

NOTES:
1. SEE PROFILE SHEET FOR SEWER PROFILES AND RIM AND INVERT ELEVATIONS.

2. CONTRACTOR SHALL INSTALL ALL WATER & SEWER SYSTEMS IN CONFORMANCE WITH TOWN OF MEDWAY WATER/SEWER RULES AND REGULATIONS.

3. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES & OWNER FOR ALL WORK WITHIN ALGONQUIN GAS AND BOSTON EDISON EASEMENTS. ALL REQUIREMENTS FOR CONSTRUCTION HEREIN ARE NOT SHOWN.

4. THE OPERATION AND MAINTENANCE OF THE E-ONE PUMPS & THE FORCE MAIN LOCATED IN THE LINDEN PATH RIGHT OF WAY SHALL BE THE RESPONSIBILITY OF THE HOA.

FAIRWAY LANE



N/F
ROBERT WALSH, TRST
114 WINTHROP ST

FOR REGISTRY USE ONLY

Y THAT THIS PLAN HAS BEEN
ED IN CONFORMANCE WITH THE
ND REGULATIONS OF THE
RS OF DEEDS.



16-25 PROFESSIONAL LAND SURVEYOR

PPROVED SUBJECT TO TERMS AND
ONDITIONS OF A COMPREHENSIVE
ERMIT PER ZONING BOARD OF APPEALS
ECISION, AS AUTHORIZED BY CHAPTER
OB OF THE MASSACHUSETTS GENERAL
AWS, SECTIONS 30, 33.

DATE:

MEDWAY ZONING BOARD OF APPEALS

THIS PLAN IS SUBJECT TO A
COVENANT TO BE RECORDED HEREWITH

I CERTIFY THAT 20 DAYS HAVE
ELAPSED SINCE ZONING BOARD
APPROVAL, AND THAT NO APPEAL
HAS BEEN FILED AT THIS OFFICE.

