

LUND ENGINEERING

Randy M. Lund, PE (WI, MN, MI, IL, IA)

CONTRACT DOCUMENTS

for

PROJECT

Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

Bid Date: March 4th, 2015

OWNER

Pikes Bay Sanitary District #1 (PBSD)

February 20, 2015

ENGINEER

LUND ENGINEERING

Washburn WI 54891



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Randy M. Lund, PE (WI, MN, MI, IL, IA)

CONTRACT DOCUMENTS

AMENDMENT #1

for
PROJECT

Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

Bid Date: March 4th, 2015

OWNER

Pikes Bay Sanitary District #1 (PBSD)

February 27, 2015

ENGINEER

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Washburn WI 54891

Amendment #1:

- 1) The 2.5" HDPE FM (Bid Item #4; 700 LF) will be changed to 2" HDPE FM.
- 2) The Bid Proposal dated Feb 27, 2015 shall be utilized for bidding on March 4th.

End

PIKES BAY SANITARY DISTRICT #1

PBS Old Orchard Lane

AMEND #1

Construction Cost Estimate

Feb. 27, 2015

BY: LUND ENGINEERING: RANDY M. LUND, PE**Sanitary Force Main**

| ITEM | UNIT | UNIT COST | QUANTITY | COST |
|---|------|-----------|----------|------|
| 1. Mobilization | LS | \$ - | 1 | \$ - |
| 2. Connect to exist. 8" stub @ MH (SS saddle) | LS | \$ - | 1 | \$ - |
| 3. Forcemain - 1.5" HDPE (160 psi) | LF | \$ - | 220 | \$ - |
| 4. Forcemain -2" HDPE (160 psi) | LF | \$ - | 700 | \$ - |
| 5. Forcemain -2" HDPE (160 psi) | LF | \$ - | 310 | \$ - |
| 6. Roadway Gravel DOT Grade 2 | CY | \$ - | 100 | \$ - |
| 7. Landscaping / Restoration | LS | \$ - | 1 | \$ - |
| 8. Erosion Control | LS | \$ - | 1 | \$ - |
| 9. Clear & Grub | LS | \$ - | 1 | \$ - |
| 10. MH 5' Dia. W casting N-1550 | LS | \$ - | 1 | \$ - |
| 11. Curb Stop Valve 1.5" (Laterals) | EA | \$ - | 6 | \$ - |
| 12. Ball Valve 2" in MH (air bleeder) | LS | \$ - | 1 | \$ - |

TOTAL , Old Orchard Lane

\$ -

Shady Lane and Pincrest Lane are NOT part of this project. Those lines will be future projects.

AMENDMENT #1 FEB. 27 2015

ITEM #4 CHANGE 2.5" TO 2" HDPE

CONTRACTOR: _____**Bid Date : March 4th 2015**

By: _____

signed

By: _____

print name

Date: _____

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Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

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PBSD – Orchard Lane

PROJECT SPECIFICATIONS

SECTION I

BIDDING INFORMATION

LUND ENGINEERING

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Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

PROJECT SCOPE

The project involves:

- A. FURNISH & INSTALL (F&I); 2.5", 2", & 1.5" HDPE (160 psi) Force Main .
- B. F&I; Manhole 5' Dia.
- C. F&I; CRUSHED AGGREGATE BASE COURSE; for roadway restoration.
- D. F&I; Erosion Control
- E. F&I; Curb Stop shut off valves.
- F. F&I; Ball Valve bleeder in side 5' MH.

A bid bond of 5% is required.

Award is expected within 45 days of the bid opening.

The following Standard Specifications shall be used for this Project:

1. Standard Specifications for Sewer and Water Construction in Wisconsin, 5th Edition, 1988 with Addenda #1; 1992 & #2; 1999 (and subsequent revisions)
2. WI DOT Standard Specifications 2015 Edition.
3. WI Construction Site Best Management Practice Handbook, WI DNR 1989, and WI DNR Technical Specifications.

The following WI Administrative Codes shall be adhered to, for this Project:

1. WI WD (DILHR)
2. WI DNR
3. WI TRANS

All state, local, and federal laws shall be adhered to, for this Project.

A location map follows this page.

The Plans and this Specification are the Contract Documents.

LUND ENGINEERING

Randy M. Lund, PE (WI, MN, MI, IL, IA)

DATE: Feb 09 2015

TO: PBSD

FR: Randy M. Lund, PE

RE: Orchard Lane – 2015 Sanitary Sewer Project – Advertisement for Bid.

For a March 4th Bid Opening We have to publish at least 7 and 14 days prior, or Feb 18 and 25, but legal ad's for Ashland Daily Press are usually on Thursdays, so publish days would be Feb 12th and 19th. I'll check Press schedule. So, I would like to get the ad to the Daily Press, this week.

ADVERTISEMENT FOR BIDS

Owner: Pikes Bay Sanitary District #1

Project: **Orchard Lane – 2015 Sanitary Sewer Project**

Engineer: Lund Engineering, Randy M. Lund, PE 415 E 3rd St. / PO Box 243 Washburn WI 54891

rmlund1@charter.net 715-209-0367

Notice is hereby given that sealed bids will be received by the Pikes Bay Sanitary District #1; **until 3:00 PM, March 04, 2015**, at the Bayfield Town Hall located at 85450 CTH J. The Bids will be publicly opened and read aloud, for the furnishing of all labor and material for the construction of the Orchard Lane – 2015 Sanitary Sewer Project.

Bids are to be addressed to the Pikes Bay Sanitary District #1, PO Box 689 Bayfield WI 54814, and shall be marked “Sealed Bid – Orchard Lane – 2015 Sanitary Sewer Project”.

The **Orchard Lane – 2015 Sanitary Sewer Project** includes, but is not limited to, the following types of work: 2.5”, 2”, and 1.5” HDPE Force Main, Manholes, gravel road repair, erosion control, and site restoration. Force main length – 1000 feet.

Alternate Bids include: extensions of the project for Shady Lane, and / or Pinecrest Lane. The PBSD Board will review the alternate bids and may or may not award the alternate bid projects. Force main length 750’ for Shady Ln.; 550’ for Pincrest Ln..

Plans and Specifications in paper or PDF format may be obtained from Lund Engineering, Washburn WI, on or after February 20, 2015, for a non-refundable fee of \$50. The project engineer contact is Randy M. Lund, PE.

Requests for bidding documents must include: street address for delivery, email address, and telephone numbers for bidder's contacts.

Bid security in the amount of five (5%) percent of the bid must accompany each bid in accordance with the Instructions to Bidders.

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The Pikes Bay Sanitary District #1 reserves the right to reject any and all bids or to accept any bid deemed to be in their best interest, and may waive any minor informalities, in the bidding process. All bidders accept the process outlined in the bidding instructions in submitting a bid.

This project will be funded by Pikes Bay Sanitary District #1.

Submitted,

Rex Dollinger, President; Pikes Bay Sanitary District #1

Published: Ashland Daily Press as a Class 2 notice – Feb 18 & 25 2015

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Pikes Bay Sanitary District #1 (PBSD)

Old Orchard Lane – Force Main Project

INSTRUCTIONS TO BIDDERS

2.01 PROPOSALS

The bidder must submit their proposal on the forms furnished and attached herein. The bidder shall specify unit prices or a lump sum price as indicated for each of the separate items called for on the proposal form; and the grand total for which they will perform all the work specified. All writing shall be done in ink. No proposal will be considered which is not made out on forms furnished.

2.2 BID GUARANTEE

A bid bond, certified check, cashiers check, bank check, or bank money order (**but not a personal or company check**) shall accompany each bid, payable to the Owner in an amount not less than five (5) percent of the total bid, as a guarantee that if the bid is accepted, the bidder will execute and file the proposed contract, performance and payment bonds, and required insurance within ten (10) working days after being notified of the acceptance of his bid. If the successful bidder so files the contract, bonds, and insurance, the bid guarantee will be returned to them. If the successful bidder fails to file such contract, bonds, and insurance, the amount of the guarantee shall be forfeited to the Owner. The bid guarantees of all except the apparent successful and first runner up bidders will be refunded after the opening of the bids. The balance of the bid guarantees will be refunded after the successful bidder has filed the contract, bonds, and insurance, and obtained Owner approval.

