

TOWN OF NATICK, MASSACHUSETTS  
BOARD OF SELECTMEN  
  
CONTRACT NO. W-144  
FOR  
WATER TREATMENT PLANT  
BACKWASH TANK

BOARD OF SELECTMEN

JONATHAN H. FREEDMAN, CHAIRMAN  
SUSAN G. SALAMOFF, VICE CHAIRMAN  
RICHARD P. JENNETT, JR., CLERK  
MICHAEL J. HICKEY  
AMY K. MISTROT

TOWN ADMINISTRATOR

MARTHA L. WHITE

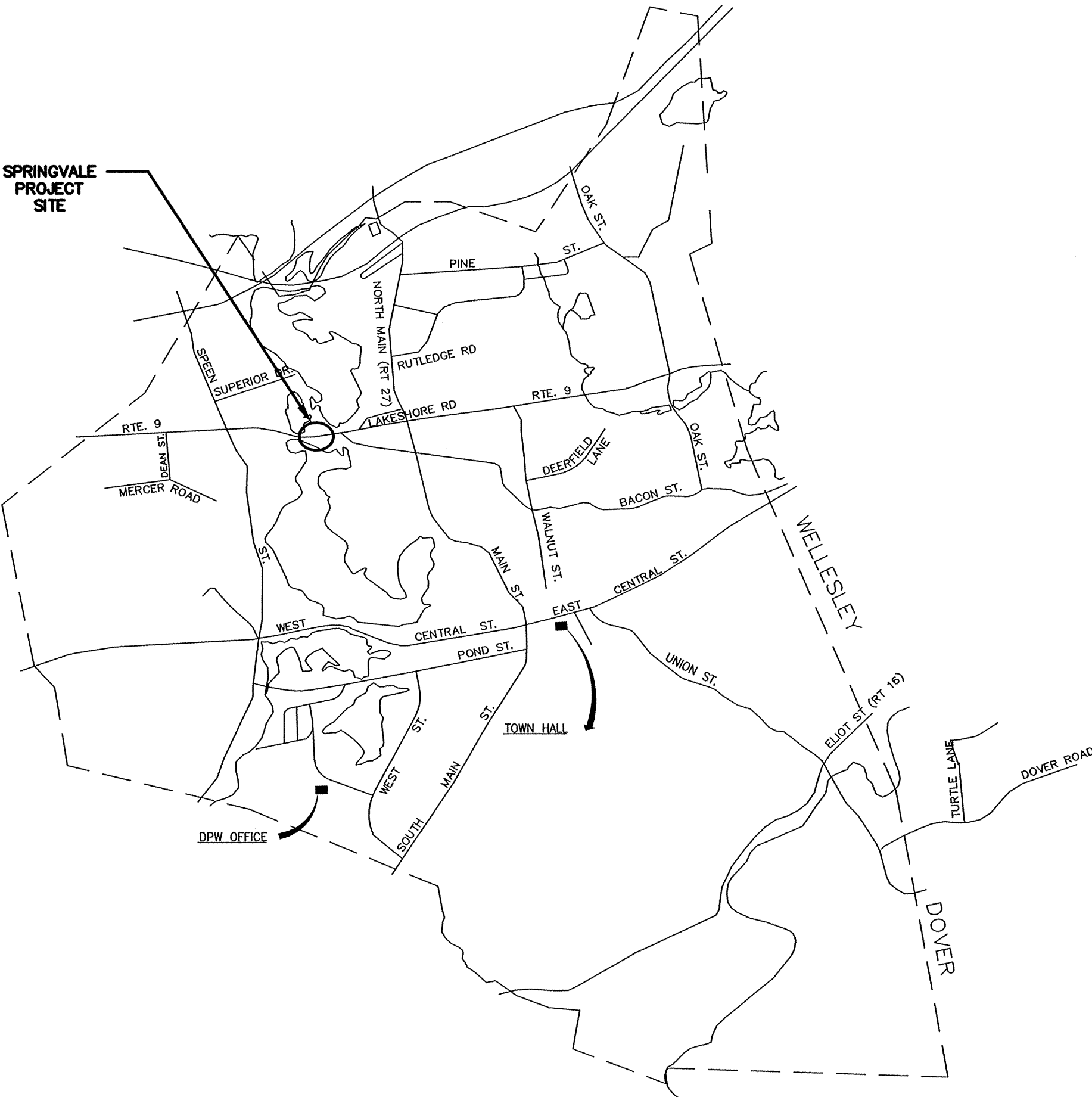
DIRECTOR OF PUBLIC WORKS

JEREMY MARSETTE

WATER AND SEWER SUPERINTENDENT

ANTHONY COMEAU

HALEY AND WARD, INC.  
ENGINEERS  
MAYNARD, MASSACHUSETTS



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TOWN OF NATICK, MASSACHUSETTS  
BOARD OF SELECTMEN

WATER TREATMENT PLANT  
BACKWASH TANK

HALEY AND WARD, INC.  
63 GREAT ROAD, SUITE 200,  
MAYNARD, MASSACHUSETTS 01754-2097  
PHONE: (978) 648-6025 FAX: (978) 648-6068  
www.haleyward.com

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CONTRACT NO.: W-144

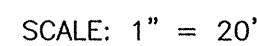
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DATE DRAWN: JULY, 2017

