

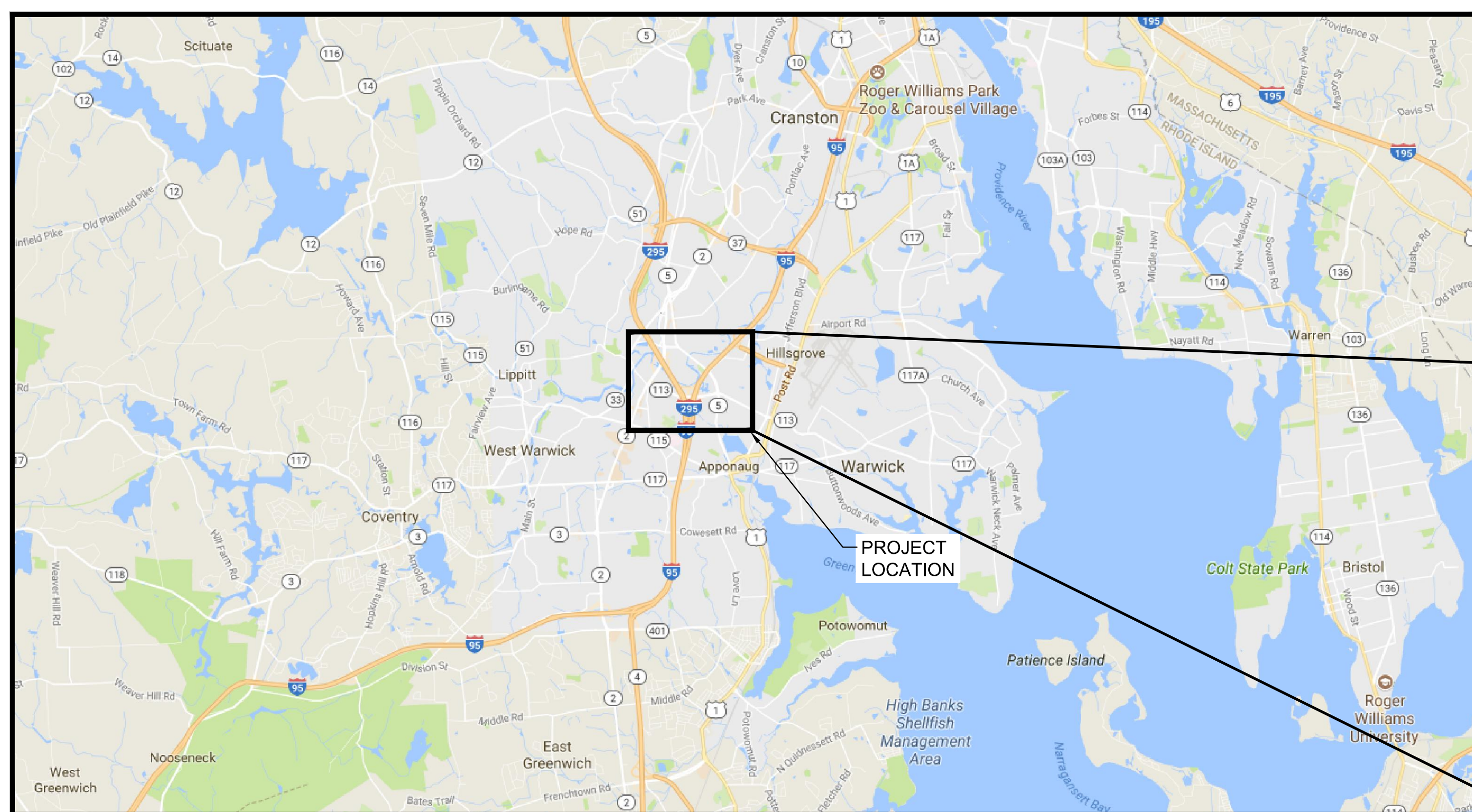
EAST NATICK I, EAST NATICK II, AND KNIGHT STREET PUMP STATION UPGRADES

CONTRACT NO: 97

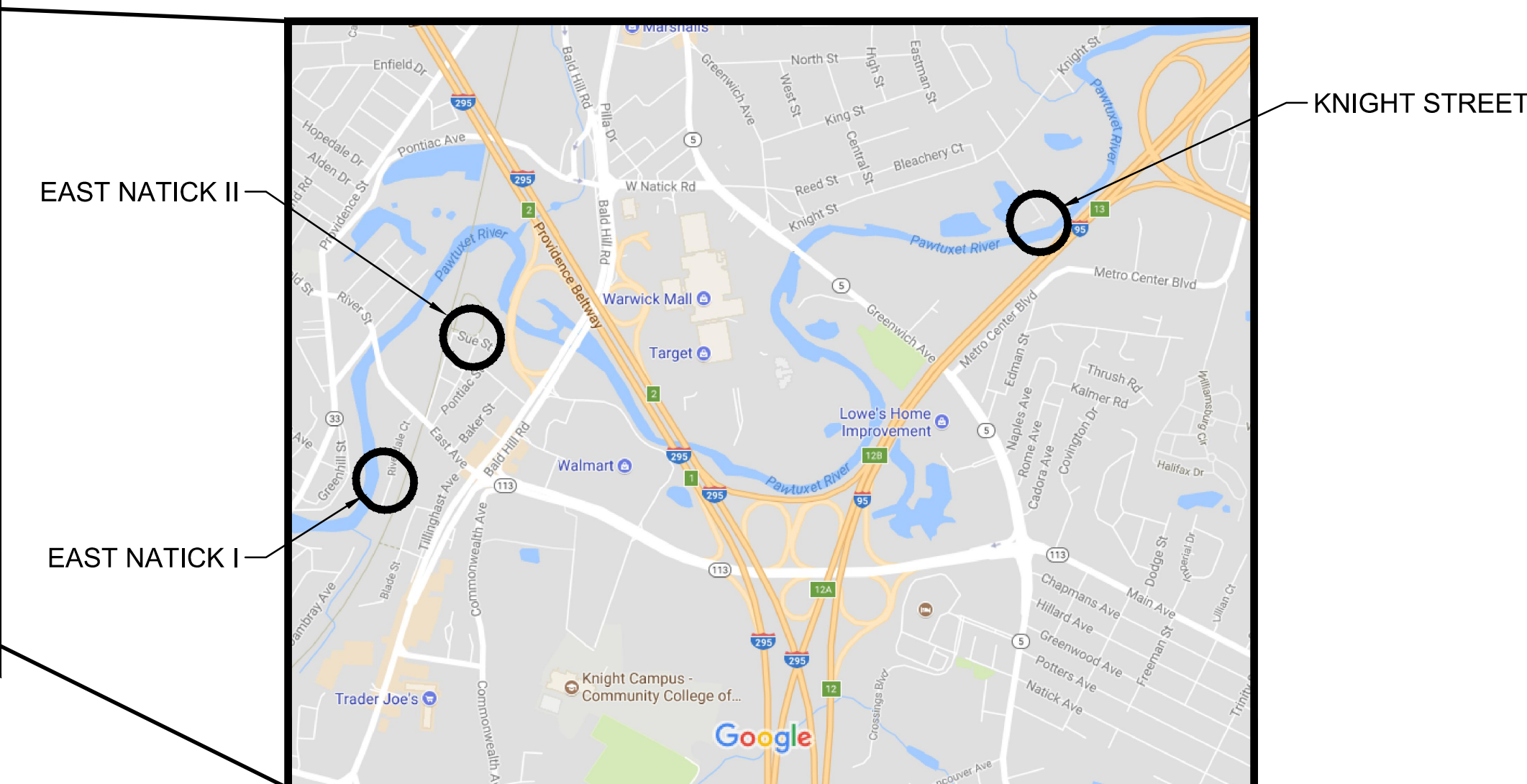
WARWICK SEWER AUTHORITY - WARWICK, RI

WARWICK SEWER
AUTHORITY
EAST NATICK I, EAST
NATICK II, AND KNIGHT
STREET PUMP STATION
UPGRADES

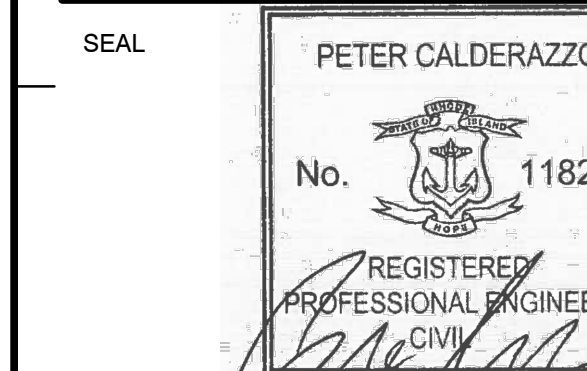
INDEX OF DRAWINGS		
SHEET	DWG	DESCRIPTION
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3	C-2	EAST NATICK II PUMP STATION DEMOLITION WORK
4	C-3	EAST NATICK II PUMP STATION NEW WORK
5	D-1	SITE DETAILS
6	M-1	EAST NATICK I PUMP STATION DEMOLITION WORK
7	M-2	EAST NATICK I PUMP STATION NEW WORK
8	M-3	KNIGHT STREET PUMP STATION DEMOLITION WORK
9	M-4	KNIGHT STREET PUMP STATION NEW WORK
10	M-5	KNIGHT STREET PUMP STATION WET WELL WORK
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14	E-2	EAST NATICK II PUMP STATION NEW WORK & NOTES
15	E-3	EAST NATICK I PUMP STATION ELECTRICAL WORK & DETAILS



LOCUS MAP
SCALE 1"=1 MILE



PROJECT LOCATIONS
SCALE 1"=1000'



KEY PLAN

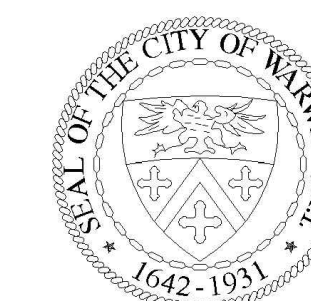
SCALE

No.	DATE	BY	Description

REVISIONS
DESIGNED BY: PC
DRAWN BY: MH / KP
CHECKED BY: CB
DATE: JAN 2018
TITLE

TITLE SHEET &
INDEX OF
DRAWINGS

PROJECT NO. 50092430



WARWICK SEWER AUTHORITY
JANINE BURKE-WELLS
EXECUTIVE DIRECTOR

JANUARY 2018

G-1

No.	DATE	BY	Description
REVISIONS			
DESIGNED BY	PC		
DRAWN BY	MH / KP		
CHECKED BY	CB		
DATE	JAN 2018		

TITLE
**KNIGHT STREET
PUMP STATION
SITE WORK &
GENERAL NOTES**

PROJECT NO. 50092430

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL DIGSAFE AT 811 OR 1-888-DIG-SAFE AT LEAST 72 HOURS, SATURDAYS AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIGSAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION.
2. ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND LIMITS OF WORK SHALL BE RESTORED TO PRE-EXISTING CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
3. UNLESS OTHERWISE INDICATED, CONCRETE USED FOR PIPE ANCHOR BLOCKS, BACKING, PIPE CRADLES, ARCHES, AND FILL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
4. THE CONTRACTOR SHALL FIELD VERIFY OUTSIDE DIAMETERS OF ALL EXISTING PIPE BEFORE PURCHASING ANY COUPLINGS FOR CONNECTING NEW PIPING WITH EXISTING PIPING.
5. THE CONTRACTOR SHALL MAINTAIN RECORDS OF THE ACTUAL AS-BUILT LOCATIONS AND DIMENSIONS OF THE WORK AS SPECIFIED IN SPECIFICATION SECTION 01736.
6. SEE SPECIFICATION SECTION 01060 FOR PERMITTING REQUIREMENTS.
7. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EXCAVATION SUPPORT DURING THE CONSTRUCTION OF THE BYPASS MANHOLE, PIPING & OTHER STRUCTURES AS DESCRIBED IN SPECIFICATION SECTION 02223.
8. ALL EXCESS EXCAVATED SOILS AND DEWATERED SEDIMENT SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR.
9. ALL NEW BURIED PIPE, VALVES AND FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT.
10. THE LOCATION OF PIPES, CAPS, REDUCERS, BENDS, AND OTHER FITTINGS AT POINTS OF CONNECTIONS TO EXISTING MAINS IS APPROXIMATE. THE CONTRACTOR SHALL DIG A TEST PIT AT EACH LOCATION TO DETERMINE THE DIAMETER AND MATERIAL OF THE EXISTING PIPE AND THE LOCATION OF THE TIE-IN POINT.
11. ELEVATIONS REFERENCED ARE NATIONAL GEODETIC VERTICAL DATUM (NGVD) OF 1988.
12. ALL GRASS AREAS DISTURBED BY THE CONSTRUCTION WITHIN THE LIMIT OF WORK SHALL BE RESTORED IN ACCORDANCE WITH SECTION 02800 UNLESS OTHERWISE NOTED.
13. ALL SITE PLANS WERE DEVELOPED USING GIS AND AVAILABLE RECORDS AND ARE NOT WARRANTED TO BE CORRECT.
14. THE EXISTING PUMP STATION IS LOCATED OFF KNIGHT STREET AND IS ACCESSIBLE BY A PAVED ROADWAY.
15. BASED ON AVAILABLE DATA, GROUNDWATER LEVELS ARE ESTIMATED TO BE APPROXIMATELY 5 FEET BELOW GRADE.

DEMOLITION NOTES:

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING CONCRETE AND GOOSENECK VENTS, COMPLETE AS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH SECTION 02050.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING PIPING AND ELECTRICAL WORK AS REQUIRED TO CONDUCT THE DEMOLITION WORK...

