

# TOWN OF ASHLAND, MASSACHUSETTS BOARD OF SELECTMEN

## INDEPENDENCE LANE WATER BOOSTER STATION REVISED

### BOARD OF SELECTMEN

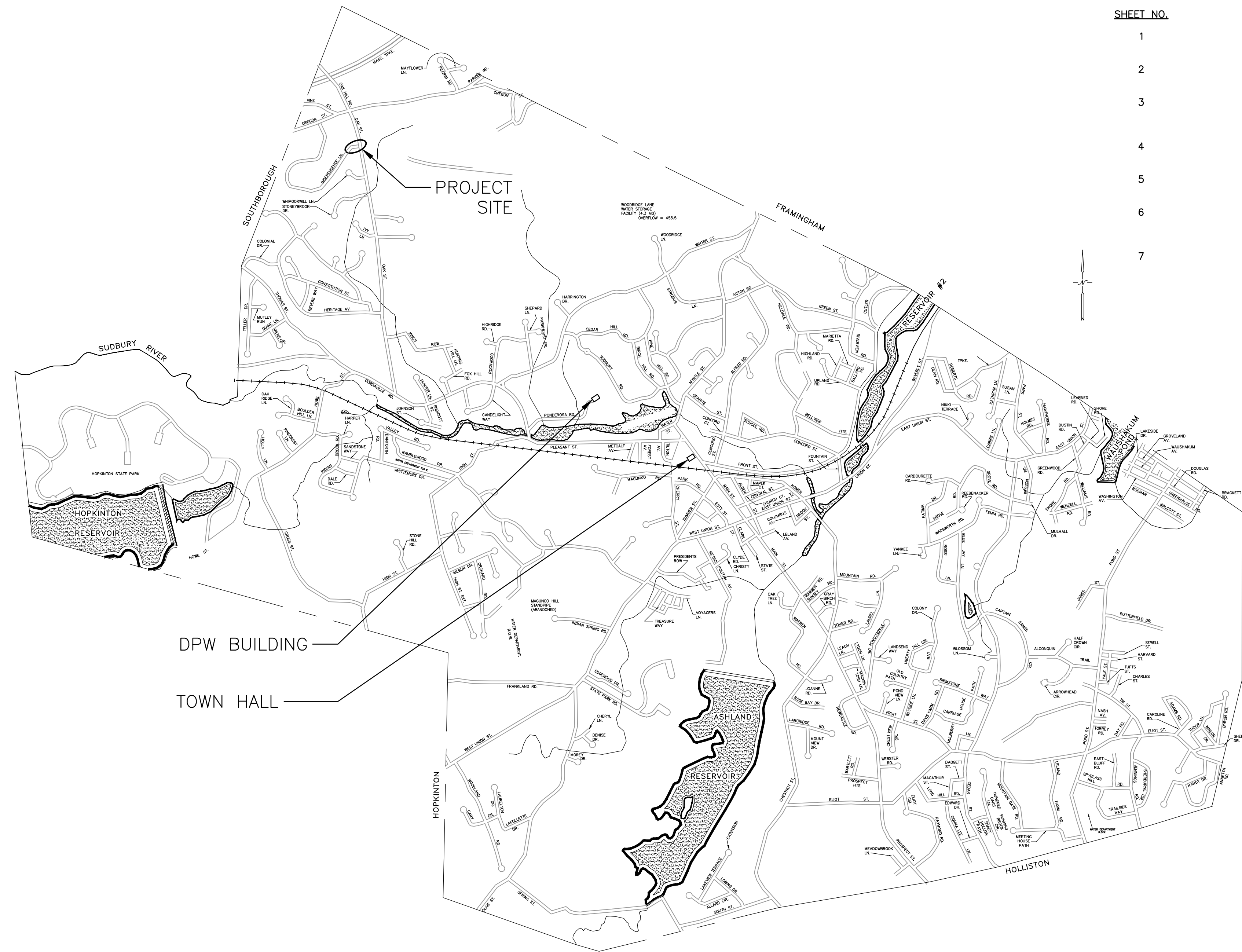
ROBERT K. SCHERER, CHAIRMAN  
STEVEN MITCHELL, VICE CHAIRMAN  
YOLANDA GREAVES, CLERK  
JOSEPH J. MAGNANI, JR.

### TOWN MANAGER

MICHAEL D. HERBERT

### DEPARTMENT OF PUBLIC WORKS

JOHN D. SMALL, DIRECTOR



SHEET NO.	DRAWING NO.	DRAWING NAME
1	1R	COVER SHEET
2	SP	SITE PLAN
3	A1R	BUILDING AND MECHANICAL DETAILS
4	S1R	STRUCTURAL DETAILS
5	SD1	CONSTRUCTION DETAILS
6	E1R	SINGLE LINE POWER & INSTRUMENTATION
7	E2	ELECTRICAL DETAILS

**HALEY AND WARD, INC.**  
**ENGINEERS**  
**MAYNARD, MASSACHUSETTS**

**JUNE, 2019**

1. 2021 CHANGE NOTES  
1. DRAWINGS LISTED AS REVISED REFLECT THE CHANGE IN BOOSTER STATION SIZE FROM 18'-8" TO 20'-3". THIS CHANGED THE STATION CONCRETE SLAB SIZE FROM 21'-5" TO 21'-11".  
2. ELECTRICAL DRAWINGS LISTED AS REVISED TO REFLECT THE ADDITION OF A THIRD DOMESTIC PUMP AND THE ELIMINATION OF THE SCADA PLC, AND THE CHANGE TO HAVE THE CONTROL PANEL PLC ACT AS THE SCADA PLC.

TOWN OF ASHLAND, MASSACHUSETTS  
BOARD OF SELECTMEN  
**INDEPENDENCE LANE  
WATER BOOSTER STATION**

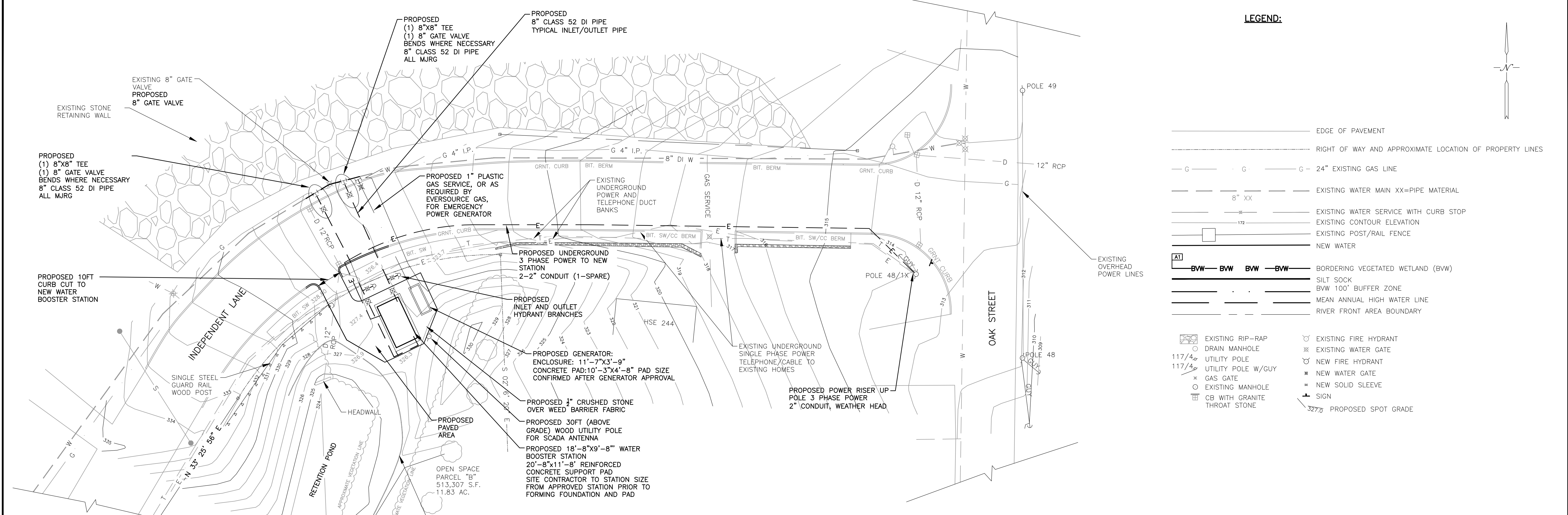
**Haley Ward, Inc.**  
65 GREAT ROAD, SUITE 200,  
MAYNARD, MASSACHUSETTS 01754-2097  
PHONE: (978) 648-6025 FAX: (978) 648-6068  
www.haleyward.com

CHECKED	DATE	BY
REVISION	DATE <td>BY</td>	BY
1	1.2021	GJE

SHEET NO.:	1 OF 7
CONTRACT NO.:	N/A
SCALE:	AS NOTED
DATE DRAWN:	JUNE 2019
DRAWN BY:	GJE
FILE NO.:	ASH-317-001.DWG

**DWG. NO.**

**1R**

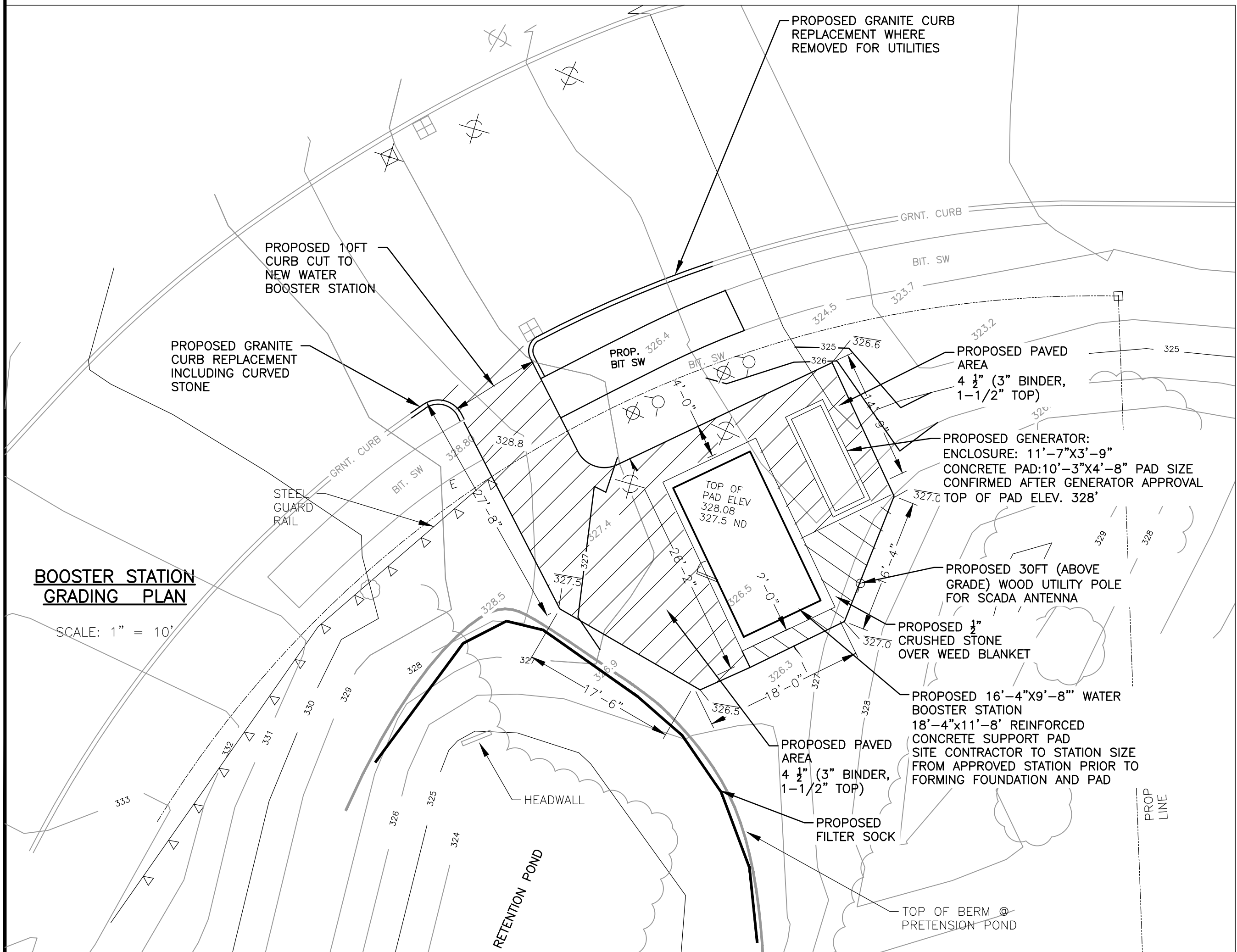


**LEGEND:**

	EDGE OF PAVEMENT
	RIGHT OF WAY AND APPROXIMATE LOCATION OF PROPERTY LINES
	EXISTING WATER MAIN XX=PIPE MATERIAL
	EXISTING WATER SERVICE WITH CURB STOP
	EXISTING CONTOUR ELEVATION
	EXISTING POST/RAIL FENCE
	NEW WATER
	BORDERING VEGETATED WETLAND (BW)
	SILT SOCK
	BW 100' BUFFER ZONE
	MEAN ANNUAL HIGH WATER LINE
	RIVER FRONT AREA BOUNDARY
	EXISTING RIP-RAP
	DRAIN MANHOLE
	UTILITY POLE
	UTILITY POLE W/GUY
	EXISTING MANHOLE
	CB WITH GRANITE THROAT STONE
	EXISTING FIRE HYDRANT
	EXISTING WATER GATE
	NEW FIRE HYDRANT
	NEW WATER GATE
	NEW SOLID SLEEVE
	SIGN
	PROPOSED SPOT GRADE

