

# 1 Invitation to Bid

CE2 Engineers, Inc. is soliciting bids for Arctic Pipe and Fittings for the City of Mountain Village. The Alaska Department of Conservation, Village Safe Water (VSW) Program is the City of Mountain Village authorized agent for this Invitation to Bid (ITB). CE2 Engineers, Inc. is authorized to conduct this ITB on behalf of the VSW Program. Bids will be received until 1PM local Alaska Time, June 22, 2018. Bids received after the specified deadline will not be considered.

The Procurement Officer for this ITB is:

Quentin Guthrie, Procurement Officer  
CE2 Engineers, Inc.  
8221 Dimond Hook Drive  
Anchorage, AK 99507  
Telephone: 907-349-1010  
Email: [qguthrie@ce2engineers.com](mailto:qguthrie@ce2engineers.com)

Questions regarding this ITB shall be addressed in writing (email preferred) to the Procurement Officer. The deadline for submission of questions is 1 PM local Alaska Time, 6/15/18.

Bids shall be mailed/delivered in a sealed envelope to the following address:

CE2 Engineers, Inc.  
Attn: Quentin Guthrie, Procurement Officer  
8221 Dimond Hook Drive  
Anchorage, AK 99507

Email, fax, or verbal bids are not authorized for this ITB and will not be accepted.

It is the responsibility of the bidder to confirm receipt of their bid by the Procurement Officer.

## **2 Instructions/Information to Bidders**

### **2-1. Bid Submission and Required Documentation**

Bids shall be mailed/delivered in a sealed envelope to the following address:

CE2 Engineers, Inc.  
Attn: Quentin Guthrie, Procurement Officer  
8221 Dimond Hook Drive  
Anchorage, AK 99507

Email, fax, or verbal bids are not authorized for this ITB and will not be accepted.

It is the responsibility of the bidder to confirm receipt of their bid by the Procurement Officer.

Bidders must bid on all items on the Bid Schedule in order to be considered responsive to this ITB. Failure to bid on all items on the Bid Schedule will disqualify the bid and cause the bid to be deemed non-responsive and therefore not considered.

Alternative bids for anything other than what is required will be rejected unless any possible alternatives are allowed in this ITB. By submitting a bid, the bidder agrees to the terms and conditions contained in this ITB, and that the VSW Program has the sole discretion to interpret and enforce the terms and conditions of this ITB.

Questions regarding this ITB must be made in writing and received by the Procurement Officer before the deadline set for receipt of questions. This will allow time for an amendment to be issued if one is required. It will also help prevent the opening of a defective bid, upon which award cannot be made, and the resultant exposure of bidder prices.

#### **Required Documentation from Bidders:**

- Completed Bid Form (1 page) - **Section 4**
- Completed Bid Schedule (2 pages) - **Attachment A**
- Completed Federal Debarment Certification Form (1 page) - **Section 6, Attachment C**
- Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions Form (2 pages) – **Section 6, Attachment D**

Bidders that fail to submit the required documentation, as identified above, before the deadline set for receipt of bids shall be deemed non-responsive.

Bids shall be submitted on the forms provided (Bid Form and Bid Schedule) in this ITB and shall be signed by an individual authorized to bind the bidder to the provisions of

this ITB and its bid. Bids submitted that fail to comply with these requirements shall be deemed non-responsive. Bid prices shall be in U.S. funds and include all applicable fees and costs to provide all items identified on the Bid Schedule. The bid must include everything necessary to fulfill all of the requirements of this ITB.

In the event of a difference between a price stated in words and a price stated in figures, the words shall govern. Math errors shall be corrected based on the criteria that words prevail over figures and that unit prices prevail over total prices (extensions of unit prices or bid summations). For purposes of bid comparison, no discounts will be considered.

## **2-2. Bid Preparation Costs**

The VSW Program and CE2 Engineers, Inc. are not liable for any costs incurred by the bidder in bid preparation and submittal.

## **2-3. Correction and Withdrawal of Bid**

Once a bid is submitted, no modifications to the bid will be considered after the deadline set for receipt of bids. No corrections to entries on the Bid Form or Bid Schedule will be considered before the deadline unless the person signing the Bid Form and Bid Schedule initials the corrections. A bidder may choose to submit a revised bid to replace their initial bid if this action is completed prior to the deadline set for receipt of bids.

## **2-4. Specifications**

Unless otherwise specified in this ITB, product brand names or model numbers are examples of the type and quality of product required, and are not statements of preference. If the specifications describing an item conflict with a brand name or model number describing the item, the specifications govern. Reference to brand name or number does not preclude a bid of a comparable or better product, if full specifications and descriptive literature are provided for the product. Failure to provide such specifications and descriptive literature may be cause for rejection of the bid.

## **2-5. Warranty**

The contractor warrants every unit purchased against faulty materials and workmanship for a minimum period of at least 12 months. If, during this period, faults develop with the unit or components of the unit, they will be repaired or replaced without any cost, including any transportation or freight cost, to the VSW Program. Bids, which include supplemental warranties, will be accepted, but supplemental warranties that conflict with or diminish the VSW Program's rights under this warranty clause will be considered null and void. The VSW Program is not responsible for identifying conflicting warranty conditions before issuing a purchase order.

### **After award of the purchase order:**

1. if a conflict arises between the supplemental warranty and the warranty clause in this ITB, the warranty clause in this ITB will prevail; and

2. if the VSW Program's rights are diminished as a result of application of the supplemental warranty, the supplemental warranty will be considered null and void and the ITB warranty clause will prevail.

By signature on the Bid Form and Bid Schedule the bidder acknowledges this requirement and indicates unconditional acceptance of this warranty clause.

#### **2-6. ITB Addendums**

Bidders shall acknowledge on the Bid Form their receipt of all ITB addendums issued during the ITB period. Failure to acknowledge addendums will result in the bid being deemed non-responsive.

#### **2-7. Method of Award**

The VSW Program reserves the right to reject any bid which is non-responsive, incomplete, or irregular; or any bid in which unit prices are unbalanced in the judgment of the VSW Program. The VSW Program reserves the right to waive any technicalities it deems appropriate in awarding the bid. The VSW Program reserves the right to reject any and all bids.

#### **2-8. Public Record**

If a bidder determines there are trade secrets or other proprietary data in their bid which they do not wish made public, they must state so in writing to the Procurement Officer. The bidder must list the parts of their bid they consider confidential and the reasons they consider the information confidential. The Procurement Officer will review this request and make a determination. If the Procurement Officer agrees with the request for confidentiality, those portions of the bid will be kept in a confidential file and will not be released in response to public information requests.

#### **2-9. Assistance to Bidders with a Disability**

Bidders with a disability may receive accommodation regarding the means of communicating this ITB or participating in the procurement process. For more information, contact the Procurement Officer no later than 7 calendar days prior to the deadline set for receipt of bids.

#### **2-10. Federal Debarment Certification**

Expenditures from a purchase order resulting from this ITB may involve federal funds. The U.S. Department of Labor requires all state agencies that are expending federal funds to have a certification filed in the bid (by the bidder) that they have not been debarred or suspended from doing business with the federal government. Certification regarding debarment, suspension, ineligibility and voluntary exclusion lower tier covered transactions (see Section 6, Attachment C: Federal Debarment Certification Form) shall be completed and submitted with the bid. Bids submitted without a completed Federal Debarment Certification Form shall be deemed non-responsive.

#### **2-11. Protest Procedures**

For information on VSW protest procedures, please refer to Section 6, Attachment B.

### **2-12. Human Trafficking**

By signature on the Bid Form and Bid Schedule, the bidder certifies that the bidder is not established and headquartered or incorporated and headquartered in a country recognized as Tier 3 in the most recent United States Department of State's Trafficking in Persons Report.

The most recent United States Department of State's Trafficking in Persons Report can be found at the following website: <http://www.state.gov/j/tip/> .

Failure to comply with this requirement will cause the VSW Program to reject the bid as non-responsive or cancel the purchase order resulting from this ITB.

### **2-13. Bidders Certification**

By signature on the Bid Form and Bid Schedule, the bidder certifies that the bidder will comply with the following:

- a) The laws of the State of Alaska;
- b) The Clean Air Act and Water Pollution Control Act and the regulations issued thereunder by the federal government;
- c) The Copeland Anti-Kick Back Act and the regulations issued thereunder by the federal government;
- d) Section 6002 of the Solid Waste Disposal Act and the regulations issued thereunder by the federal government;
- e) The Clean Water Act and the regulations issued thereunder by the federal government;
- f) The Contract Work Hours and Safety Standards Act and the regulations issued thereunder by the federal government;
- g) The Equal Employment Opportunity Act and the regulations issued thereunder by the federal government;
- h) The Americans with Disabilities Act of 1990 and the regulations issued thereunder by the federal government;
- i) The Civil Rights Act of 1964 and the regulations issued thereunder by the federal government;
- j) The Rehabilitation Act of 1973 and the regulations issued thereunder by the federal government;
- k) The Age Discrimination Act of 1975 and the regulations issued thereunder by the federal government;
- l) Byrd Anti-Lobbying Amendment (31 U.S.C 1352) and the regulations issued thereunder by the federal government. A certification must be completed and submitted.
- m) All applicable local, state and federal statutes, regulations, ordinances and codes, whether or not specifically mentioned herein.
- n) All terms and conditions set forth in this ITB;
- o) A condition that the bid submitted was independently arrived at, without collusion, under penalty of perjury;

- p) That the bid will remain open and valid for at least 90 business days; and
- q) That programs, services and activities provided to the general public under a purchase order resulting from this ITB conform with the Americans with Disabilities Act of 1990 and the regulations issued thereunder by the federal government.

