

ATTACHMENT 2

Bulldog Mine
Discharge Pipeline
Located in Mineral County, Colorado
Sec.25, T.42N., R.1W, N.M.P.M

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GENERAL AND SITE NOTES

1. THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT A WATER DISCHARGE PIPELINE FROM THE 9400' PORTAL AT THE BULLDOG MINE TO A 24" DIAMETER CULVERT IN WINDY GULCH.
2. NO EXCAVATION OR WORK SHALL BEGIN UNTIL THE CONTRACTOR HAS OBTAINED, AT HIS EXPENSE, ANY PERMITS REQUIRED TO PERFORM THE PROPOSED WORK, INCLUDING A STORM WATER DISCHARGE PERMIT (IF REQUIRED).
3. THE CONTRACTOR SHALL NOT DISTURB AREAS BEYOND THE PROJECT LIMITS UNLESS OTHERWISE DIRECTED BY THE OWNER.
4. THE APPROXIMATE DISTURBANCE AREA IS APPROXIMATELY 2,500 SQ. FT. IN SIZE. THE CONTRACTOR SHALL MAINTAIN DRAINAGE DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. ANY REWORK OF MATERIALS DUE TO LACK OF THIS MAINTENANCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
5. THE PHYSICAL FEATURES WITHIN THE LIMITS OF THE PROJECT HAVE BEEN SHOWN BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL FEATURES PRIOR TO BEGINNING ANY WORK.
6. THE CONTRACTOR SHALL KEEP ALL OPERATIONS INSIDE PROJECT LIMITS AS ESTABLISHED BY THE OWNER. THE CONTRACTOR SHALL KEEP EQUIPMENT AND MATERIALS WITHIN THESE LIMITS AND CLEAR OF THE PUBLIC ROADWAYS. CONSTRUCTION ACTIVITIES, STAGING, PARKING, OR OFF-SITE DISPOSAL SHALL NOT ENCROACH UPON PRIVATE OR PUBLIC LANDS WITHOUT WRITTEN APPROVAL FROM THE PROPERTY OWNER OR LAND MANAGEMENT AGENCY.
7. SHOULD ANY QUESTIONS ARISE OR ANY DISCREPANCIES BE NOTED IN THE PLANS, THE ENGINEER SHOULD BE CONSULTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEMS.
8. THE CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTS AND/OR CONTROL POINTS FROM DAMAGE DURING CONSTRUCTION OPERATIONS. ANY MONUMENTS DISTURBED BY THE CONTRACTOR SHALL BE RESET AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR AND THE ENGINEER SHALL NOTE THESE MONUMENTS AND/OR CONTROL POINTS IN THE FIELD PRIOR TO CONSTRUCTION.
9. ANY DAMAGE TO PUBLIC ROADWAYS SHALL BE REPAIRED IMMEDIATELY AND PRIOR TO CONTINUING OPERATIONS. DUST SHALL BE PROPERLY CONTROLLED, AND ANY MUD OR OTHER MATERIAL TRACKED OR OTHERWISE DEPOSITED ON THE ROADWAY SHALL BE REMOVED DAILY OR AS ORDERED BY THE ENGINEER.

UTILITY GENERAL NOTES

- 1) THE UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN, WHICH IS A COMBINATION OF UTILITY LOCATES, UTILITY COMPANY CONSULTATIONS, AND DISCUSSIONS WITH THE OWNER. AS MANY OF THE UTILITIES ARE PRIVATE SERVICE LINES WITHOUT TRACER WIRE, ACCURATE LOCATES ARE NOT AVAILABLE. THE INFORMATION SHOWN ON THESE PLANS CONCERNING TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. SOME UTILITIES MAY HAVE BEEN ADDED OR RELOCATED PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LOCATIONS OF EXISTING STRUCTURES AND UTILITIES SHOWN ON THE DRAWINGS AND ASCERTAIN WHETHER ANY OTHER STRUCTURE AND UTILITIES MAY EXIST. EVERY REASONABLE MEANS SHALL BE USED, INCLUDING FIELD LOCATION OF THE UTILITY USING WHATEVER PROSPECTING MEANS ARE NECESSARY. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK, AND SHALL HOLD THE OWNER AND THEIR CONSULTANTS HARMLESS FOR ANY AND ALL DAMAGES TO UTILITIES ARISING FROM CONSTRUCTION OPERATIONS.
- 2) THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITIES AT LEAST TWO (2) BUSINESS DAYS, NOT INCLUDING THE ACTUAL DAY OF NOTICE, PRIOR TO COMMENCING SUCH OPERATIONS. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811 OR 1-800-922-1987, TO HAVE LOCATIONS OF UNCC REGISTERED LINES MARKED BY MEMBER COMPANIES. ALL OTHER UNDERGROUND FACILITIES SHALL BE LOCATED BY CONTACTING THE RESPECTIVE OWNER. UTILITY SERVICE LATERALS SHALL ALSO BE LOCATED PRIOR TO BEGINNING EXCAVATION OR GRADING.
- 3) THE CONTRACTOR SHALL VERIFY AND DOCUMENT THE CONDITION OF EXISTING UTILITIES (VISIBLE FACILITIES) WITH THE ENGINEER AND REPRESENTATIVES FROM THE UTILITY COMPANIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 4) THE CONTRACTOR SHALL FULLY COORDINATE UTILITY WORK WITH THE AFFECTED UTILITY PROVIDER AS APPROPRIATE.