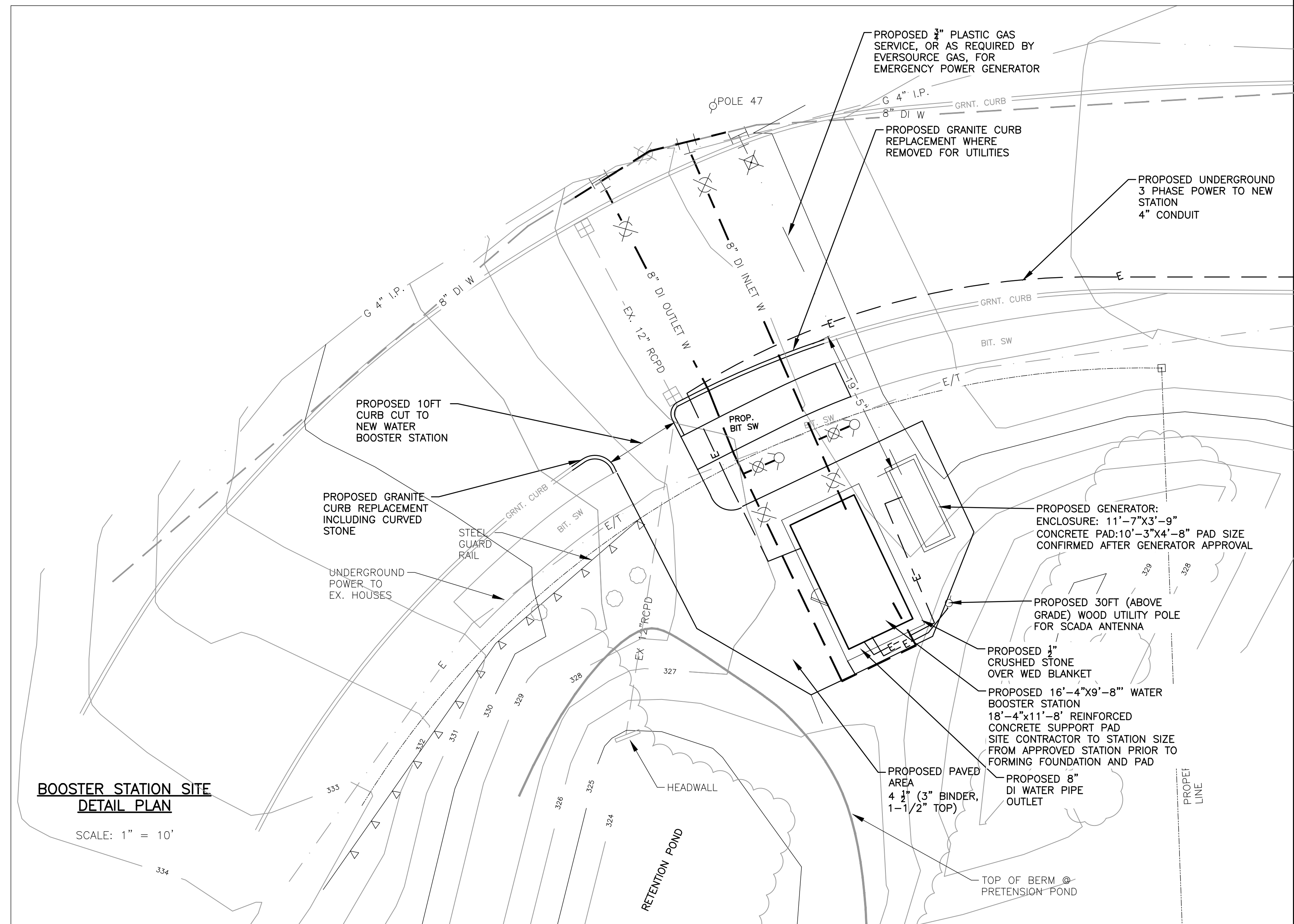
**BOOSTER STATION SITE PLAN**

SCALE: 1" = 20'



**BOOSTER STATION GRADING PLAN**

SCALE: 1" = 10'



**BOOSTER STATION SITE DETAIL PLAN**

SCALE: 1" = 10'

CHECKED	DATE	BY
REVISION	DATE	BY

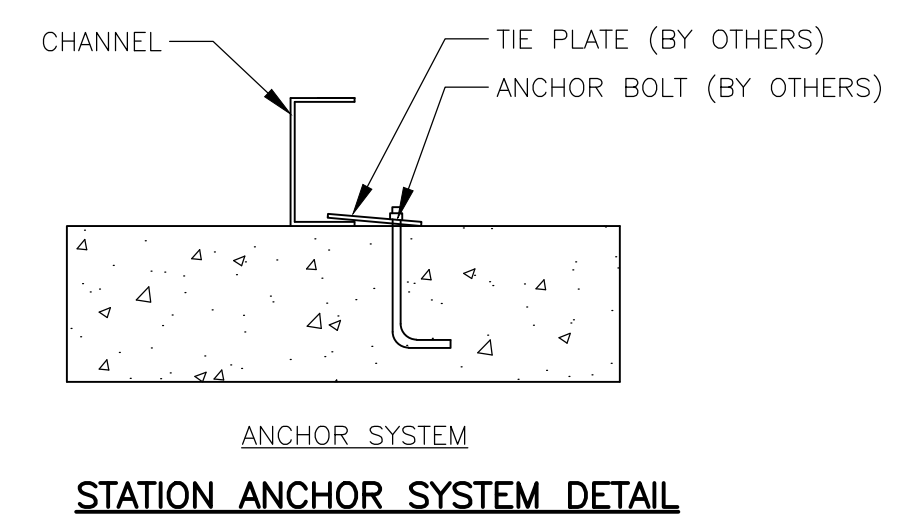
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CONTRACT NO.:	N/A
SCALE:	AS NOTED
DATE DRAWN:	2019
DRAWN BY:	GJE
FILE NO.:	ash317-000.dwg

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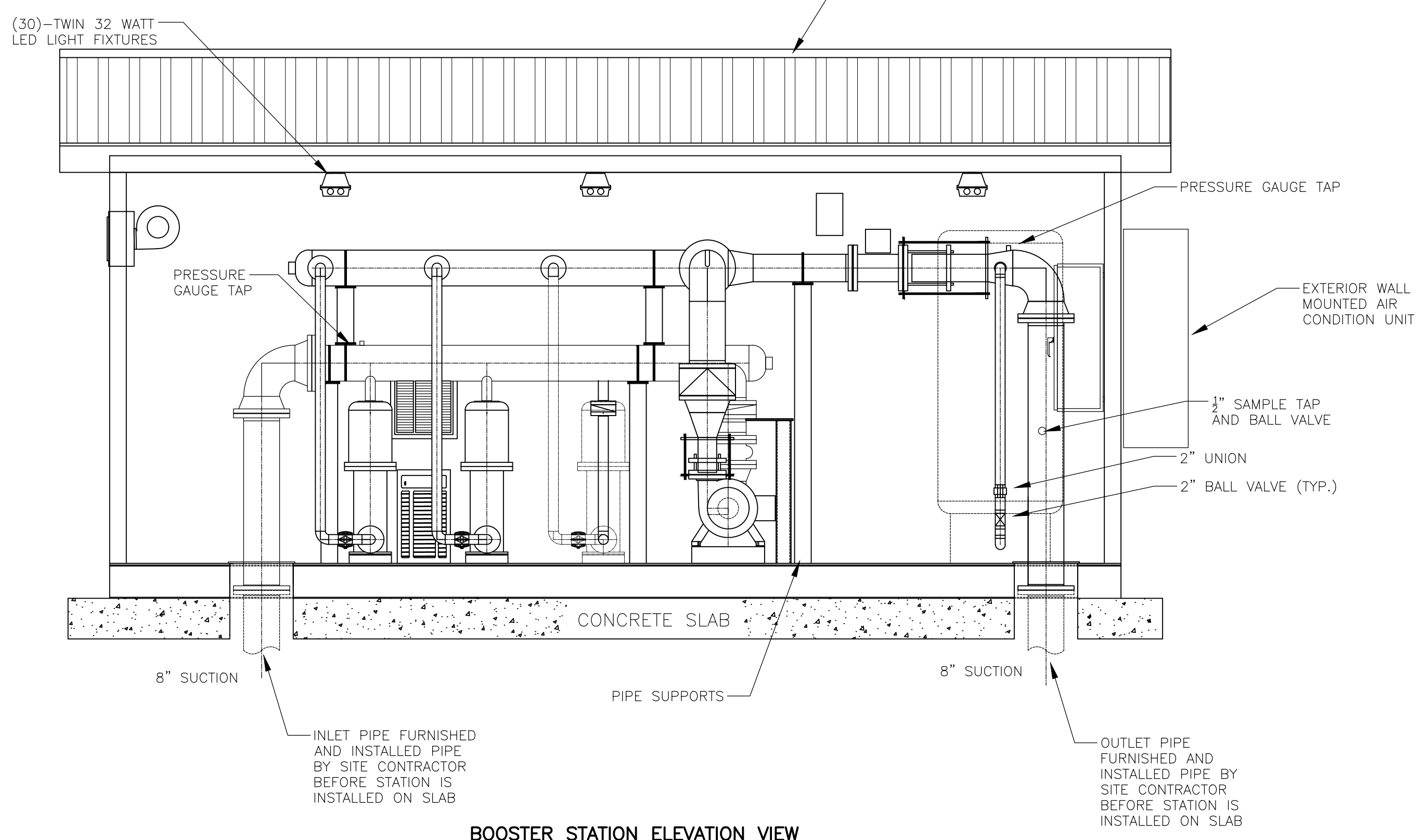
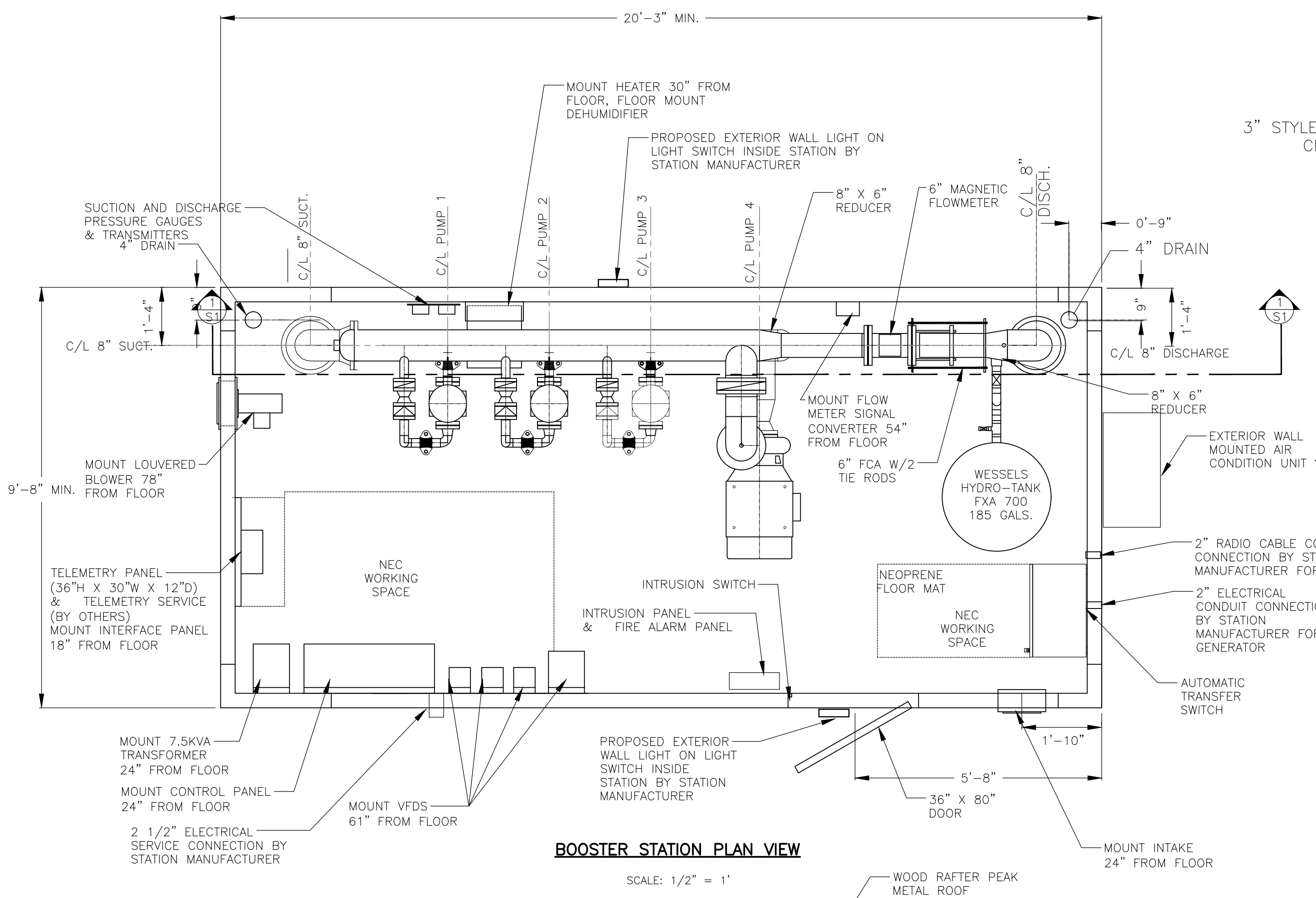
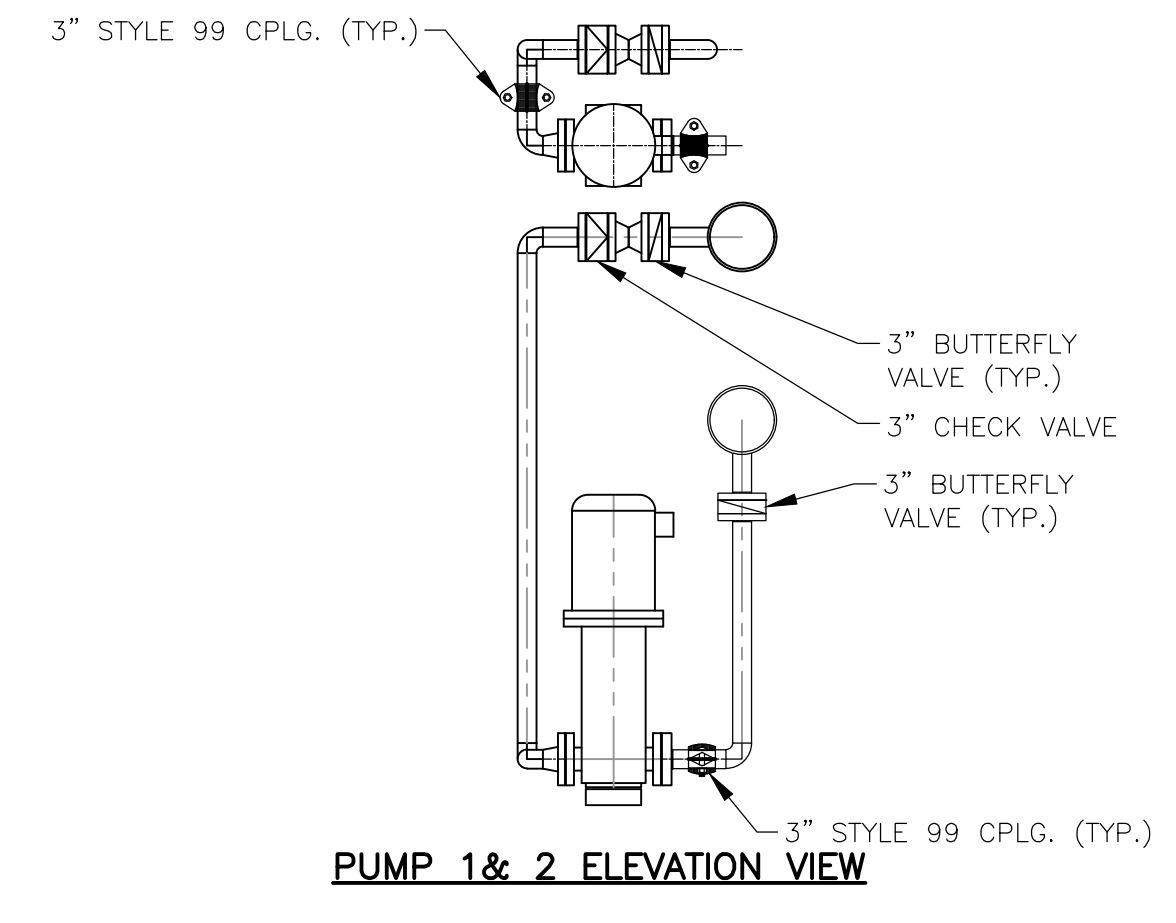
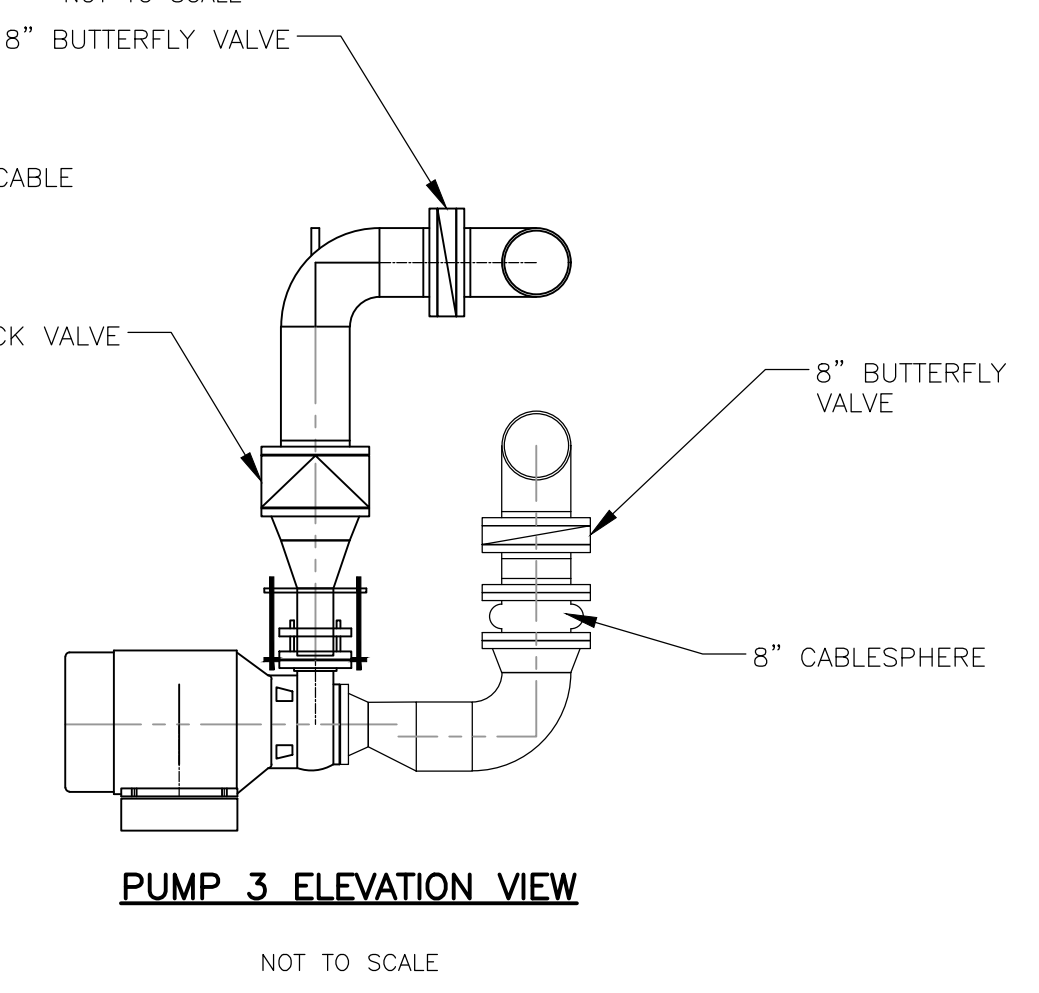
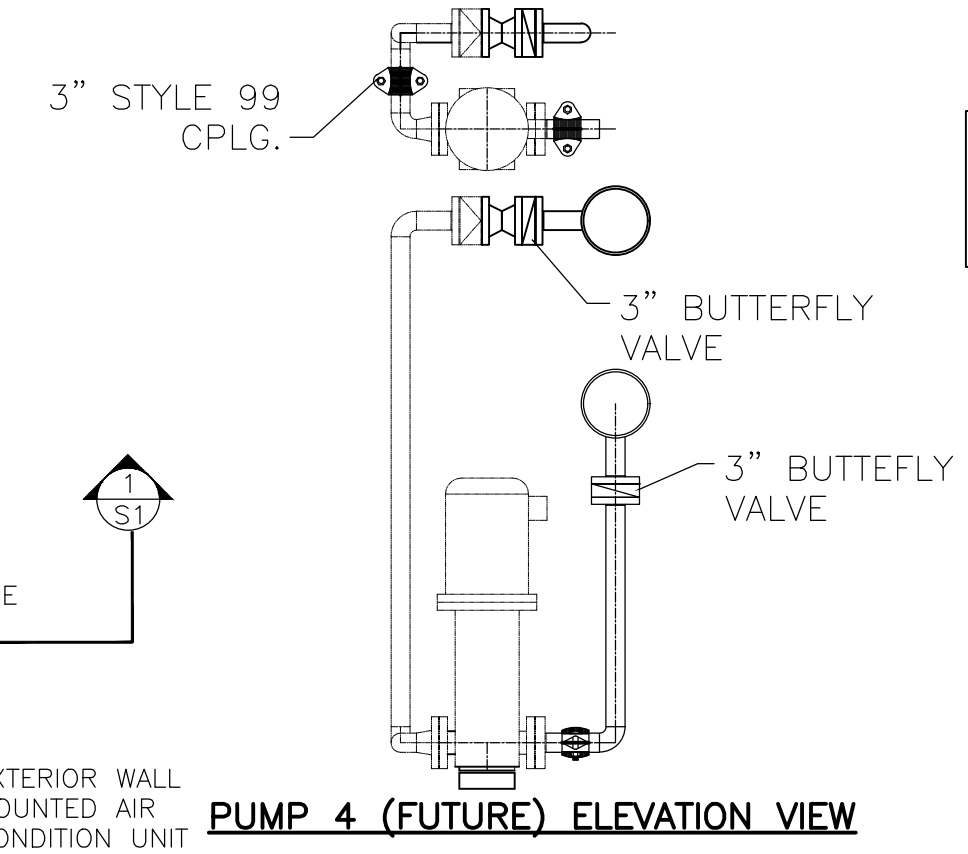
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SHEET NO.:	3 OF 7
CONTRACT NO.:	N/A
SCALE:	AS NOTED
DATE DRAWN:	JUNE 2019
DRAWN BY:	LJC
FILE NO.:	ASH317-A1