If any bidder fails to comply with [a] through [q] of this paragraph, the VSW Program will reject the bid or terminate the purchase order.

### **3 Award of a Purchase Order**

#### **3-1. Award of a Purchase Order**

Award will be made to the lowest responsive and responsible bidder. If a purchase order is to be awarded, CE2 Engineers, Inc. shall issue a Notice of Intent to Award to the apparent lowest responsive and responsible bidder as soon as practicable. The Notice of Intent to Award, serves two purposes. It lists the name of each vendor that offered a bid and the price they bid. It also provides notice of CE2 Engineers, Inc. intent to award a purchase order to the bidder indicated. A copy of the Notice of Intent to Award will be emailed (or mailed if vendor email is not available) to each vendor that responded to the ITB. The bidder identified as the apparent low responsive and responsible bidder shall not proceed with providing any goods or services until a purchase order is given by CE2 Engineers, Inc. A vendor that proceeds with providing goods or services without a purchase order does so without a contract and at their own risk.

Approval of a purchase order resulting from this ITB is contingent upon legislative appropriation and federal funding. Acceptance of the bidders bid shall be by issuance of a purchase order. The bidders total bid amount shall be construed as its bid, pursuant to the bid documents, to be accepted by CE2 Engineers, Inc. CE2 Engineers, Inc. will not sign any vendor contract.

The contractor shall furnish the following documentation to the Procurement Officer before a purchase order is issued:

- Valid Alaska business license

#### **3-2. Subcontractors**

The contractor may not enter into any subcontracts without prior written approval from the VSW Program. Notwithstanding the approval of any subcontract, the contractor shall be solely responsible for the satisfactory performance of all subcontractors and subcontracted services and for the compensation of all subcontractors. The contractor shall be and remain liable for all costs and damages to the VSW Program and CE2 Engineers, Inc. caused by negligent performance or non-performance of the subcontracted services and shall indemnify, defend and hold harmless the City of Mountain Village, the VSW Program and CE2 Engineers, Inc. from and against any such claims or failures by subcontractors.

If the contractor uses any subcontractors, each subcontractor shall have a written agreement with the contractor ensuring each subcontractor agrees to comply with the terms and conditions of the ITB and purchase order applicable to its scope of performance. That written agreement shall require each subcontractor meet and comply with all of the applicable provisions of the ITB and purchase order, including but not limited to, the indemnity requirements, record keeping obligations, audit rights, and insurance requirements.

Should the contractor fail to require the subcontractors to meet and comply with all applicable provisions of the ITB and purchase order, including but not limited to, the indemnity requirements, record keeping obligations, audit rights, and insurance requirements, and such failure damages the City of Mountain Village, the VSW Program and CE2 Engineers, Inc. in any way, the contractor shall indemnify, defend, and hold harmless the City of Mountain Village, the VSW Program and CE2 Engineers, Inc. against such damage. The contractor shall obtain proof of other insurance required from subcontractors and submit such proof to the VSW Program and CE2 Engineers, Inc. upon request.

### **3-3. No Additional Work or Materials**

No claim for additional work or materials, not specifically provided in a purchase order resulting from this ITB, performed or furnished by the contractor, will be allowed, nor may the contractor do any work or furnish any material not covered by a purchase order unless the work or material is ordered in writing by the VSW Program. Any such work or materials which may be done or furnished by the contractor, without a purchase order from the VSW Program, shall be at the contractor's own risk, cost and expense.

### **3-4. Title**

The contractor warrants and guarantees that title to all material covered by any application for payment will pass to the VSW Program no later than the time of payment free and clear of any liens, security interests and further obligations.

### **3-5. Assignments**

Assignment of rights, duties or payments under a purchase order resulting from this ITB is not permitted unless authorized in writing by the VSW Program.

### **3-6. Governing Law**

A purchase order resulting from this ITB is governed by the laws of the State of Alaska. Any claim concerning the purchase order shall be brought only in the Superior Court of the State of Alaska and not elsewhere.

### **3-7. Disputes**

If a contractor has a claim arising in connection with a purchase order resulting from this ITB that it cannot resolve with the VSW Program by mutual agreement, it shall pursue a claim, if at all, in accordance with the provisions of AS 36.30.620 – 632.

### **3-8. Default**

In case of default by the contractor, for any reason whatsoever, the VSW Program may procure the goods or services from another source and hold the contractor responsible for any resulting excess cost and may seek other remedies under law or equity.

### **3-9. Inspectors**

The VSW Program or its authorized representative shall be allowed access to all parts of the work at all times and shall be furnished with every reasonable facility for



ascertaining whether or not the work is in accordance with the requirements and intent of the purchase order and ITB.

### **3-10. Records Retention and Access**

The VSW Program or its authorized representative and the federal awarding agency or its authorized representative have the right of access to any pertinent books, documents, papers, or other records of the contractor and its subcontractors, which are pertinent to the funding of a purchase order, in order to make audits, examinations, excerpts, and transcripts. Retention of all records is required for six (6) years after final payments by the VSW Program and all other pending matters are closed. The right of access shall last as long as the records are retained.

### **3-11. Force Majeure (impossibility to perform)**

The parties to a purchase order resulting from this ITB are not liable for the consequences of any failure to perform, or default in performing, any of its obligations under the purchase order, if that failure or default is caused by any unforeseeable Force Majeure, beyond the control of, and without the fault or negligence of, the respective party. For the purposes of this agreement, Force Majeure will mean war (whether declared or not); revolution; invasion; insurrection; riot; civil commotion; sabotage; military or usurped power; lightning; explosion; fire; storm; drought; flood; earthquake; epidemic; quarantine; strikes; acts or restraints of governmental authorities affecting the project or directly or indirectly prohibiting or restricting the furnishing or use of materials or labor required; inability to secure materials, machinery, equipment or labor because of priority, allocation or other regulations of any governmental authorities.

### **3-12. Indemnification**

To the fullest extent permitted by law, the contractor shall defend, indemnify and hold harmless the City of Mountain Village, Alaska, the State of Alaska, Department of Environmental Conservation, Village Safe Water Program and CE2 Engineers, Inc. from and against any claim of, or liability for error, omission or negligent act of the contractor under any purchase order resulting from this ITB.

### **3-13. Order of Precedence**

The terms and conditions of this ITB and bidders bid shall become part of any purchase order resulting from this ITB. The contractor may not add additional or different terms and conditions to the ITB or any purchase order resulting from this ITB. In the event of a conflict of provisions, the following order of precedence shall apply in resolving which provisions control:

1. Purchase order;
2. Any written amendment to the purchase order, with the more recent amendment taking precedence over the less recent amendment;
3. ITB (includes ITB attachments);
4. Bidder's bid.

### **3-14. Termination by the VSW Program for Cause**

The purchase order may be terminated by the VSW Program if the contractor fails to perform in accordance with the terms and conditions of the ITB and purchase order. The VSW Program shall first provide written notice to the contractor. The written notice shall state specifically how the contractor is not performing and will give a reasonable period of time for the contractor to get into compliance. If, after the time limit given in the written notice, the contractor is still not in compliance with the terms and conditions of the ITB and purchase order, the VSW Program shall inform the contractor in writing that the purchase order has been terminated and from that point on, shall be excused from further obligations under the purchase order.

In case of such termination by the VSW Program for cause, the contractor shall be entitled to receive payment for goods received and approved by the VSW Program, work executed and approved by the VSW Program and any other costs approved by the VSW Program.

### **3-15. Termination by the VSW Program for Convenience**

The VSW Program may, at any time for good cause, terminate the purchase order for the VSW Program's convenience. This shall include, but is not limited to, such reasons as the VSW Program being unable to obtain adequate funding or the goods or services no longer being required. Upon receipt of written notice from the VSW Program of such termination for convenience, the contractor shall:

- Cease operations as directed by the VSW Program in the written notice;
- Take actions necessary, or that the VSW Program may direct, for the protection and preservation of the goods or work; and
- Except for work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and enter into no further subcontracts.

