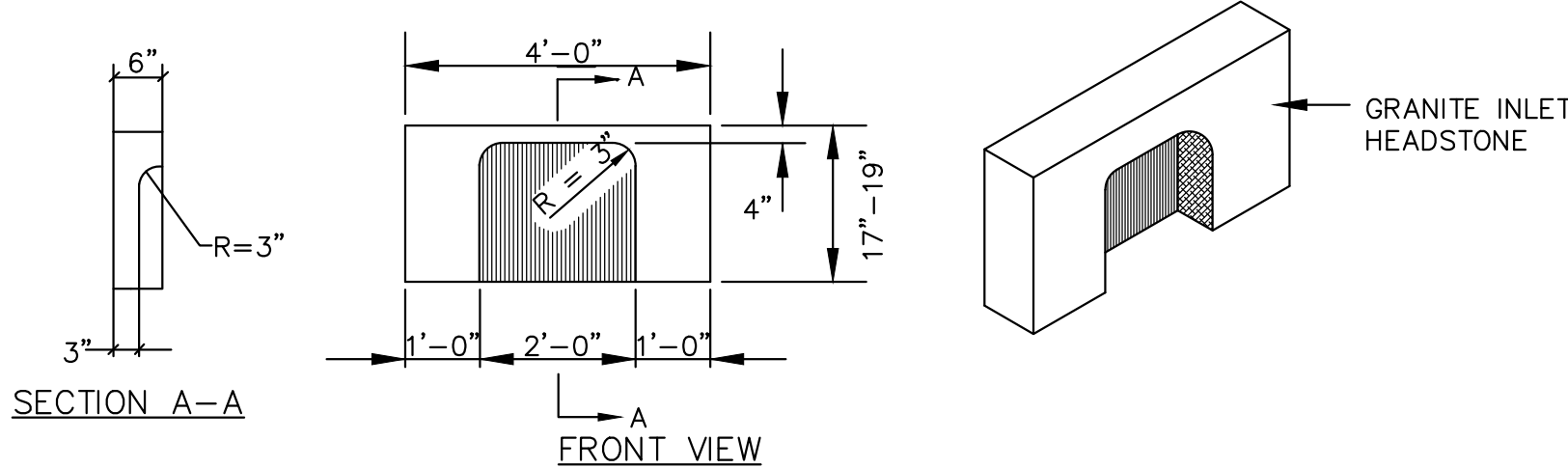


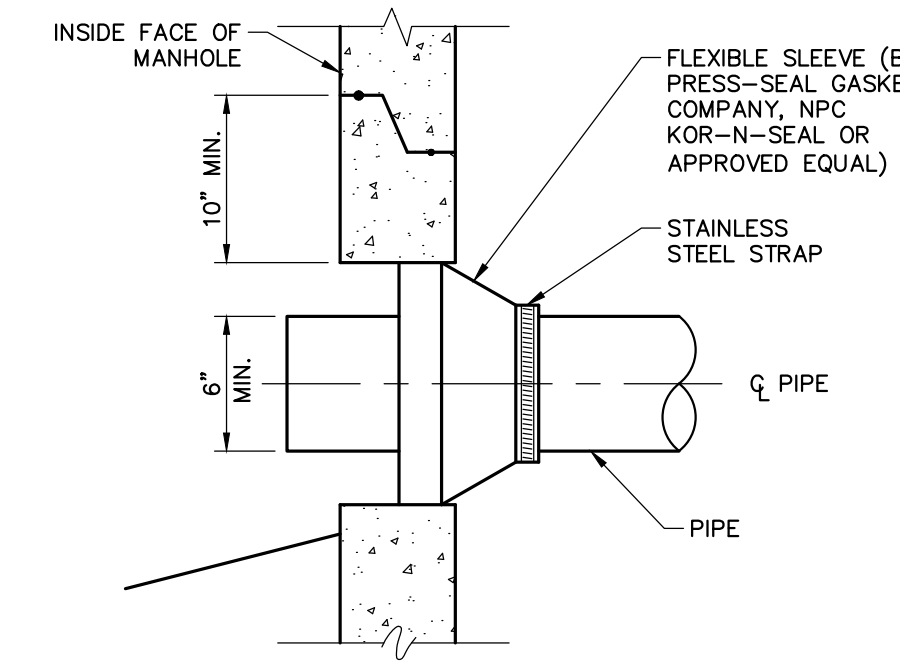
| SIZE   | A       | B       | C       | D      | E      | F       | G       | H       |
|--------|---------|---------|---------|--------|--------|---------|---------|---------|
| 6 in.  | 5 1/2"  | 13 3/8" | 13 3/4" | 5 3/8" | 5 7/8" | 11 5/8" | 8 1/2"  | 7 1/4"  |
| 8 in.  | 7 1/2"  | 15"     | 15 3/8" | 5 1/2" | 5 3/8" | 13 3/4" | 9 3/4"  | 9 3/8"  |
| 10 in. | 9 1/2"  | 16"     | 16 1/4" | 6"     | 4 1/2" | 14 1/8" | 11 1/2" | 12 3/8" |
| 12 in. | 11 1/2" | 17"     | 17 1/2" | 8"     | 3 1/2" | 17"     | 12 1/2" | 13 3/8" |