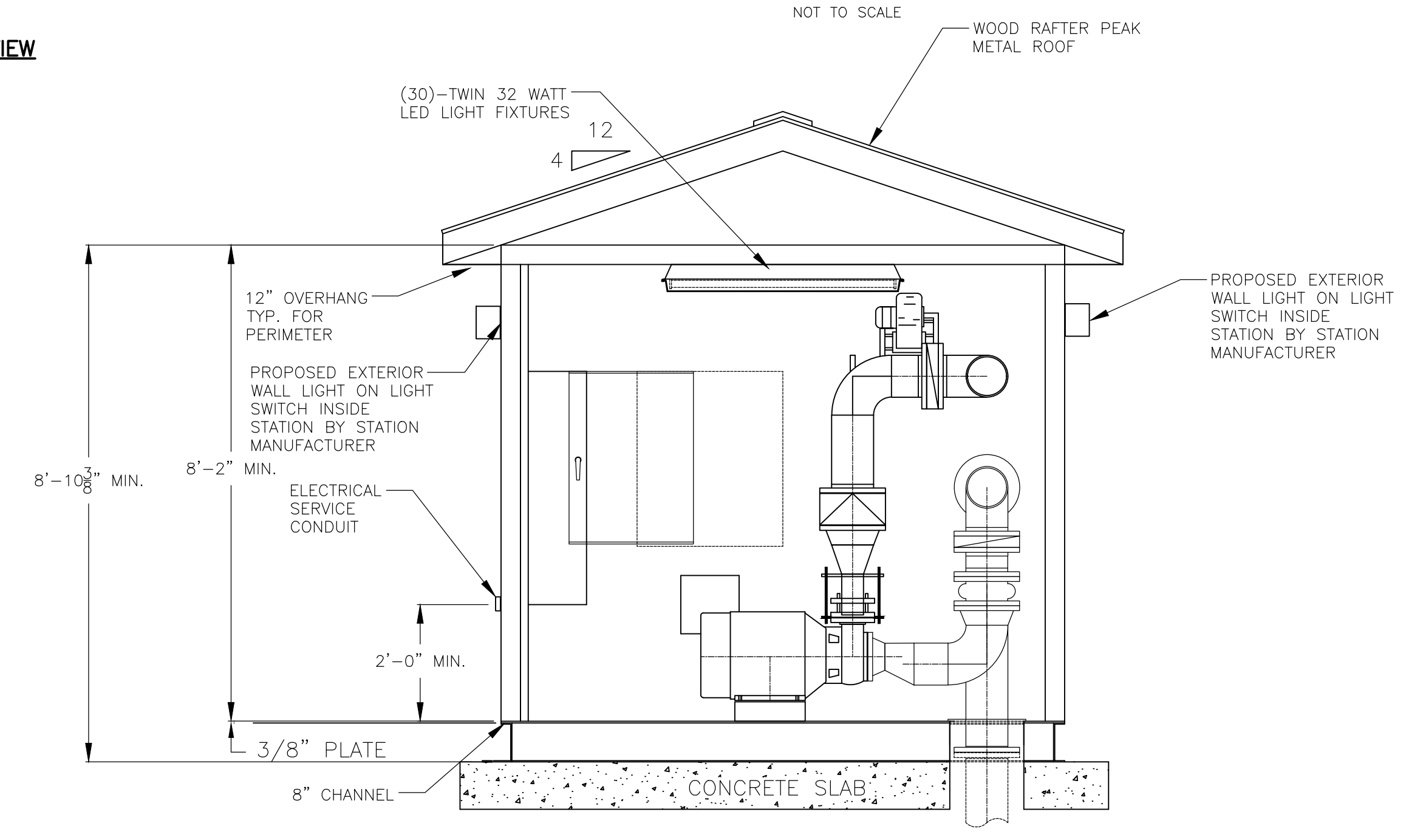
FLOOR DRAIN NOTE:  
1. STATION MANUFACTURER TO INSTALL CAST IRON 4" DIAMETER FLOOR DRAIN IN STATION FLOOR.  
2. SITE CONTRACTOR TO FURNISH AND INSTALL 3" CAST IRON DRAIN FROM FLOOR DRAIN TO UNDERGROUND STONE SUMP AREA, 3 FOOT DIAMETER BY 2 FOOT DEEP



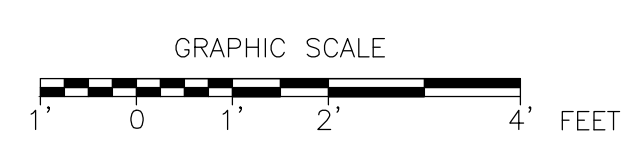
**PAINT REQUIREMENTS**  
APPLY 8 MILS EPOXY ENAMEL INTERIOR OF PIPING; FUSION BONDED EPOXY COATED PER AWWA C213



NOTE:  
INDEPENDENTLY SUPPORTED.  
PIPE EXTERNAL TO STATION MUST BE



CHANGE NOTES  
1. CHANGES MADE ON 1.19.101 WAS TO INCREASE LENGTH OF STATION BUILDING FROM 18'-8 3/4" TO 20'-3" AS REQUIRED BY THE SELECTED USEMCO BOOSTER STATION