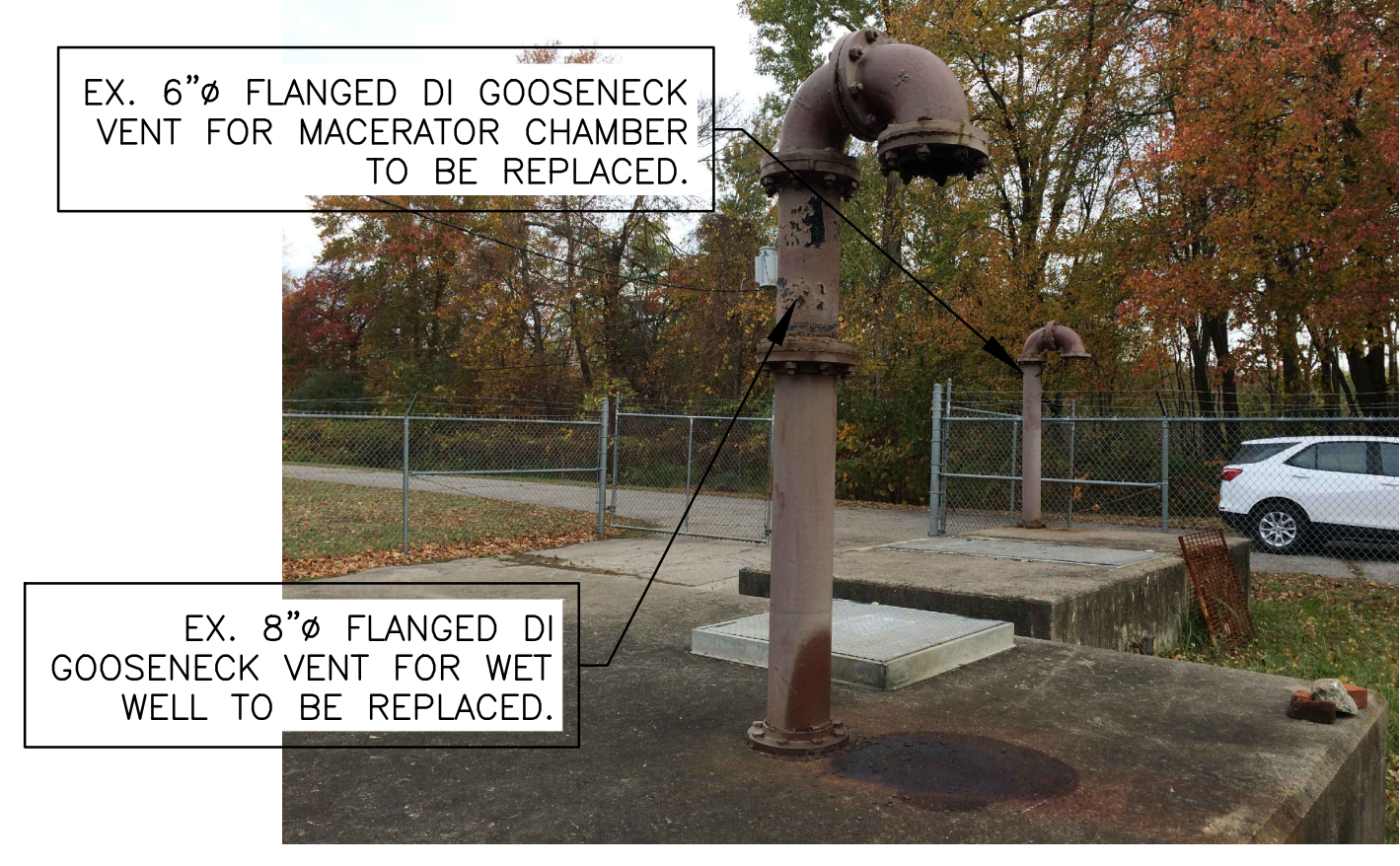
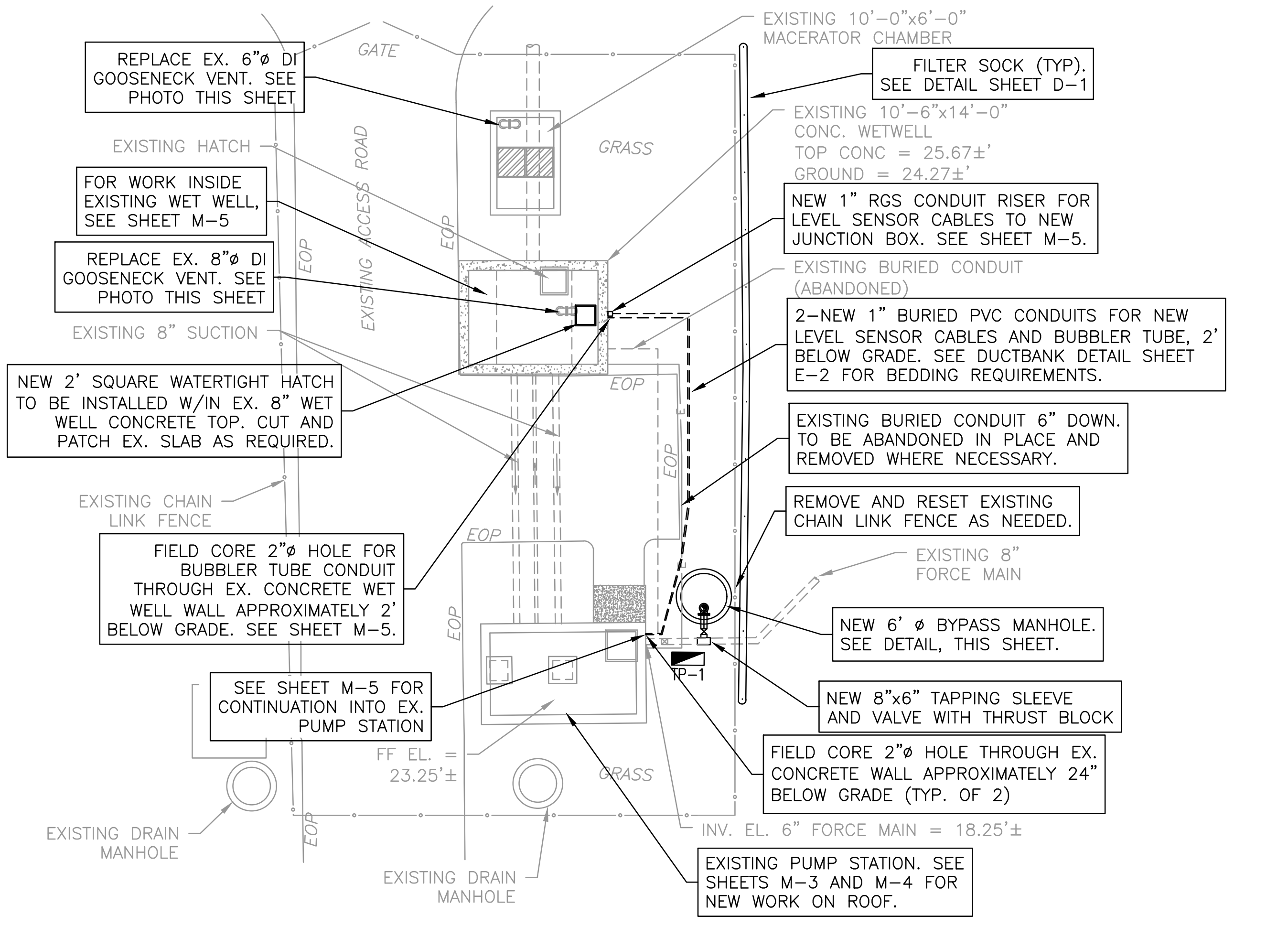
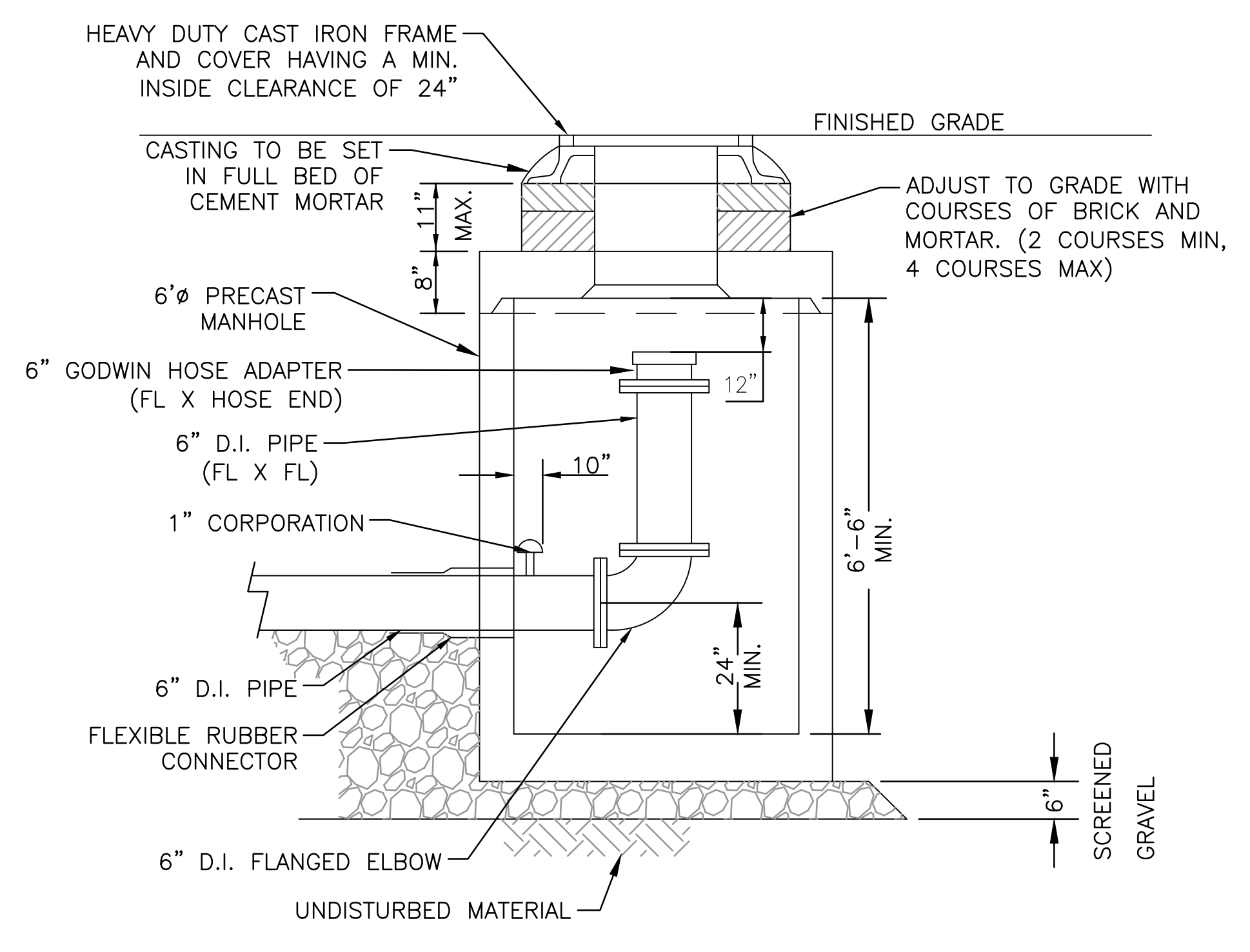
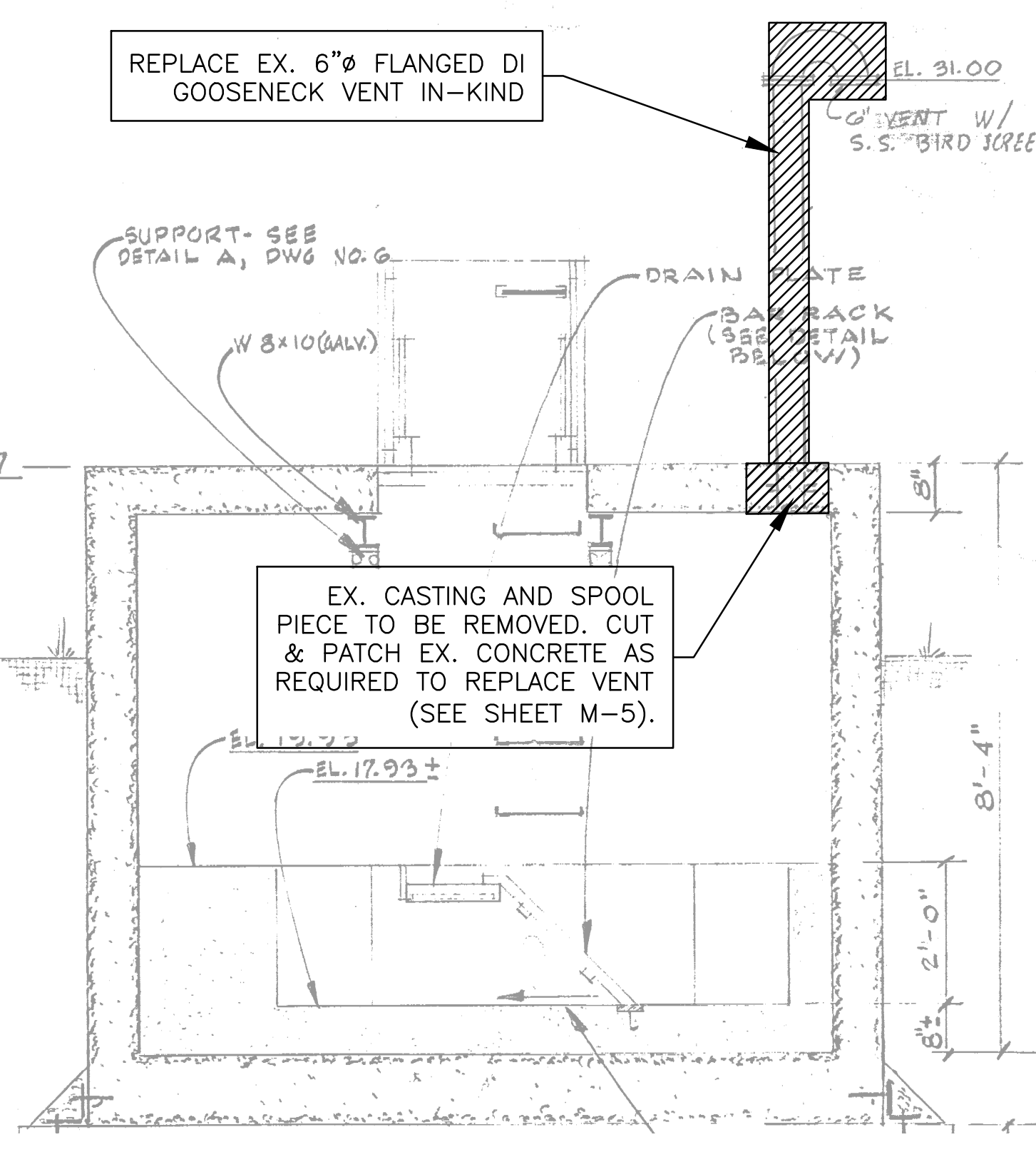
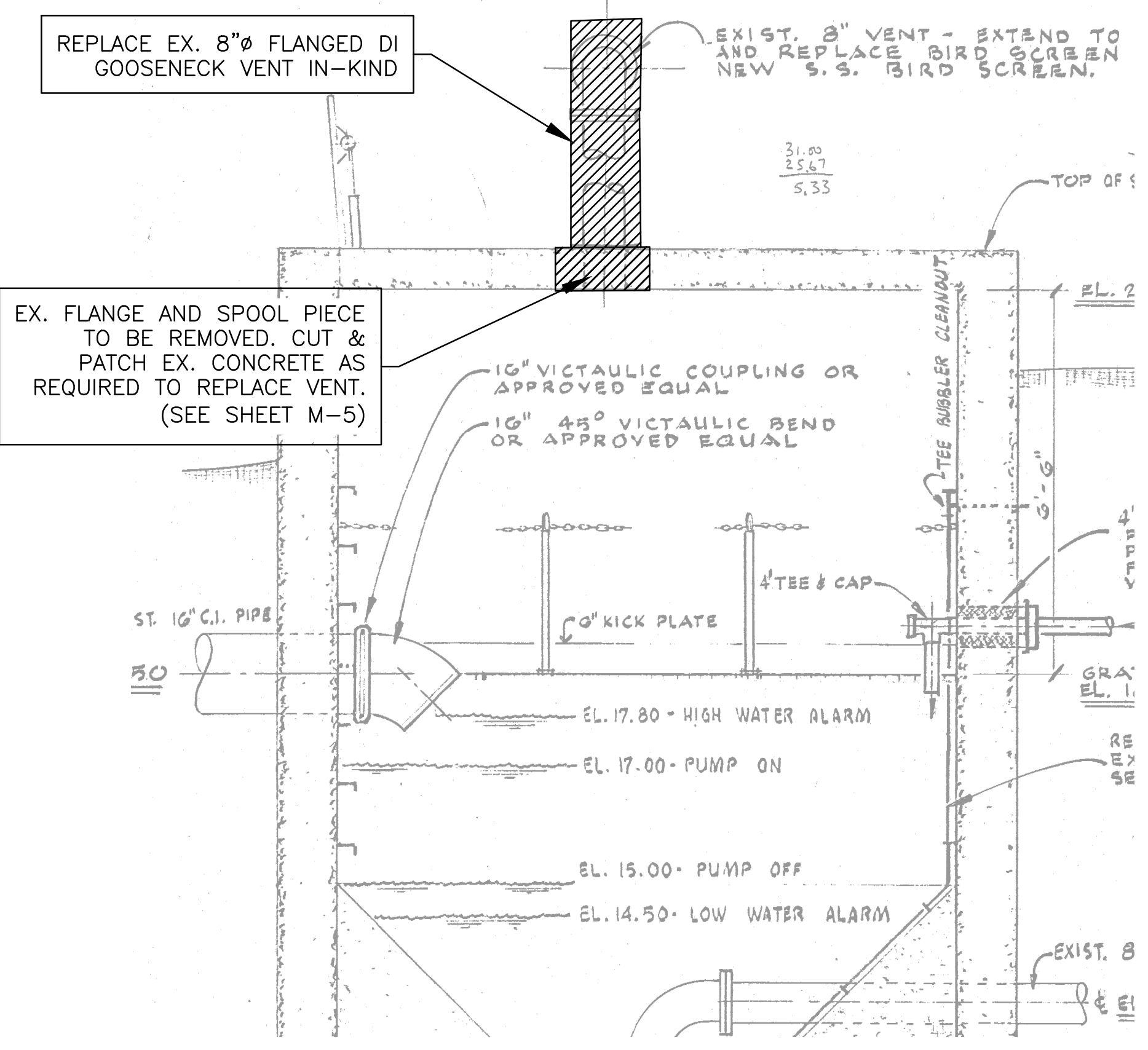


PHOTO OF EX. GOOSENECK VENTS
SCALE: NTS



PHOTO OF EX. WET WELL TOP
SCALE: NTS



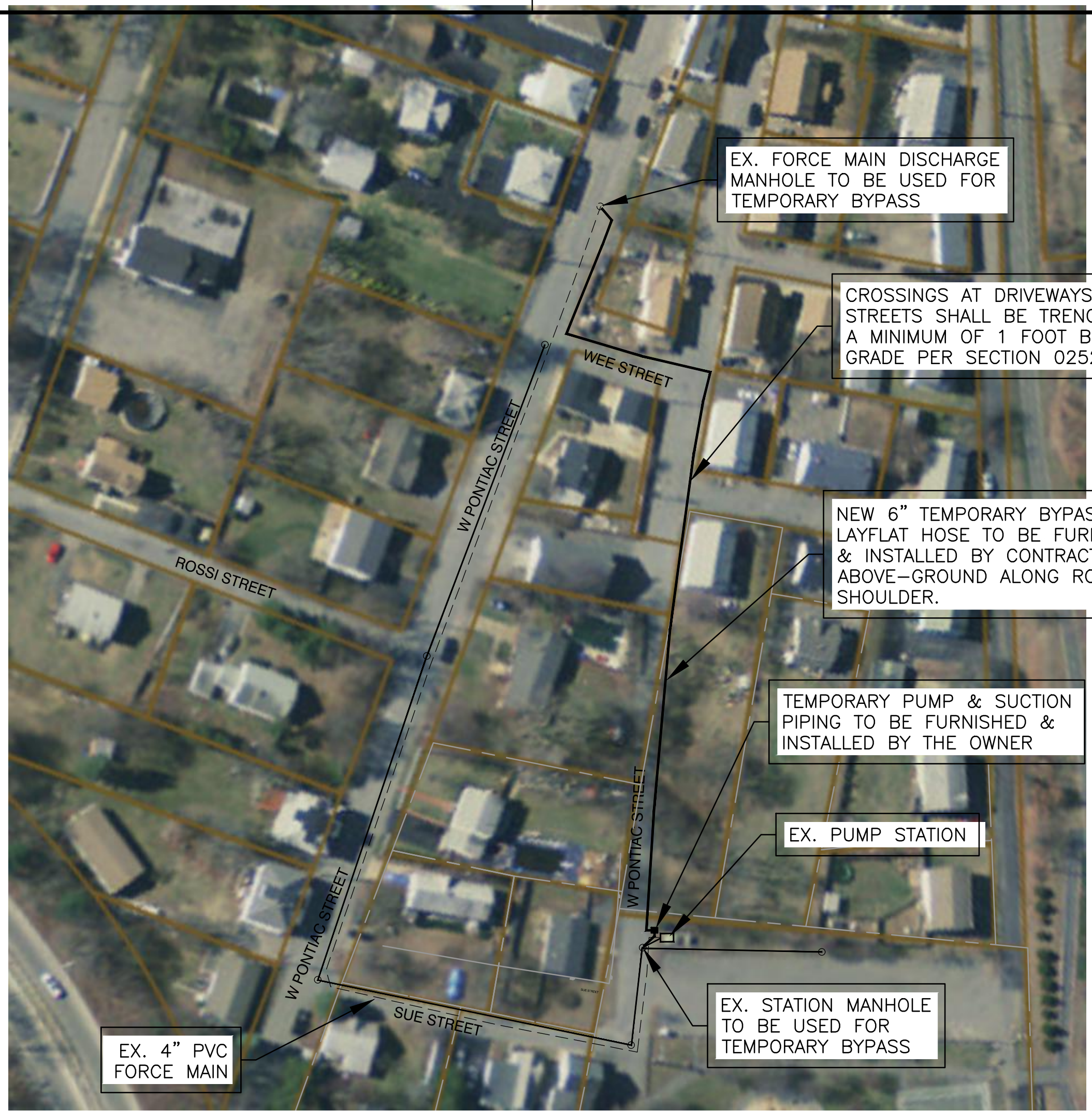
No.	DATE	BY	Description
REVISIONS			
DESIGNED BY	PC		
DRAWN BY	MH / KP		
CHECKED BY	CB		
DATE	JAN 2018		

DEMOLITION NOTES:

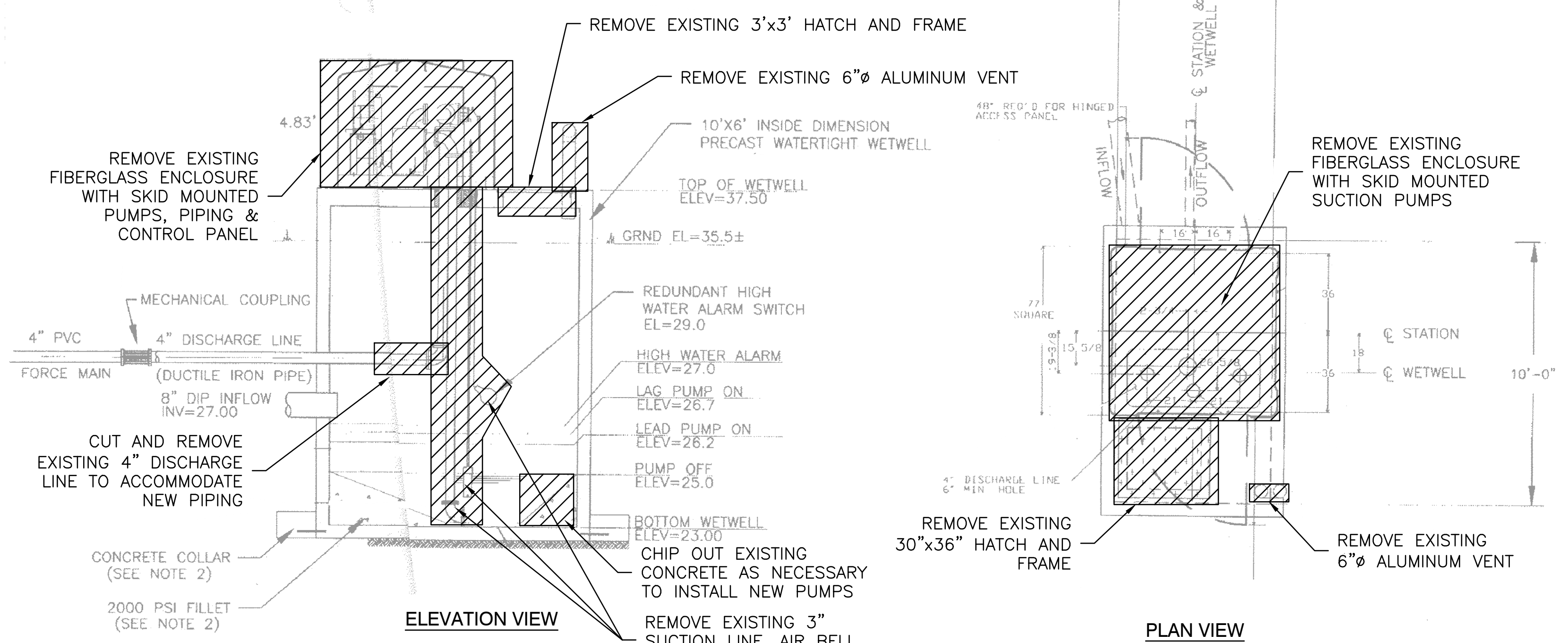
1. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING PUMP EQUIPMENT, INCLUDING THE INTERIOR PIPING AND VALVES, MECHANICAL AND RELATED COMPONENTS AS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH SECTION 02050.
2. THE TWO EXISTING 3 HP PUMPS, MOTORS AND CONTROL PANEL SHALL BE REMOVED AND SALVAGED AS SPECIFIED IN SECTION 02050.
3. EX. CONTROL EQUIPMENT SHALL BE RELOCATED TO THE NEW ABOVE GROUND ENCLOSURE. SEE SHEET E-2.
4. SEVERAL COMPONENTS WITHIN THE EX. ELECTRICAL CABINET SHALL BE RELOCATED TO THE NEW ABOVE GROUND ENCLOSURE. SEE SHEET E-2.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING PIPING AND ELECTRICAL WORK AS REQUIRED TO CONDUCT THE DEMOLITION OF THE EXISTING PUMP SYSTEM. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECONNECTING SERVICES TO THE NEW PUMP SYSTEM.
6. REFER TO SECTION 02050 OF THE SPECIFICATIONS FOR ADDITIONAL DETAIL AND REQUIREMENTS.

GENERAL NOTES:

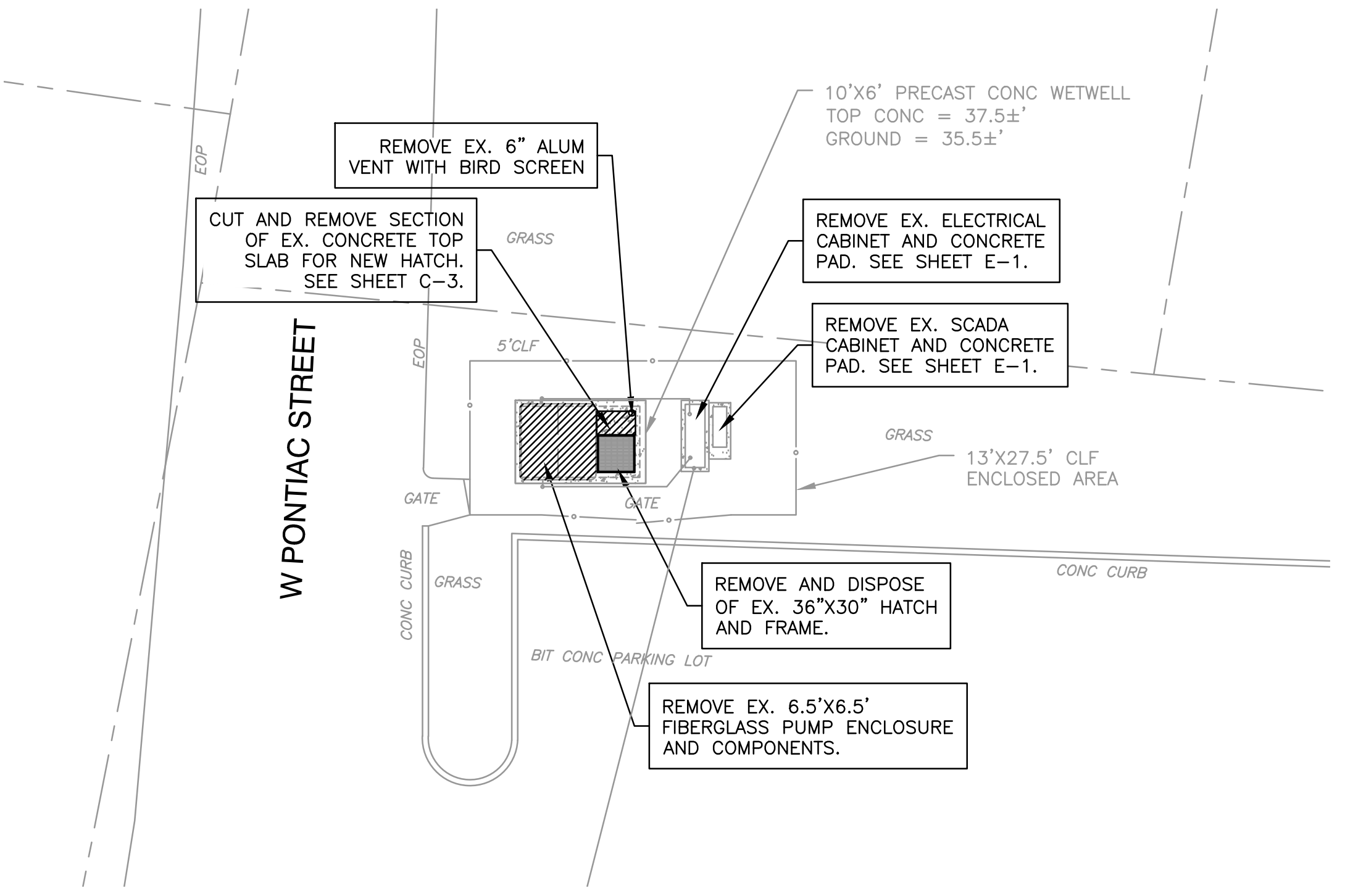
1. WASTEWATER SERVICE FOR THE EXISTING PUMP STATION SHALL BE MAINTAINED DURING CONSTRUCTION. THE OWNER SHALL FURNISH TEMPORARY BYPASS PUMP EQUIPMENT FOR CONTRACTOR'S USE. CONTRACTOR SHALL FURNISH 900 FEET OF 6" LAYFLAT HOSE AS SHOWN.
2. CONTRACTOR SHALL INSTALL AND PLACE THE TEMPORARY BYPASS PUMP SYSTEM INTO SERVICE. OWNER SHALL MAINTAIN THE TEMPORARY BYPASS PUMP SYSTEM DURING CONSTRUCTION. SEE SPECIFICATION SECTION 02523 FOR REQUIREMENTS.
3. REFER TO SECTION 01010 FOR SEQUENCE OF CONSTRUCTION REQUIREMENTS FOR INSTALLING NEW PUMPS AND REMOVAL OF EXISTING SYSTEM.
4. OWNER WILL BE RESPONSIBLE FOR PUMPING OUT WET WELL FOR ACCESS. CONTRACTOR SHALL COORDINATE AND SCHEDULE HIS WORK WITH THE OWNER AS NEEDED TO COMPLETE THE WORK.
5. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
6. THE CONTRACTOR SHALL NOT STORE ANY APPARATUS, MATERIALS, SUPPLIES, OR EQUIPMENT ON DRAINAGE STRUCTURES OR WITHIN 100 FEET OF WETLANDS.
7. UNLESS OTHERWISE NOTED, ALL AREAS WITHIN LIMITS OF WORK DISTURBED BY CONTRACTOR SHALL BE LOAMED AND SEEDING IN ACCORDANCE WITH SECTION 02800.



