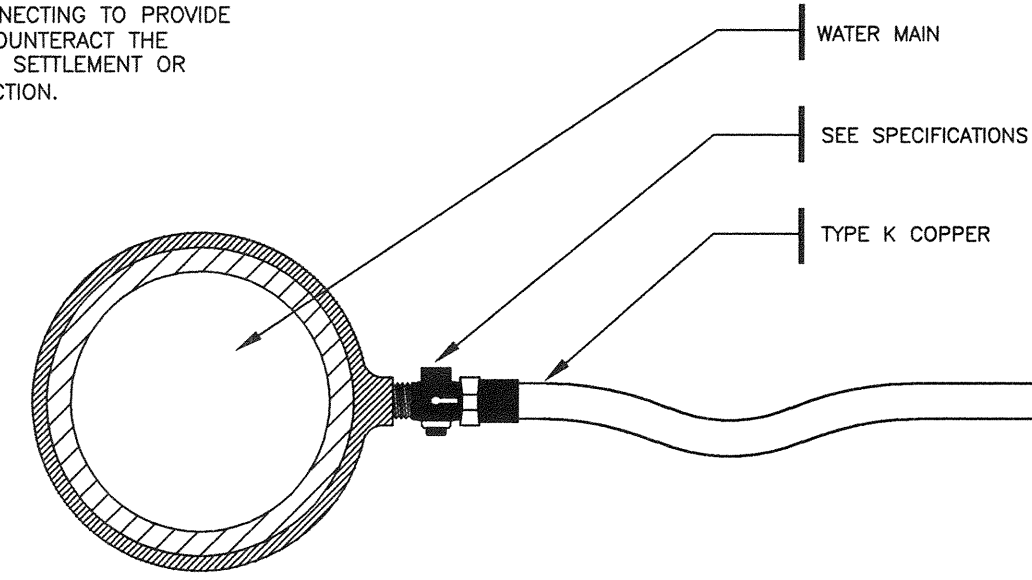
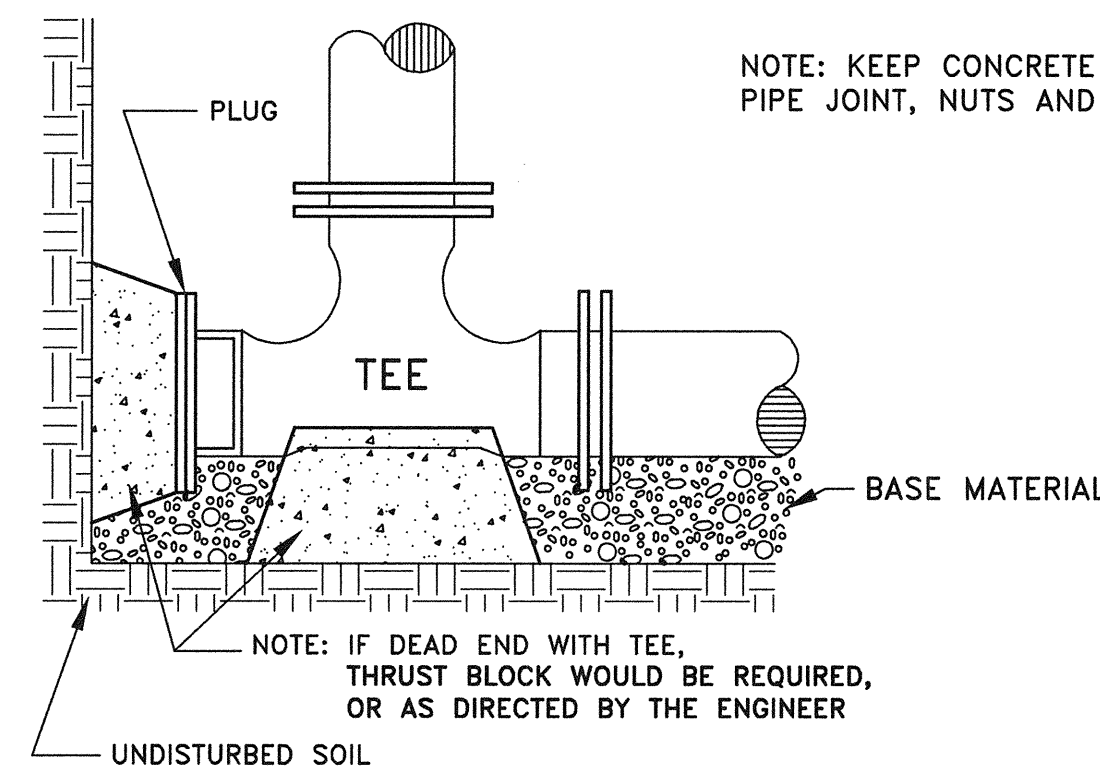