DRAWN BY: LJC

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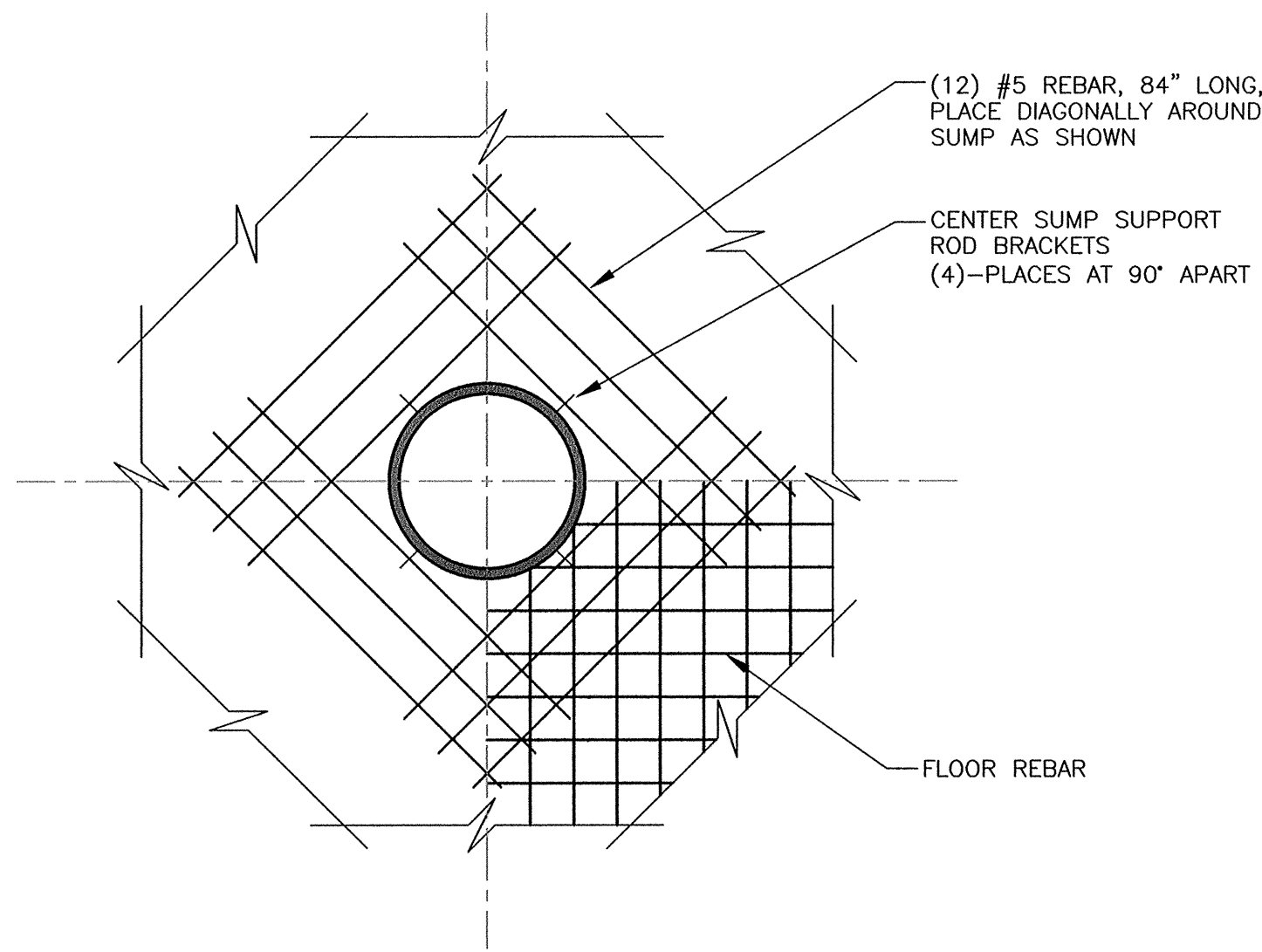
DWG. NO.  
  