TOWN CLERK—TOWN OF MEDWAY

DATE	DESCRIPTION
12/2/2025	PER TETRA TECH COMMENTS
12/16/2025	PER TETRA TECH COMMENTS

**SEWER CONNECTION
MODIFICATION PLAN**

”*TIMBER CREST
ESTATES*”
*IN
MEDWAY
MASSACHUSETTS*

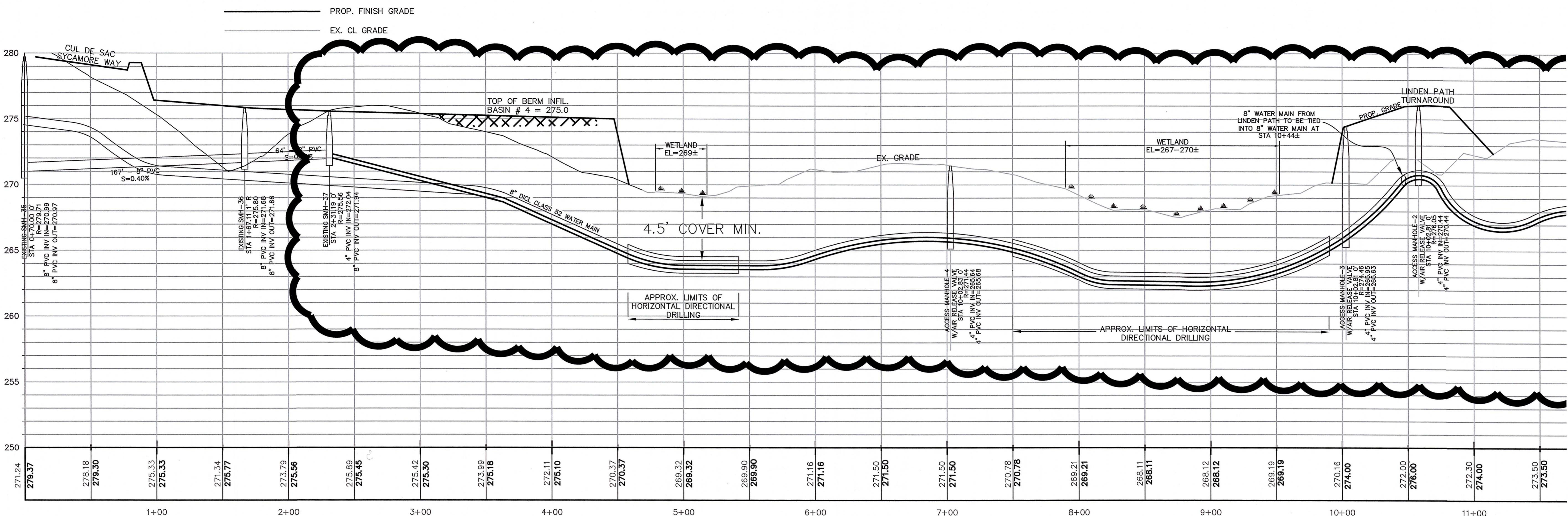
Outback Engineering Incorporated

165 EAST GROVE STREET
MIDDLEBOROUGH, MA 02346
TEL: (508)-946-9231
FAX: (508)-947-8873
www.outback-eng.com

DATE: NOVEMBER 10, 2025

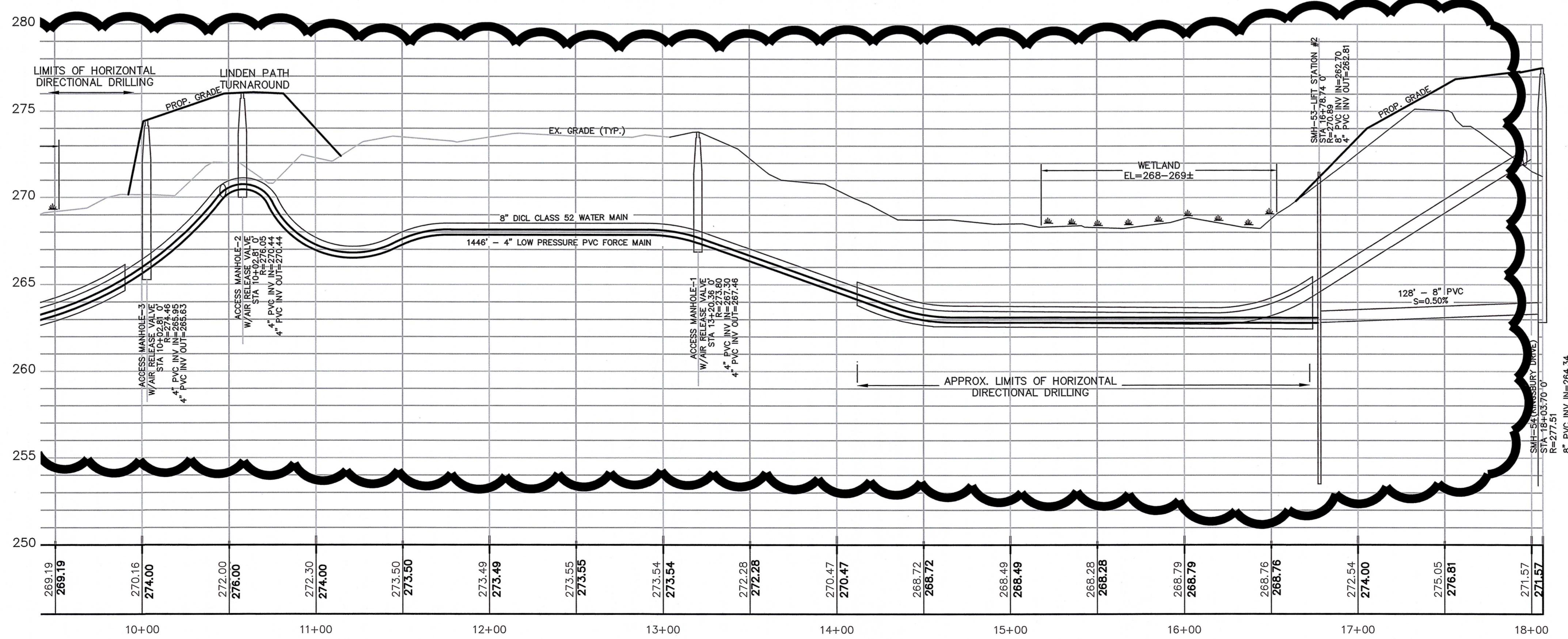
AWN BT: JJS	CHECKED BT: JAT	
SCALE: 1"=40'	SHEET 2 OF 6	
40'	80'	120'

OE-2765



EAST-WEST UTILITY PROFILE

HORIZONTAL: 1"=40'
VERTICAL: 1"=4'



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12-16-25
DATE PROFESSIONAL LAND SURVEYOR

APPROVED SUBJECT TO TERMS AND CONDITIONS OF A COMPREHENSIVE PERMIT PER ZONING BOARD OF APPEALS DECISION, AS AUTHORIZED BY CHAPTER 40B OF THE MASSACHUSETTS GENERAL LAWS, SECTIONS 20-23.

DATE:

MEDWAY ZONING BOARD OF APPEALS

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TOWN CLERK-TOWN OF MEDWAY

REVISIONS		
NO.	DATE	DESCRIPTION
1.	12/2/2025	PER TETRA TECH COMMENTS
2.	12/16/2025	PER TETRA TECH COMMENTS

SEWER CONNECTION MODIFICATION PLAN

"TIMBER CREST ESTATES & KINGSBURY VILLAGE" IN MEDWAY MASSACHUSETTS

Outback Engineering
Incorporated

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MIDDLEBOROUGH, MA 02346
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FAX: (508)-947-8873
www.outback-eng.com

DATE: NOVEMBER 10, 2025

DRAWN BY: JJS CHECKED BY: JAY

SCALE: 1"=40' SHEET 3 OF 6

0' 40' 80' 120'

OE-2765

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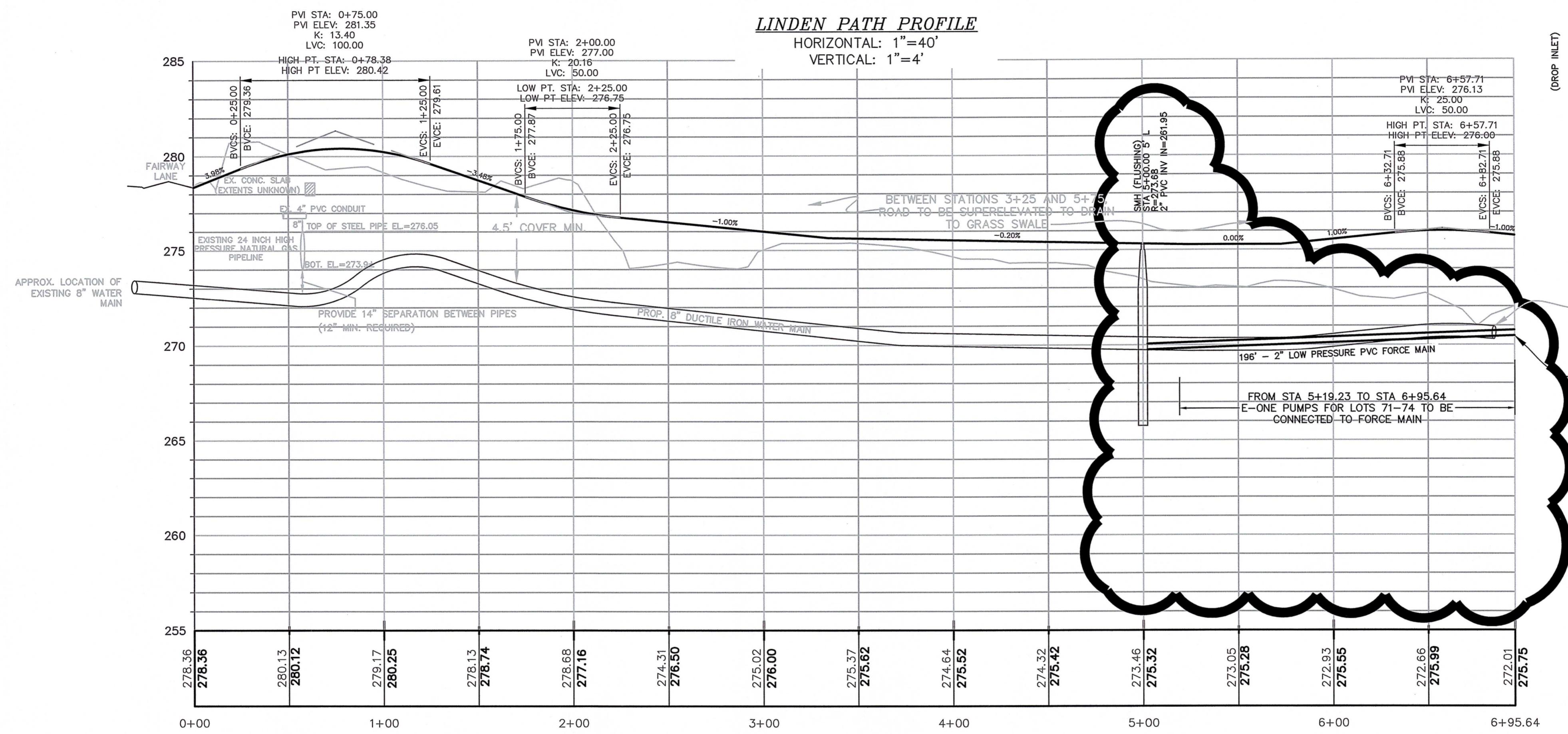
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SCALE: 1"=40' SHEET 4 OF 6