NOTE: SERVICE CONNECTIONS (DIRECT TAPS AND SERVICE CLAMPS) WILL BE INSTALLED SO THAT THE OUTLET IS AT AN ANGLE OF NOT MORE THAN 45° ABOVE THE HORIZONTAL. ALWAYS PUT A BEND OR "GOOSENECK" IN THE SERVICE LINE PRIOR TO CONNECTING TO PROVIDE FLEXIBILITY AND "GIVE" TO COUNTERACT THE EFFECTS OF A LOAD DUE TO SETTLEMENT OR EXPANSION AND/OR CONTRACTION.



SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL ON SHEET B

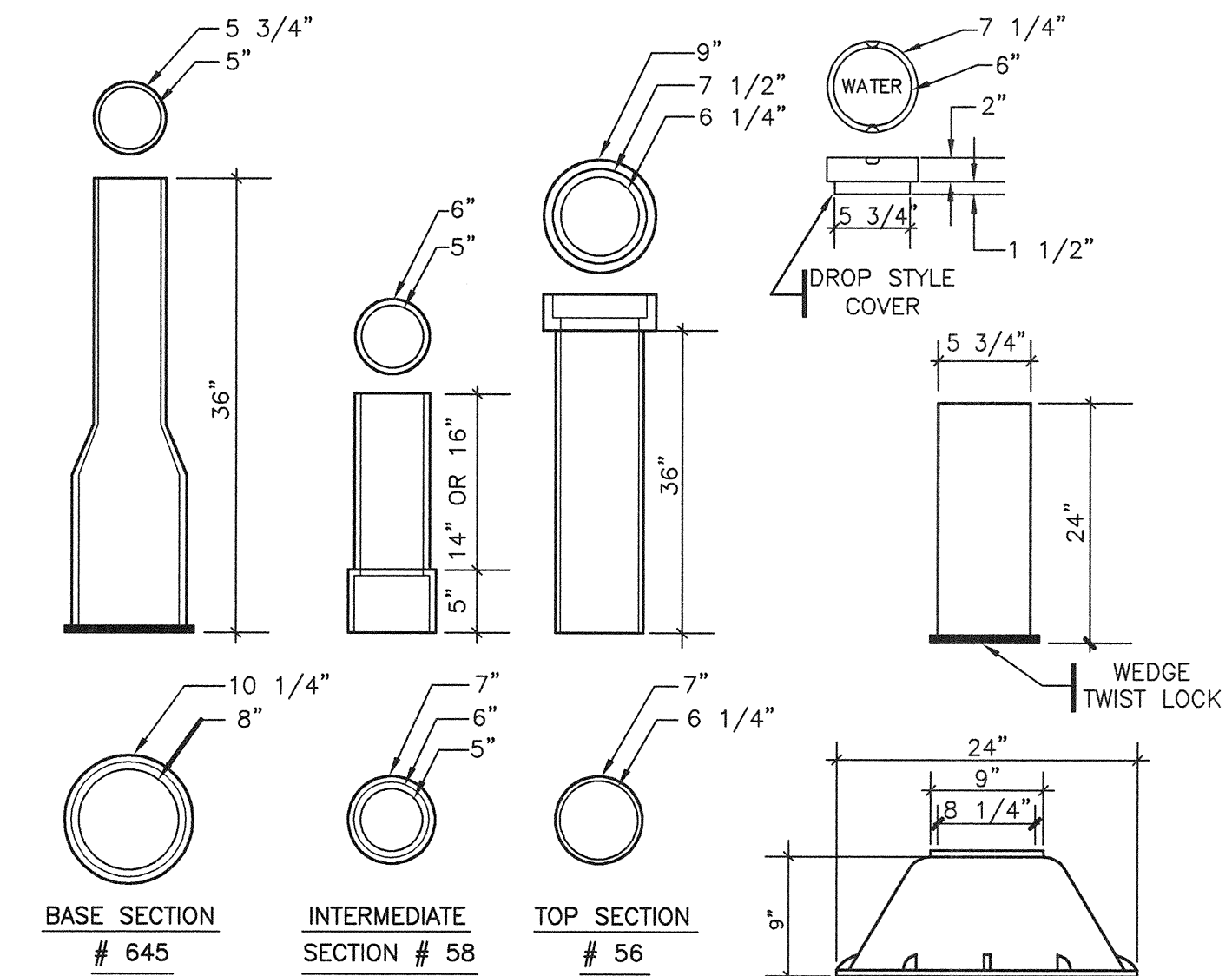
WATER SERVICE
 (1 1/2" AND 2 1/2" C.C. OR IRON PIPE THREAD)
 N.T.S.



NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS

NOTE: IF DEAD END WITH TEE, THRUST BLOCK WOULD BE REQUIRED, OR AS DIRECTED BY THE ENGINEER

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL
STANDARD TEE BLOCKING
 N.T.S.



BASE SECTION # 645

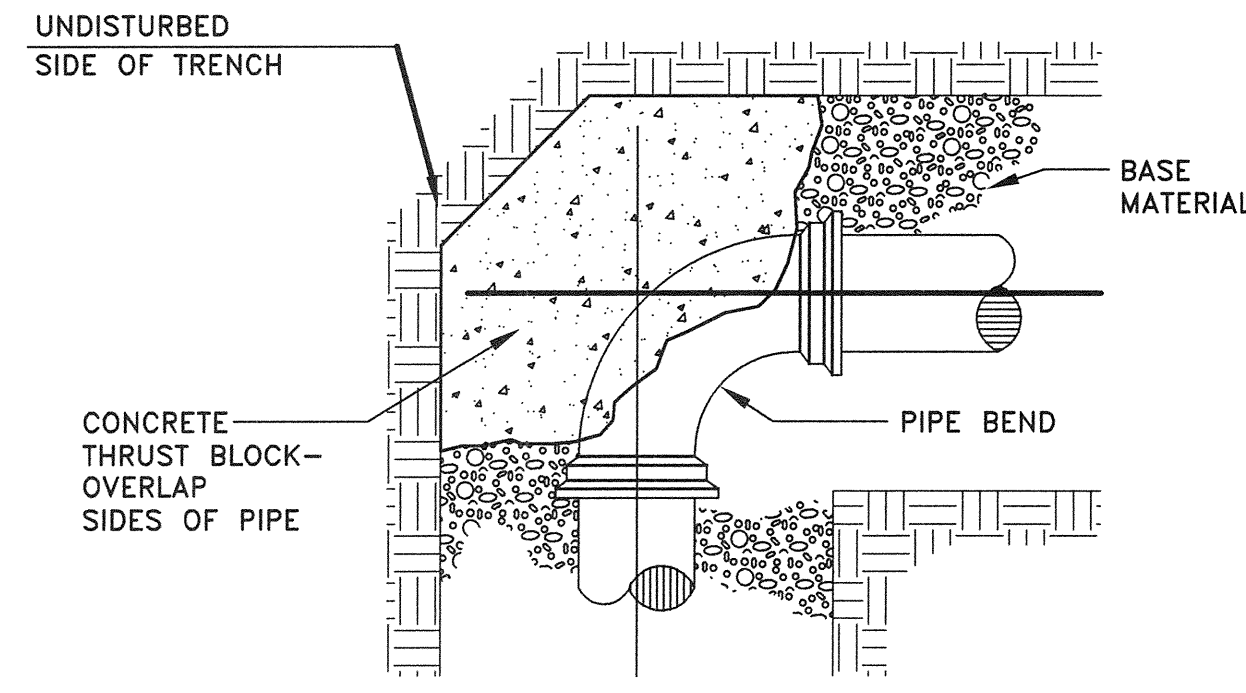
INTERMEDIATE SECTION # 58

TOP SECTION # 56

NOTE: NUMBERS ARE FOR 5.25" BUFFALO VALVE BOXES

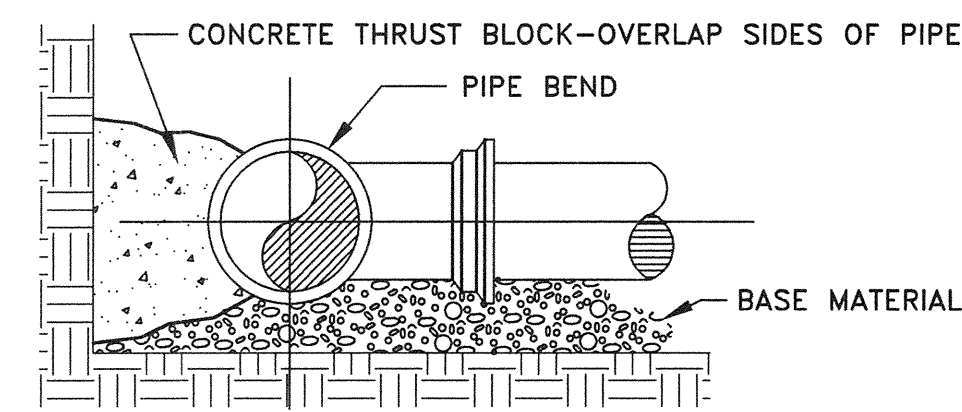
VALVE BOX BASE FOR USE WITH # 160 AIR VALVES

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL
TYPICAL VALVE BOXES
 N.T.S.



