included in the Contract and shall be used by the Contractor. Copies of all inspection and maintenance forms used on this Project shall be turned over to the Engineer every two weeks. Pay requests will not be processed until the inspection and maintenance forms for the time period covered in the estimate have been submitted.

The Contractor shall have all logs, documentation and inspection reports on site for Engineer's review and shall post the permit 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 the city, 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.

If the Contractor fails to perform the requirements as listed herein, the Engineer will issue a Work Order detailing the required action. The Contractor shall start the required action within twenty-four (24) hours of receipt of the Work Order and continue the required action until the Project is brought into compliance with the permit. Failure to perform the required action as specified, shall subject the Contractor to a \$1000/calendar day deduction.

The Contractor shall review and abide by the instruction contained in the permit package. The Contractor shall hold the city 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.

Temporary Pollution Control: The Contractor shall furnish material, labor and equipment for temporary control measures as shown in the plans or ordered by the Engineer and shall provide for the acceptable maintenance thereof during the life of the contract, to effectively prevent water pollution through the use of

berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

Temporary pollution control may include construction work outside the right of way where such work is necessary as a result of borrow pit operations, haul road construction, equipment storage, and plant or waste disposal sites.

The temporary pollution control provisions contained herein shall be coordinated with the permanent erosion control features specified elsewhere in the contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction and post-construction period.

At the preconstruction conference, or prior to the start of the applicable construction, the Contractor shall submit for acceptance his proposed schedules for accomplishment of temporary and permanent erosion control work, as are applicable for clearing and grubbing; grading, construction of bridges and other structures at watercourses; paving, and miscellaneous construction. He shall also submit for acceptance his proposed method of erosion control on haul roads and at borrow pits and his plans for disposal of waste material. No work shall be started until the applicable erosion control schedules and the Engineer has accepted methods of operation.

Training Requirements: The Contractor shall comply with the MPCA training requirements of the General Stormwater Permit for Construction Activity. At least one individual present on the permitted project site must be trained in the job duties described in Part III.A.2.a.ii and Part III.A.2.a.iii of the MPCA General Stormwater permit. Training documentation must be in or with the Stormwater Pollution Prevention Plan or be available within 72 hours upon request. The individual trained must be trained by local, state, federal agencies, professional organizations, or other entities with expertise in erosion prevention, sediment control or permanent stormwater management.

Construction Requirements: The Engineer shall have authority to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations and to direct the Contractors to provide immediate permanent or temporary control measures to prevent contamination of adjacent streams and other water courses, lakes, ponds, and areas of water impoundment. Cut slopes shall be seeded and mulched as the excavation proceeds to the extent considered desirable and practicable and as required by the General Stormwater Permit.

The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in his accepted schedules. Temporary pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design state; that are needed prior to installation of permanent erosion control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with the permanent control features on the project.

The Engineer will limit the area of excavation, borrow and embankment operations in progress commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent erosion control measures current in accordance with the accepted schedules. Should seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified.

In the event of conflict between these requirements and any pollution control laws, rules or regulations of other Federal and State or local agencies, the more restrictive requirements shall apply.

Temporary Seeding Requirements:

Turf Establishment

The following schedule shall be used for final stabilization:

*Maximum time an area can remain open when the area is not actively being worked.

Location

Within 1 mile of an impaired water

Outside 1 mile of an impaired water

Time*

7 Days

14 Days

Areas receiving mulch or erosion control mats shall be maintained and watered until the area is 70 percent established in turf. Areas not achieving 70 percent turf establishment (4) weeks after seeding shall be tilled, reseeded and mulch or erosion control mats reinstalled at Contractor's expense. This process shall be repeated at Contractor's expense until the 70 percent coverage requirement is met.

Areas not receiving mulch or erosion control mats can be seeded on the following schedule:

Spring – After soil temperature reaches 58 Degrees Fahrenheit and until June 10th.

Fall – After August 15th and before September 10th.

No seeding of bare soil areas will be allowed between June 10th and August 15th unless the Contractor presents an irrigation plan that is acceptable to the Engineer. Any areas seeded under an approved irrigation plan must meet the requirement of 70 percent coverage after four (4) weeks or be tilled and reseeded at Contractor's expense. This process shall be repeated at Contractor's expense until the 70 percent coverage requirement is met.

Bare soil areas awaiting seeding shall have temporary erosion and sedimentation controls in place to meet terms of the MPCA Stormwater Construction Permit.

This provision shall be in effect for the duration of the Contractor's responsibility to comply with terms of this project's MPCA Stormwater Construction Permit (i.e. until an approved Application for Permit Transfer/Modification or Notice Of Termination releases the Contractor from further responsibility.

Measurement and Payment: All temporary and permanent erosion and pollution control measures necessitated by the Contractor's operations outside the right of way, and all temporary erosion and pollution control measures necessitated by the Contractor's negligence, carelessness, or failure to properly coordinate the installation of permanent controls as part of the work scheduled within the right of way, shall be performed as ordered by the Engineer at the Contractor's own expense.

In case of failure on the part of the Contractor to control erosion, pollution, and siltation as ordered, the City reserves the right to employ outside assistance or to use its own forces to provide the necessary corrective measures. All expenses so incurred by the City, including its engineering costs, that are chargeable to the Contractor as his obligation and expense, will be deducted from any monies due or coming due the Contractor.

Where the Engineer orders installation of either temporary or additional permanent erosion or pollution control measures, in the absence of any negligence, carelessness, or failure on the Contractor's part to properly schedule and carry out the measures provided for in the contract, and except for such work which is necessitated by the Contractor's operations outside the right of way, the work shall be performed at the City's expense and payment will be made therefore at appropriate contract bid prices for like work, or as Extra Work if there is no comparable item of work in the contract.

Implementation of Clean Air Act and Federal Water Pollution Control Act: By signing this bid, the bidder will be deemed to have stipulated as follows:

- (a) 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 CFR, Part 15), is not listed on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.
- (b) That the City 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.



Minnesota
Pollution
Control
Agency

Complete your application online!

Permit No: MN R100001

Application for General Stormwater Permit for Construction Activity (MN R100001)

National Pollutant Discharge Elimination System
/ State Disposal System (NPDES/SDS)

Please submit to: Minnesota Pollution Control Agency
Construction Stormwater Permit Program
520 Lafayette Road North, St. Paul, MN 55155-

4194

PLEASE READ: This form is for new permit applications only. Use the Notice of Termination/Permit Modification form to transfer permit coverage for a project or a portion of a project to a new owner/contractor. Forms are available at the MPCA's Construction Stormwater Web site: www.pca.state.mn.us/water/stormwater/stormwater-c.html. Complete your application online!

Please refer to the application instructions and the NPDES/SDS General Stormwater Permit for Construction Activity (MN R100001) as you complete this form. Brackets '[]' refer to specific parts of the permit. For assistance, call the Stormwater Program at 651-757-2119 or toll-free at 800-657-3804.

Are you ready to apply?

1. Stormwater Pollution Prevention Plan (SWPPP)

- a. Has a Stormwater Pollution Prevention Plan been developed for this project and incorporated into the project's plans and specifications [Part III.A.] ☐ Yes ☐ No
- b. If an environmental review was required for this project or a common plan of development or sale that includes this project, has the environmental review been completed and all stormwater mitigative requirements been incorporated in the SWPPP as required in Part III.A.6 of the permit? ☐ Yes ☐ No ☐ NA

2. Discharges to Special or Impaired Waters

- a. If any portion of the project has a discharge point within 1 mile of a special water or a water that is impaired for sediment or a sediment related parameter (see Appendix A.B), does the SWPPP contain the additional requirements found in Appendix A, Part A-C? If the project does not have a discharge point within 1 mile of a special water or a water that is impaired for sediment or a sediment related parameter of the permit indicate "NA" ☐ Yes ☐ No ☐ NA
- b. If this project is discharging to a Calcareous fen, has an approval letter been obtained from the DNR as required in Part III.A.8 of the permit? ☐ Yes ☐ No ☐ NA

STOP if you responded 'No' to any question above. A SWPPP must be developed prior to submitting a permit application. Complete the above requirements and check 'Yes' before submitting this application. Continue if you responded 'Yes' or 'NA' to all questions above.

3. Additional Application Review:

- a. Will the project include alternative treatment methods? [Part III.C.5] If yes, this application and the alternative treatment plans must be submitted a minimum of 90 days before construction starts. ☐ Yes ☐ No
- b. If yes, are the plans attached? ☐ Yes ☐ No
- c. Will the project disturb 50 acres? AND Is there a discharge point within one mile of an impaired or special water whose discharge may reach an impaired or special water listed in Appendix A of the permit? [Part II.B.1.b] If yes, this application and the SWPPP must be submitted a minimum of 30 days before construction starts. ☐ Yes ☐ No
- d. If 'Yes,' is the SWPPP attached? ☐ Yes ☐ No

4. Application Fee:

Is the required \$400 Application Fee (payable to the MPCA) enclosed?

☐ Yes**Construction Activity Information****5. Project name:** _____**6. Project location:**

- a. Briefly describe where the construction activity occurs
(For example: "Intersection of 45th St. and Irving Ave.")
Include address if available:

b. All cities where project will occur: _____

c. All counties where project will occur: _____

d. All townships where project will occur: _____

e. Project ZIP Code: _____

f. Latitude and longitude of approximate centroid of project:

Latitude: ____ °

N (decimal)
Preferred

Longitude: ____ °

W (decimal) Preferred

____ ° ' "

N (degrees,
minutes,
seconds)

____ ° ' "

W (degrees, minutes,
seconds)

g. Method used to collect latitude and longitude:

☐ GPS☐ USGS Topographic map — Map scale: _____☐ Other**7. Project size:**Number of acres to be disturbed to
the nearest quarter acre: _____**8. Project map:**A map must be included with the application for all projects disturbing 50 acres or more. Is a project map included? ☐ Yes ☐ No**9. Project type:**☐ Residential☐ Residential / Road construction☐ Other: ☐ Commercial / Industrial☐ Commercial / Road construction☐ Road construction☐ Commercial / Residential / Road construction**10. Cumulative impervious surface:**

a. Existing area of impervious surface in acres: _____

b. Post-construction area of impervious surface in acres (If additional new impervious surface created by the project is less than one acre, skip to Question 12): _____

11. Permanent stormwater management:

- ☐ Wet sedimentation basin
☐ Infiltration / filtration
☐ Regional ponding
☐ Other (Use only if there is no feasible way of installing the treatment systems listed above for reasons such as lack of right-of-way or proximity to bedrock)
☐ Alternative methods (If using alternative methods, construction cannot commence until receiving approval from the MPCA.)

12. Receiving waters:

Identify surface waters within one mile of project boundary that will receive storm water from the site or discharge from permanent Stormwater management system. Include waters shown on USGS 7.5 minute quad or equivalent, all Special Waters and Impaired waters identified in Appendix A of the permit (To find Special or Impaired Waters, use the Special and Impaired Waters Search tool at www.pca.state.mn.us/water/stormwater/stormwater-c.html).

The Impaired Waters* list, also known as the Section 303(d) list can be found at <http://www.pca.state.mn.us/water/tmdl/index.html> Use additional paper if necessary.

* Impaired waters for the purpose of this permit are those identified as impaired for the following pollutant(s) or stressor(s): phosphorus, turbidity, dissolved oxygen, or biotic impairment

Name of water body	Type of water body (Ditch, pond, wetland, stream, river)	Special Water? See Stormwater Permit, Appendix A	Impaired Water? See Stormwater Permit, Appendix A
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

13. Dates of construction

- a. Start date: / /
 b. Estimated Completion date: / /

STOP This form will not be accepted if the Owner and Contractor contact information sections, below, are BOTH not completed and signed. If the owner is also the contractor, or a contractor hasn't yet been selected, the owner must also fill out the contractor information section and sign again.

Responsible parties**BOTH PARTIES MUST SIGN****Owner**

Business or firm name

Last name

First name

Title

E-mail

Phone (include area code)

Mailing address

City

State

ZIP Code

Alternate contact name

E-mail

Phone (include area code)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the NPDES/SDS General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

X Authorized signature: _____ Date: _____

This Application must be signed by:

- **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application.
- **Partnership or Sole Proprietorship:** a general partner or the proprietor.
- **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.

Contractor

Business or firm name

Last name

First name

Title

E-mail

Phone (include area code)

Mailing address

City

State

ZIP Code

Alternate contact name

E-mail

Phone (include area code)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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X Authorized signature: _____ Date: _____

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- **Partnership or Sole Proprietorship:** a general partner or the proprietor.
- **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.



**Minnesota Pollution
Control Agency**

520 Lafayette Road North
St. Paul, MN 55155-4194

Notice of Termination/ Permit Modification Form

NPDES Construction Stormwater Permit Program

Transfer or terminate your National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit. Allowable changes are permit termination and permit transfer for all or a portion of the site. This form replaces the Notice of Termination (NOT), Permit Transfer, Permit Modification, and Subdivision Registration forms used under the former permit.

Instructions for this form are located on the Internet at <http://www.pca.state.mn.us/publications/wq-strm2-60i.pdf>.

Form will be invalid and returned to sender unless the checkbox associated with the applicable actions is checked and the corresponding signature is provided in section A-1, A-2, A-3, and or A-4.

Please submit to: **Construction Stormwater Permit Program**
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Existing Permit Identification

a. Current permit ID: C000 _ _ _ _ _ or SUB00 _ _ _ _ _

b. Project name: _____

Project location: _____

Briefly describe where the construction activity occurs (for example: Intersection of 45th St. and Irving Ave.). Include address if available.

Select Option 1, 2, or 3

1. Notice of Termination (NOT) for entire site by existing owner

Select this option when a project has achieved final stabilization with existing owner / contractor and no part of the site is being transferred to a new owner and all construction activity is complete.

- c. ☐ Notice of Termination for entire existing permitted site or a subdivided site. (Current owner and contractor must sign under the "Current" Owner and "Current" Contractor sections respectively).

Check above box and sign section A-1 and A-2 on page 2.

2. Transfer of entire site to new owner or contractor (Transfer/Modification)

Select this option if the **entire** site (represented by the ID above) has either a new owner and/or new general contractor. Check all the boxes below that apply.

- d. ☐ New Owner for entire existing permitted site. f. ☐ Current Owner for entire existing permitted site.
e. ☐ New Contractor for entire existing permitted site. g. ☐ Current Contractor for entire existing permitted site.

Check above box(es) and sign section A-3 and A-4 page 3 and or check above box(es) and sign section A-1 and A-2 page 2
Both "Current" and "New" Parties must sign this form (preferred), however, separate forms are acceptable.

3. Transfer of a portion of a site to a new owner or contractor (Subdivision)

Select this option if a **portion** of a site (permitted under the ID above) has either a new owner and/or new general contractor. Check the boxes below that apply.

- h. Describe the portion of the site being transferred: Lot _____ Block _____
Project location/address: _____
City, State, and Zip: _____

Example: SW quadrant of 45th Street and Irving Avenue or Lots 1-17 of block 20. Include list of addresses if available or include a map

- i. ☐ New Owner for portion of existing site. k. ☐ Current Owner of the portion to be transferred.
j. ☐ New Contractor for portion of existing site. l. ☐ Current Contractor of the portion to be transferred.

Check above box(es) and sign section A-3 and A-4 page 3 and or check above box(es) and sign section A-1 and A-2 page 2
Both "Current" and "New" Parties must sign this form (preferred), however, separate forms are acceptable.

Current Owner Authorized Signature (A-1)

Business/Firm name: _____

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: () _____ Ext. _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Alternate contact:

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: () _____ Ext. _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

Authorized signature: _____ Date: _____

*This Application must be signed by: **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application. **Partnership or Sole Proprietorship:** a general partner or the proprietor. **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.*

Current Contractor Authorized Signature (A-2)

Business/Firm name: _____

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: () _____ Ext. _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Alternate contact:

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: () _____ Ext. _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

Authorized signature: _____ Date: _____

*This Application must be signed by: **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application. **Partnership or Sole Proprietorship:** a general partner or the proprietor. **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.*

"New" Owner Authorized Signature (A-3)

Business/Firm name: _____

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: () _____ Ext. _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Alternate contact:

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: () _____ Ext. _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

Authorized signature: _____ Date: _____

*This Application must be signed by: **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application. **Partnership or Sole Proprietorship:** a general partner or the proprietor. **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.*

"New" Contractor Authorized Signature (A-4)

Business/Firm name: _____

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: () _____ Ext. _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Alternate contact:

Last name: _____ First name: _____ Title: _____

E-mail address: _____ Telephone: () _____ Ext. _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

Authorized signature: _____ Date: _____

*This Application must be signed by: **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application. **Partnership or Sole Proprietorship:** a general partner or the proprietor. **Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.*

If you have questions about the administrative details of the permit process go to: <http://www.pca.state.mn.us/publications/wq-strm2-60i.pdf> or call the Minnesota Pollution Control Agency at 651-296-6300 or 800-657-3864 and ask for "Construction Stormwater." If you have technical questions, ask for the "Stormwater Policy and Technical Assistance Unit."

**CITY OF MOORHEAD SPECIFICATIONS
EXCAVATION, BACKFILL AND COMPACTION
WATER, SEWERS AND STRUCTURES**

Description of Work:

The work to be done under these specifications and the accompanying plans consists of the furnishing of all labor, materials, accessories, and plans necessary for excavation, backfill, and compaction for the completion of the work as shown on the Plans and as modified in the Special Provisions.

SPECIFICATION I - EXCAVATION, BACKFILLING AND COMPACTION

- 1-1 Trench Excavation, General Requirements
- 1-2 Classification of Excavated Materials
- 1-2.1 Dewatering of Trenches
- 1-2.2 Excavation for Structures
- 1-2.3 Subsurface Exploration
- 1-3 Replacement of Unsuitable Pipe Foundation Materials
- 1-4 Sewer Trench Excavation
- 1-4.1 Finish Grading of Trench Bottom
- 1-4.2 Maximum Sewer Trench Widths
- 1-4.3 Tunnel Excavation
- 1-5 Trench Backfill
- 1-6 Drainage Maintenance
- 1-7 Responsibility of contractors for Backfill Settlement
- 1-8 Disposal of Excess Excavated Materials
- 1-9 Protection of Sewer
- 1-10 Trench Compaction
- 1-11 Stripping of the Top Soil
- 1-12 Excavation and Backfill for Manholes

SPECIFICATION II - MEASUREMENT AND PAYMENT

- 2-1 Excavating, Backfilling and Trench Compaction

SPECIFICATION I: EXCAVATION, BACKFILLING & COMPACTION

1-1 Trench Excavation, General Requirements: The terms "excavation" and "backfilling", as used in the specifications shall refer to, and shall mean, all material excavated or otherwise removed in the performance of the specified work, and all work required for, and in connection with, the excavation, removal, and subsequent handling and disposal of such material. Excavation and backfilling shall include site clearing and preparation where required, subgrade preparation, bell holes, all sheeting, shoring, bracing, and de-watering of trenches and other excavation, protection of adjacent property, backfilling, pipe embedment, all specified backfill consolidation and surfacing, and other work necessary and required.

The contractor shall not open more trench in advance of pipe laying than is necessary to expedite the work and, in the event that pipe laying is stopped for any cause, 100 feet will be the maximum length of open trench allowed on any line under construction.

Under ordinary conditions, excavation shall be by open cut from surface. Where the depth of trench and soil conditions permit, tunneling shall be required beneath cross walks, concrete driveways, curbs, gutters, pavements, and other surface structures; for such tunneling, no additional compensation will be allowed over the price for, or based upon, open cut excavation of equivalent depths below the ground surface.

All material excavated shall be deposited along the trench in a manner that will cause the least inconvenience to the public and be consistent with the rapid and economical handling of the work. Sidewalks shall be kept clear of all materials, cross streets, driveways, alleys, and avenues shall be kept open to traffic and all trees shall be protected from injury.

The contractor shall use a backhoe bucket with a smooth cutting edge for all excavation on this contract unless the Engineer gives prior approval for a change.