2.03 REQUIREMENTS FOR SIGNING PROPOSALS

- a. The full name and business address of each bidder must be entered on any and all proposals submitted. Each proposal shall be signed in the space provided therefore by written signature of the person or persons properly authorized to sign.
- b. A proposal submitted by an individual shall be signed by the individual or by an authorized agent of same.
- c. A proposal submitted by a firm or partnership shall be signed by a member or an authorized agent thereof. If by joint ownership, the proposal shall be signed by each owner or their authorized agent(s).

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d. A proposal which is signed by and attorney-in-fact for individuals, firms, partnerships or joint ownership shall have attached thereto a power-of-attorney evidencing authority to sign the proposal.

e. A proposal submitted by a corporation shall be signed by an authorized officer or agent of such corporation. Such corporation must be licensed to do business in the State of Wisconsin before a proposal to do the work can be received. If a foreign corporation, the State under which it is incorporated must be named.

2.04 SUBMISSION OF PROPOSALS

a. The following documentation shall be placed in an envelope or in separate envelopes which shall be sealed:

1. The Proposal(s) and Proposal Schedule
2. The Bid Guarantee (see paragraph 2.02)
3. List of Subcontractors (see paragraph 2.16)
4. Affidavit on Non-Collusion (see paragraph 2.17)
5. Affidavit of Organization and Authority (see paragraph 2.18)

b. On the envelope or envelopes shall be plainly written:

1. Contract number
2. Contract title or name
3. Name of Bidder
4. Date of bid opening

c. Such envelope(s) shall be addressed and delivered to the Owner before the time for bid opening as specified in the Advertisement for Bids.

2.05 WITHDRAWAL OF PROPOSALS

Any bidder may withdraw his/her proposal(s) at any time prior to the scheduled time for the receipt of proposals, provided the request is in writing and is in the hands of the Owner or Engineer by the time set for opening proposals.

2.06 REJECTION OF PROPOSAL

The Owner reserves the right to reject any and all proposals, to waive any informalities and irregularities in bidding and to accept any proposal deemed in the best interests of the Owner.

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2.07 CONTRACT DOCUMENTS

All documents comprising this contract are available at the offices of the Owner and Engineer, and are open to inspection by bidders.

2.08 INTERPRETATION OF CONTRACT DOCUMENTS

Should any question arise concerning the true meaning of any part of the contract documents, the bidder may submit to the Engineer a written request for an interpretation thereof. An interpretation so requested will be made in the form of an addendum and either mailed or delivered to all bidders who have received contract documents. Any addenda issued during the time of bidding shall be included with the proposal and will become part of the final contract.

2.09 OMISSION AND DISCREPANCIES

Bidders shall immediately report any omissions, errors or discrepancies in the plans or specifications to the Engineer who may issue an addendum as per section 2.08.

2.10 EXAMINATION OF SITE AND CONTRACT DOCUMENTS

Bidders are required to examine carefully the site of the work (if applicable), the general conditions, supplemental conditions, technical specifications, special provisions, agreement forms, these instructions, the plans and any other contract documents for the work specified. The submission of a proposal shall be considered conclusive evidence that the bidder has made such an examination and is satisfied as to all the conditions, contingencies, provisions, and requirements of the contract documents.

2.11 QUANTITIES

- a. The estimated quantities of materials and work are the result of careful calculations but are not to be considered as final, and will be used primarily as a basis for determining the successful bidder. After the contract is awarded, the quantity of materials and work listed may be increased or decreased in an amount not to exceed 15% at the discretion of the Engineer, without in any way invalidating unit bid prices. This is pursuant to Chapter 62.15 -1c, Wisconsin Statutes.
- b. The quantities upon which payment will be made to the Contractor are to be determined by measurements of the actual materials used and work performed by the Contractor, as directed by the Engineer.

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2.12 AWARD OF CONTRACT

The Contract shall be deemed awarded when a written "Notice of Award" is postmarked to the address of the bidder given in the proposal affidavit.

2.13 EXECUTION OF CONTRACT

- a. Within ten (10) working days from receipt of the written "Notice of Award", the successful bidder is required to submit:
 1. Three (3) executed copies of the contract.
 2. Certificate(s) of Insurance (see Contractors Insurance).
- b. The contract documents shall be delivered to the Owner or Engineer. Such contract when signed by the Owner; countersigned by the Owner; approved as to form and execution by the Owners Attorney; and certified as to adequate financial provisions by the Owner shall be a part of the contract documents.
- c. In case of failure to deliver such contract documents within the said 10 days, or such extension thereto as the Owner may deem reasonable, the bidder will thereupon be considered in default to the Owner to the full amount of his bid guarantee.

2.14 NOTICE TO PROCEED

No work shall be started under the contract prior to the date named in the Owners written "Notice to Proceed" with the work.

2.15 TIME OF COMPLETION

- a. Time of completion is an ESSENTIAL CONDITION of the Contract. The Contractor shall work regularly, diligently, and uninterrupted at such a rate of progress that will insure full completion of the Contract within the Contract Time specified.
- b. It is expressly understood and agreed, by and between the Contractor and Owner, that the contract time for completion of the work described herein is a reasonable time for the completion of same.
- c. For every calendar day of delay in completion of the work beyond the contract time, unless extended in writing by the Owner, there shall be deducted from the amount due the Contractor the sum indicated in the Supplemental Conditions, per calendar day as liquidated damages.

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2.16 SUBCONTRACTORS

- a. The Contractor shall, at the time of making his proposal and as a part of his proposal, submit a list of all subcontractors with whom they propose to contract. Such list shall not be added to, nor altered, without the written consent of the Owner. The Owner reserves the right to approve any and all subcontractors, and no subcontractor shall be allowed to do work unless they are listed in the Contractor's proposal or in a subsequent written, Owner approved change order.
- b. The Contractor shall not under any circumstances be relieved of his liabilities and obligations. All transactions of the Owner shall be with the Contractor. Subcontractors shall be recognized only in such capacity.

2.17 AFFIDAVIT OF NON-COLLUSION

All proposals completed shall be accompanied by a bidder "Affidavit of Non-Collusion". A copy of the form is contained in the Contract and Agreement Forms section.

2.18 AFFIDAVIT OF ORGANIZATION AND AUTHORITY

All proposals completed shall be accompanied by a bidder "Affidavit of Organization and Authority". A copy of the form is contained in the Contract and Agreement Forms section. **2.19**

2.19 BIDDERS PROOF OF RESPONSIBILITY

Bidders must have on file with the Owner completed proof of responsibility forms prior to the opening of proposals. A copy of a sample form is contained in the Contract and Agreement forms section. A local form(s) indicating essentially the same information may be substituted.

NOTE: This submission is needed only once a calendar year.

2.20 PERFORMANCE AND PAYMENT BONDS

The Contractor who is awarded the contract shall furnish a surety bond with a company licensed to do business in the State, and approved by the Owner, in an amount at least equal to 100 percent of the contract price as security for the faithful performance of this contract, for the payment of all persons performing labor and furnishing materials in connection with this contract, and for the satisfactory repair or replacement for any portion of the work becoming defective during guarantee period.

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2.21 NONRESIDENT DEPOSIT

The Contractor shall meet State Law for deposits by non-resident Contractors.

2.22 WAGE RATES

Wage Rates apply if incorporated into this specification or if referenced in other sections of this specification.

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BIDDER'S PROOF OF RESPONSIBILITY

There is submitted herewith for your consideration, a statement of qualifications of the undersigned to furnish the necessary labor, materials and skills required to enter upon and complete public works contracts to be let by the **Pikes Bay Sanitary District #1 (PBSD)**. (Need not be submitted; if previously furnished in the current calendar year.)

STATEMENT OF BIDDER'S QUALIFICATIONS

1. Name of Bidder _____
2. Bidder's Address _____ Phone _____
3. When organized _____ If incorporated, in what State _____
4. How many years have you been engaged in the contracting business under the present firm name: _____
5. General character of work performed by your firm:

6. Have you ever failed to complete any work awarded to you? Yes No
7. Have you ever defaulted on a contract? Yes No
8. Attach a list of major contracts completed by your firm, including kind of work and the approximate cost.
9. Attach a list of your major equipment.
10. Attach a statement of background and experience of the principal members of your personnel.
11. Bonding company (name & address)

12. Itemize your current assets as of latest balance sheet.
13. Itemize your current liabilities as of latest balance sheet.
14. Project: **Pikes Bay Sanitary District #1 (PBSD)**
Old Orchard Lane – Force Main Project

LUND ENGINEERING

Randy M. Lund, PE (WI, MN, MI, IL, IA)

PBSD – Orchard Lane

3:100 CONTRACTORS INSURANCE

The Contractor shall not commence work under this contract until; they have obtained all insurance required under this paragraph, and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his sub-contract until all similar insurance required of the sub-contract has been so obtained and approved.