0' 40' 80' 120'

OE-2765



DYNAMIC HEAD CALCULATION

AMOUNT OF HEAD REQUIRED = (INVERT INTO SMH-37) - (ELEVATION OF INTERIOR BOTTOM OF LIFT STATION)
= 272.04 - 254.07 = 17.97'

FRICITION LOSS

USE A 4" SCH. 40 FORCE MAIN
TRY PUMPING AT \pm 120 GPM
EQUIVALENT PIPE LENGTH FOR 90° BEND = 5.5'
EQUIVALENT PIPE LENGTH FOR 45° BEND = 2.5'
TOTAL LENGTH OF PIPE = 1446' + 3(2.5') + 2(5.5') = 1464.5'
FRICITION LOSS PER 100' OF PIPE = 0.88
TOTAL LOSS DUE TO FRICTION = (14.64')(0.88)
= 12.88'

TOTAL DYNAMIC HEAD = 12.88' + 17.97' = 30.85'

BUOYANCY CALCULATIONS (LIFT STATION 2)

MAX. GROUNDWATER ELEV. = 267.9 (TP-12B)

PROPOSED TANK BOTTOM ELEV. = 254.07

1. BUOYANCY FORCE ON EMPTY TANK:
VOLUME DISPLACED = 81.25 FT³ X (267.9 - 254.1)
= 1121 C.F.

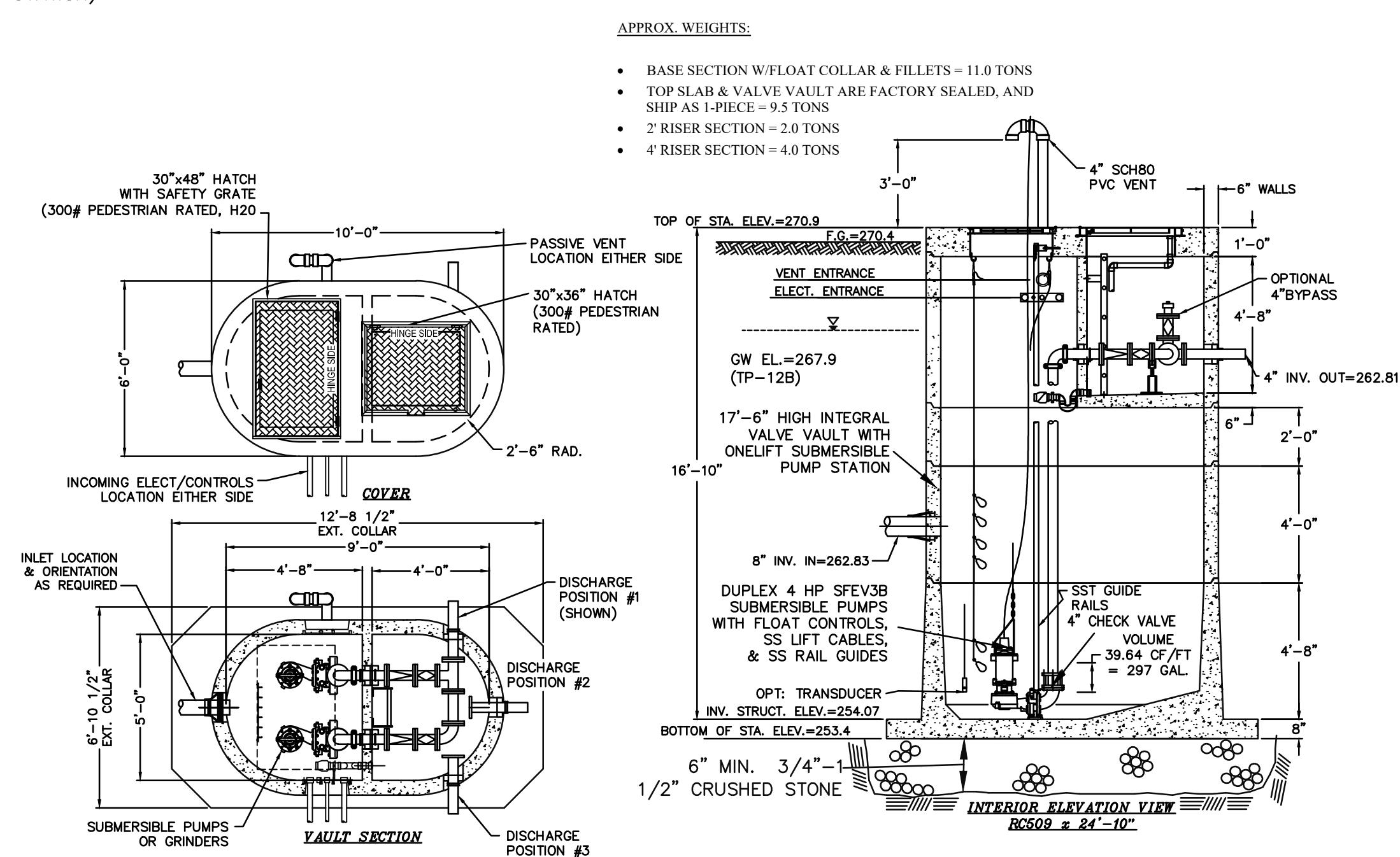
WT. OF DISPLACED WATER = 1121 C.F. X 62.4 #/C.F.
= 69950 # ↑