1-2 Classification of Excavated Materials: The term "excavation" shall include all materials excavated or otherwise removed in the performance of the contract work, regardless of the type, character, composition, or condition of any and all such material or materials. "Excavation" shall also include the removal and disposal of all debris, junk, broken concrete, bricks, stone, and all other materials encountered within the excavation limits.

1-2.1 De-Watering of Trenches: Whenever ground water or surface water is encountered in the trench, the contractor shall, at his own expense, provide suitable means of the removal of same and in no case shall this water be allowed to flow into the pipe or structure except by permission of the Engineer. In case quicksand or other unusual or exceptional conditions of soil or water are encountered and which are not otherwise covered by these specifications, the contractor shall immediately notify the Engineer. Upon receiving such notice, and after an inspection has been made, the Engineer shall direct the work to proceed in accordance with the general provisions for extra work and changes.

1-2.2 Excavation for Structures: Excavation shall be large enough to place structure and perform backfill and proper compaction.

Except where special construction on unstable soil is authorized, all manholes shall be founded on a two-inch (2") gravel cushion; all unauthorized excavation below the specified structure subgrade shall be replaced, by and at the expense of the contractor, with gravel or crushed rock.

All excavation shall be kept dry. No water shall be permitted to come in contact with any concrete within twelve (12) hours after placing. All excavations for structures which extend down to or below the static ground water elevation at the sites of such structures shall be de-watered by lowering and maintaining the ground water at an elevation not less than twelve (12) inches below the bottom of such excavation at all times when work thereon is in progress, during subgrade preparation and continuously thereafter until the structure concrete has been placed and has hardened.

The contractor shall be held responsible for the condition of any water line, sewer, drain or other conduit or pipeline which may be used for drainage purposes and all such pipe or conduits shall be clean and free from all sediments before acceptance thereof by the Engineer.

Subgrade soil for all structures, shall be firm, dense and thoroughly compacted and consolidated; and shall be free from mud and muck; and shall be sufficiently stable to remain firm and intact under the feet of the workmen engaged in subgrade surfacing, and depositing concrete thereon. Where necessary, a layer of concrete of sufficient strength and thickness to withstand subsequent construction operations shall be installed below the specified subgrade elevation and the structure concrete deposited thereon.

Coarse gravel or crushed stone may be used for subsoil reinforcement if satisfactory results can be obtained thereby. Such material shall be applied in thin layers, each layer being entirely embedded in the subsoil by thorough tamping. All excess soil shall be removed to compensate for the displacement of the gravel or crushed stone and the finished elevation of any subsoil reinforced in this manner shall not be above the specified subgrade.

1-2.3 Subsurface Exploration: Whenever necessary to determine the location or elevation of existing utilities, the contractor upon order of the Engineer, shall make the necessary excavation. Payment will be on an hourly basis as bid in the Proposal Form. The work shall include all labor and equipment necessary to expose the utilities from the time excavation is begun until the utility has been located and measured. Backfill and compaction of the exploration area shall be incidental.

1-3 Replacement of Unsuitable Pipe Foundation Materials - Crushed Rock Cradle: If the bottom of the trench is not sufficiently stable or firm to prevent vertical or lateral displacement of the pipe after installation, supplementary foundation will be required. Excavation of said unstable material shall be made to a depth of not less than eight (8) inches below grade and for the full width of the trench. A foundation of crushed rock shall be laid in layers of not more than four (4) inches thick from the bottom of the excavation to within two (2) inches of the pipe grade. The pipe shall then be laid to grade and the crushed rock carefully placed and uniformly tamped around the pipe to the spring line. The price as bid on the Proposal Form for each cubic yard includes the removal of unstable material and the placing of the crushed rock foundation complete in place. The unstable material shall not be used in backfilling the trench.

1-4 Trench Excavation: Grade lines parallel to the invert shall determine the alignment, depth, and pipe sub-grade of all trenches.

1-4.1 Finish Grading of Trench Bottom: Trench bottoms shall conform to the grade or depth to which the pipe is to be laid and the pipe bedding shall be accurately graded and shaped to provide uniform bearing and support for each pipe at every point along its entire length between bell holes before the pipe is placed in the trench. The pipe bedding shall include a three (3) inch depth of material below the pipe barrel. If excavation has been carried deeper than six (6) inches below the pipe barrel, the excess depth shall be filled with bedding material and be mechanically tamped.

In the event that after placing a pipe in the trench, it is found that the prepared trench bottom is not at the proper elevation, the pipe shall be removed and the grade corrected. In no case shall the pipe be raised from and dropped in the trench bottom for the purpose of lowering a subgrade, which is too high.

1-4.2 Maximum Sewer Trench Widths: In order to prevent the application of superimposed loadings on pipe in excess of the designed and specified pipe strengths, excavation of the pipe trench shall be in accordance with MnDOT 2503.3B, except that the maximum trench width shall also apply for cover depths less than 15 feet.

Where necessary to prevent sliding and caving of trench banks, which cannot be effectively braced because of the character of the soil, it will be permissible to deviate from the above standards as necessary to comply with OSHA requirements. However, no additional compensation will be made for over-excavation of the pipe trench.

1-4.3 Tunnel Excavation: Installation of pipes may be made in tunnels only where such installation is required or permitted by these specifications, the drawings, or the City Engineer.

Tunnel sections shall provide adequate clearance for pipe and workmen for proper lining, grading and jointing of the pipe installed therein. All bracing, shoring and sheeting necessary for the construction of the tunnel and the proper protection of workmen therein shall be furnished and installed and, where required by the City Engineer, shall be left in place. All tunnel backfill shall be of proper condition and moisture content to compact readily, and shall be thoroughly tamped and rammed under, around and over the pipe from the floor of the tunnel to the sidewalls and top thereof.

1-5 Trench Backfill: Unless otherwise specified, backfill above pipe encasement shall be done with original excavation material. Within the pipe encasement zone, granular backfill shall be placed in two layers of approximately equal depth to a height in the trench of six (6) inches above the top of the pipe. The bottom layer shall be compacted either mechanically or by hand around the pipe in such a way as to provide a good and sufficient bedding and support around the pipe, but not to disturb the pipe. The upper layer shall be mechanically compacted. Thereafter, additional backfill shall be placed in the trench in uniform lifts not exceeding 12 inches in thickness and compacted by the use of a sheep's foot roller or as directed by the Engineer. The trench shall be backfilled to the level of or slightly higher than the natural ground surface. Within the upper 3 feet of roadways, trench backfill shall be placed in uniform layers not exceeding 8 inches in thickness. After all backfilling has been satisfactorily completed, all excess earth or any other material or rubbish shall be removed from the site of work by the contractor and disposed of in a manner suitable and satisfactory to the Engineer. The contractor shall maintain the street over the trench until all settlement has taken place, provided that his responsibility for so maintaining the street shall not extend beyond the period of one year after the final payment date of the contract.

1-6 Drainage Maintenance: Backfilling of trenches for pipe installed beneath and/or across roadways, driveways, walks and other traffic ways adjacent to drainage ditches and water courses shall not be done prior to the completion of backfilling to the original ground surface of the trench on the upstream side of such traffic way in order to prevent the impounding of water at any point after the pipe has been laid, and all necessary bridges and other temporary structures required to maintain traffic across such unfilled trenches shall be constructed and maintained. All backfilling shall be done in such manner that water will not accumulate in unfilled or partially filled trenches. All material deposited in roadway ditches or other water courses crossed by the line of trench shall be removed immediately after backfilling is completed and the section, grades and contours of such ditches or water courses restored to their original condition, in order that surface drainage will be obstructed no longer than necessary.

1-7 Responsibility of Contractors for Backfill Settlement: Wherever trenching or other excavations made by the contractor in the performance of work under this contract have not been properly backfilled, or where settlement has occurred at any time prior to the final acceptance of the entire work, to the extent that the top of the backfill is below the original ground surface, such trenches shall be refilled and backfill surface compacted and smoothed to conform to the elevation of the adjacent ground surface. All sod in lawns and parking removed or damaged by reason of such settlement and the repair thereof, shall be replaced by and at the expense of the contractor.

1-8 Disposal of Excess Excavated Materials: All excess materials removed from trenches shall be disposed of as required in section 2104.3C of the current Minnesota Department of Transportation Specifications.

1-9 Protection of Pipe: In backfilling trenches, the installed pipe shall not be disturbed by dropping backfill material from the top of the trench onto the pipe, or by walking on or along side the sewer, or by pulling sheeting, or in any other manner.

1-10 Trench Compaction: Within streets, parking lots or other improved areas, the backfill shall be compacted to 95% of the maximum density determined by standard proctor. The density of the compacted backfill will be determined by field density tests unless otherwise noted in the Special Provisions. Backfill in lawns or other green areas shall be compacted by the Quality Compaction Method (MnDOT 2105.3F2).

1-11 Stripping of the Topsoil: The contractor shall, on all unimproved streets and avenues, strip all topsoil as directed by the Engineer. Said topsoil shall be carefully preserved and stockpiled on the rear of the adjacent lots or other designated locations as directed by the Engineer. Payment for removal and stockpiling of said topsoil shall be at the unit price bid for Salvage Topsoil.

The Contractor shall, on all utility easements, strip all topsoil in the area to be disturbed by his operations. Said topsoil shall be carefully stock piled and preserved until after the sewer has been installed and the trench backfilled. The Contractor shall then restore the topsoil on the stripped area to its original depth and elevation. Stripping, preservation and restoration of the topsoil on utility easements shall be considered, as incidental to the project and no direct compensation shall be made for this work.

1-12 Excavation and Backfill for Structures: Excavation shall be limited to the size required for the manhole to be constructed. Allowance shall be made for a manhole bedding of two (2) inches of sand or gravel.

Backfill shall be compacted by an approved mechanical tamper. The backfill shall be compacted to the same specifications required for the adjacent trench.

SPECIFICATION II: MEASUREMENT AND PAYMENT

2-1 Excavating, Backfilling and Compaction: Excavation, Backfill and Compaction is incidental to pipe construction.

-END OF SECTION-

CITY OF MOORHEAD SPECIFICATIONS TRAFFIC CONTROL (0563)

The contractor shall furnish and maintain all construction signs, barricades and barricade weights, traffic marking tape, and warning lights which are needed for the guidance, warning and control of pedestrian and vehicular traffic through this project. All traffic control devices shall conform to the most current versions of the "Minnesota Manual on Uniform Traffic Control Devices" and Standard Signs Manual Part I and Part II.

No measurement will be made of the individual items required for Traffic Control. All work required to furnish and maintain the traffic control devices will be included in the lump sum price for Item No. 0563.601 (Traffic Control). Any additional minor items or slight changes as may be required shall be furnished by the contractor with no additional compensation being made therefore.

If the construction work is done in a sequence other than that which the plans show appropriate signing for, the contractor shall request the appropriate signing layout from the Engineer.

Based on the lump sum contract price for "Traffic Control," partial payments will be made as follows:

- When 5 percent or more of the original contract amount is earned, 25 percent of the amount bid for "Traffic Control" will be paid.
- When 25 percent or more of the original contract amount is earned, 50 percent of the amount bid for "Traffic Control" will be paid.
- When 50 percent or more of the original contract amount is earned, 75 percent of the amount bid for "Traffic Control" will be paid.
- Except as noted below, 100 percent of the amount bid for "Traffic Control" will be paid upon completion of all contract work.

If, at any time, the contractor fails to adequately maintain any of the traffic control devices, the department may proceed to maintain the work and deduct the costs thereof from any monies due the contractor.

If the Engineer should order additional traffic control, other than that included in these Special Provisions, they shall be included as extra work and the contractor shall be reimbursed at the invoice rental prices for such traffic control devices. Current rental price shall be furnished to the Engineer prior to such installations.

The contractor shall be responsible for the repair or replacement of all traffic control devices which become damaged, moved or destroyed; of all lights which cease to function properly, and of all barricade weights which are damaged, destroyed or otherwise fail to stabilize the barricades. He shall further provide sufficient surveillance of the barricades and signs to insure attention.

The contractor shall furnish names, addresses and phone numbers of at least two local individuals responsible for the traffic control devices to:

City Engineer: (218) 299-5390

City of Moorhead Police Department: (218) 299-5111

All open excavations in excess of two inches in depth adjacent to a traffic lane or auxiliary lane shall be signed and delineated in accordance with the "Temporary Traffic Control Zone Layouts" field manual dated February 2011. Signs and delineation shall be furnished, erected and maintained by the contractor. This shall be incidental work for which no direct compensation will be made.

The contractor shall provide at least 2 working days' notice to the Engineer, prior to making any lane or roadway closures

The contractor shall furnish qualified personnel for directing and controlling traffic during such times as the Engineer deems necessary for the safety of the traveling public.

Traffic control personnel shall be thoroughly familiar with all applicable traffic laws and regulations, properly equipped and properly deputized by duly constituted authority, all to the satisfaction of the Engineer.

Providing traffic control officers, in accordance with the foregoing, shall be incidental work for which no direct compensation will be made.

-END OF SECTION-

CITY OF MOORHEAD SPECIFICATIONS CONSTRUCTION OF SEWERS

Description of Work: The work to be done under these specifications and the accompanying plans consists of all labor, materials and equipment necessary to construct the storm and/or sanitary sewers as shown on the Plans and as modified in the Special Provisions.

SPECIFICATION I - SEWER LINE CONSTRUCTION

- 1-1 Location and Grade of Sewers
- 1-2 Laying of Sewer
- 1-3 Sewer Pipe Joints
- 1-4 Installation of Wye Branches
- 1-5 Installation of Risers
- 1-6 Bulkheads
- 1-7 Manholes
- 1-8 Manhole Castings and Steps
- 1-9 Connection for Future Sewers
- 1-10 Sewer to be Kept Clean
- 1-11 Infiltration
- 1-12 Testing

SPECIFICATION II - MEASUREMENT AND PAYMENT

- 2-1 Excavating, Backfilling, and Compaction
- 2-2 Granular Material for Pipe Bedding and Pipe Encasement
- 2-3 Wye Branches
- 2-4 Standard Risers
- 2-5 Drop Manhole Connection
- 2-6 Standard Manholes
- 2-7 Furnish and Install Sewer Pipe

SPECIFICATION I - SEWER LINE CONSTRUCTION

1-1 Location and Grade of Sewers:

Sewers and structures shall be located as shown on the drawings and as determined by the City Engineer. The grade and alignment of all sewer lines shall be determined and maintained by the use of laser control or a line parallel to the grade and line of the sewer or drain, this line to be supported above the ground surface on batter boards spaced not to exceed 30 feet apart and rigidly anchored to, and supported by, substantial posts driven into the ground.

All other methods of maintaining line and grade for construction shall be specifically approved by the Engineer and subject to any restrictions conditional to said approval.

1-2 Laying of Sewer:

The type of pipe to be used is specified on the sewer plans or specifications. The substitution of any other type of pipe may be made only with the approval of the Engineer.

Special care must be taken to lay sewer pipe to exact grade and line, the pipe shall be graded and bedded and encased as shown on plan detail sheets.

All pipes when jointed in the trench shall form a true and smooth line of sewer. Pipes shall not be trimmed except for closures, and pipes not making a good fit shall be removed. The interior surfaces of all pipes shall be clean when laid.

1-3 Sewer Pipe Joints:

All joints shall be installed in accordance with the manufacturer's recommendations including the application of the proper lubricants and/or solvents. Wherever joints are required which do not permit the use of the standard pipe joint, the joint shall be made water tight with materials acceptable to the Engineer and the joint shall be covered with a 6" minimum thickness concrete collar. Water main and sanitary sewer main joints shall be gasketed.

1-4 Installation of Wye Branches:

The Contractor shall install inline wyes exclusively except where otherwise noted on the plans. Approval of the

Engineer is required before any type of wye other than an inline wye may be used.

Wye branches shall be marked with a two (2) inch by two (2) inch piece of sound wood extending vertically from the end of the connection a minimum of four feet long.

1-5 Installation of Risers:

Risers shall be installed where indicated on the sewer plans in accordance with the detail for standard risers. Risers shall be brought to the height above pipe invert indicated on the plans. Place a 2" x 2" piece of sound wood extending vertically from the end of pipe a minimum of four feet (4') long.

1-6 Bulkheads:

All manhole stubs and wye branches or risers shall be capped when providing connections for future sewers. Caps shall be watertight.

1-7 Manholes:

Manholes shall be constructed at the locations and grades indicated on the sewer plans. Their construction shall be interpreted as including excavation and backfill and all material required for a complete and satisfactory installation. Construction shall be precast concrete unless it is physically impossible to use precast. Permission by the Engineer must be obtained before any manhole can be constructed of block or brick. The invert of storm sewer manholes shall be shaped to approximate pipe diameters. Concrete fill shall be shaped upward from the top of the invert at two (2) inches per foot to the edge of the manhole. Side branch inverts shall be constructed with as large radius of curvature as possible. Inverts shall be left smooth and clean. All inverts shall be MnDOT 3A15 Concrete.

Care shall be taken to properly work the concrete to insure maximum contact with the water stops.

Sanitary manholes shall have monolithic base and inverts with watertight rubber sleeve connector for sewer pipe. Sanitary manhole bottom section interiors shall be coated with one 8 mil prime and two 8 mil finish coats of coal tar epoxy meeting Corps of Engineer Spec. C-200 and Government Spec. MIL-P-23236.

The Contractor shall use bituminous mastic rope or gasketed joints on all manhole joints. All sanitary sewer manholes shall have gasketed joints and integral bases unless otherwise specified on the plans.

Whenever the manhole casting is set at a finish elevation below the existing ground, the Contractor shall seal the casting so as to prevent excessive water infiltration.

This shall be done by placing a plastic wrap over the top of the casting and then backfilling over the casting with the excavated material on hand. This work shall be considered incidental to the manhole construction.

This work shall not be done until after the Engineering Department has made a final inspection of the sewer work and approved same.

The elevation of the top of the manhole shall be determined in accordance with the sewer plans. The Engineer may alter the elevation as required.

1-8 Manhole Castings and Steps:

Manhole frames, covers and steps shall be furnished and placed by the Contractor.

1-9 Connection for Future Sewers:

Manhole stubs shall be furnished and installed where indicated on the sewer plans. The connection pipe shall be as specified on the plans and shall terminate in a bell or groove end. Unless otherwise specified, the stubs shall extend two (2) feet outside of the manhole. The pipe shall be carefully set to the line and grade indicated on the plans. An approved water stop shall be provided as directed by the Engineer.

1-10 Sewers to be Kept Clean:

All sewers must be kept thoroughly clean. When pipe laying is ceased for the day or for other reasons, the end of the pipe must be bulk headed.

1-11 Infiltration:

All sanitary sewers must be kept nearly watertight and free from leakage, as the materials used will permit. The rate of infiltration of water into the sewer project, including appurtenances, shall not be in excess of 200 gallons per day per

inch of pipe diameter per mile of sewer. The Contractor is required, however, to repair all visible leaks, even if the infiltration requirements are met.

The infiltration allowances for manhole shall be computed using the total number of vertical feet of manhole expressed as the equivalent diameter sewer.

1-12 Testing: Sanitary Sewer

- A. Clean all lines prior to testing.
- B. Furnish equipment for performing tests and measurements.
- C. All testing shall be done under the review of the Engineer.
- D. Televising: The Contractor shall have all new 8" and larger sewer pipe televised at least 14 days after installation and shall submit a videotape of the inspection along with a written report to the Engineer for review.
- E. Deflection: Less than 5 percent. Rigid ball or mandrel diameter shall not be less than 95 percent of the pipe inside diameter. Ball on mandrel to be manually pulled through pipe.
- F. Pressure Test: The Contractor shall test all new sewer pipes by pumping it full of air to a minimum of 4 psi above the groundwater pressure at the centerline of the pipe. The allowable pressure drop shall not exceed 0.5 psi in 5 minutes.
- G. Repair or replace sections of pipe not meeting allowable pressure and deflection tests and measurements.

SPECIFICATION 2 - MEASUREMENT AND PAYMENT

2-1 Excavating, Backfill, and Compaction:

Excavation, backfill and compaction shall be incidental to sewer construction.