CVR



1. PROVIDE SILT SOCK ALONG FENCE LINE TO PREVENT SILT WASHOUT DOWN TO LAKE.

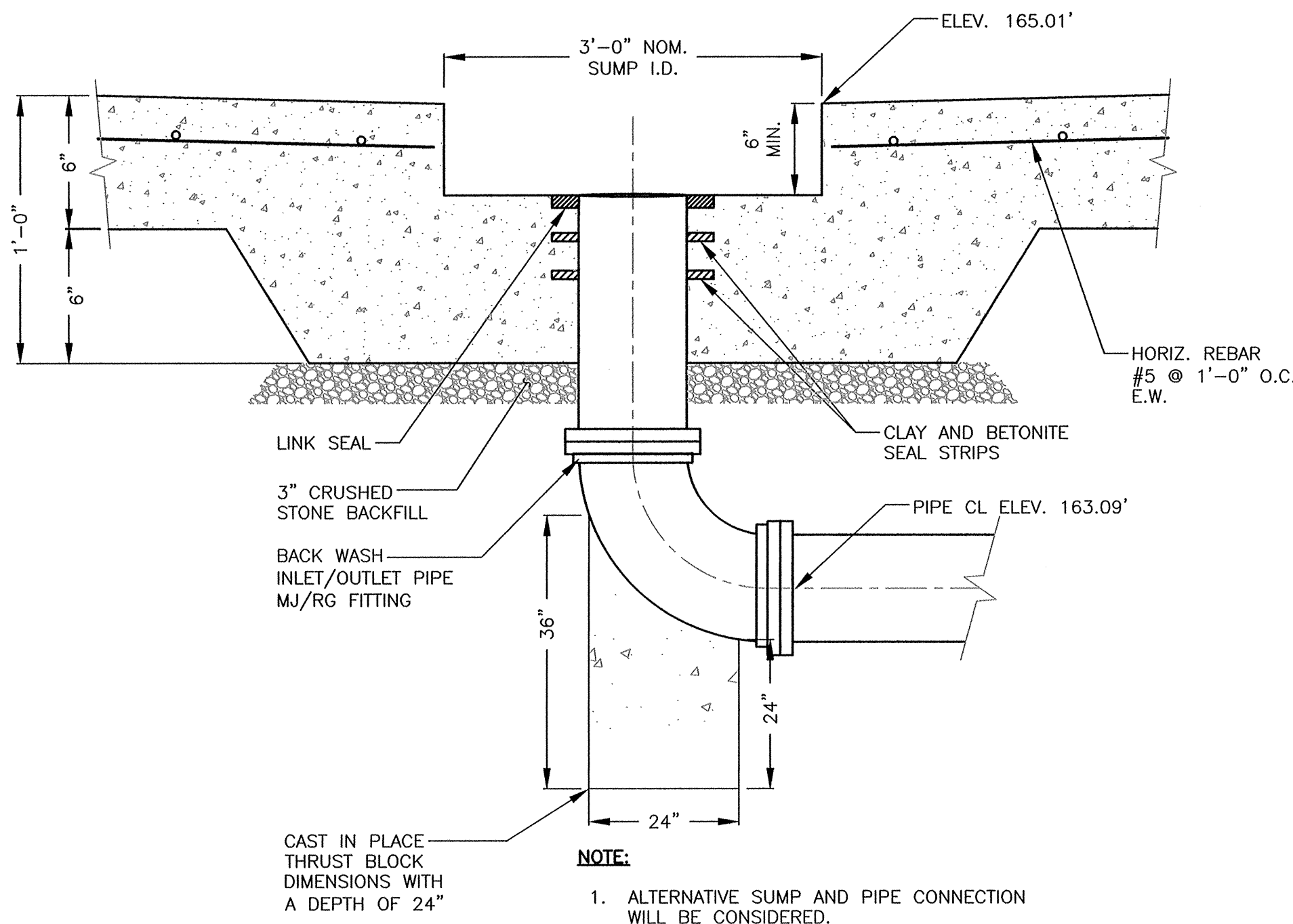
# G1





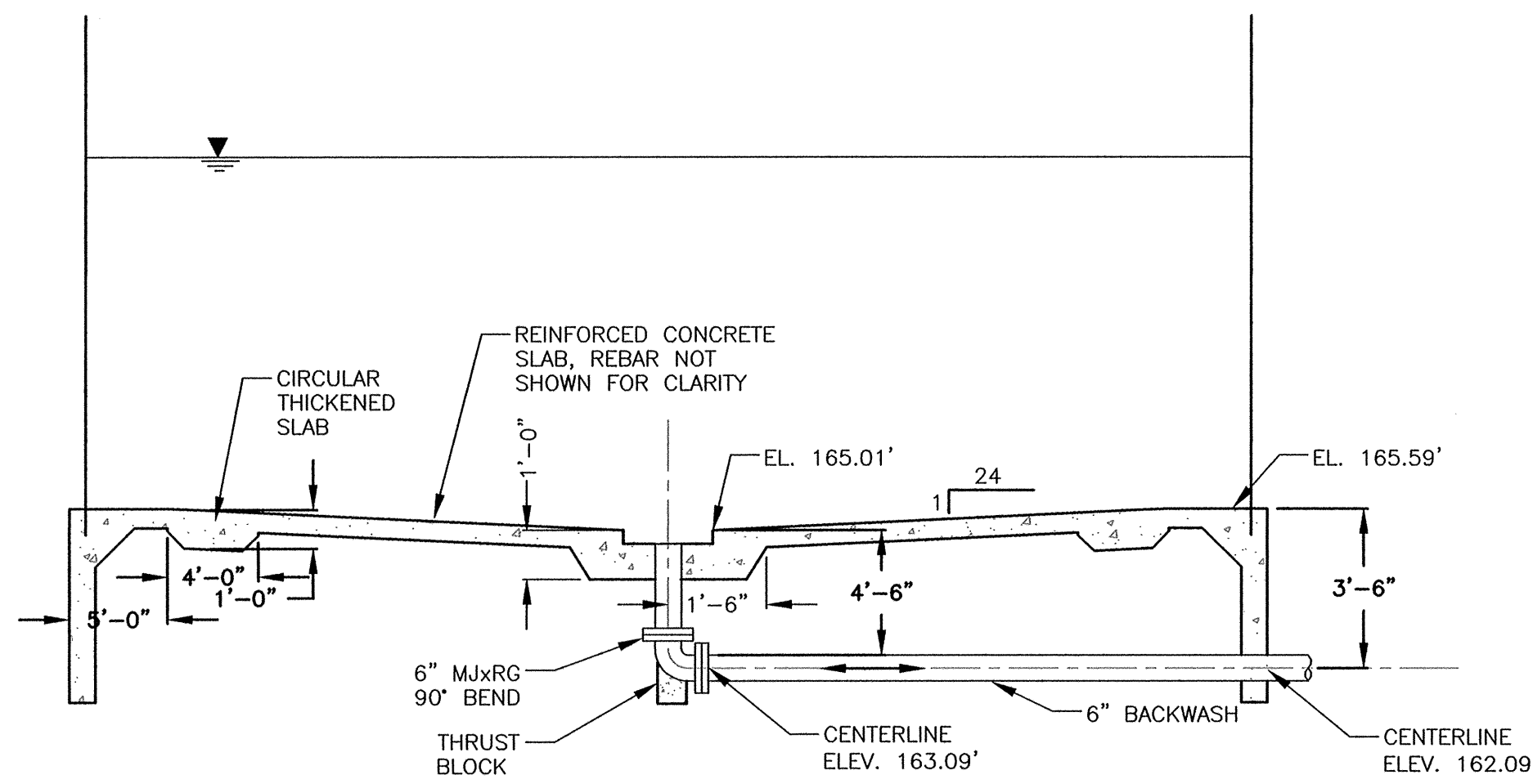
BACKWASH TANK CONSTRUCTION DETAIL  
FOUNDATION ASSEMBLY CENTER SUMP PLAN VIEW

NOT TO SCALE



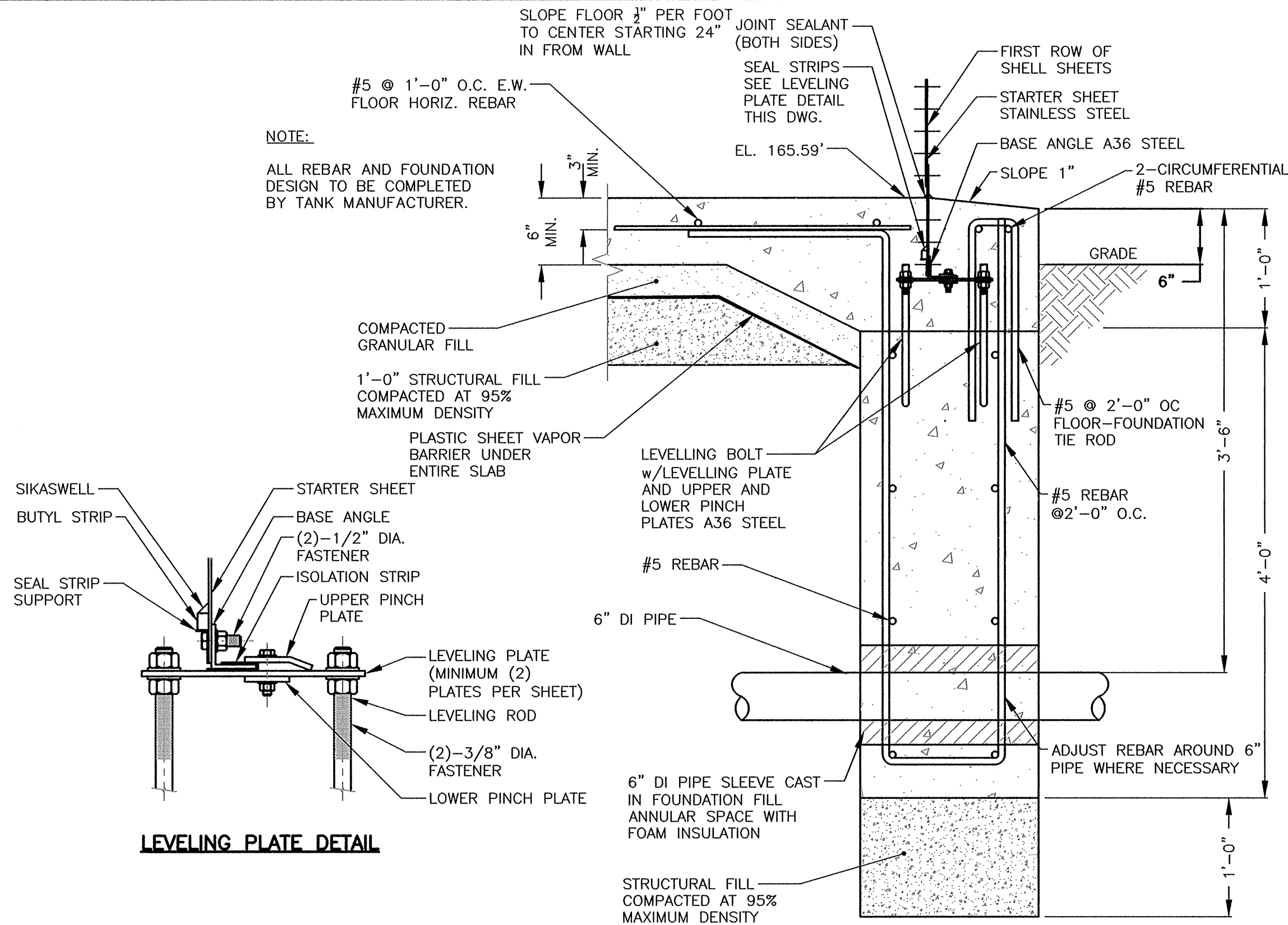
CONSTRUCTION DETAIL FOUNDATION ASSEMBLY  
CENTER SUMP SECTION WITH PIPE CONNECTION