TEMPORARY BYPASS PUMP PLAN
SCALE: 1"=1,000'



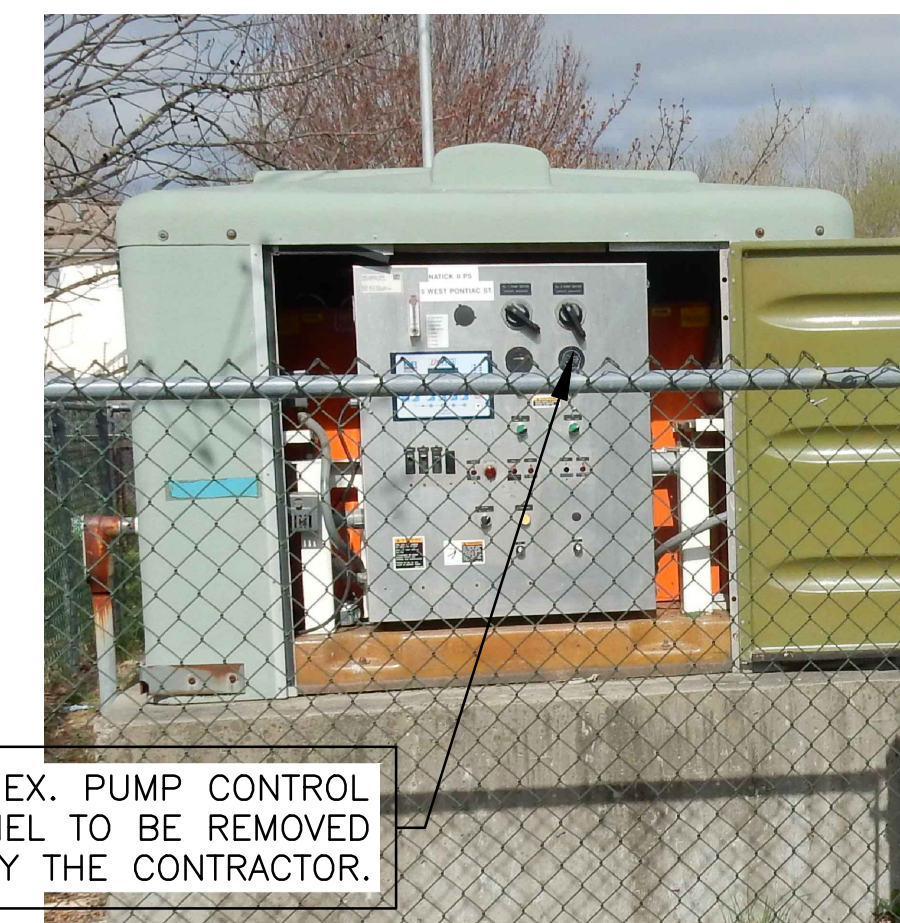
PUMP STATION DEMOLITION
SCALE: NTS



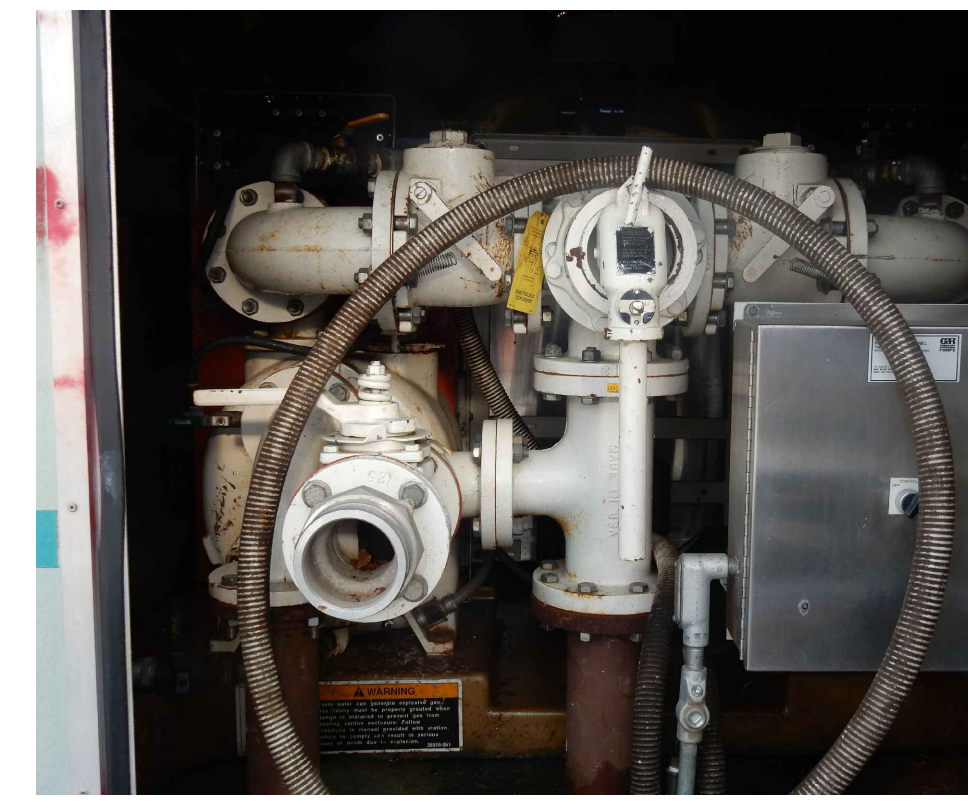
PUMP STATION DEMOLITION SITE PLAN
SCALE: 1"=10'



EX. FIBERGLASS PUMP SKID ENCLOSURE
SCALE: NTS



VIEW OF EX. CONTROL PANEL SIDE
SCALE: NTS



VIEW OF EX. PUMP SIDE
SCALE: NTS

EX. FIBERGLASS PUMP ENCLOSURE TO BE REMOVED BY THE CONTRACTOR.

EX. PUMP CONTROL PANEL TO BE REMOVED BY THE CONTRACTOR.

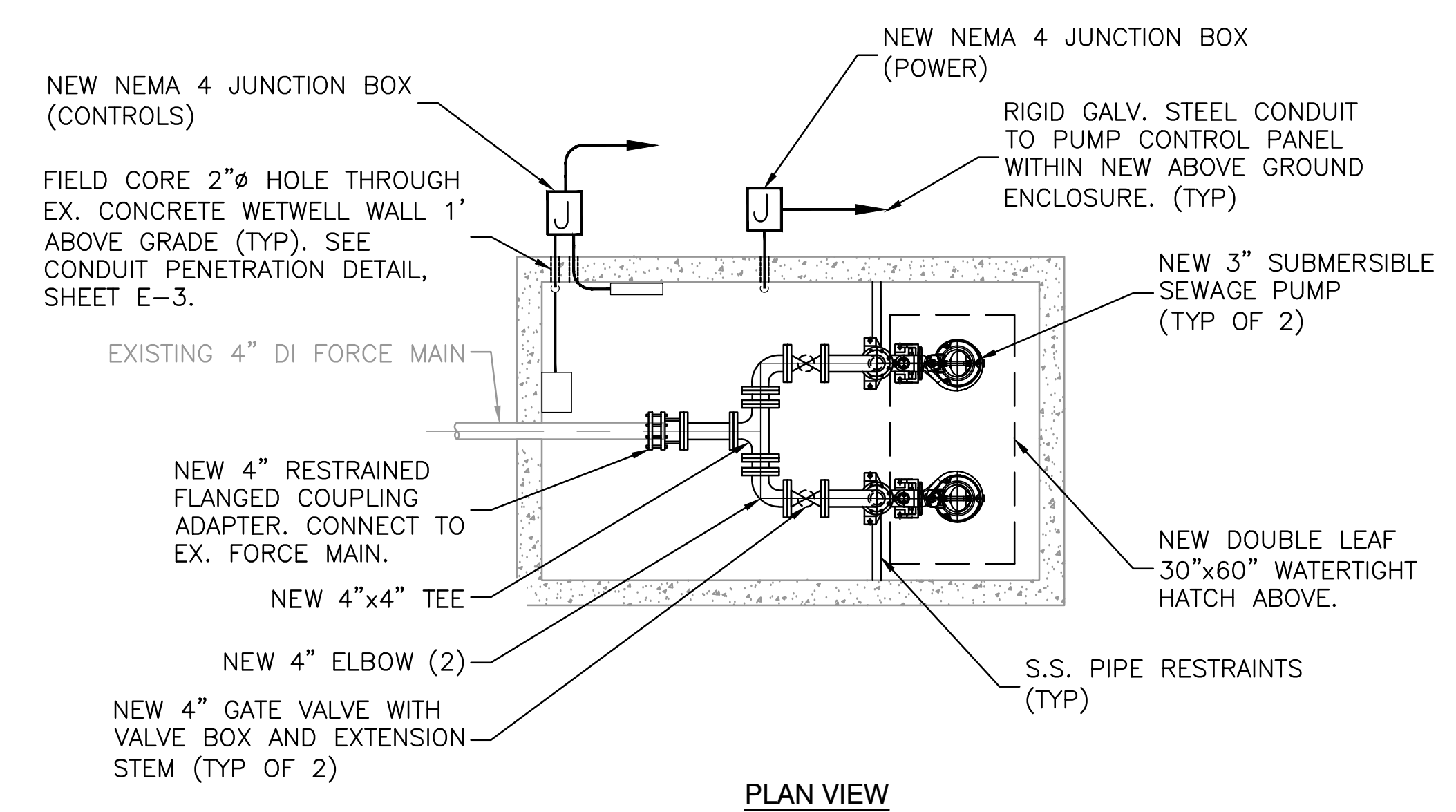
No.	DATE	BY	Description

REVISIONS

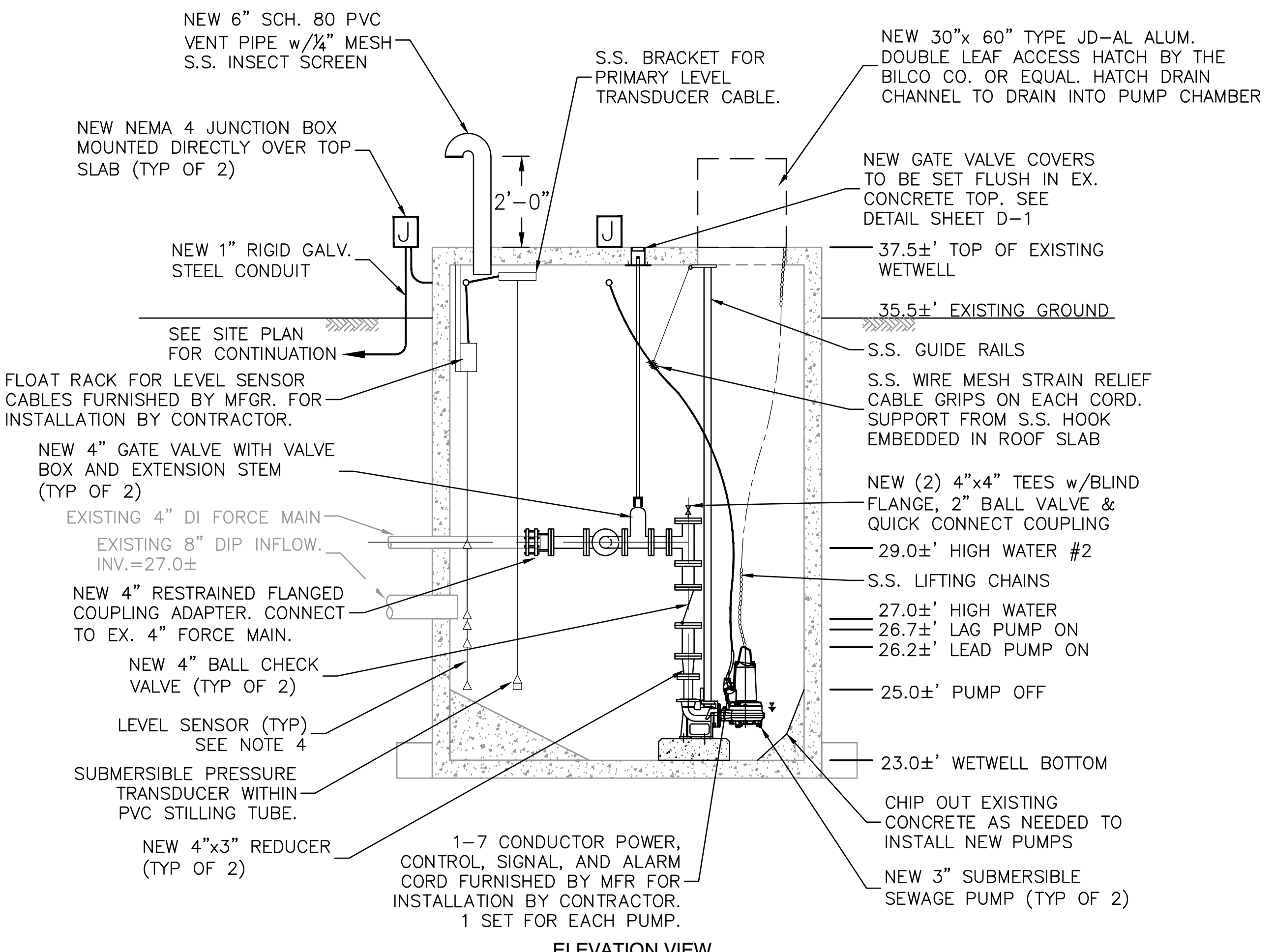
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CHECKED BY	CB
DATE	JAN 2018

TITLE
**EAST NATICK II
PUMP STATION
NEW WORK**

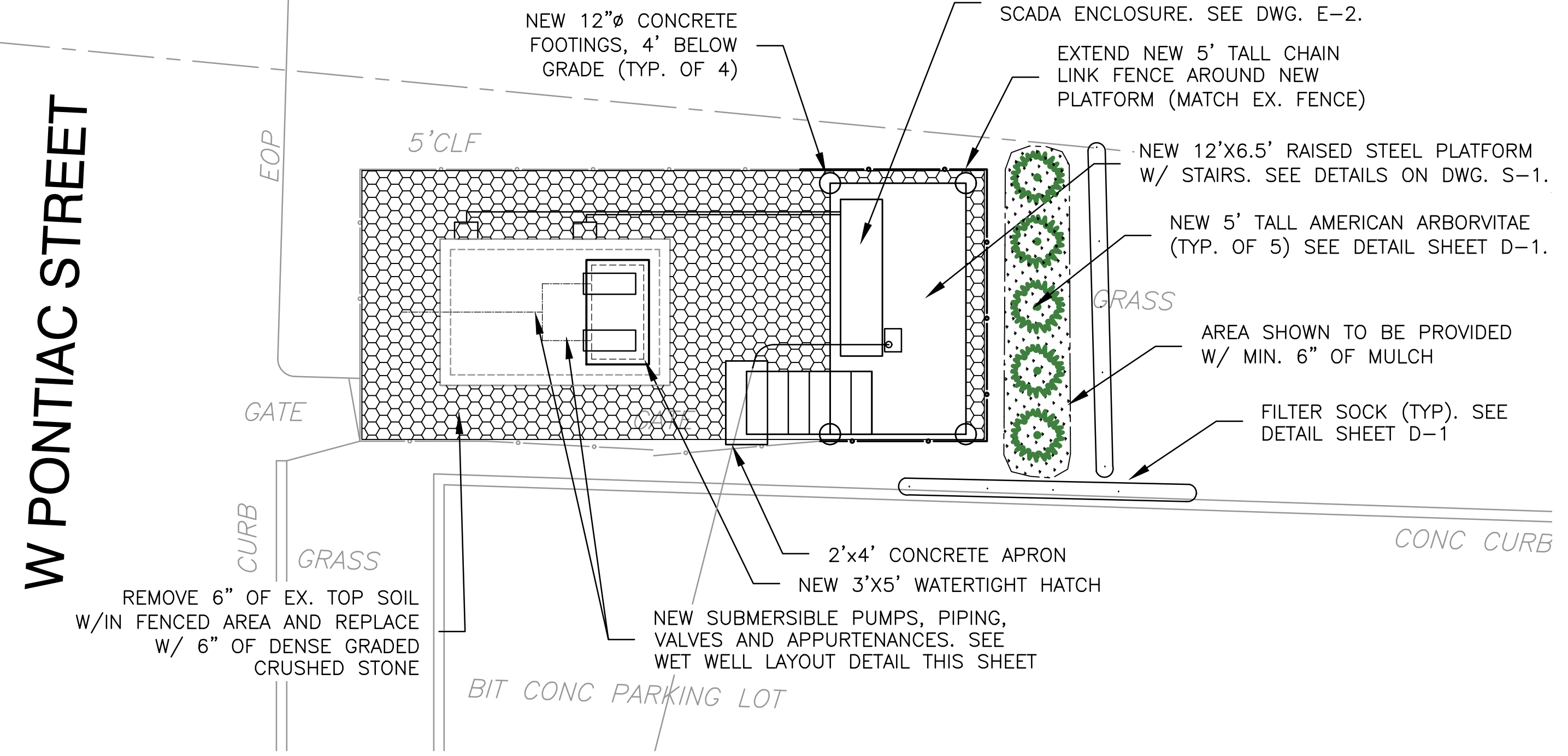
PROJECT NO. 50092430



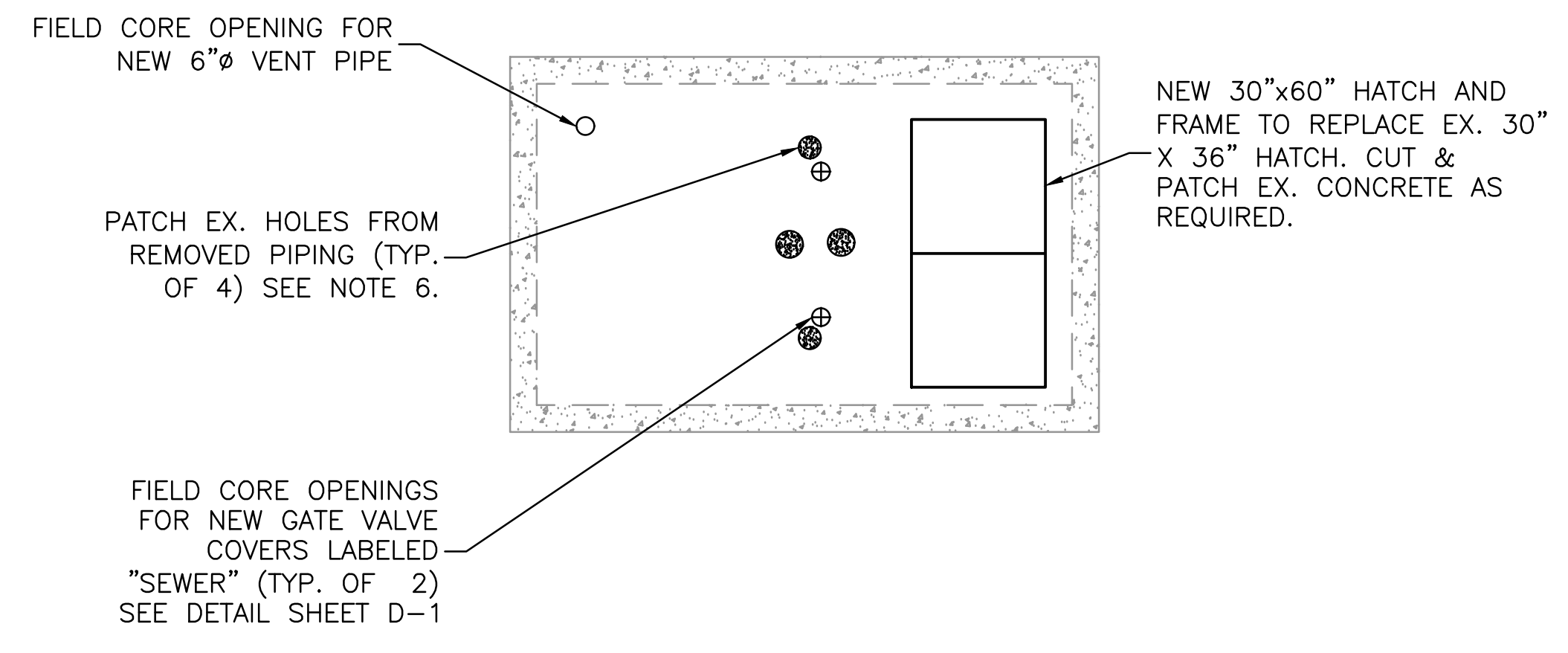
WETWELL LAYOUT PLAN
SCALE: 3/8"=1'