2. WEIGHT OF EMPTY TANK:
WT. OF EMPTY TANK = 69000 # ↓

3. WEIGHT OF SOIL ATOP BASE:
VOLUME = 24.3' DEEP X 29 FT² = 705 C.F.
WEIGHT = 705 C.F. X 120 #/C.F. = 84564 # ↓

3a. BUOYANCY FORCE OF SOIL ATOP SLAB:
VOLUME = (268.0-254.1') DEEP X 29 FT² = 403 C.F.
WEIGHT = 403 C.F. X 62.4 #/C.F. = 25153 # ↑
SUM OF FORCES: 84564 ↓ - 25153 ↑ = 59411 ↓ #

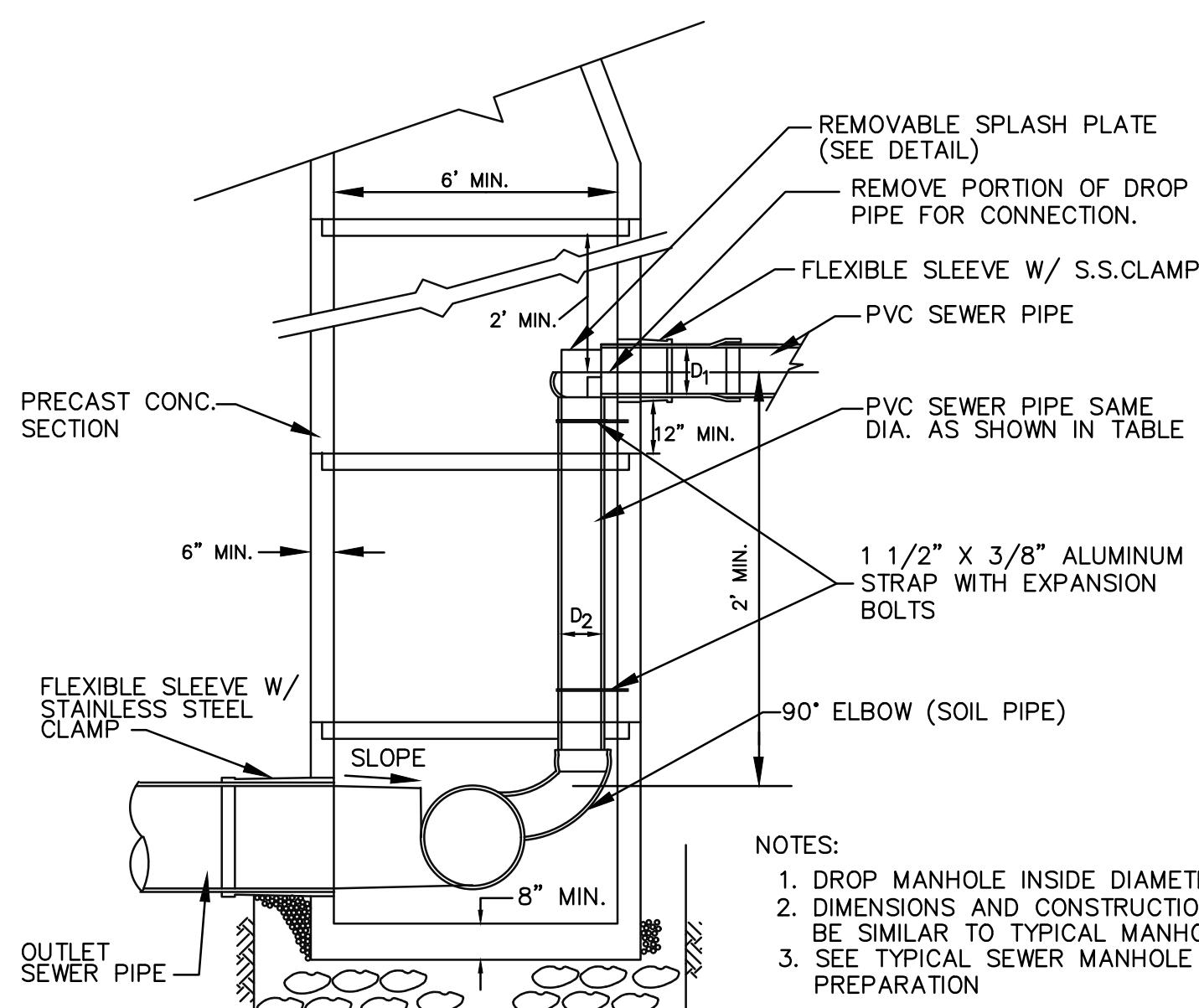
4. SUM OF FORCES:
F.S. = (69000 # + 59411 #) / 69950 # = 1.83 FACTOR OF SAFETY
WT. OF TANK + SOIL IS GREATER THAN WT. OF DISPLACED WATER
OK



LIFT STATION #2

NOTES FOR LIFT STATION 2:

1. PUMP CORDS NOT SHOWN FOR CLARITY.
2. CONTRACTOR TO PROVIDE ALL EQUIPMENT, MATERIALS & LABOR NECESSARY FOR COMPLETE INSTALLATION OF LIFT STATIONS (SEE HAYES PUMP, INC. BUDGET QUOTATION LETTERS DATED NOVEMBER 12, 2018 FOR SPECIFICATIONS), INCLUDING ELECTRIC CONTROL PANELS AND BACKUP GENERATORS. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW BY DESIGN ENGINEER & MEDWAY DPW PRIOR TO ORDERING AND INSTALLATION, AND AS-BUILT DRAWINGS PRIOR TO PLACING STATIONS IN SERVICE.
3. PRIOR TO RELEASE OF ANY BUILDING PERMITS FOR INDIVIDUAL LOTS, CONTRACTOR SHALL PROVIDE THE OWNER & TOWN DPW WITH A CLEAR WELL TEST REPORT AND AS-BUILT DRAWINGS FOR ALL PUMP STATIONS NEEDED TO SERVE PROPOSED BUILDING LOTS. OWNER SHALL PROVIDE A COPY OF A CONTRACT FOR EMERGENCY AND ROUTINE MAINTENANCE SERVICES DESIGNATING WHO IS RESPONSIBLE FOR SUCH SERVICES AND RELATED CONTACT INFORMATION. (REFER TO SEWER LIFT STATIONS SPEC SHEETS & STANDARD OPERATING GUIDELINE TIMBER CREST ESTATES & KINGSBURY VILLAGE DATED NOVEMBER 29, 2019.)