In case of such termination for the VSW Program's convenience, the contractor shall be entitled to receive payment for goods received and approved by the VSW Program, work executed and approved by the VSW Program and any other costs approved by the VSW Program.

## 4 Bid Form

**ITB # VSW-MOU-2018-09  
VSW Mountain Village Project  
Arctic Pipe and Fittings**

Company\_\_\_\_\_

Address\_\_\_\_\_

To the Department of Environmental Conservation, Village Safe Water Program and  
CE2 Engineers, Inc.:

In compliance with your Invitation to Bid (ITB) # **VSW-MOU-2018-09** dated 6/12/18, the undersigned proposes to provide the items identified on the Bid Schedule.

The undersigned hereby agrees that in the performance of any purchase order resulting from this ITB, the contractor shall comply with all applicable federal, state, and borough regulations, codes, and laws; and be liable for all required insurance, licenses, permits and bonds; and pay all applicable federal, state and borough taxes.

The undersigned declares, under penalty of perjury under the laws of the United States, that the bid submitted was independently arrived at without collusion.

The undersigned acknowledges receipt of the following addenda to the bid documents (give number and date of each):

Addendum No. \_\_\_\_\_ Date Issued \_\_\_\_\_

Addendum No. \_\_\_\_\_ Date Issued \_\_\_\_\_

Addendum No. \_\_\_\_\_ Date Issued \_\_\_\_\_

Addendum No. \_\_\_\_\_ Date Issued \_\_\_\_\_

Addendum No. \_\_\_\_\_ Date Issued \_\_\_\_\_

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

\_\_\_\_\_  
Signature of Authorized Official

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Phone Number

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

## **5 Bid Schedule Instructions**

**ITB # VSW-MOU-2018-09  
VSW Mountain Village Project  
Arctic Pipe and Fittings**

### **5-1. Bid Schedule**

The Bid Schedule is contained in Section 6, Attachment A.

In the event of a difference between a price stated in words and a price stated in figures, the words shall govern. Math errors shall be corrected based on the criteria that words prevail over figures and that unit prices prevail over total prices (extensions of unit prices or bid summations). For purposes of bid comparison, no discounts will be considered.

Bidders must bid on all items on the Bid Schedule in order to be considered responsive to this ITB. Failure to bid on all items on the Bid Schedule will disqualify the bid and cause the bid to be deemed non-responsive and therefore not considered.

Alternative bids for anything other than what is required will be rejected unless any possible alternatives are allowed in this ITB. By submitting a bid, the bidder agrees to the terms and conditions contained in this ITB, and that the VSW Program has the sole discretion to interpret and enforce the terms and conditions of this ITB.

Bidders shall include FOB transportation costs in the total cost column for each item on the Bid Schedule.

### **5-2. Packaging for Shipment**

All items on the Bid Schedule shall be suitably bundled and securely banded on pallets and skids, as appropriate, for ocean barge transport. Items shall be nested to the greatest practical extent to minimize the volume of the shipment. Bundles shall be covered with plywood or OSB board and shrink wrapped to protect the shipment. Smaller pieces shall be placed in crates for full protection and labeled. Every package shall have a label attached identifying contents and stating the following:

Village Safe Water Mountain Village Project  
Arctic Pipe and Fittings  
Mountain Village, Alaska  
Purchase Order No.: \_\_\_\_\_  
Package No.: \_\_\_\_\_ of \_\_\_\_\_

A list of items in each package shall be forwarded to Quentin Guthrie at [qguthrie@ce2engineers.com](mailto:qguthrie@ce2engineers.com) immediately after packaged goods are shipped to FOB Nenana, Alaska. A copy of delivery documents confirming acceptance at the Ruby Marine Nenana dock shall be submitted with the contractor's written invoice as proof of delivery

**5-3. Delivery Due Date**

Arctic Pipe and Fittings shall be delivered FOB Nenana, Alaska by September 1, 2018.

CE2 Engineers, Inc. will contact the successful bidder and provide the physical address for delivery of the Arctic pipe and Fittings after a purchase order has been issued.

**5-4. Payment**

The terms of the payment are 100%, upon delivery and inspection of materials or services and receipt of a properly documented invoice, payable within 30 days.

Send invoices to:

VSW Mountain Village Project

Attn: Doug Poage

555 Cordova Street, 4<sup>th</sup> floor

Anchorage, Alaska 99501

Phone: 907-269-7612

E-mail: [doug.poage@alaska.gov](mailto:doug.poage@alaska.gov)

## 6. Attachments

- A. Bid Schedule (Section 5) – (2 pages)
- B. Village Safe Water (VSW) Program Procurement Protest and Appeals – (2 pages)
- C. Federal Debarment Certification Form – (2 pages)
- D. Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions Form – (3 pages)
- E. Insurance – (1 page)
- F. Specifications – (7 pages)
- G. Drawings – (3 pages)

**ATTACHMENT A  
BID SCHEDULE**

**VILLAGE SAFE WATER MOUNTAIN VILLAGE PROJECT  
ARCTIC PIPE & FITTINGS**

Bid Item	Description	Unit	Quantity	Unit Weight (lbs.)	Total Weight (lbs.)	Unit Dimensions or Packaged Dimensions	Total Dimensions or Packaged Dimensions	Unit Cost (\$)	Total Cost (\$)
1	6" X 12" HDPE Arctic Pipe, Pre-Insulated 6" HDPE Core Pipe, SDR 11, with 175 mil thickness HDPE Outer Jacket, plain end x plain end, 20' Lengths	LF	2,490						
2	6" X 12" HDPE Arctic 90 Degree Sweep Elbow, Pre-Insulated HDPE 6" HDPE Core Pipe, SDR 11, with 175 mil Thickness HDPE Outer Jacket, Plain end x Plain end	EA	3						
3	6" X 12" HDPE Arctic Tee, Pre-Insulated 6" HDPE Core Pipe, SDR 11, with 175 mil Thickness HDPE Outer Jacket, Plain end x Plain end x Plain end, per the attached Drawing WMH-5	EA	7						
4	6" X 12" Half Shell Kits (with heat shrink sleeves) - HDPE Outer Jacket	EA	102						
5	4" X 10" HDPE Arctic Pipe, Pre-Insulated 4" HDPE Core Pipe, SDR 17 with 175 mil Thickness HDPE Outer Jacket, Bell x Spigot, 20' Lengths	LF	5,800						
6	4" X 10" HDPE Arctic 90 Degree Sweep Elbow, Pre-Insulated 4" HDPE Core Pipe, SDR 17 with 175 mil Thickness HDPE Outer Jacket, Bell x Spigot	EA	170						
7	4" X 10" HDPE Arctic 60 Degree Sweep Elbow, Pre-Insulated 4" HDPE Core Pipe, SDR 17 with 175 mil Thickness HDPE Outer Jacket, Bell and Spigot	EA	15						
8	4" X 10" HDPE Arctic 45 Degree Sweep Elbow, Pre-Insulated 4" HDPE Core Pipe, SDR 17 with 175 mil Thickness HDPE Outer Jacket, Bell and Spigot	EA	58						
9	4" X 10" HDPE Arctic 30 Degree Sweep Elbow, Pre-Insulated 4" HDPE Core Pipe, SDR 17 with 175 mil Thickness HDPE Outer Jacket, Bell and Spigot	EA	8						
10	10" Diameter Heat Shrink Sleeves for Bell and Spigot Type Pipe Joints	EA	318						
11	Freight cost to Nenana	EA	1						
<b>Note:</b>	<b>FOB Nenana, AK by September 1, 2018</b>								

**Total Bid Amount in Words:**

\_\_\_\_\_

**Total Bid Price in Numerals:**

\_\_\_\_\_

Bidder must indicate if they can meet the required delivery schedule:

Yes \_\_\_\_\_ No \_\_\_\_\_

**Alternate Delivery Due Date (if applicable)** \_\_\_\_\_

If the bidder cannot meet the delivery due date, the bidder can propose an alternate delivery due date which will be considered.

If the alternate delivery due date conflicts with the project's construction schedule, the quote may be found non-responsive and therefore not considered.

Company:	
Business License Number:	
Signature of Authorized Official:	
Printed Name:	
Title:	
Date:	
Phone Number:	
Email Address:	



# ATTACHMENT B

## Village Safe Water (VSW) Program Procurement Protest and Appeals

Per AS 36.30.550, an interested party has protest and appeal rights concerning VSW procurements including specifications, solicitations and purchase/contract award decisions. To ensure that all sources are provided due process, the following administrative procedure will be followed. The table below designates the Department of Environmental Conservation (DEC) employees who have the authority to investigate and issue decisions for VSW procurement protests and appeals based upon type and award value. An interested party shall first attempt to informally resolve any dispute concerning a VSW procurement with the VSW Project Manager. A dispute for example could include disagreement with an award decision in terms of a proposal's ranking during the Request for Proposals evaluation process. If not satisfied with that outcome, an interested party may submit a written protest with the following information:

- Name, address, fax number, email address and telephone number of the protestor;
- Signature of the protestor or their representative;
- Identification of the contracting agency and the solicitation or contract at issue;
- Detailed statement of the factual grounds of the protest including copies of relevant documents; and
- The form of relief requested.

