



Engineering Department
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**CONTRACT DOCUMENTS
AND
SPECIFICATIONS
FOR:**

***MATERIALS PROCUREMENT FOR CSAH 78
UNDERPASS IMPROVEMENTS AT ZUMBRO
AVENUE***

Improvement Project No. PR-24-001

THE CITY OF SHAKOPEE, MINNESOTA

DOCUMENT DATE: September 14, 2023

SEALED BID DUE: 10:00 am, September 26, 2023

DELIVERY DATE: July 1, 2024 – All material shall be fabricated and delivered

CONTRACT DOCUMENTS

FOR

THE CITY OF SHAKOPEE, MINNESOTA

IMPROVEMENT PROJECT NO. PR-24-001

MATERIALS PROCUREMENT FOR
CSAH 78 UNDERPASS IMPROVEMENTS AT ZUMBRO AVENUE

PREPARED BY

ENGINEERING DEPARTMENT
CITY OF SHAKOPEE
485 GORMAN STREET
SHAKOPEE, MINNESOTA 55379
TELEPHONE 952.233.9300

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



Alexander Jordan, PE

DATE: September 14, 2023 REG. NO. 52612

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CITY OF SHAKOPEE, MINNESOTA

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ADVERTISEMENT FOR BIDS

MATERIALS PROCUREMENT FOR CSAH 78 UNDERPASS IMPROVEMENTS AT ZUMBRO AVENUE IMPROVEMENT PROJECT NO. PR-24-001 CITY OF SHAKOPEE, MN

NOTICE IS HEREBY GIVEN that sealed bids will be received by the City Council for the City of Shakopee, Minn., until 10:00 A.M. on September 26, 2023, at which time bids will be opened, for the following: **Materials Procurement for the CSAH 78 Underpass Improvements at Zumbro Avenue, PR-24-001**

Approximate Major Quantities Include:

125	LF	FURNISH 14' X 10' PRECAST CONCRETE BOX CULVERT
2	EA	FURNISH 14' X 10' PRECAST CONCRETE BOX CULVERT END SECTION

Bids shall be submitted by paper at the office of the City Clerk, City Hall, 485 Gorman St., Shakopee, Mn. 55379 (952-233-9300). Paper bids must be sealed and the envelope clearly marked on the outside that it is a bid for this improvement. A digital bid will also be accepted in the form of digital PDF bid (with scanned PDF of Bid Bond Security) emailed to ProjectBid@ShakopeeMN.gov, subject line clearly titled that it is a bid for this improvement. Both paper and digital bids will be opened concurrently at the time of bid opening.

Suppliers desiring a copy of the specifications and bid forms may obtain them electronically at <http://www.shakopeemn.gov> and clicking on the “RFPs and Bids” link under the “Business & Development” menu dropdown at the top of the page, or by contacting Alex Jordan, City Engineer (952-233-9361 or ajordan@shakopeemn.gov). Suppliers must notify Alex Jordan via email when they have received the bidding documents.

Each bid shall be accompanied by a bid bond, cash deposit, certified bank letter of credit or certified check made payable to the City of Shakopee, Minnesota, in the amount of 5 percent of the total bid amount, as a guarantee that the bidder will enter into the proposed contract within the time specified and at the price bid. No bids may be withdrawn for a period of 60 days from the date of opening of bids.

The Shakopee City Council reserves the right to reject any or all bids, to waive any defects or technicalities in bidding and to determine whether a bid is responsive or non-responsive. The City Council further reserves the right to make a bid award to the lowest and most responsible bidder as determined by the City Council.

Published by authority of the City Council of Shakopee, Minnesota the 14th day of September, 2023.
City Clerk, City of Shakopee

Published on: Shakopee’s city website, Shakopee Valley News on September 16, 2023.

INSTRUCTION TO BIDDERS

IMPROVEMENT PROJECT NO. PR-24-001
MATERIALS PROCUREMENT FOR
CSAH 78 UNDERPASS IMPROVEMENTS AT ZUMBRO AVENUE
CITY OF SHAKOPEE, MINNESOTA

1. EXAMINATION OF PLANS, SPECIFICATIONS AND SITE WORK

The bidder shall examine to his satisfaction the quantities of work to be done as determined from the plans and specifications. Quantities indicated by the Engineer on drawings or elsewhere are estimated only, and bidders must rely on their own calculations. Bidders shall be thoroughly familiar with Contract Documents including all General Conditions and Special Provisions.

Bidders shall inform themselves of the character and magnitude of work and the conditions under which the work is to be performed concerning the site of the work, the structure of the ground, the existence of surface and ground water, availability of drainage, the obstacles which may be encountered, means of approach to the site, manner of delivery and handling materials, facilities of transporting equipment and all other relevant matters pertaining to the complete execution of this Contract. No plea of ignorance of conditions that exist or that may hereafter exist or of difficulties that will be encountered in the execution of the work hereunder which result from failure to make necessary examinations and investigations, will be accepted as a sufficient excuse for any failure or omission on the part of the Contractor to fulfill in every detail all the requirements of this Contract, or will be accepted as a basis for any claim whatsoever for extra compensation or for an extension of time. No bidder may rely upon any statements or representations of any officer, agent or employee of the Owner with reference to the conditions of the work, of the character of the soil or other hazards which may be encountered in the course of construction.

2. BID SECURITY

Each bid shall be accompanied by a bid security in the form of an amount as specified in the Advertisement for Bids. Such bid security is a guarantee that the bidder will enter into a contract with the Owner for the work described in the proposal, and the amount of the bid security of a successful bidder shall be forfeited to the Owner as liquidated damages in the event that such bidder fails to enter into a contract and furnish a Contractor's bond.

3. CONTRACT DOCUMENTS

The Contract Documents will consist of the Advertisement for Bids, Instruction to Bidders, Specifications, Proposal Form, Contract for Services, Non-Collusion Affidavit, Contract Bond, and all plans and drawings. These documents are on file with the Owner.

4. PREPARATION OF PROPOSAL

The bidder shall submit his proposal on the form provided by the Engineer.

The blank spaces in the proposal shall be filled in correctly with ink or where indicated for each and every item for which a quantity is given, and the bidder shall state the prices for which he proposes to do each item of the work contemplated. All alterations, corrections or deletions shall nullify the bid unless each alteration, correction or deletion is initialed by the bidder.

Instructions to Bidders

The bidder's proposal shall be signed correctly with ink. If the proposal is made by an individual, his name and post office address shall be shown. If made by a firm or partnership, the name and post office address of each member of the firm or partnership shall be shown. If made by a corporation, the person signing the proposal shall show the name of the state under the law of which the corporation was chartered, and names, titles and business addresses of the president, secretary, and treasurer. All bids for corporations shall bear the official seal of the corporation.

The proposal shall contain an acknowledgement of receipt of all Addenda, the numbers of which must be filled in on the Proposal Form.

5. CONDITIONS IN THE BIDDER'S PROPOSAL

The bidder shall not stipulate in his proposal any conditions not provided for on the Proposal Form.

6. INTERPRETATION OF ESTIMATES

The Engineer's estimate of quantities as shown in the proposal shall be used as a basis of calculation upon which the award of contract will be made, but these quantities are not guaranteed to be accurate and are furnished without any liability on the part of the Owner.

7. DELIVERY OF PROPOSALS

All bids shall be placed in a sealed with a statement thereon showing the work covered by the bid, and addressed as stipulated in the Advertisement for Bids. Paper bids must be sealed and the envelope clearly marked on the outside that it is a bid for this improvement. A digital bid will also be accepted in the form of digital PDF bid (with scanned PDF of Bid Bond Security) emailed to ProjectBid@ShakopeeMN.gov, subject line clearly titled that it is a bid for this improvement. Both paper and digital bids will be opened concurrently at the time of bid opening. Paper bids may be mailed or submitted in person. No bids will be received after the time set for receiving them. Bids arriving by mail at the office of the Owner after the time designated for receiving bids will be returned to the sender unopened.

8. REJECTION OF PROPOSAL

Proposals may be rejected if they show any omission, alteration of form, additions not called for, conditional bids or alternate bids not specified, or irregularities of any kind. Proposals in which the prices are obviously unbalanced may be rejected.

9. WITHDRAWAL OF PROPOSAL

A bidder may withdraw his proposal without prejudice to himself, provided he files a written request to the Owner before the time of letting, and such withdrawal proposal may be modified and resubmitted by the bidder at any time prior to the time set for the opening of bids.

10. PUBLIC OPENING OF PROPOSALS

Proposals will be opened publicly and read aloud in such place as designated at the time and the date set in the "Advertisement for Bids". Bidders or their authorized agents are invited to be present.

11. DISQUALIFICATION OF BIDDERS

More than one proposal for the same project from an individual firm, partnership or corporation under the same or different names will not be considered. Evidence that any bidder is interested in more than one proposal for the same work will cause rejection of all such proposals. Collusion between the bidders will be considered sufficient cause for the rejection of all bids so affected.

Failure on the part of any bidder to carry out previous contracts satisfactorily or his lack of the experience or equipment necessary for the satisfactory completion of the work may be deemed sufficient cause for his disqualification.

12. EQUIPMENT

When requested by the Owner, the bidder shall furnish a complete statement of the make, size, weight (where weight is one of the specified requirements), condition and previous length of service of all equipment to be used in the proposed work.

13. FURNISHING OF EVIDENCE OF RESPONSIBILITY

When requested by the Owner, the bidder shall furnish a balance sheet, certified by a certified public accountant as to a date not more than sixty (60) days prior to the date of the opening of the proposals which shall set forth outstanding assets and liabilities in reasonable detail.

To demonstrate qualifications to perform the Work, the low Bidder, if requested by the OWNER, shall submit to OWNER (with copy to ENGINEER) within three (3) calendar days following the request by the OWNER, written documentation which demonstrates the Bidder's ability to complete the Work as specified. This documentation may include a description of present commitments; a description of the Bidder's equipment, key personnel, resources, and material supplies which demonstrate the Bidder's ability to furnish and deliver materials within the time frames specified and successfully complete the Work; a list of subcontractors Bidder proposes to use; description of the Bidder's project experience in the past five (5) years, including the nature of project, with three (3) projects completed by the CONTRACTOR involving work of similar type, complexity and contract value; and such other information the OWNER believes is necessary. The project experience list shall include the following information as a minimum:

- Names, address, and telephone number of Owner.
- Name of project.
- Location of project.
- Description of the work performed.
- Contract amount and name of bonding company.
- Date of completion of the project.
- Name, address, and telephone of the engineer for the work.
- Name of the Owner's project engineer.

The OWNER reserves the right to reject any bid if evidence submitted by, or investigation of, such bidder fails to satisfy the OWNER that such bidder is properly qualified to carry out the obligations of the Contract and to complete work contemplated therein.

14. AWARD OF CONTRACT

The award of the Contract will be made to the lowest responsive, responsible Bidder, based on the Proposal Form with the lowest TOTAL BID.

Discrepancies between words and figures will be resolved in favor of words. If discrepancies exist between an extension or indicated sum of any column of figures, the corrected extensions or sum thereof will govern.

Owner reserves the right to reject any and all bids, the right to waive any and all informalities, and the right to disregard all nonconforming or conditional bids or counter proposals.

Instructions to Bidders

15. RESPONSIVE/RESPONSIBLE BID

A responsible Bid is one from a Bidder that has all of the following:

- a. Documented proof of past and present financial resources, technical qualifications, experience, organization and facilities adequate to carry out the project;
- b. Resources to meet the completion schedule contained in the Agreement;
- c. A satisfactory performance record for completion of at least three (3) projects of similar type, complexity and contract value.

A “responsive” bid must include the following:

- a. Complete Proposal Form.
- b. Bid Security.

Unless otherwise specifically provided in the specifications for the improvements, bids must be made upon each and every item shown on the blank Proposal Form, including all alternate items.

16. BID REQUIREMENTS

Each bid must be accompanied by a bid bond, a signed non-collusion affidavit and a certificate of insurance that complies with the insurance requirements in the Contract.