(AS MANUFACTURED BY THE ETHERIDGE FOUNDRY IN PORTLAND, ME.)  
 NOTE: CONTRACTOR SHALL UTILIZE THE "CASCO TRAP" AS MANUFACTURED BY THE ETHERIDGE FOUNDRY, OR AN APPROVED EQUIVALENT.

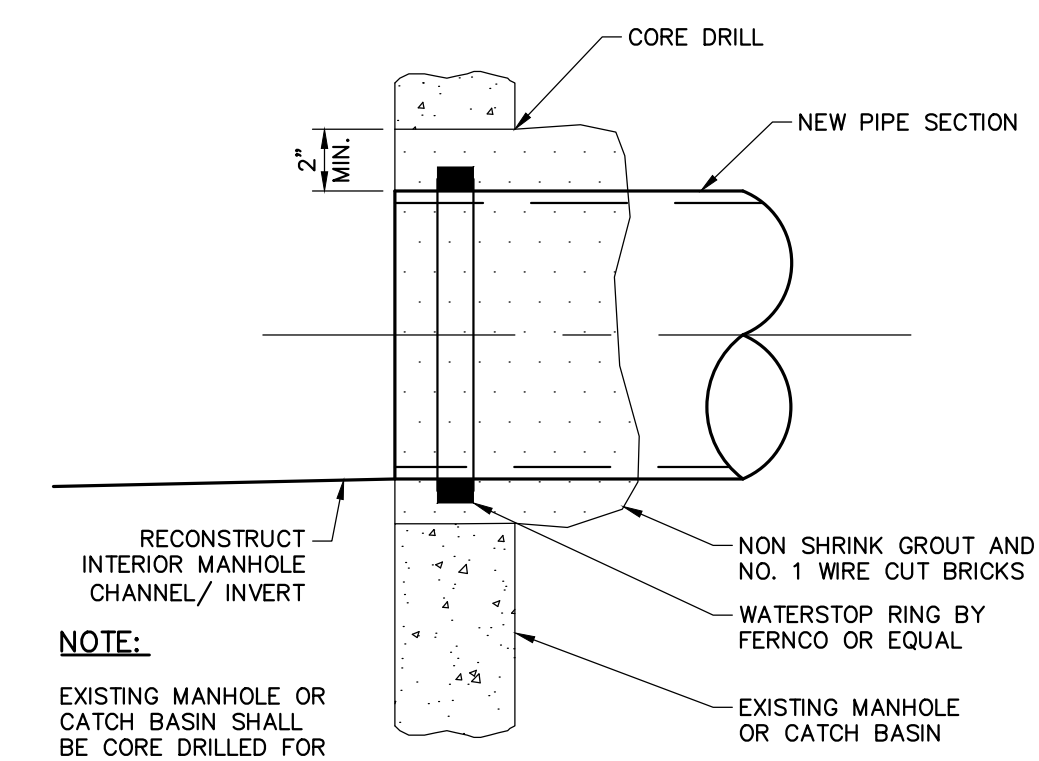
**CASCO TRAP**  
N.T.S.