### **VSW Small and Medium Procurements**

<b><u>Protest Issue</u></b>	<b><u>Cost Range</u></b>	<b><u>Protest Decision Authority</u></b>	<b><u>Appeal Decision Authority</u></b>
Solicitation	< \$100,000	VSW Procurement Specialist	VSW Program Manager
Specification	< \$100,000	VSW Procurement Specialist	VSW Program Manager
Award Decision	< \$100,000	VSW Procurement Specialist	VSW Program Manager

### **VSW Large Procurements**

<b><u>Protest Issue</u></b>	<b><u>Cost Range</u></b>	<b><u>Protest Decision Authority</u></b>	<b><u>Appeal Decision Authority</u></b>
Solicitation	> \$100,000	VSW Program Manager	DEC Facility Program Manager
Specification	> \$100,000	VSW Program Manager	DEC Facility Program Manager
Award Decision	> \$100,000	VSW Program Manager	DEC Facility Program Manager

If protesting a solicitation document including the content of a specification, the protest must be filed with the VSW Procurement Specialist not later than four (4) state business days before quotations, bids or proposals are due. Within one (1) state business day of receiving the protest, the VSW Procurement Specialist shall provide notice of the protest to all firms or persons that received the solicitation. The protest notice will include the required not later than date of the VSW decision by the applicable VSW decision authority.

If protesting a decision to cancel a solicitation or an award, purchase or contract, the protest shall be filed with the VSW Procurement Specialist within ten (10) calendar days of the date of the written Notice of Cancellation or Notice of Award. The deadline date cannot end on a weekend or state holiday. Within one (1) state business day of receiving the protest, the VSW Procurement Specialist shall provide notice of the protest to all firms or persons that received the solicitation. The protest notice will include the required not later than date of the VSW decision by the applicable VSW decision authority. The VSW Procurement Specialist shall acknowledge receipt of the protest to the protestor and to the apparent winner of the award as well as all other interested parties within one (1) state business day.

After protest receipt, the VSW Procurement Specialist or VSW Program Manager as applicable, shall take one of the following actions within fifteen (15) calendar days:

- a) Issue a written decision denying the protest including the specific reasons for the denial;
- b) Issue a written decision sustaining the protest in whole or in part and implementing an appropriate remedy.

If the protestor is not satisfied with the protest decision, they may appeal the protest decision to the VSW Program Manager or DEC Facility Program Manager as applicable, depending on the type of procurement transaction and award value. The written appeal must be filed within ten (10) calendar days of the date of the protest decision. The deadline date cannot end on a weekend or state holiday. The appeal shall not raise any new issues that were not included in the written protest. An informal hearing on the protest appeal may be conducted by the VSW Program Manager or DEC Facility Program Manager as applicable to attempt to resolve the dispute. A written appeal decision on the appeal will be issued as follows:

- a) Issue a written decision denying the appeal including the specific reasons for the denial;
- b) Issue a written decision sustaining the appeal in whole or in part and implementing an appropriate remedy.

<b><u>Appeal Issue</u></b>	<b><u>Cost Range</u></b>	<b><u>Appeal Decision Authority</u></b>	<b><u>Legal Remedy</u></b>
Specification, Solicitation or Award	< \$100,000	VSW Program Manager	None – Appeal Decision is final
Specification, Solicitation or Award	> \$100,000	DEC Facility Program Manager	Litigation in Alaska Superior Court

# ATTACHMENT C

## Federal Debarment Certification Form

### Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 29 CFR Part 98, Section 98.510, Participant's responsibilities. The regulations were published as Part VII of the May 26, 1988 Federal Register (pages 19160-19211).

#### **(BEFORE COMPLETING CERTIFICATION, READ THE INSTRUCTIONS ON THE FOLLOWING PAGE WHICH ARE AN INTEGRAL PART OF THE CERTIFICATION)**

(1) The prospective recipient of Federal assistance funds certifies, by submission of this bid, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the prospective recipient of Federal assistance funds is unable to certify to any of the Statements in this certification, such prospective participant shall attach an explanation to this Proposal.

---

Name and Title of Authorized Representative

---

Signature

---

Date

## **Federal Debarment Certification Form Instructions**

### **Instructions for Certification**

1. By signing and submitting this Proposal, the prospective recipient of Federal assistance funds is providing the certification as set out below.
2. The certification in this class is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective recipient of Federal assistance funds knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the Department of Labor (DOL) may pursue available remedies, including suspension and/or debarment.
3. The prospective recipient of Federal assistance funds shall provide immediate written notice to the person to whom this Proposal is submitted if at any time the prospective recipient of Federal assistance funds learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "Proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this Proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective recipient of Federal assistance funds agrees by submitting this Proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the DOL.
6. The prospective recipient of Federal assistance funds further agrees by submitting this Proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may but is not required to check the List of Parties Excluded from Procurement or Non-procurement Programs.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the DOL may pursue available remedies, including suspension and/or debarment.

# ATTACHMENT D

## FAR 52.203-11

### CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (SEPT 2007)

(a) *Definitions.* As used in this provision—"Lobbying contact" has the meaning provided at [2 U.S.C. 1602\(8\)](#). The terms "agency," "influencing or attempting to influence," "officer or employee of an agency," "person," "reasonable compensation," and "regularly employed" are defined in the FAR clause of this solicitation entitled "Limitation on Payments to Influence Certain Federal Transactions" ([52.203-12](#)).

(b) *Prohibition.* The prohibition and exceptions contained in the FAR clause of this solicitation entitled "Limitation on Payments to Influence Certain Federal Transactions" ([52.203-12](#)) are hereby incorporated by reference in this provision.

(c) *Certification.* The offeror, by signing its offer, hereby certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on its behalf in connection with the awarding of this contract.

(d) *Disclosure.* If any registrants under the Lobbying Disclosure Act of 1995 have made a lobbying contact on behalf of the offeror with respect to this contract, the offeror shall complete and submit, with its offer, OMB Standard Form LLL, Disclosure of Lobbying Activities, to provide the name of the registrants. The offeror need not report regularly employed officers or employees of the offeror to whom payments of reasonable compensation were made.

(e) *Penalty.* Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by [31 U.S.C. 1352](#). Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure required to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

#### **CONSENT TO USE OF ELECTRONIC SIGNATURES**

BY CHECKING HERE, I AGREE TO THE USE OF ELECTRONIC SIGNATURES AS VALID, LEGALLY BINDING SUBSTITUTES FOR ORIGINAL, HANDWRITTEN SIGNATURES ON THIS DOCUMENT.

Company \_\_\_\_\_

Name (signature) \_\_\_\_\_

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

Title \_\_\_\_\_ Date of execution \_\_\_\_\_

# DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

Approved by OMB

0348-0046

(See reverse for public burden disclosure.)

<b>1. Type of Federal Action:</b> <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance		<b>2. Status of Federal Action:</b> <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award		<b>3. Report Type:</b> <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change <b>For Material Change Only:</b> year _____ quarter _____ date of last report _____	
<b>4. Name and Address of Reporting Entity:</b> <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known:  <b>Congressional District, if known:</b>			<b>5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:</b>  <b>Congressional District, if known:</b>		
<b>6. Federal Department/Agency:</b>			<b>7. Federal Program Name/Description:</b>  CFDA Number, if applicable: _____		
<b>8. Federal Action Number, if known:</b>			<b>9. Award Amount, if known:</b> \$ _____		
<b>10. a. Name and Address of Lobbying Registrant</b> (if individual, last name, first name, MI):			<b>b. Individuals Performing Services</b> (including address if different from No. 10a) (last name, first name, MI):		
<b>11.</b> Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.			Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____		
<b>Federal Use Only:</b>				Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)	

## INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.  
  
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

**Workers' Compensation Insurance:** The contractor shall provide and maintain, for all employees engaged in work under this contract, coverage as required by AS.23.30.045, and where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements. In the case of subcontractor work, the contractor shall provide workmen's compensation insurance for all of the subcontractors' employees engaged in such work. **The policy shall provide waiver of subrogation against the State of Alaska.** The coverage shall include:

Employer's Liability Protection at \$500,000 each accident/each employee and \$500,000 policy limit

**Commercial General Liability Insurance:** The contractor shall provide and maintain coverage for all business premises and operations used by the contractor in the performance of services under this contract with minimum combined single limit coverage per the following schedule:

\$1,000,000 each occurrence  
\$1,000,000 personal injury  
\$1,000,000 general aggregate  
\$1,000,000 products completed operations aggregate

**The State of Alaska shall be named as an additional insured.**

**Commercial Automobile Liability Insurance:** The contractor shall provide and maintain coverage for all vehicles used by the contractor in the performance of services under this contract with minimum coverage limits of \$1,000,000 combined single limit per occurrence.