17. FAILURE TO EXECUTE CONTRACT

Failure to execute the Contract within ten (10) days, as specified, shall be just cause for the annulment of the award, and it shall be understood by the bidder that in the event of the annulment of the award, the amount of the guaranty deposited with the proposal shall be retained by the Owner, not as a penalty, but as liquidated damages.

18. UNIT PRICES

In case of error in the extension of prices, the unit bid prices shall govern. The Owner reserves the right to waive any informality in the bids at his discretion.

19. OWNER DELETION RIGHT

The Owner reserves the right to delete any line item from the bid prior to final contract execution.

20. NONDISCRIMINATION IN EMPLOYMENT

If awarded the project, the Bidder agrees not to discriminate on account of race, creed or color as per Minnesota Statutes, Section 181.59 and Minnesota Statutes 363.

21. SURETY DEPOSITS

All out-of-state contractors on construction work over \$100,000 will be required to file an exemption from Surety Deposit (Form SD-E) prior to their first progress payment.

**BID PROPOSAL
FOR**

BID COPY

**MATERIALS PROCUREMENT FOR
CSAH 78 UNDERPASS IMPROVEMENTS AT ZUMBRO AVENUE
IMPROVEMENT PROJECT NO. PR-24-001**

CITY OF SHAKOPEE, MINNESOTA

BIDDER: _____

ADDRESS: _____ ZIP _____

TELEPHONE: _____

E-MAIL: _____

BIDS TO BE OPENED AT 10:00 A.M., LOCAL TIME, SEPTEMBER 26, 2023

Honorable City Council
City of Shakopee
485 Gorman Street
Shakopee, Minnesota 55379

The undersigned, as Bidder, having examined the site and having studied the Contract Documents for the Work and being familiar with all factors and conditions affecting the Work and cost thereof, hereby proposes and agrees to enter into a Contract with the City of Shakopee to fabricate, deliver and offload the materials as specified previously, and at the unit price proposed by July 1, 2024 for the following work, all in accordance with the Contract Documents and any subsequent addenda issued thereto:

Improvement Project No. PR-24-001, Materials Procurement for CSAH 78 Underpass Improvements at Zumbro Avenue

The undersigned Bidder understands the quantities of Work as shown herein are approximate only and are subject to increase or decrease and proposes to do the Work whether the quantities are increased or decreased, at the unit price stated in the following Schedule of Prices and the unit price as Bid shall constitute compensation in full for the respective items.

<u>ITEM</u>	<u>APPROXIMATE QUANTITIES</u>	<u>COST</u>	<u>TOTAL COST</u>
Furnish 14 x 10 Precast Concrete Box Culvert	125	_____ /LIN FT	\$ _____
Furnish 14 x 10 Precast Concrete Box Culvert End Section	2	_____ /EACH	\$ _____
		Total Bid	\$ _____

ESTIMATED DELIVERY DATE: _____

The undersigned agrees as follows:

1. Within ten (10) calendar days after Award of Contract to execute a Contract for the work involved.
2. That this Proposal cannot be withdrawn for a period of thirty (60) days after the date and time scheduled for the opening of Bids.
3. That the Shakopee City Council reserves the right to reject any and all Bids, to waive irregularities and informalities therein and further reserves the right to award the Contract in the best interests of the City.
4. All work included in this Contract shall be completed in accordance with the specified dates of completion provided in the Contract Documents and Specifications.

In guarantee of sincerity of purpose in entering this Bid, the undersigned encloses a certified check, a cashier's check, or a bid bond, in an amount equal to five percent (5%) of the total Bid amount, made payable to the City of Shakopee. It is agreed that this amount is subject to forfeiture to the OWNER in the event the undersigned fails to execute the prescribed Contract and submit the required Insurance Certificates to the OWNER within ten (10) calendar days after issuance of Notice of Contract Award.

This is to acknowledge receipt of addenda numbered _____, _____, and _____.

Respectfully submitted,

By: _____
(Signature of Bidder)

Title: _____

Name and Address of Bidder:

(Name)

(Address)

(Date)

(City and State)

(Bidders E.I. Number, used on employer's quarterly federal tax return, US Treasury Department Form 941)

Incorporated under the laws of the State of _____.

Authorized Signature: _____

Typed/Printed Name and Title: _____

AFFIDAVIT OF NON-COLLUSION

I hereby swear (or affirm) under the penalty for perjury:

1. That I am the Bidder (if the Bidder is an individual), a partner in the Bidder (if the Bidder is a partnership), or an officer or employee of the Bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);
2. That the attached Bid or Bids have been arrived at by the Bidder independently and have been submitted without collusion with, and without any agreement, understanding, or planned common course of action with, any other vendor of materials, supplies, equipment, or services described in the Advertisement for Bids, designed to limit independent bidding or competition;
3. That the contents of the Bid or Bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished with the Bid or Bids and will not be communicated to any such person prior to the official opening of the Bid or Bids; and
4. That I have fully informed myself regarding the accuracy of the Statements made in this affidavit.

Signature

Firm Name

Subscribed and sworn to before me

this _____ day of _____, 20__

(Notary Public)

(Seal)

**NOTICE OF AWARD
FOR
MATERIALS PROCUREMENT FOR
CSAH 78 UNDERPASS IMPROVEMENTS AT ZUMBRO AVENUE
RECONSTRUCTION PROJECT NO. PR-24-001
CITY OF SHAKOPEE, MINNESOTA**

TO:

The City of Shakopee, Minnesota, having considered the proposals submitted on _____, 2023 for the construction of the **MATERIALS PROCUREMENT FOR CSAH 78 UNDERPASS IMPROVEMENTS AT ZUMBRO AVENUE, PROJECT PR-24-001**, and it appearing that your proposal is fair, equitable and to the best interest of the City, the said proposal is hereby accepted for the prices set forth therein.

In accordance with the terms of the Contract Documents, you are required to execute the formal Contract Agreement within ten (10) days from the date hereof.

The Bid Security submitted with your proposal will be returned upon execution of the Contract Agreement. In the event you should fail to execute the Contract Agreement, within the time limit specified, said Bid Security will be retained by the City of Shakopee as liquidated damages for failure to accept the award and execute the necessary documents for the formation of the contract.

The City is accepting Alternate _____ No. _____.

CITY OF SHAKOPEE, MINNESOTA

Bill Reynolds/ City Administrator

Awarded by:
Shakopee City Council _____

Contract Amount: _____

CONTRACT FOR SERVICES

THIS CONTRACT, made and entered into this _____ day of _____, 2023 by and between _____ hereinafter called "Contractor" (a corporation organized and existing under the laws of the State of Minnesota) (a partnership consisting of _____ created under the laws of Minnesota), and the City of Shakopee, Minnesota, a municipal corporation, hereinafter called "City."

WITNESSETH:

That Whereas, the Contractor has become the lowest responsible bidder for furnishing the materials and supplies for the following City improvements:

MATERIALS PROCUREMENT FOR CSAH 78 UNDERPASS IMPROVEMENTS AT ZUMBRO AVENUE

NOW THEREFORE,

the parties to this contract agree to the following:

1. Manner for Completion

The Contractor, at his own proper cost and expense, shall perform all work and furnish all supervision (needed beyond that provided by the City Engineer), labor, material, tools, supplies, machinery and other equipment necessary for the fabrication, delivery and offloading of materials of the **Materials Procurement for CSAH 78 Underpass Improvements at Zumbro Avenue, Project PR-24-001** for the City of Shakopee, Minnesota, in a workmanlike and substantial manner, as outlined in the Plans and Specifications.

2. Due Diligence

Time is of the essence in the performance of this Contract. The maintenance of a rate of progress in the work which will result in its completion in a reasonable time, is an essential feature of this Contract, and the Contractor agrees to proceed with all due diligence and care, at all times to take all precautions to insure the time of completion as defined in this Contract. The Contractor shall fully complete the work called for under the Contract in accordance with the specifications.

3. Contract Price

The City shall pay Contractor the Total Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities) \$_____ and ___/100ths Dollars (\$_____).

4. Payment

The City agrees to pay, and the Contractor agrees to receive and accept payment in accordance with the prices as quoted in the Contractor's Proposal, which is inclusive of sales tax, as set forth in the completed Proposal Form. Payment to the Contractor shall be made based on measurements as shown in the Proposal once delivered and submission and approval of an invoice.

5. Contractor's Responsibility for Subcontractors

It is further agreed that Contractor shall be as fully responsible to the City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for the acts and omissions of persons it directly employs. Contractor shall cause appropriate provisions to be inserted in all

subcontracts relating to this work, to bind all subcontractors to Contractor by all the terms herein set forth, insofar as applicable to the work of subcontractors and to give Contractor the same power regarding termination of any subcontract as the City may exercise over Contractor under any provisions of this contract. Nothing contained in this Contract shall create any contractual relation between the subcontractor and the City or between any subcontractors.

6. Payment to Subcontractors

The Contractor shall pay any subcontractor within ten days of receipt of payment from the City for undisputed services provided by the subcontractor. If the Contractor fails to pay within ten days, the Contractor shall pay the subcontractor interest at the rate of one and one-half percent per month or part of month to the subcontractor on any undisputed amount not paid on time to the subcontractor, in accordance with Minn. State. Sec. 471.425, Subd. 4a.

7. Termination without Cause by City

The City reserves the right to terminate Contractor at will immediately without cause at any time within the term of this Contract. In the event of such termination, the City shall provide Contractor written notice of termination and upon receipt of same, Contractor shall immediately cease and desist Contractor's provision of services under this Contract and City shall have no further obligation under this Contract to pay any further compensation to Contractor except for compensation due and owing for services prior to Contractor's receipts of the written notice of termination.

8. Indemnity

The Contractor agrees to defend, indemnify, and save the City harmless from and against all claims, suits and actions of every description, brought against the City and from all damage and costs, including attorney's and expert fees, by reason or on account of any injuries or damages received or sustained by any person or persons, or their property, by Contractor, its servants, agents or subcontractors in the construction of said work, or by any negligence or carelessness in the performance of same, or on account of any other wrongful act or omission, including breach of any provision of this Contract, of Contractor, its independent subcontractors, agents, employees, or delegates. The Contractor further agrees to indemnify the City for defense cost incurred in defending any claims, unless the City is determined to be at fault.

9. Contract Documents

This Contract, together with the other documents enumerated in this paragraph, forms the Contract between the parties. These documents are as fully a part of the contract as if attached hereto or repeated herein. In the event of any conflict between those documents listed as (a) through (f), they shall govern in the order listed, with this Contract governing over all other documents. The contract documents consist of the following:

- a. This Contract
- b. All Change Orders or Addenda
- c. Technical Specifications for Project PR-24-001
- d. Materials Procurement Plans
- e. Contractor's Completed Bid Form
- f. All items listed under the Table of Contents

10. Duplicate Originals

This Contract shall be executed in two copies; one (1) copy being retained by the City, one (1) to be delivered to the Contractor.

11. Insurance

Prior to the start of deliveries, Contractor shall furnish to the City a certificate of insurance showing proof of the required insurance required under this Paragraph. Contractor shall take out and maintain or cause to be taken out and maintained until six (6) months after the City has accepted the public improvements, such insurance as shall protect Contractor and the City for work covered by the Contract including workers' compensation claims and property damage, bodily and personal injury which may arise from operations under this Contract, whether such operations are by Contractor, or anyone directly or indirectly employed by either of them. The minimum amounts of insurance shall be as follows:

Commercial General Liability (or in combination with an umbrella policy)

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$2,000,000
Products – Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$2,000,000
Bodily Injury and Property Damage – Each Occurrence	\$2,000,000

Automobile Liability

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$2,000,000
Each Accident	\$2,000,000
Property Damage	
Each Accident	\$2,000,000
or	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$2,000,000

Workers Compensation

Worker's Compensation and Related Policies	Policy limits not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Employer's Liability	
Each accident	\$2,000,000
Each employee	\$2,000,000
Policy limit	\$2,000,000

Umbrella or Excess Liability: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer’s liability, commercial general liability, and automobile liability insurance described in the Paragraphs above.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$2,000,000
General Aggregate	\$2,000,000

The Contractors’ insurance must be “Primary and Non-Contributory”.