PLAN VIEW

NOTE: KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS AND BOLTS

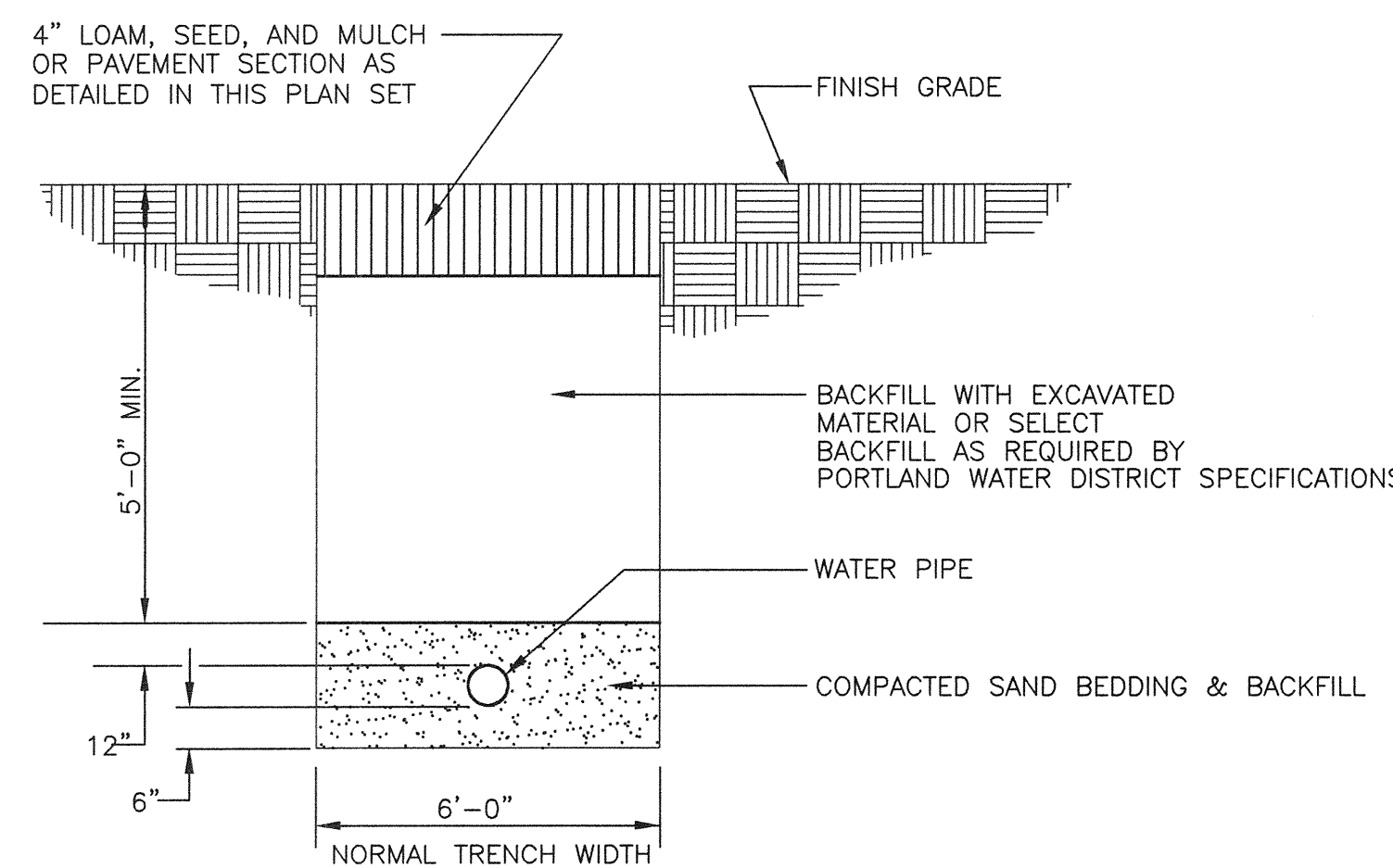


SECTION

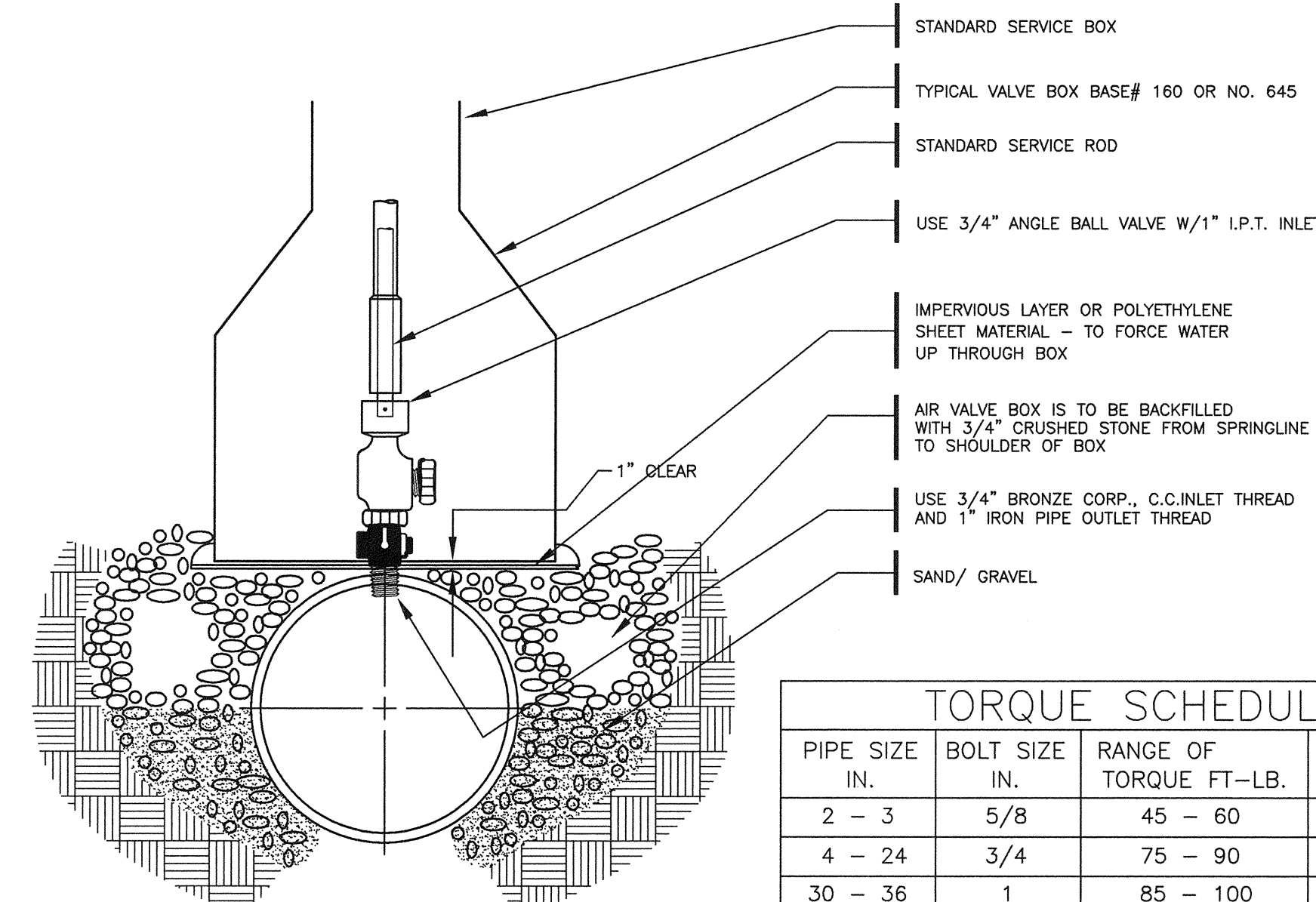
| THRUST/RETAINER GLAND SCHEDULE | | |
|--------------------------------|--|--|
| 1/4 BEND (90°) | | USE POURED-IN-PLACE THRUST BLOCK w/RETAINERS |
| 1/8 BEND (45°) | | THRUST BLOCK w/RETAINERS |
| 1/16 BEND (22 1/2°) | | THRUST BLOCK |
| 1/32 BEND (11 1/4°) | | THRUST BLOCK |

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL
TYPICAL THRUST BLOCK PLACEMENT ON BENDS
 N.T.S.



SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL
WATER SERVICE TRENCH SECTION
 N.T.S.



| TORQUE SCHEDULE | | | |
|-----------------|---------------|-------------------------|-----------------------|
| PIPE SIZE IN. | BOLT SIZE IN. | RANGE OF TORQUE FT.-LB. | LENGTH OF WRENCH IN * |
| 2 - 3 | 5/8 | 45 - 60 | 8 |
| 4 - 24 | 3/4 | 75 - 90 | 10 |
| 30 - 36 | 1 | 85 - 100 | 12 |
| 42 - 48 | 1 1/4 | 105 - 120 | 14 |

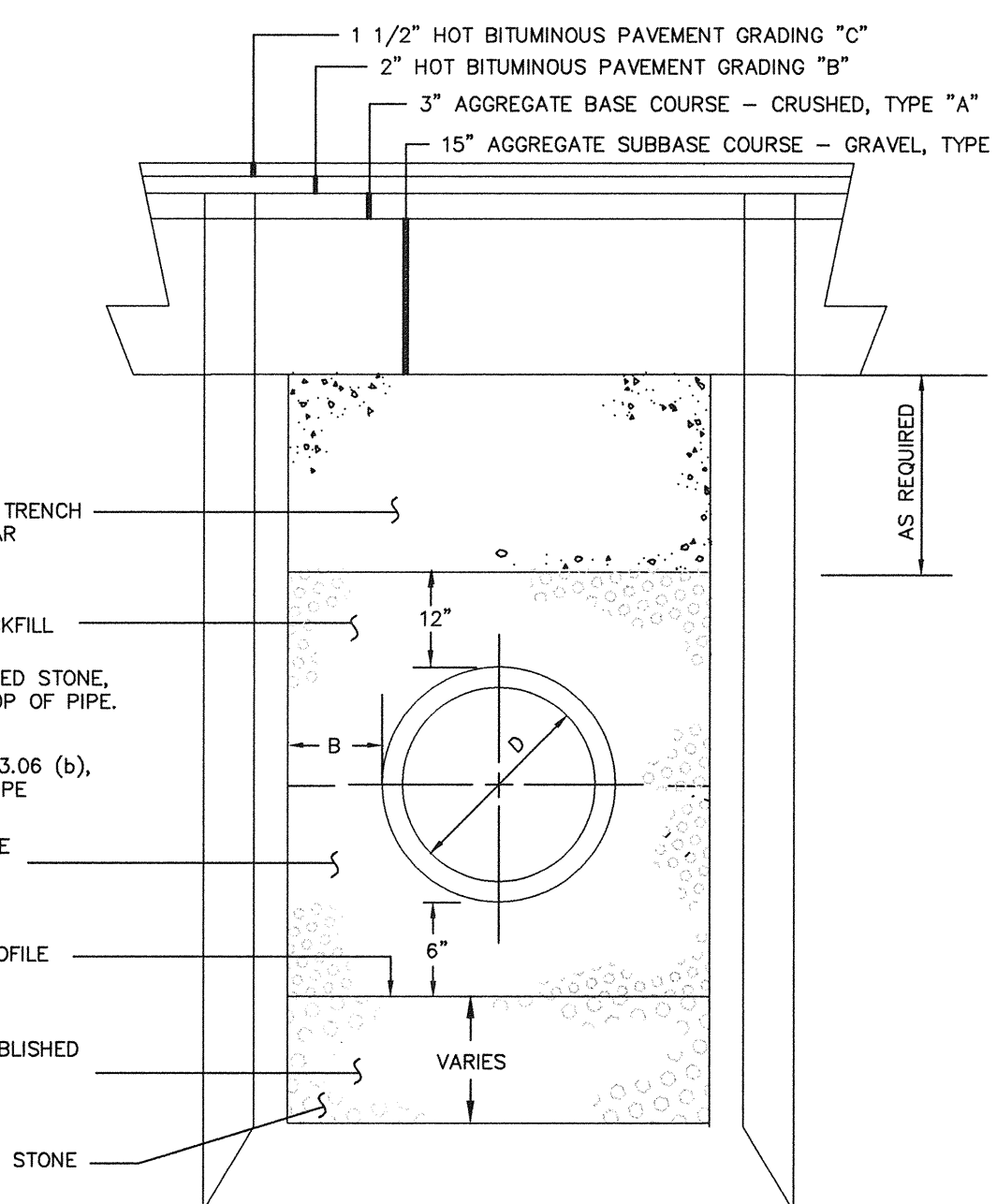
* THE TORQUE LOADS MAY BE APPLIED WITH TORQUE MEASURING OR TORQUE INDICATING WRENCHES, WHICH MAY ALSO BE USED TO CHECK THE APPLICATION OF APPROXIMATE TORQUE LOADS APPLIED BY A PERSON TRAINED TO GIVE AN AVERAGE PULL ON A DEFINITE LENGTH OF REGULAR SOCKET WRENCH.