All of the above insurance coverage shall be considered to be primary and non-contributory to any other insurance carried by the State of Alaska, whether through self-insurance or otherwise.



## TECHNICAL SPECIFICATIONS FOR INSULATED PIPE AND FITTINGS

Revision Date July 24, 2017

### PART I GENERAL

1.1 The Contractor shall supply insulated pipe and fittings with heat trace channels for use in water and forced sewage applications. The minimum service temperature range of all individual components and final products shall be -40 to 100°F unless otherwise specified. All pipe and fittings shall be capable of withstanding the cyclic freezing of water under its rated service pressure without breaks, leaks, gross deformities or impaired service characteristics. The pipe and fittings shall consist of an HDPE SDR 11 core pipe insulated with polyurethane insulation and protected with an outer jacket of 175-mil HDPE, per the bid schedule.

### 1.2 REFERENCES

- A. The following specifications are referenced in this document and shall be considered integral to this specification:

2004 CSI Master Format number 33 11 00 (water utility distribution piping)

ASTM C177	Thermal transmission (guarded hot-plate apparatus)
ASTM C273	Shear properties of sandwich-core materials
ASTM C518	Thermal transmission (heat flow meter apparatus)
ASTM D1248	Polyethylene (PE) extrusion materials – wire and cable
ASTM D1621	Compressive properties of rigid cellular plastics
ASTM D1622	Apparent density of rigid cellular plastics
ASTM D1784	Rigid PVC Compounds and CPVC Compounds
ASTM D2126	Response of rigid cellular plastics to thermal humid aging (thermal dimensional stability)
ASTM D2657	Heat Joining Polyolefin Pipe and Fittings
ASTM D2837	Obtaining pressure design basis for thermoplastic pipe products
ASTM D2842	Water absorption of rigid cellular plastics
ASTM D3139	Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
ASTM D3350	Specification for Polyethylene Plastic Pipe and Fittings Materials
ASTM E96	Water vapor transmission of rigid cellular plastics
ASTM E398	Water vapor transmission rate of sheet materials (dynamic relative humidity measurement)
ASTM F477	Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F714	Polyethylene (PE) plastic pipe (SDR-PR) – based on outside diameter
AWWA C901	Polyethylene Pressure Pipe and Tubing, 1/2-inch through 3-inch for Water Service
AWWA C906	Polyethylene Pressure Pipe and Fittings, 4-inch through 63-inch for Water Distribution and Transmission
NSF/ANSI-61	Drinking Water System Components-Health Effects
PPI TR-33*	Generic Butt Fusion Joining Procedure for Polyethylene Gas Pipe

(\*A gas pipe specification which is used industry-wide for municipal and industrial PE pipe applications.)

- B. Unless otherwise noted herein or on the drawings, all fittings shall be constructed utilizing core pipe of the same material, resin, and dimensions as that used for the core pipe of the straight lengths.

## PART 2 PRODUCTS:

### 2.1 CORE PIPE:

- A. All core pipes shall be made of high-density polyethylene (HDPE) that conforms to Plastics PE4710 pipe and shall be manufactured from pressure rated PE4710 polyethylene compounds that meet or exceed ASTM D 3350 requirements and Cell Classification PE445574C. Plastics PE4710 compound will meet or exceed ASTM D3350 requirements and Cell Classification PE345464C and material code designations PE3608 and PE3408.
- B. Plastics PE4710 polyethylene pipe compounds are listed by PPI in TR-4 and are stress rated for pressure pipe with PPI HDS ratings for water at 73°F (23°C) and PPI HDB ratings at 73°F 23°C) and 140°F (60°C).  
Plastics PE4710 exceeds PPI TR-3 and ASTM D3350 SCG resistance requirements per ASTM F 1473 (PENT).  
Plastics PE4710 ductility is substantiated with greater than 438,300 hours (50 years) at 73°F (23°C) before the onset of SCG.  
Plastics PE4710 black polyethylene compounds shall be certified to NSF-61, all applicable provisions and requirements of the latest revision of AWWA C901 and AWWA C906 and, by inclusion, all appropriate standards referenced therein.
- C. All core HDPE pipe and fittings shall conform to standard iron pipe size outside dimensions (IPS), have a wall thickness meeting SDR 11, and have a minimum pressure rating of 200 psi according to ASTM D2837 at 73 °F with a service rating of 0.5. All HDPE pipe shall be from straight sticks of pipe. Under no circumstances shall any coiled HDPE pipe be used to manufacture products furnished under this specification. All core sewer pipe shall be black, stamped with the appropriate SDR and ASTM designations.
- D. All core HDPE pipe and fittings shall be homogeneous throughout, free of visible cracks, holes, foreign inclusions, blisters, dents, or other injurious defects, and shall be made of materials having the same chemical and physical characteristics. All HDPE pipe ends shall be free from chips, gouges, and other damage. All HDPE pipe and fittings shall be designed for direct pipe-to-pipe or pipe-to-fitting thermal butt fusion or electrofusion jointing, as shown on the drawings.
- E. All core HDPE fittings shall be manufactured to be as strong as or stronger than the pipe the fittings will be joined to, and shall maintain identical IPS outside dimension on stub-outs, and shall conform to the minimum pressure rating listed in section 2.1C. All fittings shall be manufactured from NSF-61 approved components. Tees may be fabricated using branch saddle sidewall fusion or molded fittings. All wyes shall be constructed using a prefabricated reinforced fitting constructed with thickened sidewalls and an inside diameter that matches SDR11 pipe.
- F. All standard core elbows shall be fabricated using sweep bends. Sweep bends shall be seamless, manufactured in one continuous piece of SDR 11 HDPE pipe, with an angular tolerance of  $\pm 2$  degrees without reversion and shall have a bend radius as specified in the following table. The elbows shall not be mitered and fused. All elbows must maintain normal outside diameters along their entire length within tolerance as per ASTM-F714 and be suitable for butt-welding or electrofusion. The outside surface of the elbows shall exhibit all the specified characteristics of the straight pipe and shall not have any blisters or other surface defects from the manufacturing process. All sweep bends shall be NSF-61 approved after manufacture of the final product. Tight radius 90 degree elbows shall be constructed with molded fittings rated at the minimum pressure listed in section 2.1C and shall be NSF-61 approved.

Pipe Size (inches dia.)	Centerline Radius (inches)
2	6.0 – 9.0
3	9.0 – 11.0
4	13.0 – 15.0
6	19.0 – 21.0
8	22.0 – 26.0

- G. The manufacturer of fabricated fittings supplied under this specification shall establish and qualify heat fusion procedures conforming to PPI TR-33 and ASTM D2657 and all fusion must be performed by a qualified operator factory-certified in the use of the specific equipment employed to construct the fittings.
- H. Bell ends of all core pipe and fittings shall be fabricated with identical PVC push-on type sewer couplings. All PVC sewer couplings shall be manufactured in one piece of injection molded PVC compound meeting ASTM D1784. Couplings shall be Class 200 and conform to requirements of DR 21. Fittings shall be designed to withstand a minimum of 630 psi quick burst pressure at 73°F, tested in accordance with ASTM D1599. Bells shall be gasketed joints conforming to ASTM D3139 with gaskets conforming to ASTM F477.
- I. All gaskets on push-on couplings shall be elastomeric, non-circular in cross-section, tapered on the inlet edge to prevent rollout when the pipe is coupled, and not less than 1/4-inch square in the cross-sectional area. The groove in which the gasket is retained shall have sides that are perpendicular to the centerline of the pipe.
- J. The spigot end of the core pipe shall be smoothly beveled to a 15-degree angle as shown in the drawings. The bevel shall reduce the wall thickness at the end of the pipe by 50 percent. The bell and spigot ends shall be free from chips, gouges, and other damage. The bell couplings shall not be ground, chipped, gouged, or damaged in any manner.

## 2.2 INSULATION

- A. Insulation between core pipe and outer jacket of all pipe and fittings shall be low-density rigid closed-cell urethane insulation with a nominal thickness as shown on the drawings. It shall be applied and cured in strict accordance with the manufacturer's recommendations and good commercial practices such that the resulting insulation completely fills the annular space between core pipe and outer jacket and is free of defects affecting its intended purpose.
- B. Urethane insulation shall exhibit the following properties and characteristics specified by the referenced ASTM tests below.