The Contractor shall carry “Public Liability Insurance” coverage to insure the Owner against claims arising out of the negligence of the Contractor.

The Contractor shall file a “Certificate of Insurance” with the Owner prior to contract award.

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1 of 2

3:100 CONTRACTORS INSURANCE (cont.)

a) Worker's Compensation Insurance -

The Contractor shall take out and maintain during the life of this contract Workman's Compensation insurance for all of his employees employed at the site of the project and in case work is subcontracted, the Contractor shall require the sub-contractor similarly to provide Workman's Compensation insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. In case any class of employees engaged in hazardous work under this contract at the site of the project is not protected under the Workman's Compensation statute the Contractor shall provide and shall cause each sub-contractor to provide adequate insurance for the protection of his employees not otherwise protected.

b) Bodily Injury and Property Damage Liability Insurance -

The Contractor shall maintain during the life of this contract such Bodily Injury and Property Damage Liability insurance as shall protect him, the Owner, their engineer, and any and all sub-contractors performing work covered by this contract, from claims for damages for personal injury, including accidental death, as well as for claims for property damage, which may arise from operation under this contract, whether such operation be by the contractor, the subcontractor(s) or either of them.

The amount of such insurance shall be as follows:

GENERAL LIABILITY:

Bodily Injury Liability Insurance: \$1,000,000 each occurrence.

Property Damage Liability Insurance: \$500,000 each occurrence.

MOTOR VEHICLE LIABILITY:

Bodily Injury Liability Insurance: \$1,000,000 each occurrence.

Property Damage Liability Insurance: \$500,000 each occurrence.

The contractor shall require sub-contractors, if any, not protected under the contractor's insurance policies to maintain insurance as stated above.

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Randy M. Lund, PE (WI, MN, MI, IL, IA)

PROJECT SPECIFICATIONS

Pikes Bay Sanitary District #1 (PBSD)

Old Orchard Lane – Force Main Project

Subcontractor's Listing

Name _____

Address

LUND ENGINEERING

Randy M. Lund, PE (WI, MN, MI, IL, IA)

PBSD – Orchard Lane

PROJECT SPECIFICATIONS

WAGE RATES

Wage Rates apply as specified by State & Federal Law and / or by inclusion of a Wage Rate Determination.

A Wage Rate Determination DOES NOT APPLY TO THIS PROJECT.

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Pikes Bay Sanitary District #1 (PBSD)

AFFIDAVIT OF NON-COLLUSION

STATE OF Wisconsin _____

S.S. COUNTY OF _____

PROJECT: Old Orchard Lane – Force Main Project

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

- 1) That I am the bidder (if the bidder is an individual), a partner with the bidder (if the bidder is a partnership) or an officer or employee of the bidding corporation having authority to sign on their behalf (if the bidder is a corporation);
- 2) That the attached bid or bids have been arrived at by the bidder individually 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 individual 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 any 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.

Subscribed and sworn to before me

this _____ day of _____, 20 ____.

(Signature)

Notary: State of Michigan

Commission expires: _____ -

(Print Name)

(Title)

(Firm making bid)

noncoll
Page 1 of 1

2/23/2015

E-mail rmlund1@charter.net Web: "lundcivilengineering.com"

LUND ENGINEERING
415 East Third Street
PO Box 243
Washburn WI 54891

W: 715-254-6061 C: 715-209-0367

LUND ENGINEERING

Randy M. Lund, PE (WI, MN, MI, IL, IA)

Project:

Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project (Bayfield County)

AFFIDAVIT OF ORGANIZATION AND AUTHORITY

State of Wisconsin; ss.

_____ being first duly sworn on oath depose and says that the bidder on the attached bid proposal is organized as indicated below and that all statements herein made are made on behalf of such bidder and that this deponent is authorized to make them.

(Fill out applicable paragraph)

1. CORPORATION

The bidder is a corporation organized and existing under the laws of the State of _____, its secretary is _____, and does have a corporate seal. The present is authorized to sign construction contracts and bids for the company, a certified copy of which is hereto attached. (Strike out this last sentence if not applicable).

2. PARTNERSHIP

The bidder is a partnership consisting of _____ and partners doing business under the name of _____

3. SOLE TRADER

The bidder is an individual and if operating under a trade name, such trade name is as follows:

4. ADDRESS

The business address of the bidder is as follows: _____

Its phone number is _____

5. STATUTORY SWEAR STATEMENT

_____ also deposes and says that he has examined and carefully prepared their bid proposal from the plan and specifications and has checked the same in detail before submitting this proposal or bid, that the statements contained herein are true and correct.

(Signature)

Subscribed and sworn to before me this _____ day of _____ 20____.

Notary public, _____ Co.

My commission Expires: _____

(This affidavit must be attached to and filed with the bid proposal)

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Randy M. Lund, PE (WI, MN, MI, IL, IA)

PBSD – Orchard Lane

PROJECT SPECIFICATIONS

SECTION II

CONTRACT DOCUMENTS / EXHIBITS

LUND ENGINEERING

Randy M. Lund, PE (WI, MN, MI, IL, IA)

BID PROPOSAL

BID LOCATION: Bayfield Town Hall

85450 CTH J, Bayfield WI, 54891

BID DATE: March 4th, 2015

BID TIME: 3:00 pm

PROJECT: Pikes Bay Sanitary District #1 (PBS)

Old Orchard Lane – Force Main Project

Proposal of _____
(herein after called BIDDER) a corporation of _____, a partnership, or an individual doing business as
_____.

TO: The Pikes Bay Sanitary District #1 (PBS)

The BIDDER, in compliance with your invitation for bids for the construction of the

Old Orchard Lane – Force Main Project.

and having examined the Plans and Specifications and related documents prepared by LUND ENGINEERING, and the site of the proposed project, including the availability of materials and labor, hereby propose to furnish all labor, equipment, materials and supplies, and to construct the project in accordance with the Contract Documents within the time set forth therein, and at the prices set forth below. Those prices are to cover all of the expenses incurred in performing the work required under the Contract Documents, of which this Proposal is a part thereof.

The BIDDER hereby agrees to commence Work on the Contract on or before a date specified in the written "Notice To Proceed" of the Owner and to substantially complete the Project by July 15th, 2015. Final Completion shall be achieved by July 30th, 2015. Substantial completion shall be: to install the catch-basins and new culverts, perform the ditching, to place the gravel surface, pulverize the existing pavement and base, place the curb & gutter, and to perform the undercut excavations.

The BIDDER agrees to pay as liquidated damages the sum of \$100.00 for each consecutive day thereafter, past the substantial completion date and \$200.00 for each consecutive day past the final completion date. (Unless a shutdown is mutually agreed to between the Owner and Contractor)

The BIDDER acknowledges receipt of the following addenda:

Award is expected within 45 days of the Bid Opening.

The BIDDER agrees to perform all the Work described in the Contract Documents for the following price: _____ Dollars.

\$ _____ based on the unit price bid proposal schedule attached.

_____ (BIDDER)

_____ (Signature)

_____ (Date)

PIKES BAY SANITARY DISTRICT #1**PBSD Old Orchard Lane****Construction Cost Estimate****Feb. 19, 2015****BY: LUND ENGINEERING: RANDY M. LUND, PE****Sanitary Force Main**

| ITEM | UNIT | UNIT COST | QUANTITY | COST |
|---|------|-----------|----------|------|
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| 5. Forcemain -2" HDPE (160 psi) | LF | \$ - | 310 | \$ - |
| 6. Roadway Gravel DOT Grade 2 | CY | \$ - | 100 | \$ - |
| 7. Landscaping / Restoration | LS | \$ - | 1 | \$ - |
| 8. Erosion Control | LS | \$ - | 1 | \$ - |
| 9. Clear & Grub | LS | \$ - | 1 | \$ - |
| 10. MH 5' Dia. W casting N-1550 | LS | \$ - | 1 | \$ - |
| 11. Curb Stop Valve 1.5" (Laterals) | EA | \$ - | 6 | \$ - |
| 12. Ball Valve 2" in MH (air bleeder) | LS | \$ - | 1 | \$ - |
| TOTAL , Old Orchard Lane | | | | \$ - |

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Pikes Bay Sanitary District #1 (PBSD)