WETWELL LAYOUT PLAN
SCALE: 3/8"=1'

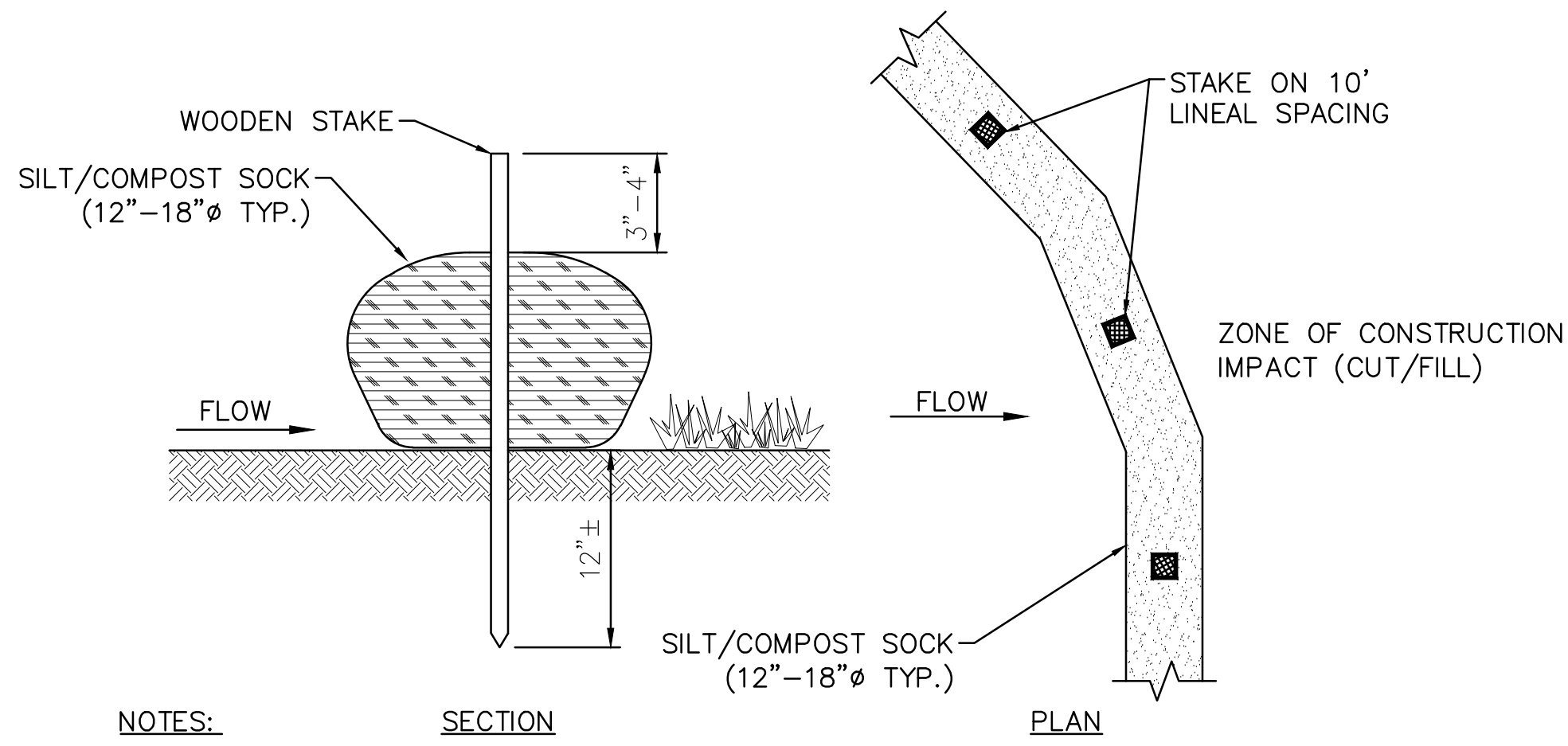


PUMP STATION NEW WORK PLAN
SCALE: 1"=5'



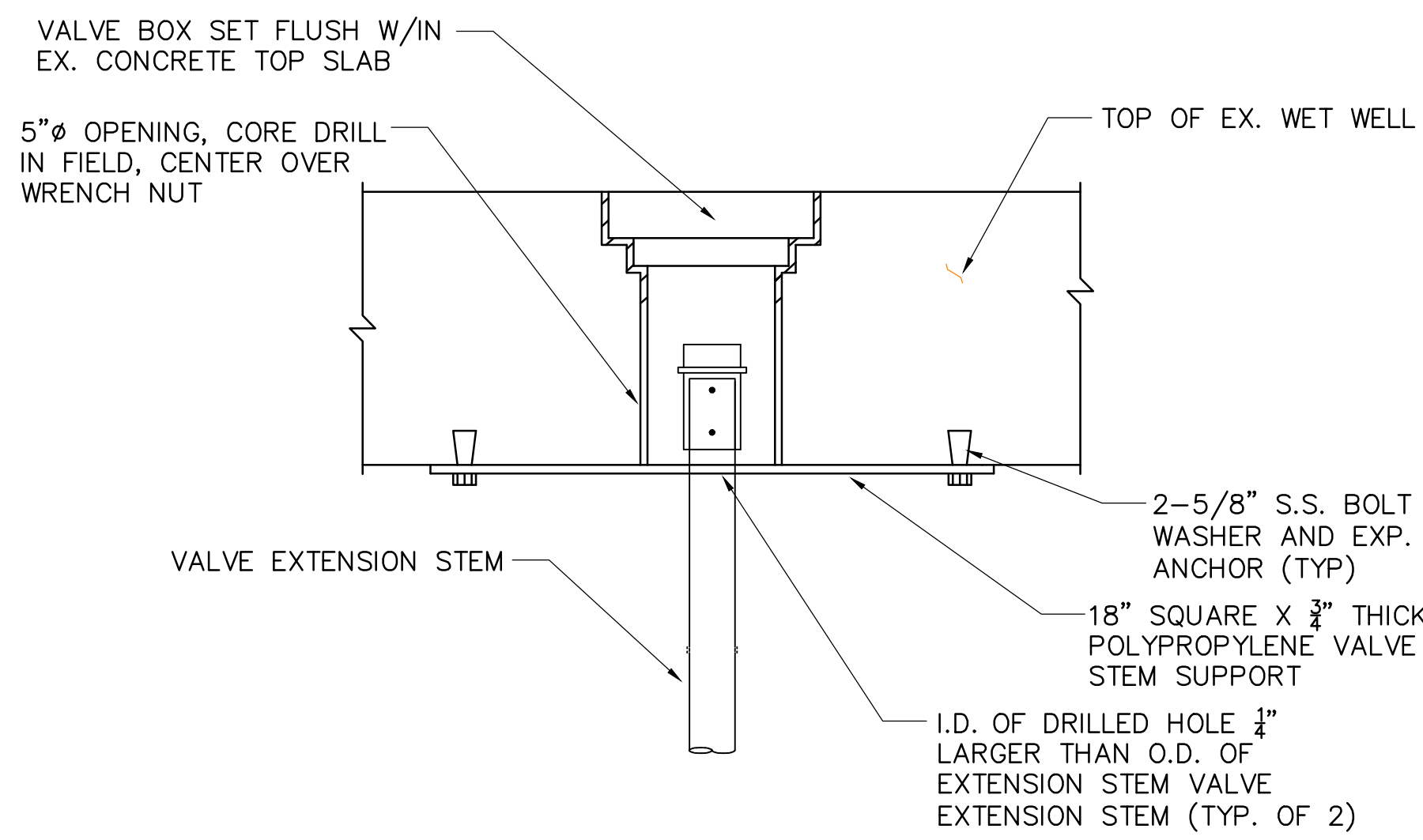
WETWELL TOP PLAN
SCALE: 3/8"=1'

- NOTES:
1. PROVIDE SUPPORTS UNDER ALL VALVES AND FITTINGS.
 2. REFER TO SPECIFICATION SECTION 11303 FOR DETAILED INFORMATION REGARDING THE WASTEWATER PUMPING SYSTEM.
 3. USE ONLY PVC COATED GALVANIZED STEEL CONDUIT WITHIN 5 FEET OF THE PUMP STATION. SEAL CONDUITS IN PUMP STATION.
 4. ALL LIQUID LEVEL CONTROLS SHALL BE INTRINSICALLY SAFE.
 5. THE UNDERSIDES OF THE ACCESS HATCH SHALL HAVE WARNING SIGNS WHICH READ "WARNING, HAZARDOUS AREA, ENTER ONLY WITH PROPER EQUIPMENT".
 6. CONTRACTOR SHALL LAY 1" SKIM COAT OVER TOP OF EXISTING WETWELL TO PROVIDE UNIFORM SURFACE.
 7. ELECTRICAL EQUIPMENT WITHIN WET WELL IS SHOWN SCHEMATICALLY. ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD.

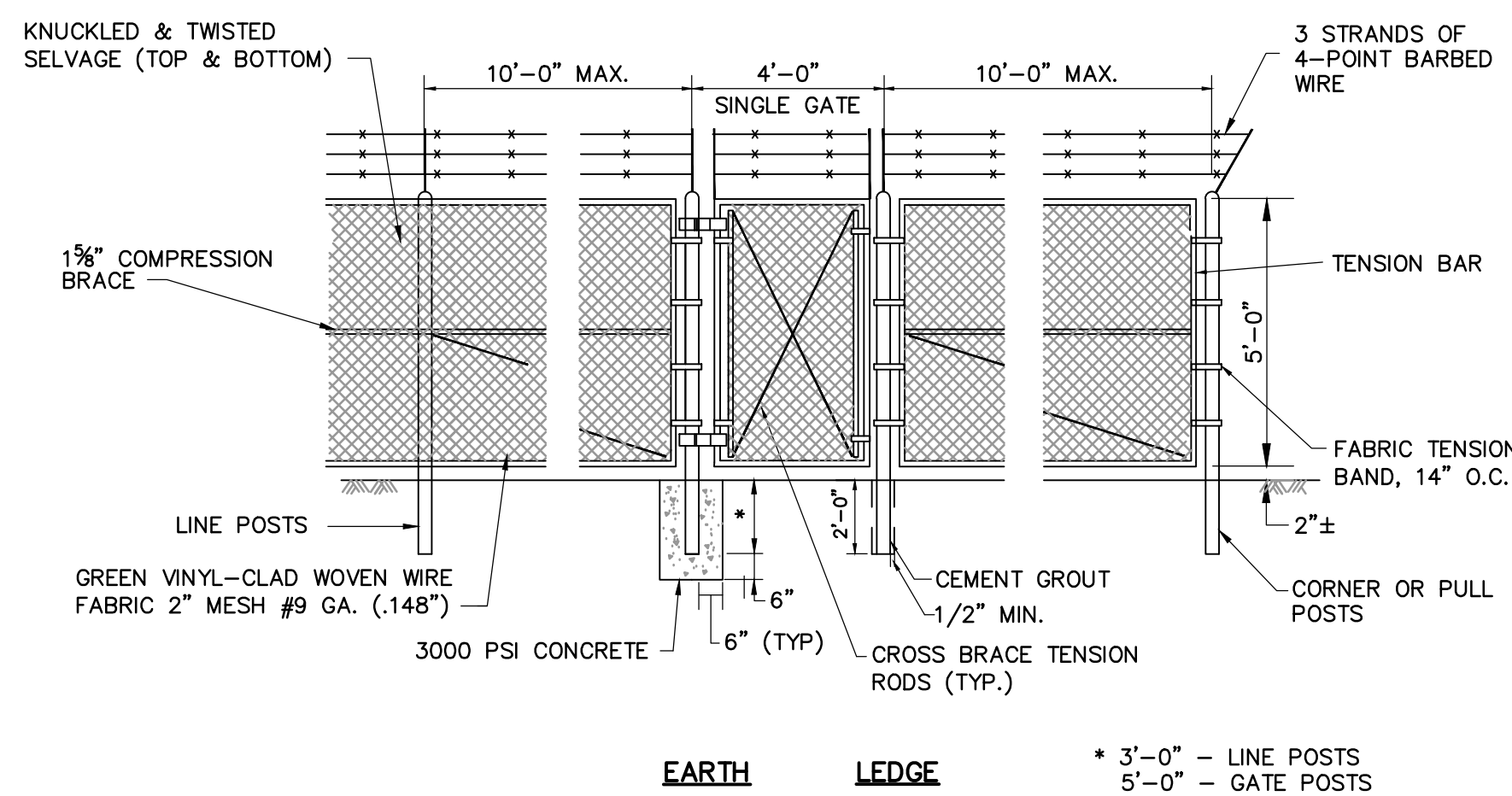


- NOTES:
- NO TRENCHING IS REQUIRED. TIE A KNOT IN ONE END OF THE MESH SOCK, FILL THE SOCK WITH COMPOSTED MATERIAL AND KNOT THE OPPOSITE END ONCE THE DESIRED LENGTH IS ACHIEVED.
 - REFER TO MANUFACTURER'S SPECIFICATIONS FOR PROPER INSTALLATION AND MAINTENANCE METHODS.

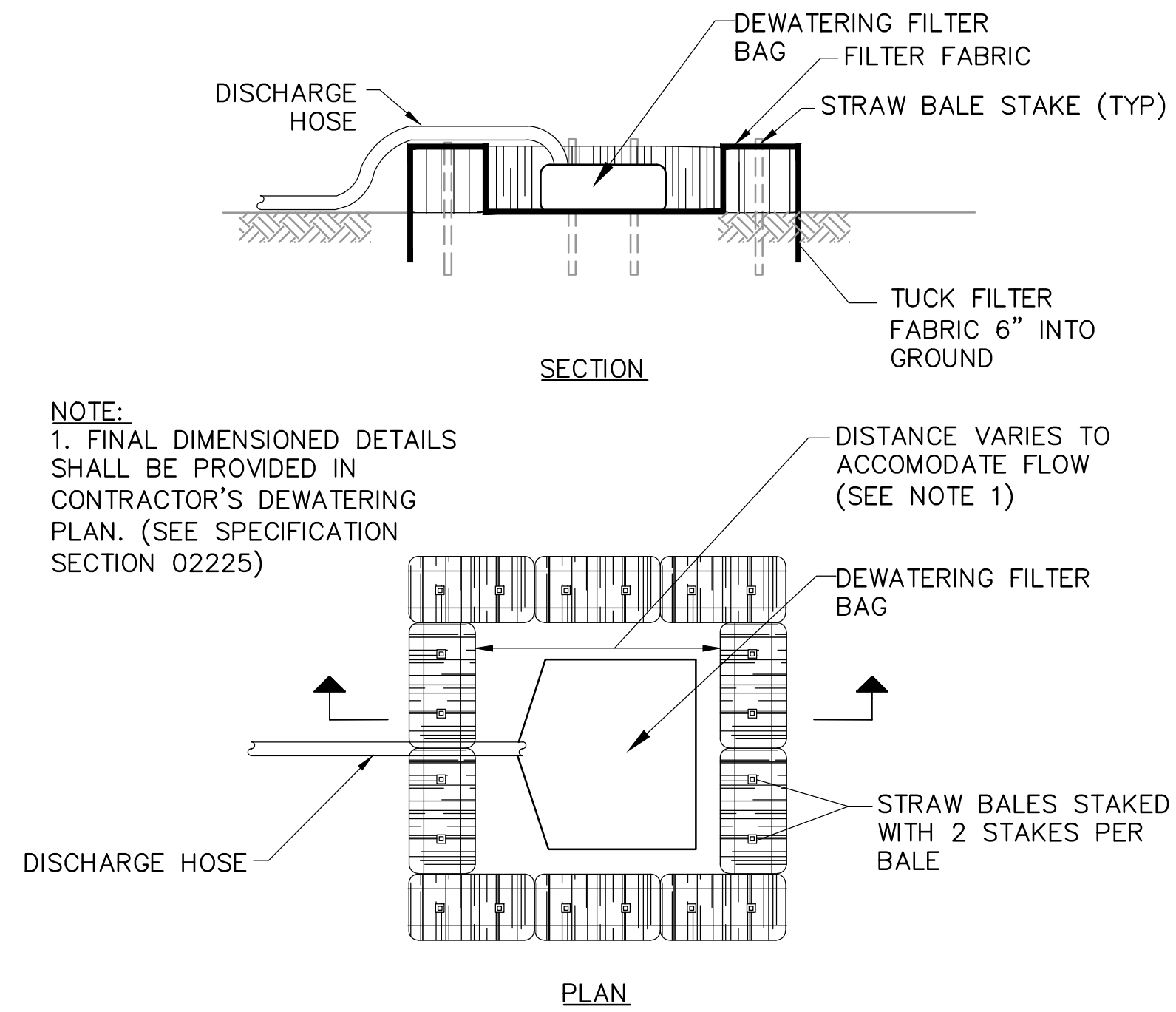
1 SEDIMENTATION FILTER SOCK DETAIL
NOT TO SCALE



VALVE BOX & STEM GUIDE DETAIL
SCALE : NONE

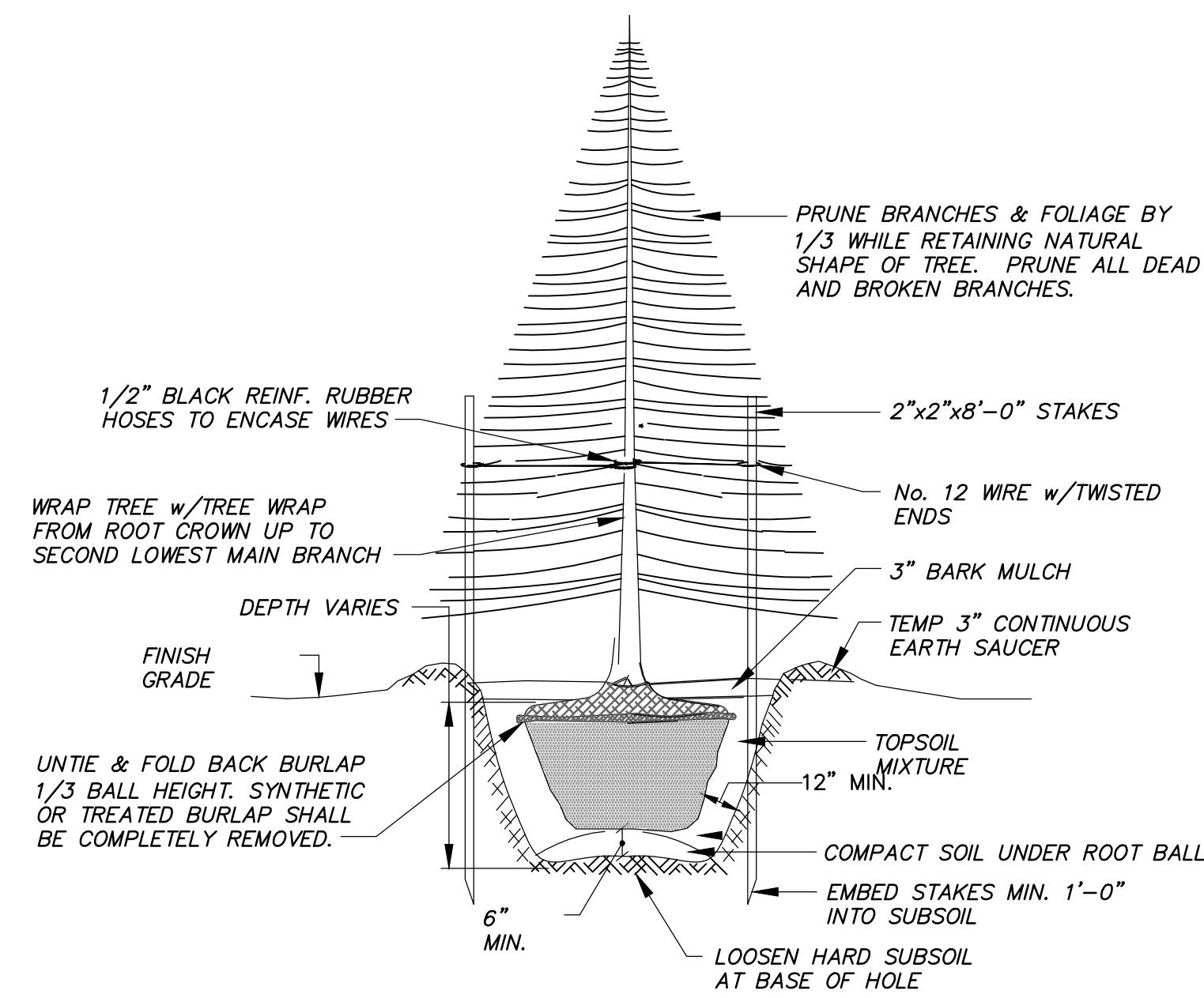


CHAIN LINK FENCE DETAIL
SCALE : NONE

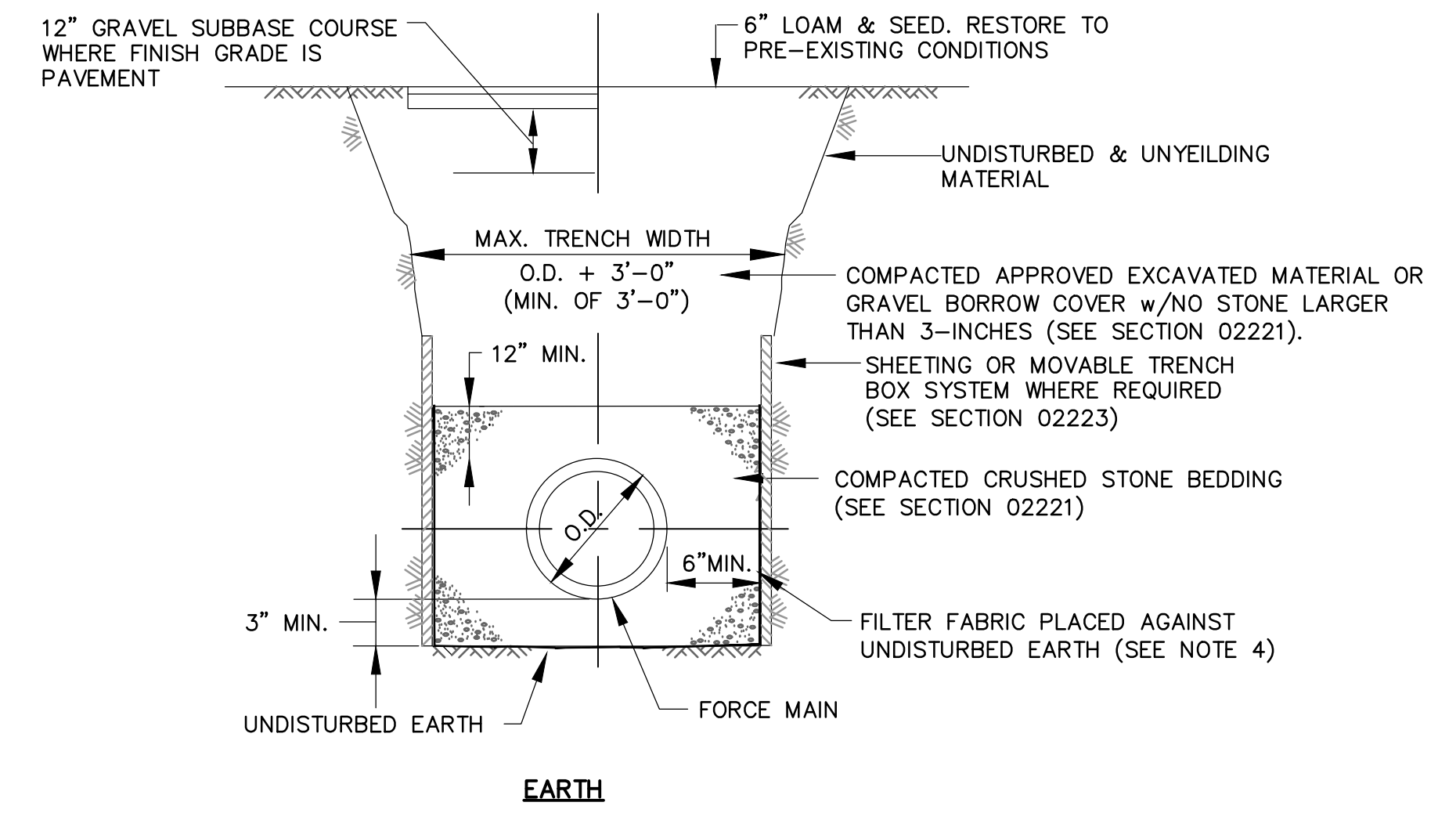


- NOTE:
- FINAL DIMENSIONED DETAILS SHALL BE PROVIDED IN CONTRACTOR'S DEWATERING PLAN. (SEE SPECIFICATION SECTION 02225)