2-2 Granular Material for Pipe Bedding and Encasement:

All costs of granular bedding and encasement of sewer pipe shall be incidental.

2-3 Wye Branches:

Payment for wye connections will be made at the unit price bid for each and shall include payment for the entire section or piece of pipe in which the wye is located (assumed 2 foot length) when inline wyes are being used. If saddle wyes are being used, the unit price shall include a two (2) foot section of the pipe as well as the wye. The Contractor shall install inline wyes exclusively except where otherwise noted on the plan. A two (2) inch by two (2) inch marker required at each connection shall be considered as incidental and all costs should be included with wye.

2-4 Standard Riser:

Riser will be measured from invert of main sewer to the top of riser as shown on the detail sheet. Payment for risers will be at the unit price bid per lineal foot and shall include all costs for materials, excavation and labor.

2-5 Drop Manhole Connection:

Drop manhole connection will be measured in linear feet from invert to invert of the two pipes being connected by the drop. Payment for drop manhole connection shall include cost of furnishing and placing the pipe and pipefittings and concrete as indicated on the detail, the manhole itself will be paid for under other items herein provided.

2-6 Standard Manholes:

Payment will be made at the unit prices and shall be payment for all work, materials and services incidental to their construction including excavation, backfill, sheathing, pumping, removal of excess dirt, casting, and clean up.

2-7 Furnish and Install Sewer Pipe:

Payment will be made for the actual number of lineal feet of sewer pipe placed in the trench measured from center of manhole to center of manhole at the unit prices bid for the various sizes of pipe.

-END OF SECTION-



MPS' STANDARDS FOR WATER UTILITY INSTALLATION

Description of Work

The work to be performed under these standards and accompanying plans and specifications consists of the furnishing of all labor, materials, and equipment to install or replace watermains in the city of Moorhead. The work includes excavation and removal of paving where encountered; furnishing, laying and jointing pipe; making connections to existing watermains as necessary; installing new valves, valve boxes, or valve manholes; installing hydrants; protecting existing utilities and public and private property; backfilling trenches; and other work as may be necessary in order that the work may be completed in accordance with these specifications and the plans and specifications accompanying them.

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DIVISION 1000 STANDARDS AND DEFINITIONS

1100 Reference Standards

1101 American Water Works Association (AWWA)

- A. B300, Hypochlorites
- B. B301, Liquid Chlorine
- C. C100, Thickness Design of Cast Iron Pipe
- D. C104, Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
- E. C105, Polyethylene Encasement for Ductile-Iron Pipe Systems
- F. C110, Ductile-Iron and Gray-Iron Fittings
- G. C111, Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
- H. C153, Ductile-Iron Compact Fittings
- I. C502, Dry-Barrel Fire Hydrants
- J. C504, Rubber-Seated Butterfly Valves, 3 in. through 72 in.
- K. C509, Resilient-Seated Gate Valves for Water Supply Service
- L. C515, Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service
- M. C550, Protective Interior Coatings for Valves and Hydrants
- N. C600, Installation of Ductile Iron Water Mains and Their Appurtenances
- O. C605, Underground Installation of Polyvinyl Chloride (PVC) and Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe and Fittings
- P. C651, Disinfecting Watermains
- Q. C800, Underground Service Line Valves and Fittings
- R. C900, PVC Pressure Pipe and Fabricated Fittings, 4 in. through 12 in., for Water Transmission and Distribution
- S. C905, PVC Pressure Pipe and Fabricated Fittings, 14 in. through 48 in., for Water Transmission and Distribution

1102 American National Standards Institute (ANSI)

- A. A21.4, American National Standard for Cement Mortar Lining for Cast-Iron and Ductile-Iron Pipe and Fittings for Water
- B. A21.10, American National Standard for Gray-Iron and Ductile-Iron Fittings, 2-inch through 48-inch, for Water and Other Liquids
- C. A21.11, American National Standard for Rubber-Gasket Joints for Cast-iron and Ductile-Iron Pressure Pipe and Fittings

1103 American Society of Testing Materials (ASTM)

- A. A48, Standard Specification for Gray Iron Castings
- B. D1784, Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds (Type 1, Grade 1)

- C. D2241, Polyvinyl Chloride (PVC) Plastic Pipe (SDR-PR and Class T)
- D. D2837, Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products
- E. D3139, Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
- F. F477, Elastomeric Seals (Gaskets) for Joining Plastic Pipe

1104 United States Environmental Protection Agency (US EPA)

- A. Safe Drinking Water Act
- B. Reduction of Lead in Drinking Water Act

1105 NSF International

- A. NSF 14, Plastics Piping System Components and Related Materials
- B. NSF 60, Drinking Water Treatment Chemicals—Health Effects
- C. NSF 61, Drinking Water System Components—Health Effects

1106 Plastic Pipe Institute (PPI)

- A. TR-2, PVC Range Composition Listing of Qualified Ingredients

1200 Definitions

1201 Moorhead Public Service (MPS)

The purveyor of water used in the city and the drinking water utility that maintains the water distribution system in the city.

1202 City of Moorhead

The municipality in which the project is located.

1203 Contractor

The Contractor awarded the project by the City or MPS.

1204 Engineer

The consultant engineer or City/MPS engineering staff and/or their designated inspector assigned the engineering of the project.

1205 Engineer's Inspector

The inspector assigned to the project by the consultant or City/MPS engineering staff to inspect the installation of watermains and appurtenances.

– END OF SECTION –

DIVISION 2000 ENGINEERING DESIGN STANDARDS

2100 Plan Review

Plans and specifications shall be submitted to MPS a minimum of four weeks before a contract is advertised for bids. Any changes to the approved plans must be resubmitted for review and approval. Plans must show both plan and profile views of the facility to be constructed. Fittings shall be identified and located by station or other suitable dimensions. The plan should also indicate both existing and proposed utilities located within the construction area.

2200 Water Service Design

2210 Water Service Material

Two (2)-inch and smaller water service connections shall be copper pipe. Four (4)-inch and larger water service connections shall be PVC or ductile iron pipe. Polyethylene (PE) water pipe is not an acceptable water service material. Refer to Division 3000 for water service material specifications.

2300 Watermain Design

2310 Grade

The permanent finished street grade established by the City shall be used to determine the depth and grade directly over the watermain. No reduction in earth cover is allowed over any watermain or service connection that has a previous history of freezing, unless the pipe is adjusted to the proper depth under the new finished grade.

2320 Depth

The depth of cover over the crown of the pipe shall be as described below. Variations in pipe depth may be considered and approved. However, protective measures to prevent freezing may be required, depending on the conditions.

Pipe Size	Minimum Depth
< 12"	8.0'
12"	7.5'
16"	7.0'
> 20"	6.5'

2400 General

2410 Insulation

Insulation shall be used when a watermain offset or utility crossing is required because of a frost generating structure. Frost generating structures include, but are not limited to, catch basins, manholes,

and other outlets. The minimum guidelines for the placement of insulation shall be as follows:

- A. If a water pipe crosses within 3 feet above or below a storm sewer, insulation shall be placed between the water pipe and storm sewer.
- B. If a water pipe is offset over a storm sewer, insulation shall be placed both between the water pipe and storm sewer and over the top of the water pipe.
- C. If a water pipe is within 4 feet of a frost generating structure, insulation shall be placed between the structure and water pipe.

Insulation shall be placed parallel to the water pipe and 2 feet beyond either side of the water pipe. For guidelines A and B above, insulation shall also extend 2 feet beyond either side of the storm sewer. For guideline C above, insulation shall extend 2 feet beyond either side of the water pipe and 2 feet beyond either side of the structure.

2420 Approved Equal

Material specifications to be used for watermain installations shall be submitted to MPS' Water Division for review and approval. MPS' Water Division will review material requested to be substituted as an approved equal on a case-by-case basis.

– END OF SECTION –

DIVISION 3000 MATERIALS

All products (treatment chemicals and material) that may come into contact with water intended for use in a public water system shall meet ANSI/NSF Standards 60 & 61, as appropriate. A product will be considered as meeting these standards if so certified by NSF, The Underwriters Laboratories, or other organizations accredited by ANSI to test and certify such products. All materials used for underground service line valves and fittings shall comply with the latest revision of ANSI/AWWA C800. All materials shall be new and unused.

3100 Pipe and Appurtenances

3110 Polyvinyl Chloride Pipe (PVC)

The PVC material shall conform to the requirements of ASTM D1784, Class 12454. The pipe shall be marked to indicate compliance with NSF 61, Factory Mutual (FM), and either be marked or tagged with the Underwriter Laboratory (UL) approval. All PVC watermain pipe material shall be blue in color. PVC pressure pipe shall be manufactured in accordance with the latest AWWA Standard revision, pressure class, and dimension ratio as follows:

Pipe Size	AWWA Standard	Pressure Class (psi)	Dimension Ratio (DR)
4"–12"	C900	235	18
14"–48"	C905	235	18

PVC Pipe Joints

Bell-end pipe, couplings, and fittings designed for making PVC joints using elastomeric gaskets to affect the pressure seal shall be tested as assembled joints and shall meet the laboratory performance requirements specified in the latest revision of ASTM D3139.

Gaskets and lubricants intended for use with PVC pipe, couplings, and fabricated fittings shall be made from materials that are compatible with the pipe and with each other when used together. Gaskets and lubricants shall not adversely affect the potable quality of the water that is to be transported.

3115 Fusible PVC (FPVC) Pipe

FPVC pipe shall conform to the latest revision of AWWA C900, AWWA C905, or ASTM D1784 for standard dimensions and material, as applicable. Testing shall be in accordance with the referenced AWWA standards for all pipe types.

The FPVC pipe shall be extruded with plain ends, which shall be square to the pipe and free of any bevel or chamfer. No bell or gasket, of any kind, shall be incorporated into the pipe. FPVC shall be manufactured in a standard 40-foot nominal length, or custom length as specified, and shall be homogeneous throughout and be free of visible cracks, holes, foreign material, blisters, or other visible deleterious faults or physical damage. FPVC pipe shall be blue in color for potable water use.

FPVC pipe shall be marked as follows:

- A. Nominal pipe size,
- B. Material type (PVC),
- C. Dimension Ratio, Standard Dimension Ratio, or Schedule,
- D. AWWA pressure class, or standard pressure rating for non-AWWA pipe, as applicable,
- E. AWWA standard designation number, or pipe type for non-AWWA pipe, as applicable,
- F. Extrusion production-record code,
- G. Trademark or trade name, and
- H. Cell Classification.

Fusion Technician Requirements

The FPVC fusion technician shall be fully qualified by the pipe supplier to install fusible PVC pipe of the type(s) and size(s) being used. Qualification shall be current as of the actual date of fusion performance on the project.

FPVC Pipe Joints

Fusible PVC pipe lengths shall be assembled in the field with butt-fused joints, unless otherwise specified. Contractor shall follow the pipe supplier's written guidelines for this procedure. All fusion joints shall be completed per the pipe supplier's guidelines.

FPVC Pipe and Joint Warranty

FPVC pipe installed shall be warranted for one year per the pipe supplier's standard terms. In addition to the standard pipe warranty, the fusion services shall be warranted for one year per the fusion service provider's standard terms.

Saddle/Tapping Connections

Tapped connections through the use of a saddle will require the installation of a Bell Restraint Harness (EBAA Series 6500 or approved equal) prior to tapping of the Fusible pipe.

3120 Ductile Iron Fittings

Ductile iron, mechanical joint fittings shall be used with both mechanical joint and push-on joint pipe and shall conform to the latest revision of AWWA C153. Ductile iron fittings must be used for fittings having an 8-inch diameter or larger.

All ductile iron fittings shall be:

- Mechanical joint, except as noted.
- Attached to the pipe using restraint devices, as specified in **Section 3150**.
- Wrapped, including the restraint devices, as specified in **Section 3170**.
- Bid complete with gaskets, glands, and bolts. All bolts shall be stainless steel.

All fittings shall be cement mortar lined on the interior and bituminous coated on the exterior. Cement lining shall conform to AWWA C104. Joints shall conform to the latest requirements of AWWA C111.

3130 PVC Fittings

PVC fittings shall conform to the requirements of AWWA C907, carry a working pressure of 150 psi, and be of the slip-joint type. Only fittings 8 inches in diameter, or less, may be PVC.

Acceptable PVC fittings include:

- A. IPEX Blue Brute, or
- B. Approved equal.

3140 Mechanical Joint Restraint

All connections between PVC pressure pipe and ductile iron fittings, valves, and/or hydrants shall be made with installing a mechanical joint restraint.

All bolts and ties shall be stainless steel. All factory-installed bolts shall also be stainless steel. All bolts shall be tightened to manufacturer's recommended tightness and verified with a torque wrench. After the installation of the fitting, the bolts shall be rechecked with a torque wrench to ensure tightness.

Acceptable mechanical joint restraints include:

- A. EEBA Iron Series 2000 PV,
- B. Sigma ONE-LOK Series SLCE,
- C. Star Series, or
- D. Approved equal.

3150 Transition Couplings

Transition couplings shall be used for connection of new watermains to existing watermains. All necessary bolts to install transition couplings shall be stainless steel. Transition couplings shall be PVC, ductile iron, carbon steel, or approved equal, and shall be coated inside and out with epoxy or nylon coating.

Acceptable transition couplings include:

- A. HYMAX[®],
- B. Romac Alpha,
- C. Romac Macro, or
- D. Approved equal.

3160 Polyethylene Wrap

All ductile iron fittings, restraint devices, gate valves, butterfly valves, valve boxes, buried sections of hydrants, transition couplings, and/or other devices that contain metal shall be wrapped according to the latest revision of AWWA C105. The polyethylene plastic film must have an 8-mil minimum thickness. Cross-woven polyethylene plastic film having a 4-mil minimum thickness is also allowed.

3200 Valves

3210 Gate Valves

Gate valves shall be used on pipe sizes 4- through 12-inch. Ductile iron resilient-seated gate valves and tapping valves shall conform to the latest requirements of AWWA C515. Valve seats shall be able to withstand 200 psi and the body shall withstand 400 psi.

All valves shall be mechanical joint and attached to PVC pressure pipe with approved joint restraints listed in **Section 3150**.

Gaskets shall be rubber.

Valves shall be left-hand (counter-clockwise) opening with 2-inch operating nut.

The stem shall be made of bronze and shall use O-ring type stem seals.

All valves shall be coated inside and out in accordance with the latest revision of AWWA C550.

All bolts shall be stainless steel.

Acceptable manufacturers include:

- A. American Flow Control,
- B. U.S. Pipe,
- C. Waterous, or
- D. Approved equal.

3220 Butterfly Valves

Butterfly valves shall be used on pipe sizes larger than 12-inch. Butterfly valves shall be mechanical joint end valves, Class 150B, rubber-seated, suitable for buried service, and shall conform to the latest revision of AWWA C504. Epoxy coating shall be applied to all surfaces of the valve body and vane to an average film thickness of 10-mils, or conforming to the latest revision of AWWA C550. All body and operator bolts shall be stainless steel.

Valves shall by left-hand opening (counter-clockwise) with 2-inch operating nut.

Shaft seals shall be O-ring type.

Acceptable manufacturers include:

- A. DeZURIK, or
- B. Approved equal.

3230 Valve Boxes and Adaptors

Valve boxes are required on all gate valves and butterfly valves.

All valve boxes shall be made of cast-iron in accordance with ASTM A48 Class 30B material specification with a minimum tensile strength of 30,000 psi, have screw-type adjustment, be of the three-piece,

5 ¼-inch shaft, size G, and be furnished with cast iron bonnets and covers. The valve box shall be suitable for a depth of cover as specified. Valve box adaptors shall be installed for all valve boxes.

Drop lids shall be marked "WATER" and be American-made, or be heavy-duty foreign-made boxes that meet or exceed the weight of the American-made box.

Acceptable valve box manufacturers include:

- A. Tyler 6850/668S,
- B. Star® heavy-duty series boxes, or
- C. Approved equal.

Acceptable valve box adaptors include:

- A. Valve Box Adaptor II (Adaptor, Inc.) or
- B. Approved equal.

3240 Tapping Sleeves and Valves

Tapping valves shall be in accordance with the latest revision of AWWA C509. Tapping sleeves shall be stainless steel with a stainless steel flange. Tapping sleeve gaskets shall provide sealing across the full pipe circumference and the full area of the sleeve. Bolts and nuts shall be stainless steel. All tapping sleeves shall be wrapped in polyethylene plastic film as specified in **Section 3170**.

3300 Fire Hydrants

Fire hydrants shall be non-jacket type meeting the latest revision of AWWA C502. Hose and pump nozzle connections shall be supplied with O-ring seals, nozzle caps, and nozzle cap chains.

Hydrants shall be Waterous Pacer WB67 Traffic Models, or approved equal, meeting the following specifications:

Main Valve Opening	5¼-inch valve opening
Hydrant Barrel	7¾-inch minimum inside diameter
Shut-off type	Compression
Inlet Connection	6-inch size, mechanical joint fitting
Bury Length	As specified on the plan sheets
Bury Depth	Maximum bury depth of 9 feet, unless approved by Engineer
Traffic Flange	22-inch breakable flange
Hose Nozzles	Two 2½-inch National Standard Thread (NST) hose connections
Pumper Nozzle	One 5-inch Storz Nozzle, pre-installed on hydrants upon delivery to site, provided with a cap containing a 1½-inch National Standard Pentagonal operating nut
Cap Nuts	1½-inch National Standard Pentagonal operating nut, counter-clockwise open
Operating Nut	1½-inch National Standard Pentagonal operating nut, counter-clockwise open
Finish Paint	Standard Red above Ground Line

Installation of fire hydrants shall include the installation of a hydrant post measuring 1½-inch square by 9 feet long. The trade name shall be Telespar®, or approved equal. Installation shall include a hydrant sign on both sides of the top of the hydrant post. MPS will provide additional signs as needed.

3400 Water Service Connections

The Contractor shall be required to furnish and install all stainless steel service saddles, corporation stops, copper pipe, curb stops, and fittings, as specified, necessary to connect existing services to the new watermain. All materials used for underground service line valves and fittings shall comply with the latest revision of AWWA C800.

3410 Corporation Stop Valves

Corporation stop valves for water services 2-inch and smaller shall have the inlet threads protected in shipment by a plastic coating or other equally satisfactory means. Corporation valve inlets shall be threaded with standard AWWA/CC Taper. Corporation valve outlets shall be for use with flared copper tubing unless otherwise specified.

Acceptable corporation stop valves include:

- A. Mueller Co. H-15000,
- B. Ford F600 Series, or
- C. Approved equal.

3420 Curb Stop Valves

Curb stop valves for copper service connections 2-inch and smaller shall be without drain and shall have a Minneapolis thread pattern. End connections shall be for use with flared copper tubing unless otherwise specified.

Acceptable curb stop valves include:

- A. Mueller Co. Oriseal,
- B. Ford B22 Series, or
- C. Approved equal.

3430 Curb Stop Boxes

Curb stop boxes 2-inch and smaller shall be complete with a cast iron plug and Minneapolis thread pattern. Curb stop boxes shall be telescoping and be capable to extend 6 inches above grade with an 8-foot bury.

Acceptable curb stop boxes include:

- A. Mueller Co. H-10302,
- B. Ford,
- C. Sigma, or
- D. Approved equal.

3440 Water Service Pipes

Copper water service 2-inch and smaller shall be Type "K" soft copper, or approved equal.

PVC water service pipe must conform to the standards in **Section 3110**.

Polyethylene (PE) water service pipe is not allowed.

3450 Service Saddles

All service saddles shall be double-bolt (minimum) stainless steel band-type with full half-circle gaskets. Service saddles shall have stainless steel washers between the nut and the plastic washer to equalize tightening stress. Rubber tapered gaskets shall be required to resist circumferential and longitudinal forces, along with O-rings or flat gaskets for hydraulic seal. Saddle bolts shall be tightened to the manufacturer's recommended tightness using a torque wrench. Bolt tightness shall be rechecked with a torque wrench after the pipe tap is complete.