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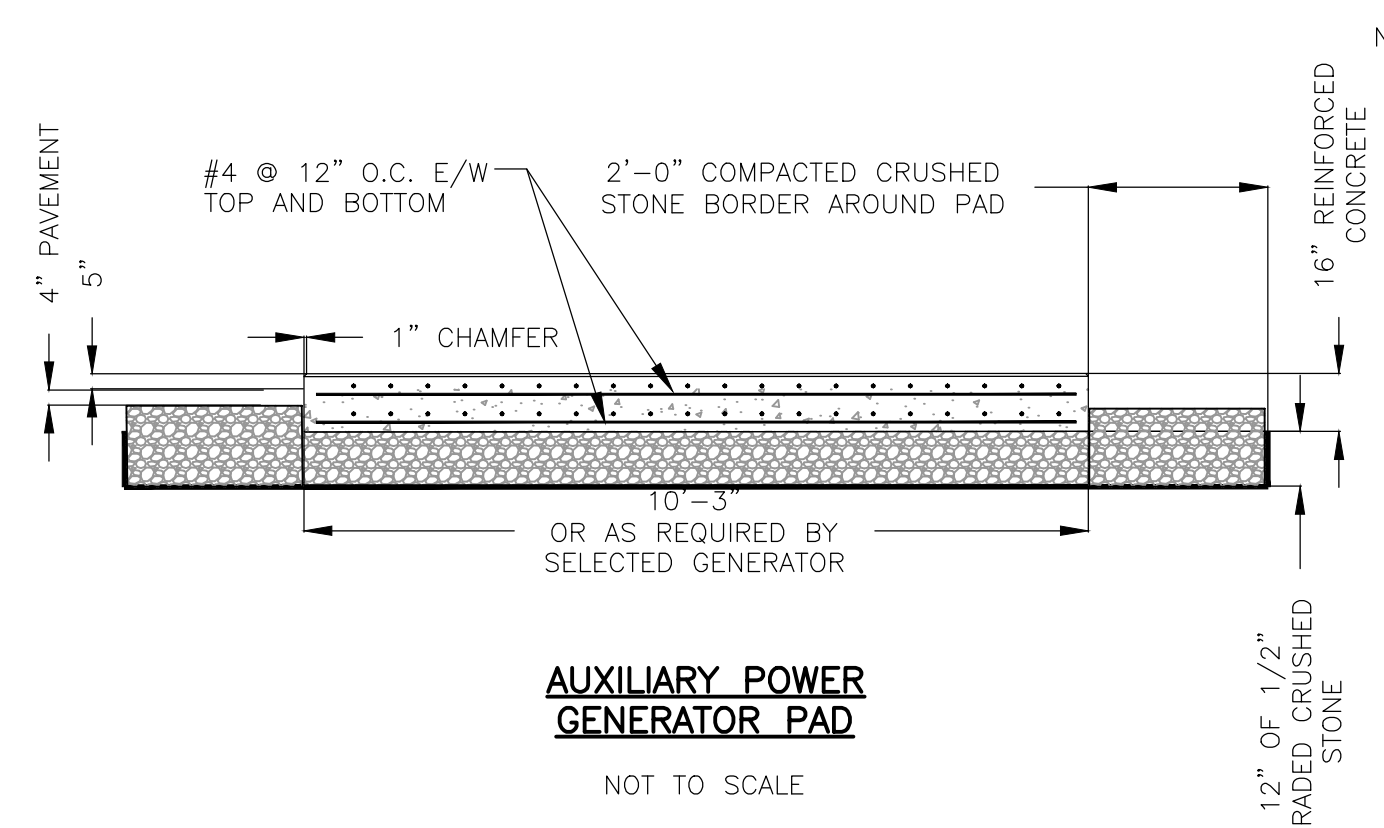
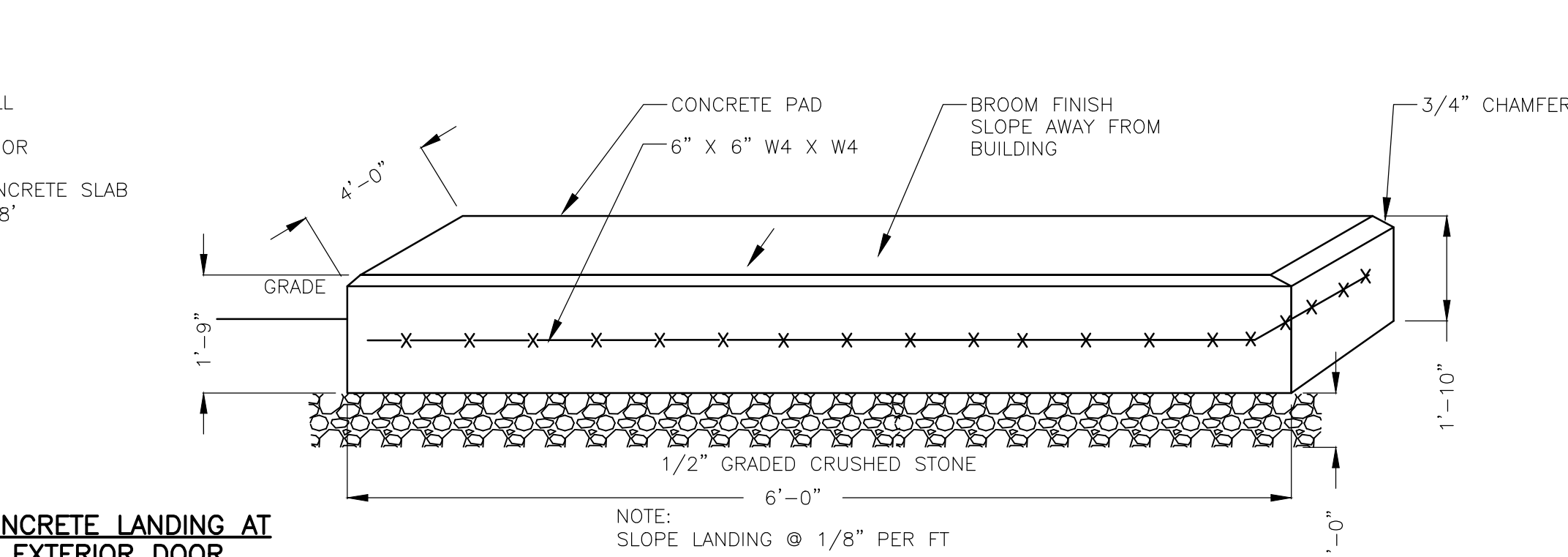
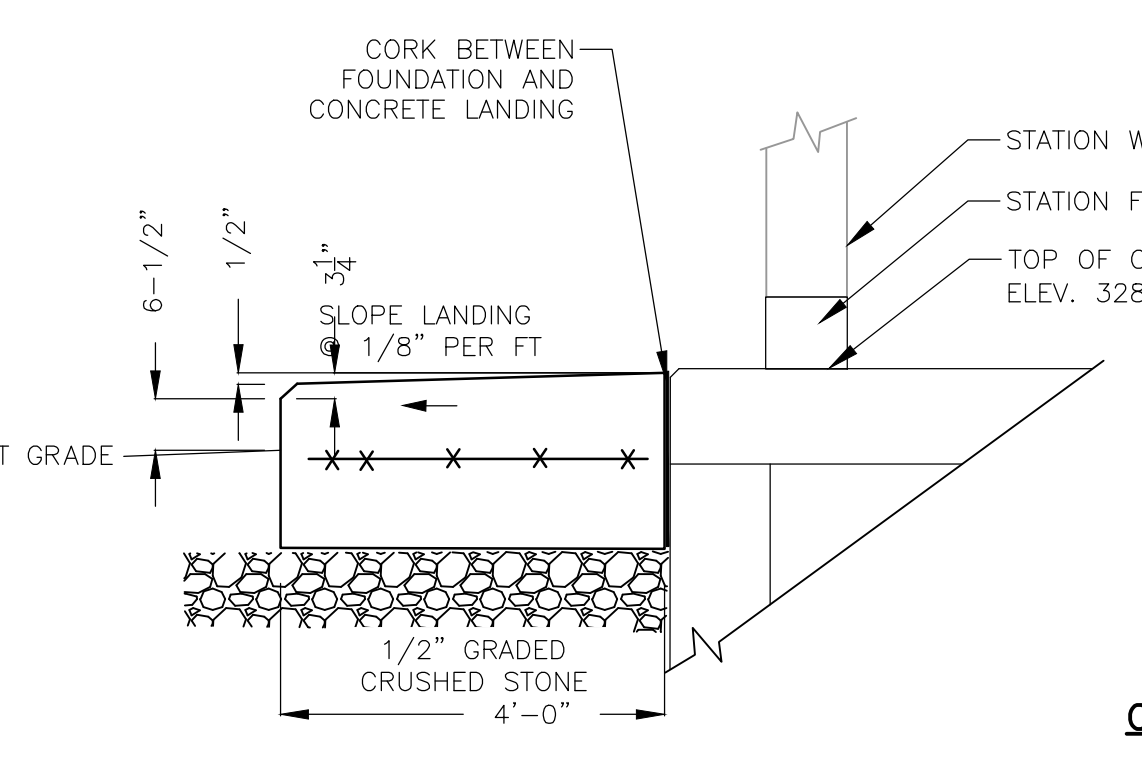
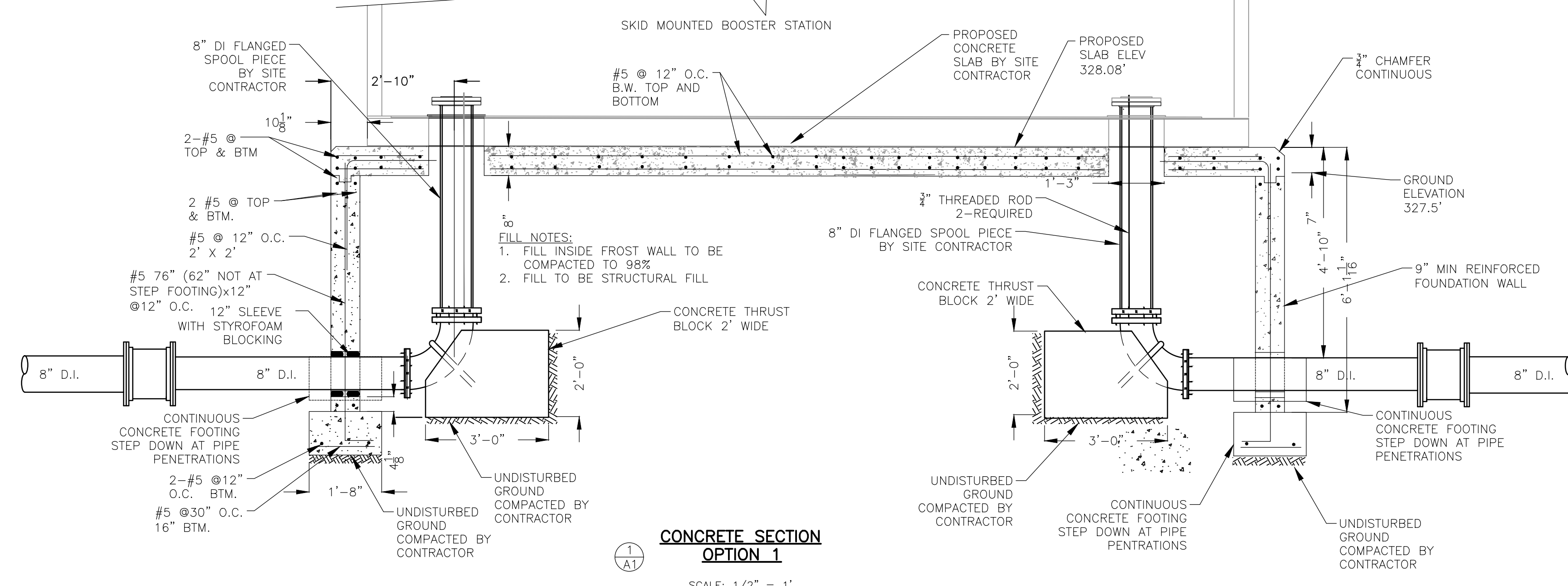
**MECHANICAL  
DETAILS**

**Haley Ward, Inc.**  
63 GREAT ROAD, SUITE 200,  
MAYNARD, MASSACHUSETTS 01754-2097  
PHONE: (978) 648-6025 FAX: (978) 648-6068  
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CHECKED	DATE	BY	REVISION	DATE	BY
1	1	1			
1	1,2021	G/JE			