ASTM C518 or C177	Maximum K-factor, as produced	0.15-0.16 btu-in/hr-ft <sup>2</sup> -°F
ASTM D1622	Core Density Range	2.0 to 4.0 lbs/ft <sup>3</sup>
ASTM D1621	Minimum Compressive Strength (parallel and perpendicular to pipe axis)	35 psi
ASTM D2842	Maximum Water Absorption	0.05 lb/ft <sup>3</sup>
ASTM D2126	Dimensional Stability (Maximum Linear Change)	1% at -20°F 3% at +100°F
- C. Exposed urethane insulation faces at pipe and fitting ends shall be coated to protect against physical abuse, UV exposure during shipping and storage, and against water intrusion in service. The coating

shall be suitable for direct application over urethane insulation with no deleterious effects to the insulation or coating. The coating shall be formulated for long-term service and retained flexibility over extended periods of exposure to sunlight, harsh weather, and saltwater spray. The strength of the adhesive bond of the coating to the insulation shall be greater than the tensile strength of the coating. In the event the coating is nicked or an edge is rolled up in handling, the coating that has been dislodged shall tear free from the coating still adhering to the insulation rather than pull the balance of the coating off as a sheet.

- D. The coating shall be applied and cured in strict accordance with the manufacturer's recommendations and good commercial practice such that the finished product is free of defects affecting its intended purpose.
- E. The coating material shall exhibit the following properties and characteristics:

ASTM E398 or E96	Maximum Water Vapor Permeance	1.0 perm
	Dry Film Thickness Range:	15 to 63 mils

### 2.3 HDPE OUTER JACKET

- A. HDPE outer jacket shall be high-density polyethylene, conforming to ASTM D-1248 and the specification standards listed above for the HDPE core pipe. The wall thickness shall be a minimum of 175 mils thick. The jacket size shall be as specified on the drawings. Joints in the HDPE outer jacket for fittings shall be butt fused wherever possible and extrusion welded where required. The outer jacket shall be finished to produce a watertight covering.
- B. All joints in the aluminum outer jacket fabricated around fittings shall be welded with a continuous bead, resulting in a finished jacket that is watertight per the requirements of section 2.3A.
- C. The Contractor shall provide company name and production date (month and year) on the outer jacket of each pipe and fitting. Information shall be heat stamped on HDPE jackets with 1/8-inch to 1/4-inch high lettering within 24" of one end of the jacket.

## PART 3 EXECUTION

### 3.1 MANUFACTURING AND DIMENSIONAL TOLERANCES

- A. Allowable offset of the centerline of the outer jacket and core pipe shall be not more than 1/4-inch at the pipe ends. Elsewhere along pipe lengths the centerline offset shall not be greater than 3/8-inch. Allowable offset of the centerline of the glycol trace channel and core pipe shall be not more than 3/8-inches.
- A. The minimum temperature of all components used to manufacture pipe and fittings shall be 50 °F at the start of fabrication. The fabricated pipe shall be placed in a facility maintained at a temperature of 50 °F or greater for a minimum of 12 hours after fabrication.
- B. All elbows shall have a bend radius as specified in the drawings with a tolerance of  $\pm 2$  degrees without reversion. All elbows must maintain normal outside diameters along their entire length without tolerance as per ASTM-F714.
- C. All branches of fabricated fittings must lie in a single plane with a maximum deviation of  $\pm 2$  degrees.
- D. The length of core pipe protruding from the insulation on the ends shall be 12 inches  $\pm 1/4$  -inch. The core pipe ends shall be smooth and oriented perpendicularly to the core pipe longitudinal axis  $\pm 1/8$ -inch.
- E. The outer jacket shall be cut in one pass perpendicular to the length of the jacket  $\pm 1$  degree. The coupling on bell ends shall be perpendicular to the length of the jacket  $\pm 1$  degree and flush with the jacket end with a tolerance of -1/8-inch. No part of the coupling shall protrude beyond the end of the jacket as determined by placing a straight-edge across the jacket at any two points. The bell end of the

coupling shall be flush with the insulation and outer jacket. Before coating, the plane of the exposed insulation face at bell and spigot ends shall be perpendicular to the centerline axis of the outer jacket  $\pm$  1/8-inch. The insulation profile of the coated ends shall not exceed a relief deviance of  $\pm$  1/4-inch across the face.

### 3.2 FABRICATED FITTINGS

- A. All fusion joints used in fabricated fittings shall be documented by a computer that records pressure and temperature applied at each fused joint. Computer printouts and electronic data for each fitting shall be made available to the owner upon request. The contractor shall ensure that each joint is fused at the temperature and pressure recommended by the pipe manufacturer in order to achieve the maximum pressure rating for that joint.
- B. All fittings for each project shall be labeled with a unique identifier that corresponds with the fusion computer printouts for each fitting.

### 3.3 INSULATING

- A. All Federal and State regulations applicable to the type of insulation and its use shall be strictly adhered to.
- B. Insulation shall be placed into the pipe by a single injection application. Fittings may be manufactured using one insulation injection for each open end of the fitting. In no case shall the jacket be drilled to perform, monitor, or inspect the injection.
- C. The maximum allowable void size is 0.05 in<sup>3</sup> (for reference, a 3/8-inch cube is .05 in<sup>3</sup>).
- D. Insulation and chemicals shall be prevented from coming in contact with the end or inside of the exposed core pipe.

### 3.4 CORE PIPE/INSULATION BOND

- A. Core pipe and fittings shall be bonded to the insulation with a minimum shear bond strength of 15 psi, or in such a manner as to produce insulation-to-insulation separation when a sample is tested in shear.
- B. The core pipe surface preparation will be performed in a manner that does not leave foreign material imbedded in the plastic. Gouges or scratches in the pipe surface that exceed the tolerance specified by the pipe manufacturer for the pipe pressure rating shall be cause for rejection.

### 3.5 PRODUCTION TESTING AND INSPECTION

- A. Only finished pipe lengths and fittings that meet the requirements of these specifications and drawings shall be used for destructive testing. Should any product fail to meet the visual quality control specifications listed below, that product shall be either re-built to meet the specifications or rejected. Only those products that meet all visual quality control specifications shall be considered final products suitable for receipt by the Owner or for laboratory or other destructive testing.

#### 1. VISUAL QUALITY CONTROL:

- a. FUSION JOINTS: All fusion joints on elbow and fitting extensions shall be examined before the core pipe assembly is installed into the outer jacket. Elbow and fitting extension fusion joints shall meet all the requirements of the pipe manufacturer and the following minimum requirements:
  - 1) On both sides, the double bead shall be rolled over to the surface and be uniformly rounded and consistent in size throughout the entire circumference of the joint.

- 2) The gap between the two beads must not be below the fusion surface throughout the entire circumference of the joint.
- 3) The displacement (perpendicular to the pipe centerline) between the fused ends must not exceed 10% of the pipe minimum wall thickness.
- 4) The width of the combined two beads for SDR 11 pipe shall be as follows:

<u>Pipe Dia.</u>	<u>Minimum Bead Width</u>	<u>Maximum Bead Width</u>
2" pipe	3/16-inch	5/16-inch
3" pipe	9/32-inch	3/8-inch
4" pipe	5/16-inch	7/16-inch
6" pipe	3/8-inch	9/16-inch
8" pipe	1/2-inch	11/16-inch

- 5) Both beads of each fusion joint shall be of a uniform size and shape. The ratio of the difference in individual bead widths divided by the total width of both beads shall not exceed 10%.
- b. DIMENSIONAL TOLERANCE: Each length of pipe and each fitting will be examined by the Contractor for off-set tolerances, insulation cut-back distances, exposed insulation face alignment and relief profile, and alignment and smoothness of core pipe ends.
  - c. INSULATION INTEGRITY: Completed pipe and fitting ends shall be inspected for voids in excess of 0.05 in<sup>3</sup> or discontinuities by the Contractor prior to coating. Any glazing left on the uncoated pipe end from the forms used during the insulating operation shall be removed before coating.
  - d. HDPE CARRIER PIPE: The surface of the HDPE carrier pipe shall be free of nicks, cuts, or gouges as outlined in Section 2.1 of this document.

## 2. LABORATORY TESTING

- a. Laboratory testing as identified in section 2.2B shall be conducted to verify the quality of the finished product. The density and K-factor shall be measured on insulation specimens of the appropriate size and under the specified conditions as set forth in the applicable ASTM test. Insulation specimens shall be retrieved by cutting a 12-inch section of insulated pipe from a production sample. The remaining length shall be trimmed to the dimensional tolerances of this specification to allow Owner use of that pipe section.
- b. Should the Contractor choose to test the "K" factor as outlined in ASTM C518, the testing apparatus shall be calibrated within 24 hours of the test using a calibration standard certified accurate by the National Bureau of Standards (NBS). The "K" factor test sample shall be removed from the insulated pipe, prepared for testing, and left open to the atmosphere at 70°F for a minimum of 24 hours prior to testing.
- c. In addition to the testing identified in section 2.2B, the following tests shall be performed to verify the quality of the finished product:
  - 1) Core pipe/insulation bond:
    - a) Two 6-inch lengths of cured insulated pipe shall be cut from one uncoated insulation face end of completed pipe length. The remaining length shall be trimmed according to the dimensional tolerances of this specification and coated to allow Owner use of that pipe section.