Approved service saddles include:

- A. Romac Industries Style 306,
- B. Ford FS303,
- C. PowerSeal Model 3412 AS,
- D. Cascade CSC2, or
- E. Approved equal.

3460 Service Fittings

Fittings at the property line shall be Mueller Co. H-15400 straight three-part unions, or equal. Soft soldered joints are not permitted.

3500 Miscellaneous

3510 Insulation

Insulation used for watermain offsets and utility crossings shall be rigid extruded polystyrene insulation board having a minimum compressive strength of 40 psi. The insulation material shall be furnished in panels 2 inches thick and shall be laid over top of each other to form a 4-inch layer of insulation. A minimum of two (2) wood skewers per board in each layer driven flush with the surface of the material shall be utilized to hold the insulation material in place during backfill operations.

Approved insulation types include:

- A. Dow STYROFOAM™ HIGHLOAD 40 or
- B. Approved equal.

– END OF SECTION –

DIVISION 4000 CONSTRUCTION

4100 General Requirements

Pipe and fittings shall be handled and laid in accordance with the latest revision of AWWA C600. Pipe and fittings shall be laid in the location shown on the plans—the exact location being designated by the Engineer during construction. Before laying any pipe, it shall be cleaned of all foreign matter and kept clean thereafter. Open ends shall be protected at all times to prevent the entrance of dirt, trench water, animals, or foreign material into the pipe. The bell and spigot shall be wiped clean and sufficient lubrication placed on the gasket and spigot before the pipe is pushed fully into the bell. Field cut spigot ends of push-on joints shall be beveled prior to being pushed into the bell. All handling, field cuts, and jointing shall be done per the manufacturer's recommendation.

4110 Preconstruction Requirements

A preconstruction meeting attended by the Contractor, Engineer, and MPS representative is required prior to the start of construction. If water facilities are proposed for installation in or across a state or county highway, the appropriate state or county engineer shall be invited to the meeting. Representatives of utility companies having facilities within the project area shall also be invited to the meeting.

4120 Notification

The Contractor shall notify MPS at least 48 hours in advance of construction so that an inspector may be assigned to the project. An MPS representative will also be assigned to the project to mark the location of watermain appurtenances, valves, and water service equipment using GPS equipment.

4130 Temporary Water Service

This work shall include providing, installing, maintaining, and removing all hosing, piping connections, and fittings necessary to provide continuous water service to water users during construction of the project. This shall also include any disinfection required by this specification.

Contractor shall be responsible to notify affected property owners, cleaning and disinfecting all materials used for temporary water connections, operating water shut-off valve inside the building, and back flushing all services before connecting to the new watermain.

Contractor is required to have two passing bacteria tests on all temporary water service connections before it shall be turned on to provide temporary water service. This shall include all hosing, piping, and fittings required to provide temporary connections. Coordination between the Contractor and MPS will be required to complete the bacteria testing.

Contractor shall provide personnel who will be available at all times (including evenings and weekends) to correct interrupted temporary water service or other problems associated with the project. The Contractor shall coordinate the contact information for these identified personnel with MPS before beginning the project.

Contractor shall be required to employ a registered and licensed master plumber who will be responsible for all plumbing connections on this project. Contractor shall provide backflow prevention devices on the temporary water supply.

Contractor will be required to remove all handles on valves within the temporary water service connections before the commencement of construction—this is to prevent the unintentional distribution of water service to water users.

4140 Materials

The Contractor shall furnish and install only the specified materials approved by MPS in these standards or those approved in **Division 2000**. MPS will be responsible for furnishing material that is required for work to be performed by MPS.

4150 Abandoning of Watermains, Hydrants, and Valves

The Contractor shall plug the ends of abandoned watermains with concrete whenever it is not practical to remove the abandoned pipe. When it is not practical to remove the existing hydrant, the Contractor shall remove the hydrant to 18 inches below grade and fill the stand pipe with concrete. If a valve is being abandoned in place, the Contractor shall close the valve, remove the valve box to the road grade, and fill the valve box with concrete.

4200 Pipe Installation

PVC pipe and associated fittings shall be installed in accordance with the latest revision of AWWA C605.

4210 Pipe Alignment and Grade

The pipe shall be laid to the horizontal alignment and depth as directed by the Engineer. The minimum bury depth shall be determined based on **Section 2320**.

Deflection of the pipe joints will be permitted up to a 5-degree maximum. A 5-degree deflection equals an offset of approximately 1-inch per foot of pipe. Any deflection exceeding 5 degrees will require the use of bends and fittings, which shall be furnished and installed by the Contractor.

At locations where a watermain crosses a sewer pipe, a full-length section of watermain pipe shall be centered over the sewer pipe to place joints as far away from the sewer pipe as possible. Contractor shall maintain 18 inches of vertical clearance between watermain pipe and sewers.

4220 Pipe Bedding and Backfilling

The pipe shall be bedded and backfilled with clean pit run material. No particle size may exceed 1 inch. The pipe shall be placed on a 3-inch layer of material and backfilled 3 inches over the top of the pipe. A uniform support shall be provided for the entire length of the pipe.

4300 Setting Valves, Valve Boxes, Service Stops, Hydrants, and Fittings

4310 Valves and Valve Boxes

Valves will be installed where shown on the plans or as directed by the Engineer. Before installing the valve, care should be taken to ensure that all foreign material has been removed from the inside of the valve.

The body of the valve shall be wrapped with polyethylene in accordance with the latest revision of AWWA C105. Also see **Section 3170**.

The stuffing boxes shall be tightened and the valve opened and closed to see that all parts are in first-class working order. Valves and valve boxes must be plumb. Valves shall be set on pre-cast concrete blocks.

The valve box adapter shall be installed on the valve and the valve box shall be placed directly over the operating nut, and the top of the box being brought to grade flush with the surface of the ground.

The box shall be backfilled and thoroughly tamped around the box. After backfilling, a wrench shall be dropped on the valve to ensure that it is operable.

4320 Fire Hydrants

Hydrants shall be set at such an elevation that the specified pipe cover is provided throughout the length of the supply line and that the pumper nozzles are a minimum of 30 inches above the surrounding finished ground.

Contractor can either provide hydrants meeting the required elevations or provide hydrants with hydrant extensions (incidental to the hydrants) as approved by the Engineer. The breakaway flange shall be between 3 and 6 inches above finished ground elevation.

All hydrants shall be vertically plumb and shall have their pumper nozzle facing at right-angles to the street, unless otherwise specified.

Each hydrant shall be set on a concrete block and blocked behind with concrete blocks(s) of sufficient size to prevent settling and horizontal movement. Hydrant bases shall be backfilled with at least one-third cubic yard of crushed rock to facilitate drainage. The crushed rock shall extend to 6 inches above the weep hole.

4330 Water Service Stops

All curb boxes shall be wrapped in polyethylene having a minimum thickness of 8 mils, as specified in **Section 3170**.

Each water curb box shall be marked with a 2"x2"x4' wooden marker. The upper 24 inches of said markers shall be painted with blue paint in a manner satisfactory to the Engineer.

4340 Fittings

All fittings shall be PVC or ductile iron, and shall be "push-on" or "slip-joint," unless specified otherwise in the plans or special instructions to bidders.

4350 Thrust Blocks

All fittings shall be braced by means of poured concrete or concrete thrust blocks. No wood thrust blocks will be allowed. Poured concrete shall be 3,000 psi concrete poured against undisturbed earth. Care shall be taken not to cover up joints, bolts, flanges, and fittings with concrete.

Thrust restraint at the joints may be used in lieu of concrete thrust blocking with the permission of the Engineer. Restraint devices for PVC pipe shall meet or exceed the requirements of the latest revision of ASTM F1674 (Standard Test Method for Joint Restraint Products for use with PVC Pipe).

4400 Horizontal Directional Drilling (HDD) Requirements

A project safety and contingency plan shall include, but shall not be limited to, drilling fluid containment and cleanup procedures, equipment and plan for compromised utility installations, including electrical and power lines, watermain, sanitary sewer, storm sewer, and any other subsurface utility in the area. An HDD schedule identifying daily work hours and working dates for each installation is required.

4500 Tracer Wire and Insulation

4510 Tracer Wire Installation and Termination

Tracer wire shall be No. 10 solid copper wire with blue colored THHN insulation. Tracer wire should be continuous and shall be placed on the crown of the pipe and attached to the pipe every 10 feet. If splicing is needed, the use of splice caps approved by the Engineer will be required. Tracer wire must be continuous to maintain connectivity. In-line splices shall be made with "DryConn Direct Bury Lug Aqua," or approved equal. Wire nut splices will not be allowed. Wire splices must be made to assure proper connectivity of the wire. The completed splices must be constructed to prevent moisture from contacting the wire splice to prevent corrosion of the wire connections.

For trenchless installation, tracer wire shall consist of a 304 stainless steel, alloy, 7 x 19 stranded core, inside a copper shell, entirely wrapped in High-Density Polyethylene (HDPE) as manufactured by Copperhead Industries (SoloShot Burst). Tracer wire shall be 10 GA, colored blue. As part of the final inspection and acceptance of newly-installed watermains, the tracer will be tested for electrical continuity. If the tracer wire fails, the Contractor will be responsible for providing some means of tracing out newly-installed watermain including, but not limited to, re-installing tracer wire.

On fire hydrants, tracer wire must be installed inside a ½-inch galvanized conduit brought alongside the hydrant and then attached to a tracer wire bracket that is attached to one of the head bolts.

On water services, the tracer wire for services must be run from the watermain to the curb boxes. The tracer wire for the services must be connected to the tracer wire for the watermain. The tracer wire must come up the outside of all curb boxes. The tracer wire must be taped to the curb boxes and be

extended 2 feet above the finished grade of the curb boxes. The excess wire shall be wrapped and taped around the curb boxes at finished grade.

At each valve location (including fire hydrant isolation valves), a loop of wire is to be brought up the outside of the valve box and looped inside the box through a hole drilled 2 inches below the bottom of the lid, unless directed otherwise by the Engineer.

4520 Polystyrene Insulation Installation

Rigid extruded polystyrene conforming to the material requirements of this specification shall be installed with two layers of 2-inch thick insulation board at the locations designated in the plans. The insulation material shall be furnished in panels 2 inches thick and shall be placed on a smooth level foundation. If joints are required, they shall be in a staggered manner that will provide overlaps a minimum of 6 inches on the underlying sheets. The edges shall be trim and square. The insulation shall be held together by a minimum of two wood skewers per board in each layer—driven flush with the surface of the material. If the bedding procedure is not adequate to properly support the insulation, an additional treated wood shell will be required.

Backfilling and compaction of material over the insulation board shall be accomplished in a manner that will not damage the insulation material. Construction equipment of any kind shall not operate directly on the insulation board. The Contractor shall replace, at their own expense, sections of insulation damaged by the Contractor's construction operations.

4600 Operation of Valves and Hydrants

The Contractor shall notify MPS Water Division staff when gate valves need to be opened or closed. Only MPS Water Division staff shall operate existing valves and hydrants.

New valves that are installed by the Contractor shall not be opened adjacent to an existing watermain unless the following conditions have been met:

1. MPS Water Division staff have been notified and are available to operate the valve and flush adjacent watermain in the area, if necessary.
2. All testing is complete and approved, including pressure testing, disinfection, and bacteriological testing.

Unauthorized valve operations resulting in a labor or material cost to the City or MPS will be either invoiced (when not currently under City contract) or deducted from the payment due the Contractor. Charges to the Contractor, in either case, will be calculated at the City or MPS employee's direct wage rate times a 2.0 multiplier.

4700 As-Built Requirements

The Contractor shall notify MPS at least 48 hours in advance of construction so that an MPS representative can be assigned to the project to mark the location of watermain appurtenances, valves, and water service equipment using GPS equipment.

– END OF SECTION –

DIVISION 5000

PIPE, SERVICE CONNECTION, AND APPURTENANCE TESTING

5100 General Testing Requirements

The Contractor shall notify MPS Water Division staff when valves need to be opened or closed. MPS personnel must be onsite to supervise operation of the valves. The new watermain must be isolated from the existing mains until the new pipe passes the bacteriological testing requirements.

5200 Pressure and Hydrostatic Testing

It is the Contractor's responsibility to pass the pressure and hydrostatic testing. It is at the Contractor's own risk to pressure test against an existing valve in the water system. If the Contractor chooses to pressure test against an existing valve and they cannot pass the test, the valve will have to be replaced at the Contractor's expense.

Following the installation of a new watermain, all newly-laid pipe or valved sections shall be subjected to a hydrostatic test.

Each valved section of the pipeline shall be slowly filled with water. When venting air from pipelines, it is important to limit the pipeline fill rate to avoid excessive surge pressures when the water reaches the air venting openings.

Before applying the specified test pressure, air shall be expelled completely from the pipeline section under test. Before pressure testing can commence, any heavily-chlorinated water in the line must be thoroughly flushed.

The pipeline shall be allowed to stabilize at the test pressure before conducting the hydrostatic test. This may require several cycles of pressurizing and bleeding trapped air prior to beginning the test.

The hydrostatic test shall be at least 2 hours in duration with no drop in pressure during the test with a minimum pressure reading of 150 psi.

An additional curb stop shall be installed in the service line within the trench. The curb stop shall be closed when performing the pressure test. The curb stop shall have a temporary access pipe installed at or above grade to allow the curb stop to be opened after the pressure test is performed. The temporary access pipe shall be removed after the pressure test and bacteria test have been completed and approved, and the additional curb stop has been opened. The water service shall be back-flushed before restoring service to residences to remove any scaling or debris that is in the service line.

5300 Watermain Disinfection

Disinfection shall conform to Minnesota Department of Health requirements and the latest revision of AWWA C651. Thoroughly flush watermain prior to disinfection in order to remove all foreign matter that may have entered the pipe during construction.

A 50 mg/L (ppm) chlorine solution shall be used for disinfection.

5310 New Watermain Installation Disinfection

Hypochlorite tablets or liquid chlorine may be used on new watermain projects.

5320 Watermain Replacement Disinfection

Hypochlorite tablets shall not be used on watermain replacement projects—liquid chlorine is to be used and may be inserted through a hydrant or a corporation installed on the new watermain.

Location of the corporation shall generally be placed at a location such that the chlorine solution can be injected into a water supply stream and the chlorine mixture is carried through the entire length of the new watermain. Location of the corporation must meet approval of the Engineer.

Cost of corporation and disinfecting work shall be incidental to the watermain installation.

The corporation valves are to be closed at the main prior to the backfilling of the trench areas.

Maintain chlorine solution in watermain for a minimum of 24 hours.

Thoroughly flush line after retention time has expired until the chlorine content is at acceptable levels. The environment to which the heavily-chlorinated water is to be discharged shall be inspected. If deemed necessary, a reducing agent shall be added to neutralize the chlorine residual remaining in the water.

5330 Dechlorination

Heavily-chlorinated water that is flushed from the watermain, after disinfection, shall be disposed of according to the latest revision of AWWA C651.

5340 Bacteriological Testing

Upon completion of disinfecting and flushing the watermain, but prior to placing the watermain into service, the Contractor will coordinate with MPS to test for bacteriological quality.

Prior to acceptance, MPS will collect and test samples in accordance with Standard Methods of the Examination of Water and Wastewater, and shall show the absence of coliform organisms.

Two bacteriological tests shall be performed per 1,200 linear feet of watermain pipe. These tests shall be taken 24 hours apart. Two (2) consecutive samples must pass in order for the work to be accepted.

Bacteria sampling will not be allowed through a fire hydrant or fire hose. The sampling line must be dedicated and cleaned, disinfected, and flushed prior to sampling.

If tests indicated the presence of coliform bacteria, the Contractor shall re-flush the watermain and new samples will be collected. At the Contractor's option and cost, the watermain may be re-disinfected prior to re-flushing and re-sampling. If the re-test fails, Contractor shall repeat the disinfecting, flushing, sampling, and testing process until test results indicate absence of coliform bacteria. If the re-test fails, Contractor will be responsible for the additional costs of flushing, disinfecting, and re-testing for bacteria. Only after bacteriological test results are favorable shall the watermain be placed in service.

– END OF SECTION –

DIVISION 6000
FINAL INSPECTION, ACCEPTANCE, AND PAYMENT

6100 Final Inspection and Acceptance

Before any pavement operations may commence, the Contractor shall be required to request a final inspection with the Engineer and MPS.

As part of this inspection, the Engineer and MPS shall inspect all aspects of the watermain project including, but not limited to, valve operation and location, hydrant operation and location, tracer wire continuity, curb stop operation and location. Once the Engineer and MPS have signed off and accepted the newly-installed watermain, the Contractor shall be paid for work completed.

6200 Measurement and Payment

All measurements and payments will be based on completed and accepted work. The payments listed below shall be full compensation for all labor, materials, equipment, and incidental items necessary to complete work.

Pipe will be measured in units of lineal feet along the center line of the pipe without deductions for fitting or valves. Payments shall be made at the Contract unit price per lineal foot for "Watermain" for each respective size and type listed in the proposal. Pay items shall include excavation bedding, backfill, thrust blocks, disinfection, and testing. Payment for installation of watermain shall not be paid in full until the main has been flushed, pressure tested, disinfected, and tested for bacteriological content and final inspection has been completed.

PVC or ductile-iron fittings and connections to existing facilities will not be measured for separate payment but will be considered a subsidiary item to the installation of the watermain unless a pay item is specifically included on the bid form.

Fire hydrants will be measured in units of each. Payment will be made at the contract unit price per each of the item "Fire Hydrants."

All valves will be measured in units of each, which shall include the valve box and cover. Payment will be made at the contract unit price per each for "Gate Valves or Butterfly Valves and Valve Box" of the size indicated.

Hydrant leads will be measure in units of lineal feet along the centerline of the pipe. Payment shall be made at the contract unit price per lineal foot for the size of pipe as indicated.

Fittings will be measured for separate payment as a lump sum. Payment will be made on the basis of the contract lump sum for "Fittings."

Measurement of water services shall be from the centerline of the watermain to connection to the existing services. Payment for said water services shall include all costs for installation of the water

service, including, but not limited to, copper water pipe, labor, and incidentals necessary to complete the work in accordance with these standards.

Payment for furnishing and installing corporation stops will be at the unit price bid on the proposal form. The unit price bid for corporation stops shall include the specified saddle.

Payment for furnishing and installing curb stops and curb boxes shall be at the unit price bid on the proposal form.

Temporary Water Service bid item shall include all work necessary for providing temporary water connections to water users affected by this project.