All insurance policies (or riders) required by this Contract shall be (i) taken out by and maintained with responsible insurance companies organized under the laws of one of the states of the United States and qualified to do business in the State of Minnesota, (ii) shall name the City, its employees and agents as additional insureds (CGL and umbrella only) by endorsement which shall be filed with the City. A copy of the endorsement must be submitted with the certificate of insurance.

Contractor’s policies and Certificate of Insurance shall contain a provision that coverage afforded under the policies shall not be cancelled without at least thirty (30) days’ advanced written notice to the City, or ten (10) days’ notice for non-payment of premium. An Umbrella or Excess Liability insurance policy may be used to supplement Contractor’s policy limits on a follow-form basis to satisfy the full policy limits required by this Contract.

12. Nondiscrimination

The Contractor agrees in the performance of this Contract not to discriminate on the ground or because of race, color, creed, religion, national origin, sex, marital status, status with regard to public assistance, disability, sexual orientation or age, against any employee of Contractor or applicant for employment, and shall include a similar provision in all subcontracts let or awarded hereunder.

13. Independent Contractor

City and Contractor agree that Contractor, while engaged in carrying out and complying with the terms and conditions of this Contract and the provision of services thereunder, shall be considered at all times an independent contractor and not an officer, employee, or agent of the City. City and Contractor further agree that Contractor shall not at any time or in any manner represent that Contractor or any of the Contractor’s agents or employees are in any manner agents or employees of the City. City and Contractor further agree that Contractor shall be exclusively responsible under this Contract for Contractor’s own FICA payment, workers compensation payments, unemployment compensation payments, withholding amounts, and/or self-employment taxes or other taxes if any such payments, amounts, or taxes are required to be paid by law or regulations.

14. Jurisdiction

This agreement and every question arising hereunder shall be construed or determined according to the laws of the State of Minnesota.

15. Supervision of the Contractor

The City’s designated supervisor will be the City Engineer. The City Engineer, acting on the City’s behalf, shall be responsible for providing communication and direction as to the provision of services by the Contractor under this Contract. The Contractor will contact the City of Shakopee by e-mail as to the supply dates and times

they will perform work. City Engineer's mailing address is: 485 Gorman St, Shakopee, MN 55379; telephone number is: (W) 952-233-9361; email address is ajordan@shakopeemn.gov.

16. Written Notice or Other Correspondence

Any written notice or other correspondence to be provided by or between the City and the Contractor in accordance with this Contract shall be hand delivered or mailed by registered or certified mail to the following address:

CITY: City of Shakopee
485 Gorman Street
Shakopee, MN 55379
Attn: William Reynolds, City Administrator

CONTRACTOR: _____

Attn: _____

17. No Assignment

Neither party shall assign this Agreement, nor any interest arising herein, without the written consent of the other party.

18. Invalidity of Provisions

If any term or provision of this Contract or any application hereof to any person or circumstances, shall to any extent be invalid or unenforceable, the remainder of this Contract or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable shall not be effected hereby and each term and provision of this Contract shall be valid and be enforced to the fullest extent permitted by law.

19. Warranty

The Contractor shall be held responsible for any and all defects in workmanship, materials, and equipment which may develop in any part of the contracted service, and upon proper notification by the City shall immediately replace, without cost to the City, any such faulty part or parts and damage done by reason of the same in accordance with the bid specifications. No warranty bond shall be required. The warranty period shall be 2 years from the date of delivery.

20. Work Hours

Deliveries shall be Monday through Friday between 8:00 a.m. and 3:30 p.m. daily. No deliveries will be accepted on Saturdays, Sundays, and Holidays.

21. Miscellaneous

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

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

C. Data Practices/Records.

(1) All data created, collected, received, maintained or disseminated for any purpose in the course of this Contract is governed by the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, any other applicable state statute, or any state rules adopted to implement the act, as well as federal regulations on data privacy.

(2) All books, records, documents and accounting procedures and practices to the Contractor, relative to this Contract are subject to examination by the City.

D. All reports, plans, models, software, diagrams, analyses, and information generated in connection with performance of this Agreement shall be the property of the City. The City may use the information for its purposes.

E. Patented devices, materials and processes. If the Contract requires, or the Contractor desires, the use of any design, devise, material or process covered by letters, patent or copyright, trademark or trade name, the Contractor shall provide for such use by suitable legal agreement with the patentee or owner and a copy of said agreement shall be filed with the Owner. If no such agreement is made or filed as noted, the Contractor shall indemnify and hold harmless the Owner from any and all claims for infringement by reason of the use of any such patented designed, device, material or process, or any trademark or trade name or copyright in connection with the Project agreed to be performed under the Contract, and shall indemnify and defend the Owner for any costs, liability, expenses and attorney's fees that result from any such infringement.

F. In providing services hereunder, Contractor shall abide by all statutes, ordinances, rules and regulations pertaining to the provisions of services to be provided.

G. Assignment. Neither party may assign, sublet, or transfer any interest or obligation in this Contract without the prior written consent of the other party, and then only upon such terms and conditions as both parties may agree to and set forth in writing.

H. Waiver. In the particular event that either party shall at any time or times waive any breach of this Contract by the other, such waiver shall not constitute a waiver of any other or any succeeding breach of this Contract by either party, whether of the same or any other covenant, condition or obligation.

I. Governing Law/Venue. The laws of the State of Minnesota govern the interpretation of this Contract. In the event of litigation, the exclusive venue shall be in the District Court of the State of Minnesota for Dakota County.

J. Severability. If any provision, term or condition of this Contract is found to be or become unenforceable or invalid, it shall not affect the remaining provisions, terms and conditions of this Contract, unless such invalid or unenforceable provision, term or condition renders this Contract impossible to perform. Such remaining terms and conditions of the Contract shall continue in full force and effect and shall continue to operate as the parties' entire contract.

K. Entire Agreement. This Contract represents the entire agreement of the parties and is a final, complete and all-inclusive statement of the terms thereof, and supersedes and terminates any prior agreement(s), understandings or written or verbal representations made between the parties with respect thereto.

22. Term

The term of this Contract shall begin on October 3, 2023, and end on December 31, 2024, both dates inclusive, unless sooner terminated as hereinafter provided.

CONTRACTOR

CITY OF SHAKOPEE, MINNESOTA

By _____

By _____
Mayor/Matt Lehman

By _____
Name / Title

By _____
City Administrator/Bill Reynolds

Approved as to form:

City Attorney

**NOTICE TO PROCEED
FOR**

**MATERIALS PROCUREMENT FOR CSAH 78 UNDERPASS AT ZUMRBO AVENUE
PROJECT NO. PR-24-001**

CITY OF SHAKOPEE, MINNESOTA

TO:

DATE: _____

You are hereby authorized to proceed on this date for the fabrication and delivery of the **Materials Procurement for CSAH 78 Underpass at Zumbro Avenue, Improvement Project PR-24-001** for the City of Shakopee, Minnesota as set forth in detail in the Contract Documents, including Plans and Specifications.

CITY OF SHAKOPEE, MINNESOTA

By: _____
City Engineer

TECHNICAL SPECIFICATIONS

S-1 (2412) PRECAST CONCRETE BOX CULVERTS

S-1.1 DESCRIPTION

This Work consists of the fabrication, storage, and transportation of Bridge No. 70J70 and end sections; and furnishing tie bars, sealant, fabric for wrapping joints, lintel beams, dowels, and all necessary hardware for installation in accordance with the Plans, MnDOT 2412, and 3238.

S-1.2 MATERIALS – See Standard Specifications for Construction

Add the following to MnDOT 3238.2B:

B.3 Welded Wire Reinforcement 3303

Delete and replace MnDOT 3238.2I with the following:

I Certified Plant Requirement

Provide precast concrete box culverts, end sections, and appurtenances constructed in a precast concrete fabrication plant certified by the American Concrete Pipe Association, the National Precast Concrete Association, or another organization approved by the Materials Engineer. If requested, provide quality control and plant certification records to the Materials Engineer.

Add the following to MnDOT 3238.2

J Tolerances

Dimensional tolerances will be based on *AASHTO M 259*, “Standard Specification for Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers.”

S-1.3 CONSTRUCTION REQUIREMENTS

A The fabricated materials will be installed under a separate contract. The actual date of delivery to the job site shall be coordinated by the Project Manager.

B The box culverts and end sections shall be delivered to and offloaded at the intersection of 130th Street NW and Zumbro Avenue in Shakopee, MN, 55379. A minimum of two weeks prior to shipping any materials, the Supplier shall contact the Project Manager to coordinate schedule and shipping details. The box culverts and end sections shall be delivered to the project site no later than July 1, 2024.

C Delivery to the project site for Bridge No. 70J70 will be at the intersection of 130th Street NW and Zumbro Avenue in Shakopee, MN, 55379.

D Upon completion of fabrication, contact the Project Manager.

S-1.4 METHOD OF MEASUREMENT

The Engineer will measure the completed work.

Technical Specifications

Materials Procurement for CSAH 78 Underpass Improvements at Zumbro Avenue

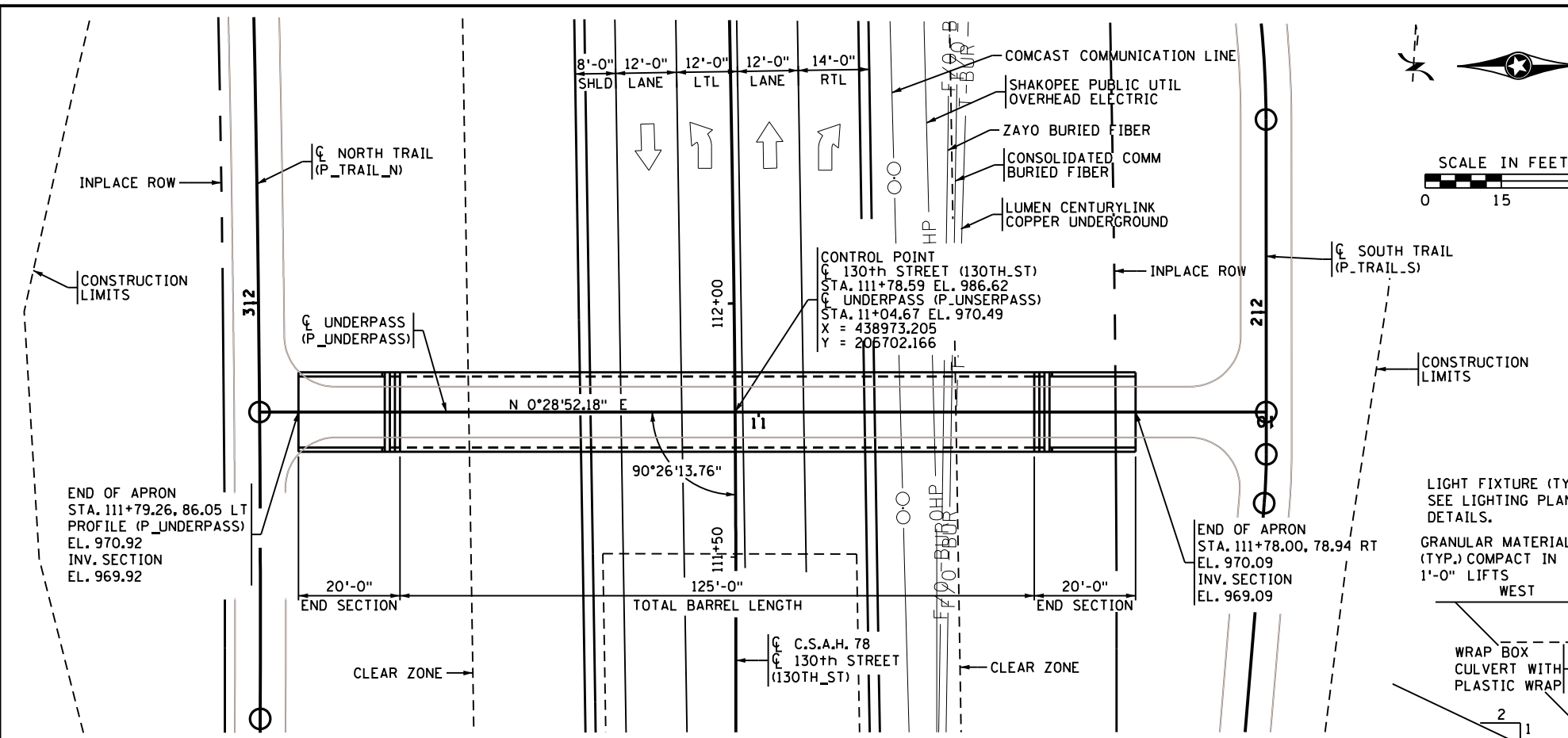
S-1.5 BASIS OF PAYMENT

Payment for “FURNISH 14x10 PRECAST CONCRETE BOX CULVERT and FURNISH 14x10 PRECAST CONCRETE BOX CULVERT END SECTION” will be made at the Contract price per LIN FT and EACH, respectively, and shall be compensation in full for Equipment, Materials and labor required to complete the Work, including temporary storage of the culvert, delivery to the site and offloading the materials.