- b) One specimen shall be tested at +70°F. The other specimen shall be brought to -60°F in 4 hours or less, and remain there for at least 24 hours before testing. Acceptance will be indicated by a minimum shear bond strength of 15 psi and insulation-to-insulation (or insulation-to-insulation pipe surface film) separation or tearing.
- c) Testing shall be conducted as indicated on the attached drawing labeled "Core pipe/insulation bond test setup."

### 3.6 PACKING

- A. The core pipe spigot ends of all pipe and fittings shall be capped with PE pipe caps (Caplugs, or approved equal) and the plugs taped to the pipe with black electrical tape (such as 3M #33+) or other approved tape after final inspection and prior to shipment. Duct tape shall not be used to secure the PE pipe caps to the pipe spigot ends.
- B. Pre-insulated pipe shall be packed in bundles with a maximum gross weight of 4,000 pounds per bundle unless otherwise specified by the Owner. The end geometry of each bundle shall be rectangular. Each layer of pipe within the bundle including the bottom layer shall rest upon a minimum of 3 each 4-inch x 4-inch cross cleats banded to that individual layer using 1 1/4-inch steel strapping. All cleats shall feature a 45-degree stop block at least nominal 4-inches high by 4-inches long fastened securely to both ends of the cleats to prevent the pipe from rolling off the cleat when the banding is cut. The outer cross cleats shall be installed between 1 to 2-feet from the insulation face of the pipe ends with the middle cleat centered on the bundle. In addition, 1 1/4-inch steel straps shall securely fasten all the layers together to form a complete bundle. Bundles 5 pipes wide by 5 pipes high are recommended.
- C. All fittings and couplings shall be packaged in crates sheathed with minimum 1/2-inch sheathing not to exceed 4 ft x 4 ft x 8 ft. Minimum nominal 2-inch x 3-inch framing members shall be installed in all corners of the crate and fastened securely to the sheathing. On crates longer than 6-feet, framing members shall be installed along the shorter centerline of all the 4 long panels. The framing members shall be securely fastened to each other and to the sheathing. For crates 4-feet long or less, 2 each 4-inch x 4-inch cleats shall be installed on the bottom edges of the crate to provide for forklift handling. For crates longer than 4-feet, 3 cleats shall be installed, with the middle cleat centered on the crate. These cleats shall be fastened through the bottom sheathing and also banded to the crate with 1 1/4-inch wide steel bands that wrap around the entire crate. The crates shall be designed to stack 3 crates high, provide protection to the contents during rough ocean, air freight transport, and on-site handling without damage.
- D. All bundles and crates will be clearly marked per the following:

Village Safe Water

Mountain Village

Supplier's Name

### 3.7 FINAL INSPECTION

- A. After completion of the quantity of pipe and fittings contracted for, the Owner may perform a final inspection at the fabrication point. The certified results of all required laboratory tests made during production by the Contractor shall be made available in report form at this time. During the final inspection, the product packing will be inspected to see that all specifications listed in section 3.6 have been met. Should any of the packing fail to meet the specifications, the Contractor shall re-pack the pipe to meet the specifications.

END OF SPECIFICATION

PLOTTED: Mar 16, 2005, 15:20:36 BY: ktuning  
LAYOUT: 11 X 8.5, FILENAME: R:\Drawings\REFERENCE\_DRAWINGS\Civil\General\Arctic\_Pipe\Gravity\_GRV\_HTrc\_Bends\_45.dwg

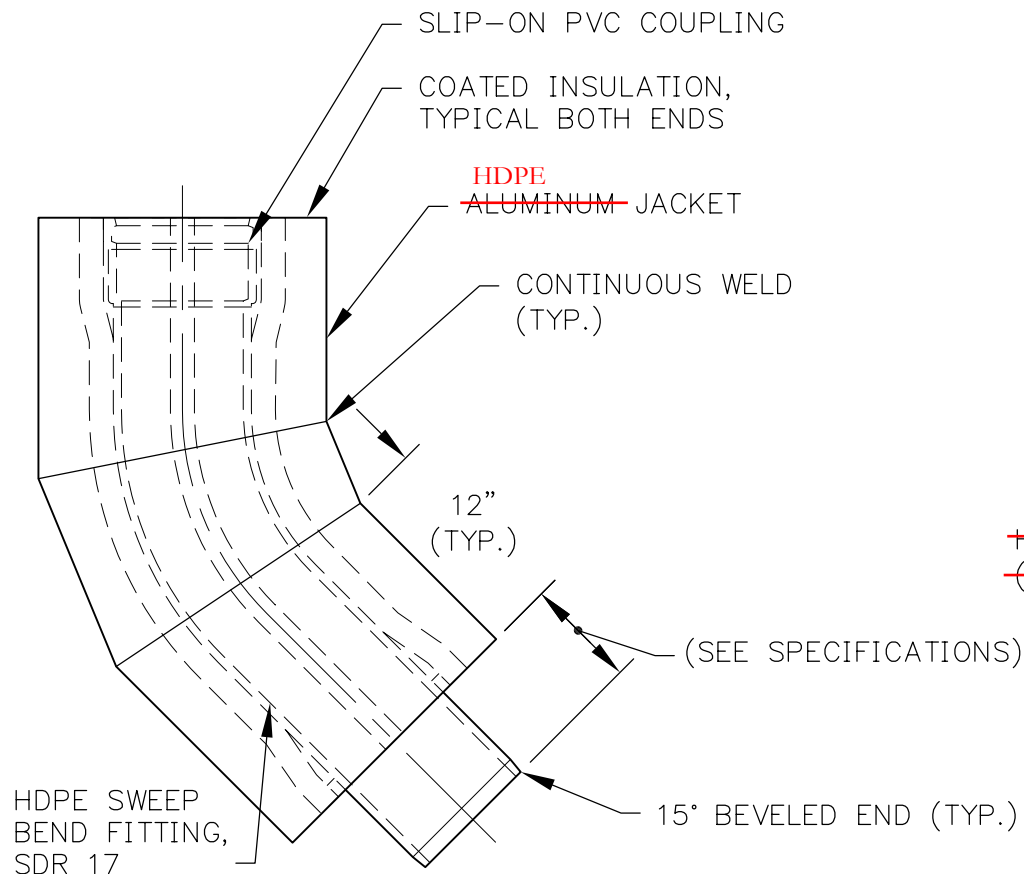
# ANTHC / VSW STANDARD DETAIL

~~GRAVITY SEWER~~ ~~WATER SERVICE DUCT~~  
~~45° ELBOW~~ ~~45° SWEEP ELBOW~~  
~~WITH HEAT TRACE~~

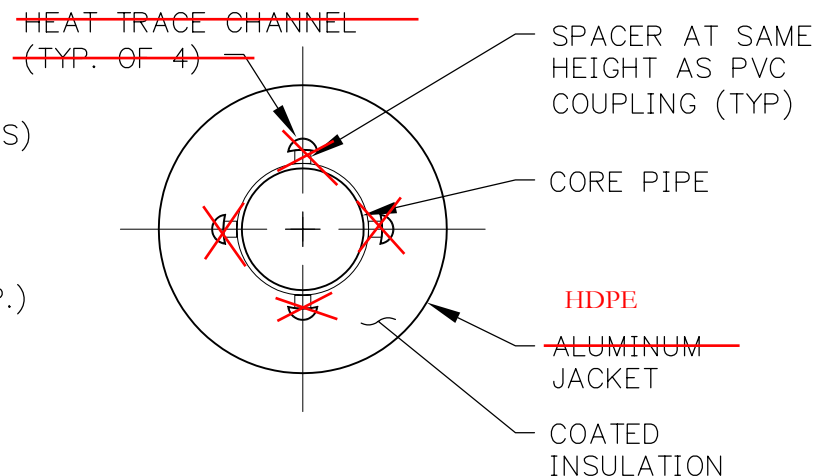
## NOTES:

- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

NOMINAL INSULATED PIPE	INNER CORE PIPE O.D.	NOMINAL OUTER JACKET
4"	4.500"	<del>12"</del> +1/4" -0"
<del>6"</del>	<del>6.625"</del>	<del>12"</del> +1/4" -0"
<del>8"</del>	<del>8.625"</del>	<del>15"</del> +1/4" -0"



SIDE VIEW



SPIGOT END VIEW

DATE	REVISIONS	INITIALS
02/24/05	RE-ENGINEERED	GM & KB



ALASKA NATIVE  
TRIBAL HEALTH CONSORTIUM  
DIVISION OF ENVIRONMENTAL  
HEALTH AND ENGINEERING  
1901 SOUTH BRAGAW STREET, SUITE 200  
ANCHORAGE, ALASKA, 99508-3440  
(907) 729-3600

## ANTHC / VSW STANDARD DETAIL

~~GRAVITY SEWER FITTING~~ ~~WATER SERVICE DUCT~~  
~~45° ELBOW~~ ~~45° SWEEP ELBOW~~  
~~WITH HEAT TRACE~~

DATE: 3/26/03  
SCALE: 1" = 1'  
DRAWN BY: K.B.