SEE NOTE 3 IN THRUST BLOCK NOTES DETAIL
TYPICAL AIR VALVE SECTION (1")
 N.T.S.

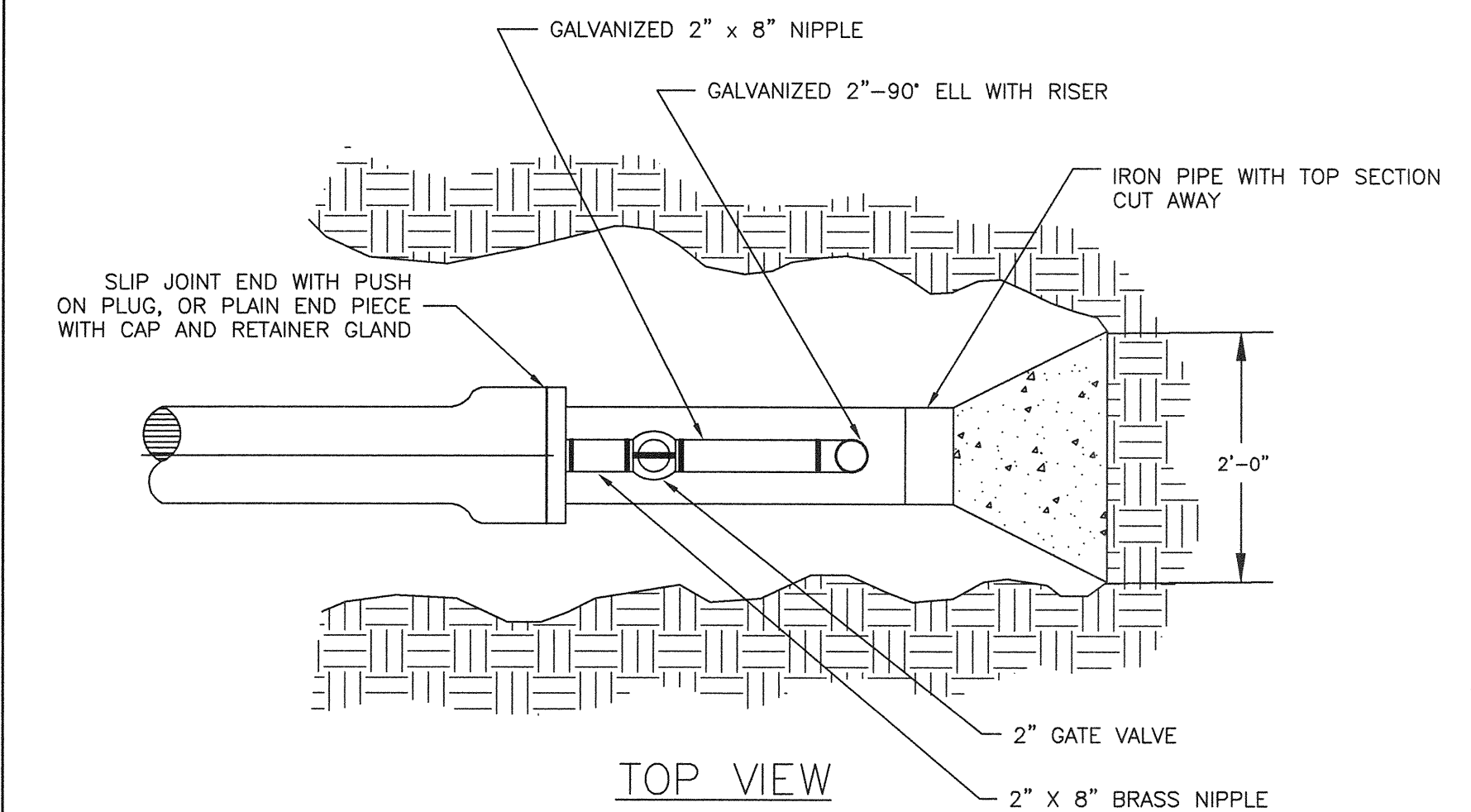
| PIPE DIAMETER DIMENSION | |
|-------------------------|-----------|
| D | B |
| 12" | 0'-10" |
| 15" | 0'-8 1/4" |
| 18" | 0'-6 1/2" |

NOTES: TRENCH PAVEMENT REPLACEMENT SHALL EXTEND 9" BEYOND EDGE OF TRENCH.