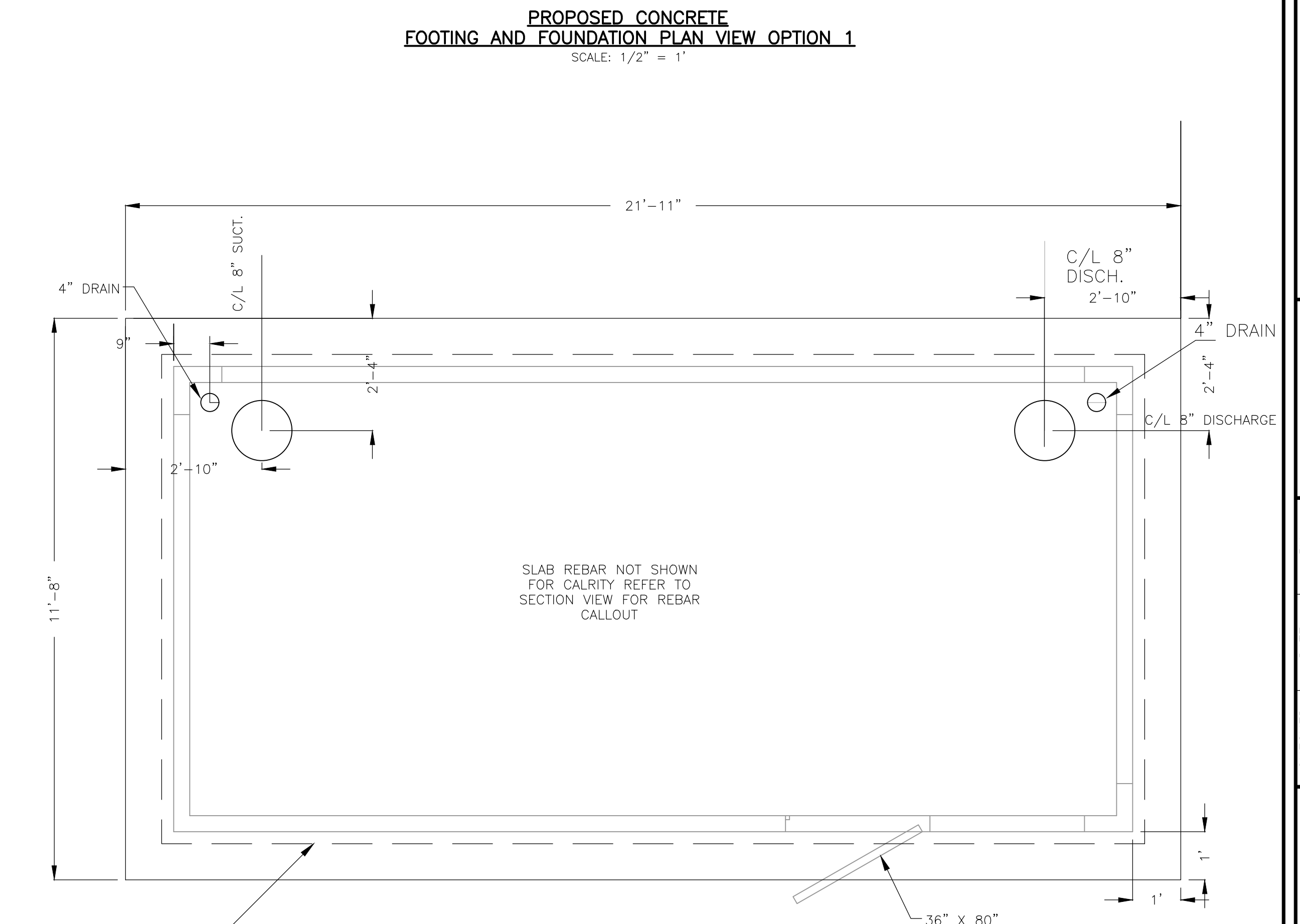
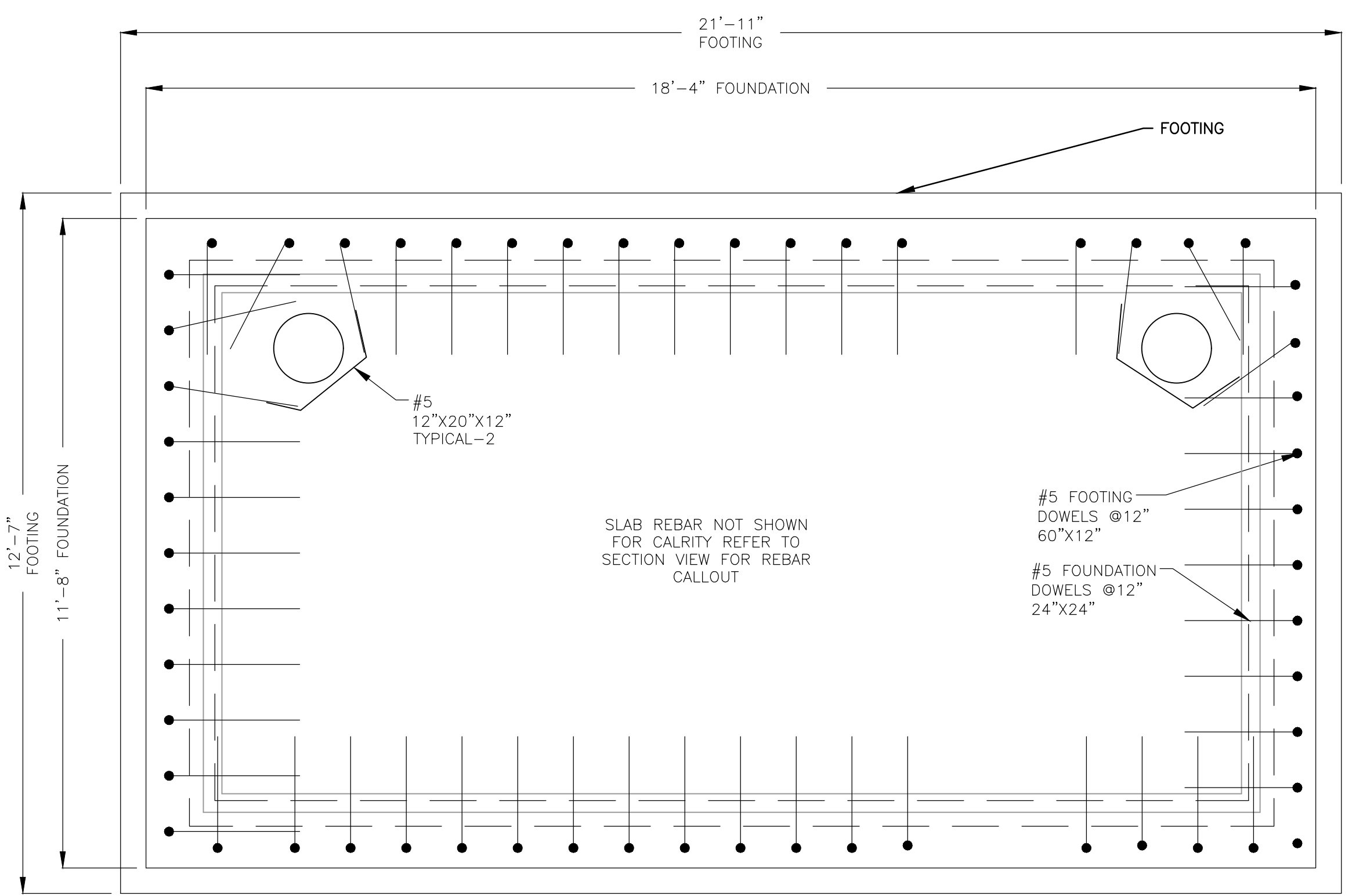
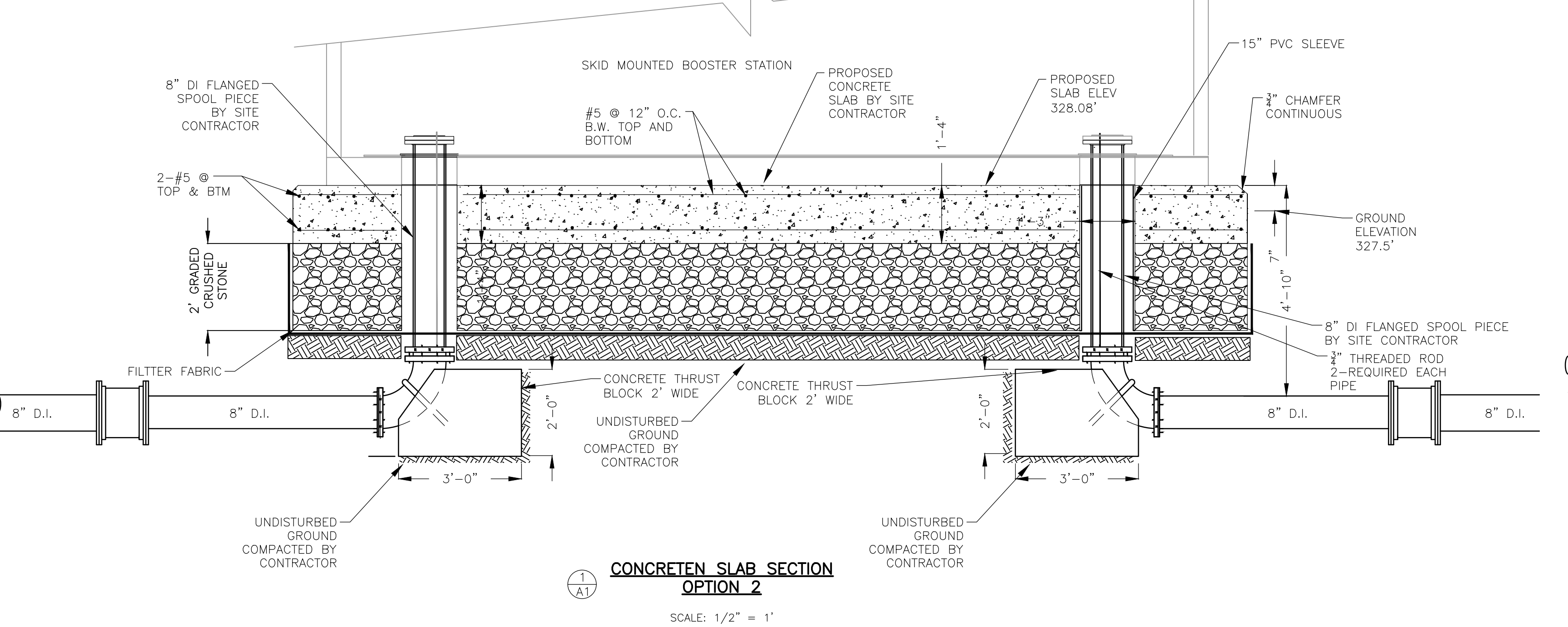
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CONTRACT NO.:	N/A
SCALE:	AS NOTED
DATE DRAWN:	JUNE 2019
DRAWN BY:	G/JE
FILE NO.:	ASH 317-S1

**DWG. NO.**  
**S1**



**NOTES:**

1. PROPOSED GENERATOR PAD APPROX. SIZE 10'-3" LONG BY 4'-8" WIDE BY 16" THICK. FINAL PAD SIZE BASED ON SELECTED GENERATOR SKID SIZE PLUS 6" ALL SIZE
2. TOP REINFORCEMENT AT 2" BELOW TOP SURFACE.
3. BOTTOM REINFORCEMENT AT 3" ABOVE BOTTOM GRADE

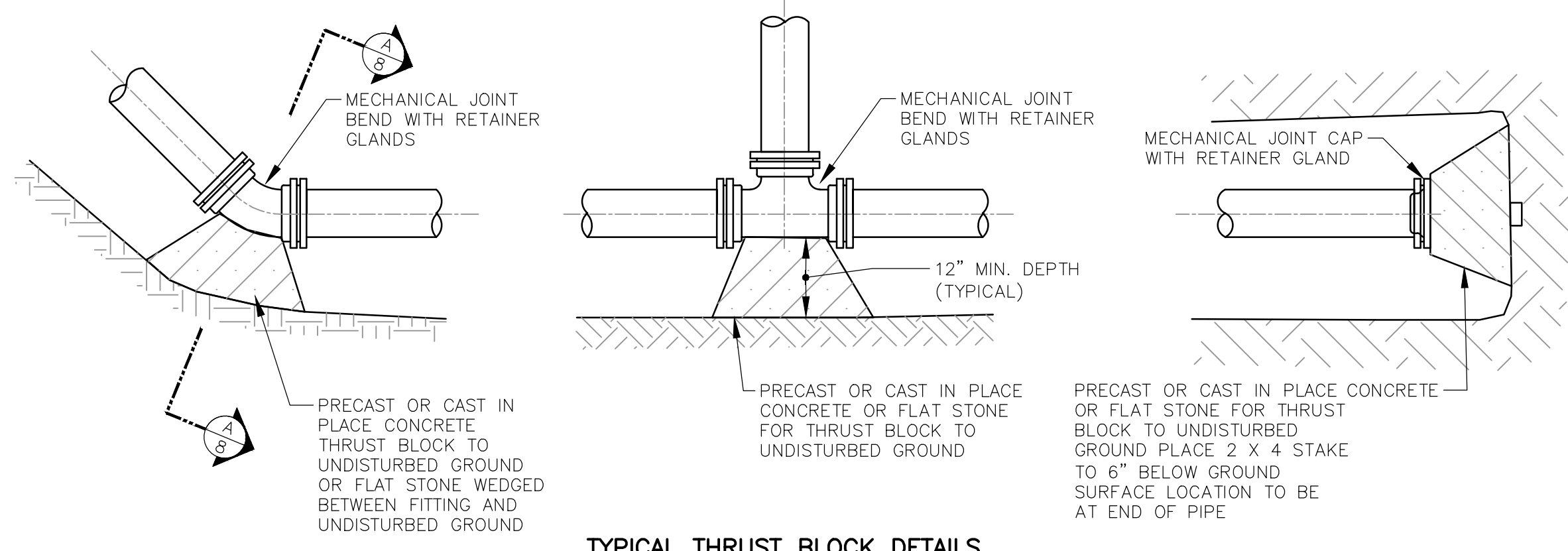


**CONCRETE SLAB NOTES**

1. CONCRETE SLAB SIZE IS APPROXIMATE. ACTUAL SIZE TO BE ONE FOOT LARGER IN ALL DIRECTIONS FROM SELECTED WATER BOOSTER STATION SKID.
2. THERE ARE 2 OPTIONS FOR THE CONCRETE SLAB ON THIS PROJECT: 1) FROST WALL FOUNDATION, FOOTING AND STRUCTURAL SLAB OR 2) CONCRETE STRUCTURAL SLAB ON GRADE.
3. CONTRACTOR'S OPTION SELECTED REQUIRES APPROVAL BY THE ASHLAND BUILDING DEPARTMENT

**CHANGE NOTES**

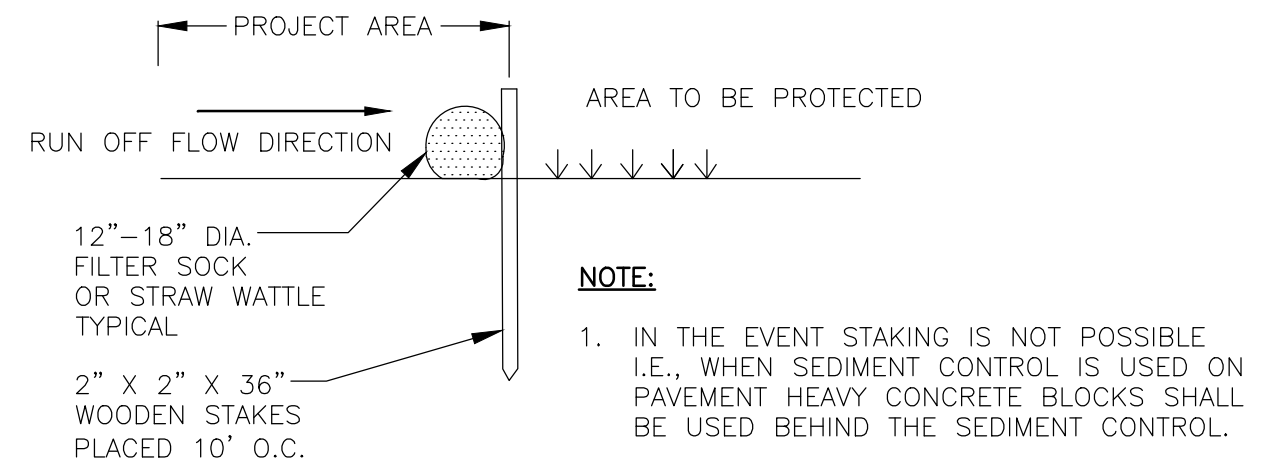
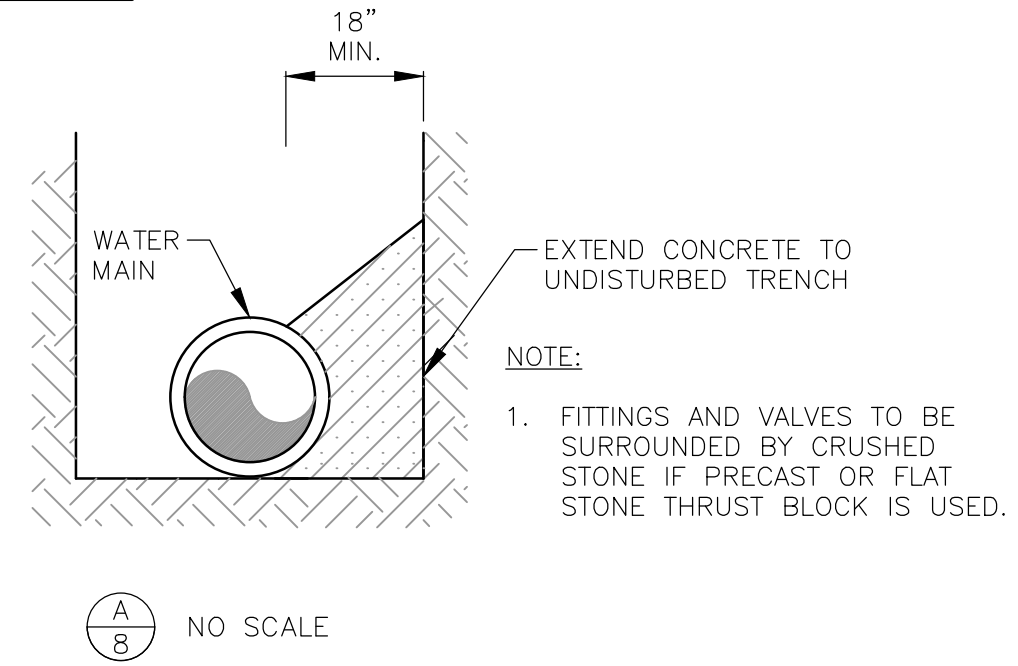
1. CHANGES MADE ON 1.19.101 WAS TO INCREASE LENGTH OF STATION BUILDING FROM 18'-8 1/2" TO 20'-3" AS REQUIRED BY THE SELECTED USEMCO BOOSTER STATION.  
CHANGE INS STATION CONCRETE FOOTING WAS FROM 21'-5" TO 21'-11" THROUGH REDUCTION OF SLAB OVERHAND ON LONG ENDS.