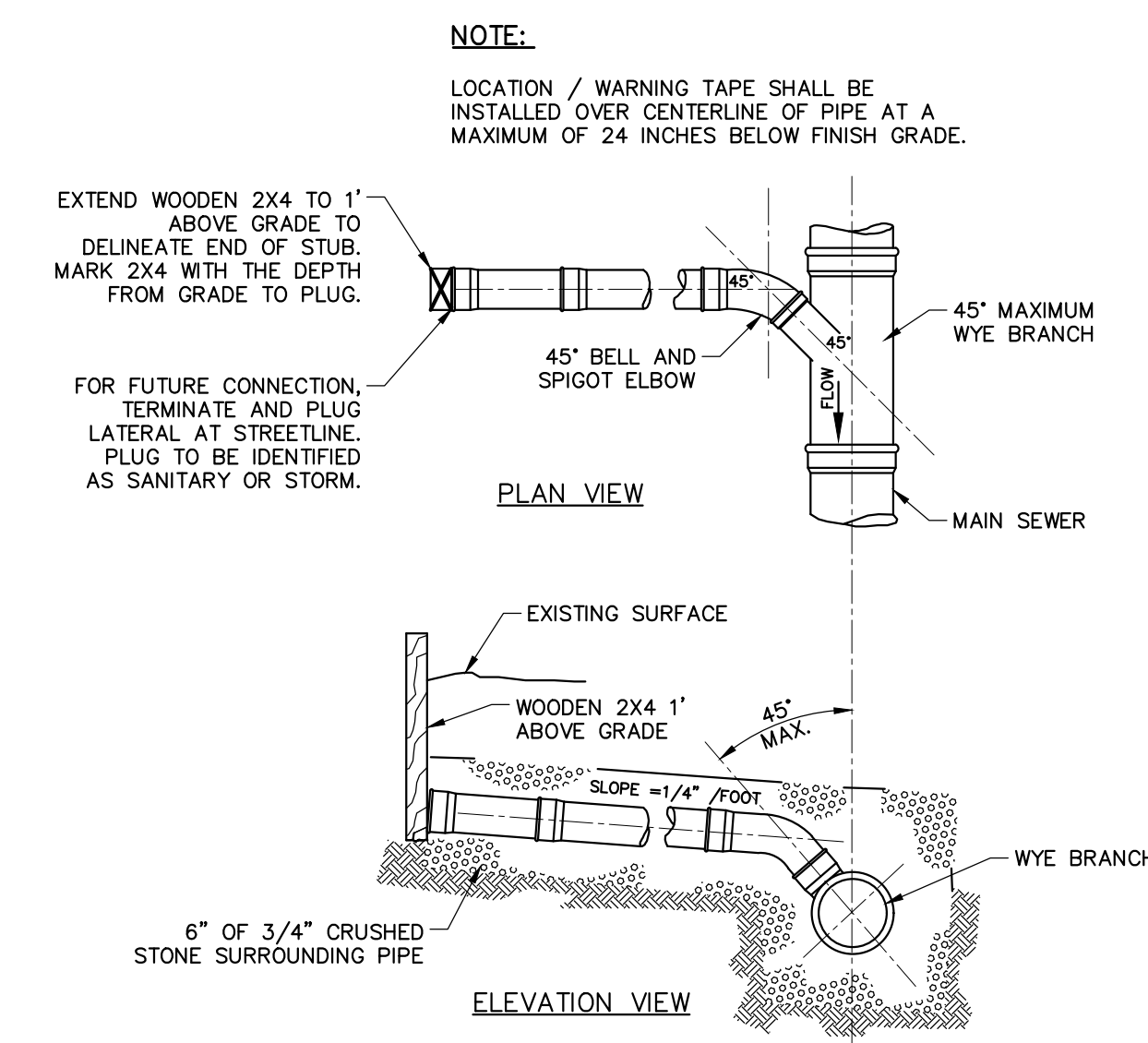
**4' GRANITE HEADSTONE FOR CATCH BASIN INLET**  
N.T.S.