VICINITY MAP
SCALE 1" : 500'

[illegible]

**PROPOSED CONSTRUCTION
PLAN VIEW
SCALE: 1" : 10'**

EXISTING CONCRETE HEADWALL

90° ELBOW INTO CMP PIPELINE
(SEE DETAIL SHEET)

EXISTING 24" Ø CMP

4" Ø HDPE PIPELINE
ABOVE GROUND FROM BERM TO HEADWALL

4" Ø HDPE PIPELINE
CROSSES UNDER BERM

GENTLE ARC ALIGNS PIPELINE TO BE
PARALLEL WITH CONCRETE HEADWALL

4" Ø HDPE PIPELINE ABOVE GROUND DOWN SLOPE

LOCATION OF VACUUM
BREAKER (SEE DETAIL SHEET)

A SECOND TEE CONNECTS TO
EXISTING DISCHARGE LINE

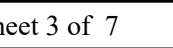
INSTALL BUTTERFLY VALVE TO ISOLATE
EXISTING DISCHARGE PIPELINE FROM
NEW INSTALLATION (SEE DETAIL SHEET)

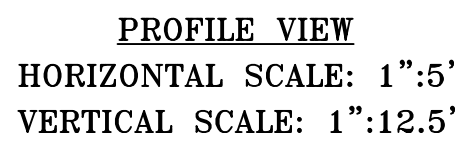
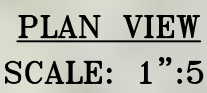
MIN. 2' COVER FOR BURIED SECTION

4" Ø HDPE PIPELINE

NOTE:
A MINIMUM 2% SLOPE TOWARDS WINDY GULCH
ALL ANGULAR MATERIAL GREATER THAN 3" Ø 1
FOOT TO EITHER SIDE OF THE PIPELINE WHEN

ALL ANGULAR MATERIAL GREATER THAN 3" ϕ IS TO BE REMOVED FROM AN AREA 1 FOOT TO EITHER SIDE OF THE PIPELINE WHEN IT IS INSTALLED ON THE SURFACE.





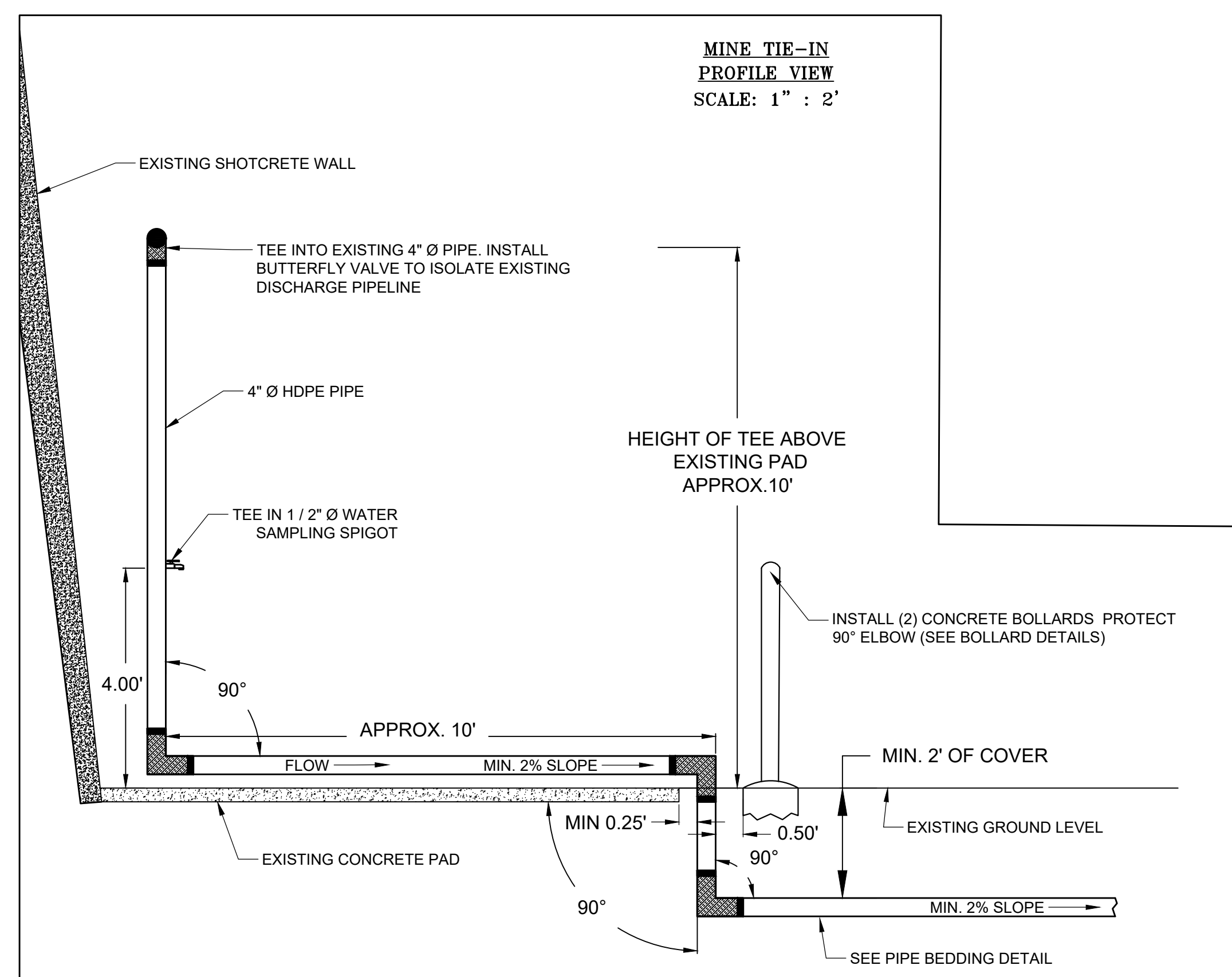
NOTE:
THESE STATIONS ARE BASED ON AN ESTIMATE OF THE LOCATION OF THE EXISTING TEE. USE THE
0.25' OFFSET FROM THE PAD, AS SHOWN ON THE DETAIL SHEET, TO ALIGN THESE PROFILES.