The City will pay for Furnish Precast Concrete Box Culvert and Furnish Precast Concrete Box Culvert End Section on the basis of the following schedule:

Item No.:	Item:	Unit:
2412.603	FURNISH 14X10 PRECAST CONCRETE BOX CULVERT.....	LIN FT
2412.602	FURNISH 14X10 PRECAST CONCRETE BOX CULVERT END SECTION.....	EACH

END OF SECTION



CONSTRUCTION NOTES

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPEC. 2411 AND 2412 EXCEPT AS NOTED.

THE BAR SIZES SHOWN IN THIS PLAN ARE IN U.S. CUSTOMARY DESIGNATIONS.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

FINISH ALL EXPOSED EDGES OF CONCRETE WITH 1/2" OR 3/4" CHAMFER OR RADIUS, UNLESS OTHERWISE NOTED.

DESIGN DATA

DESIGNED IN ACCORDANCE WITH 2017 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

HL-93 LIVE LOAD

BARREL SPAN = 14'-0"
 BARREL RISE = 10'-0"
 BARREL LENGTH = 125'-0"
 EST. MIN. FILL DEPTH (A) = 5'-11"
 EST. MAX. FILL DEPTH (B) = 6'-6"
 SKEW ANGLE = 0°58'58.5"

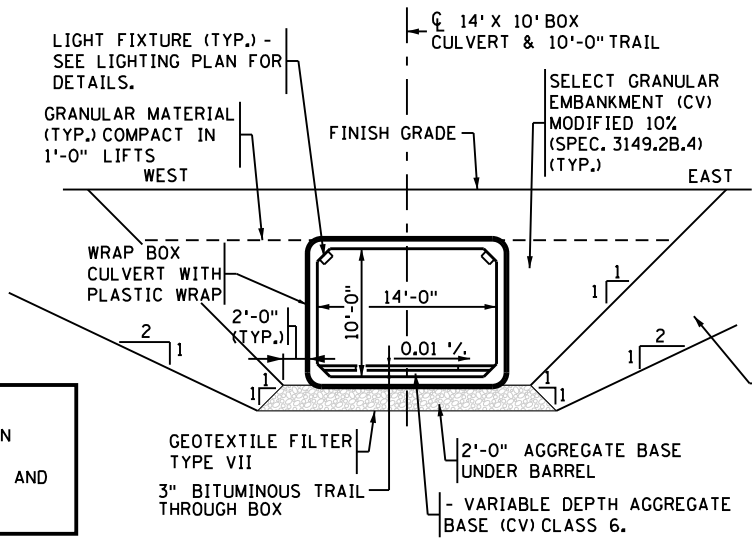
MATERIAL PROPERTIES
 PRECAST REINFORCED CONCRETE:
 f'c = 5 KSI
 fy = 65 KSI WELDED WIRE REINFORCEMENT
 fy = 60 KSI REINFORCEMENT BARS

DESIGN SPEED: OVER = 55 MPH

HL-93 LRFR
 BRIDGE OPERATING RATING FACTOR RF= 1.3

LIST OF SHEETS

NO.	DESCRIPTION
BR1	GENERAL PLAN & ELEVATION
BR2	PRECAST CONCRETE BARREL DETAILS
BR3-BR4	PRECAST CONCRETE END SECTION TYPE III



CULVERT SECTION

NOTE:
 NOT FOR CONSTRUCTION FOR FABRICATION OF PRECAST BOX CULVERT AND END SECTION

NOTES:

TRAFFIC WILL BE DETOURED DURING CONSTRUCTION. SEE ROADWAY PLANS.

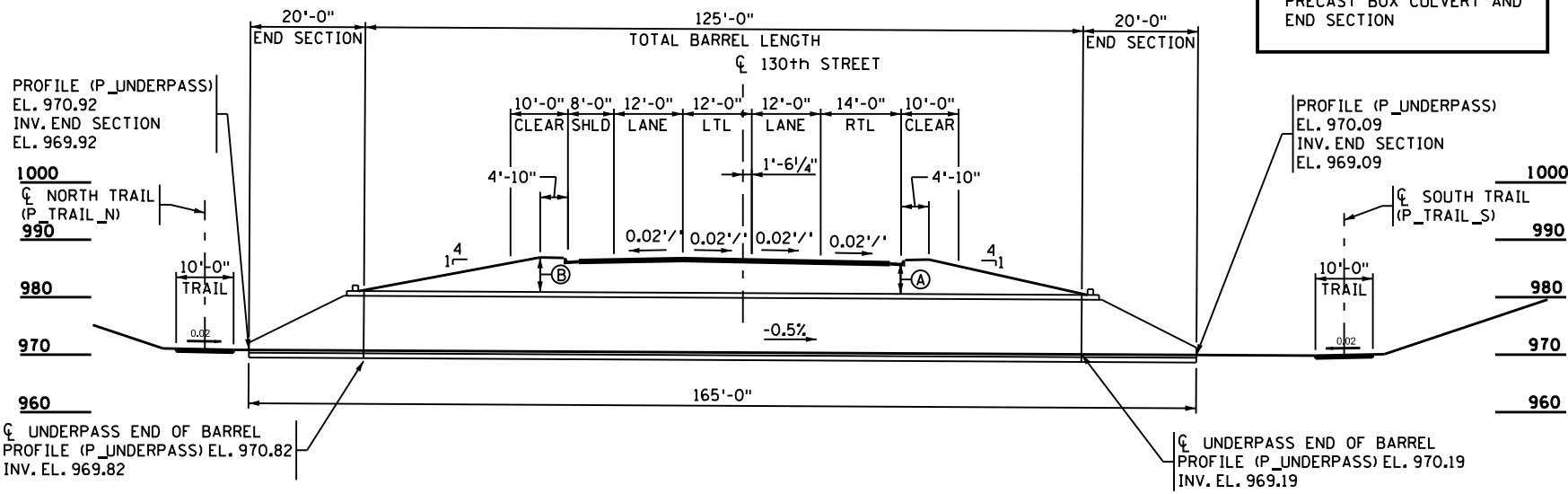
1-1/4" DIA. PREFORMED BUTYL RUBBER MASTIC JOINT SEALANT SHALL BE PLACED AROUND THE ENTIRE JOINT (TOP, BOTTOM, AND SIDES) AT ALL CULVERT JOINT LOCATIONS AND IS INCLUDED IN BID PRICE FOR 14X10 PRECAST BOX CULVERT.

EXISTING GROUND SURVEY BY OTHERS.

WATERPROOFING SHALL BE PER MNDOT SPEC. 2481 AND PAID FOR AS 2481.618 "MEMBRANE WATERPROOFING" AND SHALL EXTEND AROUND THE TOP AND SIDES OF THE CULVERT OVER THE ENTIRE LENGTH OF THE BOX. MEMBRANE WATERPROOFING SYSTEM SHALL BE A MNDOT APPROVED PRODUCT. CONTRACTOR MAY SUBMIT ALTERNATIVE PRODUCTS TO ENGINEER FOR APPROVAL. SEE DIVISION 5 SPECIAL PROVISIONS FOR BOX CULVERT CONSTRUCTION AND MEMBRANE INSTALLATION. MEMBRANE MAY BE FURNISHED IN PARTIAL LENGTHS WITH ADDITIONAL WATERPROOFING OF THE SEAMS, AND ALL POSSIBLE CAUSES FOR MEMBRANE TEARS SHALL BE REMOVED, SEE SPECIAL PROVISIONS FOR MORE INFORMATION.

A 2 FOOT MINIMUM COARSE FILTER AGGREGATE BEDDING (MNDOT SPEC. 3149.2H) COMPACTED TO THE REQUIREMENT OF SPEC. 2211.3D.2.b IS PLACED BELOW BOTTOM OF THE CULVERT TO REDUCE DIFFERENTIAL SETTLEMENT AND PROVIDE FOR UNIFORM BASE.

A MNDOT TYPE 4 SEPARATION GEOSYNTHETIC (MNDOT SPEC. 3733) SHOULD BE PLACED AT THE BASE OF THE SUBCUT EXCAVATION BETWEEN NATIVE SOILS AND THE REPLACEMENT BACKFILL. THE GEOSYNTHETIC SHOULD BE FULLY WRAPPED AROUND THE AGGREGATE TO PREVENT THE BACKFILL MATERIAL FROM MIXING WITH THE AGGREGATE. IN ADDITION, SEAM ALL FABRIC SIDES AND ENDS PER SPEC. TABLE 3733-1 INCLUDING FOOTNOTE (E) OR OVERLAP A MINIMUM OF 3 FEET.



GENERAL ELEVATION

SCHEDULE OF QUANTITIES FOR BRIDGE 70J70

ITEM	2106.507	2211.507	2401.601	2412.502	2412.503	2451.507	2481.618	2511.504
	SELECT GRANULAR EMBANKMENT (CV)	AGGREGATE BASE (CV) CLASS 6	STRUCTURE EXCAVATION	14X10 PRECAST CONCRETE BOX CULVERT END SECTION	14X10 PRECAST CONCRETE BOX CULVERT	COARSE FILTER AGGREGATE	MEMBRANE WATERPROOFING	GEOTEXTILE FILTER TYPE 4
UNIT	CU. YD.	CU. YD.	LUMP SUM	EACH	LIN. FT.	CU. YD.	SQ. FT.	SQ. FT.
QUANTITY	-	-	-	2	125	-	-	-

MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 70J70

14x10 BOX CULVERT
 130th STREET OVER UNDERPASS
 0.9 MILES EAST OF
 JCT. T.H. 169 AND C.S.A.H. 78

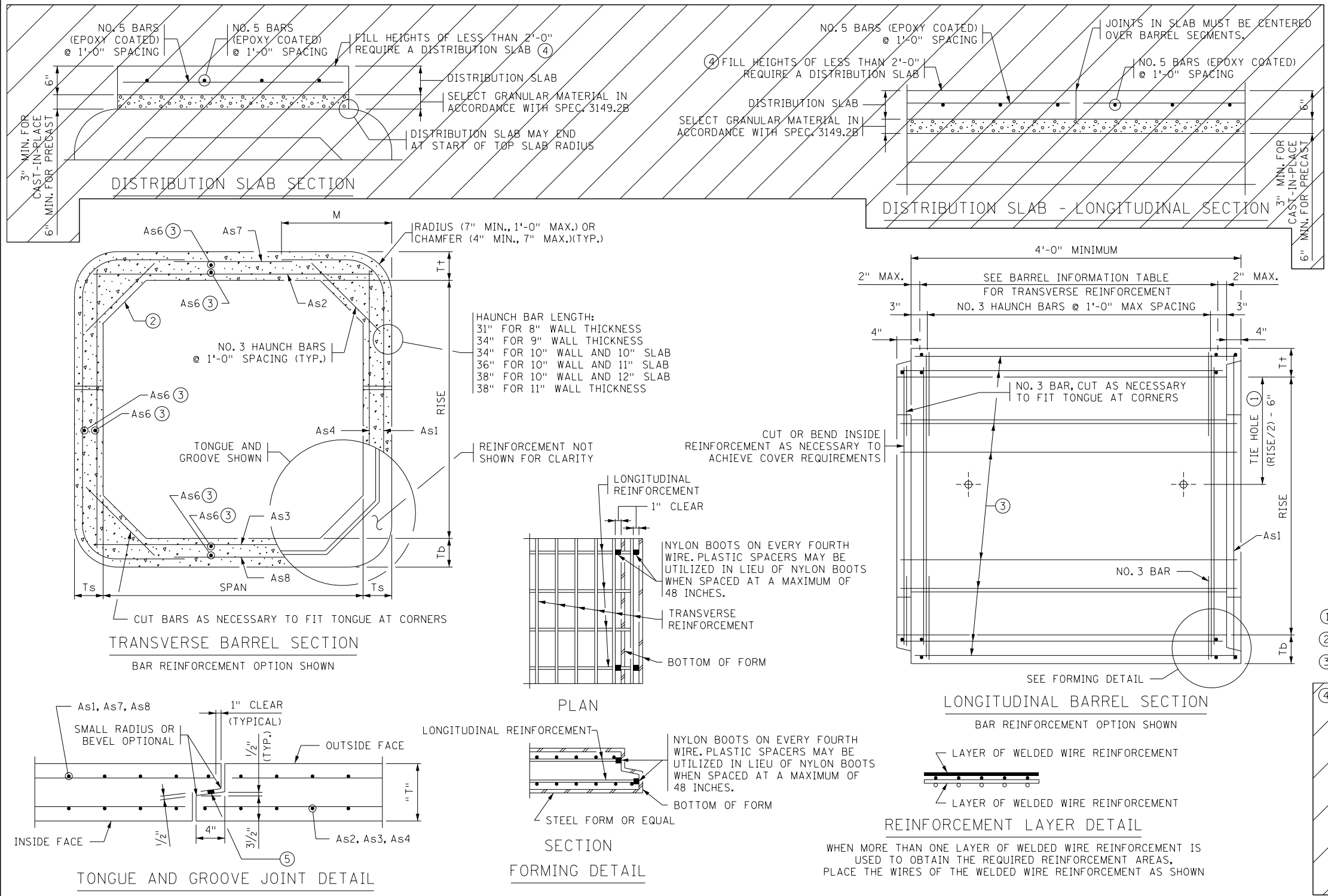
GENERAL PLAN AND ELEVATION

SPAN IDENTIFICATION NO. 513
 SEC. 23 TWP. 115 N R. 23 NW
 CITY OF SHAKOPEE SCOTT COUNTY

APPROVED _____ DATE _____
 CITY OF SHAKOPEE

APPROVED _____ DATE _____
 STATE BRIDGE ENGINEER

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CONSTRUCTION NOTES
 CONSTRUCT CULVERTS IN ACCORDANCE WITH SPEC. 2412 EXCEPT AS NOTED.
 REFER TO THE GENERAL PLAN AND ELEVATION SHEET FOR THE DISTANCE BETWEEN BARRELS OF ADJACENT BOXES AND TO STANDARD FIGURE 5-395.115 FOR MATERIAL REQUIREMENTS FOR FILL BETWEEN ADJACENT BOXES.
 PROVIDE WELDED WIRE REINFORCEMENT, SHEAR REINFORCEMENT AND REINFORCEMENT BARS IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF AASHTO M259.
 1/2" MIN. AND 2" MAX. CONCRETE COVER ON ALL REINFORCEMENT, INCLUDING SHEAR REINFORCEMENT, EXCEPT FOR TONGUE AND GROOVE DETAIL.
 ANY OF THE FOLLOWING COMBINATIONS OF STEEL REINFORCEMENT MAY BE USED:
 (a) 1 OR 2 LAYERS OF WELDED WIRE REINFORCEMENT OR
 (b) 1 LAYER OF WELDED WIRE REINFORCEMENT AND 1 LAYER OF REINFORCEMENT BARS OR
 (c) 1 LAYER OF REINFORCEMENT BARS.
 DEVELOP REINFORCEMENT IN ACCORDANCE WITH AASHTO "LRFD BRIDGE DESIGN SPECIFICATIONS". IF BAR REINFORCEMENT IS SUBSTITUTED FOR WELDED WIRE REINFORCEMENT, INCREASE THE AREA OF REINFORCEMENT BY 8%, AND SUBMIT DESIGN CALCULATIONS VERIFYING COMPLIANCE WITH AASHTO 5.7.3.4. "CONTROL OF CRACKING BY DISTRIBUTION OF REINFORCEMENT".
 MAXIMUM SIZE OF REINFORCEMENT BARS IS NO. 6. THE MAXIMUM WELDED WIRE REINFORCEMENT SIZE IS W23 PER LAYER (MAXIMUM OF 2 LAYERS).
 SPACE CENTER TO CENTER OF TRANSVERSE WIRES NOT LESS THAN 2" NOR MORE THAN 4". SPACE CENTER TO CENTER OF LONGITUDINAL WIRES NOT MORE THAN 8".
 WHEN USING As1, As7, AND As8 REINFORCEMENT AS ONE CONTINUOUS CAGE WITH SPLICES OCCURRING IN THE CENTER OF THE TOP AND BOTTOM OF THE BOX SECTION, THE MIN. LAP LENGTH FOR THE As7 AND As8 IS 15".
 WELDING IS NOT PERMITTED ON REINFORCEMENT BARS OR WELDED WIRE REINFORCEMENT, EXCEPT THAT THE ORIGINAL WELDING REQUIRED TO MANUFACTURE WIRE REINFORCEMENT IS ACCEPTABLE.
 WHEN REINFORCEMENT IS CUT, PLACE ADDITIONAL REINFORCEMENT ON BOTH SIDES OF THE CUT MEMBER TO REPLACE OR EXCEED THE CUT STEEL.
 USE CONCRETE MIX NO. 3W82 WITH NO CALCIUM CHLORIDE ALLOWED.
 SHOP DRAWING APPROVAL IN ACCORDANCE WITH SPEC. 3238.2A IS NOT REQUIRED UNLESS OPENINGS OR ATTACHMENTS ARE PLACED ON A BARREL SEGMENT.
 COMPACT THE FIRST 1.5' (LOOSE) OF FILL ABOVE THE BOX WITH LIGHT COMPACTION EQUIPMENT SUCH AS PLATE COMPACTORS OR WALK BEHIND ROLLERS.
 TRANSVERSE REINFORCEMENT IS PARALLEL TO THE CULVERT SPAN. LONGITUDINAL REINFORCEMENT IS PERPENDICULAR TO THE CULVERT SPAN.
 (1) USE 1" DIAMETER CULVERT TIES. SEE STANDARD PLATE NO. 3145 FOR DETAILS.
 (2) USE 12" VERTICAL, 12" HORIZONTAL HAUNCHES ON ALL BOX SIZES.
 (3) PLACE LONGITUDINAL REINFORCEMENT DENOTED AS As6 IN ALL SLABS AND WALLS WITH A MINIMUM OF 0.06 SQ. IN./FT.
 (4) ROADWAY OR SHOULDER FILL HEIGHTS OF LESS THAN 2'-0" REQUIRE A 6" THICK DISTRIBUTION SLAB WITH CONCRETE MIX 3552.
 PLACE CAST-IN-PLACE DISTRIBUTION SLABS WITH 3" MIN. SELECT GRANULAR MATERIAL IN ACCORDANCE WITH SPEC. 3149.2B BETWEEN BARREL AND DISTRIBUTION SLAB.
 PRECAST DISTRIBUTION SLABS MAY BE USED FOR FILL HEIGHTS OVER 1'-0". PROVIDE 6" MINIMUM SELECT GRANULAR MATERIAL IN ACCORDANCE WITH SPEC. 3149.2B BETWEEN BARREL AND SLAB.
 EXTEND THE WIDTH OF THE DISTRIBUTION SLAB TO THE OUTSIDE EDGES OF THE ROADWAY SHOULDERS UNLESS DIRECTED BY THE ENGINEER.
 REDESIGN THE DISTRIBUTION SLAB PER THE MNDOT PAVEMENT DESIGN MANUAL IF IT IS USED AS PAVEMENT SURFACE.
 PAYMENT FOR THE DISTRIBUTION SLAB AND SELECT GRANULAR MATERIAL BENEATH THE SLAB IS INCLUDED IN THE PRECAST CONCRETE BOX CULVERT PAY ITEM.
 (5) REFER TO SPEC. 2412 FOR SEALANT REQUIREMENTS.

BARREL INFORMATION TABLE ***

LOCATION	SIZE	CLASS	f'c (P.S.I.)	FILL HEIGHT RANGE (FT.)	DISTRIBUTION SLAB REQUIRED *	RECESSED TIE RODS REQUIRED **	DIMENSIONS					WEIGHT (LBS./FT.)	WELDED WIRE REINFORCEMENT												
							SPAN (FT.)	RISE (FT.)	T+ (IN.)	Tb (IN.)	Ts (IN.)		As1		As2		As3		As4		As7		As8		
													AREA (IN. ² /FT.)	LENGTH (FT.)	M (FT.)	AREA (IN. ² /FT.)	LENGTH (FT.)	AREA (IN. ² /FT.)	LENGTH (FT.)	AREA (IN. ² /FT.)	LENGTH (FT.)	AREA (IN. ² /FT.)	LENGTH (FT.)	AREA (IN. ² /FT.)	LENGTH (FT.)
YES	14x10	3	5000	6-11	YES	NO	14	10	10	10	9	6425	0.90	18'-11"	3'-11"	1.33	14'-6"	1.40	14'-6"	0.22	10'-6"	0.24	10'-11"	0.24	10'-11"

REVISION: DECEMBER 21, 2022
 APPROVED: MARCH 24, 2011
 Nancy Rubenberger
 STATE BRIDGE ENGINEER

* ALL CLASS 1 CULVERTS WITH FILL HEIGHTS OF LESS THAN 2'-0" REQUIRE A DISTRIBUTION SLAB. IF A DISTRIBUTION SLAB IS NOT REQUIRED, INDICATE "NO" IN THIS BOX.
 ** FOR PEDESTRIAN CULVERT APPLICATIONS HIDE-AWAY OR RECESSED TIE CONNECTIONS ARE REQUIRED, SEE STANDARD PLATE 3145. IF REQUIRED, INDICATE "YES" IN THIS BOX.
 *** BOX CULVERTS WITH SPANS FROM 6 TO 14 FT. ARE DESIGNED FOR HL-93 LIVE LOADS (AASHTO LRFD 3.6.2.1) NOT INCLUDING THE DESIGN LANE LOAD. BOXES WITH SPANS OF 16 FT. ARE DESIGNED FOR HL-93 LIVE LOADS INCLUDING THE DESIGN LANE LOAD.