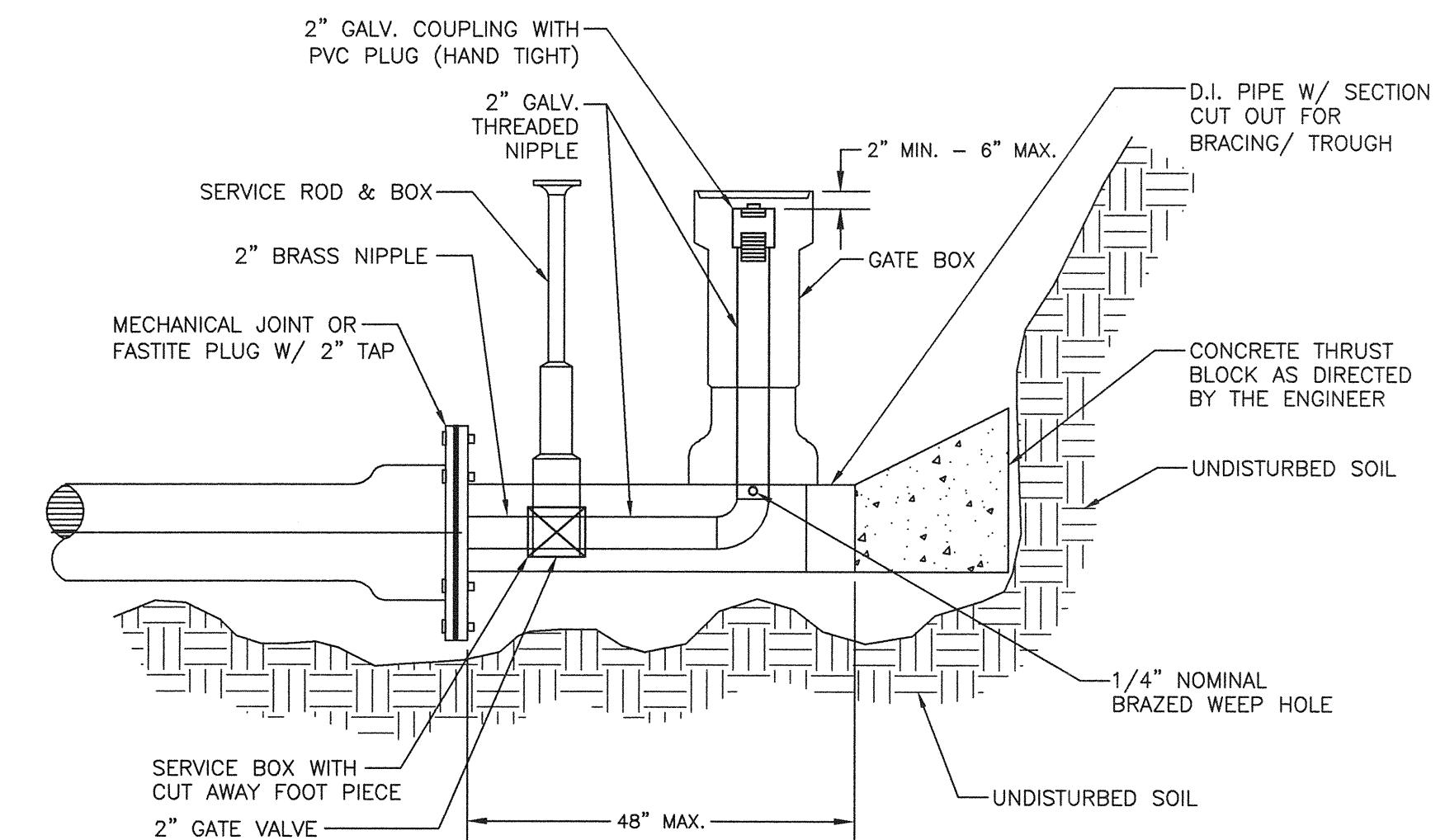
- COMMON BACKFILL FROM TRENCH EXCAVATION OR GRANULAR BORROW (IF ORDERED)
- COMPACTED SPECIAL BACKFILL
- FLEXIBLE PIPE: CRUSHED STONE, 703.30, 12" ABOVE TOP OF PIPE. SAND NOT ALLOWED.
- RIGID PIPE: SAND, 703.06 (b), 12" ABOVE TOP OF PIPE
- CRUSHED STONE FOR PIPE BEDDING, 703.30
- ESTABLISHED TRENCH PROFILE
- EXCAVATION BELOW ESTABLISHED TRENCH PROFILE
- 2" CRUSHED STONE



TYPICAL PIPE INSTALLATION DETAIL
 N.T.S.



TOP VIEW



ELEVATION VIEW

STANDARD 2" BLOW OFF
 N.T.S.

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Title:
UTILITY AND DRAINAGE DETAILS

Scale: NONE

North:

Sheet No.:

10