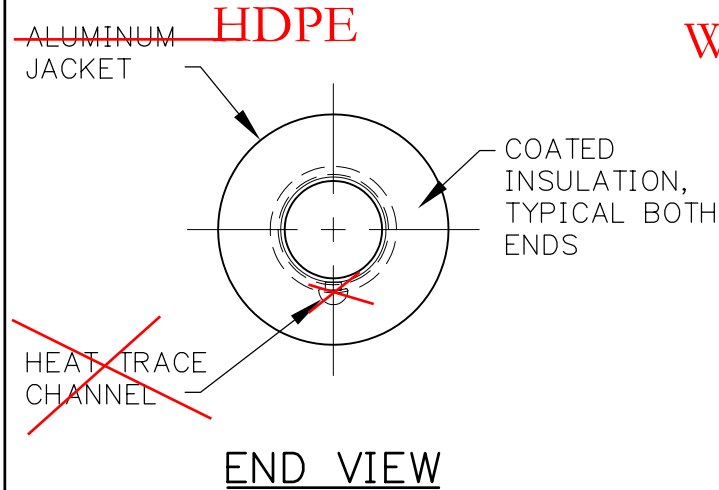
FILE NAME: Arctic\_Pipe\_GRV\_HTrc\_Bends\_45  
LAYOUT NAME: 11 X 8.5  
PROJ ENG: G.M.



PLOTTED: Mar 16, 2005, 15:15:51 BY: ktuning  
LAYOUT: 11 X 8.5, FILENAME: R:\Drawings\REFERENCE\_DRAWINGS\Civil\General\Arctic\_Pipe\Grv\_HTrc\_Straight.dwg

ANTHC / VSW STANDARD DETAIL

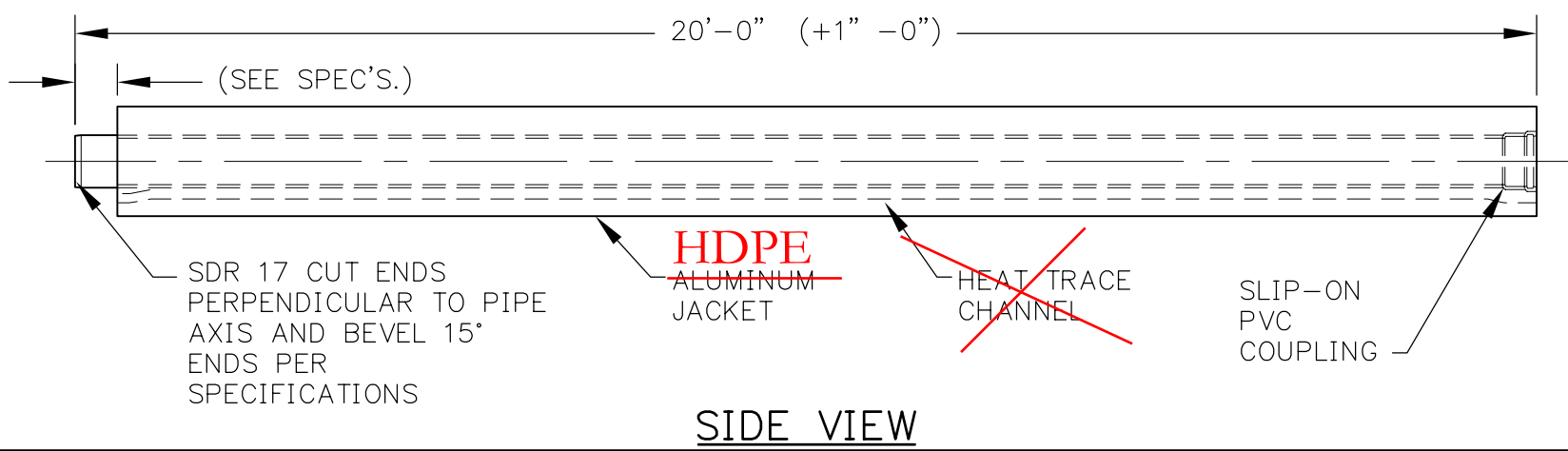
INSULATED POLYETHYLENE GRAVITY SANITARY  
SEWER PIPE WITH HEAT TRACE  
WATER SERVICE DUCT




NOTES:

- 1. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

NOMINAL INSULATED PIPE	INNER CORE PIPE O.D.	NOMINAL OUTER JACKET
4"	4.500"	10 INCH +1/4" -0"
6"	6.625"	12 INCH +1/4" -0"
8"	8.625"	15 INCH +1/4" -0"



DATE	REVISIONS	INITIALS
02/24/05	RE-ENGINEERED	GM & KB



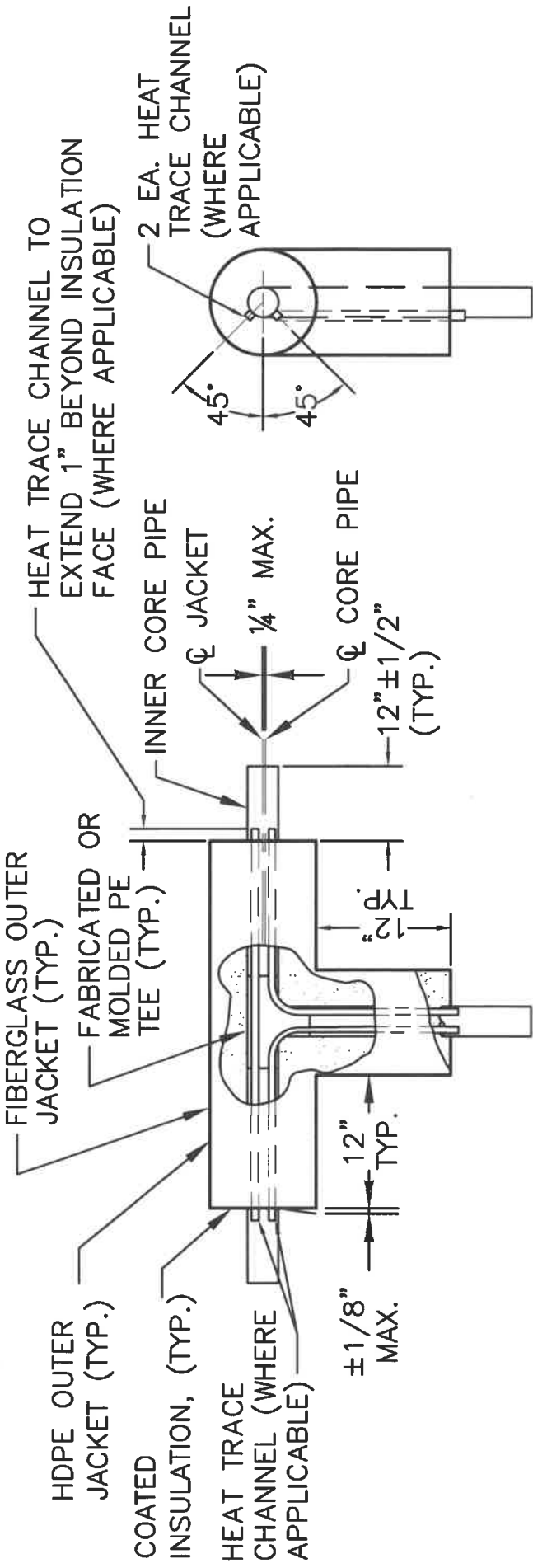
ALASKA NATIVE  
TRIBAL HEALTH CONSORTIUM  
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HEALTH AND ENGINEERING  
1901 SOUTH BRAGAW STREET, SUITE 200  
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(907) 729-3600

ANTHC / VSW STANDARD DETAIL  
INSULATED POLYETHYLENE GRAVITY  
SANITARY SEWER PIPE  
WITH HEAT TRACE

WATER SERVICE  
DUCT

DATE: 3/26/03	FILE NAME: Arctic_Pipe_Grv_HTrc_Straight
SCALE: 1" = 30"	LAYOUT NAME: 11 X 8.5
DRAWN BY: K.B.	PROJ ENG: G.M.

TEE TABLE		
NOMINAL SIZE	PIPE DIAMETER	NOM. OUTER JACKET
3"	3.50"	12"
4"	4.50"	12"
6"	6.625"	12"



SIDE VIEW

END VIEW

WMH-5

HDPE WATER TEE - HDPE JACKET

NOT TO SCALE