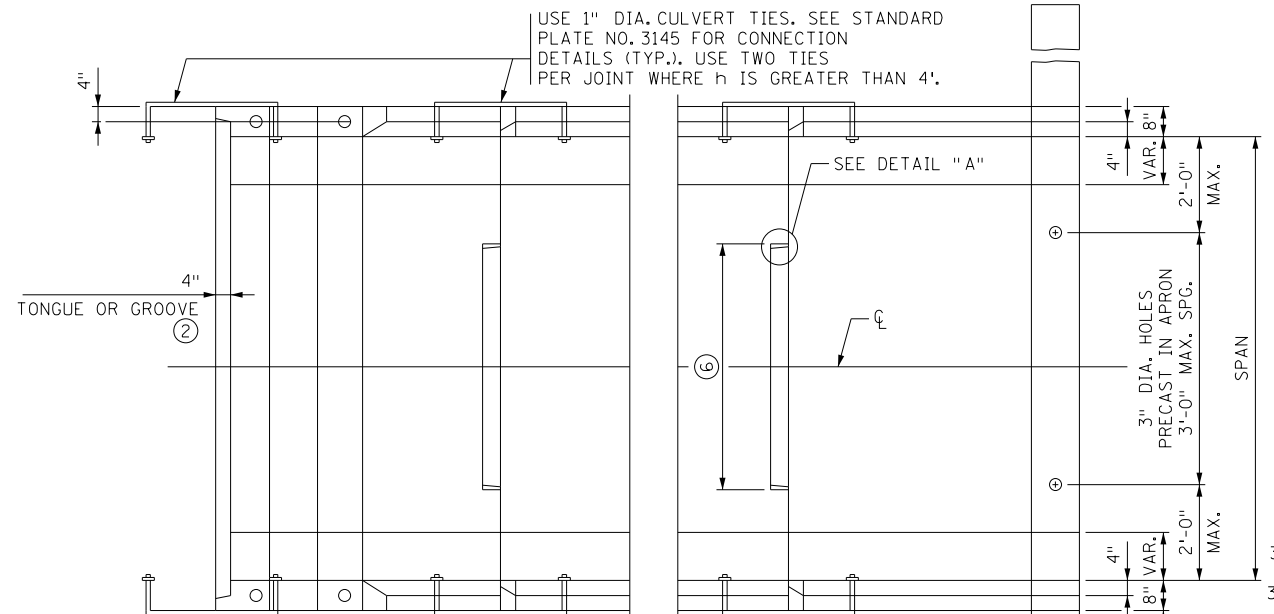
FIG. 5-395.101(A)

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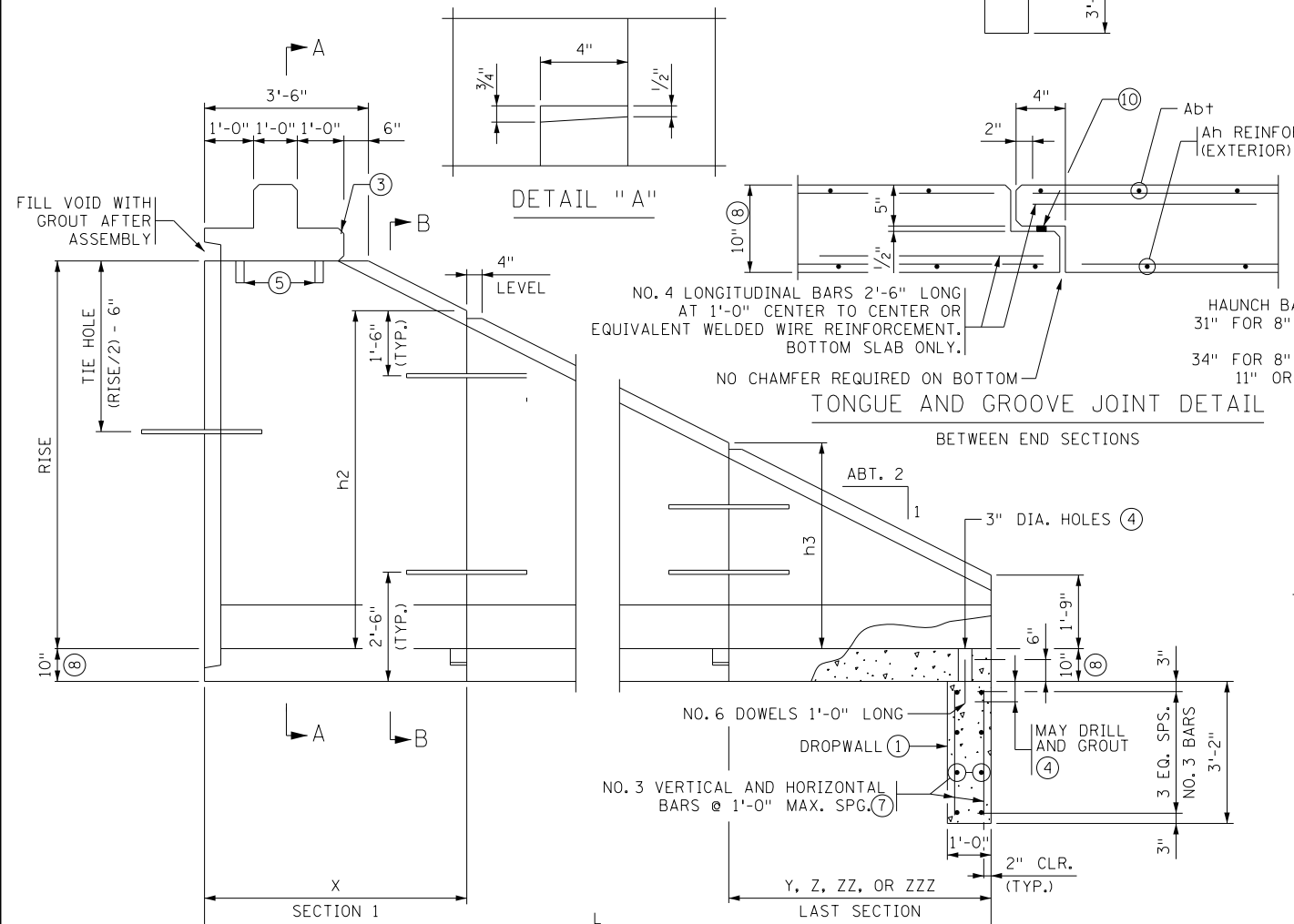
NO.	DATE	BY	CHK	REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.
 LICENSED PROFESSIONAL ENGINEER: CARL OSBERG
 DATE: XXXX/XXXX/XXXX REG. NO.: 42732

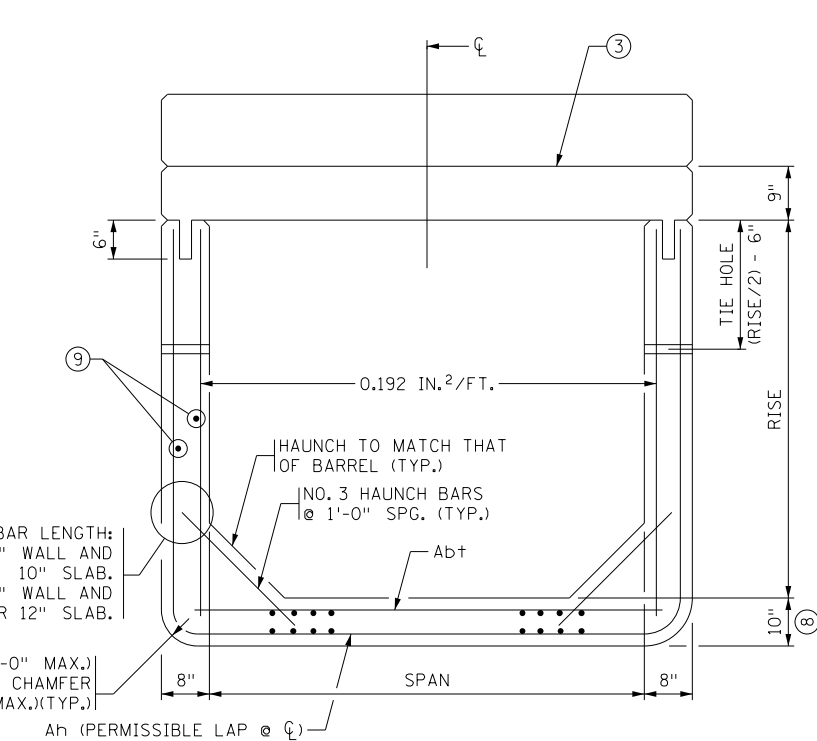
		130th STREET UNDERPASS SHAKOPEE, MINNESOTA	TITLE: PRECAST CONCRETE BARREL DETAILS	DES: JLB	DR: SWH	Bridge No. 70J70
				CHK: CBO	CHK: JLB	



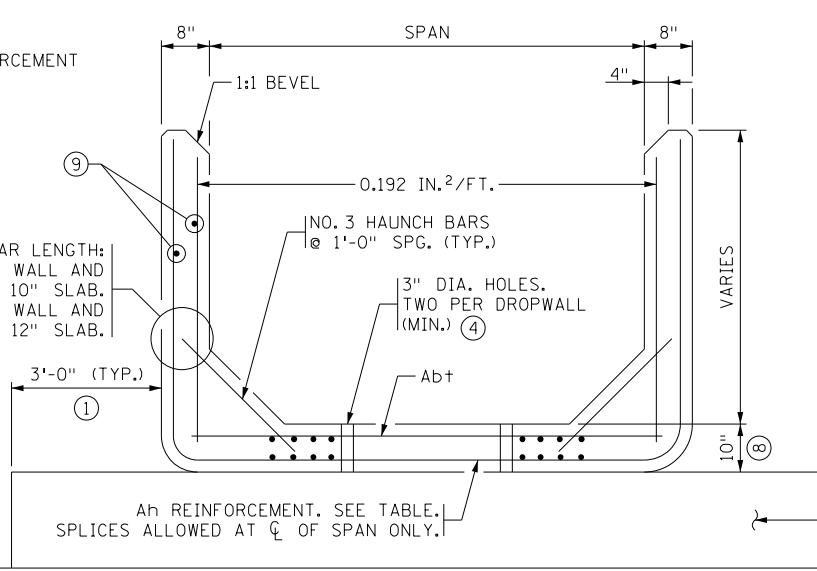
PLAN VIEW
SOME REINFORCEMENT NOT SHOWN



SIDE ELEVATION

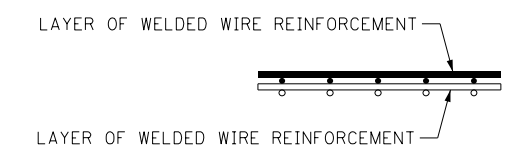


SECTION A-A



SECTION B-B

- CONSTRUCTION NOTES
- SEE STANDARD FIG. 5-395.101(A) AND FIG. 5-395.101(B) FOR ADDITIONAL DIMENSIONS AND CONSTRUCTION NOTES.
- USE CONCRETE MIX NO. 3W82 WITH NO CALCIUM CHLORIDE ALLOWED.
- ON ALL END SECTIONS FOR WATERWAYS, USE DROPWALLS ON INLET AND OUTLET ENDS.
- SEE STANDARD FIG. 5-395.115 FOR EMBANKMENT PROTECTION.
- FINISH ALL EXPOSED EDGES OF CONCRETE WITH 1/2" OR 3/4" CHAMFER OR RADIUS UNLESS OTHERWISE NOTED.
- WITH DOUBLE BOXES LOCATE DROPWALL JOINTS BETWEEN END SECTIONS. SEE STANDARD FIG. 5-395.111 FOR ALTERNATE DROPWALLS. LIMITS OF EXCAVATION FOR DROPWALL ARE APPROXIMATELY THE SAME AS DROPWALL DIMENSIONS. DROPWALL CONCRETE MIX IS 3S52, OR 3Y82 IF PRECAST. FURNISHING AND INSTALLATION OF DROPWALL TO BE INCLUDED IN PRICE BID FOR END SECTIONS. DROPWALL NOT REQUIRED FOR NON-WATERWAY USE.
 - CHECK LOCATION TO DETERMINE WHETHER A TONGUE OR A GROOVE IS USED.
 - SEE STANDARD FIG. 5-395.104 (2 OF 2) FOR LINTEL BEAM DETAILS.
 - FILL HOLE WITH GROUT. GROUT CONSISTS OF 1 PART CEMENT AND 2 PARTS SAND. USE TYPE 1A AIR ENTRAINED PORTLAND CEMENT. GROUT MIX MAXIMUM SLUMP IS 4".
 - 2" DIAMETER HOLE, 6" DEEP IN TOP OF THE SECTION WALL.
 - 3'-6" MIN. TONGUE AND 3'-7" MIN. GROOVE FOR CULVERTS WITH 6'-0" SPANS. 5'-0" MIN. TONGUE AND 5'-1" MIN. GROOVE FOR CULVERTS WITH SPANS GREATER THAN 6'-0". CENTER TONGUE AND GROOVE ON ϕ OF EACH APRON JOINT. TONGUE AND GROOVE JOINT ON ALL THREE SIDES OF APRON IS PERMISSIBLE.
 - WELDED WIRE REINFORCEMENT OF EQUAL AREA MAY BE SUBSTITUTED FOR REBAR.
 - APRON TOP AND BOTTOM SLAB THICKNESS MAY BE 8" FOR CULVERTS WITH 6" SPANS ONLY. BOTTOM SLAB THICKNESS MAY BE INCREASED UP TO 2" MAX. PROVIDED CONCRETE COVER IS 1/2" MIN., 2" MAX.
 - PLACE LONGITUDINAL REINFORCEMENT PERPENDICULAR TO THE CULVERT SPAN WITH A MINIMUM OF 0.06 SQUARE INCHES PER PERIPHERAL FOOT ON ALL FACES OF THE BARREL.
 - REFER TO SPEC. 2412 FOR SEALANT REQUIREMENTS.