Old Orchard Lane – Force Main Project

SUPPLEMENTAL CONDITIONS

1. Liquidated damages shall be as stated in Article 3 of the Standard Form of Agreement (between Owner and Contractor).
2. Submittals:
 - a. Shop drawings are required. The Contractor shall supply the following shop drawings to the ENGINEER (as applicable):

| | | | |
|---------------------|-------------------|----------------------|----------------|
| - manholes/castings | - valves/hydrants | - fitting locations | - pipes |
| - structures | - under-drains | - geotextile fabrics | - end-sections |
 - b. Material certifications are required, for pipe and concrete products. Asphalt job mix reports and aggregate gradations are required.
 - c. Product data on hydrants, valves, and piping is required in triplicate (as applicable).
 - d. A Construction Schedule shall be provided within ten (10) days of Contract Execution.
3. Permits
 - a. Permits are included in Tech Spec. 'E' for the PROJECT.
 - b. All permit conditions and requirements shall be adhered to, by the Contractor.
 - c. WI DNR erosion control requirements will be enforced.
4. Meetings may be held at the site to discuss progress and construction issues. A pre-construction meeting may be held to discuss procedures and schedules.
5. The Contractor shall give two (2) full working days notice to the Engineer when construction staking is required.
 - a. The Engineer shall provide one-time staking for alignment and grade for the project.
 - b. Benchmarks will be set at locations, approx. 1000' apart.
 - c. Re-staking will be at the Contractors expense. The Owner will deduct re-staking costs, from Contractors pay requests.
 - d. Contractor is responsible for installation to correct horizontal and vertical alignments.

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6. Weather Delays

a. The project may encounter weather delays but it is the intent of the Owner to finish the project by the dates listed in the Standard Form of Agreement Between the Owner and Contractor.

b. If the Contractor feels that the schedule cannot be met the Contractor shall inform the Owner in the bid proposal.

7. Construction Testing / Observation

a. Pipeline pressure testing will be required for water mains and sanitary sewers (as applicable).

b. The Contractor will be responsible for providing all tools, equipment and labor necessary for accomplishing the tests.

c. The Engineer shall be notified 3 working days in advance of when testing will be performed.

d. Tests shall be in accordance with the Standard Specifications for Sewer and Water Construction in Wisconsin for the following:

- Sanitary sewer
 - 1. deflection test
 - 2. low pressure air test
 - 3. lamping
- Watermain
 - 1. leakage
 - 2. bacteriological
 - 3. pressure
 - 4. chlorination
 - 5. continuity

e. The Contractor shall adhere to OSHA confined space entry regulations.

8. De-watering / Drainage

a. Contractor is responsible for de-watering and any necessary permits.

b. Contractor is responsible for site drainage during construction. Positive site drainage is required to prevent saturating sub-grades and structures.

c. WI DNR permits may be required for de-watering in excess of 70 gpm.

9. Standards

a. All appropriate ASTM, AWWA, NEMA and ANSI standards shall be followed (see the technical specifications and the reference specifications).

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10. Record Drawings

- a. Contractor shall keep record drawings for all underground installations. Items shall be referenced (measured) to permanent fixtures on the surface for horizontal and vertical locations.
- b. Contractor shall submit record drawing information to the Owner prior to final payment.

11. Site Safety / Access

- a. Contractor is responsible for all site safety and security.
- b. Contractor shall adhere to all OSHA regulations.
- c. Contractor shall not impede traffic flow without notifying the Owner unless traffic control devices are in place.

12. The Contractor will be responsible to provide adequate bedding for the pipe per the Standard Specifications for Sewer and Water Construction in Wisconsin and the manufacturers recommendations. The Contractor shall provide (at no extra cost) $\frac{3}{4}$ " crushed aggregate (4" thick) as bedding, if soils are wet, in addition to standard bedding material.

13. WI DOT regulations shall be adhered to, for building services. Note that clear water from sump pumps, foundation drains, and roof drains, etc. CANNOT be connected to the sanitary sewer.

14. Erosion Control devices shall be in place prior to beginning construction.

- a. Erosion bales and/or silt fence shall be placed every 300 feet along concentrated water flow paths; or at the Engineer's direction.
- b. Six (6)' foot steel posts shall be used (every 15') to reinforce silt fence and to secure erosion bales.
- c. Sediment traps, tracking pads, and check dams shall be used to limit sediment transport offsite. These items are incidental to the Project, and shall be used at the Engineer's direction.
- d. WI DNR Best Management Practices shall be utilized.

15. The locations of existing and proposed Utilities as shown on the plans are approximate. There may be other Utilities within the project limits which are not shown on the plans. Diggers Hotline shall be contacted 3 days prior to any excavation. The Contractor is

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responsible for coordination for Utility relocations.

16. **Soil borings** have NOT been performed for this project.
17. Except where otherwise indicated on the plans or in the proposal and the supplementary specifications contained herein, all materials and workmanship shall be in accordance with the State of WI Department of Transportation Standard Specifications, 2015 Edition.
18. If the asphaltic surface pavements are to be completed after the winter season has passed, a tack coat shall be incidental to the asphalt cost. The tack coat shall be applied immediately prior to surface paving.
19. Contractor is required to maintain traffic on all streets during construction for local residents. Adequate Traffic Control signs shall be placed by the Contractor
20. Unsuitable soils quantities in the bid form include frost heave material, peat, organic, and other material, as determined by engineer in field, shall be removed. The EBS bid item shall be used for removal and backfill, if included in the bid proposal schedule.
21. Water service shall be maintained by the contractor. Contractor shall give affected home owners 48 hours notice prior to turning off the water main (costs are incidental to water main construction). Water service outages shall be limited to four (4) hours, otherwise temporary water service shall be provided. The existing water services shall be maintained until the new water mains are tested and disinfected.
22. Construction Progress
 - a. Construction shall proceed in a fashion to allow local traffic to have access. If alleys or other roads are unavailable, then temporary access (on gravel) shall be provided.
 - b. The schedule shall proceed so that once a road is closed to thru traffic, it is continuously worked on until a gravel surface is replaced and thru traffic is restored.
23. All signs and mail boxes that need to be moved during construction shall be done so by Contractor. All signs and mail boxes shall be replaced by Contractor in accordance with the Manual on Uniform Traffic Control Devices, and Post Office requirements.
24. Existing culverts that are in the proposed roadway or will no longer be necessary do to altered drainage shall be completely removed. The cost shall be incidental to the Project, unless the Bid Item "Removing Culverts" is included.
25. All asphalt and concrete drives and road surfaces shall be saw cut, after road construction and prior to paving.
26. Driveways shall be restored with like materials to the limits of the right-of-way unless

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otherwise noted on plans or requested by engineer in field.

27. Maximum driveway grade shall be 8%.
28. Under-drain is required on all urban streets, per specifications and details. All underdrain shall continue around the proposed RADII, and shall connect into all proposed catch-basins. All under-drains shall end @ a catch-basin and begin @ a cleanout.
29. Trees removed shall become the property of the Contractor.
30. Haul Routes
 - a) Trucks must use designated truck routes whenever possible.
 - b) Damage to local streets shall be the Contractor's responsibility to repair.
31. Existing castings and hydrants shall be salvaged for the Owner.
32. All concrete replacement, shall include #4 rebar's spaced at 3' to be installed between existing and proposed concrete pavements.
33. Curb ramps shall be installed at all urban intersections affected by the Project.
34. Contractor shall perform all work, and store all materials within the R/W or Project Easements; unless private owners have given their permission in writing.

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EJCDC

STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR ON THE BASIS OF STIPULATED PRICE

THIS AGREEMENT is by and between the **Pikes Bay Sanitary District (PBSD)** (hereinafter called OWNER)

and _____ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK

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

- A. FURNISH & INSTALL (F&I); 2.5", 2", & 1.5" HDPE (160 psi) Force Main .
- B. F&I; Manhole 5' Dia.
- C. F&I; CRUSHED AGGREGATE BASE COURSE; for roadway restoration.
- D. F&I; Erosion Control
- E. F&I; Curb Stop shut off valves.
- F. F&I; Ball Valve bleeder in side 5' MH.

Article 2 THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

Article 3. ENGINEER

3.01 The Project has been designed by:

LUND ENGINEERING (RANDY M. LUND, PE)

who are hereinafter called ENGINEER and who are to act as OWNER's representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

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Article 4. CONTRACT TIME

4.01 *Time of the Essence* All time limits for Milestones, if any, Substantial completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence for the Contract.