2 DEWATERING DISCHARGE DETAIL
NOT TO SCALE

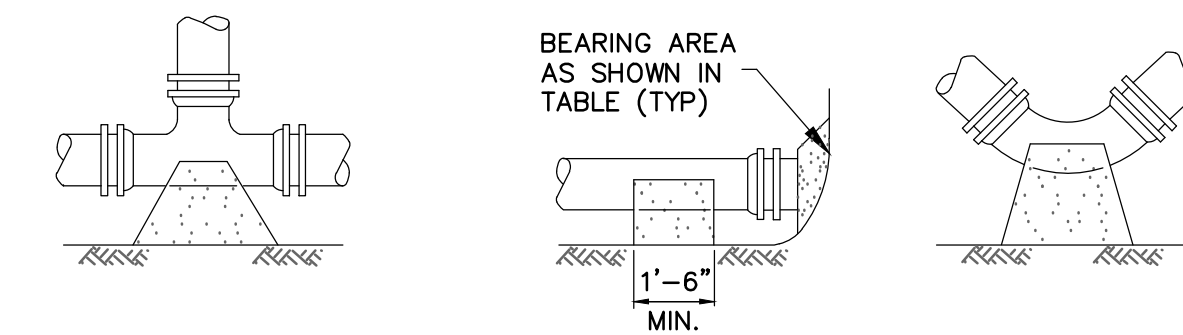


TREE PLANTING DETAIL(TYP. OF 5)
SCALE : NONE



- EXCAVATION NOTES:
- TRENCH BOX SHALL NOT GO BELOW THE SPRING LINE OF THE PIPE.
 - FOR EARTH SUPPORT REQUIREMENTS, SEE SECTION 02223. FOR DEWATERING REQUIREMENTS, SEE SECTION 02225.
 - SHEETING LEFT-IN-PLACE SHALL BE CUT OFF AT LEAST 4'-0" BELOW FINISH GRADE.
 - WHERE THE SURROUNDING SOILS ARE FINE SAND, SILT OR CLAY, STONE USED FOR BEDDING AND BACKFILL SHALL BE WRAPPED IN FILTER FABRIC.

TYPICAL FORCE MAIN TRENCH DETAIL
SCALE : NONE

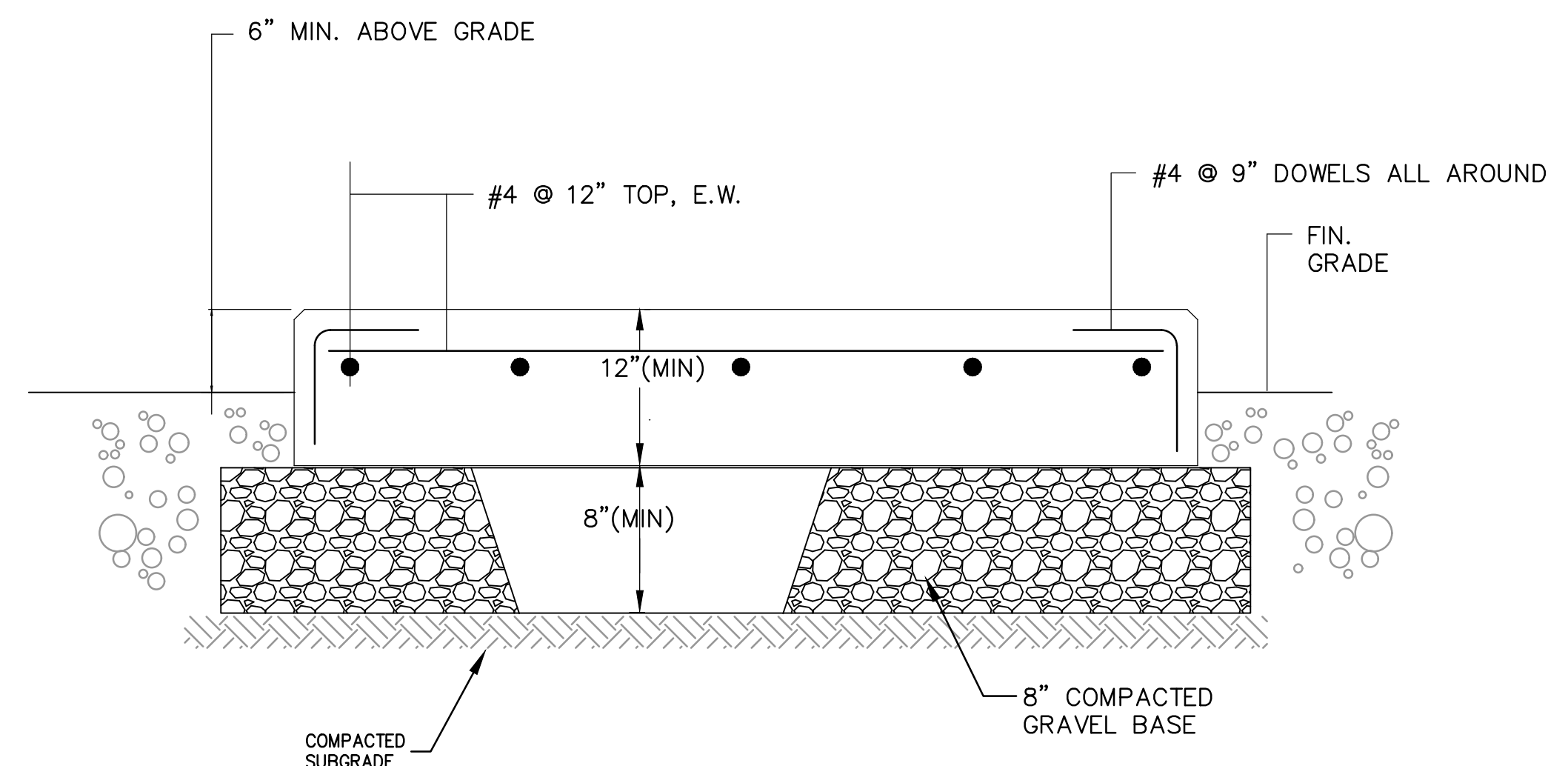


TEE DETAIL (PLAN VIEW) CAP DETAIL (SECTION VIEW) BEND DETAIL (PLAN VIEW)

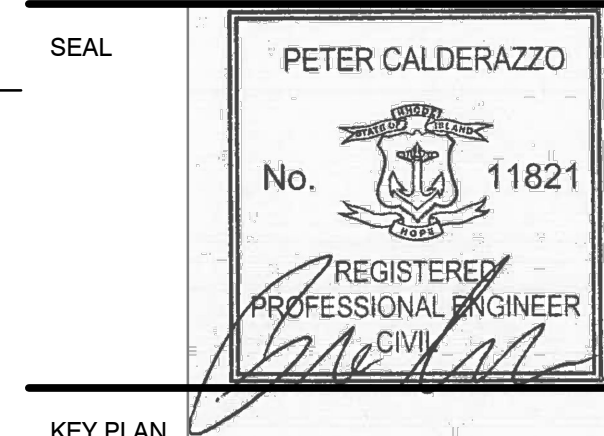
SIZE OF MAIN	90° BENDS, TEES, CAPS & PLUGS	45° BENDS AND WYES	22-1/2° BENDS	11-1/4° BENDS
6", 8"	5	4	2	2
10", 12"	12	9	5	2
16"	20	15	8	4
20"	36	24	13	7

- NOTES:
- ALL PIPE FITTINGS SHALL HAVE CONCRETE BACKING FOR THRUST RESTRAINT UNLESS OTHERWISE SPECIFIED.
 - CONTRACTOR SHALL USE CARE TO AVOID PLACEMENT OF CONCRETE ON THE FITTING JOINTS

CONCRETE THRUST BLOCK DETAIL
SCALE : NONE



DETAIL-CONCRETE PAD FOR PLATFORM STAIRS
SCALE : NONE



SCALE

No.	DATE	BY	Description

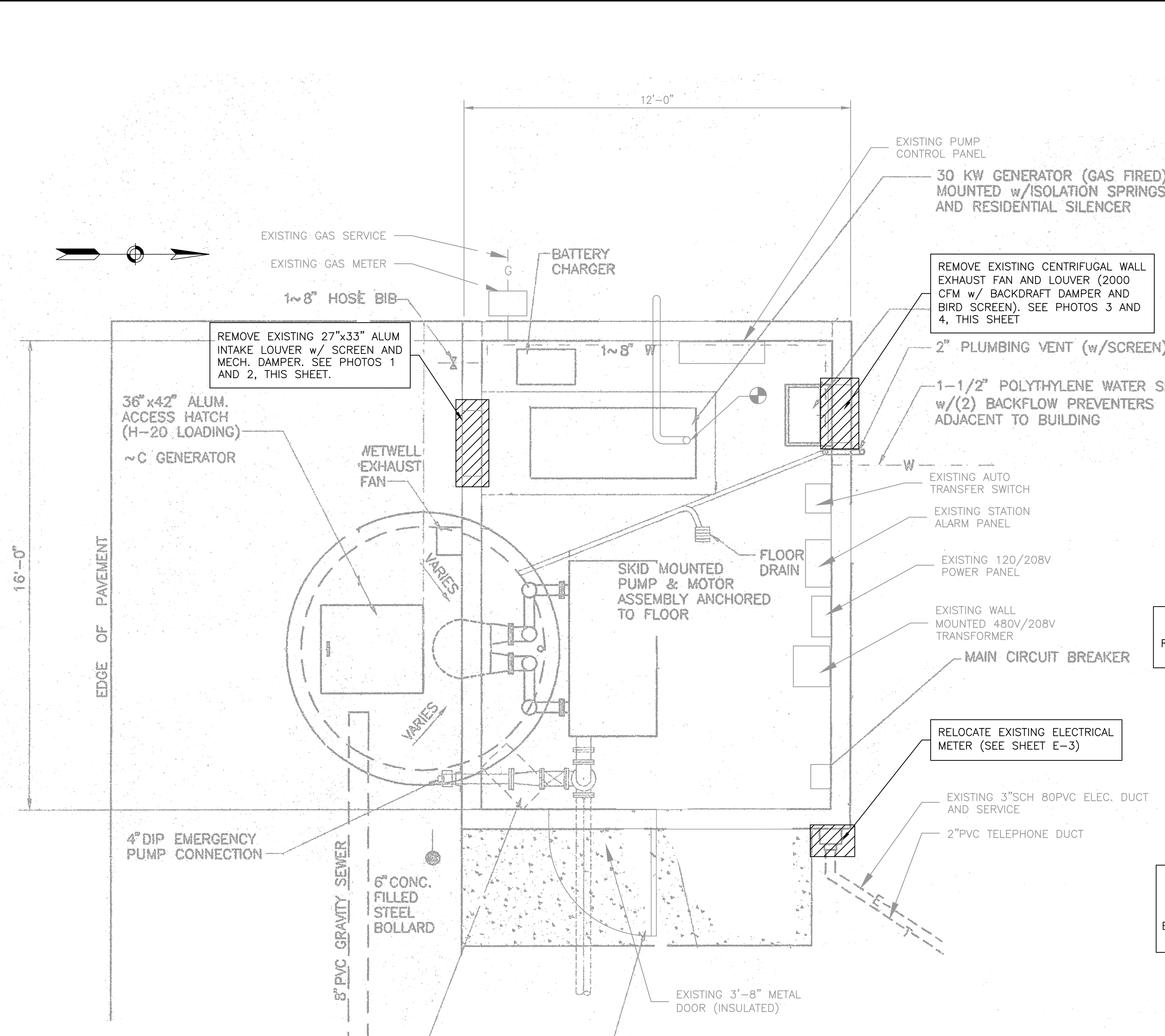
DESIGNED BY PC
DRAWN BY MH / KP
CHECKED BY CB
DATE JAN 2018
TITLE

SITE DETAILS

PROJECT NO. 50092430

D-1

E
D
C
B
A



- DEMOLITION NOTES:**
- CONTRACTOR SHALL REMOVE AND DISPOSE OF THE EXISTING MECHANICAL EQUIPMENT, CONCRETE AND RELATED COMPONENTS AS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH SECTION 02050.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING PIPING AND ELECTRICAL WORK AS REQUIRED TO CONDUCT THE DEMOLITION WORK. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECONNECTING ELECTRICAL SERVICES TO NEW EQUIPMENT.
 - REFER TO SECTION 02050 OF THE SPECIFICATIONS FOR ADDITIONAL DETAIL AND REQUIREMENTS.

CUT OPENING IN EXISTING EXTERIOR BRICK VERNEER FOR REPLACING THE EXISTING LOUVER & MOTORIZED DAMPER. SEE SHEET M-2 FOR NEW LOUVER OPENING

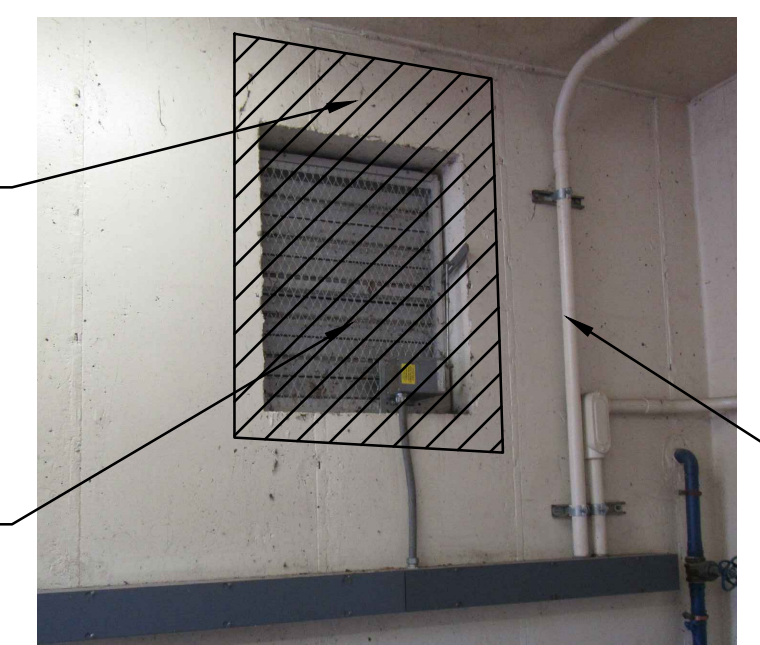
REMOVE EXISTING 27"x33" ALUM INTAKE LOUVER w/ SCREEN AND MECH. DAMPER



WORK AROUND EXISTING PANEL AS REQUIRED

1 - SOUTH WALL EXTERIOR DEMOLITION

CUT OPENING IN EXISTING INTERIOR CONCRETE WALL FOR REPLACING THE EXISTING LOUVER & MOTORIZED DAMPER. SEE SHEET M-2 FOR NEW LOUVER OPENING.



WORK AROUND EXISTING CONDUITS AS REQUIRED

2 - SOUTH WALL INTERIOR DEMOLITION

CUT OPENING IN EXISTING EXTERIOR BRICK VERNEER FOR RELOCATING EXISTING LOUVER. SEE SHEET M-2 FOR NEW OPENING.



RELOCATE EXISTING CONDUIT AS REQUIRED

3 - NORTH WALL EXTERIOR DEMOLITION

REMOVE EXISTING CENTRIFUGAL WALL EXHAUST FAN AND LOUVER (2000 CFM w/ BACKDRAFT DAMPER AND BIRD SCREEN)

WORK AROUND OR RELOCATE EXISTING CONDUIT AS REQUIRED



CUT OPENING IN EXISTING INTERIOR CONCRETE WALL FOR RELOCATING EXISTING LOUVER. SEE SHEET M-2 FOR NEW OPENING.

4 - NORTH WALL INTERIOR DEMOLITION

280 SUMMER ST.,
10TH FLOOR
BOSTON, MA 02210
(617) 695-3400
(617) 695-3310

**WARWICK SEWER
AUTHORITY**
EAST NATICK I, EAST
NATICK II, AND KNIGHT
STREET PUMP STATION
UPGRADES

SEAL
PETER CALDERAZZO
No. 11821
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