WHEN MORE THAN ONE LAYER OF WELDED WIRE REINFORCEMENT IS USED TO OBTAIN THE REQUIRED REINFORCEMENT AREAS, PLACE THE WIRES OF THE WELDED WIRE REINFORCEMENT AS SHOWN.

APRON DIMENSIONS & Ah REINFORCEMENT

RISE FT.	L FT.	SECTION 1		SECTION 2		SECTION 3		SECTION 4		SECTION 5		h6				
		X	Ah	h2	Y	Ah	Z	Ah	h4	ZZ	Ah		ZZZ	Ah		
-4	8	8' (4')	0.192	1'-9" (3'-9")	(4)	(0.192)	(1'-9")									
-5	10	6'	0.192	3'-9"	4'	0.192	1'-9"									
-6	12	6'	0.192	4'-9"	6'	0.192	1'-9"									
-7	14	6'	0.192	5'-9"	8' (4')	0.192	1'-9" (3'-9")	(4)	(0.192)	(1'-9")						
-8	16	6'	0.20	6'-9"	6'	0.192	3'-9"	4'	0.192	1'-9"						
-9	18	6'	0.29	7'-9"	6'	0.20	4'-9"	6'	0.192	1'-9"						
10	20	6'	0.42	8'-9"	6'	0.29	5'-9"	8' (4')	0.192	1'-9" (3'-9")	(4)	(0.192)	(1'-9")			
-11	22	6'	0.60	9'-9"	6'	0.42	6'-9"	6'	0.192	3'-9"	4'	0.192	1'-9"			
-12	24	6'	0.78	10'-9"	6'	0.60	7'-9"	6'	0.20	4'-9"	6'	0.192	1'-9"			
-13	26	6'	1.03	11'-9"	6'	0.78	8'-9"	6'	0.28	5'-9"	8' (4')	0.192	1'-9" (3'-9")	(4)	(0.192)	(1'-9")
-14	28	6'	1.38	12'-9"	6'	1.03	9'-9"	6'	0.40	6'-9"	6'	0.192	3'-9"	4'	0.192	1'-9"

NOTE: Ah IS AREA OF REINFORCEMENT PER FOOT OF LENGTH (IN²/FT.) VALUES IN () MAY BE USED FOR END SECTIONS WITH SPANS OF 14' AND 16' ONLY.

FIG. 5-395.104 (1 OF 2)

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REVISION: DECEMBER 21, 2022

APPROVED: MARCH 24, 2011

Nancy Rubenberger
STATE BRIDGE ENGINEER

NO	DATE	BY	CHK	REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.

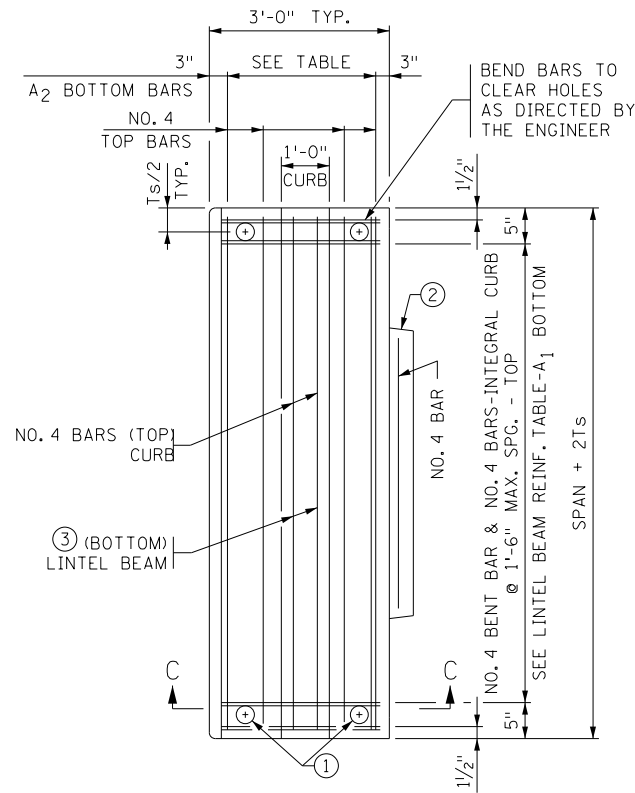
LICENSED PROFESSIONAL ENGINEER: CARL OSBERG
DATE: XX/XX/XXXX REG NO: 42732

wsb SHAKOPEE 130th STREET UNDERPASS SHAKOPEE, MINNESOTA

TITLE: PRECAST CONCRETE END SECTION TYPE III - SINGLE OR MULTIPLE BARREL FOR SKEWS UP TO 7 1/2'

DES: JLB DR: SWH
CHK: CBO CHK: JLB

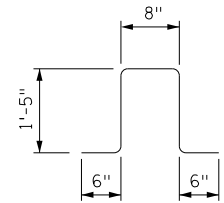
Bridge No. 70J70
Sheet BR3 of BR5 Sheets



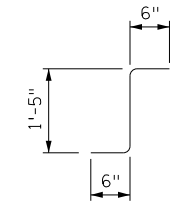
PLAN VIEW OF SQUARE LINTEL BEAM

LINTEL BEAM BOTTOM REINFORCEMENT		
SPAN (FT.)	A ₁	A ₂
6	NO. 4 @ 1'-2"	NO. 4 @ 9 1/2"
8	NO. 4 @ 8"	NO. 5 @ 8"
10	NO. 5 @ 8"	NO. 6 @ 7 1/2"
12	NO. 5 @ 6"	NO. 6 @ 6"
14	NO. 6 @ 6"	NO. 7 @ 6"
16	NO. 6 @ 6"	NO. 7 @ 6"

NOTE: MAXIMUM BAR SPACING GIVEN,
REDUCE AS NECESSARY

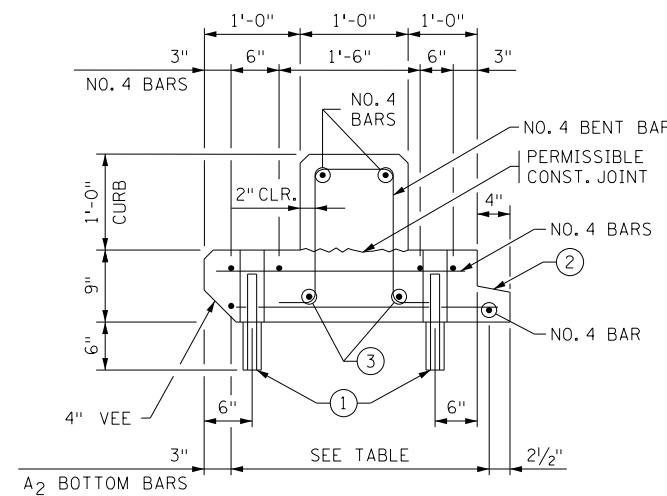


NO. 4 BENT BAR



NO. 4 BENT BAR
ALTERNATE

④
2 REQUIRED



SECTION C-C

INTEGRAL CURB WITH TONGUE.
ADDITIONAL REINFORCEMENT IN TONGUE NOT SHOWN.

CONSTRUCTION NOTES

SEE STANDARD FIG. 5-395.101(A) AND FIG. 5-395.101(B) FOR ADDITIONAL DIMENSIONS AND CONSTRUCTION NOTES.

ALL END SECTIONS REQUIRE CURB ON LINTEL BEAM.

GROUT CONSISTS OF 1 PART CEMENT AND 2 PARTS SAND. USE TYPE 1A AIR ENTRAINED PORTLAND CEMENT. GROUT MIX MAXIMUM SLUMP IS 4".

- ① 3" DIA. HOLE THROUGH LINTEL BEAM AND 2" DIA. HOLE IN TOP OF WALL SECTION. PLACE NO. 8 DOWEL, 1'-0" LONG, IN HOLE AND FILL HOLE WITH GROUT.
- ② CHECK THE LOCATION TO DETERMINE WHETHER A TONGUE OR A GROOVE IS USED. TONGUE AND GROOVE TO TERMINATE AT HAUNCH.
- ③ FOR SPANS UNDER 10'-0" USE NO. 8 BARS. FOR SPANS OF 10'-0" TO 12'-0" USE NO. 9 BARS. FOR 14'-0" AND 16'-0" SPAN, USE NO. 10 BARS.
- ④ ALTERNATE BAR BEND MAY BE USED FOR NO. 4 BENT BAR.

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REVISION: DECEMBER 21, 2022
APPROVED: MARCH 24, 2011
Nancy Rubenberger
STATE BRIDGE ENGINEER

NO.	DATE	BY	CHK	REVISIONS

I HEREBY CERTIFY THAT THIS PLAN 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.
LICENSED PROFESSIONAL ENGINEER: CARL OSBERG
DATE: XX/XX/XXXX REG NO: 42732



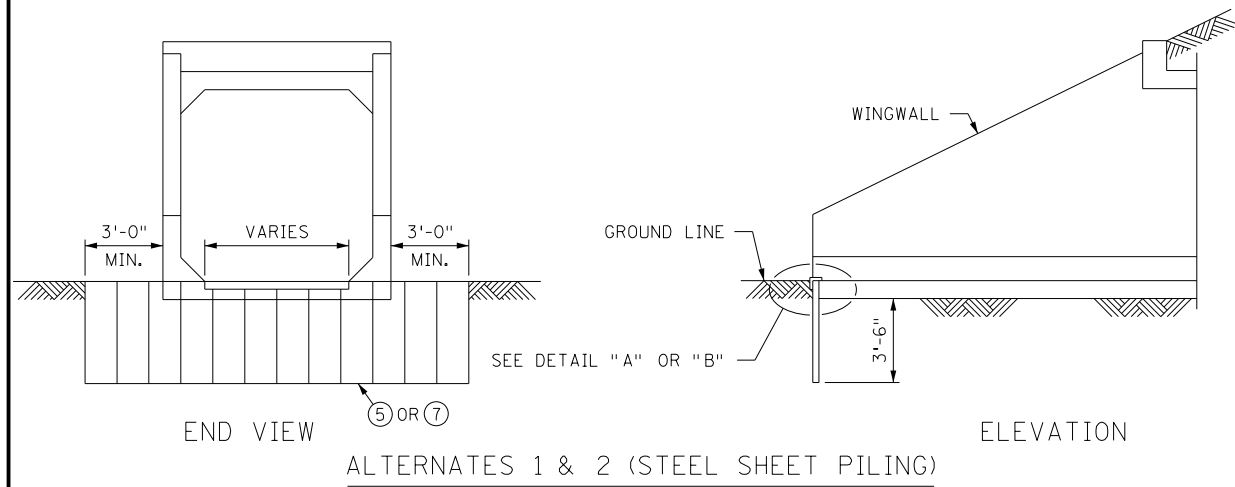
130th STREET UNDERPASS
SHAKOPEE, MINNESOTA

TITLE:
**PRECAST CONCRETE END SECTION
TYPE III - SINGLE OR MULTIPLE BARREL**
FOR SKEWS UP TO 7 1/2'