4.02 *Dates for Substantial Completion and Final Payment* The Work will be Substantially Completed (defined as ALL WORK EXCEPT ASPHALT SURFACE) on or before July 15, 2015, and completed and ready for Final Payment in accordance with paragraph 14.07 of the General conditions on or before July 30, 2015.

4.03 *Liquidated Damages*. OWNER and CONTRACTOR recognize that time is of the essence or this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER One Hundred dollars (\$100.00) for each day that expires after the time specified in paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER Two Hundred Dollars (\$200.00) for each day that expires after the time specified in paragraph 4.02 for completion and readiness for final payment until the work is completed and ready for final payment.

Article 5. CONTRACT PRICE.

5.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents and amount in current funds equal to the sum of the amounts determined pursuant to paragraph 5.01C below:

- A. Not used.
- B. Not used.
- C. For all Work, at the prices stated in CONTRACTOR'S Bid, attached hereto as an exhibit.

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UNIT PRICE WORK

(SEE ATTACHED PROPOSAL SCHEDULE)

TOTAL OF ALL UNIT PRICES

_____ (dollars)
(use words)

\$ _____ (dollars)
(use numbers)

As provided in paragraph 11.03 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by ENGINEER as provided in paragraph 9.08 of the General Conditions. Unit prices have been computed as provided in paragraph 11.03 of the General Conditions.

Article 6. PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

6.02 *Progress Payments; Retainage.*

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER, on or about the 5th Day of each month during construction as provided in paragraphs 6.02.A.1 and 6.02A.2 below. All such payments will be measured by the schedule of values established in paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER may determine, or OWNER may withhold, in accordance with paragraph 14.02 of the General Conditions.

a. 90 % of Work completed (with the balance being retainage). If Work has been 50% completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER and ENGINEER,

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OWNER, on recommendation of ENGINEER, may determine that as long as the character and progress of the Work remain satisfactory to them, there will be no additional retainage on account of Work subsequently completed, in which case the remaining progress payments prior to Substantial Completion will be in an amount equal to 100% of the Work completed less the aggregate of payments previously made; and

- b. 50 % (of cost) of materials and equipment not incorporated in the Work (but with the balance being retainage).
2. Upon Substantial Completion, the OWNER shall pay an amount sufficient to increase total payments to CONTRACTOR to 95% of the work completed less such amounts as ENGINEER shall determine, in accordance with paragraph 14.02.B.5 or of the General Conditions and less 100 % of ENGINEER's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate Substantial Completion.

6.03 Final Payment.

- A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 14.07.

Article 7. INTEREST.

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of 12% per annum.

Article 8. CONTRACTOR'S REPRESENTATIONS.

8.01 In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

- A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- B. CONTRACTOR has visited the site and become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, and performance of the Work.

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C. CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, and performance and furnishing of the Work.

D. CONTRACTOR has carefully studied all: 1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions and 2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions are provided in paragraph 4.06 of the General Conditions.

E. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto.

F. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.

H. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

I. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

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Article 9. CONTRACT DOCUMENTS.

9.01 *Contents*

A. The Contract Documents consist of the following:

- 1 This Agreement (pages 1 to 9, inclusive).
- 2 Performance, Bonds (attached);
3. Payment Bond (attached);
4. Other Bonds (attached);
- 5 General Conditions (1 to 62, inclusive).
- 6 Supplementary Conditions (pages 1 to 5, inclusive).
- 7 Specifications bearing the title:

Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

and consisting of items as listed in table of contents thereof.

8 Drawings as part of the PLAN Set with each sheet bearing the following general title:

Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

9 Addenda numbers ____ to ____, inclusive.

10. Exhibits to this Agreement (enumerated as follows):

- a. Notice to Proceed (attached);
- b. CONTRACTOR's Bid (attached).
- c. Documentation submitted by CONTRACTOR prior to Notice of Award (attached).
- d. Bid Submittal Package

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11. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto:

- a. All Written Amendments
- b. Work Change Directives
- c. Change Order(s)

B. The documents listed in paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.05 of the General Conditions.

Article 10. MISCELLANEOUS

10.01 *Terms*

A. Terms used in this will have the meanings indicated in the General Conditions.

10.02 *Assignment of Contract*

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

10.03 *Successors and Assigns*

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.

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10.04 *Severability*

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

10.05 *OTHER PROVISIONS*

A. _____

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IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER, and CONTRACTOR. All portions of the contract Documents have been signed or identified by OWNER and CONTRACTOR or on their behalf.

This Agreement will be effective on _____, 20____ (which is the Effective Date of the Agreement).

OWNER: PBSD

CONTRACTOR: _____

By: _____

By: _____

(CORPORATE SEAL)

(CORPORATE SEAL)

Attest: _____

Attest: _____

By: _____

By: _____

Address for giving notices
PBSD
President, Rex Dollinger
PO Box 689
Bayfield, WI 54814

Address for giving notices

(If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of OWNER-CONTRACTOR Agreement

License No. _____

Agent for service of process: _____

(If CONTRACTOR is a corporation, attach evidence of authority to sign.)

Designated Representative:

Designated Representative:

Name: Randy M. Lund, PE

Name: _____

Title: Project Manager

Title: _____

Address: 415 3rd Street / PO Box 243
Washburn WI 54891

Address: _____

Phone: 715-209-0367

Phone: _____

Email: rmlund1@charter.net

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CONTRACTOR'S AFFIDAVIT OF DEBITS AND CLAIMS

PROJECT: Old Orchard Lane – Force Main Project

Owner: Pikes Bay Sanitary District #1 (PBSD)

Contractor: _____

Address: _____

State: _____

County of: _____

Contract Date: _____

The undersigned hereby certifies that, except as listed below, he has paid in full or has otherwise satisfied all obligations for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referred above for which the Owner or his property might in any way be held responsible.

EXCEPTIONS: (If none, write "NONE".)

CONTRACTOR:

Subscribed and sworn to before me

Address: _____

this ____ day of ____, 20 ____

By: _____

Notary Public:

My Commission Expires:

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CONTRACTORS AFFIDAVIT OF RELEASE OF LIENS

PROJECT: Old Orchard Lane – Force Main Project

Owner: Pikes Bay Sanitary District #1 (PBSD)

Contractor: _____

Address: _____

State: _____

County of: _____

Contract Date: _____

The undersigned hereby certifies that to the best of his knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers or Work, labor or services who have or may have liens against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS: (if none, write "NONE".)

CONTRACTOR:

Subscribed and sworn to before me

Address: _____

this ____ day of ____, 20

By: _____

Notary Public: _____

My Commission Expires: _____

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PBSD – Orchard Lane

PROJECT SPECIFICATIONS

SECTION III TECHNICAL SPECIFICATIONS

These Technical Specifications, ONLY apply for Bid Items listed in the Bid Proposal Schedule. They also apply to work incidental to listed Bid Items.

Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

TECHNICAL SPECIFICATIONS

A. PROJECT WORK

1. Summary of Work

- A. FURNISH & INSTALL (F&I); 2.5", 2", & 1.5" HDPE (160 psi) Force Main .
- B. F&I; Manhole 5' Dia.
- C. F&I; CRUSHED AGGREGATE BASE COURSE; for roadway restoration.
- D. F&I; Erosion Control
- E. F&I; Curb Stop shut off valves.
- F. F&I; Ball Valve bleeder in side 5' MH.
- G. F&I; All other items as listed in the bid proposal schedule, or required by the Specifications.

2. Site Clearing / Erosion Control / Landscaping

- a. WI DNR Construction Site - Best Management Practices shall be followed in addition to erosion control items called for in the plans.
- b. Topsoil shall be salvaged and replaced after construction. Excess topsoil shall be the Contractor's responsibility and property, and shall be removed or placed on site at the Engineer's direction..
- c. Vegetation shall be re-established per **WI DOT Standard Specifications**.
- d. All vegetation and other debris removed shall be disposed of by the Contractor.
- e. Erosion Control shall be in place prior to the start of construction.
- f. Finished topsoil (in urban or rural lawn areas) shall be screened and free of debris for top 2". Bottom 2" can be salvaged topsoil.
- g. All excess material shall be disposed of by the Contractor.
- h. Salvaged topsoil may be used for rural areas and for the bottom 2" in the urban areas.