**NEW PIPE TO NEW STRUCTURE CONNECTION DETAIL**  
N.T.S.

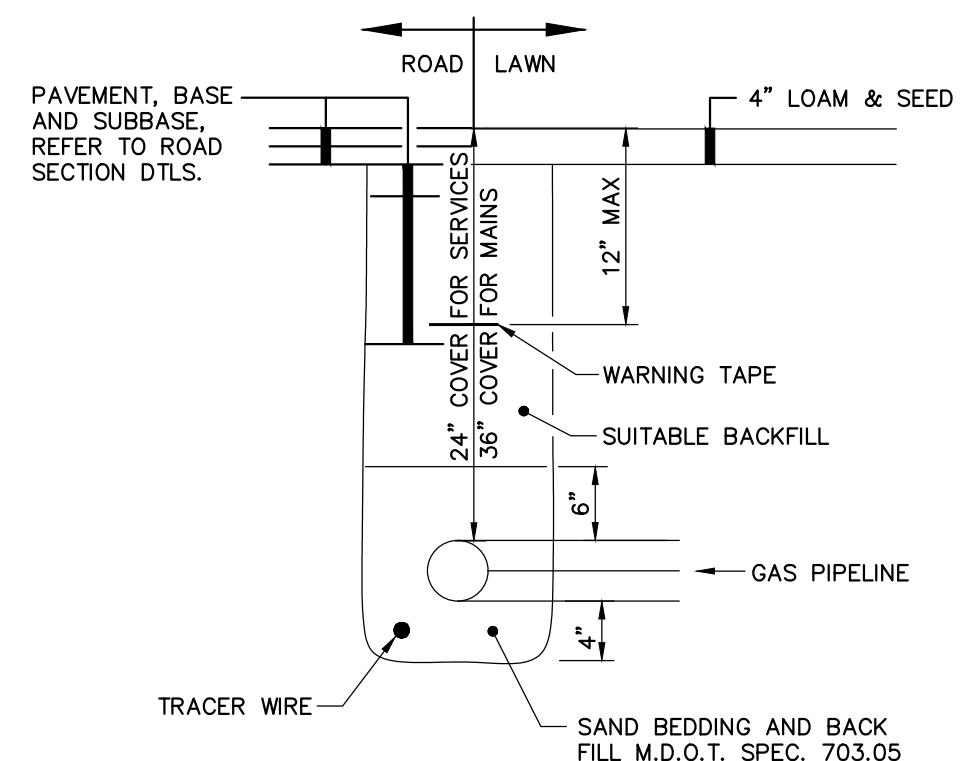


**NEW PIPE TO EXISTING STRUCTURE CONNECTION DETAIL**  
N.T.S.



**TYPICAL HOUSE LATERAL WYE CONNECTION DETAILS**  
N.T.S.

NOTE: FOR INSERTA TEE CONNECTIONS TO SEWER AND STORMDRAIN MAINS, REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.