– END OF SECTION –

DRAWING INDEX

D-1..... Watermain Trench Detail

D-2..... Gate Valve with Extension and Support Detail

D-3..... Polyethelene Pipe Wrap Details

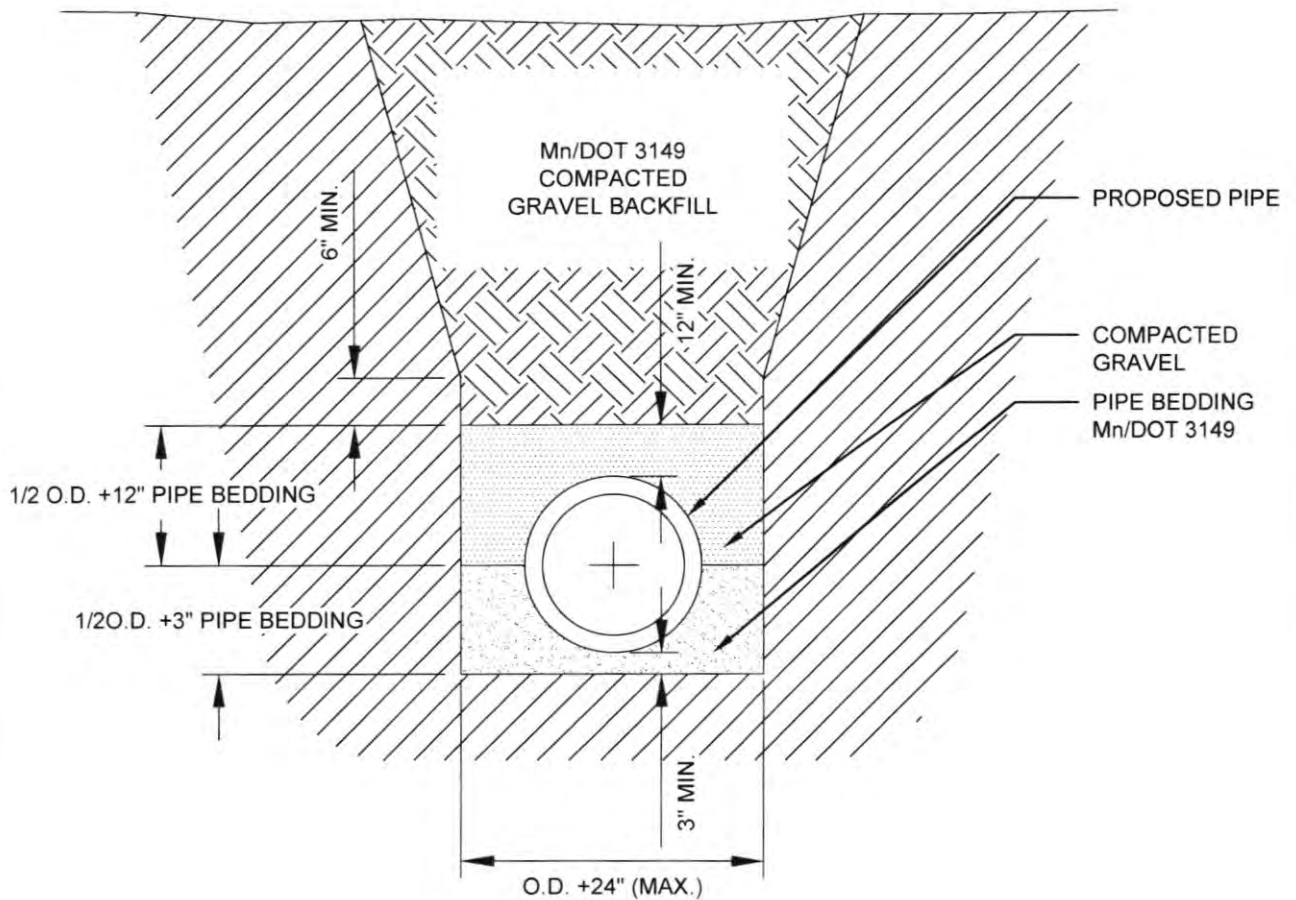
D-4..... Thrust Blocking Details

D-5..... Restraint Device for PVC Pipe Bell Details

D-6..... Fire Hydrant Connection with Gate Valves

D-7..... Watermain Relocation Over and Under Piping

D-8..... Watermain Stub Detail



COORDINATE BACKFILL
REQUIREMENTS WITH THE
CITY OF MOORHEAD
STANDARD REPAIR PLATES



WATERMAIN TRENCH DETAIL

MOORHEAD PUBLIC SERVICE
STANDARD DETAILS

D-1

COMPACTED
MATERIAL PER CITY
OF MOORHEAD
STANDARD PLATE

FINISHED GRADE

STANDARD
GATE VALVE
ADJUSTABLE
BOX

STANDARD GATE
VALVE NUT

STANDARD GATE
VALVE

PROVIDE STEM EXTENSION
WITH OPERATING NUT IF
INVERT OF WATERMAIN IS
GREATER THAN 10 FEET
DEEP

COVER PER PLAN & PROFILE

COMPACTED FILL
PER CITY OF MOORHEAD
STANDARD PLATE

PIPE BEDDING GRAVEL
TO MIN. 3" ABOVE PIPE,
Mn/DOT 3149
(INCIDENTAL)

GASKET

WATERMAIN PIPE

CONCRETE BLOCK
UNDISTURBED EARTH

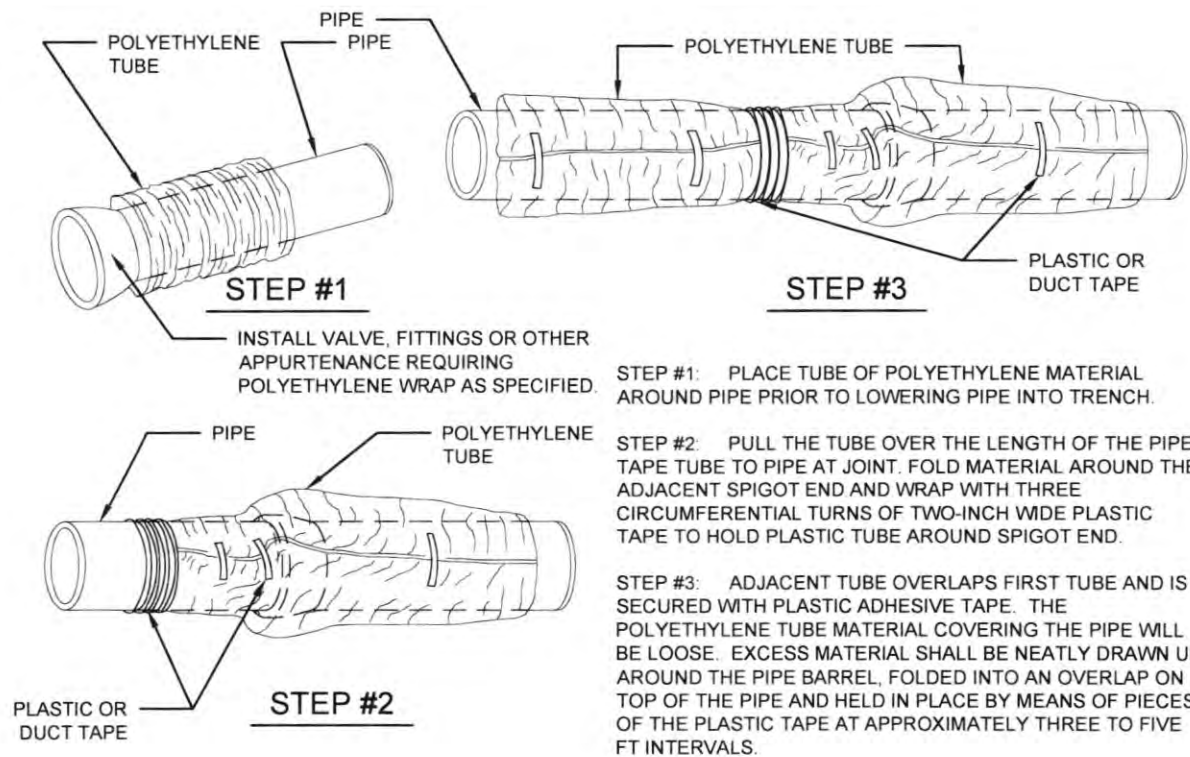
COORDINATE BACKFILL
REQUIREMENTS WITH THE
CITY OF MOORHEAD
STANDARD REPAIR PLATES



GATE VALVE WITH EXTENSION AND SUPPORT DETAIL

MOORHEAD PUBLIC SERVICE
STANDARD DETAILS

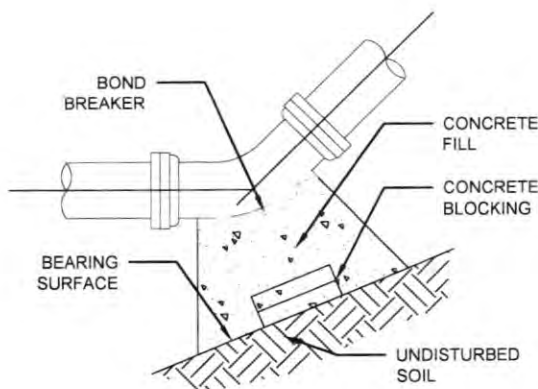
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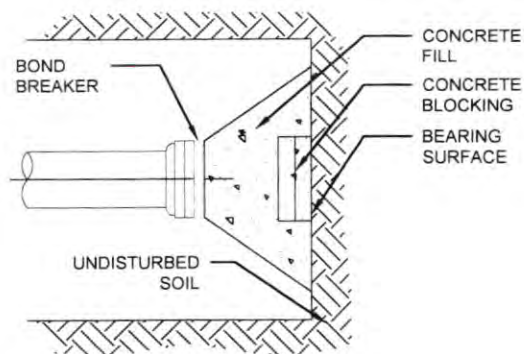
POLYETHELENE PIPE WRAP DETAILS

**MOORHEAD PUBLIC SERVICE
STANDARD DETAILS**

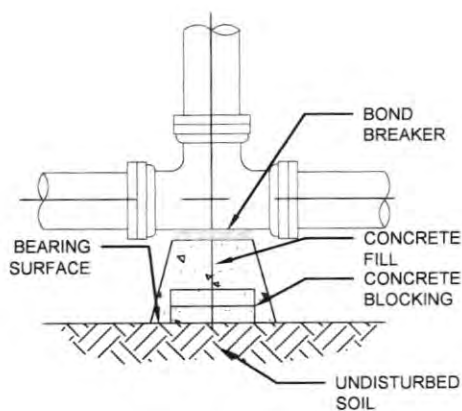
D-3



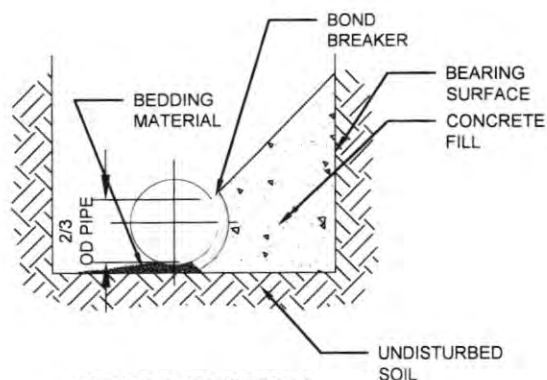
11-1/4°, 22-1/2°, 45° & 90° BENDS



DEAD END SECTION



TEE SECTION



CROSS SECTION

NOTES:

1. BEARING SURFACES SHOWN IN CHART ARE MINIMUM
2. BASED ON 150 PSI INTERNAL PIPE PRESSURE PLUS WATER HAMMER. 4", 6", 8" AND 12" WATER HAMMER = 110 PSI 16", 20" AND 24" WATER HAMMER = 70 PSI
3. BASED ON 3,000 PSF SOIL BEARING CAPACITY.
4. CONCRETE BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH. BELLS AND BOLTS TO BE KEPT FREE OF CONCRETE. CONCRETE IN PLACE TO BE INCLUDED IN PRICE BID FOR WATERMAIN.
5. IF APPROVED BY THE ENGINEER, SOLID CONCRETE BLOCKS MAY BE USED FOR BLOCKING ON 8" DIA PIPE AND BELOW. 10" DIA. PIPE AND ABOVE WILL CONFORM TO CONCRETE POURED IN PLACE AREAS SHOWN ABOVE.

TABLE OF REQUIRED BEARING AREAS

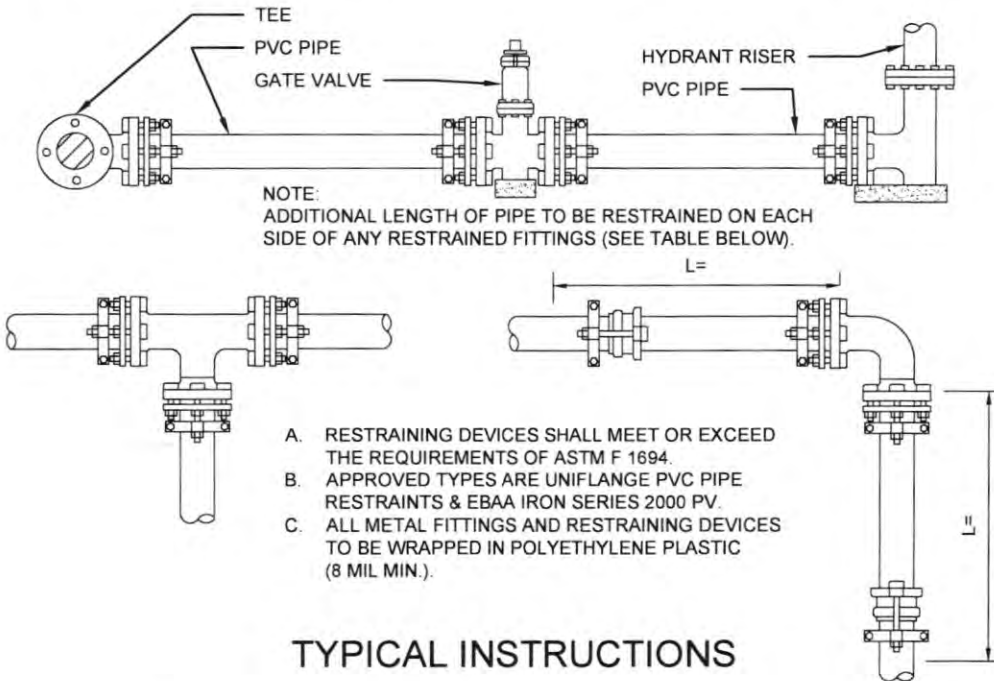
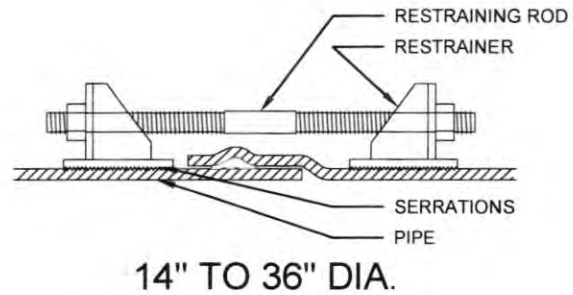
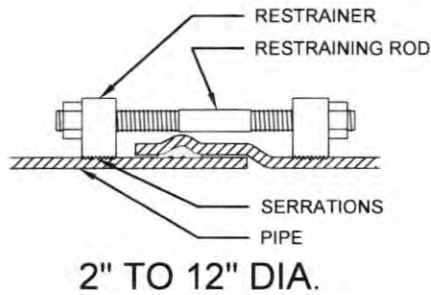
SIZE OF PIPE	90°	45°	22 1/2°	11 1/4°	TEES, PLUGS & TAPPING SLEEVE
4"	2' SQ.	2' SQ.	2' SQ.	2' SQ.	2' SQ.
6"	3' SQ.	2' SQ.	2' SQ.	2' SQ.	3' SQ.
8"	5' SQ.	3' SQ.	2' SQ.	2' SQ.	4' SQ.
10"	8' SQ.	4' SQ.	3' SQ.	2' SQ.	6' SQ.
12"	11' SQ.	6' SQ.	3' SQ.	2' SQ.	8' SQ.
16"	20' SQ.	11' SQ.	6' SQ.	4' SQ.	15' SQ.
18"	25' SQ.	14' SQ.	7' SQ.	4' SQ.	18' SQ.
20"	22' SQ.	12' SQ.	10' SQ.	4' SQ.	15.5' SQ.
24"	61' SQ.	33' SQ.	17' SQ.	9' SQ.	43' SQ.
30"	75' SQ.	41' SQ.	21' SQ.	11' SQ.	53' SQ.



THRUST BLOCKING DETAILS

**MOORHEAD PUBLIC SERVICE
STANDARD DETAILS**

D-4



TYPICAL INSTRUCTIONS

RESTRAINED LENGTHS OF PVC PIPE

NOM. PIPE SIZE	90° BEND (L)	45° BEND (L)	22.5° BEND (L)	11.25° BEND (L)	SIZE ON SIZE TEE(L)*	VALVE/ DEAD- END(L)
6"	19'	8'	4'	2'	2'	35'
8"	25'	11'	5'	3'	13'	45'
10"	31'	13'	6'	3'	23'	55'
12"	36'	15'	8'	4'	33'	65'
16"	47'	20'	10'	5'	52'	84'
18"	49'	21'	10'	5'	62'	96'
20"	53'	22'	11'	6'	73'	106'
24"	61'	26'	13'	6'	95'	125'
30"	72'	30'	15'	8'	125'	152'
36"	82'	34'	17'	9'	155'	180'

* RECOMMENDED RESTRAINED LENGTHS FOR TEES ARE FOR THE BRANCH OUTLET AND ASSUME A MINIMUM 10 FT. SECTION OF PIPE ATTACHED TO EACH SIDE OF THE RUN. RESTRAINT DEVICES ARE ALSO REQUIRED ON BOTH RUN JOINTS OF THE TEE ITSELF.

SIZE	45° VERT. OFFSET* (L)	22 1/2° VERT. OFFSET* (L)
6"	15'8"	7'4"
8"	19'11"	9'5"
10"	23'13"	11'6"
12"	27'15"	13'8"
16"	35'20"	17'10"
18"	58'12"	28'6"
20"	64'13"	31'6"
24"	74'15"	36'7"
30"	89'17"	43'9"
36"	103'20"	50'10"

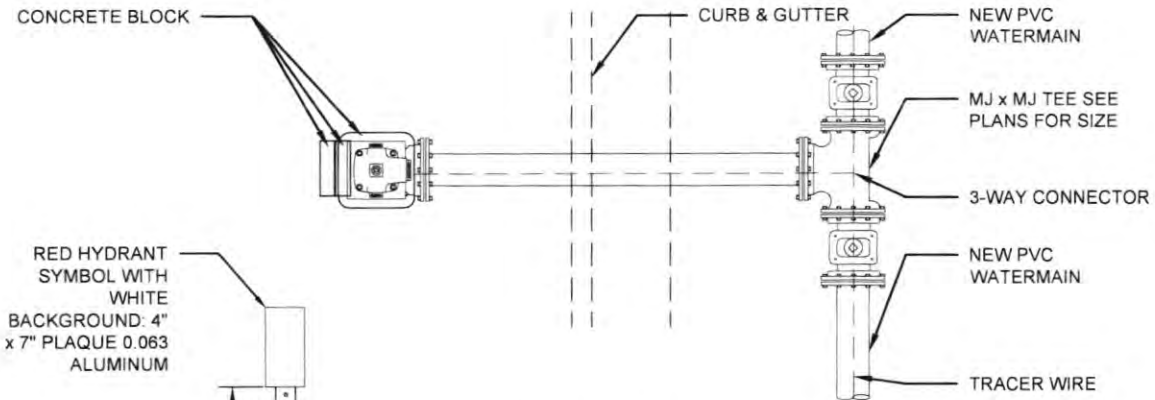
* FIRST NUMBER IS THE RECOMMENDED RESTRAINED LENGTH ON EACH SIDE OF THE DOWN BEND, THE SECOND NUMBER IS THE LENGTH FOR EACH SIDE OF THE UP BEND.