3. Site Work

a. Contractor shall submit shop drawings for Engineer approval for:

- manholes/castings
- valves
- piping
- fittings locations
- structures (MH's)

- b. Finished manhole rims to be set 6" above finished ground level in turf areas. Gravel shall be mounded around casting to blend to existing grade. In pavement areas the manhole rims shall match the existing or proposed pavement elevation

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4. Backfill Materials

- a. Backfill materials for structures shall be compacted (95% proctor) granular backfill ; per WI DOT Specifications
- b. Backfill for PVC and HDPE pipes shall be per the **WI Standard Specifications for Sewer and Water** and per pipe manufacturers recommendations.
- c. Crushed aggregate base course shall be Grade 2 per WI DOT Specifications.
- d. Riprap shall be standard riprap per WI DOT.
- e. Manholes shall be standard pre-cast manholes per the WI DOT Standard Specifications and per plan details.
- f. Landscaping shall conform to WI DOT specifications
- g. Trenches shall be backfilled with native materials.

4. Concrete

- a. Concrete per WI DOT Specifications; shall be used for incidental concrete work. Ready-mix concrete is acceptable.
- b. Manholes and Inlets shall be grouted with concrete as listed above, on the inside and outside.
- c. Flat work, Concrete will have Nycon or similar fiber added.

5. Asphalt Pavement (Bituminous) (N/A)

- a. HMA Binder Type PG 58-34
- b. Cost per ton for Asphalt Pavement (surface or binder) shall include all materials (aggregate and bituminous materials) and labor to produce, deliver, and place the pavement.

6. Standards

- a. ASTM, NEMA, AWWA, ANSI and other applicable standards shall be adhered to as required by laws and codes and as listed in the Supplemental Conditions and standards sections.

7. Dewatering

- a. If dewatering is required the contractor shall contact the WI DNR for required permits or regulations.
- b. If dewater pumping exceeds 70 gpm the Contractor may be required to notify the WI DNR

8. Utilities

- a. Contractor shall call DIGGER's Hotline; prior to beginning work.
- b. Contractor shall coordinate utility relocations with Utility Companies.

9. General

- a. All materials supplied shall have certifications provided by the supplier to the Engineer. The certifications shall state compliance with applicable codes and standards.

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- b. All manufacturers procedures shall be followed unless the Engineer authorizes deviation.

10. Soil Borings

- a. Soil Borings have not been performed for this project.

11. Traffic Control

- a. Shall meet MUTCD requirements.
- b. Local traffic shall have access on gravel @ all times.
- c. Advance warning signs shall be placed when roads are under construction.
- d. Construction zone signs shall be in place for duration of construction.

12. Notifications

- a. Contractor shall notify (24 hours in advance) businesses and residences if their traffic flow will be affected by the Contractor.
- b. Contractor shall notify (48 hours in advance) affected water customers prior to shutting off the water.

13. Salvaging Materials

- a. Existing castings and hydrants shall be salvaged for the Owner. (N/A)
- b. Existing asphaltic pavement (hot-mix) shall be salvaged and reused on the project if possible. (N/A)
- c. Existing gravel shall be salvaged for use by the Contractor. The Engineer will evaluate acceptance of any excess for use on the Project, during construction.

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Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

TECHNICAL SPECIFICATIONS

B. REFERENCE SPECIFICATIONS

The following documents are included and made part of the project requirements by this reference:

- 1) Standard Specifications for sewer and water construction in Wisconsin 1988 edition, with Addendum No. 1, Jan 1992.
- 2) WI DOT Standard Specifications for Road and Bridge Construction 2015 edition.
- 3) WI DNR Construction Site Best Management Practices, and Technical Specifications.
- 4) WI Administrative Code
- 5) Wisconsin State Law
- 6) AASHTO Policy on Geometric Design of Highways & Streets, 2002 (and subsequent updates)
- 7) US DOT Manual on Uniform Traffic Control Devices, Millennium Edition
- 8) Standard Specifications for Sewer and Water construction in Wisconsin 1988 edition, with Addendum No. 1, Jan 1992 (and subsequent updates).

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PBSD – Orchard Lane

TECHNICAL SPECIFICATIONS

C. STANDARDS

ASTM D 2487 - Classification of Soils for Engineering Purposes

ASTM D 2922 - Nuclear Methods Density Testing

ASTM D 3017 - Soil Testing Moisture Content

ASTM D 1557 - Soil Testing Moisture-Density

ASTM D 698 - Soil Testing Moisture-Density

ASTM D 2321 - Underground Flexible Sewer Pipe

ASTM D 1785 - PVC Pipe, Schedule 40, 80, 120

ASTM C 94 - Ready-Mixed Concrete

ASTM D 3261/ D 2657 - HDPE 3408 Force main Fittings / Joints, fused

ASTM F 714 - HDPE 3408 Force main

ASTM D 2241 / AWWA C-900 - PVC Force main

ASTM D 3034 - PVC Sewer Pipe/Fittings

ASTM C 923 - Manhole Connections

ASTM F 477 - Gaskets

ASTM F 679 - PVC Sewer Pipe/Fittings

ASTM F 789 - PVC Sewer Pipe/Fittings

ASTM D 2241 - PVC (SDR-PR)

ASTM D 2564 - PVC Solvent weld Joints

ASTM D 3212 - PVC Joints

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| | |
|---|--|
| ASTM C 443, C 990, C 923, C 425 - | Sanitary Manholes, Joints |
| AWWA C-900 C-905 - | PVC Water Pipe |
| ANSI/AWWA C 153/A 21.53 - C 116 / A 21.18 | Ductile-Iron and Gray-Iron Fittings, 3 in. Through 48 in., for Water and Other Liquids. |
| ANSI/AWWA C 111/A 21.11 - C 110 | Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings. |
| ANSI/AWWA C 151 / A 21.51 - C150 / A 21.50 | Ductile-Iron Pipe, Centrifugally Cast, for Water or Other Liquids. |
| ASTM C1116 - | Fibrous Reinforcing for Concrete |
| ANSI B 16.1 / B 16.5 - | Mechanical Joints |
| AWWA C-800 / ASTM B-62 - | Corp. Stops & Curb Stops |
| ASTM A 48 Cl. 20 - | Cast Iron Service Boxes |
| AWWA C 500 / C 502 - | Gate Valves / Fore Hydrants |
| AWWA C 105 / ANSI A 21.5 - | Poly. Wrap |
| AWWA C 901 / ASTM D 2737 - | Water Tubing |

ANSI American National Standards Institute
1430 Broadway
New York, NY 10018

ASTM American Society for Testing and Materials
1916 Race Street
Philadelphia, PA 19103

EJCDCEngineers' Joint Contract Documents Committee
American Consulting Engineers Council
1015 15th Street, N.W.
Washington, DC 20005

NEMA National Electrical Manufacturers' Association
2101 "L" Street, N.W.
Washington, DC 20037

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TECHNICAL SPECIFICATIONS

D. DETAILS

1. General (also see plans)
2. WI DOT Standard Specifications
3. Standard Spec's. for Sewer and Water

Pikes Bay Sanitary District #1 (PBSD)
Old Orchard Lane – Force Main Project

TECHNICAL SPECIFICATIONS

E. PERMITS

1. This Project is to be funded by **Pikes Bay Sanitary District #1 (PBSD)**
2. Coordination with the WI DNR is under way, as required..

Specific permits follow this page, if issued by regulatory agencies.

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Pikes Bay Sanitary District #1 (PBSD)

Old Orchard Lane – Force Main Project

TECHNICAL SPECIFICATIONS

F. MANHOLES

1. Manholes

- a. O-ring gaskets required for joints.
- b. E-Z stick mastic required for chimney joints.
- c. A minimum of one 2" polyethylene adjusting ring is required for sanitary manholes and one 2" concrete for storm manholes and inlets (maximum 12" of rings).
- d. Inverts shall be grouted.
- e. Integral pipe water stop boots are required at all pipe openings.
- f. Manholes shall be precast concrete, 4' diameter.
- g. Chimney, seals shall be included (see Spec. details)
- h. Must use manufacturer approved sealant between rings.

2. Manhole Castings

- a. Casting shall be equal to Neenah R 1642 (see detail)
- b. Concealed pick-holes
- c. Non-rocking
- d. Machined Fit

3. Price for bid item “manholes” shall include castings and covers.

4. Existing manholes:

- a. Modification of the existing manholes shall include excavation and coring of the walls.
- b. Backfill shall include material and placement as incidentals.
- c. The backfill shall be placed in 12" compacted lifts. Compaction methods shall result in a uniform 90% of modified proctor density throughout.