**NOTES:**

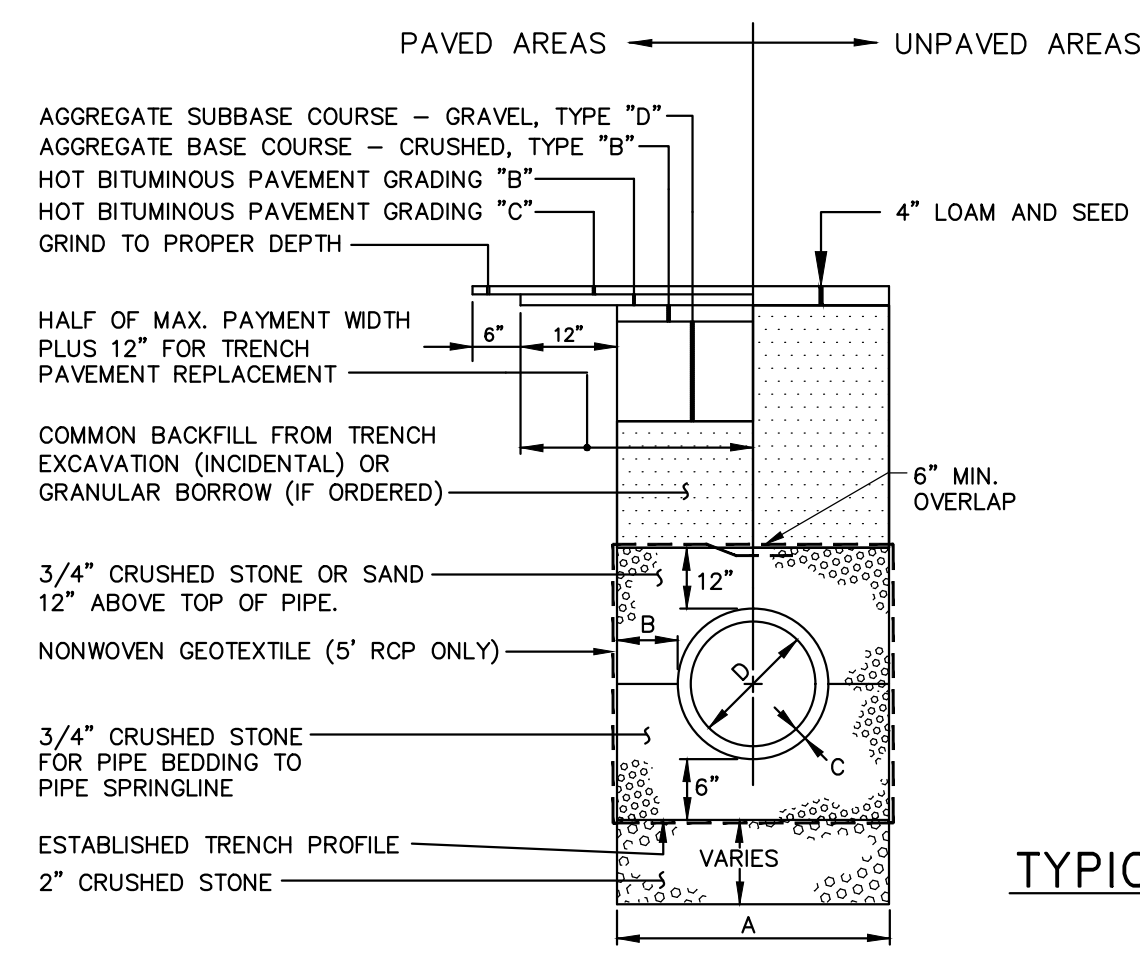
- NATURAL GAS MAIN IN DEERING AND STATE STREET WILL BE INSTALLED IN ADVANCE OF THIS PROJECT BY OTHERS; THIS DETAIL APPLIES TO ANY RELOCATIONS DETERMINED NECESSARY DURING CONSTRUCTION.
- CONTRACTOR SHALL PERFORM EXCAVATION AND PROVIDE BEDDING, BACKFILL, AND SURFACE RESTORATION; UNTIL SHALL PROVIDE PIPING, VALVES AND FITTINGS. CONTRACTOR SHALL COORDINATE ALL WORK WITH UNTIL INC.