io Grande Silver, Inc.
5000 N. Mineral Drive, Suite 200,
oeur d'Alene, ID, 83815-9408
Bulldog Mine Discharge Pipeline
Pipeline Profile Sheet 1

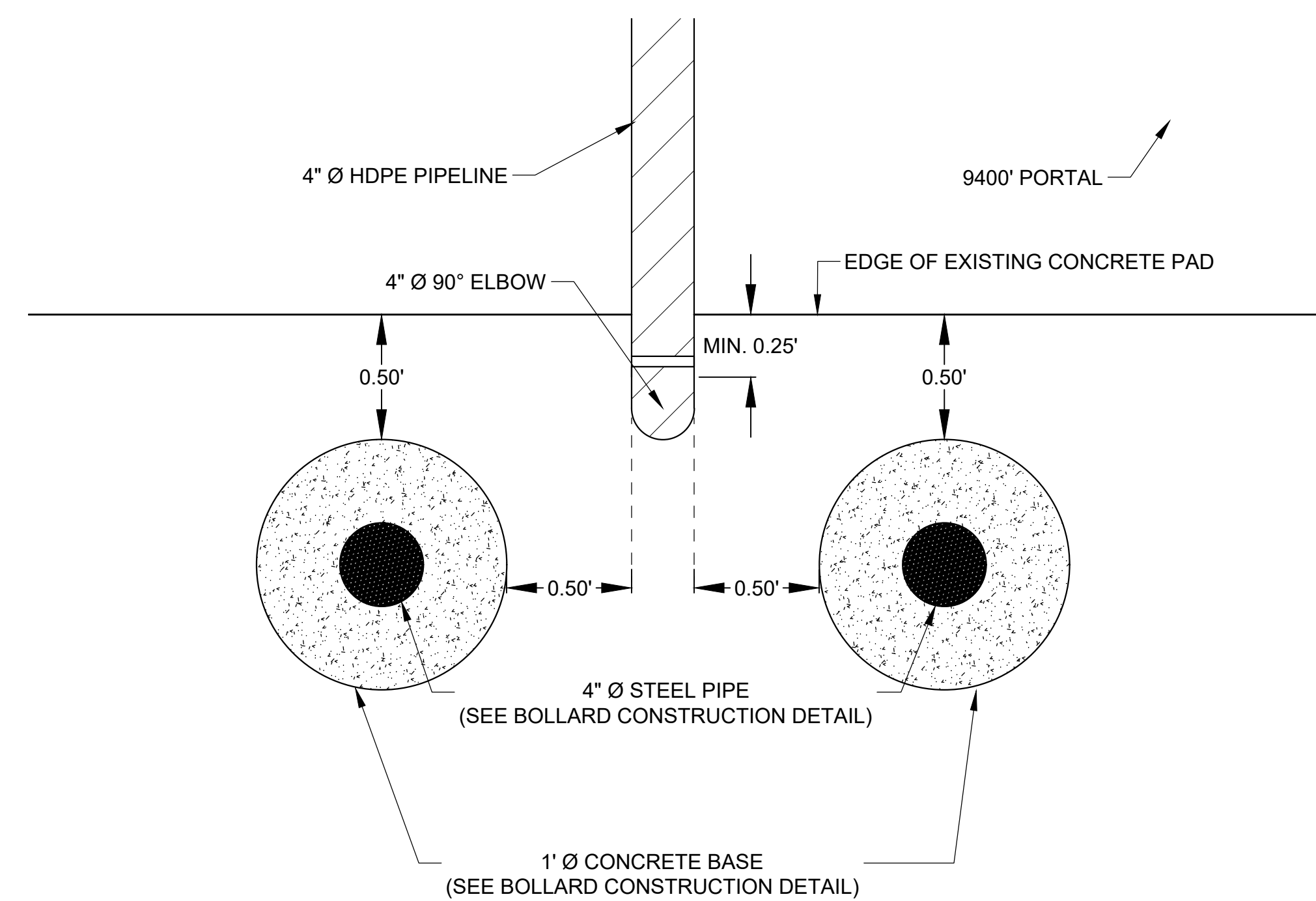
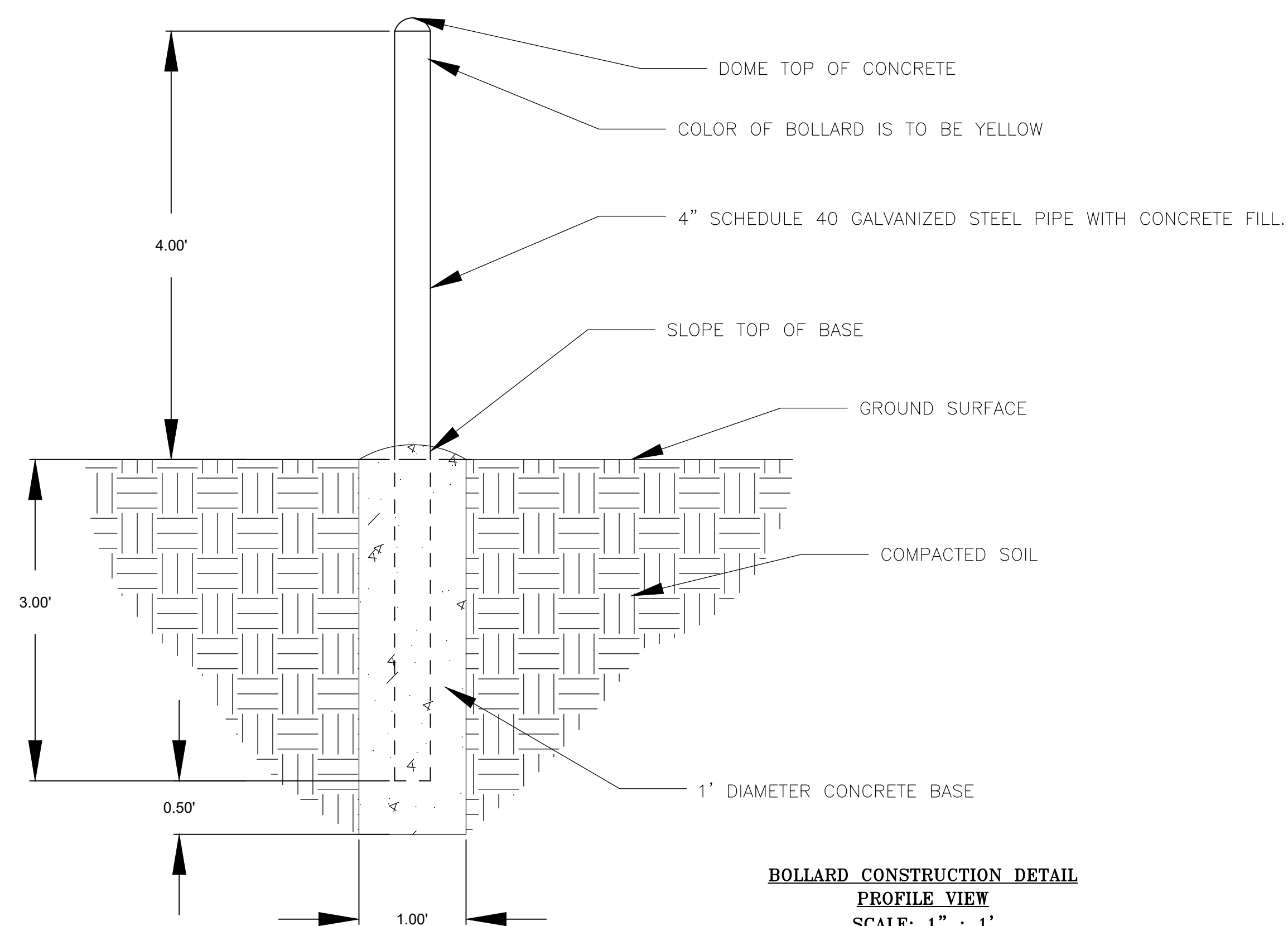
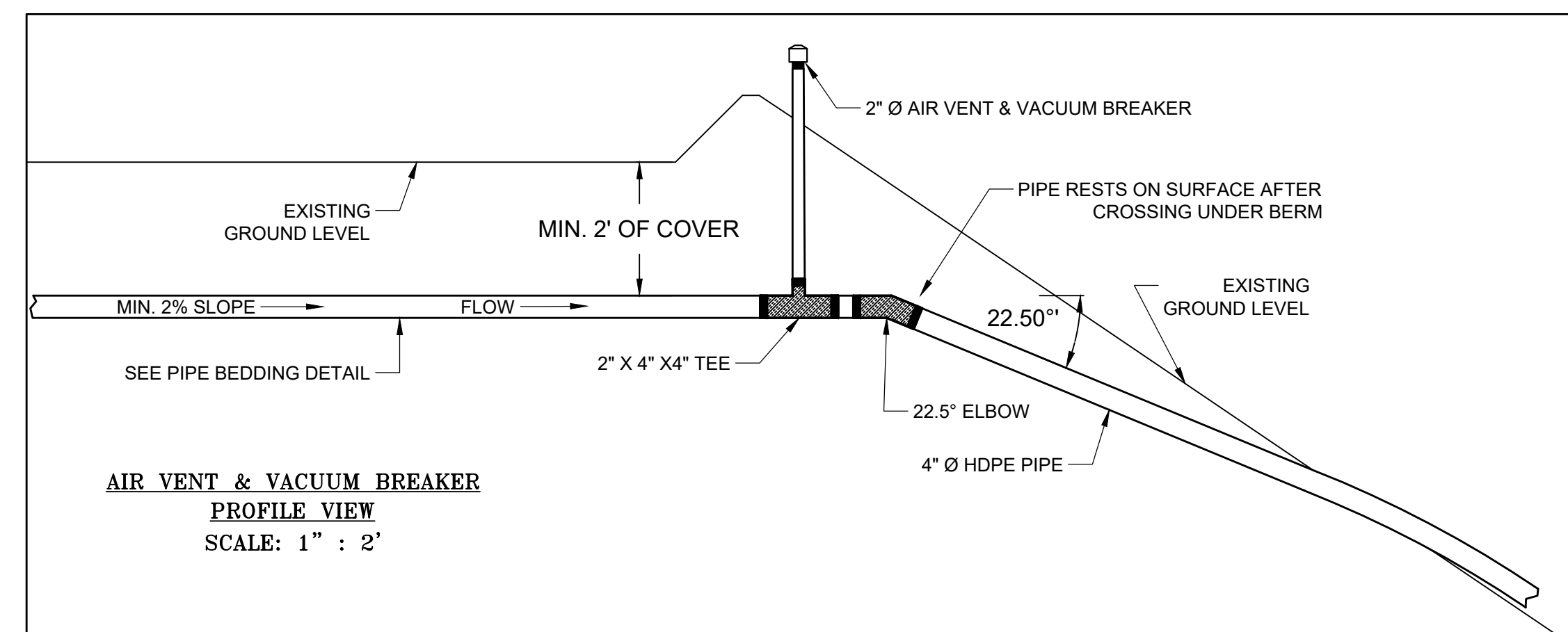