5. Inlets

- a. Inlets shall be 2' x 3' precast concrete.
- b. Casting shall be R-3246 with Type L covers.
- c. Adjusting rings to be grouted on inside and outside. (or sealed per manufacturers recommendations)
- d. Pipe openings shall be grouted.
- e. Fabric wraps shall be placed on outside of rings.

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TECHNICAL SPECIFICATIONS

G. WATERMAIN

1. Watermain to be Pressure Class 350 Ductile Iron Pipe, with push-on joints. Cover shall be 7.0' minimum. **Water main to be insulated if cover is less than 6', or if crossing storm sewers.** Insulation is incidental to the pipe cost.
2. Watermain pipe joints **shall be cable bonded**, and wrapped in polyethylene if called for in the Plans.
 - a. cable bonding shall bypass valves and hydrants
 - b. a continuity lead shall be placed adjacent to hydrants. The lead shall be a 6' long ½ dia. copper or steel rod placed to 2" above finished grade at the hydrant valve.
3. The District standards for hydrants/fittings are:
 - Zinc nut sacrificial anodes shall be provided (4 minimum per fitting joint; 6 minimum on each hydrant)
 - Stainless steel (304) bottom bolts shall be provided @ the junction of the hydrant barrel and hydrant bottom
 - Waterous Pacer –Mercer Spec.; .
 - 28" breakoff section
 - Two 2½ " hose connections
 - One 5 ¼" steamer connection
 - Set traffic flange 2" to 4" above finished grade
 - 6" lead with valve required.
 - Adjustable screw type valve box also required
 - Corp. stop Ford #1 FB600 or equal; (Mueller H-15000)
 - Curb stop Ford B22-444M or equal; (Mueller H-15151)
 - Curb box Ford FM2-75-56 or equal; (Mueller H-10300)
 - Bolts shall be coated with bituminous compound
 - Hydrant to be wrapped in polyethylene if called for in the Plans.
 - Cover @ hydrants shall be 7.5'
 - Mega-lug mechanical joints (or equal) shall be used.
 - drain (hydrants shall have casting drain port, open)
4. Old hydrants shall be salvaged intact to the District. Abandoned leads shall be capped and thrust blocked. (Cost incidental to "water main" items)

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5. PVC AWWA C-900 pipe shall be accepted by the Engineer/Owner for use, by alternate bid items as listed in the Bid Proposal Schedule.
6. The hydrant shall be set so that the traffic breakoff flange is 2" to 4" above the existing or proposed grade or per the Engineer's direction.
7. Water main shall be wrapped in polyethylene if called for in the Plans.
8. Cut in valves and leads
 - a) use mega-lug mechanical joints. (or equal)
 - b) use one cut-in sleeve
9. Water service connections shall include furnishing and installing a new corporation stop, a new curb box, and connection to the curb box, existing lateral (if applicable), and water main.
10. Replacement of lead services shall include placement of a new lateral using the bid items, water service lateral and water service connect. The lead line shall be removed and disposed of, by the Contractor.
11. Proposed water services shall include furnishing and installing 1" type K copper service. This item shall include pavement replacement on roads not planned for reconstruction, if pavement replacement bid items are not listed in the bid proposal schedule. The furnishing and installing of the corporation stop and curb box shall be paid by the water service connect bid item.
12. Hydrant bid item shall include valve and connecting 6" lead. The 6" DIP between the main and the hydrant valve will be paid as "6" DIP Water main".
13. Trenches shall be backfilled with native materials.
14. A 12" sand lift shall be placed immediately below the planned CABC, above all trenches.
15. DNR codes require water main to be 6" clear (above) or 18" clear (below) storm or sanitary sewers. Otherwise water main casings or sewer replacements with "water main quality" pipe are required for storm or sanitary lines (including laterals).

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TECHNICAL SPECIFICATIONS

H. SANITARY SEWER

1. Gravity Sanitary sewer shall be SDR 35 PVC pipe, with push-on joints. HDPE sewer pipe to be accepted with Engineer's Approval prior to Bidding, only.
2. Force Main sewer to be HDPE (160 psi) fused joint pipe. Fittings to be factory manufactured.
3. Sanitary sewers shall have 6" in-line wyes. Wye locations to be marked with 4' – 2" x 4" AND 4' - #4 rebar
4. All sanitary sewers with less than 6.0 feet of cover shall be insulated (12" above pipe) with 2" x 4' x 8' polystyrene boards.
5. The sanitary service shall be a 6" wye attached to the mainline sewer. The building service shall not enter directly into the manhole. Refer to Dept. Commerce Chap. 82-85 WI Administrative Plumbing Code.
6. Precast concrete 4' diameter manholes shall be used for the sanitary sewer. Chimney/frame seals and pipe/manhole seals (A-lok, Kor-N-Seal, or equal) shall be used. Costs are incidental to the manhole bid item.
7. Roadway patches shall utilize in-kind repairs with partial depth saw cuts. Saw cuts shall be made after trench backfill and base repair are complete.
8. Polyethylene adjusting rings shall be used. (See Details Tech. Spec.) Butyl mastic shall be used for sealing rings. Concrete rings acceptable with Engineers approval.
9. The Contractor will be responsible for confined space entry safety and adherence to OSHA regulations.
10. Casting shall be Neenah R-1642 or equal.
11. All manhole frames shall be set to finished grade during initial construction. Temporary asphalt wedges shall be placed when the surface course placement is delayed thru the winter. This cost is incidental to the asphalt item.
12. Trenches shall be backfilled with native materials.
13. A 12" sand lift shall be placed immediately below the planned CABC, above all trenches.

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Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

TECHNICAL SPECIFICATIONS

I. ROADWAY

1. Underdrain

- a. 4" wrapped pipe underdrains shall be supplied.
- b. The underdrain shall be placed 12" behind the curb and 32" below the flowline.
- c. The underdrain shall use washed stone bedding and backfill.
- d. A 5 oz. woven geotextile shall be used as a separation fabric (Amoco 2002 or equal). The width shall extend to 2' behind the curb.
- e. The underdrain shall have access to both ends for maintenance. Either use cleanouts (behind curb) or start and end underdrain in manholes (or inlets).
- f. Connection to existing or proposed manholes/inlets is incidental to the item "4" underdrain".

2. Culverts

- a. All culverts shall have riprap w/geotextile underliner placed at the pipe end sections.
- b. All culverts shall have end sections.
- c. HDPE culverts shall be WI DOT spec dual-walled smooth interior pipe, with a corrugated exterior.

3. Cross-section

Urban

- a. 32' to 36' face/face of curb (see plans for variations)
- b. 12" sand sub-base
- c. 8" CABC
- d. 3½ " (WI DOT) Asphalt (or 8" concrete to match existing)
- e. 0.025 cross-slope
- f. geotextile underliner

Rural

- a. 24' wide asphalt
- b. 3' wide gravel shoulder
- c. 0.025 cross-slope
- d. 8" CABC
- e. 12" sand sub-base
- f. geotextile under liner

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4. Curb & Gutter

- a. 24" modified type D (WI DOT) (see spec. details) and/or 30" or 36" type J (WI DOT)
- b. Provide drive openings and Type 1 curb ramps at intersections.
- c. Inlet castings to be Neenah R-3246 (Type L cover) or equal.
- d. Construct per WI DOT Specs Section 601
- e. Contraction joints @10' (20 maximum and 6' minimum)
- f. Expansion joints @ 200' maximum on and at all curb radius returns

5. Asphalt

- a. The surface course shall be placed after one winter season has passed.
- b. A tack coat shall be placed prior to surface paving. The cost is incidental to the asphalt item.
- c. Temporary wedging shall be placed at all transitions from the binder course to adjacent (for the winter). This cost is incidental to the asphalt item.

6. Geotextiles

- a. Roadway stabilization fabric (geotextile underliner) shall be 5 oz. woven, Type SAS (WI DOT Sec. 645) Amoco 2002 or EQUAL

7. Construction staking will include:

- a. Slope stakes (hubs/lath/paint marks) will be placed 5' from back of curb by the City.
- b. These slope stake hubs will have elevations listed.
- c. The City will prepare cut sheets for road subgrade and curb/gutter grades.
- d. The Contractor will be responsible to control the grades for subgrade, CABC, and asphalt.

8. Area Inlets

- a. 2'x3' inlet required (or 30" RCP pipe with concrete bottom).
- b. Casting shall be Neenah R-4340-B or equal
- c. An adjusting ring (4") to transition from the square inlet to the round casting is required.