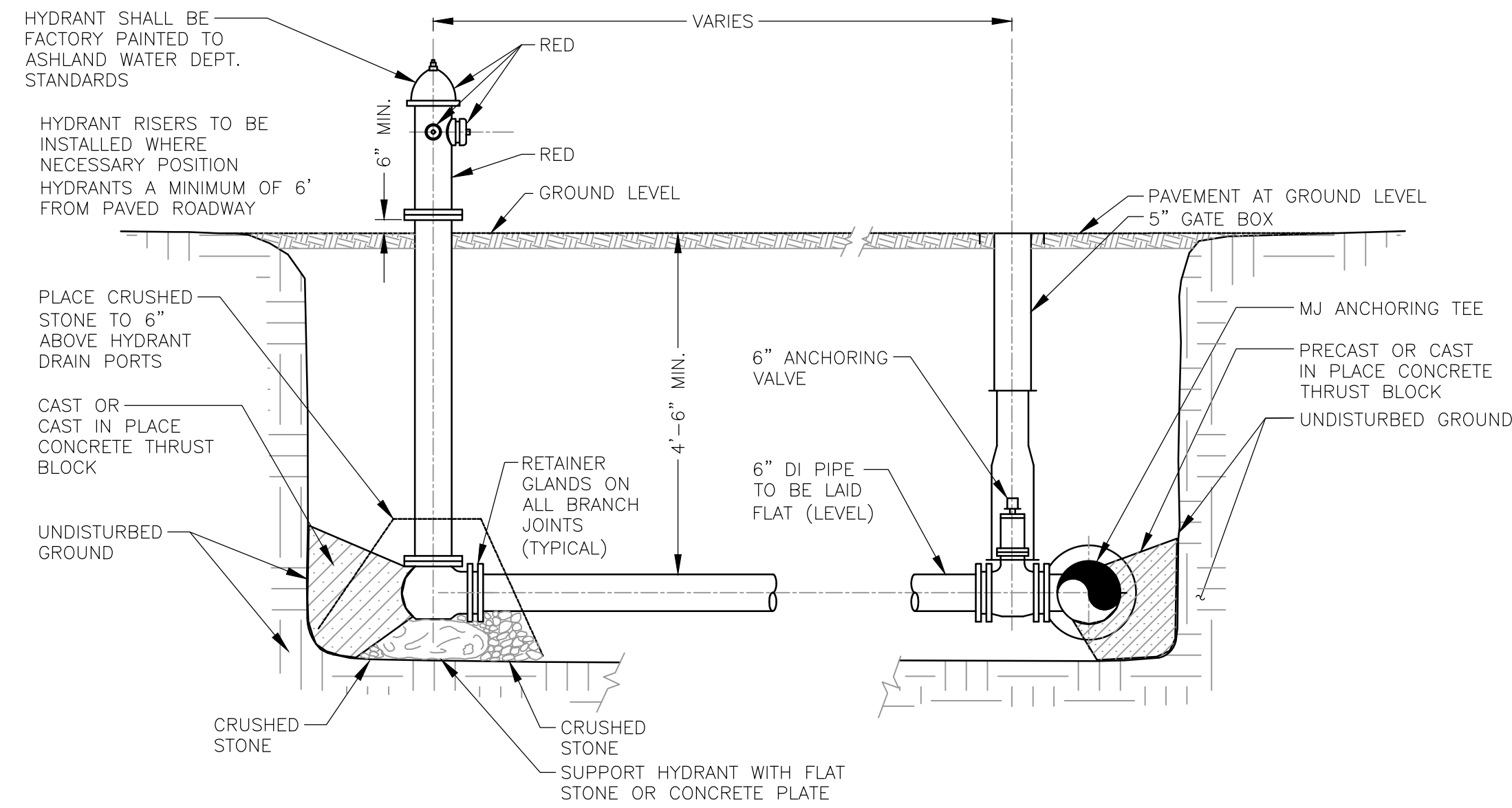
**TYPICAL THRUST BLOCK DETAILS**  
NO SCALE

PIPE DIAMETER	BENDS				TEE
	11.25	22.5	45	90	
6	1	1	1	2	1.5
8	1	1	2	3	2.5
12	1	2	3.5	6.5	5

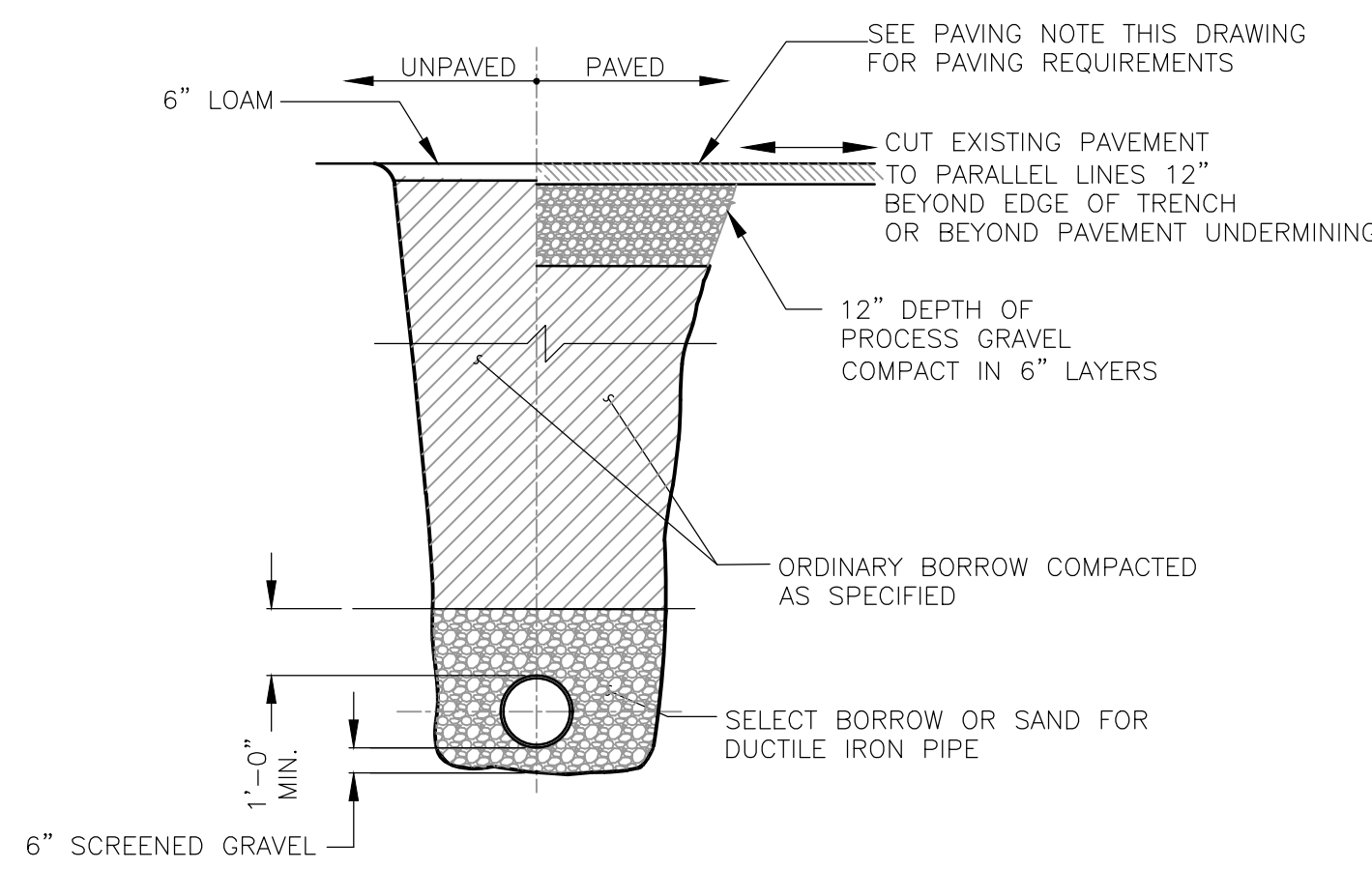
THRUST BLOCK BEARING AREA (SF)  
(BASED UPON 100 PSI WATER PRESSURE  
AND 3000 PSF BEARING LOAD CAPACITY)



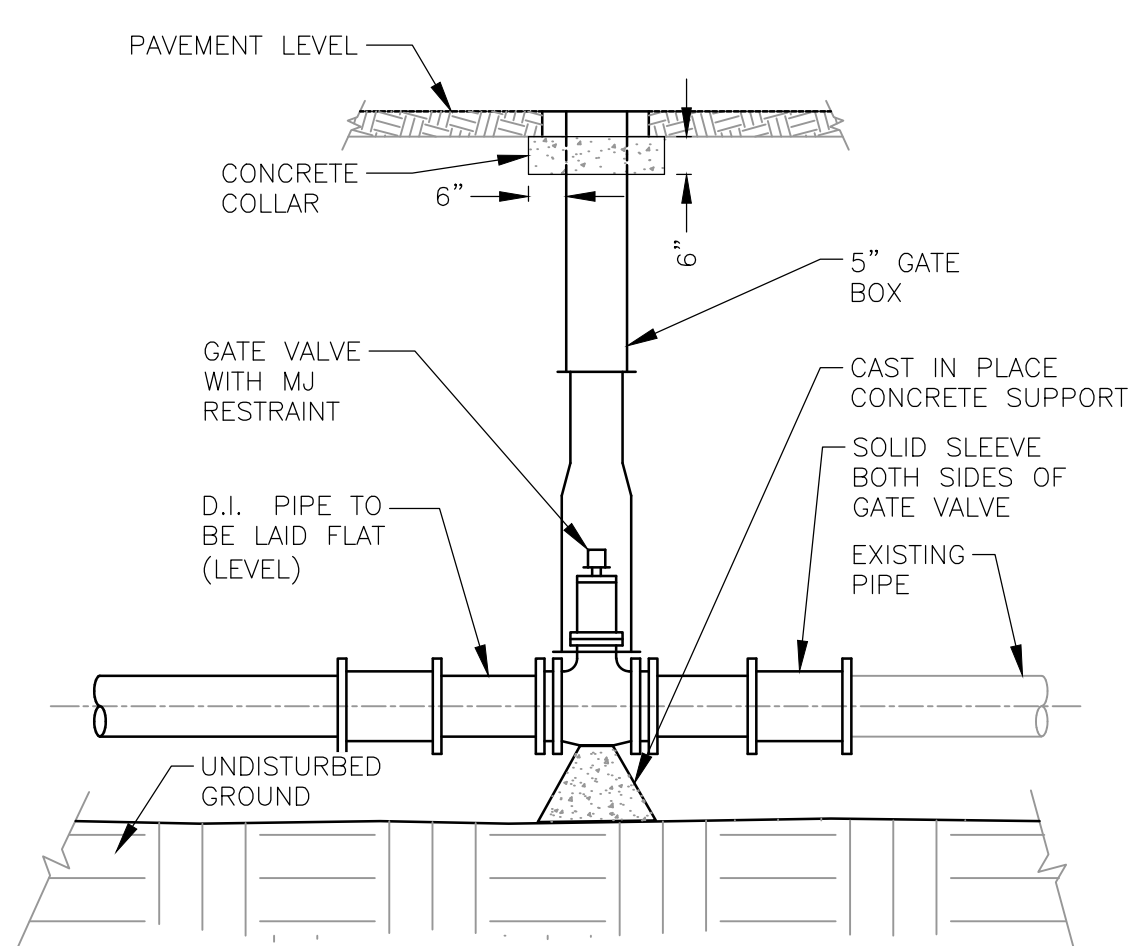
**TYPICAL FILTER SOCK DETAIL**  
NOT TO SCALE