**NATURAL GAS PIPE**  
N.T.S.

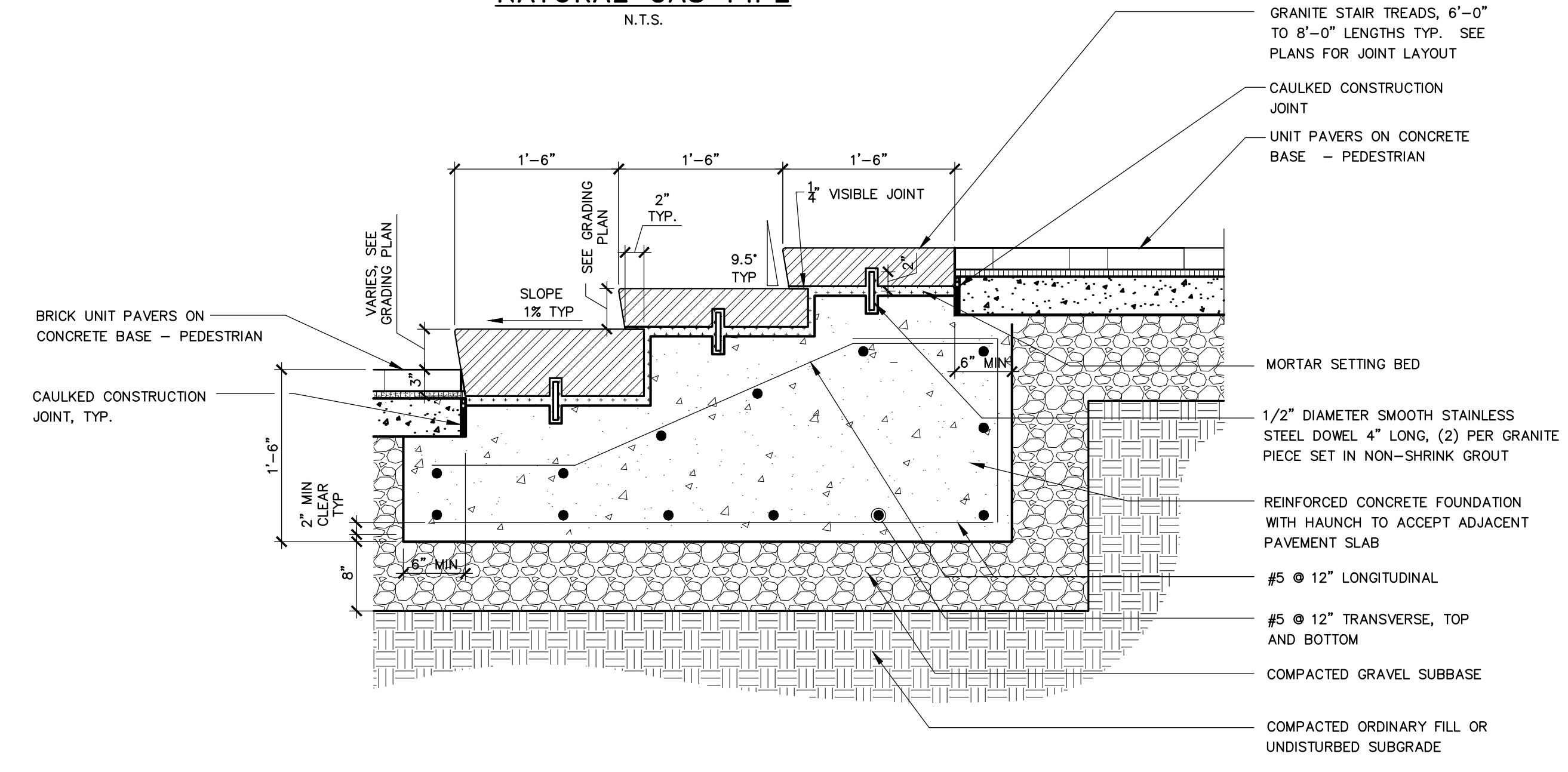
**NOTES:**  
 DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION. SEE OTHER DETAILS.  
 ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES.

- NOTES:**
- ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY. IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
  - DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9".
  - DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE FOLLOWING TABLE.

| PIPE DIAMETER, D (INCHES) | MAX. TRENCH WIDTH, A (FEET) |
|---------------------------|-----------------------------|
| 4                         | 4.0                         |
| 6                         | 4.0                         |
| 8                         | 4.0                         |
| 10                        | 4.0                         |
| 12                        | 5.0                         |
| 15                        | 5.0                         |
| 18                        | 5.0                         |
| 21                        | 5.0                         |
| 24                        | 6.0                         |
| 27                        | 6.0                         |
| 30                        | 6.0                         |
| 36                        | 6.0                         |
| 42                        | 7.0                         |
| 48                        | 7.0                         |
| 60                        | 9.0                         |



**TYPICAL PIPE TRENCH INSTALLATION**  
N.T.S.



**GRANITE STAIRS**  
N.T.S.

**TYPICAL PIPE TRENCH INSTALLATION**  
N.T.S.

41 Hutchins Drive  
 Portland, Maine 04102  
 800.426.4262 | www.woodardcurran.com

**WOODARD & CURRAN**  
 COMMITMENT & INTEGRITY DRIVE RESULTS

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| REV | DESCRIPTION | DATE |
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|     |             |      |

DESIGNED BY: [blank]  
 CHECKED BY: [blank]  
 DRAWN BY: [blank]

**CIVIL DETAILS - 3**

CITY OF PORTLAND  
 PORTLAND, MAINE 04101

**THAMES STREET  
 EXTENSION PROJECT**

JOB NO.: 0230637.37  
 DATE: MAY 2018  
 SCALE:  
 SHEET: 10 OF 13