KEY PLAN
SCALE

No.	DATE	BY	Description
REVISIONS			
DESIGNED BY	PC		
DRAWN BY	MH / KP		
CHECKED BY	CB		
DATE	JAN 2018		

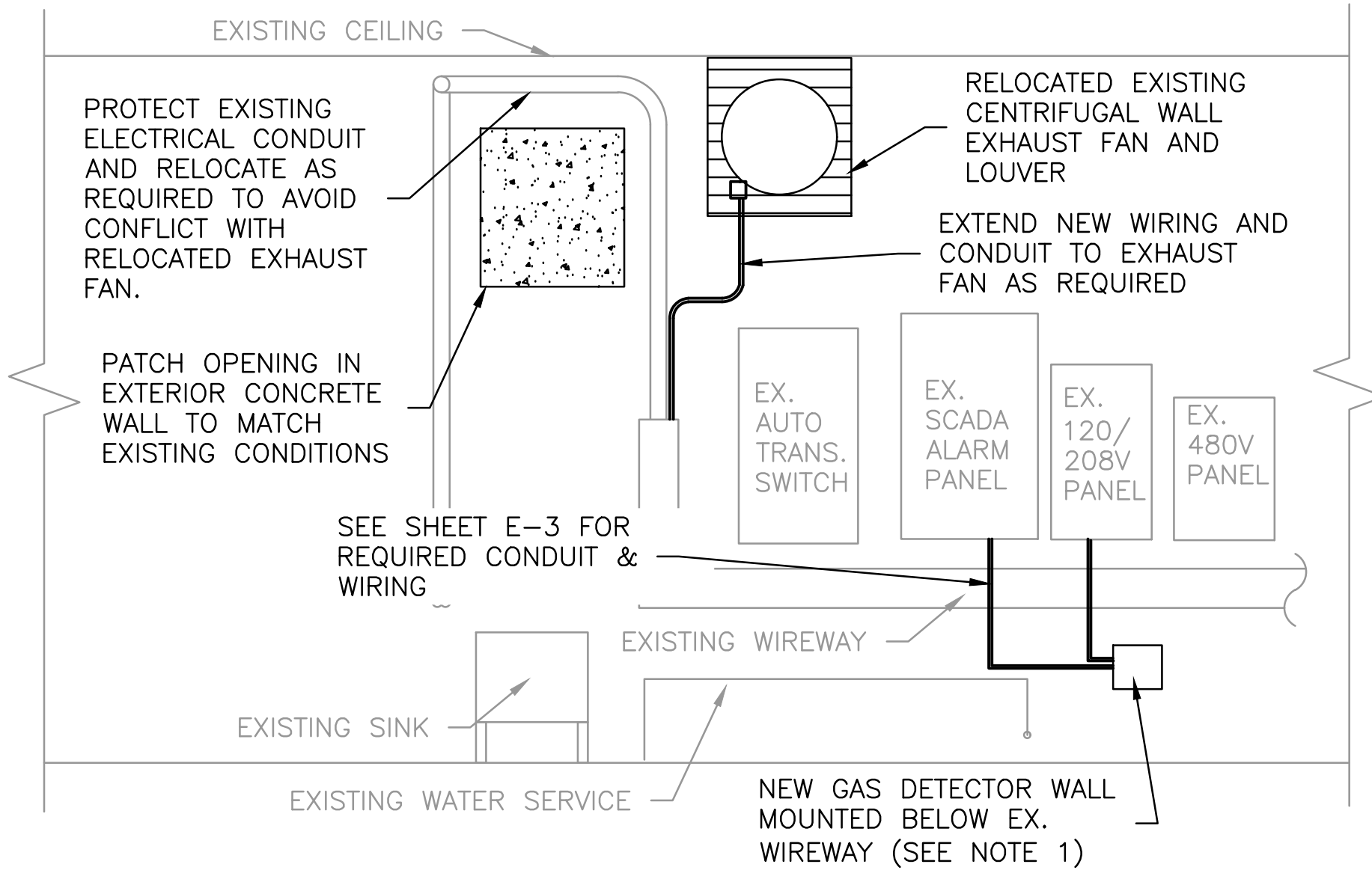
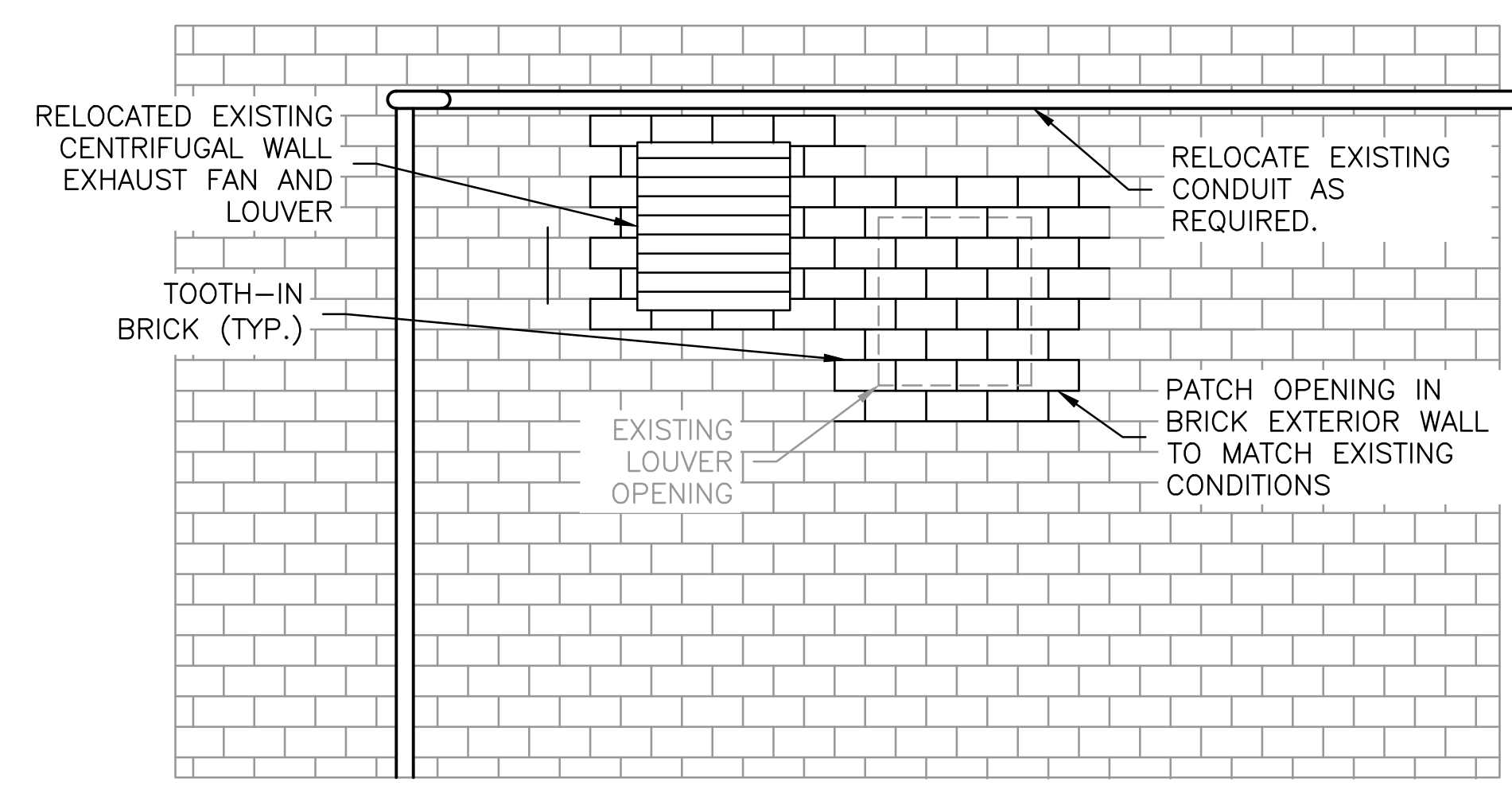
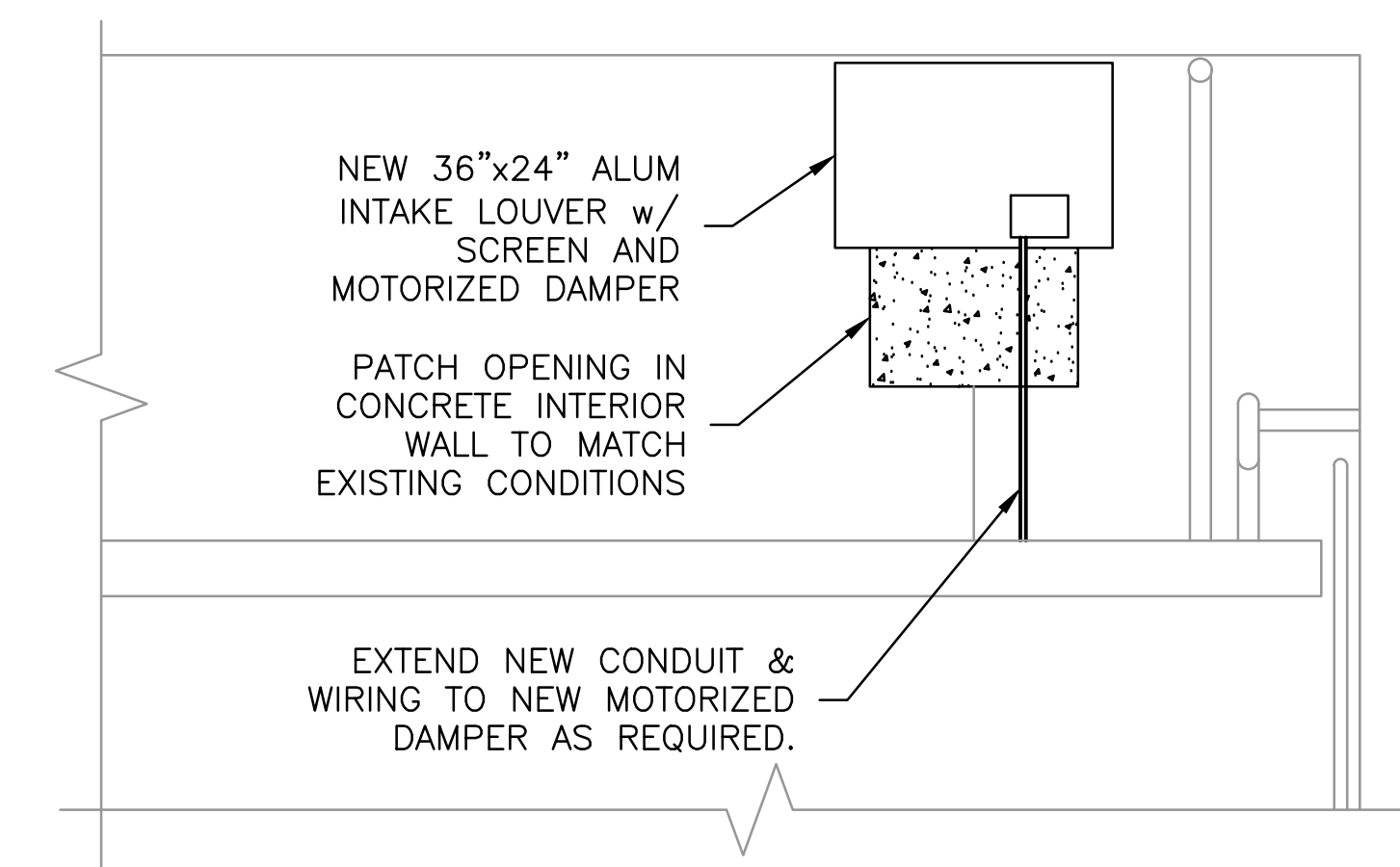
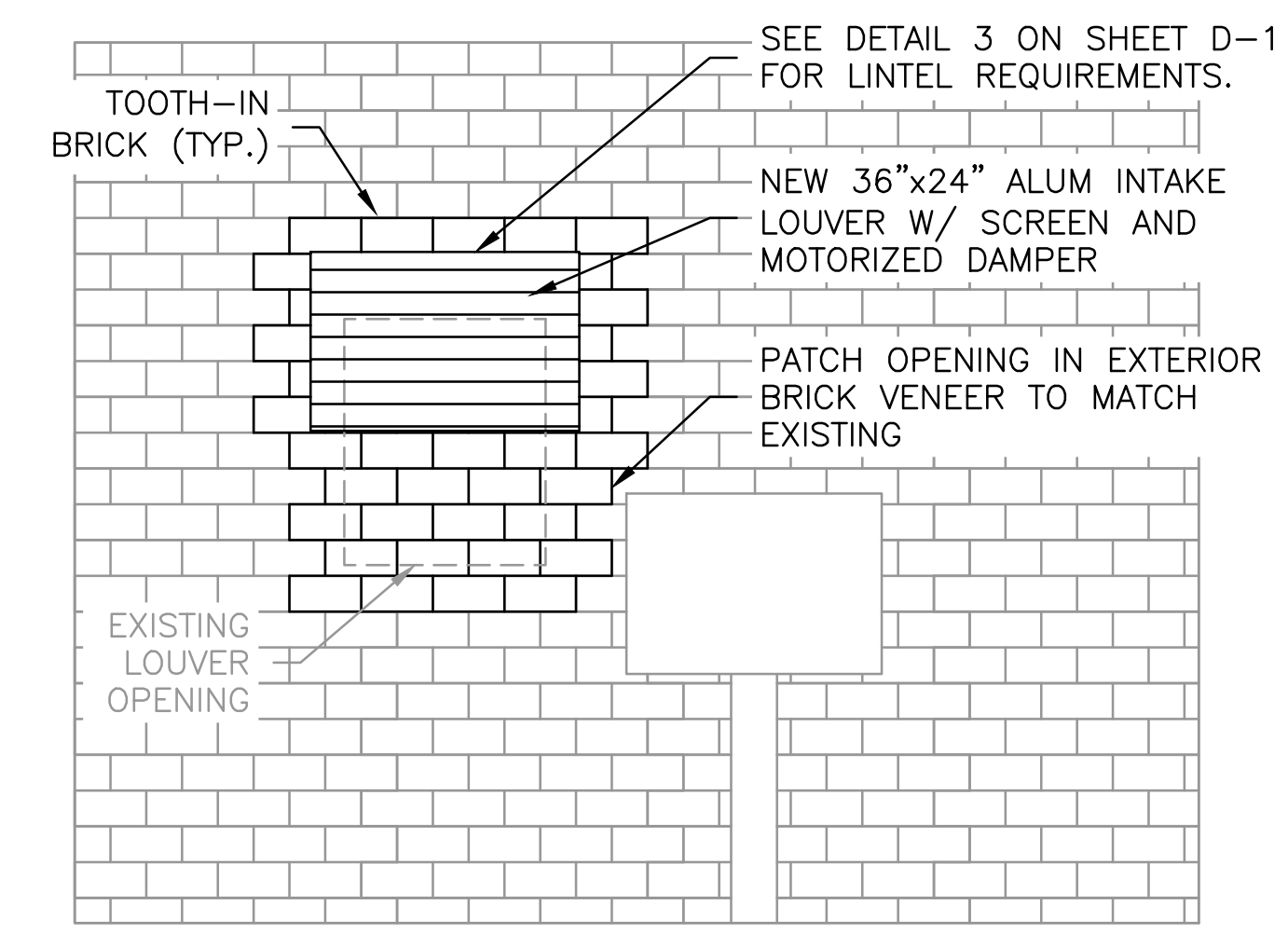
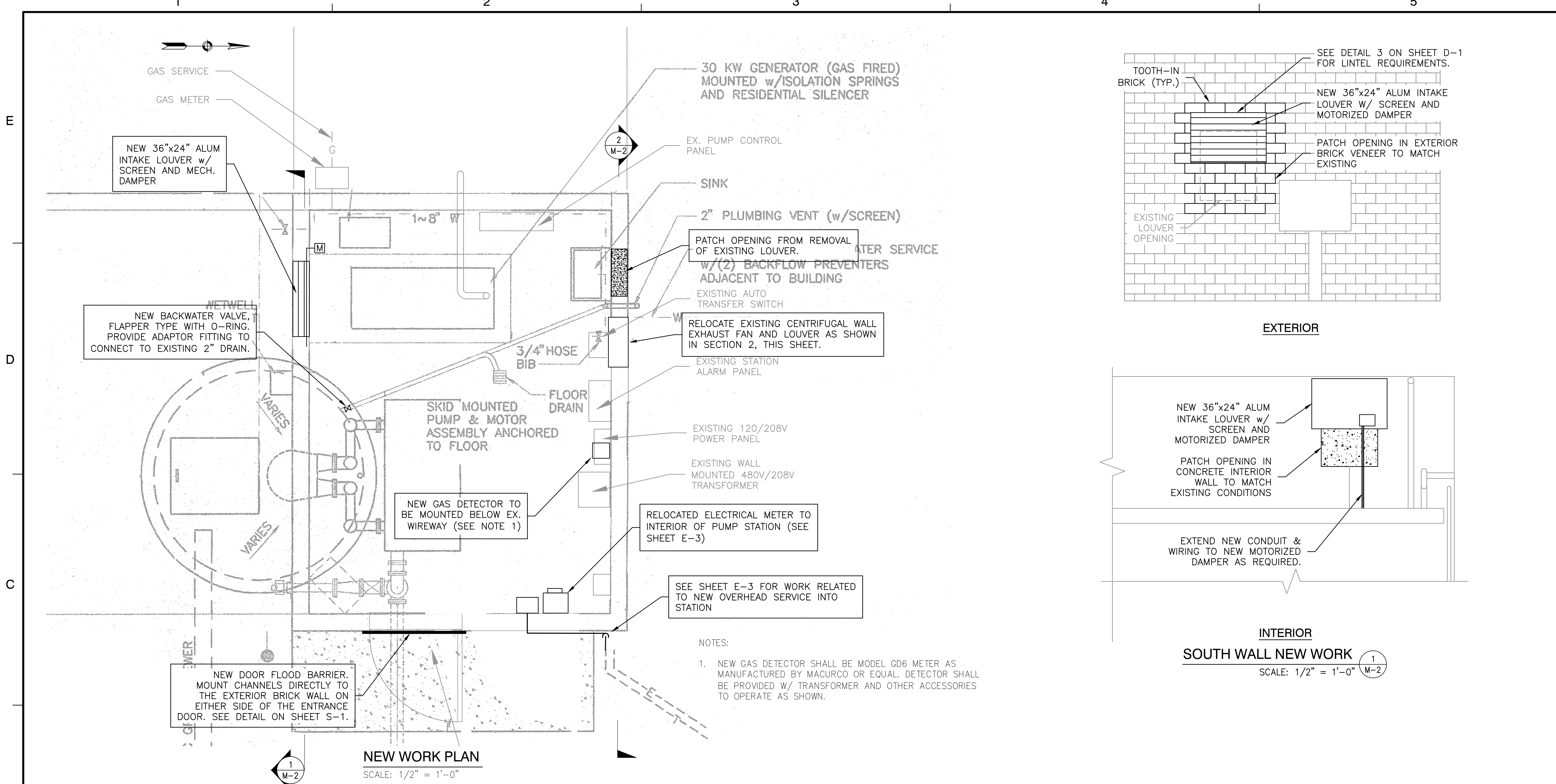
TITLE
**EAST NATICK I
PUMP STATION
DEMOLITION
WORK**

PROJECT NO. 50092430

M-1

No.	DATE	BY	Description
REVISIONS			
DESIGNED BY		PC	
DRAWN BY		MH / KP	
CHECKED BY		CB	
DATE		JAN 2018	
TITLE			

**EAST NATICK I
PUMP STATION
NEW WORK**



NORTH WALL NEW WORK 2
SCALE: 1/2" = 1'-0" M-2

SEAL

PETER CALDERAZZO
No. 11821
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

KEY PLAN

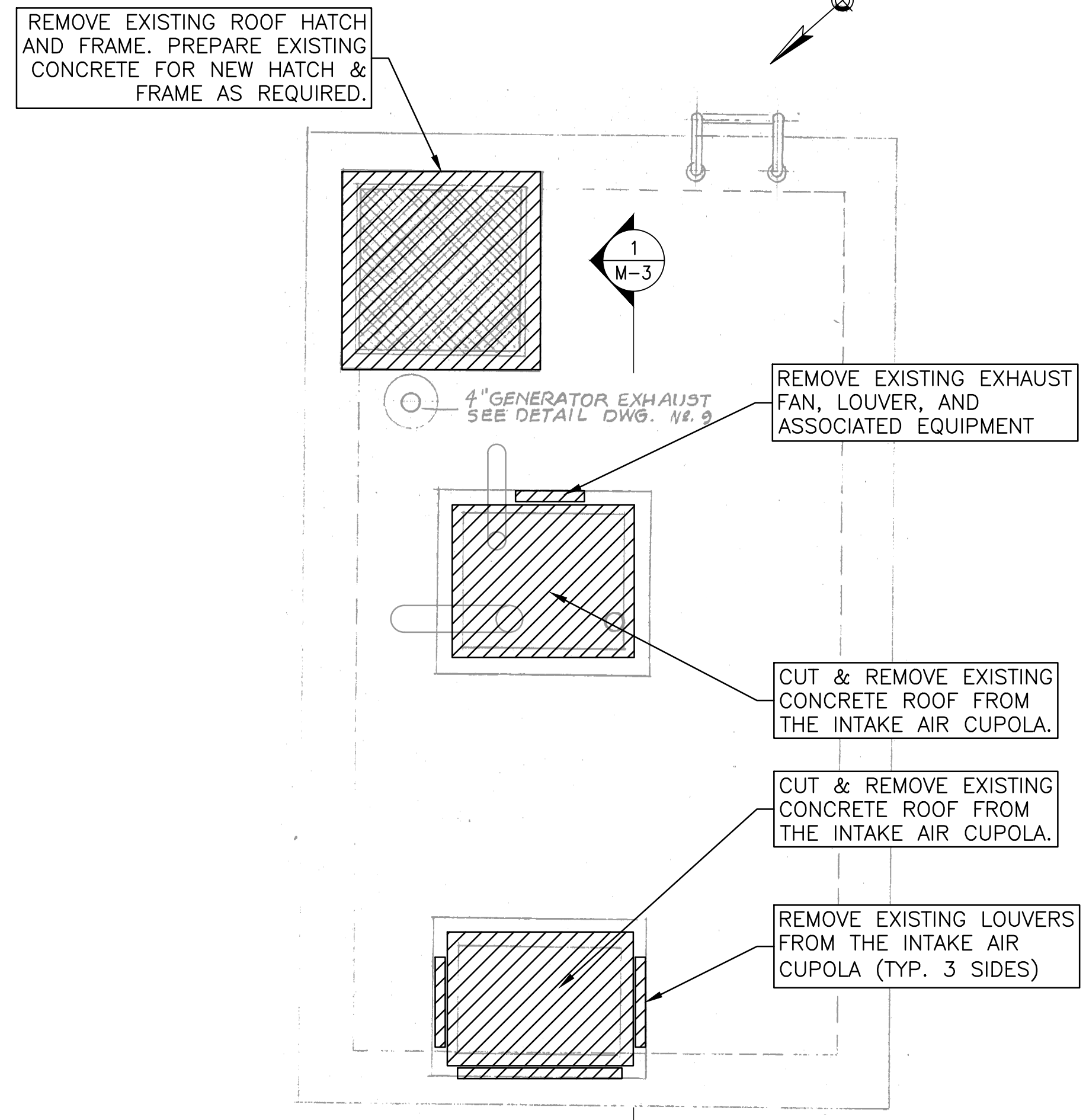
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DATE		JAN 2018	