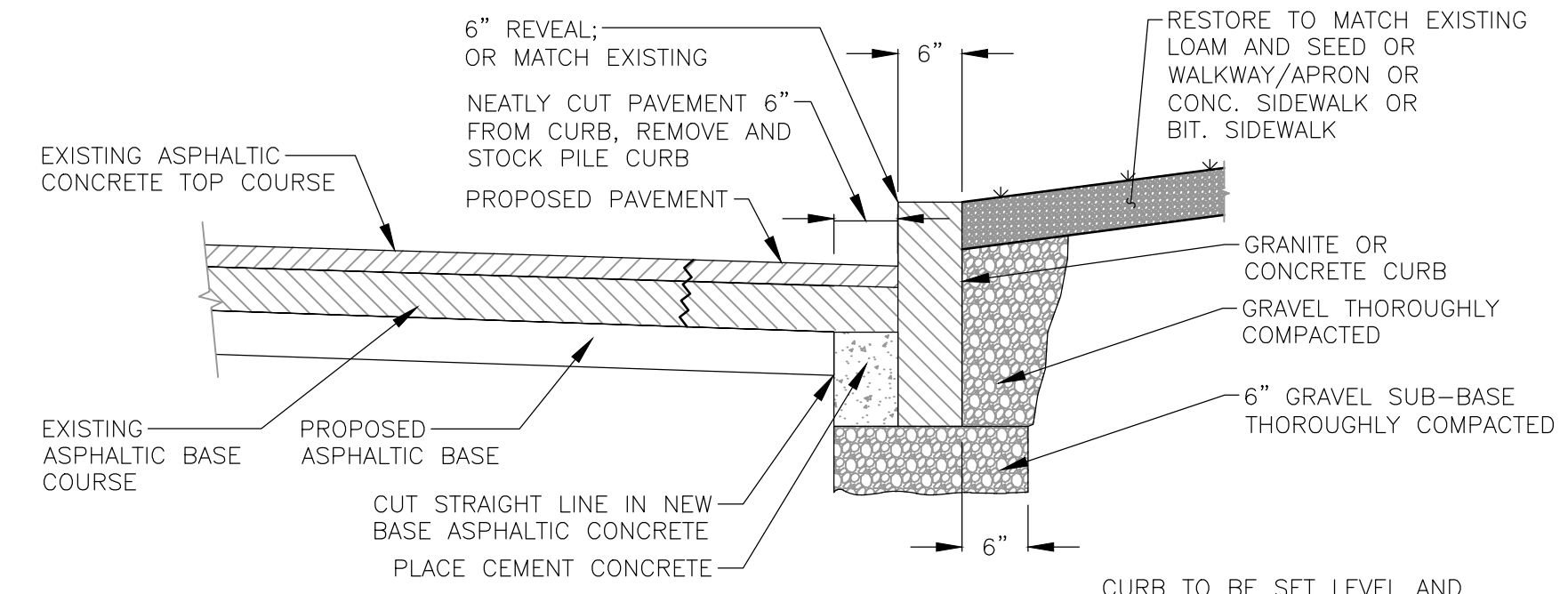
**TYPICAL HYDRANT ASSEMBLY INSTALLATION**  
NOT TO SCALE



**TYPICAL PIT SECTION FOR WATER MAINS**  
NOT TO SCALE



**TYPICAL GATE VALVE INSTALLATION**  
NOT TO SCALE



**TYPICAL GRANITE CURB REMOVAL AND REPLACEMENT**  
NOT TO SCALE

**PAVING NOTES:**

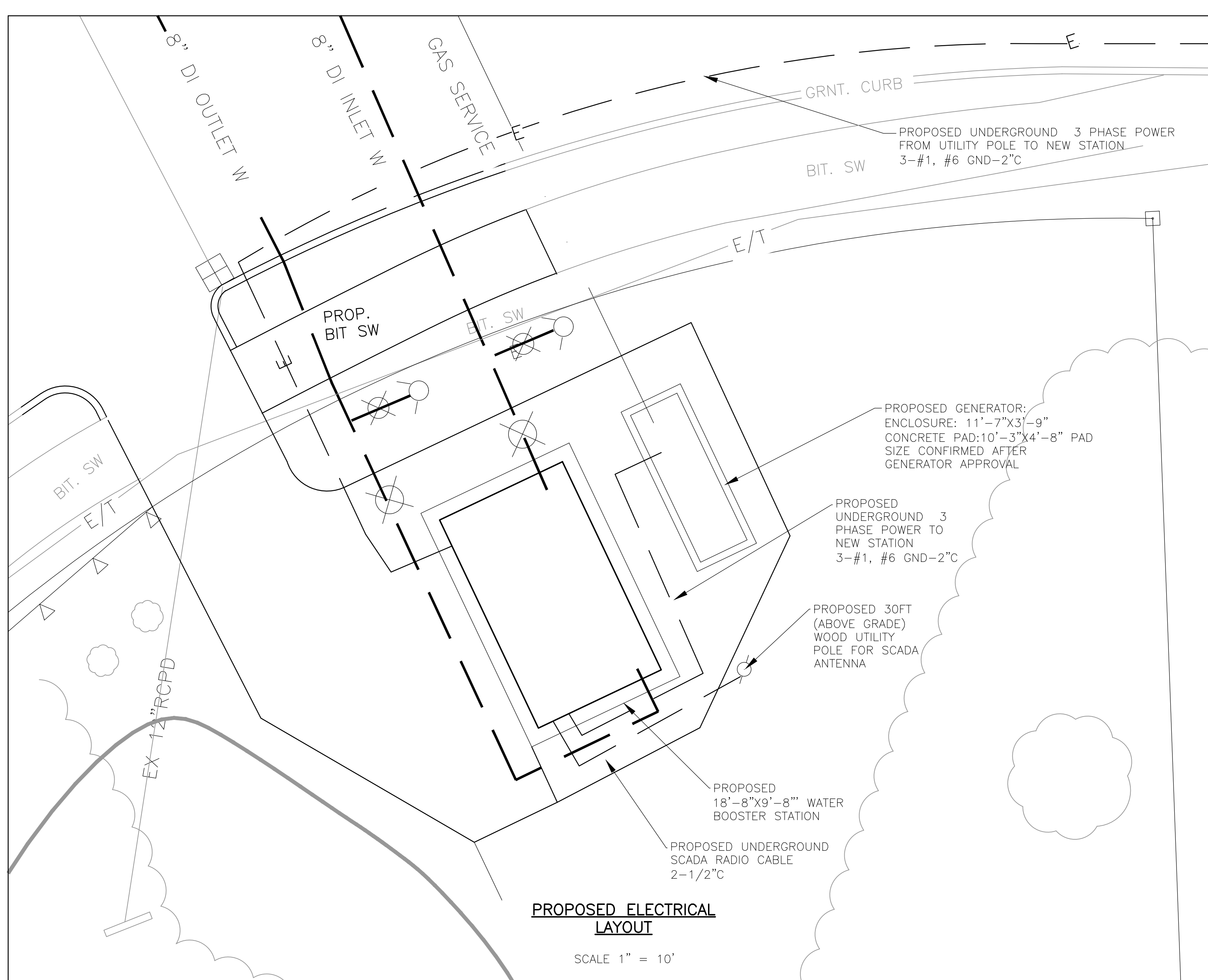
- EXISTING ROADWAY PAVEMENT IS APPROXIMATELY FIVE (5)-INCHES THICK.
- PROPOSED TRENCH PAVEMENT TO BE 2-1/2" TEMPORARY AND FIVE INCHES PERMANENT (3-1/2" BINDER 1-1/2" TOP).

CHECKED	DATE	BY	REVISION	DATE	BY

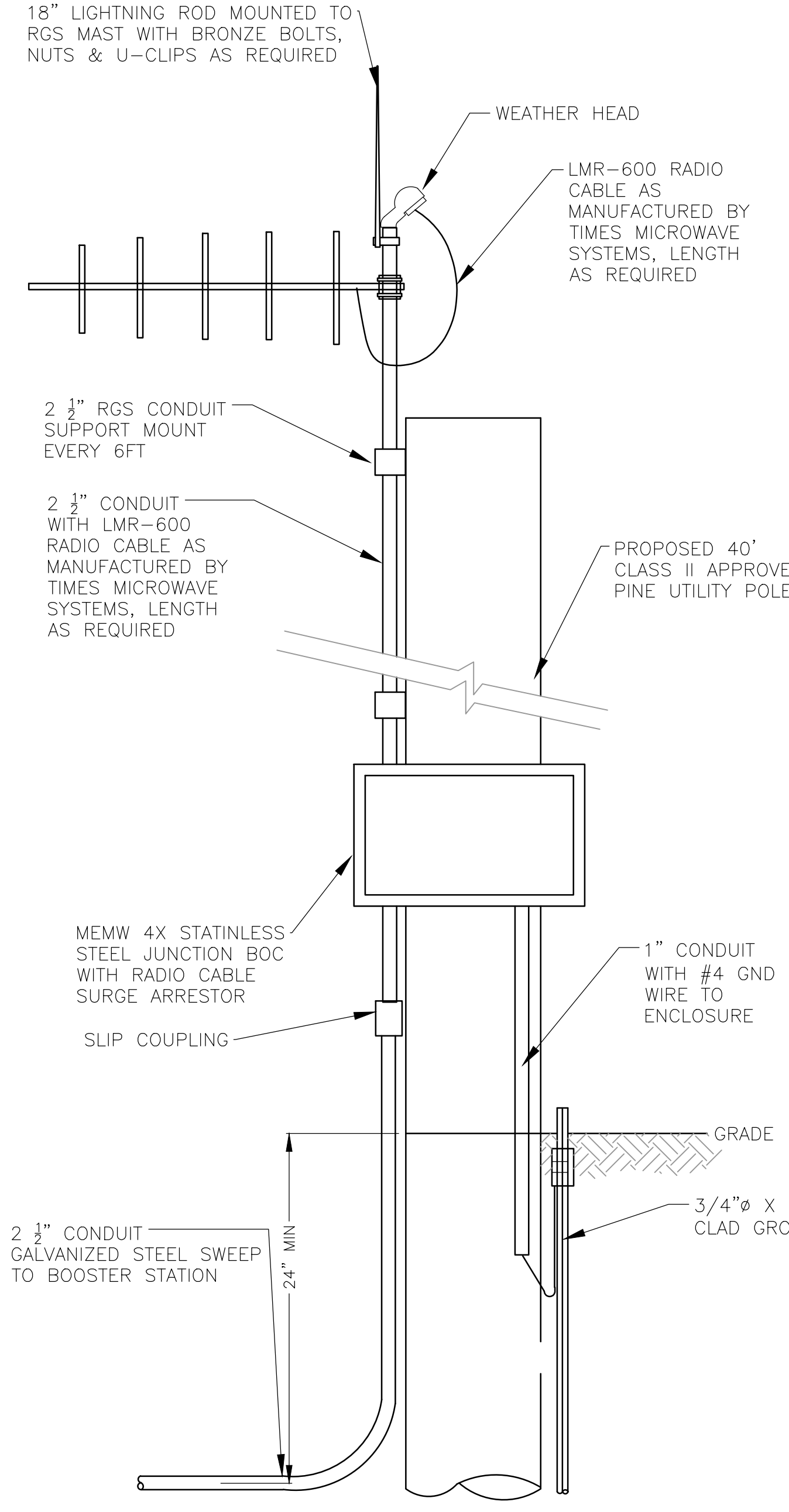
SHEET NO.:	5 OF 7
CONTRACT NO.:	N/A
SCALE:	NONE
DATE DRAWN:	JUNE 2019
DRAWN BY:	GJE
FILE NO.:	ASH-317-SD1.DWG

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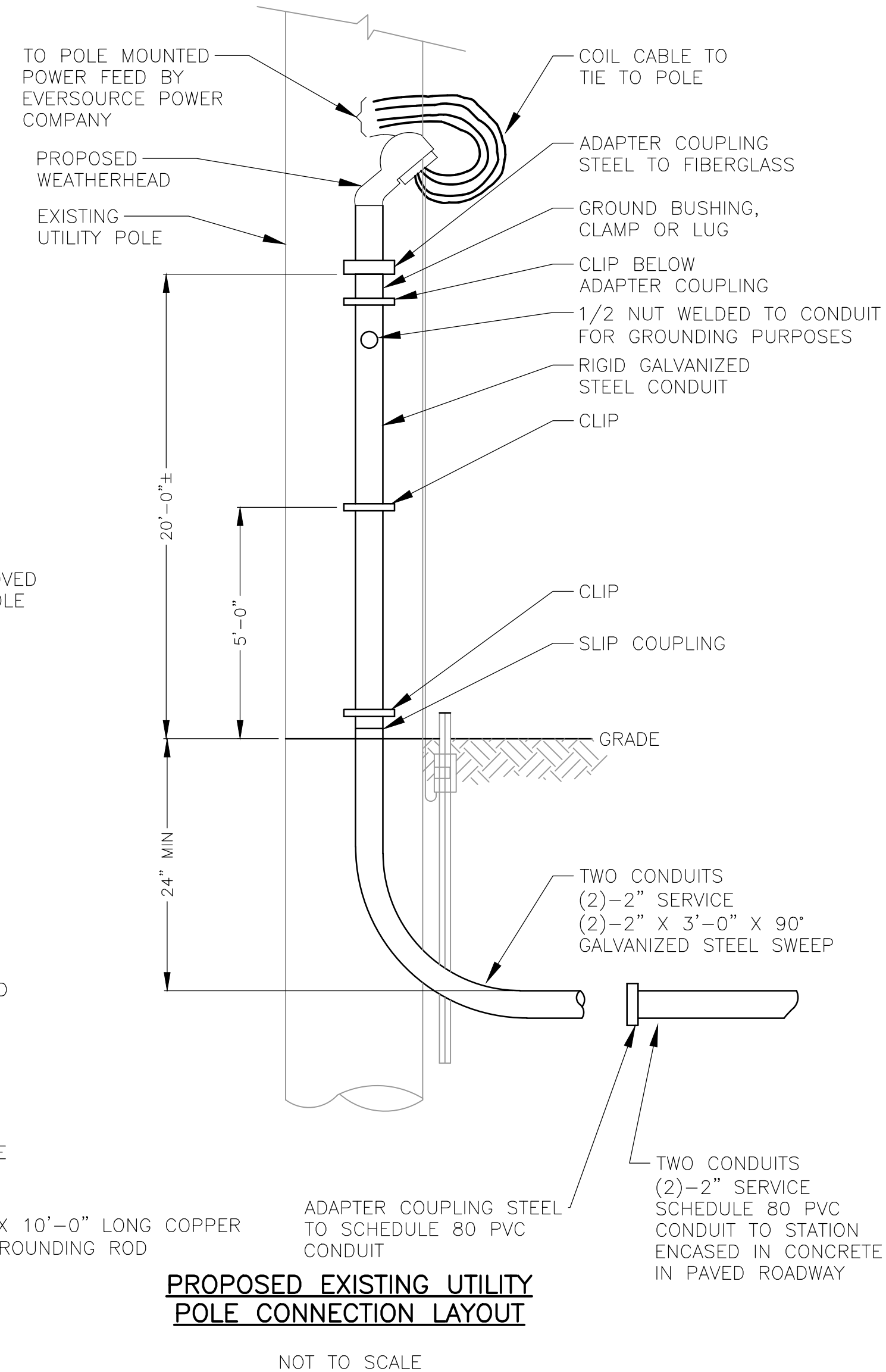