NOT TO SCALE



PROPOSED BACKWASH TANK  
ELEVATIONS

NOT TO SCALE



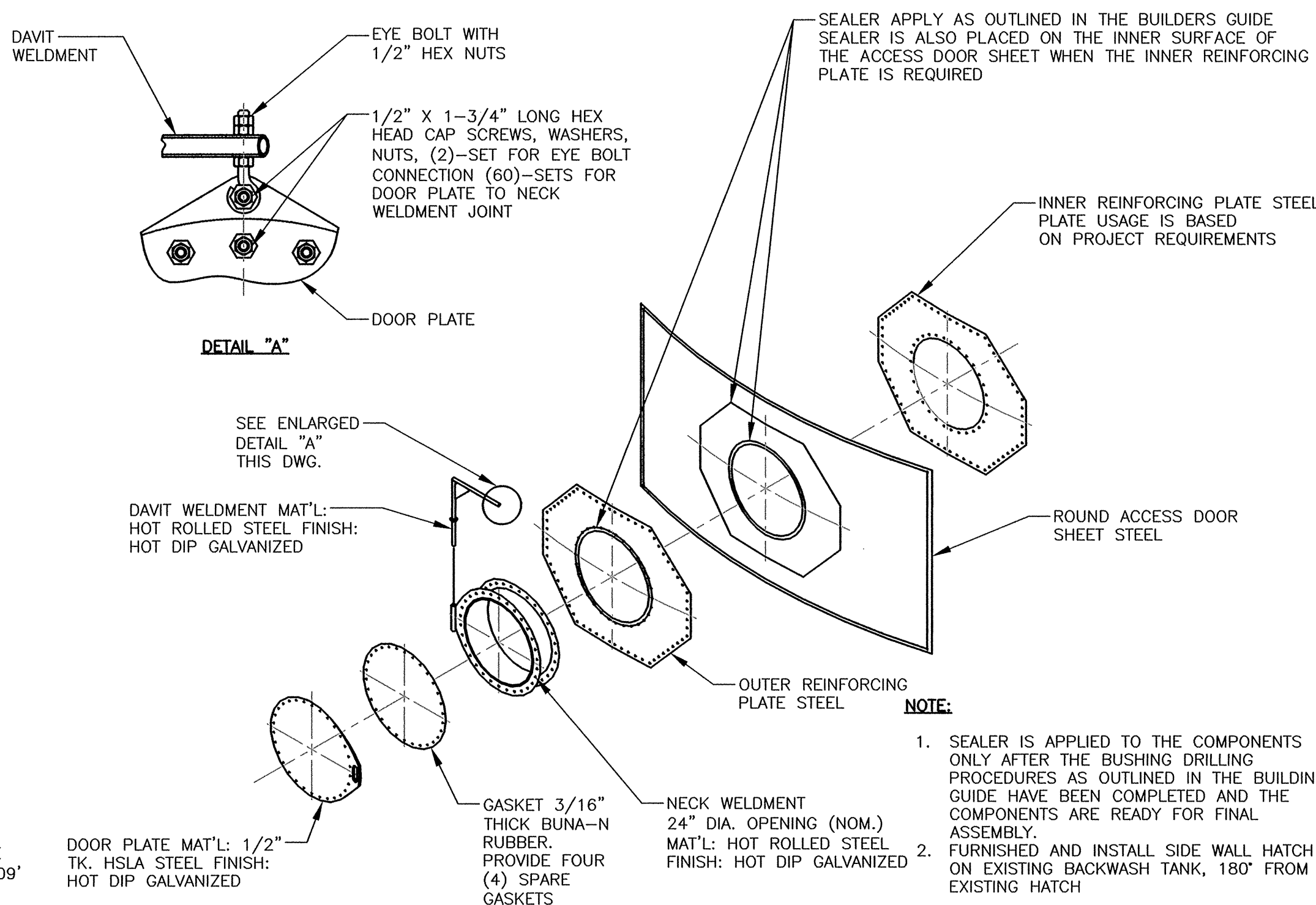
LEVELING PLATE DETAIL

TANK CONSTRUCTION NOTES

- FLOOR ELEVATION TO BE DETERMINED ON SITE
- ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI AND SHALL CONTAIN WATER REDUCING AND AIR ENTRAINING AGENTS
- REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI
- FOOTINGS SHALL BEAR ON NON-ORGANIC, UNDISTURBED GROUND HAVING A MINIMUM ALLOWABLE BEARING STRENGTH OF 2000 PSF. REPLACE UNSUITABLE MATERIAL WITH CLEAN GRANULAR FILL COMPACTED TO 98% STANDARD PROCTER MAXIMUM DENSITY
- TANK CONCRETE FLOOR TO HAVE A FLOATED (SMOOTH) FINISH
- BACKFILL RINGWALL WITH CLEAN GRANULAR FILL COMPACTED TO 98% STANDARD PROCTER MAXIMUM DENSITY
- ALL FILL INSIDE RINGWALL TO BE COMPACTED TO 100% STANDARD PROCTER MAXIMUM DRY DENSITY
- LEVELLING OF THE STARTER RING SHALL BE REQUIRED AND THE MAX. DIFFERENTIAL 10 FEET OF LENGTH
- UPPER SEAL STRIP TO BE SIKASWELL S ONE PART POLYURETHANE, EXTRUDABLE SWELLING WATERSTOP AS MANUFACTURED BY SIKACORP. (BEAD SIZE AS PER MANUFACTURER'S RECOMMENDATIONS)
- LOWER SEAL TO BE BUTYL STRIP 1/2" THK. x 3/4" W AS MANUFACTURED BY SIKACORP.
- JOINT BETWEEN FLOOR AND WALL TO BE SEALED WITH NSF APPROVED JOINT SEALER
- OUTSIDE CURB TO SLOPE AWAY FROM TANK WALL TO PREVENT PONDING
- ISOLATION STRIP TO ISOLATE BASE ANGLE FROM LEVELLING PLATE