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9. Stormsewer (HDPE)

- a. Dual-walled
- b. Smooth interior
- c. Corrugated exterior
- d. Must meet WI DOT load criteria
- e. All manhole frames shall be set to finished grade during initial construction and temporary asphalt wedges shall be placed for the winter. This is applicable when the surface course is delayed thru winter. This cost is incidental to the asphalt item.
- f. Joints shall be push-on, water-tight (gasketed)
- g. Castings to be R-1642 non-rocking concealed pickhole or R-3246 (Type L cover) if in curb and gutter.
- h. Shall meet AASHTO M 294 Type S, requirements.

10. Sidewalk

- a. Construct per WI DOT Specs. (Section 602)
- b. Contraction joints and expansion joints are required.
- c. To be 4" thick with 4" sand base.

11. Concrete (Sidewalk and Curb & Gutter and Pavement Repair)

- a. Concrete shall be air entrained (5-6%)
- b. Concrete shall use fibrous reinforcing (Nycon- Nylon 6 or equal) Fibers shall be 100% nylon filamentized fiber bundles.
- c. Fibers shall be $\frac{3}{4}$ " long added @ one (1) pound/cy of concrete.
- d. Concrete shall meet all other requirements of WI DOT Standard Specs
- e. Materials certifications and a one (1) year warranty will be required. Weight tickets shall note the use of fibrous reinforcing.
- f. Fibers shall be per ASTM C1116
- g. Concrete strength at 28 days shall be 3500 psi minimum.
- h. Concrete must achieve 3000 psi to open to traffic.

12. Concrete Pavement Repair

- a. All concrete repairs shall have tie bars (#4) placed @ 3' centers in longitudinal joints.
- b. All concrete repairs shall have 1" dowel bars placed @ 1' centers in transverse joints.
- c. All drilling, epoxy grouting, tie bars, and dowel bars are incidental to the item of "Concrete Pavement".

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13. Concrete Pavement Removal

- a. This item is for roadway and driveway concrete removal.
- b. Sidewalk removal is incidental to pipe costs or unclassified excavation.

14. Topsoil (4") URBAN

- a. Salvaged topsoil may be used for the bottom 2".
- b. Screened topsoil shall be used for the top 2".
- c. The bid items; Topsoil 2" and salvaged topsoil 2" shall include topsoil as in a. and b. above.
- d. The item "Landscaping" shall include preparation, seeding, fertilizing, and mulching.
- e. Hydromulch (w/seed) may be used with the Engineer's approval.

15. Topsoil, Salvaged

- a. RURAL shall meet WI DOT section 625

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Pikes Bay Sanitary District #1 (PBSD) Old Orchard Lane – Force Main Project

TECHNICAL SPECIFICATIONS

When the below items are called for in the plans and bid proposal schedule, the following specifications will govern.

I. ROADWAY

1. Underdrain

- a. 4" wrapped pipe underdrains shall be supplied.
- b. The underdrain shall be placed 12" behind the curb and 32" below the flowline.
- c. The underdrain shall use washed stone bedding and backfill.
- d. A 5 oz. woven geotextile shall be used as a separation fabric (Amoco 2002 or equal). The width shall extend to 2' behind the curb.
- e. The underdrain shall have access to both ends for maintenance. Either use cleanouts (behind curb) or start and end underdrain in manholes (or inlets).
- f. Connection to existing or proposed manholes/inlets is incidental to the item "4" underdrain".

2. Culverts

- a. All culverts shall have riprap w/geotextile underliner placed at the pipe end sections.
- b. All culverts shall have end sections.
- c. HDPE culverts shall be WI DOT spec dual-walled smooth interior pipe, with a corrugated exterior.

3. Cross-section

Urban

- a. 32' to 36' face/face of curb (see plans for variations)
- b. 12" sand sub-base
- c. 8" CABC
- d. 3½ " (WI DOT) Asphalt (or 8" concrete to match existing)
- e. 0.025 cross-slope
- f. geotextile under-liner

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Rural

- a. 22' wide asphalt
- b. 2' wide gravel shoulder
- c. 0.025 cross-slope
- d. 8" CABC
- e. 12" sand sub-base
- f. geotextile under-liner (if noted on plans)

4. Curb & Gutter

- a. 24" type D (WI DOT) (see spec. details) and/or 30" or 36" type J (WI DOT)
- b. Provide drive openings and Type 1 curb ramps at intersections.
- c. Inlet castings to be Neenah R-3246 (Type L cover) or equal.
- d. Construct per WI DOT Specs Section 601
- e. Contraction joints @10' (20 maximum and 6' minimum)
- f. Expansion joints @ 200' maximum on and at all curb radius returns

5. Asphalt

- a. The surface course shall be placed after one winter season has passed.
- b. A tack coat shall be placed prior to surface paving. The cost is incidental to the asphalt item.
- c. Temporary wedging shall be placed at all transitions from the binder course to adjacent (for the winter). This cost is incidental to the asphalt item.

6. Geotextiles

- a. Roadway stabilization fabric (geotextile underliner) shall be 5 oz. woven, Type SAS (WI DOT Sec. 645) Amoco 2002 or EQUAL

7. Construction staking will include:

- a. Two project benchmarks will be set in the field by the Engineer.
- b. The C/L will be marked on the pavement outside the construction limits with PK nails.

8. Area Inlets

- a. 2'x3' inlet required (or 30" RCP pipe with concrete bottom).

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- b. Casting shall be Neenah R-4340-B or equal
- c. An adjusting ring (4") to transition from the square inlet to the round casting is required.

9. Storm sewer (HDPE)

- a. Dual-walled
- b. Smooth interior
- c. Corrugated exterior
- d. Must meet WI DOT load criteria
- e. All manhole frames shall be set to finished grade during initial construction and temporary asphalt wedges shall be placed for the winter. This is applicable when the surface course is delayed thru winter. This cost is incidental to the asphalt item.
- f. Joints shall be push-on, water-tight (gasketed)
- g. Castings to be R-1642 non-rocking concealed pickhole or R-3246 (Type L cover) if in curb and gutter.
- h. Shall meet AASHTO M 294 Type S, requirements.

10. Sidewalk

- a. Construct per WI DOT Specs. (Section 602)
- b. Contraction joints and expansion joints are required.
- c. To be 4" thick with 4" sand base.

11. Concrete (Sidewalk and Curb & Gutter and Pavement Repair)

- a. Concrete shall be air entrained (5-6%)
- b. Concrete shall use fibrous reinforcing (Nycon- Nylon 6 or equal) Fibers shall be 100% nylon filamentized fiber bundles.
- c. Fibers shall be $\frac{3}{4}$ " long added @ one (1) pound/cy of concrete.
- d. Concrete shall meet all other requirements of WI DOT Standard Specs
- e. Materials certifications and a one (1) year warranty will be required. Weight tickets shall note the use of fibrous reinforcing.
- f. Fibers shall be per ASTM C1116
- g. Concrete strength at 28 days shall be 3500 psi minimum.
- h. Concrete must achieve 3000 psi to open to traffic.

12. Concrete Pavement Repair

- a. All concrete repairs shall have tie bars (#4) placed @ 3' centers in longitudinal joints.
- b. All concrete repairs shall have 1" dowel bars placed @ 1' centers in transverse joints.
- c. All drilling, epoxy grouting, tie bars, and dowel bars are incidental to the item of "Concrete Pavement".

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13. Concrete Pavement Removal

- a. This item is for roadway and driveway concrete removal.
- b. Sidewalk removal is incidental to pipe costs or unclassified excavation.

14. Topsoil (4") URBAN

- a. Salvaged topsoil may be used for the bottom 2".
- b. Screened topsoil shall be used for the top 2".
- c. The bid items; Topsoil 2" and salvaged topsoil 2" shall include topsoil as in a. and b. above.
- d. The item "Landscaping" shall include preparation, seeding, fertilizing, and mulching.
- e. Hydromulch (w/seed) may be used with the Engineer's approval.

15. Topsoil, Salvaged

- a. RURAL shall meet DOT section 625

16. Force Main (FM)

- a. FM shall be rated for 160 psi.
- b. FM shall meet WI Standard Spec's for Sewer & Water

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TECHNICAL SPECIFICATIONS

J. SOIL BORINGS

 X Soil Borings have NOT been performed for this Project.

 N/A The attached soil boring logs are provided for information only, any interpretations are the Contractor's responsibility. The boring information is for the boring location only.

A full report can be provided upon request.