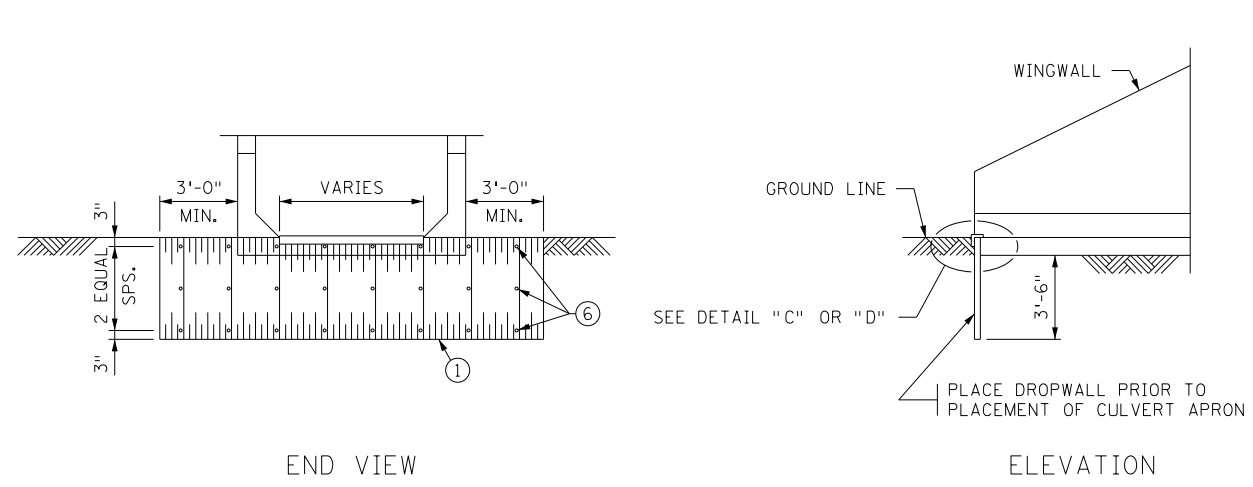
DES: JLB DR: SWH
CHK: CBO CHK: JLB

Sheet BR4 of BR5 Sheets

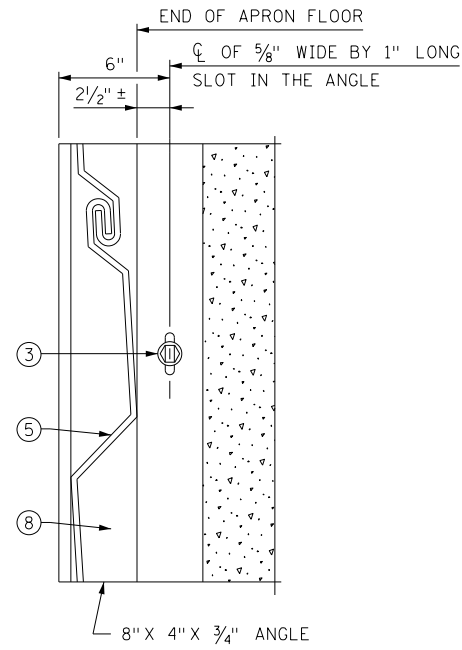
Bridge No.
70J70



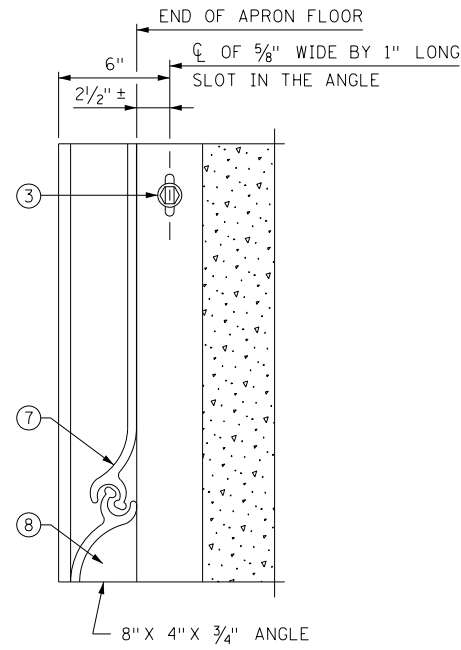
ALTERNATES 1 & 2 (STEEL SHEET PILING)



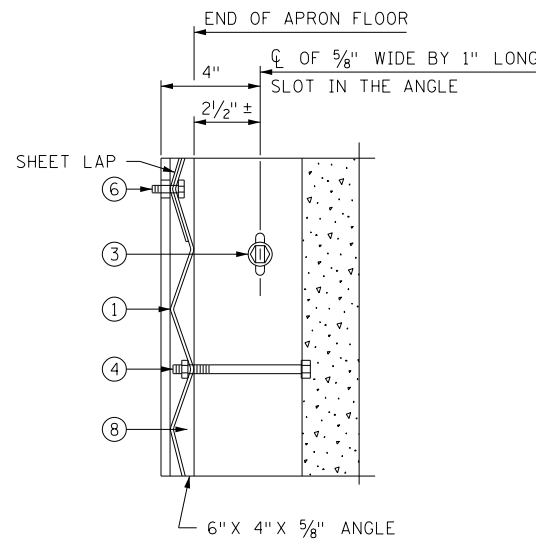
ALTERNATES 3 & 4 (GALVANIZED STEEL SHEETS)



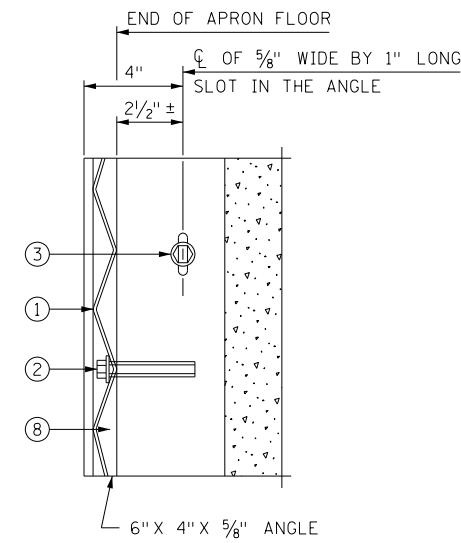
PLAN



PLAN

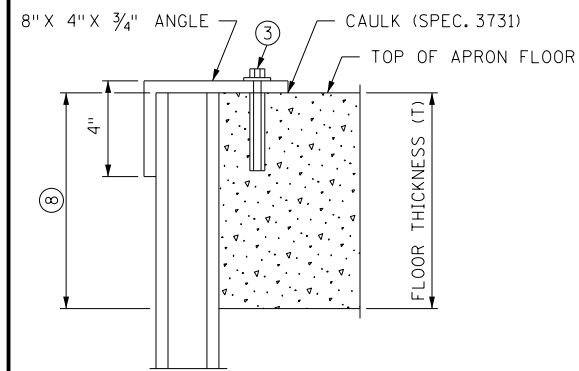


PLAN

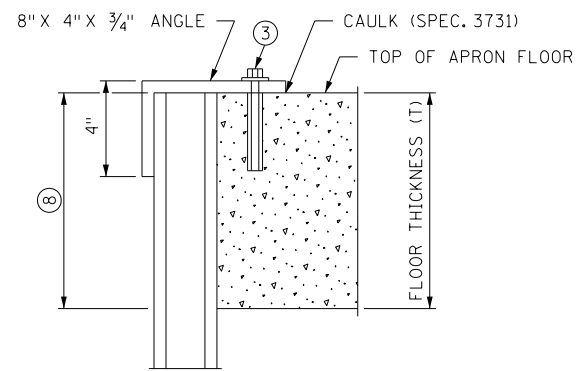


PLAN

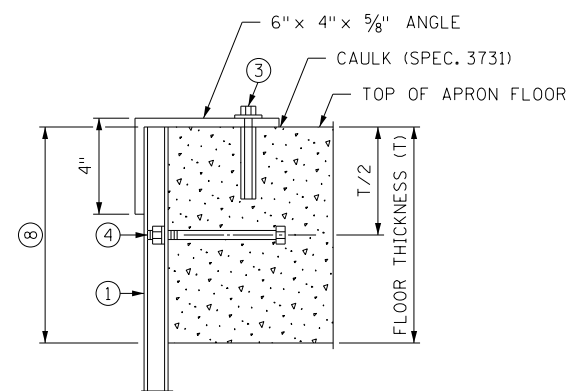
DESIGNER NOTE
(REMOVE PRIOR TO PRINTING FINAL PLAN):
BEFORE CULVERT PLANS ARE PREPARED, TAKE SAMPLES FROM THE DRAINAGE AREA FOR PH DETERMINATION. THE SOIL AND WATER SHOULD HAVE A PH OF 6.5 OR MORE IF SHEET STEEL IS USED.



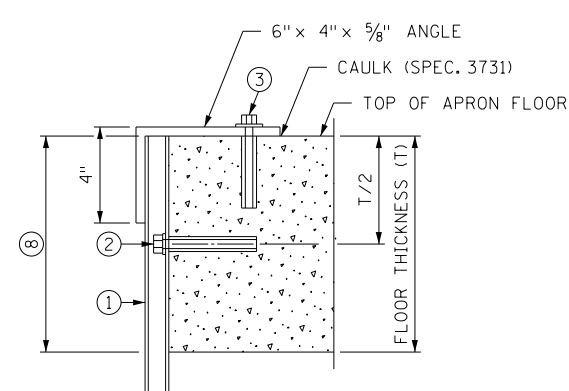
DETAIL "A" - ALTERNATE 1
STEEL SHEET PILING SHOWN



DETAIL "B" - ALTERNATE 2
STEEL SHEET PILING SHOWN



DETAIL "C" - ALTERNATE 3
ON NEW CONSTRUCTION ONLY



DETAIL "D" - ALTERNATE 4
ON NEW OR OLD CONSTRUCTION

CONSTRUCTION NOTES

- GALVANIZE ALL FASTENERS AND ANCHORS IN ACCORDANCE WITH SPEC. 3392.
- GALVANIZE STEEL ANGLES IN ACCORDANCE WITH SPEC. 3394.
- ① 2 1/2" x 1/2" OR 2 3/8" x 1/2" CORRUGATED (12 GAGE) OR HEAVIER GALVANIZED STEEL SHEETS.
- ② FASTEN THE STEEL SHEETS TO THE FRONT EDGE OF THE APRON WITH 3/8" DIAMETER BY 4" LONG BOLTS AND APPROVED ANCHORAGES (10" ± CENTER TO CENTER, TO THE NEAREST VALLEY).
- ③ FASTEN THE 8" x 4" x 3/4" OR 6" x 4" x 5/8" ANGLE WITH 3/8" DIAMETER 4" LONG BOLTS, 1" O.D. WASHER AND AN APPROVED ANCHORAGE (2'-0" SPACING).
- ④ FASTEN THE STEEL SHEETS TO THE FRONT EDGE OF THE APRON WITH 3/8" DIAMETER 5" LONG BOLTS, NUT AND LOCK WASHER (10" ± CENTER TO CENTER, TO THE NEAREST VALLEY).
- ⑤ (12 GAGE) GALVANIZED CORRUGATED STEEL SHEET PILING, INTERLOCKING TYPE A.
- ⑥ 3/8" DIA. x 1" LONG BOLT WITH NUT, TO LAP STEEL SHEETS.
- ⑦ STEEL SHEET PILING, SECTION NO. MP-112 OR EQUAL.
- ⑧ FILL THE VOIDS AS SHOWN, WITH CONCRETE OR CONCRETE GROUT, AS APPROVED BY THE ENGINEER.

FIG. 5-395.111

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LICENSED PROFESSIONAL ENGINEER: CARL OSBERG
DATE: XX/XX/XXXX REG NO: 42732



130th STREET UNDERPASS
SHAKOPEE, MINNESOTA

TITLE:
**ALTERNATE DROPWALLS
FOR BOX CULVERTS**

DES: JLB DR: SWH
CHK: CBO CHK: JLB

Sheet BR5 of BR5 Sheets

Bridge No.
70J70

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