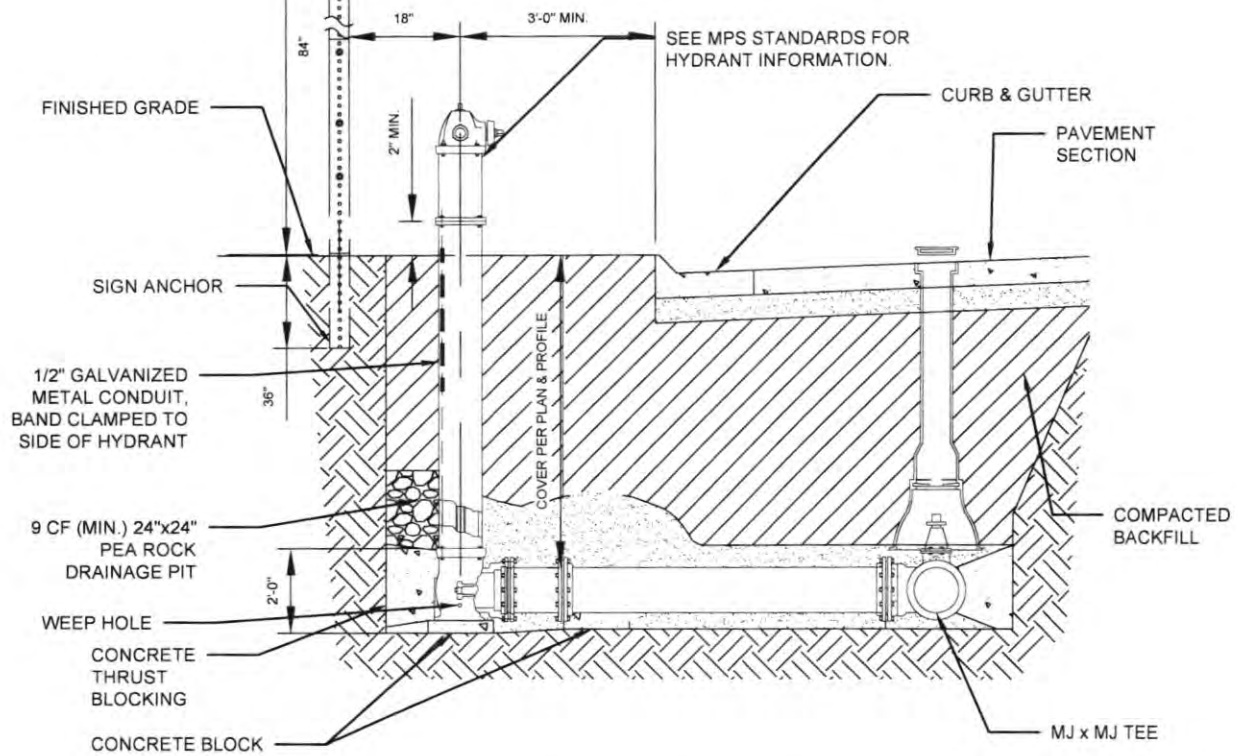
RESTRAINT DEVICE FOR PVC PIPE BELL DETAILS

MOORHEAD PUBLIC SERVICE STANDARD DETAILS

D-5



PLAN VIEW



SECTION VIEW

NOTE:

1. ALL BURIED CAST AND DUCTILE IRON MUST BE WRAPPED IN POLYETHYLENE (MIN. 0.008 INCH THICK)



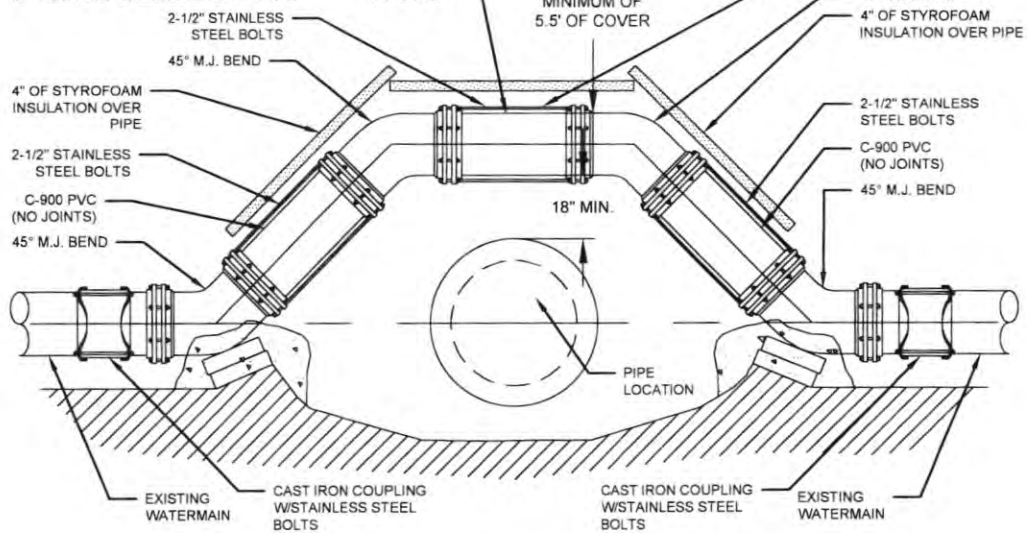
**FIRE HYDRANT CONNECTION
WITH GATE VALVES**

**MOORHEAD PUBLIC SERVICE
STANDARD DETAILS**

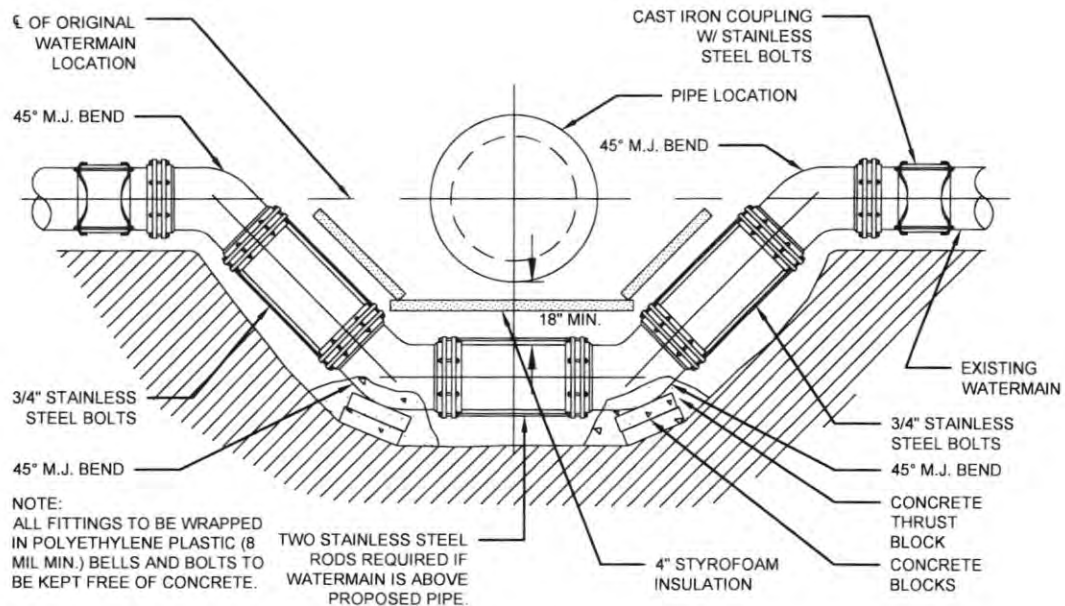
D-6

NOTES:

1. ALL FITTINGS TO BE WRAPPED IN POLYETHYLENE PLASTIC (8 MIL MIN.) BELLS AND BOLTS TO BE KEPT FREE OF CONCRETE.
2. USE RESTRAINED JOINT DI FITTINGS



1 WATERMAIN RELOCATION OVER PIPE DETAIL
NO SCALE



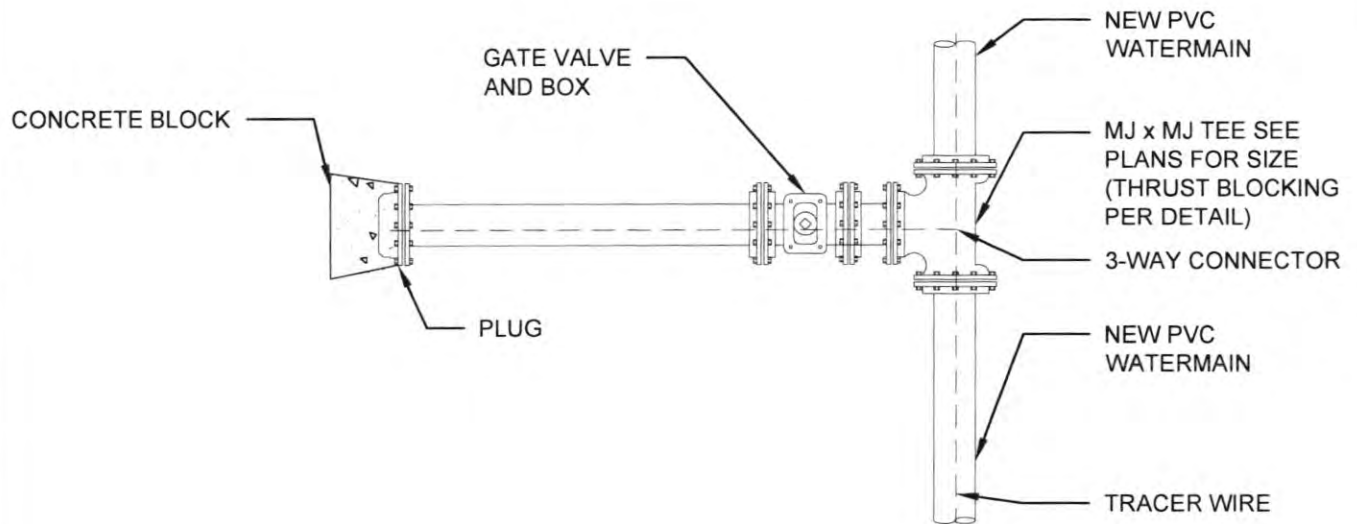
2 WATERMAIN RELOCATION UNDER PIPE DETAIL
NO SCALE



WATERMAIN RELOCATION OVER AND UNDER PIPING

**MOORHEAD PUBLIC SERVICE
STANDARD DETAILS**

D-7



PLAN VIEW

NOTE:

1. ALL BURIED CAST AND DUCTILE IRON MUST BE WRAPPED IN POLYETHYLENE (MIN. 0.008 INCH THICK)



WATERMAIN STUB DETAIL

MOORHEAD PUBLIC SERVICE
STANDARD DETAILS

D-8

CITY OF MOORHEAD SPECIFICATIONS SEWER SERVICE CONSTRUCTION

Construction: All sewer pipes shall be of the type and quality as specified elsewhere in these specifications. Sewer pipe shall be laid true to line and grade as given by the Engineer and in such a manner as to form a close concentric joint with adjoining sections of pipe. All sewer pipes shall be laid with bell ends up grade.

Joints in sewer pipe shall be installed in strict accordance with the manufacturer's recommendations.

Materials for sewer service pipe shall meet the specifications outlined in Section 05000 (materials specifications).

The contractor shall furnish upon request by the Engineer an affidavit that all materials meet the requirements of these specifications.

New Construction Testing: Sewer services shall be pressure tested to 4-psi air pressure, maintained for 10 minutes. Water services shall be pressure tested with the new watermain.

Basis of Payment: Payment for construction of sewer services will be made at the unit price bid on the proposal form and in accordance with the following provisions.

Measurement of sanitary sewer services shall be from the centerline of the sanitary sewer or sanitary sewer riser to the property line of the lot to be served, or 10' beyond the property line when designated on plan sheets. Payment for said sanitary sewer service shall include all costs of construction including, but not limited to, materials, labor and incidentals necessary to complete the work in accordance with the plans and specifications.

MISCELLANEOUS

Markers for Sewer Clean-out: Each sanitary clean-out shall be marked with a 2"x2"x4' wooden marker as shown on the standard detail sheets. The upper 24" of said marker shall be painted with green paint in a manner satisfactory to the Engineer.

Nothing in the specifications shall prevent a property owner from retaining persons or parties other than the City contractor for installation of the sewer and water services for individual lots if said services are needed before work on this contract begins.

The Contractor shall use a backhoe bucket with smooth cutting edge for all excavation on this contract unless the Engineer gives prior approval for a change.

The Contractor shall plug pipes where designated with a plug intended by the manufacturer to be used with the type of pipe being installed. Installation of plugs shall be incidental.

-END OF SECTION-

CITY OF MOORHEAD MATERIAL SPECIFICATIONS FOR SEWER CONSTRUCTION

SPECIFICATION I - SAMPLES AND TESTS

- 1-1 Tests
- 1-1.1 Certification of Pipe and Appurtenances
- 1-2 Standards

SPECIFICATION II - SEWER MATERIALS

- 2-1 Pipe Requirements
- 2-1.1 Reinforced Concrete Sewer Pipe (Sanitary)
- 2-1.2 Reinforced Concrete Sewer Pipe (Storm Water)
- 2-1.3 Polyvinyl Chloride Pipe
- 2-1.4 Schedule 40 PVC Sewer Pipe
- 2-1.5 Polyethylene Pipe - Sanitary Sewer Liner
- 2-1.6 Corrugated Polyethylene Tubing
- 2-1.7 Corrugated Polyethylene Pipe - Storm Sewer
- 2-1.8 Ductile Iron Pipe
- 2-1.9 Acrylonitrile Butadiene Styrene (ABS)
- 2-2 Concrete
- 2-3 Concrete Brick or Block
- 2-4 Precast Reinforced Concrete Manholes
- 2-4.1 Manhole Joint Sealant
- 2-4.2 Manhole Steps
- 2-4.3 Manhole Castings
- 2-5 Precast Catch Basins
- 2-5.1 Catch Basin Castings
- 2-6 Resilient Type Joint Material
- 2-7 Coal-Tar Epoxy
- 2-8 Jointing Material for Storm Sewer Pipe
- 2-9 Pipe Bedding and Encasement
- 2-10 Steel Reinforcement
- 2-11 Rubber Gasket Joint for PVC Sewer Pipe
- 2-12 Solvent Welded Joint for Sewer Pipe
- 2-13 Corrugated Polyethylene Pipe Joint
- 2-14 Geotextile Pipe Wrapping

SPECIFICATION I - SAMPLES AND TESTS

1-1 Tests:

The Engineer may at any time require testing of material samples proposed or furnished for the work.

1-1.1 Certification of Pipe and Appurtenances:

The Engineer prior to the laying of any pipe may request the manufacturer's certificate as to compliance of the pipe and specials furnished for this contract.

1-2 Standards:

The use of an A.S.T.M., A.N.S.I., A.A.S.H.O., etc. designation in these specifications refers to the latest revision of that particular standard of that organization.

SPECIFICATION II - GENERAL REQUIREMENTS

2-1 Pipe Requirements:

Each length of pipe shall conform to the following specifications for that type of pipe. Pipe shall be rejected that does not conform to the specifications or for any of the following reasons:

- a) Fractures or cracks passing through the pipe.
- b) Other fractures, cracks or chips sufficient to impair the strength, durability or serviceability of the pipe.
- c) Defects that indicate improper proportioning, mixing, or molding.

- d) Variation of more than 1/8 inch per linear foot in alignment of a pipe intended to be straight.
- e) Insecure attachment of wye branches.
- f) Damaged ends, where such damage would prevent making a satisfactory joint.

2-1.1 Reinforced Concrete Sewer Pipe (Sanitary):

All reinforced concrete pipe used in sanitary sewers shall conform to A.S.T.M. Specification C76-63T except as hereafter required:

- a) Portland Cement shall be Type 2 with a maximum tri-calciumaluminite content of 7%.
- b) Concrete shall have an air content of 4-7%.
- c) Calcium chloride shall not be used in the concrete.
- d) Joints shall be Cretex CX-4 or an approved equal.
- e) Inside surfaces shall be coated with two (2) coats of Inertol Standard, as applied in accordance with manufacturer's recommendations.

2-1.2 Reinforced Concrete Sewer Pipe (Storm Sewer):

All reinforced concrete pipe used in storm sewers shall conform to A.S.T.M. Designation C76-63T (Table III, Wall B) and be of the tongue and groove type unless otherwise specified. Pipe shall be laid in six (6) or eight (8) foot lengths. Each pipe shall be marked with the date of manufacture and all pipe shall be at least seven (7) days old before use in the project.

All reinforced concrete pipe used for jacking shall conform to A.S.T.M. Designation C76-57T (Table IV, Wall B).

2-1.3 Polyvinyl Chloride Pipe (Sanitary and Storm Sewer):

All polyvinyl chloride (PVC) pipe shall conform to A.S.T.M. Designation D3034 SDR 35. All PVC pipe on the contract shall meet the same specification.

All fittings such as saddles, elbows, tees, wyes, and others shall be of material, construction and joint design corresponding to the adjacent pipe. Inline wyes shall be installed exclusively except where otherwise noted on the plans. Approved adapters shall be provided for transitions to other types of pipe.

Polyvinyl chloride saddle wyes installed in the field shall be secured in accordance with manufacturer's recommendation and, in addition, shall be fastened with two (2) stainless steel straps.

2-1.4 Schedule 40 PVC:

All Schedule 40 Pipe shall conform to ASTM D-1785 and D-2665

2-1.5 Polyethylene Pipe - Sanitary Sewer Slip Liner:

High-density polyethylene pipe shall conform to ASTM 3350, cell classification 345434C and ASTM 714 for PE 3408 High Density Pipe.

2-1.6 Corrugated Polyethylene Tubing (3" to 10") Storm Sewer:

Pipe shall conform to AASHTO M252.

2-1.7 Corrugated Polyethylene Pipe - Storm Sewer (12" to 36"):

Pipe shall conform to AASHTO M294 for dual wall pipe.

2-1.8 Ductile Iron Pipe:

All cast iron pipe shall conform to Specification A.S.A. A21.6 with a pressure class outlined in the sewer plans.

Pipe and fittings shall be made with bell and spigot ends adaptable for use of a rubber gasket slip joint. They shall be straight and of true circular section with their inner and outer surfaces concentric.

2-1.9 Acrylonitrile Butadiene Styrene (ABS) Truss Pipe:

All ABS pipe shall conform to A.S.T.M. D2680 for Truss pipe and A.S.T.M. D2751 for Solid Wall pipe.

All fittings such as saddle, elbow, tees, wyes and others shall be of material, construction and joint design as specified above. Approved adapters shall be provided for transitions to other types of pipe. Inline wyes shall be installed exclusively except where otherwise noted on the plan.

ABS saddle wyes installed in the field shall be secured in accordance with manufacturer's recommendations and, in addition, shall be fastened with two (2) stainless steel straps.

2-2 Concrete:

All concrete shall conform to Specification No. 2461 of the Standard Specifications for Construction, 2000 Edition. Concrete Mix No. 3A15 shall be used unless otherwise specified.

Tests shall be conducted by the Engineer in accordance with standard testing methods for compressive strength, slump and air content of concrete work. The Engineer shall have the right to take samples of concrete whenever he deems necessary.

2-3 Concrete Brick and Block:

Concrete brick or block shall be made from a mixture of Portland Cement, sand and gravel or crushed stone. Concrete brick shall conform to A.S.T.M. Designation C-55 (Grade V-II). Concrete block shall conform to A.S.T.M. Designation C-139.

2-4 Precast Reinforced Concrete Manholes:

Precast reinforced concrete manhole risers and tops shall meet the requirement of A.S.T.M. Designation C-478. Precast manhole tops shall be the eccentric cone type unless otherwise specified.

2-4.1 Manhole Joint Sealant:

Kent-Seal Sealant, bituminous mastic or an approved equal, shall be used for joints in storm sewer manholes. Sanitary sewer manholes shall have gasketed joints.

2-4.2 Manhole Steps:

Manhole steps shall conform to ASTM C478.

2-4.3 Manhole Castings:

Manhole casting assemblies shall be Minnesota Department of Transportation Castings as shown on the standard detail sheets. Metal used in the manufacture of the castings shall conform to ASTM A48-76 Class 35 for gray iron. Proof Load Test procedure shall be in accordance with Federal Specification RR-F-621c.

2-5 Precast Catch Basins:

Precast catch basins shall conform to the standard catch basin design included in the sewer plans.

2-5.1 Catch Basin Castings:

Catch basin casting assemblies shall be the types shown on the standard detail sheet. Metal used in the manufacture of the casting shall conform to ASTM A48-76 Class 35 for gray iron. Proof Load Test procedure shall be in accordance with Federal Specification RR-F-621c.

2-6 Resilient Type Joint Material:

Resilient type joints for vitrified clay pipe shall conform to A.S.T.M. Designation C-425. Rubber type gaskets on concrete pipe shall conform to A.S.T.M. Designation C-443.

2-7 Coal Tar Epoxy:

Coal tar epoxy to be used for coating concrete pipe and structures shall be Kopper's Bitumastic, or an approved equal, for exterior surfaces and Inertol Standard Coating, or an approved equal for interior surfaces.

2-8 Jointing Material for Storm Sewer Pipe:

Unless otherwise specified, storm sewer jointing material shall be a bituminous cold mix such as "Kalktite", "Carey Sewertite", "Prestite" or other approved equal.

2-9 Pipe Bedding and Encasement:

Granular material for pipe bedding and encasement shall be any pit run sand or gravel which meets the gradation requirements of Specification No. 3149 F of the Standard Specifications for Construction, 2000 Edition. It shall be free from hard or frozen chunks.