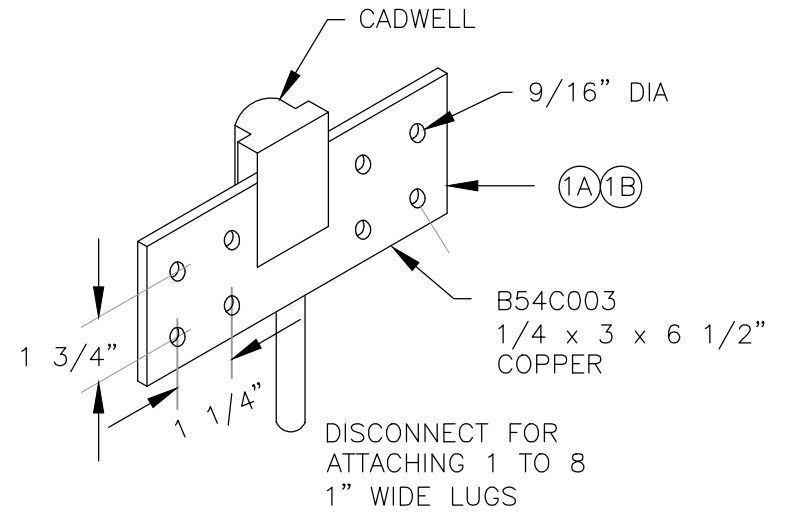
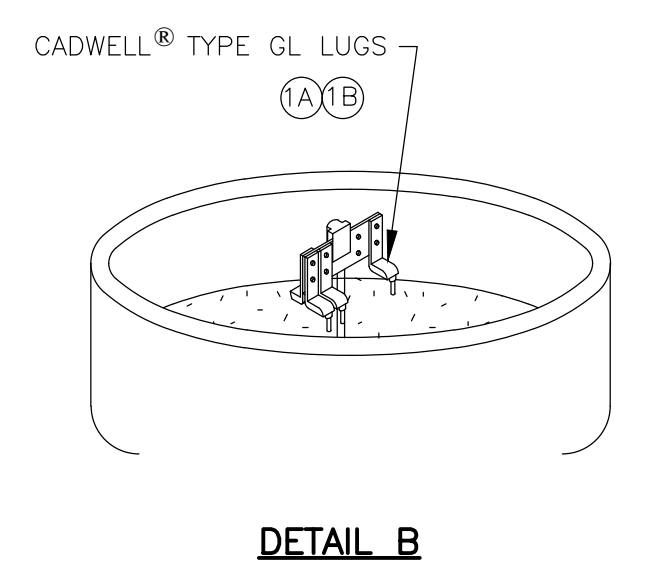
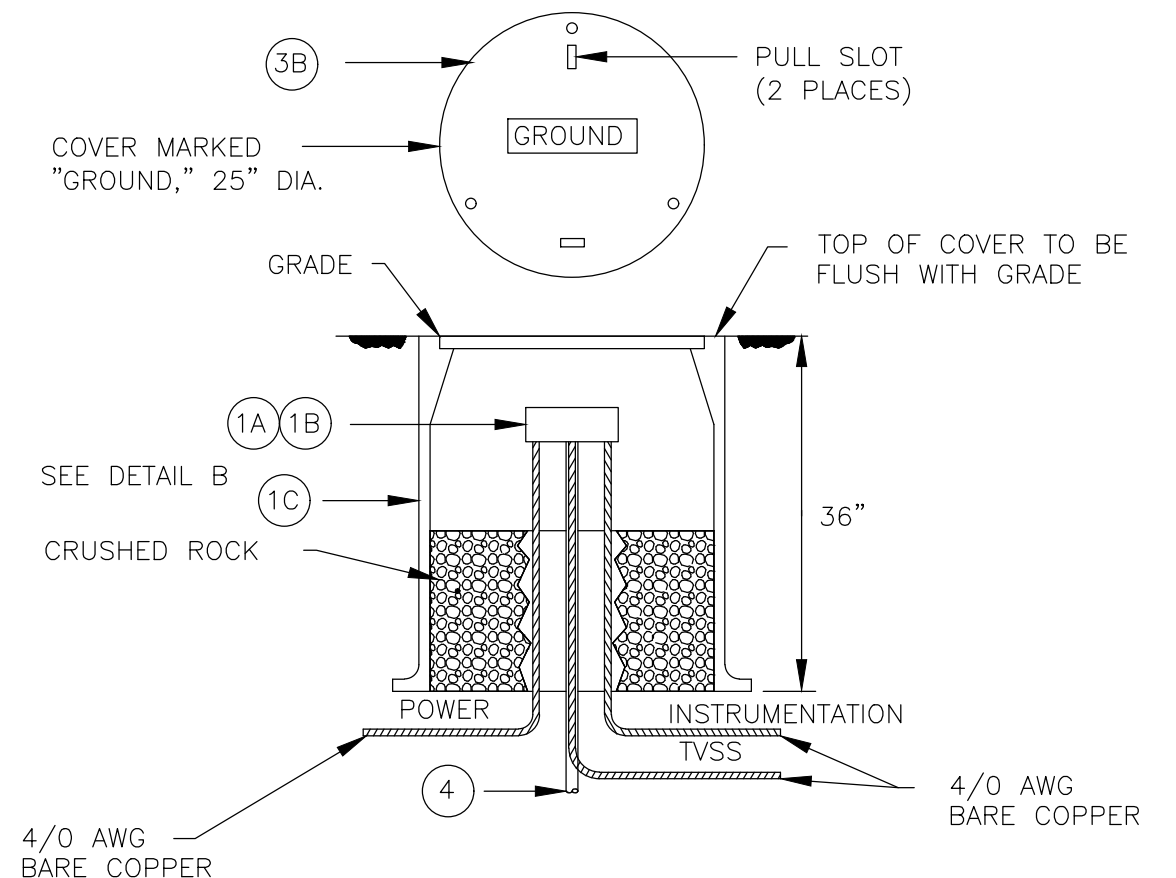
**PROPOSED ELECTRICAL LAYOUT**  
SCALE 1" = 10'



**PROPOSED PUMP STATION SCADA RADIO POLE LAYOUT**  
NOT TO SCALE

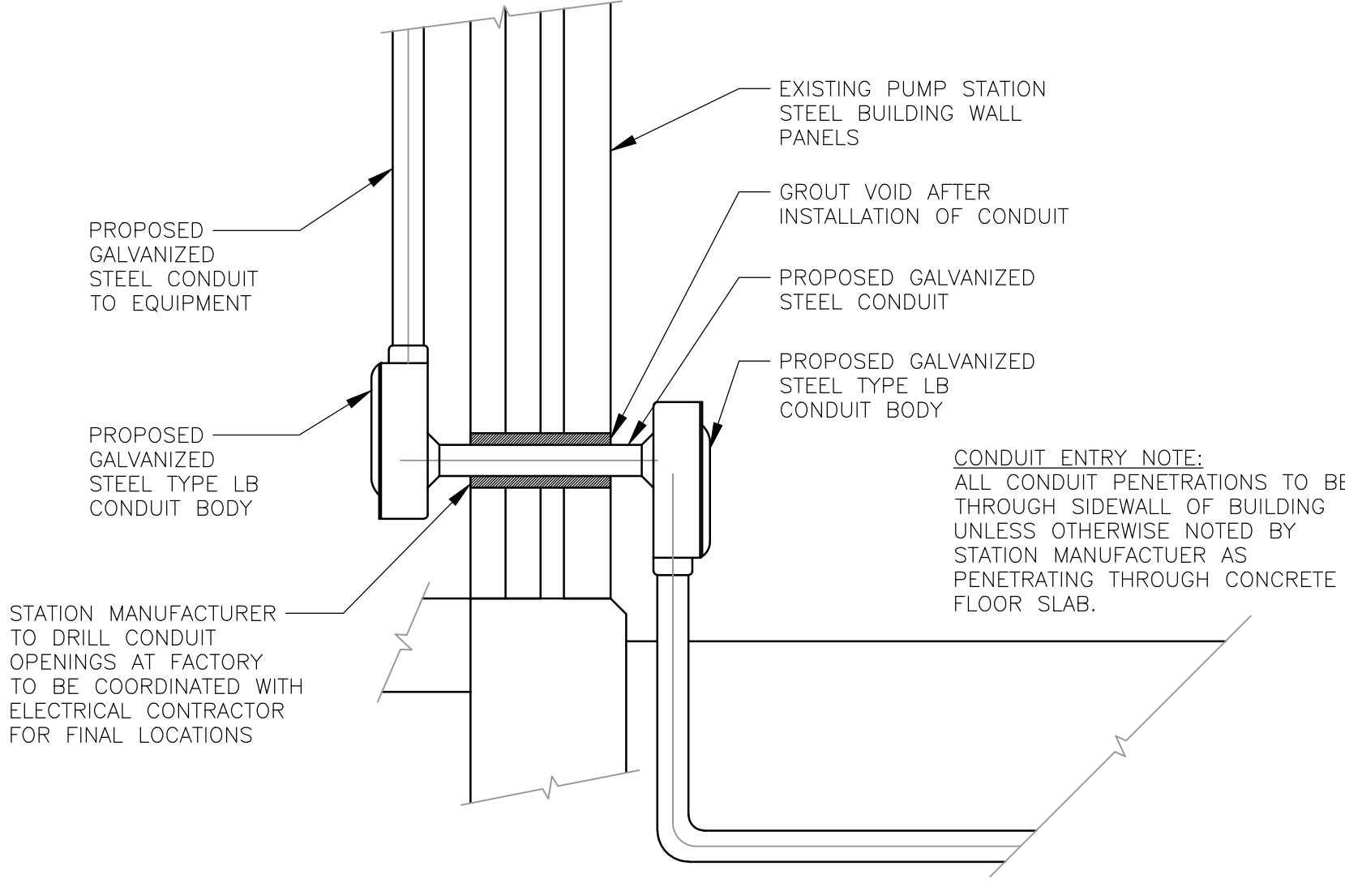


**PROPOSED EXISTING UTILITY POLE CONNECTION LAYOUT**  
NOT TO SCALE

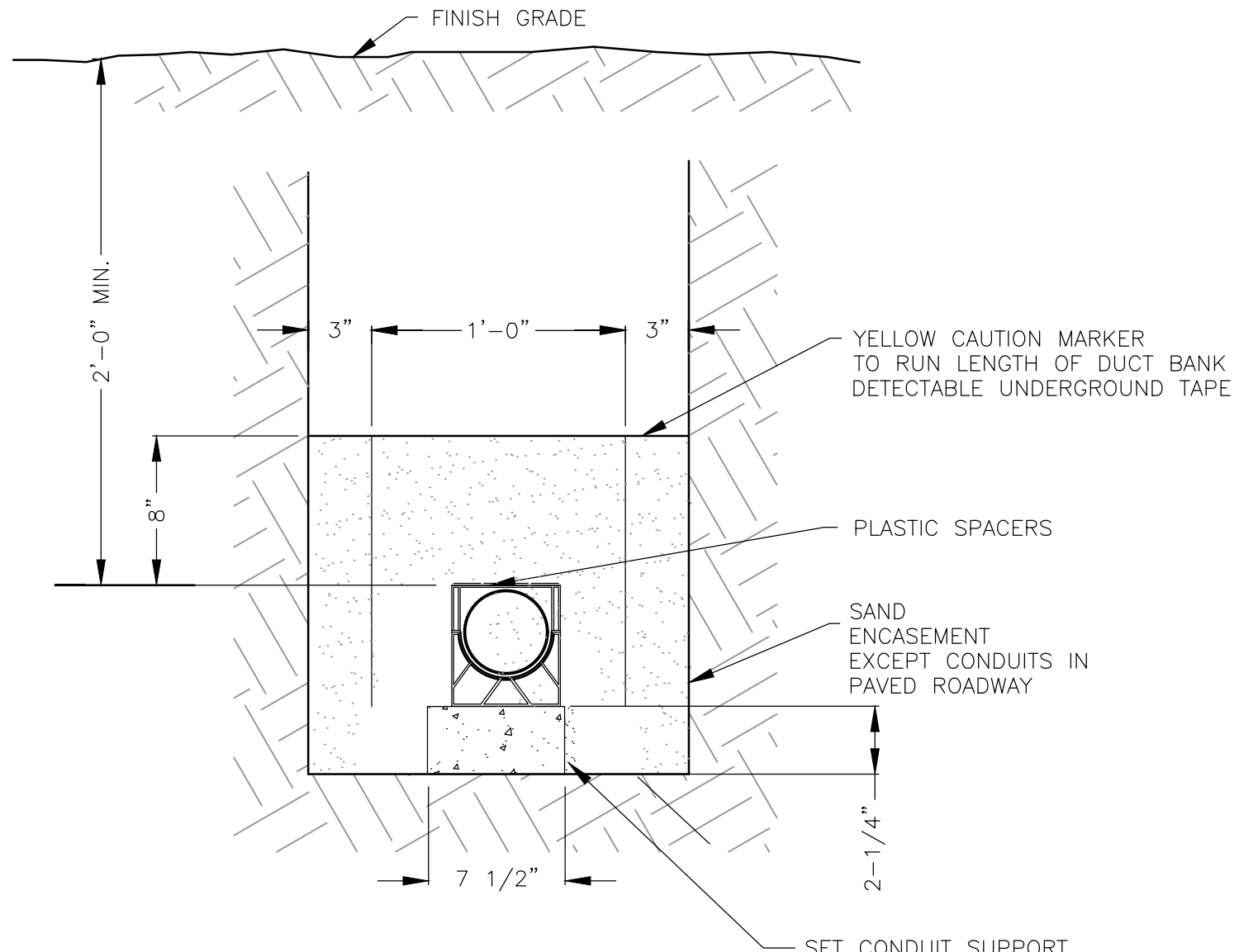


ITEM NUMBER	QUANTITY	DESCRIPTION	MANUFACTURER	CAT #
1A	1	CADWELD CONNECTION BUS BAR TO GND ROD	ERICO, INC. OR EQUAL	CR 200
1B	1	CADWELD GROUND BAR	ERICO, INC. OR EQUAL	B543C003
2A	3	CADWELD TYPE GL CONNECTION	ERICO, INC. OR EQUAL	GLCDE20
2B	3	CADWELD TYPE GL COPPER LUG	ERICO, INC. OR EQUAL	B122DE
3A & B	1	INSPECTION HOUSING AND COVER	ERICO, INC. OR EQUAL	T416A
4	1	GROUND ROD, 3/4\"/>		
5	1	EARTH ENHANCEMENT MATERIAL (GEM)	ERITECH OR EQUAL	GEM 25 M

**GROUND INSTALLATION DETAIL**  
NOT TO SCALE



**PROPOSED CONDUIT ENTRY INTO BUILDING**  
NOT TO SCALE



- NOTES:**
1. ALL CONDUITS SHALL BE SCHEDULE 80.
  2. CONDUITS IN PAVED ROADWAY TO EB ENCASED IN CONCRETE

**POWER AND RADIO CABLE DUCT DETAIL**  
NOT TO SCALE

CHECKED	DATE	BY	REVISION	DATE	BY

SHEET NO.:	7 OF 7
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FILE NO.:	ASH317-E2.DG

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