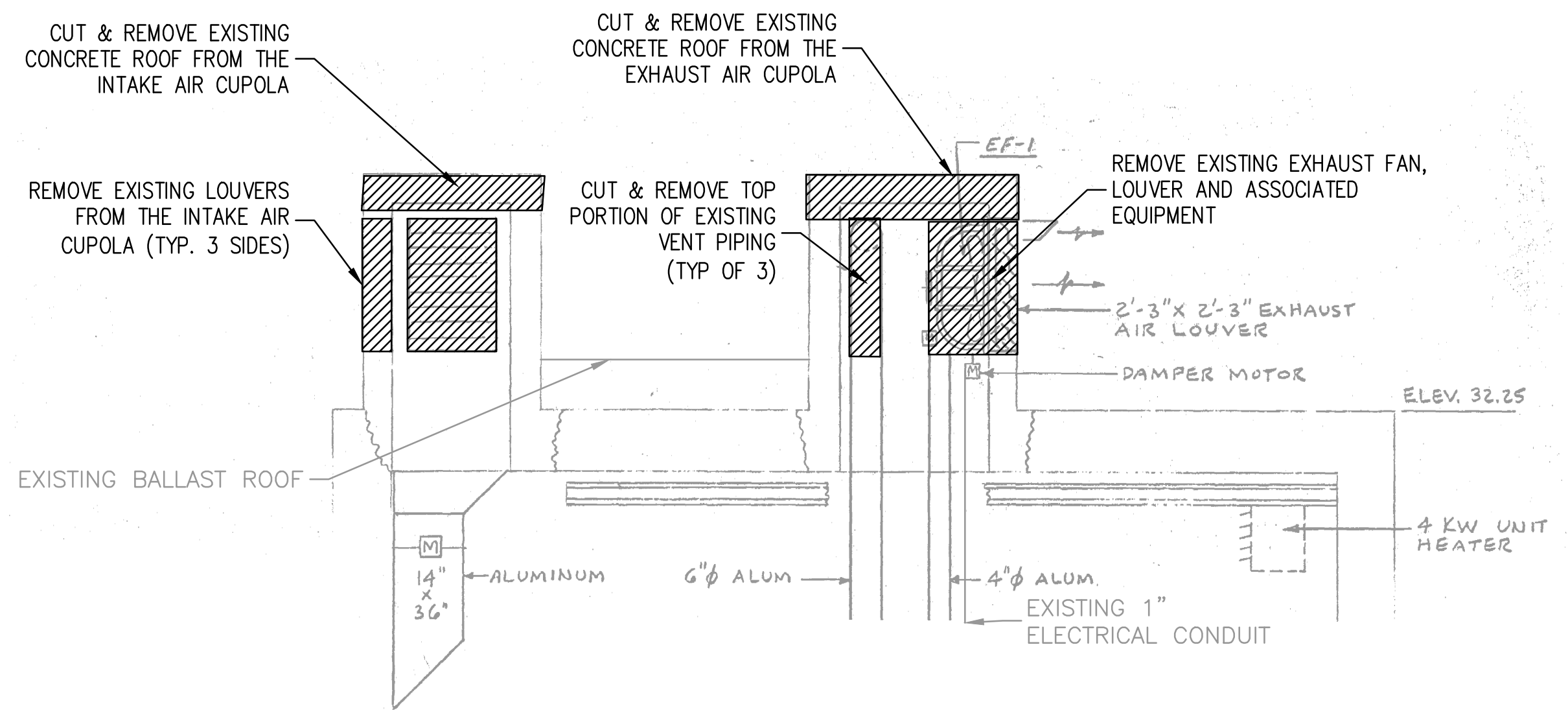
TITLE
**KNIGHT STREET
PUMP STATION
DEMOLITION
WORK**

PROJECT NO. 50092430

M-3



ROOF DEMO WORK PLAN - ELEV 32.25'
SCALE: 1/2" = 1'-0"



EXTERIOR DEMO WORK - SECTION 1
SCALE: 1/2" = 1'-0"

EX. BALLAST ROOF OVER
CONCRETE TOP TO BE REMOVED
(TYP. OF BOTH CUPOLAS)



EXISTING INTAKE AIR CUPOLA - FLASHING
SCALE: NTS



EXISTING CUPOLAS - VIEW FROM NORTH
SCALE: NTS

DEMOLITION NOTES:

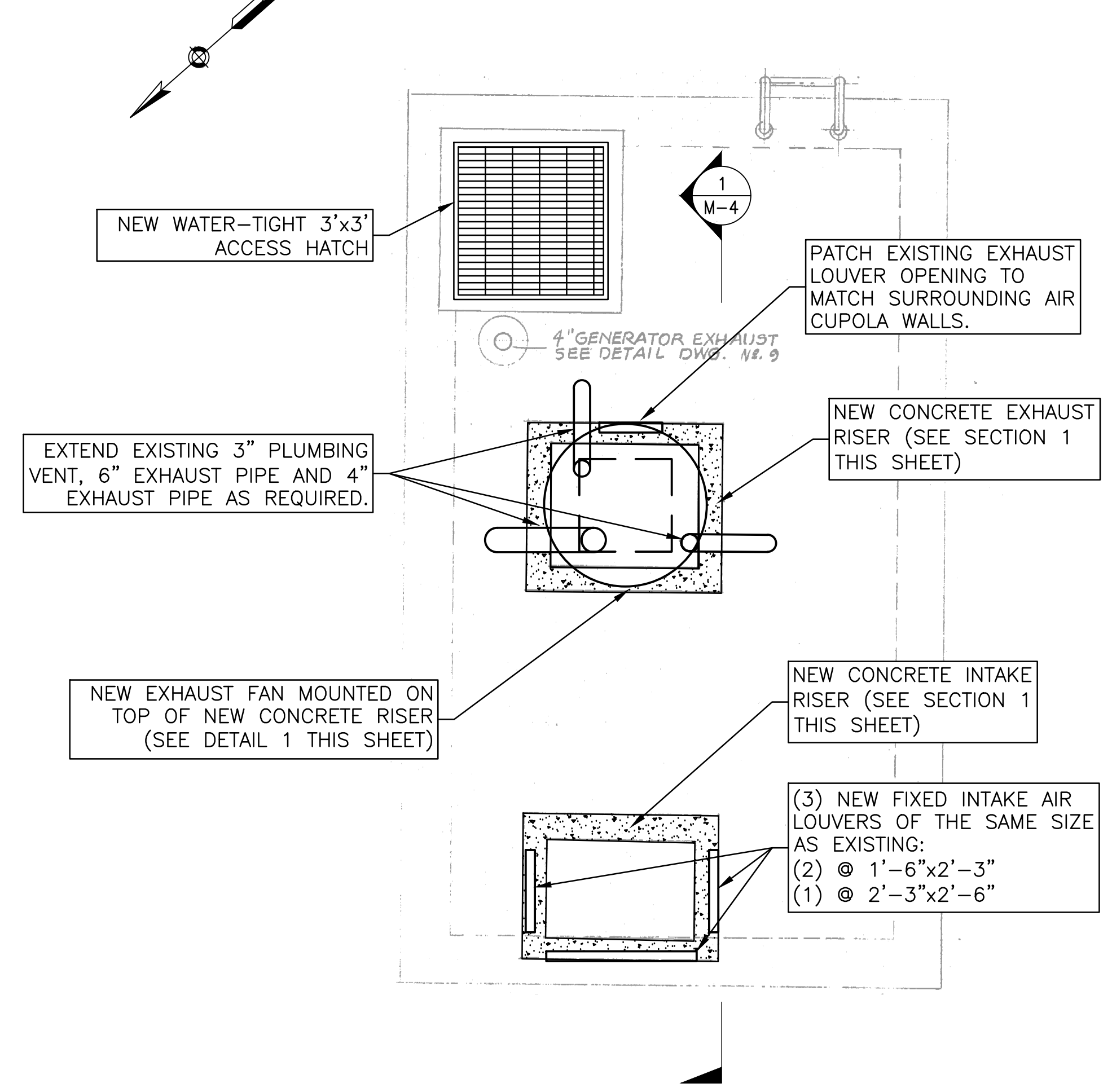
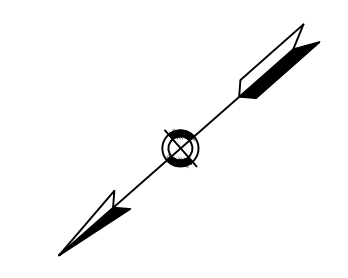
- CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING CONCRETE CUPOLAS, MECHANICAL EQUIPMENT AND PIPING, COMPLETE AS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH SECTION 02050.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING PIPING AND ELECTRICAL WORK AS REQUIRED TO CONDUCT THE DEMOLITION OF THE EXISTING CUPOLAS AND RELATED EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECONNECTING ELECTRICAL SERVICE TO NEW EQUIPMENT..
- CONTRACTOR SHALL PATCH THE EXISTING FLASHING AND ROOF AS REQUIRED FOR REMOVAL OF THE EXISTING LOUVERS WITHIN THE CUPOLAS AND THE ACCESS HATCH.

No.	DATE	BY	Description
REVISIONS			
DESIGNED BY	PC		
DRAWN BY	MH / KP		
CHECKED BY	CB		
DATE	JAN 2018		
TITLE			

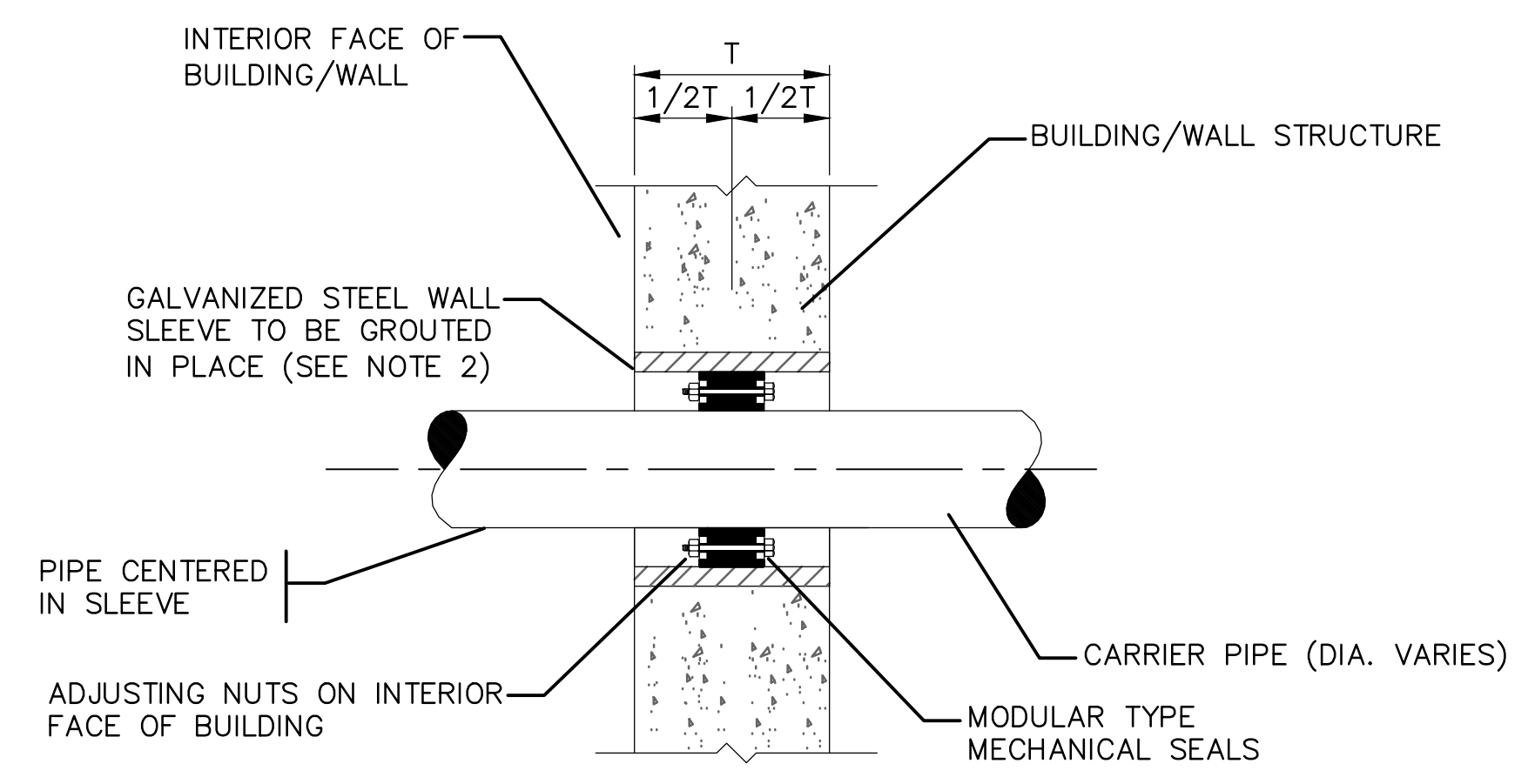
DESIGNED BY: PC
DRAWN BY: MH / KP
CHECKED BY: CB
DATE: JAN 2018
TITLE:

**KNIGHT STREET
PUMP STATION
NEW WORK**

PROJECT NO. 50092430

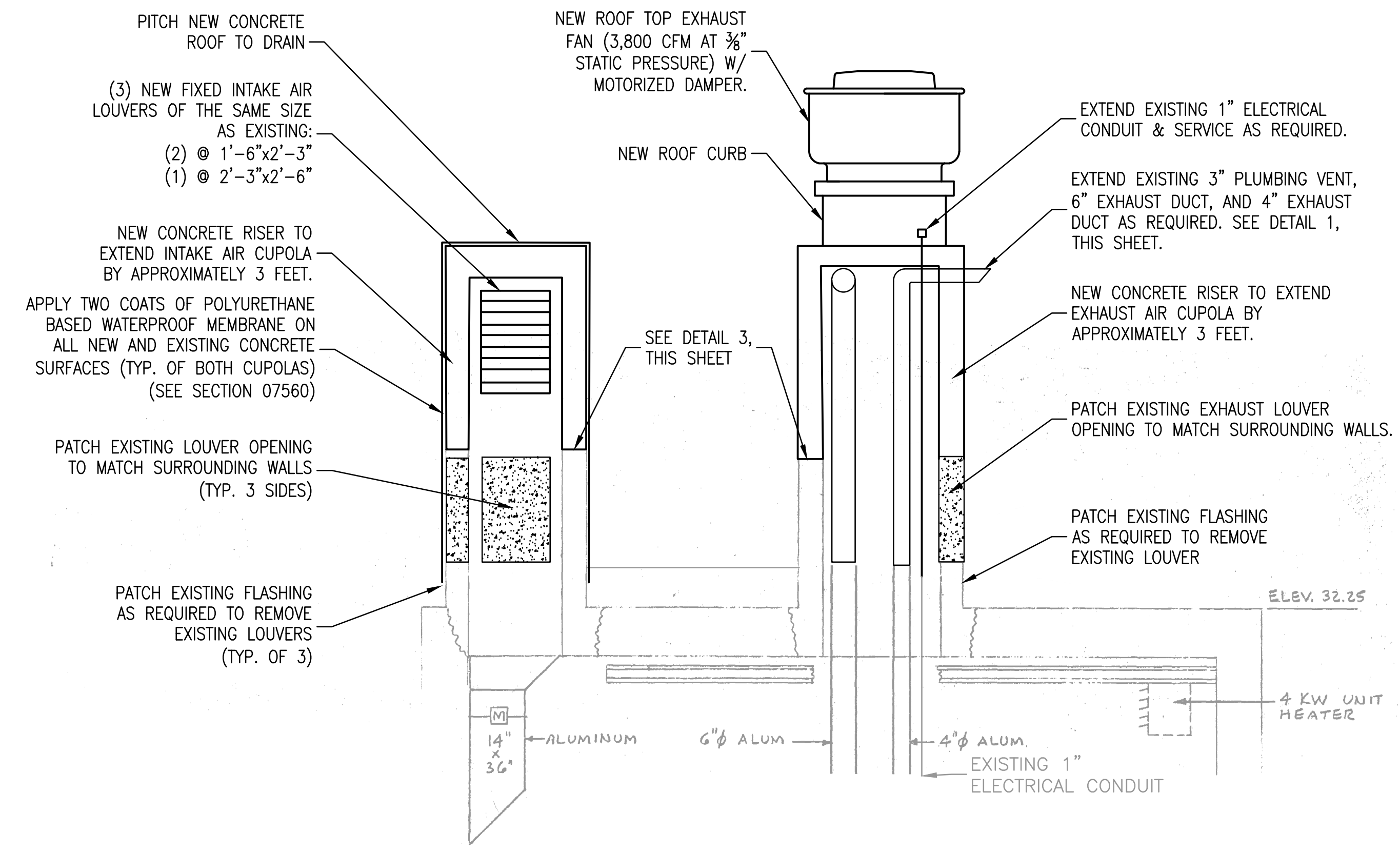


ROOF NEW WORK PLAN - ELEV 32.25'
SCALE: 1/2" = 1'-0"

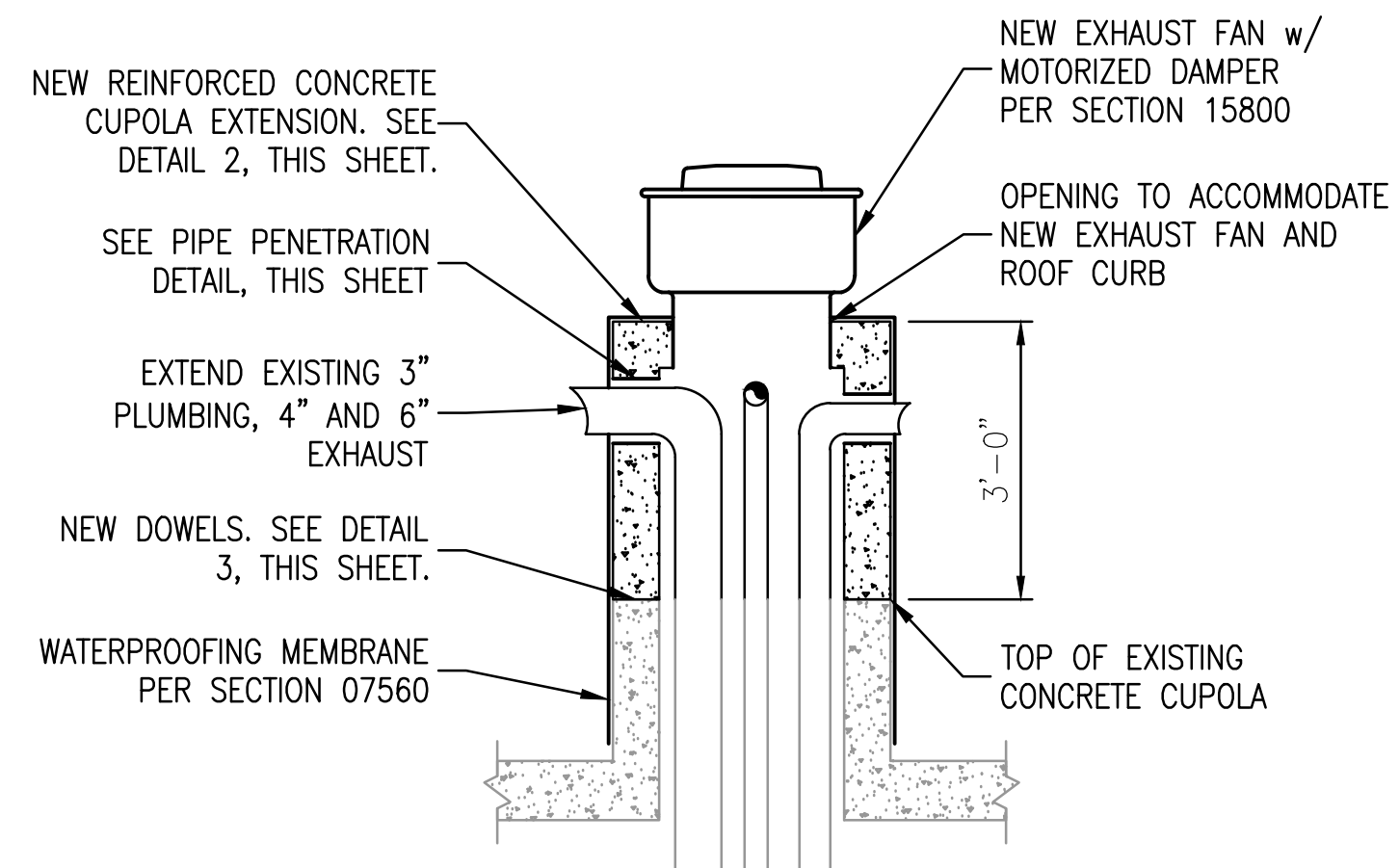


- NOTES:**
1. TYPICAL FOR ALL WALL & FLOOR PENETRATIONS UNLESS SHOWN OTHERWISE.
 2. PIPE SLEEVE TO BE SIZED IN ACCORDANCE WITH MECHANICAL SEAL MANUFACTURER'S REQUIREMENTS.