2-10 Steel Reinforcement:

Steel bars shall conform to the specification for deformed steel bars as specified in A.S.T.M. Designation A-615. Structural steel shall conform to A.S.T.M. Designation A-283 or A-306.

2-11 Rubber Gasket Joint for PVC Sewer Pipe:

The rubber gasket shall conform to A.S.T.M. Specification D-3212 and ASTM F477 and shall be installed in accordance with manufacturer's recommendations.

2-12 Solvent Welded Joint for ABS & PVC Sewer Pipe:

The primer and the cement used in making the solvent welded joint shall meet the pipe manufacturer's specifications. The manufacturer's recommended procedure shall be followed in making the solvent welded joint.

2-13 Corrugated Polyethylene Pipe Joints:

Joints shall conform to AASHTO M252 and M294.

2-14 Geotextile Pipe Wrapping:

Geotextile Material shall conform to MnDOT Specification 3733.

Type I geotextile sock shall be used for wrapping corrugated polyethylene drintile.

Type II geotextile fabric shall be used for wrapping pipe joints, where required.

-END OF SECTION-

**SECTION 10000
SPECIAL PROVISIONS**

City of Moorhead Parks Dept. – Sewer and Water Installation

1. **Specifications:** The Minnesota Department of Transportation (MnDOT) "Standard Specification for Construction" 2018 edition, shall govern all work on this project, except as noted in City specifications or special provisions included in this contract. All *.600 series bid items refer to City of Moorhead contract specifications or special provisions. Where the terms "City", "Department", "Contracting Authority" and "Commissioner" appear in the MnDOT specifications, they shall be construed to mean "City of Moorhead".

2. **Responsible Contractor:** In accordance with Laws of Minnesota, 2014, chapter 253 (Minnesota Statutes §16C.285), Bidders are hereby advised that the Department cannot award a construction contract in excess of \$50,000 unless the contractor is a "responsible contractor" as defined in Minnesota Statutes §16C.285, subdivision 3. A bidder submitting a Proposal for this Project must verify that it meets the minimum criteria specified in Minnesota Statutes §16C.285, subdivision 3, by completing the Certification of Compliance of Responsible Contractors within this Proposal. Statements in the certificate must be certified by a company officer. Bidders are responsible for obtaining verifications of compliance from all subcontractors, using a form provided by the City. A bidder must submit signed verifications from subcontractors upon the City's request.

A Bidder or subcontractor who does not meet the minimum criteria established in Minnesota Statutes §16C.285, subdivision 3, or who fails to verify compliance with the minimum requirements, will not be a "responsible contractor" and will be ineligible to be awarded the Contract for this Project or to work on this Project. Bidders and subcontractors are also advised that making a false statement verifying compliance with any of the minimum criteria will render the Bidder or subcontractor ineligible to be awarded a construction contract for this Project and may result in the termination of a contract awarded to a Bidder or subcontractor that makes a false statement.

3. **Maintenance of Traffic (MnDOT 1404):** Prior to closing portions of a road, the Contractor shall provide at least two (2) working days' notice to the affected residents. Proper notice shall consist of contacting the City Engineering Department and delivering leaflets to each affected residence describing construction operations and timelines. Temporary no parking signs may be used to delineate the project limits to be completed the following day. Full closures of roadways may require a public notice release 48 hours prior and installation of detour signage.

4. **Utility Property and Service (MnDOT 1507):** Construction operations in the proximity of utility properties shall be performed in accordance with the provisions of MnDOT 1507, except as modified below:
 - A. The following utility owners may have existing facilities that could 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. Additional utility owners not listed below may have utilities on the project site. Contractor to make Gopher One call prior to any construction.

- Moorhead Public Service

- City of Moorhead for Sewer and Water
- Xcel Energy
- Midcontinent Communications

5. **Utility Coordination:** The contractor shall coordinate with utility owners for the installation of new facilities within the project area. Prior to the installation of sidewalks, the contractor shall coordinate work schedule with Moorhead Public Service.

6. **Permits, Licenses and Taxes (MnDOT 1702):** MnDOT 1702 is modified as follows: The City shall pay for and apply for the following permits:

- a) Moorhead Stormwater Permit

The Contractor shall become a co-permittee with the City for the MPCA General Storm Water Permit, in accordance with the Special Provisions and Section 00900 and 00950 of these specifications.

The Contractor is responsible for obtaining all other state and local permits for the project.

7. **Subletting of Contract (MnDOT 1801 & General Conditions Section 6-1):** MnDOT 1801 & General Conditions Section 6-1 are modified as follows:

The Contractor may sublet up to 40 percent (40%) of the total original contract cost without obtaining written consent from the Engineer. However, the Engineer reserves the right to consider the qualifications of the subcontractors prior to awarding the bid and/or authorizing the work.

Projects in excess of \$50,000, the Contractor may sublet work only to subcontractors that meet the definition of "responsible contractor" in Minnesota Statutes §16C.285, subdivision 3. The Contractor is responsible for obtaining verifications of compliance with §16C.285 from subcontractors using a form provided by the City. The Contractor must provide such verifications to the City upon the City's request.

8. **Project Schedules (MnDOT 1803):** MnDOT 1803 is modified as follows: **The bar chart or critical path diagram progress schedule as specified in MnDOT specification 1803.1 shall be submitted 3 days prior to the Preconstruction Conference.** The Contractor shall commence work and continue work on site with adequate personnel and equipment to make significant progress (as determined by the Engineer) within 15 days after the "Notice to Proceed" is issued.

9. **Determination and Extension of Contract Time (MnDOT 1806) & Failure to Complete the Work on Time (MnDOT 1807):** MnDOT 1806 and 1807 are modified as follows: It is anticipated that the City of Moorhead will award the Contract on **May 28, 2019**. No construction activity may begin anywhere on this project until the Notice-to-Proceed has been issued. The Notice-to-Proceed will be issued after required bonds, insurance documents and signed contracts have been received. All work shall be fully completed by **July 31, 2019**.

Village Green Drive may be closed to traffic a maximum of 15 calendar days from the point of pavement removal to placement of bituminous wear course.

The City is entitled to the recovery of damages due to the Contractor's failure to complete the work on time. By executing the Contract, the Contractor agrees to the

assessment of Liquidated Damages per Table 1807.1 of MnDOT 1807. The determination of calendar days is subject to the provisions of MnDOT 1807.2. The intent of the Contract is that these damages will be used at the discretion of the Engineer in lieu of making a precise determination of actual damages incurred.

10. **Compensation for Altered Quantities (MnDOT 1903):** MnDOT 1903 is deleted and replaced with the following: There shall be no price adjustments to the contract unit prices on the basis of increased or decreased quantities.
11. **Extra and Force Account Work (MnDOT 1904 & General Conditions Section 3-2):** MnDOT 1904 & General Conditions Section 3-2 are modified as follows: The Contractor shall notify the Engineer of any potential claims for additional compensation on the basis of extra work prior to commencing such extra work. Extra work items will not be authorized until a change order, extra work order or supplemental agreement has been fully executed. The Engineer may authorize minor extra work items prior to execution of the change order or extra work order, but only if unit prices for the extra work have been agreed upon in advance of the extra work taking place. Work performed on a Force Account basis will not be permitted except as authorized in writing by the Engineer in advance of the extra work taking place.
12. **Partial Payments (MnDOT 1906 & General Conditions Section 7-3):** MnDOT 1906 & General Conditions Section 7-3 are modified as follows: Partial payment requests shall be submitted to the Engineer on a monthly basis for review and approval on the last Friday of the month, or some other date as agreed upon at the Preconstruction Conference. The City will withhold a **retainage** in the amount of **5%** of the total work completed and materials on hand until the project is fully complete. However, the City may reduce the amount retained upon substantial completion at the discretion of the City Engineer. Partial payments will not be processed until the MPCA General Storm Water Permit inspection and maintenance forms for the time period covered in the estimate have been submitted. The Contractor must comply with the requirements of MN Statute 16A.1245 and promptly pay subcontractors any undisputed payments within 10 days after receiving payment from the City of Moorhead.
13. **Exemption from Surety Deposits for Out-of-State Contractors:** the Contractor shall provide to the city a completed form SD-E, Exemption from Surety Deposit for Out-of-State Contractor. Upon receipt of this form, the City will forward to the Department of Revenue for Certification. **FAILURE BY THE OUT-OF-STATE CONTRACTOR TO PROVIDE THIS COMPLETED FORM WILL RESULT IN AN 8% RETAINAGE ON ALL PAY VOUCHERS UNTIL COMPLETION OF THE PROJECT.**
14. **Final Payment (MnDOT 1908):** MnDOT 1908 is modified as follows: Final contract payment will not be processed until the City of Moorhead has received the State-Certified IC-134 Forms for all sub-Contractors and the primary Contractor.
15. **Maintenance and Restoration of Haul Roads (MnDOT 2051):** MnDOT 2051 is modified as follows: Haul routes shall be coordinated with and approved by the City of Moorhead Engineering department prior to construction. A construction entrance must be provided at all locations where construction vehicles enter and exit the site, and drainage must be maintained at any temporary entrances. The Contractor shall be required to sweep the haul route within 1,000 feet of the construction entrance to the project a minimum of once per week. Additional sweeping shall be required as needed as determined by the Engineer. Sweeping of the haul route shall be considered incidental to other items. No construction traffic shall be permitted on any other existing City streets unless approved by the Engineer. The Contractor is responsible for repairing any damage to haul roads that occurs during construction. Damaged roads

shall be restored to pre-construction conditions. Haul roads shall be determined at the pre-construction conference. Only approved haul roads shall be used.

16. **Traffic Control:** The Contractor shall furnish and maintain all construction signs, barricades, and barricade weights and warning lights which are needed for the guidance, warning and control of traffic through this project. The Contractor shall coordinate road closure and signing plan with the City of Moorhead Engineering department prior to starting construction. All traffic control devices shall conform to the "Minnesota Manual on Uniform Traffic Control Devices" and Standard Signs Manual Part I and Part II. All traffic control devices required shall be included in the lump sum bid item "Traffic Control".
17. **Machine Time (SPEC):** The Machine Time bid item will be used as directed by the Engineer to make exploratory excavation in advance of construction to verify the location of existing utilities. Machine time will be measured on an hourly basis from the time the exploratory excavation begins until the utility has been located and measured. Backfilling and compacting the exploration area shall be incidental. The machine time bid item shall include, at a minimum, a 1.5 CY backhoe, a front end loader, foreman, operators and laborers necessary to complete the work.
18. **Removing Pavement, Curb & Gutter, and Miscellaneous Structures (MnDOT 2104):** MnDOT 2104 is modified as follows: This contract includes the removal of miscellaneous items. The limits of removal shall be as shown on the plans or as determined in the field by the Engineer. It is the responsibility of the Contractor to properly dispose of all excess materials, including bituminous and concrete pavement, miscellaneous pipe and structure removals, concrete curb & gutter, and other items. Where a bid item has been included on the proposal form, the item to be removed shall be measured on a unit, area or lineal foot basis as indicated on the proposal form. Where no bid item has been provided, the removal and or abandonment of the items shall be considered incidental. For pavement removals, the Contractor shall sawcut the pavement full-depth to provide a straight, vertical edge at the limits of removal within 5 days in advance of placing the new pavement.
19. **Excavation and Embankment (MnDOT 2105):** MnDOT 2105 is modified as follows: The latest editions of the standards listed below but referred to hereinafter by basic designation only, form a part of this section of the specifications.
American Society of Testing Materials (ASTM)
 1. D-1556 "Standard Test Method for Density and Unit Weight of Soil in Place by the Sand Cone Method"
 2. D-698 "Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu. ft. (600 kN-m/cu. m.))"
 3. D-2487 "Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)"
 4. D-6938 "Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)"
Classification according to ASTM D-2487 and a laboratory compaction curve according to ASTM D-698 test reports for each on-site and borrow soil material proposed for fill and backfill shall be submitted to the Engineer.

- A. **Preparation of Embankment Foundation (MnDOT 2105.3C):** Material shall not be placed on surfaces that are muddy, frozen, contain frost, or where unsatisfactory material remains in or under the fill. All soft or yielding material and other portions of the subgrade which will not readily compact shall be removed and replaced with suitable material. The entire subgrade shall then be brought to a line and grade and foundation of uniform compaction which will provide uniform support for fill embankments to be subsequently placed. The subgrade shall be scarified to a depth of six (6) inches for the full width of the subgrade. The loose materials shall then be spread and manipulated so as to bring all the material to a uniform density.
- B. **Placing Embankment Materials (MnDOT 2105.3E):** Embankment shall not be constructed during periods when the embankment material freezes while being placed and compacted, nor shall any embankment material be placed on soil that is frozen. Where the foundation soil is frozen at a time when weather conditions are such that embankment construction could be continued without the material freezing as it is being placed and compacted, the Contractor may be permitted to excavate the frozen foundation soil and proceed with the embankment construction for so long as the weather will permit, but only if and to the extent approved by the Engineer, and with the understanding that the additional costs involved shall be at the expense of the Contractor. The frozen soil shall be pulverized or wasted and replaced with other suitable soil as may be necessary to construct the embankment as specified.

The distribution of materials throughout each zone shall be essentially uniform, and the fill shall be free from lenses, pockets, streaks or layers of material differing substantially in texture or gradation from the surrounding material. Fill shall be placed in uniform uncompacted lifts not to exceed twelve (12) inches in thickness, and thoroughly mixed by disking or other approved methods to obtain uniformity of material.

Moisture content of the embankment material at the time of placement shall be maintained within minus 1% and plus 3% of optimum moisture as defined by ASTM D-698. Water may be applied by sprinkling the materials after placement on the fill, if necessary. Uniform moisture distribution shall be obtained by disking. Material that is above the optimum moisture content shall either be removed or be dried to the specified moisture content prior to compaction. If the top layer of the preceding lift of compacted fill becomes too dry to permit a suitable bond it shall either be removed or scarified and moistened by the addition of water to an acceptable moisture content prior to placement of the next lift. Once each lift has been adequately processed, the surface of each lift should be scarified to a minimum of 2" prior to placing additional lifts.

- C. **Compacting Embankments (MnDOT 2105.3F):** During the course of the work, the Engineer will perform such quality assurance tests as are required to identify materials; determine compaction characteristics; determine moisture content; and determine density of fill in place. Tests performed by the Engineer will be used to verify that the fills conform to contract requirements of the specifications and not as a replacement for the Contractor's quality control program. Densities of fill requiring compaction will be determined in accordance with the appropriate ASTM methods which may include ASTM D1556 (Sand Cone Method), D2167 (Balloon Method), D6938 (Nuclear Methods) D2937 (Drive Cylinder Method) and other methods approved by the Engineer. The Engineer will determine the density test which is appropriate for the conditions and materials encountered.

The moisture content will be determined in accordance with appropriate ASTM methods which may include ASTM D2216, D6938, D4643, D4944, D4959 and other methods approved by the Engineer. The Engineer will determine moisture content test which is appropriate for the conditions and materials encountered.

Where the density and moisture content tests do not meet the minimum requirements as set forth above, the Contractor, at his own expense, shall remove and replace and recompact the embankment material. A retest shall be required for every test that does not meet the minimum requirements for moisture and density. Retest shall be at the Contractors expense.

All Common Excavation material shall be compacted to a minimum density of 95% of the maximum density per ASTM D-698. Fill adjacent to structures shall be compacted to a density equivalent to that of the surrounding fill by means of hand tamping if permitted by the Engineer, or manually directed power tampers or plate vibrators. Heavy equipment shall not be operated within two feet of any structure. Vibrating rollers shall not be operated within five (5) feet of any structure. Compaction by means of drop weights operating from a crane or hoist will not be permitted. The passage of heavy equipment will not be allowed over any type of conduit until the backfill has been placed above the top surface of the structure to a height equal to one-half the clear span width of the structure or pipe or two (2) feet, whichever is greater.

20. **Aggregate Base (MnDOT 2211):** MnDOT 2211 is modified as follows: Aggregate base used on this project shall be a modified Class 5 conforming to the requirements of the table below, unless otherwise approved by the Engineer. In lieu of MnDOT Certification Form TP-24346, the Contractor shall submit gradation samples for approval a minimum of **ten (10) days prior to placement** of any aggregate base. During placement, the Engineer will take samples to verify that gradation requirements are being met. The cost of all failed gradation tests shall be deducted from any money due the Contractor. In case of gradation failures, the Engineer **may accept** the material subject to the price reductions in Tables 2211-4 and 2211-5.

Class 5 – Modified Gradation Specification	
Total Percent Passing	
Sieve Size	Class 5
75 mm (3 in)	--
50 mm (2 in)	--
37.5 mm (1.5 in)	--
25.0 mm (1 in)	100
19.0 mm (3/4 in)	90 – 100
9.5 mm (3/8 in)	50 – 80
4.75 mm (#4)	35 – 70
2.00 mm (#10)	20 – 55
0.425 mm (#40)	10 – 30
0.075 mm (#200)	3.0 – 10.0

The Aggregate Base Class 5 compacted in-place volume (CV) includes the aggregate base necessary to construct as shown in the plans.

21. **Temporary Erosion Control (MnDOT 2573):** The Contractor shall be required to install the erosion control devices as required by MnDOT specifications 2573 and City

specifications 00900 in advance of construction operations, where possible, and to install the remaining devices at the appropriate times in accordance with the MPCA General Storm Water Permit. Once installed, the Contractor shall be responsible to maintain the devices until they are no longer needed or until final completion of the contract and a Notice of Termination has been completed and approved. The Contractor shall be required to clean up material that is washed, tracked or otherwise eroded off site due to negligence in maintaining the erosion and pollution control devices. Erosion Control devices installed as directed by the Engineer shall be measured and paid for in accordance with the contract unit prices.

City of Moorhead Specification Section 00900 is modified under Turf Establishment so that **the maximum time any area not being actively worked can be open shall be 7 days.**

Temporary cover of exposed soils for stabilization as required by the MPCA General Storm Water Permit shall be at the expense of the Contractor and shall not be measured for separate payment.

Inlet protection shall be measured on a unit basis once per inlet. Payment at the contract unit price per each shall be considered full compensation for all labor, materials and equipment necessary to install and upgrade the devices from one "Type" to another in accordance with the construction schedule and the plan details. Silt fence used for Inlet Protection, Type A, shall be incidental to the inlet protection bid item. Inlet Protection, Type C shall become property of the owner and remain in place at the completion of the project. Temporary rock construction entrances shall be at the expense of the Contractor unless approved by the Engineer. Payment shall be considered full compensation for all labor, materials and equipment necessary to install and maintain the entrance as long as it is needed. Construction entrances used in addition to those listed on the bid sheet shall be at the expense of the Contractor unless approved by the Engineer. Street sweeping as necessary to remove materials tracked off site shall be incidental to the temporary rock construction entrances. Fiberlog shall consist of 6-inch bioroll, and shall be measured on the basis of length, and shall be paid for at the contract unit price per linear foot.

All other erosion and pollution control devices not included on the proposal form shall be incidental to construction. Maintenance of the devices, and removal upon completion of construction, shall be incidental.

Street sweeping as necessary to remove materials tracked off site shall be incidental to other items.

- END OF SECTION -



CONTRACT FOR

City of Moorhead Parks Dept. Sewer and Water Installation

BID PACKET FOR:

**City of Moorhead Parks Dept.
Sewer and Water Installation**

COMPANY NAME: _____

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!! CAUTION !!

UTILITIES IN THE AREA, BEFORE CONSTRUCTION
UTILIZE 1 CALL 1-800-252-1166

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY
QUALITY LEVEL "B". THIS 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."