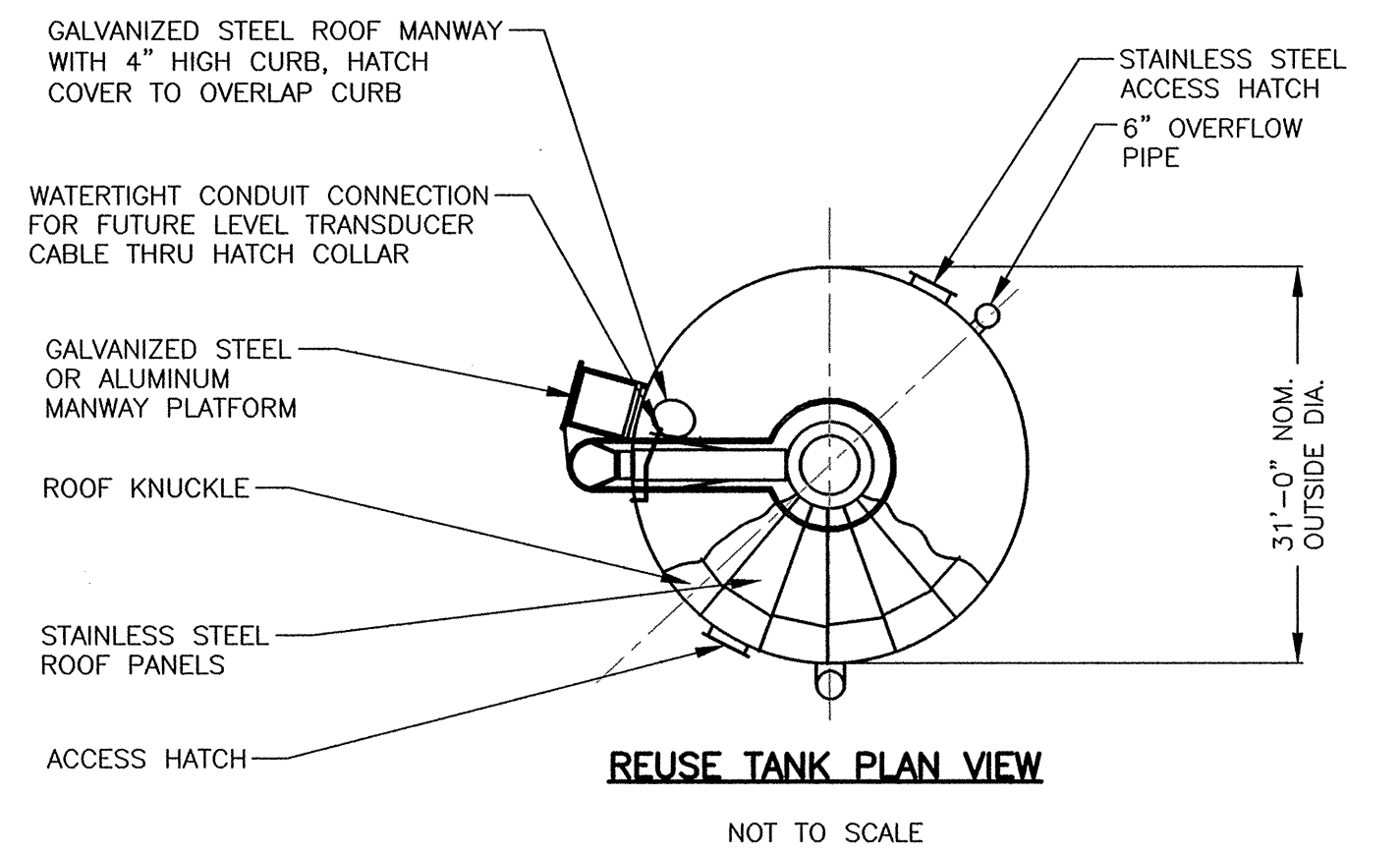
SECTION THRU PROPOSED  
BACKWASH TANK FOUNDATION

NOT TO SCALE



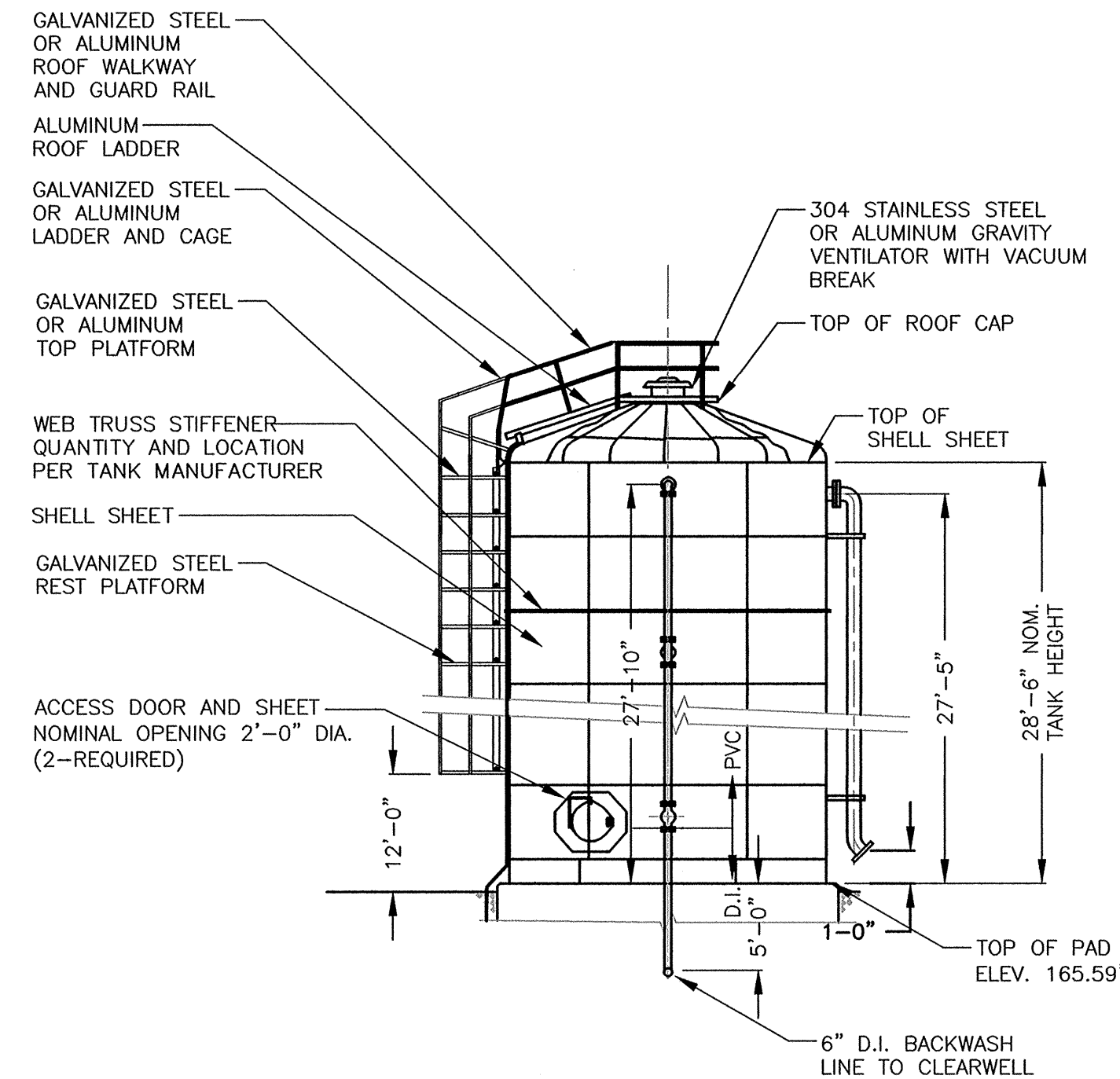
PROPOSED BACKWASH  
TANK MANWAY

NOT TO SCALE



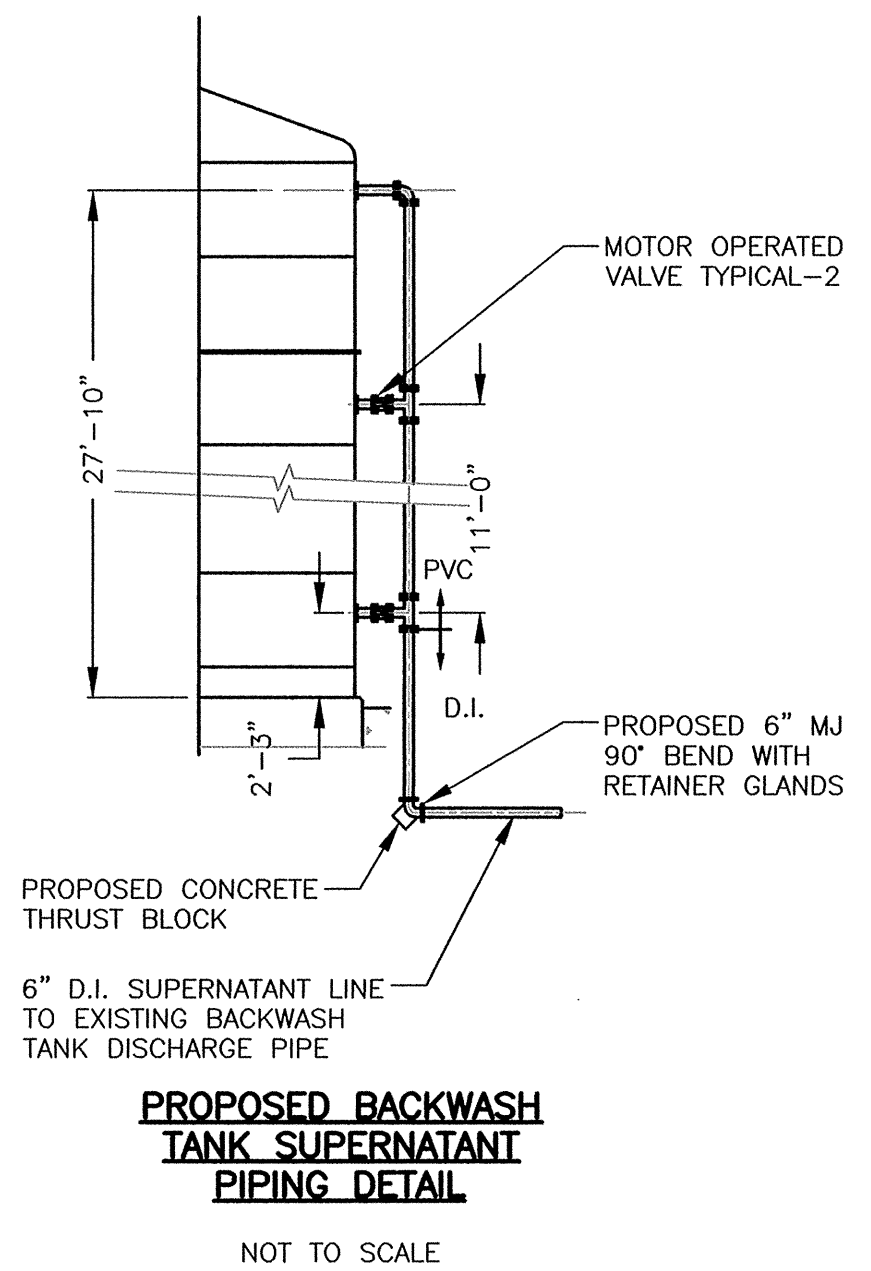
REUSE TANK PLAN VIEW

NOT TO SCALE



PROPOSED BACKWASH  
TANK ELEVATION VIEW

NOT TO SCALE



PROPOSED BACKWASH  
TANK SUPERNATANT  
PIPING DETAIL

NOT TO SCALE