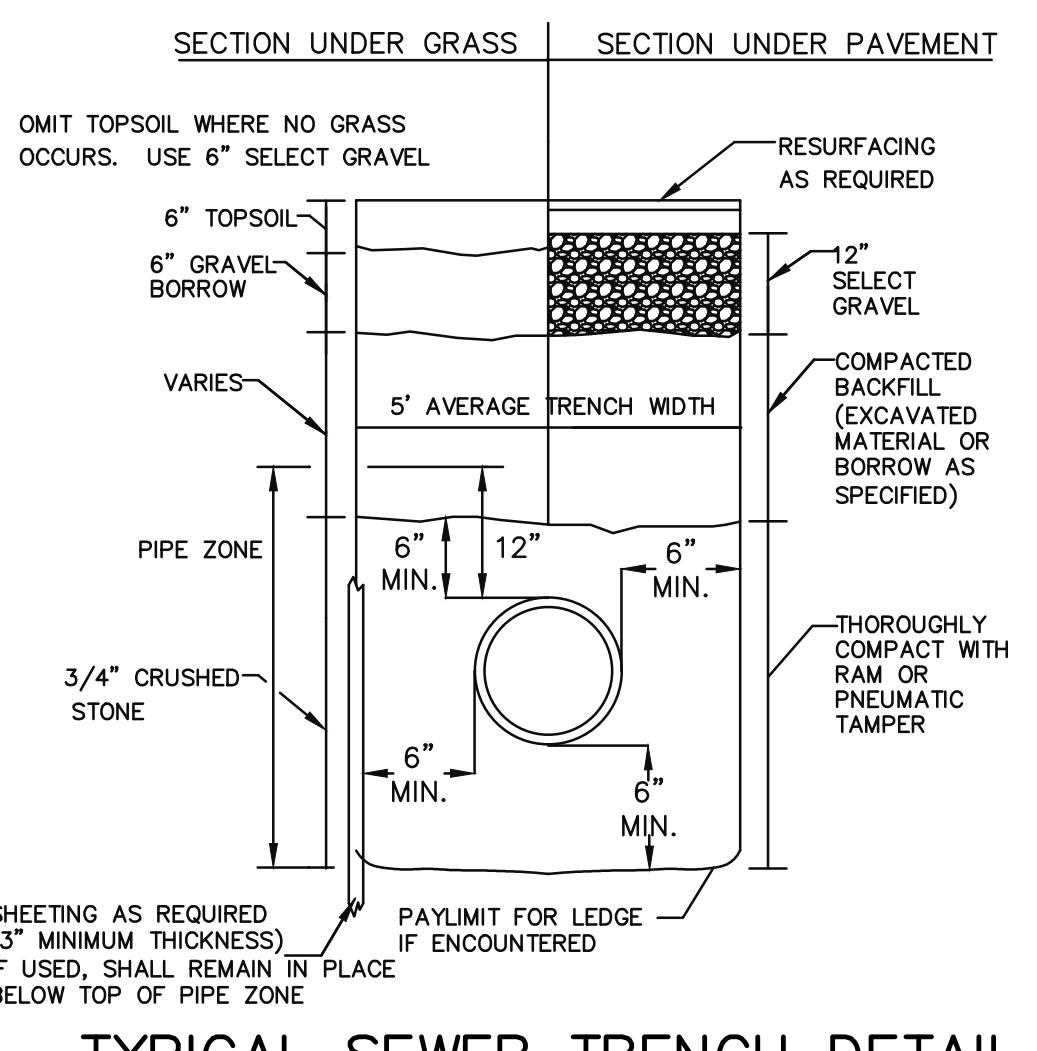


PIPE SIZE TABLE

PIPE SIZES (IN.)	INLET PIPE D ₁	DROP PIPE D ₂
18	15	
15	12	
12	12	
10	10	
8	8	
6	6	

DROP SEWER MANHOLE INSIDE CONNECTION

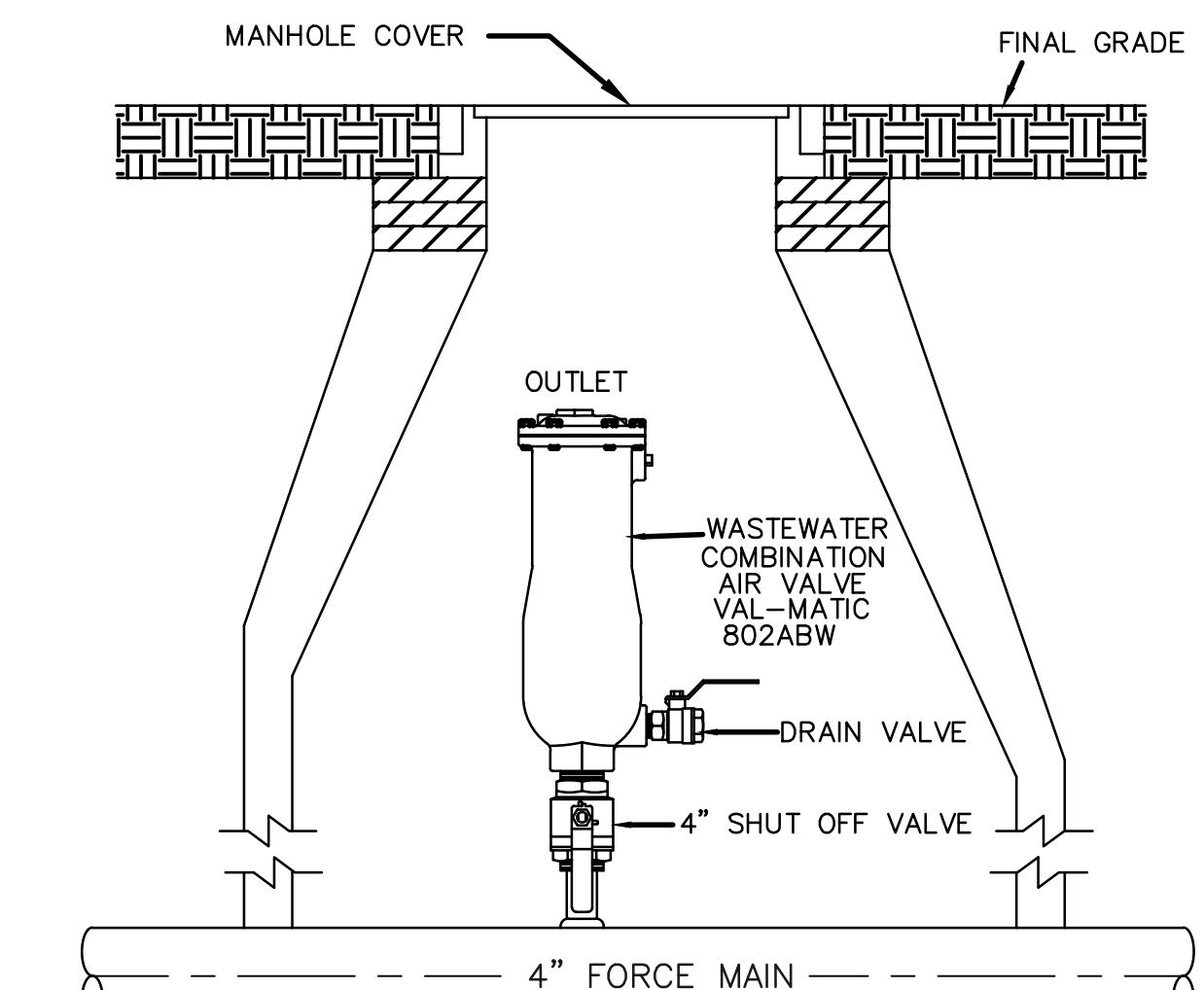
NOT TO SCALE



TYPICAL SEWER TRENCH DETAIL

NOT TO SCALE

NOTES:
1. INCLUDES HOUSE SERVICES
2. EXISTING PAVEMENT SHALL BE SAW CUT BEFORE TRENCH EXCAVATION
3. PAY WIDTH EQUALS 5 FEET



ACCESS MANHOLE SECTION

NOT TO SCALE

LIFT Station # & Location	# of homes	Avg Flow(GPD) (170 GPD/home)	Peak flow (5X) (GPD)	GPH (peak hour)	GPM (peak hour)	Rim El.	8" Inv. In to Lift station	Inv. Out (of wet well)	FM length	Connecting inv. El.
#2	67	11390	56950	2373	40	270.89	262.83	(4") 262.81	*1446'	272.04

LIFT STATION DESIGN FLOW CALCULATIONS & ELEVATIONS

*NOTE: FROM LIFT STATION TO MANHOLE WITH GRAVITY SEWER

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PAUL BAGNEAU
No. 45916
PROFESSIONAL LAND SURVEYOR
12-16-25

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MEDWAY ZONING BOARD OF APPEALS
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JASON A. YOUNGQUIST
CIVIL
NO. 45572
REGISTERED
PROFESSIONAL LAND SURVEYOR
12-16-25