PLAN SYMBOLS

RIGHT-OF-WAY LINE ROAD	---	R/W
RIGHT-OF-WAY LINE DRAINAGE DITCH	---	
SECTION LINE	---	
QUARTER LINE	---	
PROPERTY LINE	---	
EASEMENT LINE	---	
RAILROAD	---	
FENCE	---	
SANITARY SEWER - EXISTING	---	SS
SANITARY SEWER - PROPOSED	---	SS
SANITARY SEWER SERVICE - EXISTING	---	SS-SV
SANITARY SEWER SERVICE - PROPOSED	---	SS-SV
SANITARY SEWER FORCE MAIN	---	SS-FM
STORM SEWER - EXISTING	---	ST
STORM SEWER - PROPOSED	---	ST
WATER - EXISTING	---	W
WATER - PROPOSED	---	W
WATER SERVICE - EXISTING	---	W-SV
WATER SERVICE - PROPOSED	---	W-SV
TELEPHONE	---	TEL
TELEVISION	---	CATV
FIBER OPTIC	---	FBR
OVERHEAD POWER	---	OHP
UNDERGROUND POWER	---	UGP
PETROLEUM PIPELINE	---	PETRO
GAS	---	GAS
CURB & GUTTER - EXISTING	---	
CURB & GUTTER - PROPOSED	---	
SANITARY MANHOLE	---	SS
STORM MANHOLE	---	ST
EXISTING MANHOLE	---	
HYDRANT	---	
EXISTING HYDRANT	---	
GATE VALVE	---	
EXISTING GATE VALVE	---	
CLEAN OUT	---	
CURB STOP	---	
PROPOSED INLET	---	
EXISTING INLET	---	
SIGN - STREET NAME	---	
SIGN - REGULATORY / WARNING	---	
POWER POLE	---	or
STREET LIGHT	---	or
ELECTRICAL TRANSFORMER	---	or
UTILITY PEDESTAL	---	or
UTILITY HANDHOLD / VAULT	---	or
DECIDUOUS TREE	---	or
CONIFEROUS TREE	---	or
BUSH / HEDGE	---	or

SPECIFICATION REFERENCE

THE CURRENT EDITION OF THE MINNESOTA DEPARTMENT OF
TRANSPORTATION "STANDARD SPECIFICATIONS FOR
CONSTRUCTION" SHALL GOVERN, AS MODIFIED BY THE CITY OF
MOORHEAD SPECIFICATIONS AND SPECIAL PROVISIONS.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE CURRENT
VERSION OF THE MMUTCD, AND TEMPORARY TRAFFIC CONTROL
ZONE LAYOUTS (FIELD MANUAL).

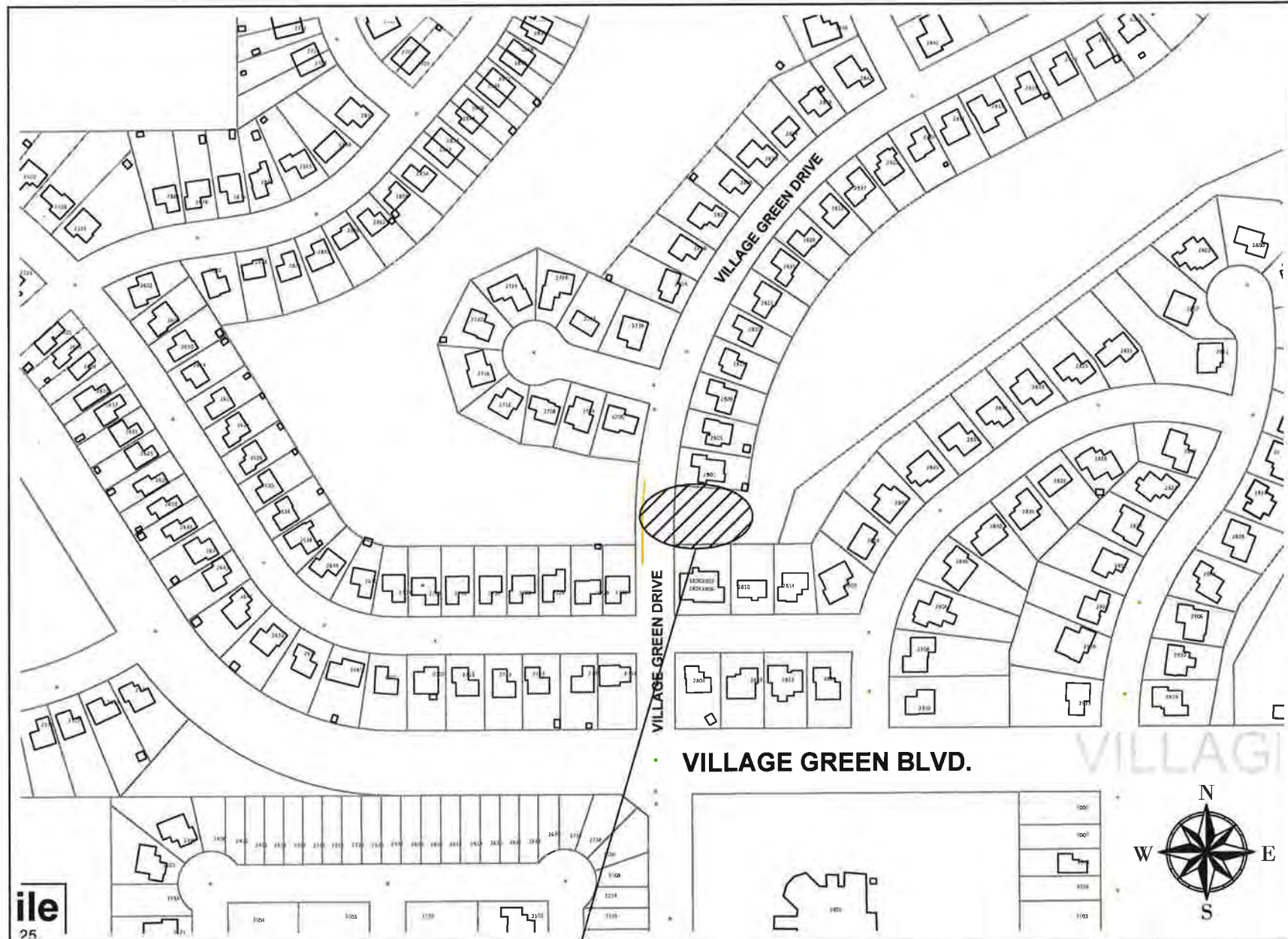
City of Moorhead

Sewer and Water Service Installations

City of Moorhead Parks Dept.

SHEET NO	TITLE
1	Title Sheet
2	Plan & Profile - Sewer and Water Service
3-4	Standard Details

INDEX



PROJECT AREA



I hereby certify that this plan, specification or report was prepared
by me or under my direct supervision and that I am a duly Licensed
Professional Engineer under the laws of the State of Minnesota.

Thomas E. Trowbridge
Signature - Project Engineer
April 25, 2019
Date

Thomas E. Trowbridge
Name - Project Engineer
25771
License No.

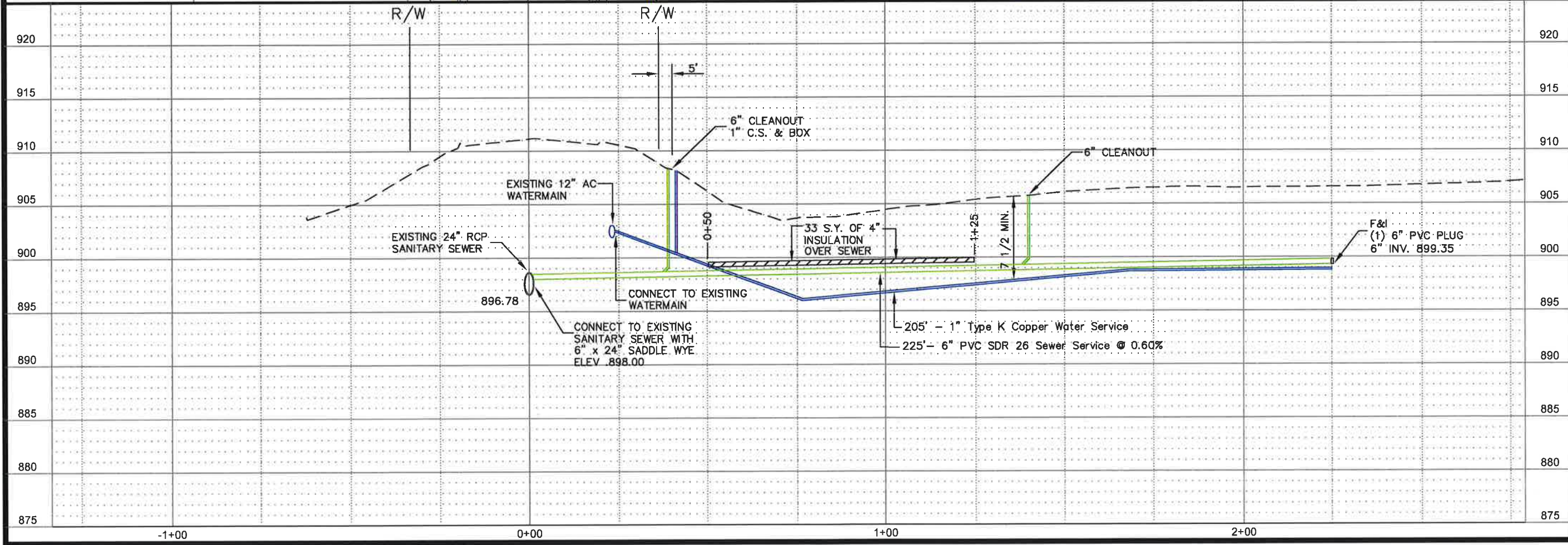
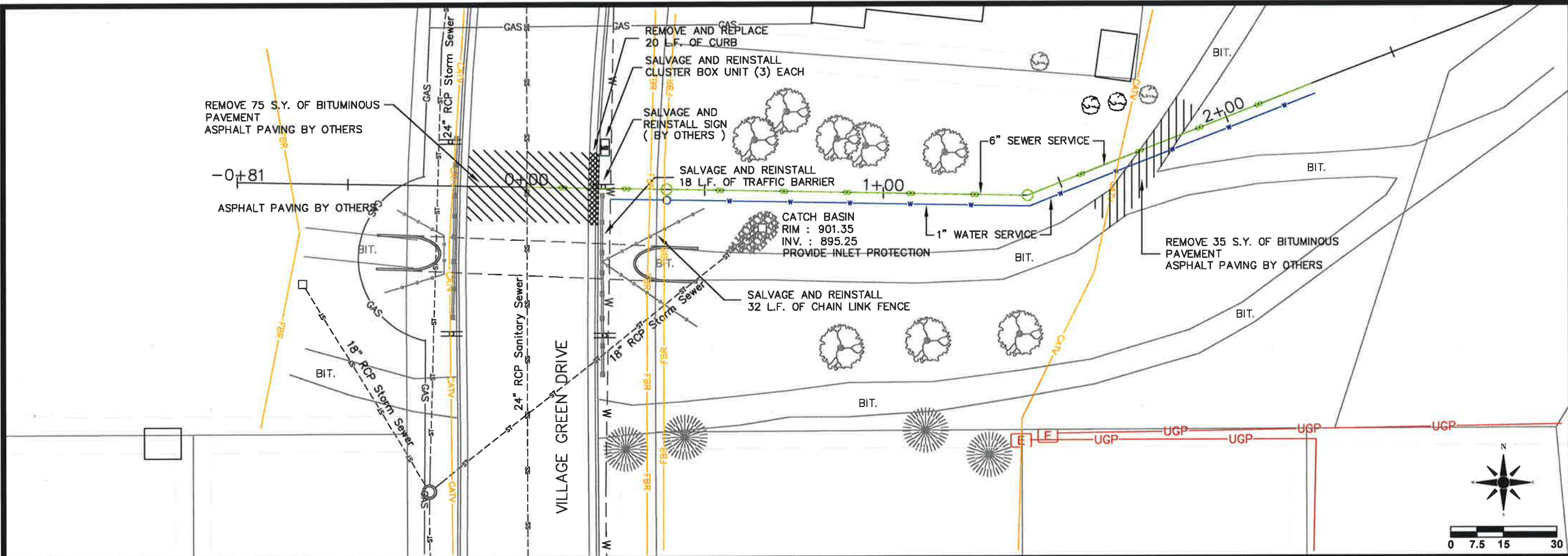
Title Sheet

Sewer and Water Service Installations
Stonemill Access Road
Curb & Gutter, Asphalt Paving, Underground Utilities and Grading

SHEET

1
OF 4

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S.P. No.		City of Moorhead	
MEO	DRAWN BY	MEO	CHECKED BY
TET	APPROVED BY		

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Thomas E. Trowbridge
Signature - Project Engineer
Date: April 25, 2019
License No. 25771

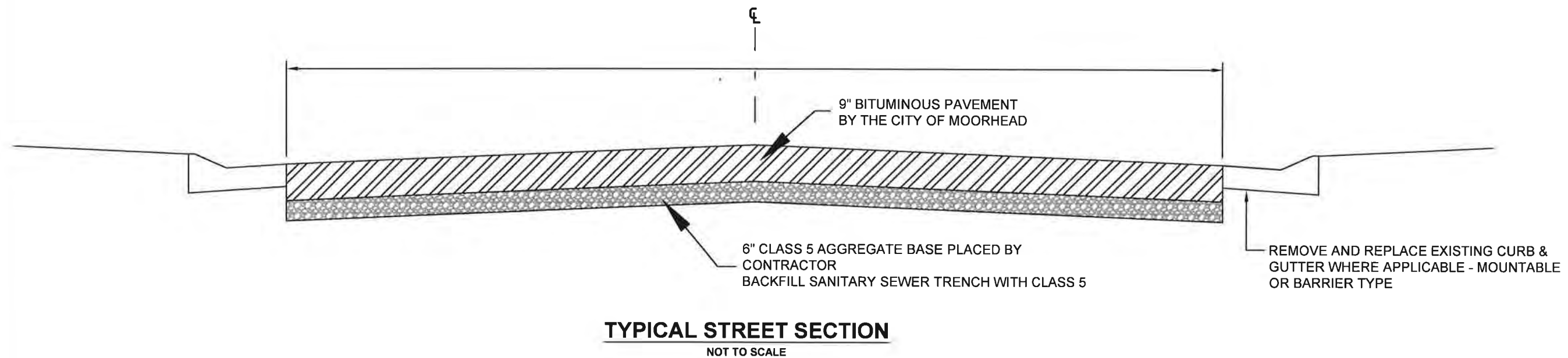
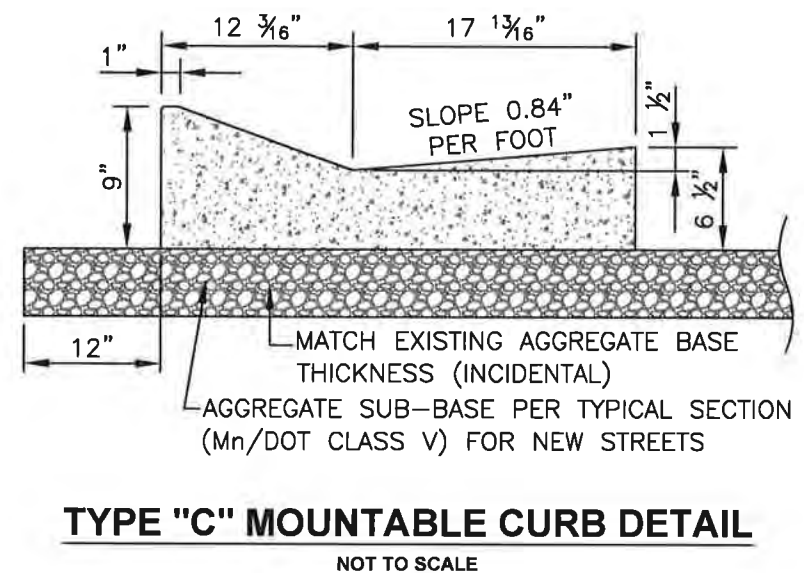
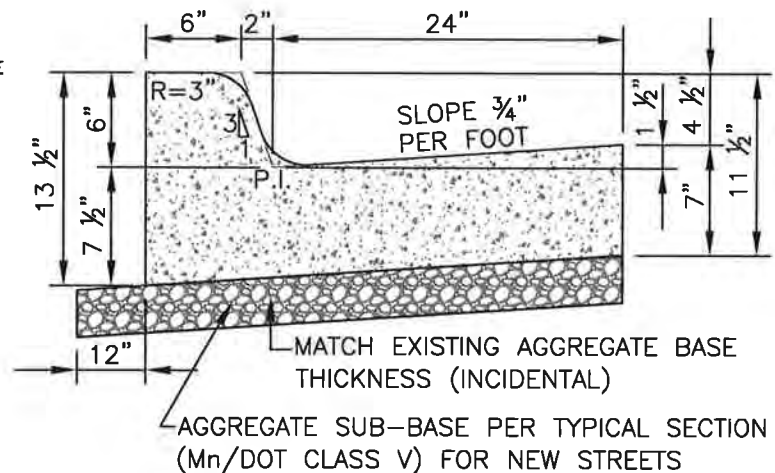
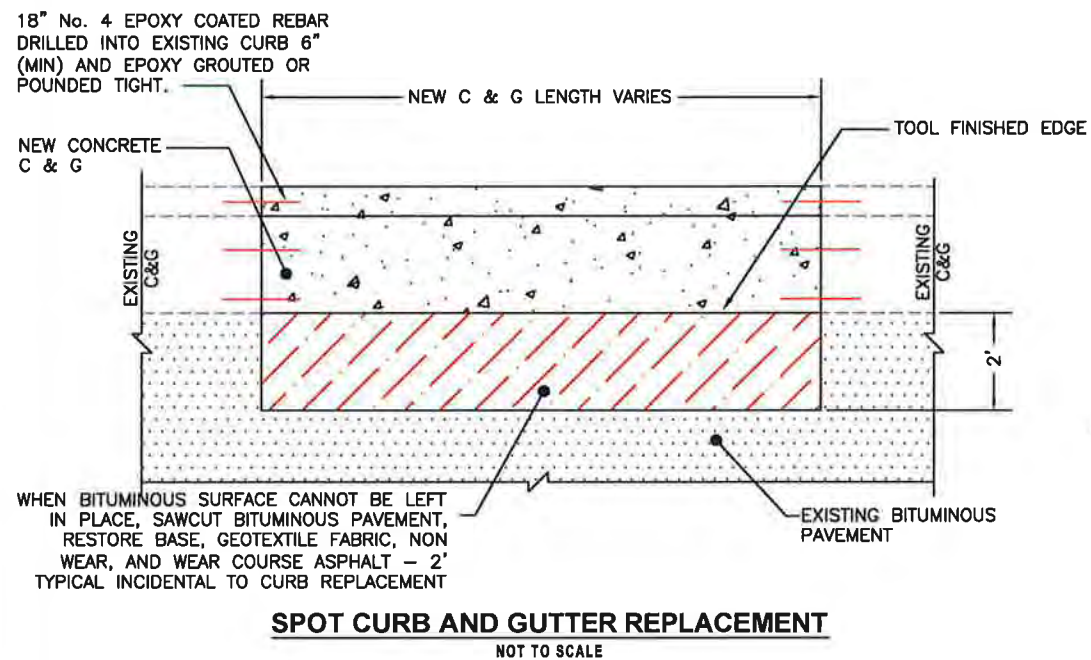
Thomas E. Trowbridge
Name - Project Engineer

Plan and Profile
Stonemill Access (44th Avenue South)
Proposed Grading, Paving and Storm Sewer Improvements

Sewer and Water Service Installations
Stonemill Access Road
Curb & Gutter, Asphalt Paving, Underground Utilities and Grading

SHEET
2
OF
4

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SHEET

3

OF 4

I hereby certify that this plan, specification or report was prepared
by me or under my direct supervision and that I am a duly Licensed
Professional Engineer under the laws of the State of Minnesota.

Signature - Project Engineer
Thomas E. Trowbridge
Date
April 25, 2019
License No.
25771



Thomas E. Trowbridge
Name - Project Engineer

Detail Sheet
Curb & Gutter

Sewer and Water Service Installations
Stonemill Access Road

Curb & Gutter, Asphalt Paving, Underground Utilities and Grading

MEO
DRAWN BY

MEO
CHECKED BY

TET
APPROVED BY

S.P. No.

City of Moorhead
ENG. No.

X
LEGAL No.