NOTE:

- ELECTRICAL WORK RELATED TO MOTOR OPERATED VALVES WILL BE COMPLETED BY OTHERS UNDER THE SPRINGVALE NO. 4 PUMP STATION PROJECT.

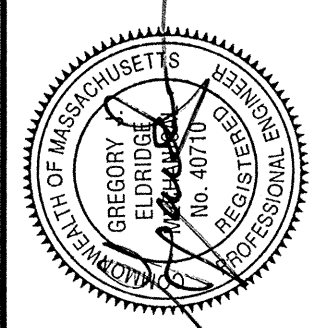
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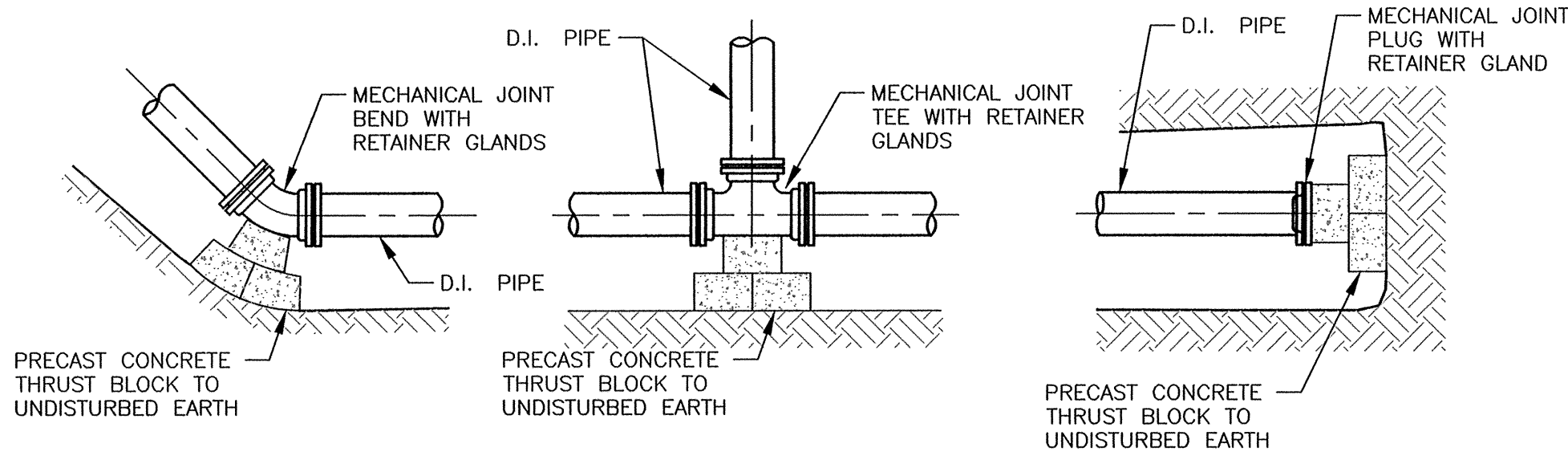


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SHEET NO.:	3 OF 4
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DWG. NO.