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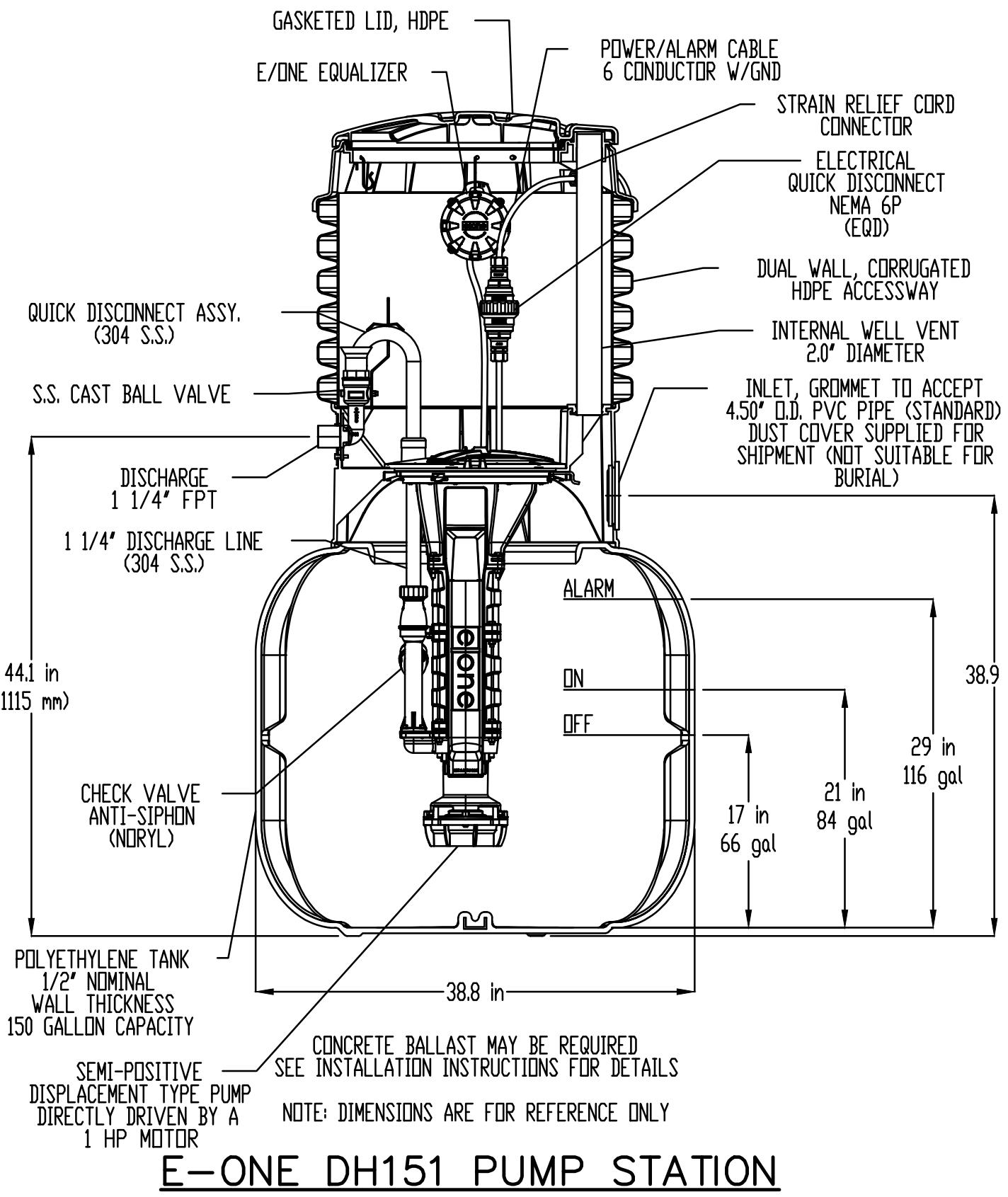
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SEWER CONNECTION MODIFICATION PLAN