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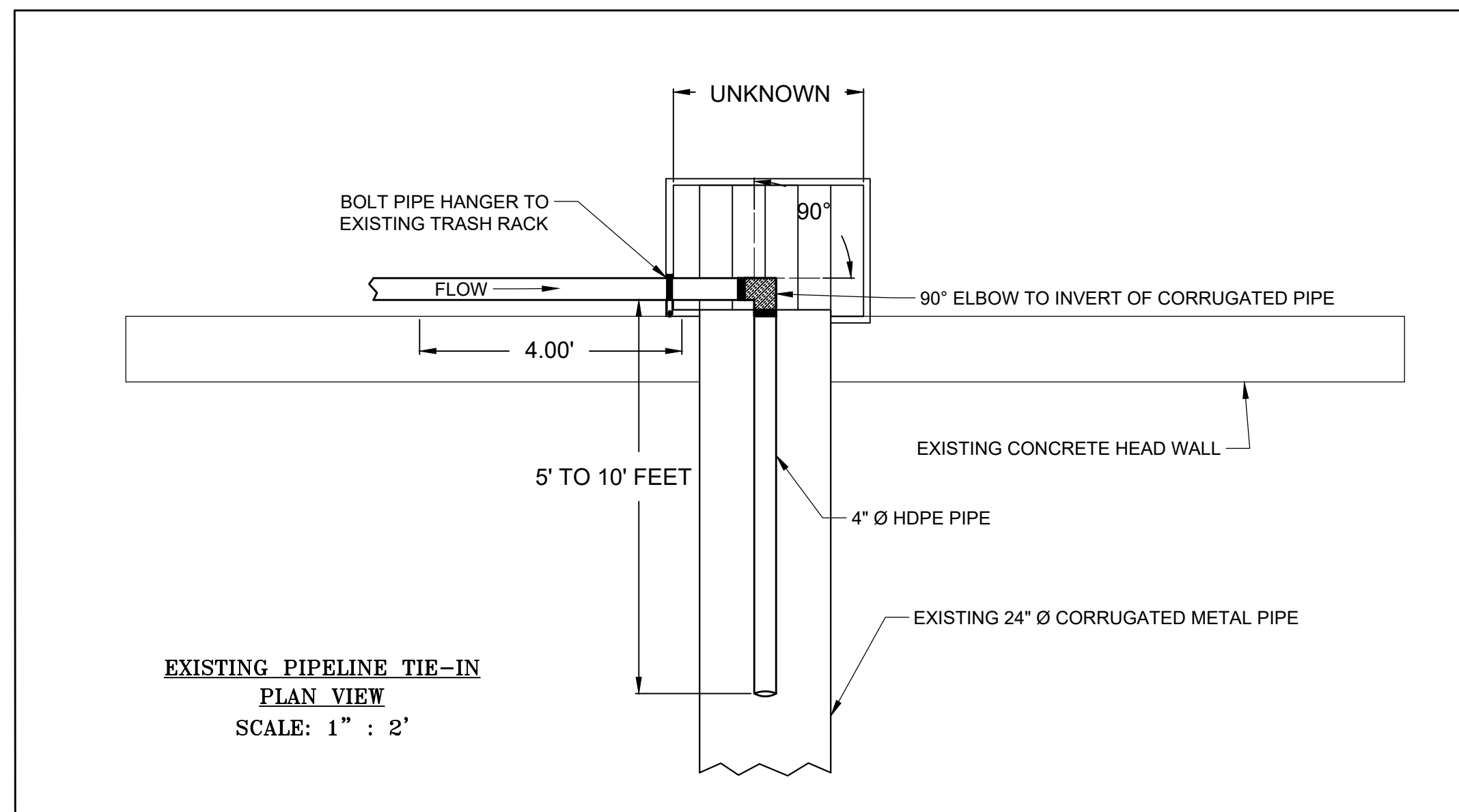
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NOTE:

DOWNSTREAM OF THE AIR VENT / VACUUM BREAKER THE PIPELINE WILL LAY ON THE EXISTING GROUND SURFACE. PAST THIS POINT IT WILL ONLY BE INSTALLED BELOW GRADE AS NEEDED TO MAINTAIN A 2% SLOPE.



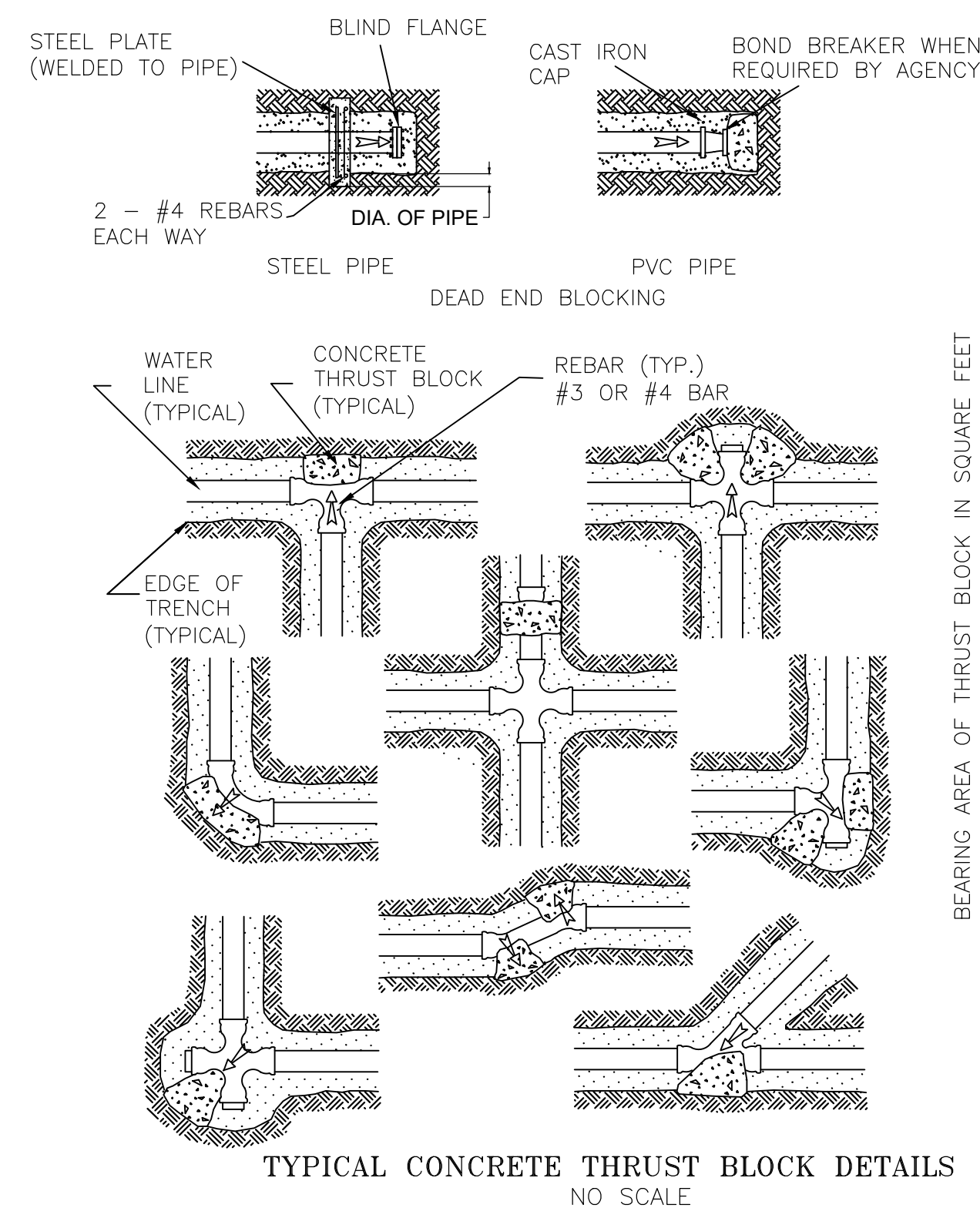
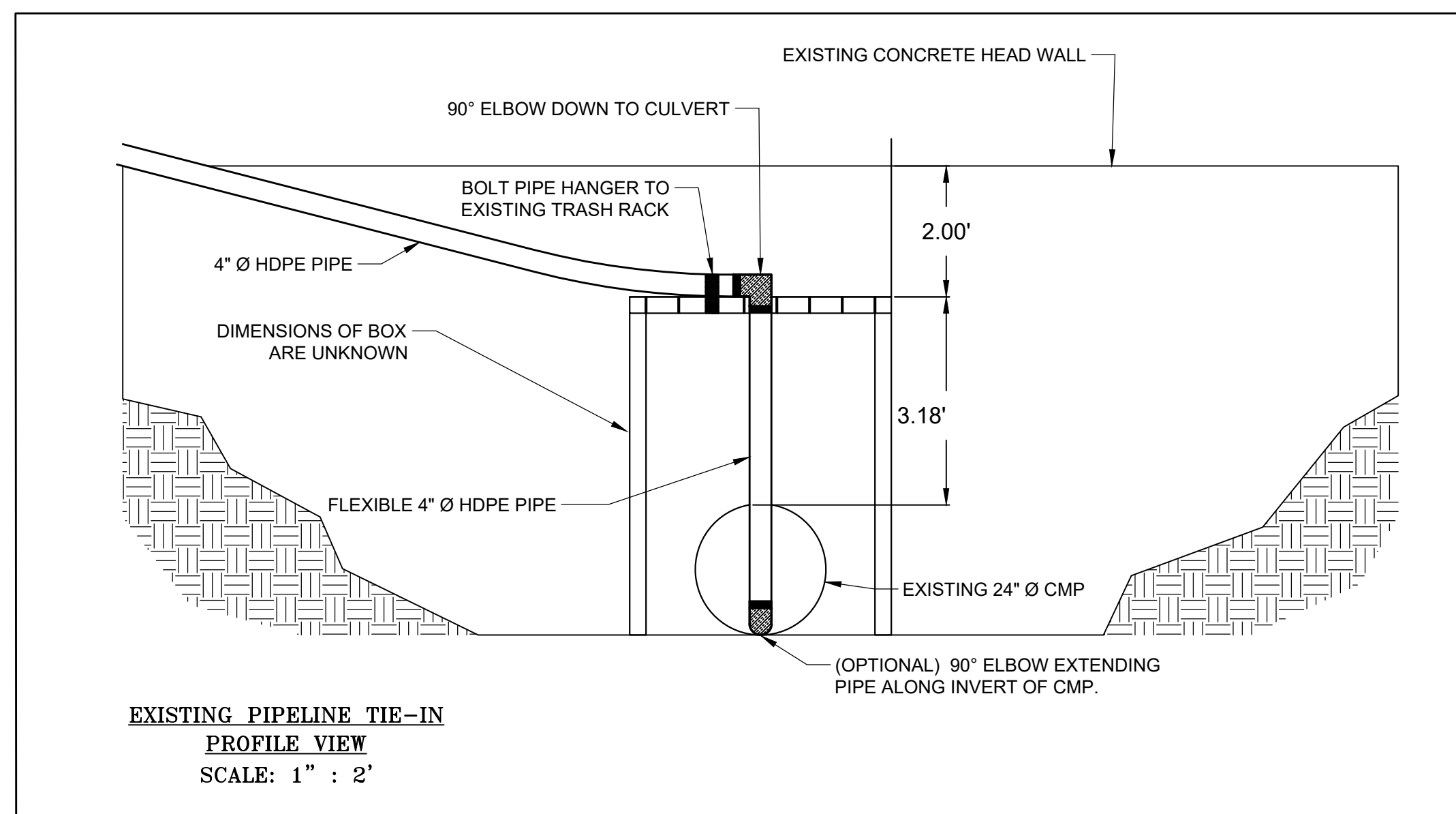