M1



TYPICAL THRUST BLOCK DETAILS

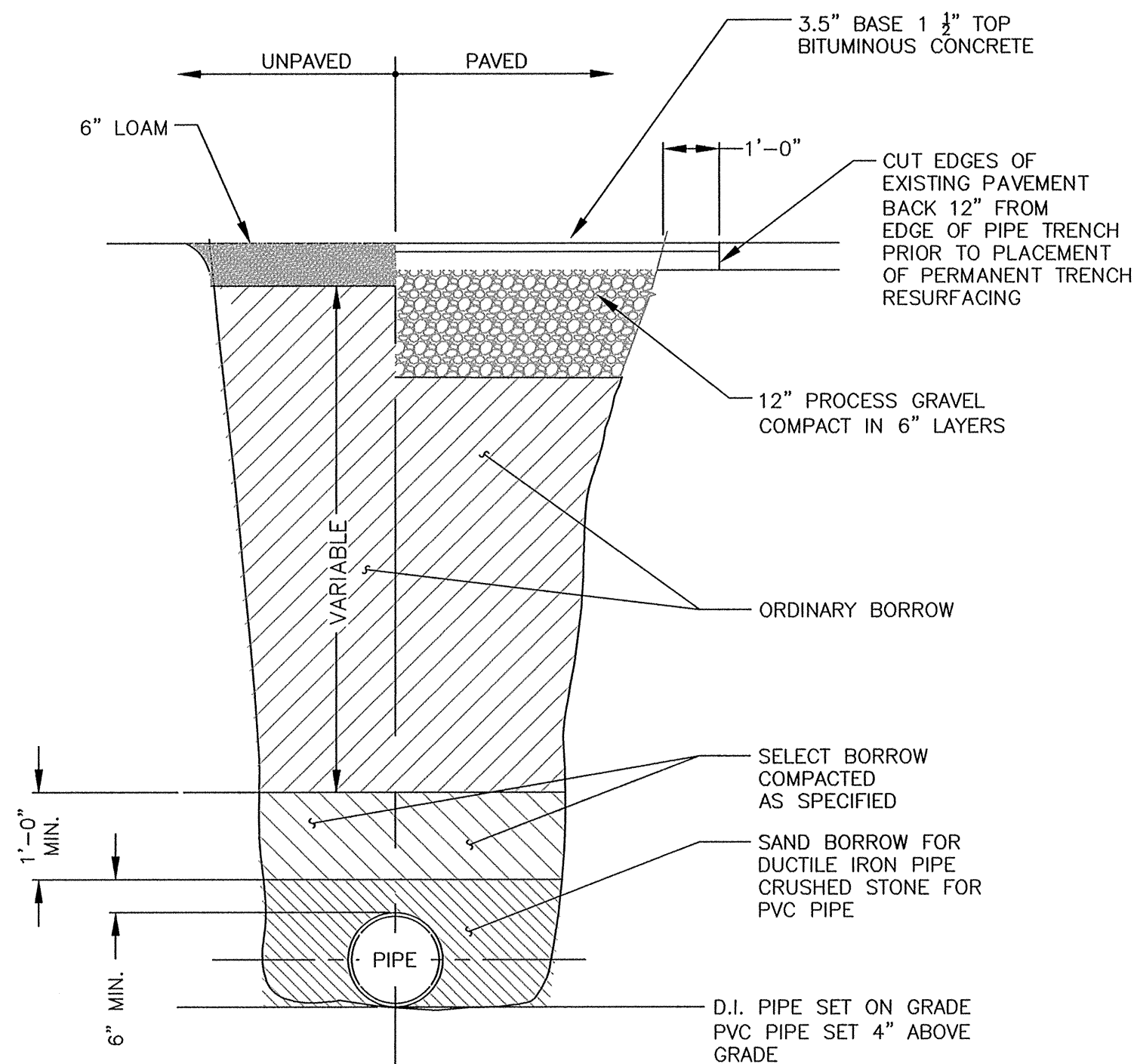
NOT TO SCALE

MANUFACTURER'S ALLOWABLE DEFLECTION		
PIPE DIAMETER	INCHES PER 20' LENGTH	DEGREES OF DEFLECTION
4" PUSH-ON	21"	5'
6" PUSH-ON	21"	5'
8" PUSH-ON	21"	5'
10" PUSH-ON	21"	5'
12" PUSH-ON	21"	5'
14"-24" PUSH-ON	12"	3'

NOTE:

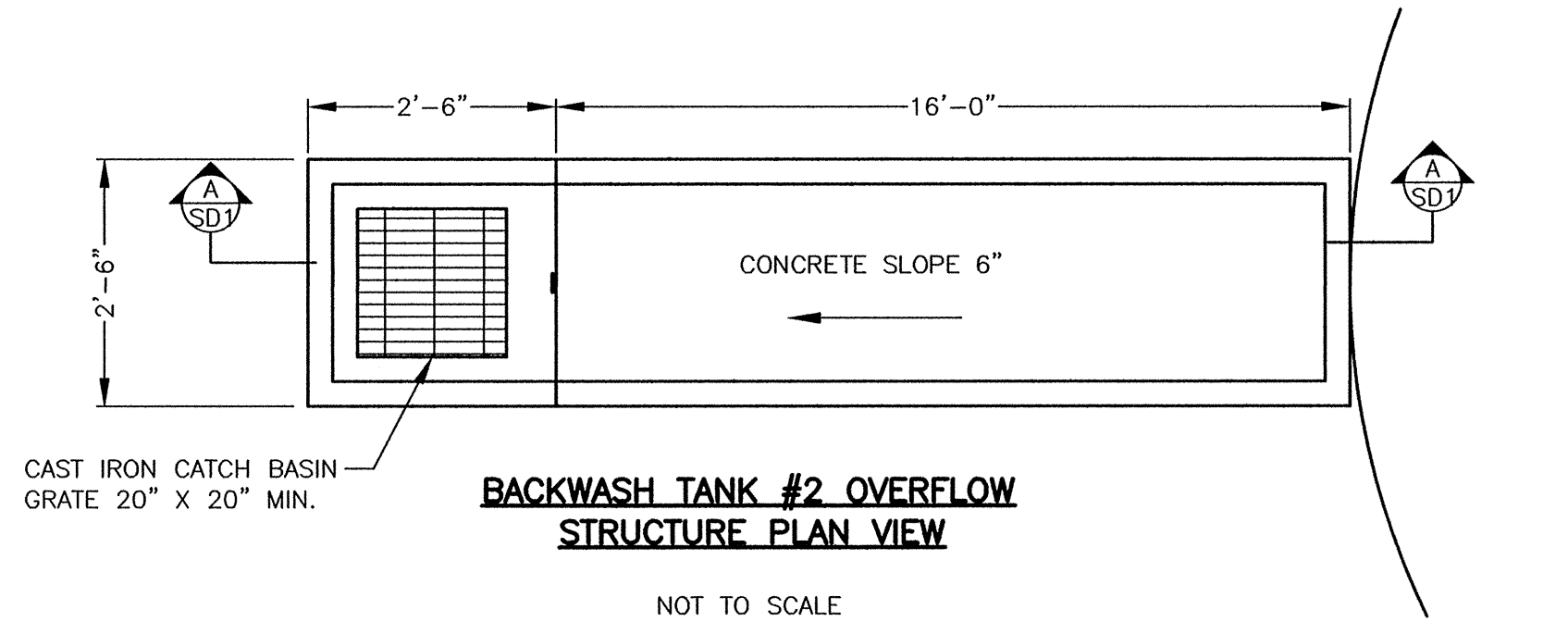
PIPING SHALL BE PUSH-ON JOINT DUCTILE IRON PIPE AND DEFLECTION SHALL NOT EXCEED 75% OF MANUFACTURER'S RECOMMENDATION.

ALLOWABLE JOINT DEFLECTION TABLE FOR D.I. PUSH-ON PIPE



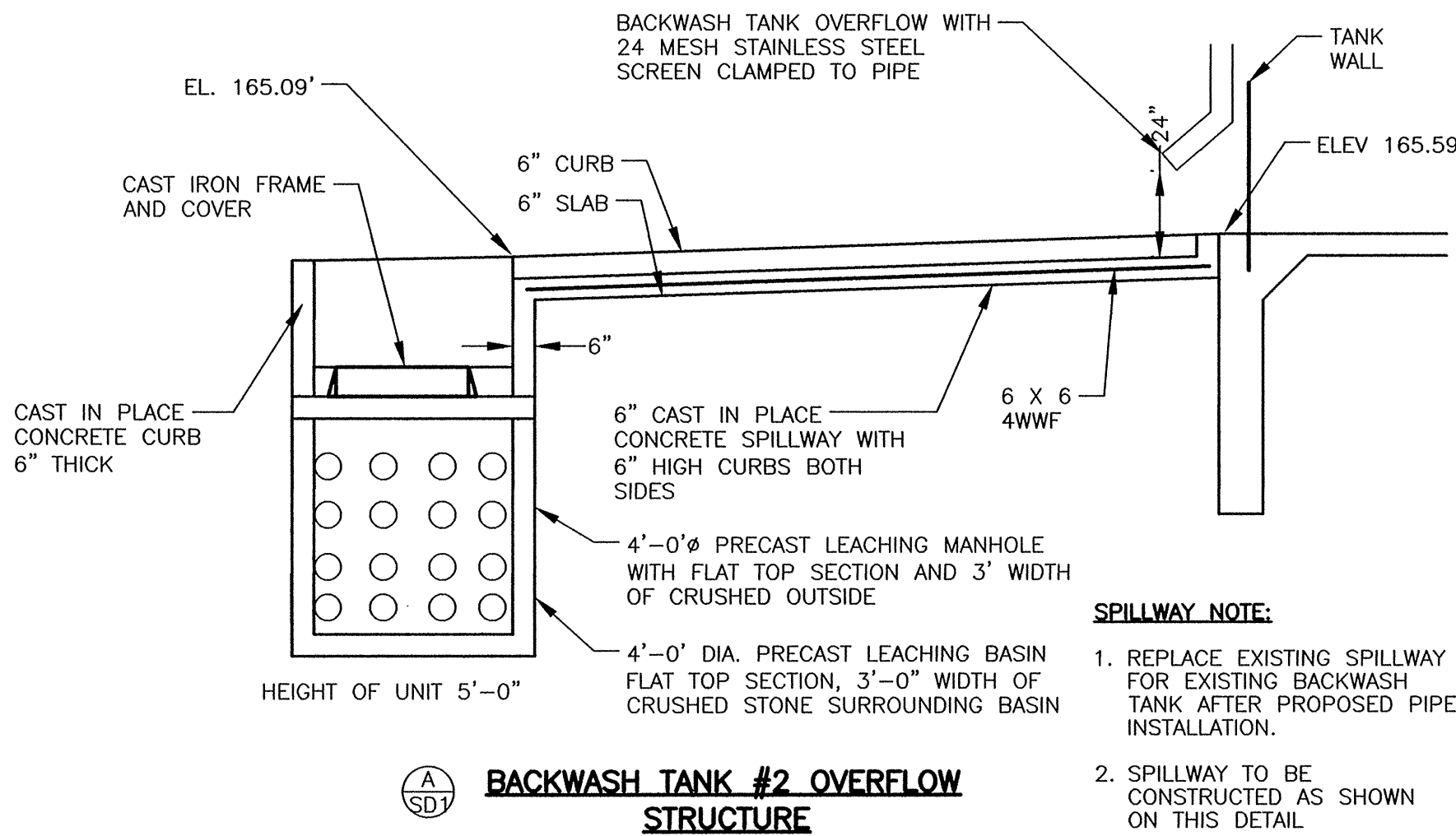
TYPICAL TRENCH SECTION FOR D.I./PVC PIPE

NOT TO SCALE



BACKWASH TANK #2 OVERFLOW STRUCTURE PLAN VIEW

NOT TO SCALE



BACKWASH TANK #2 OVERFLOW STRUCTURE

NOT TO SCALE

SPILLWAY NOTE:

1. REPLACE EXISTING SPILLWAY FOR EXISTING BACKWASH TANK AFTER PROPOSED PIPE INSTALLATION.
2. SPILLWAY TO BE CONSTRUCTED AS SHOWN ON THIS DETAIL

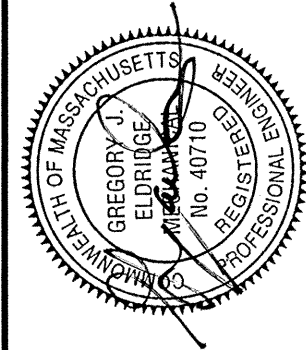
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DWG. NO.

SD1