TIMBER CREST ESTATES & KINGSBURY VILLAGE IN MEDWAY MASSACHUSETTS

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DRAWN BY: JUS CHECKED BY: JAY
NOT TO SCALE SHEET 5 OF 6

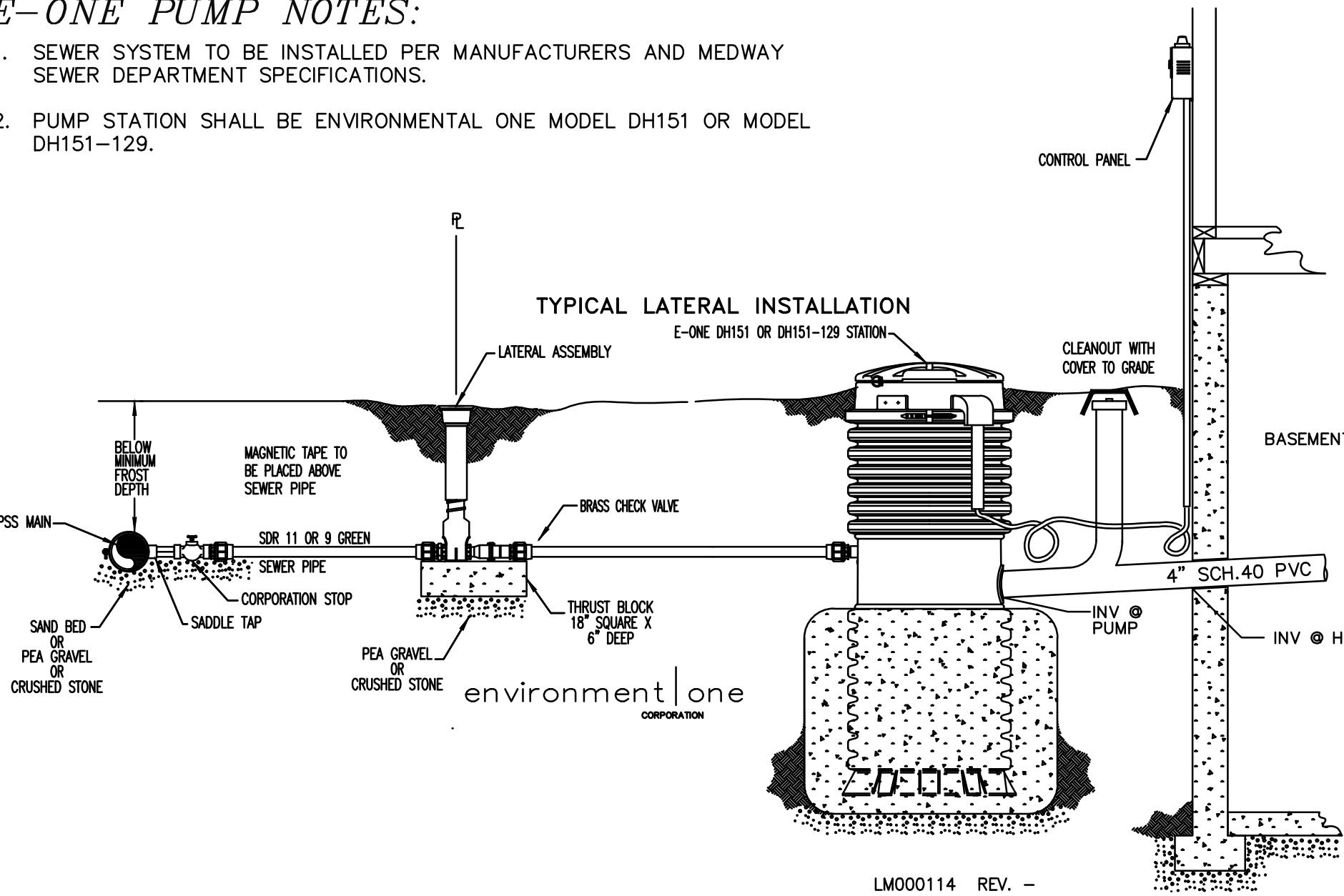


E-ONE DH151 PUMP STATION

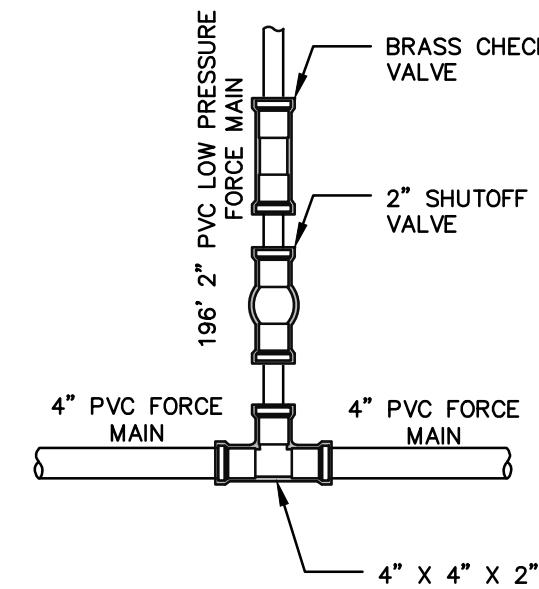
NOT TO SCALE

E-ONE PUMP NOTES:

1. SEWER SYSTEM TO BE INSTALLED PER MANUFACTURERS AND MEDWAY SEWER DEPARTMENT SPECIFICATIONS.
2. PUMP STATION SHALL BE ENVIRONMENTAL ONE MODEL DH151 OR MODEL DH151-129.



LATERAL FROM MAIN TO E-ONE STAINLESS STEEL ASSEMBLY
DETAIL
NOT TO SCALE



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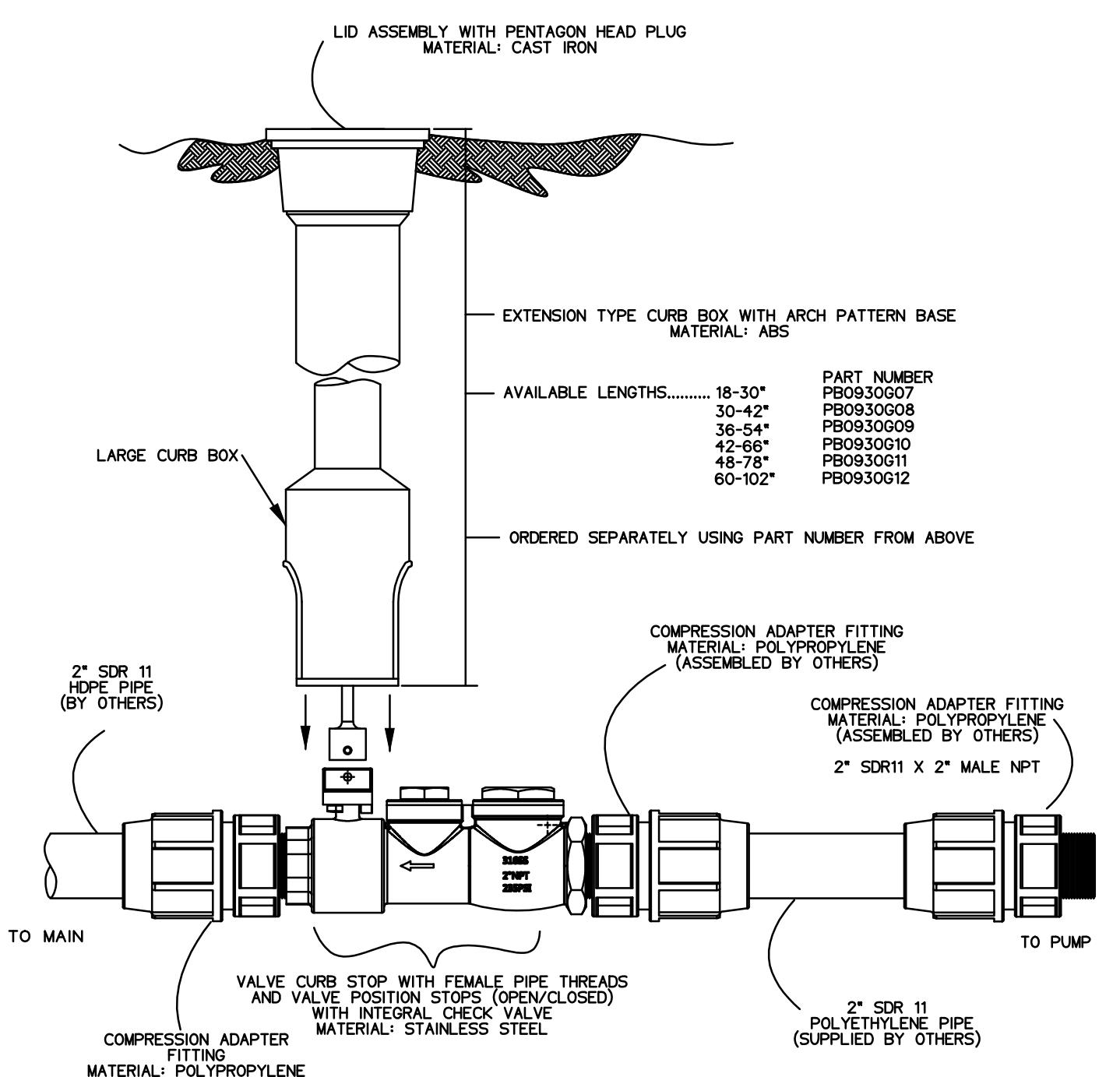
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SEWER CONNECTION MODIFICATION PLAN

TIMBER CREST ESTATES & KINGSBURY VILLAGE IN MEDWAY MASSACHUSETTS



12-16-25



STAINLESS STEEL LATERAL KIT

NOT TO SCALE

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