NOTE:

THE 90 DEGREE ELBOW AT THE INVERT OF THE CORRUGATED METAL PIPE IS OPTIONAL. IF POSSIBLE, FLEXIBLE HDPE PIPE SHOULD BE USED WITHOUT FITTINGS. THE LENGTH OF HDPE INTO THE CULVERT SHOULD BE A MINIMUM OF 5 FEET TO A MAXIMUM OF 10 FEET.

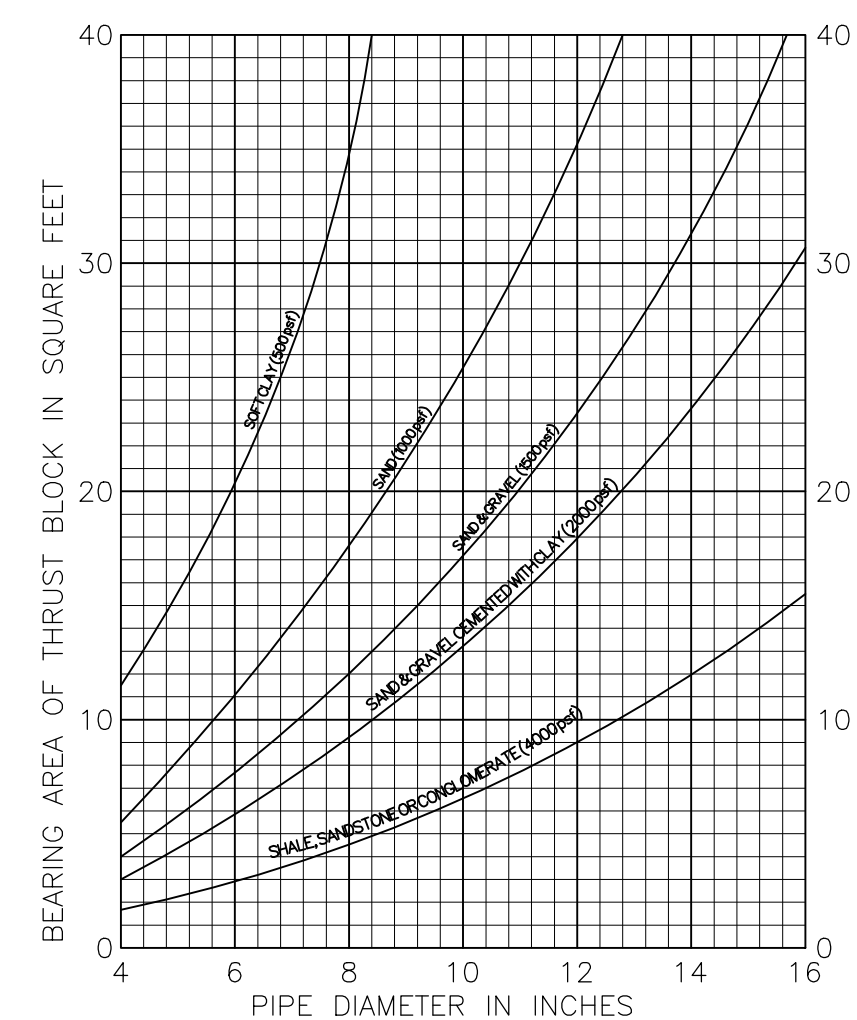
THE ONLY KNOWN TRASH RACK DIMENSIONS ARE A 6 INCH BAR SPACING AND THAT THE TOP IS LOCATED 2 FEET BELOW THE HEADWALL.

DUE TO THE TEMPORARY NATURE OF THE PIPELINE THE THRUST BLOCK DETAIL IS PROVIDED TO BE USED AT THE DISCRETION OF THE OWNER. IT IS SUGGESTED THAT AT A MINIMUM, THE 22.5 DEGREE ELBOW ABOVE THE LARGE SLOPE HAVE A THRUST BLOCK INSTALLED. THE TRENCH BEDDING DETAIL SHOULD BE UTILIZED FOR BURIED SECTIONS OF PIPE. ABOVE GROUND SECTIONS SHOULD BE BEDDED AS IS PRACTICAL WITHOUT CREATING EROSION ISSUES.



NOTES:

- 1 CONCRETE SHALL BE 470-C-2000.
2 SEE DRAWING FOR BEARING AREAS.
3 BEARING AREAS TO BE FLAT AND CORNERS SQUARE



NOTES:

- 1 BASED ON 225 PSI TEST PRESSURE AND BEARING VALUES OF DRY SOIL.
- 2 VALUES FROM CURVES ARE FOR TEES AND DEADENDS, I.E.;
STRAIGHT LINE THRUST.
FOR 90° BEND $1.4 \times$ VALUE FROM CURVE
FOR 45° BEND $0.8 \times$ VALUE FROM CURVE
FOR $22\frac{1}{2}$ ° BEND $0.4 \times$ VALUE FROM CURVE
- 3 FOR CONDITIONS NOT COVERED BY CURVES, SPECIAL THRUST
BLOCKS MUST BE COMPUTED AND APPROVED.