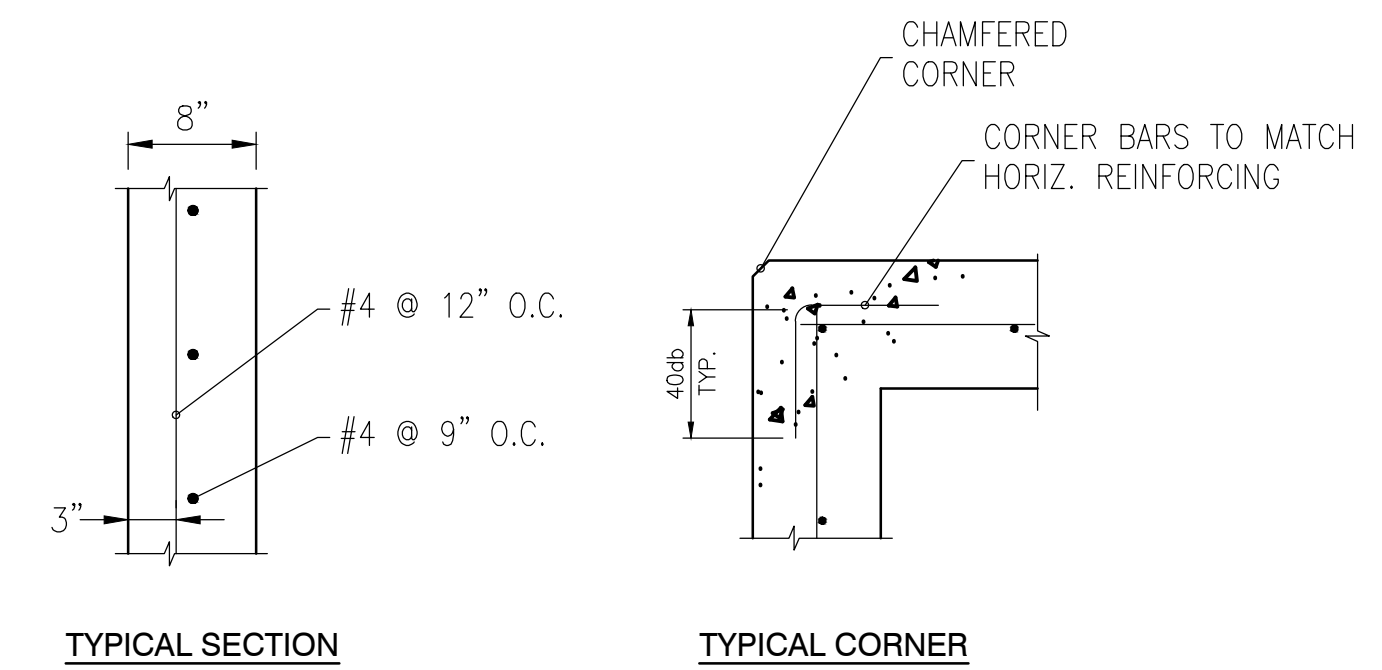
4 PIPE PENETRATION DETAIL
SCALE: NTS



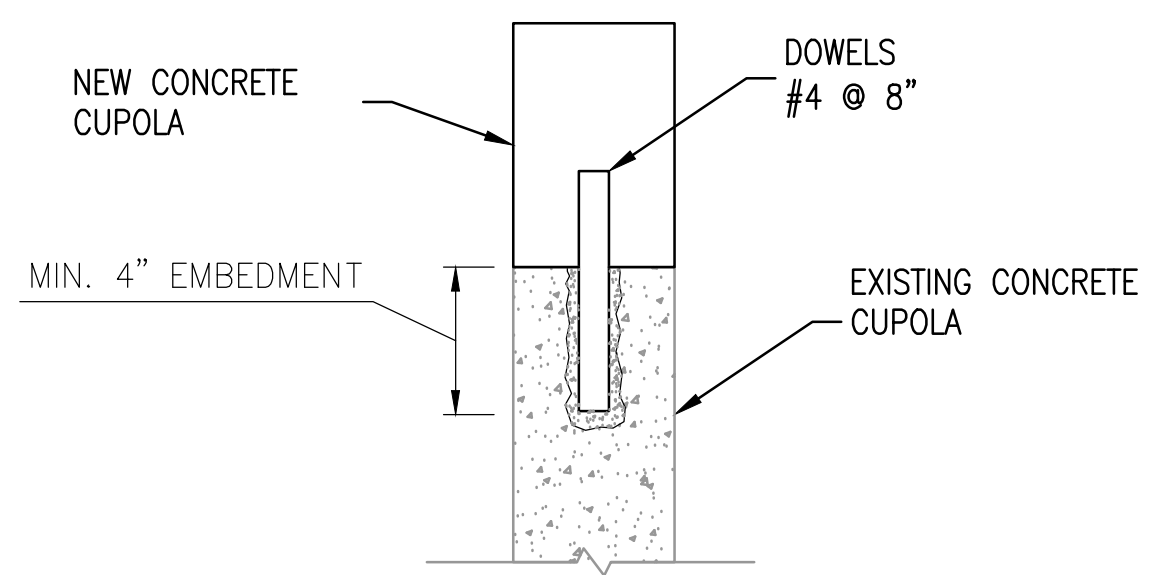
EXTERIOR NEW WORK - SECTION 1
SCALE: 1/2" = 1'-0"



1 DETAIL PIPING IN CUPOLA
SCALE: NTS

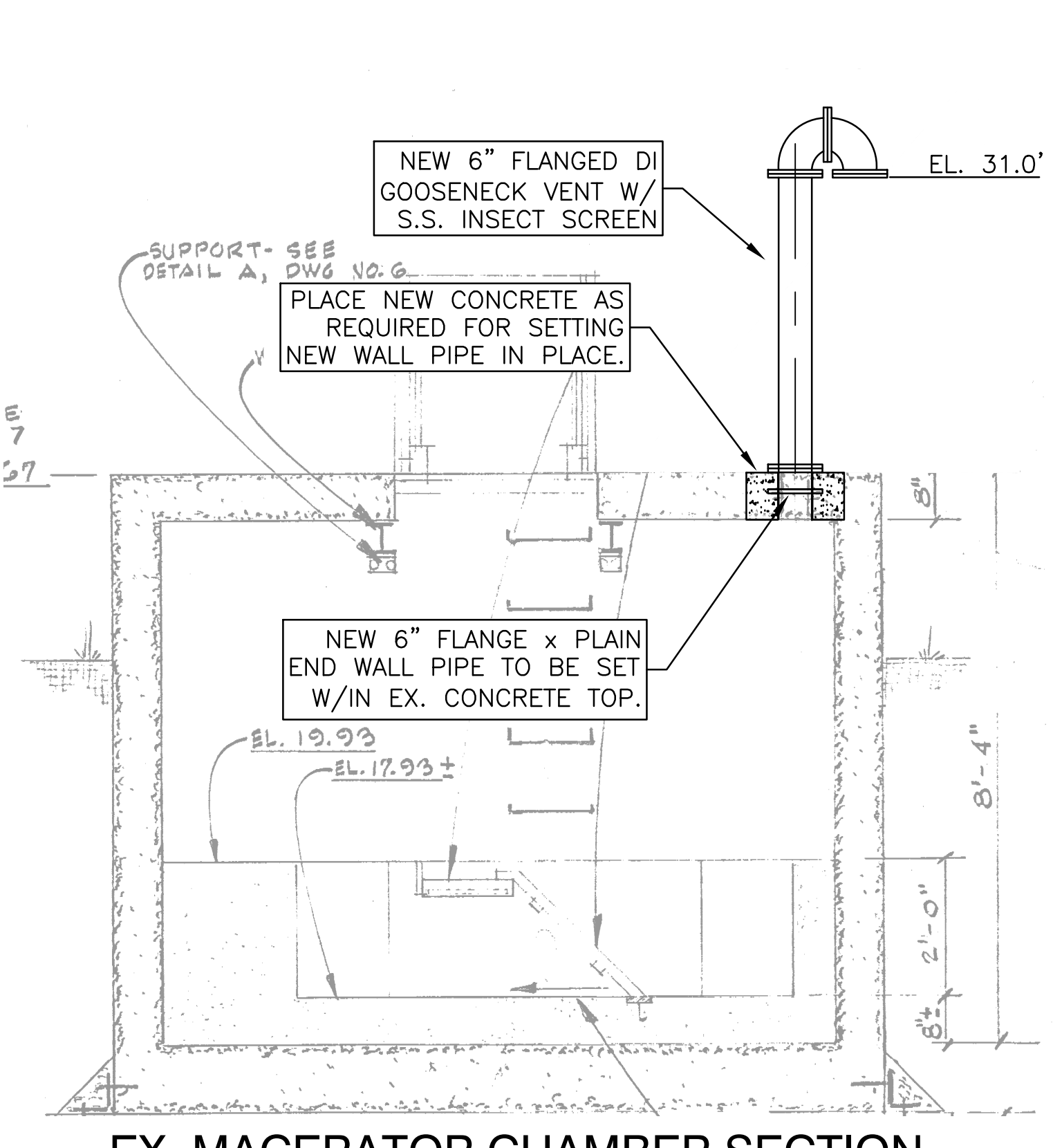


2 TYPICAL CAST-IN-PLACE CONCRETE CUPOLA SECTION
SCALE: NTS

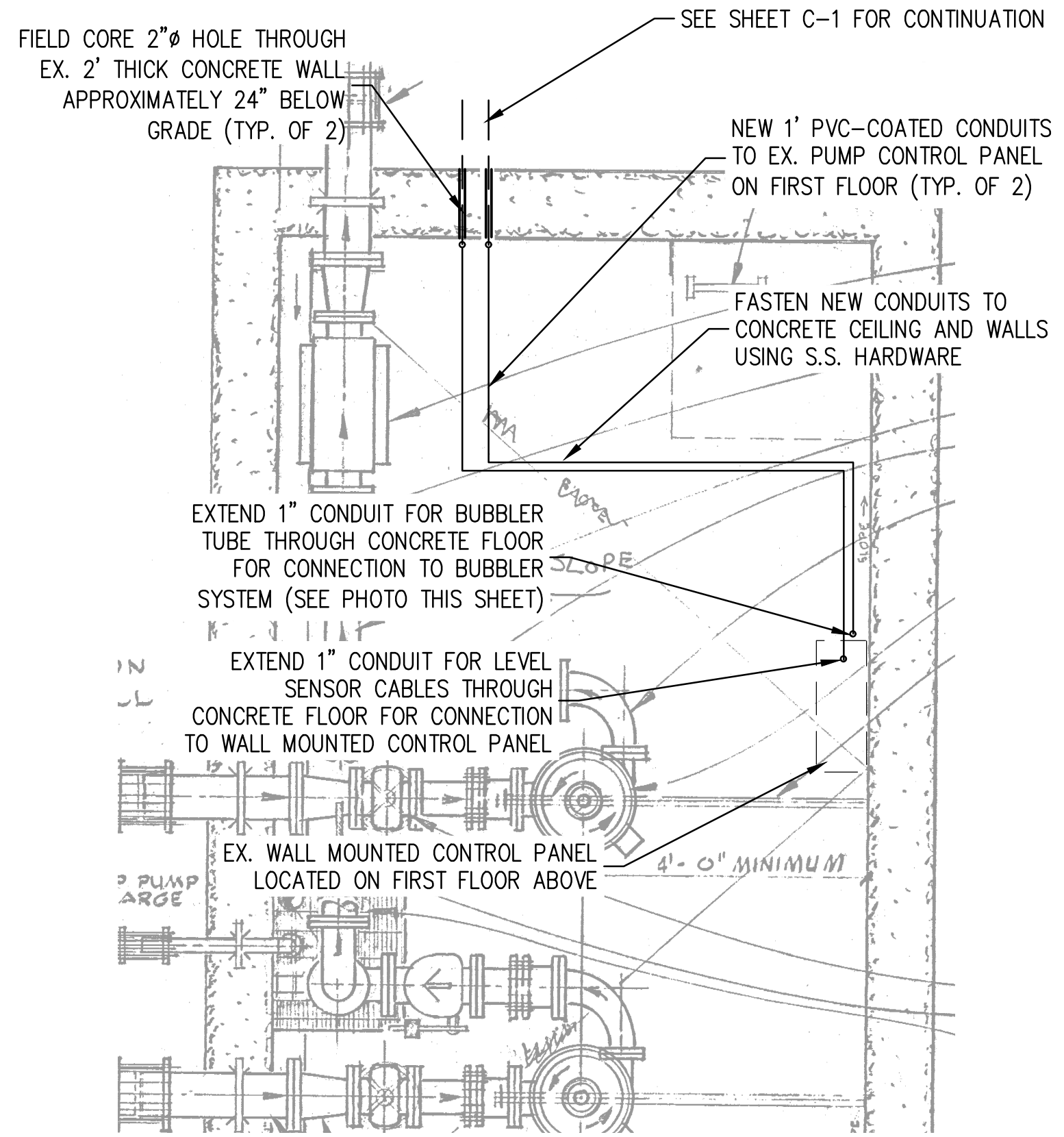


3 DOWELING FOR EXISTING OPENINGS
NOT TO SCALE

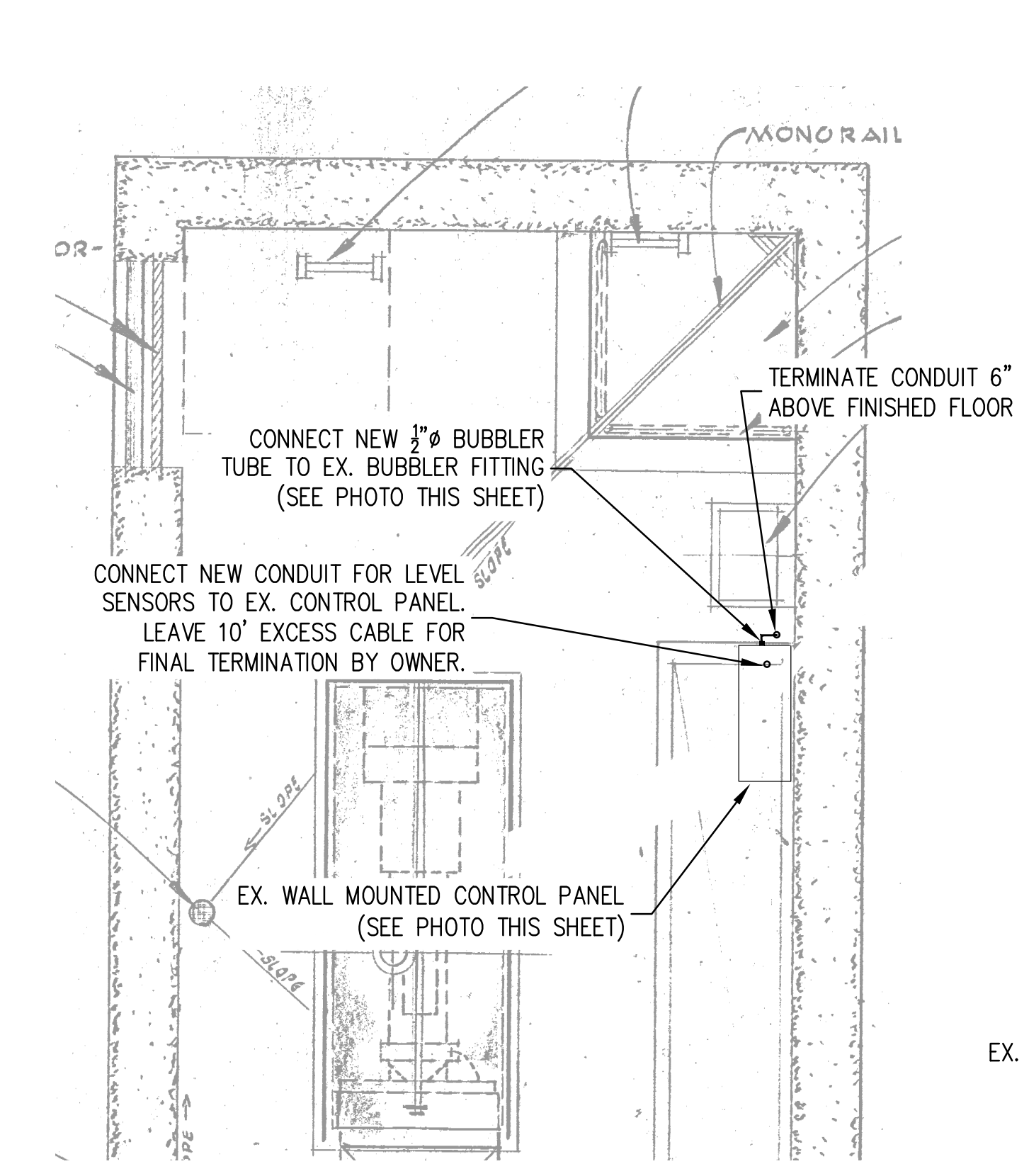
E
D
C
B
A



EX. MACERATOR CHAMBER SECTION
SCALE: 1/2" = 1'-0"



EX. PUMP STATION FLOOR PLAN - EL 12.25'
SCALE: 1/4" = 1'-0"



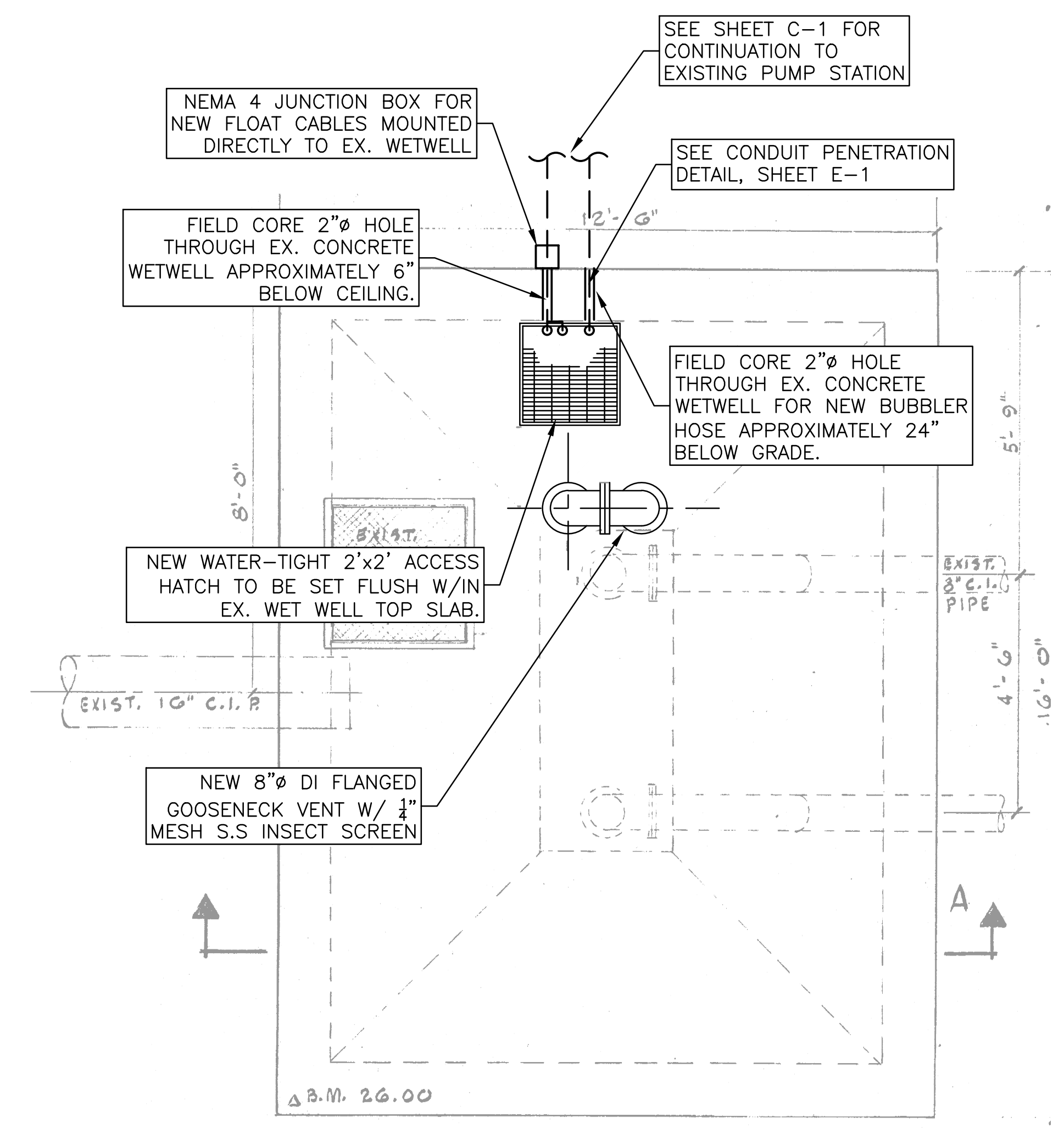
EX. PUMP STATION FLOOR PLAN - EL 23.25'
SCALE: 1/4" = 1'-0"



EX. WALL MOUNTED CONTROL PANEL
SCALE: NTS

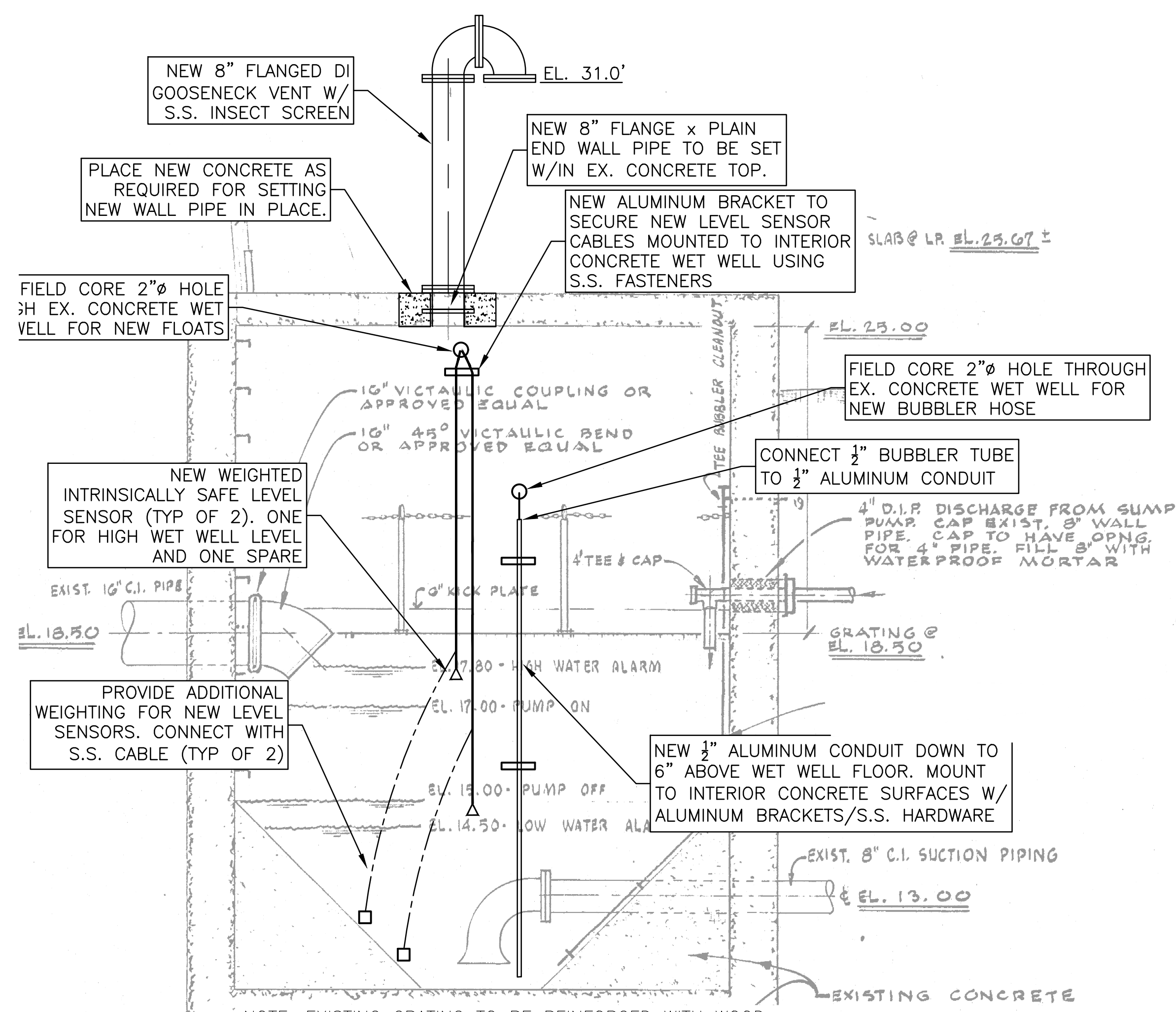


EX. WALL MOUNTED CONTROL PANEL
SCALE: NTS



NOTE: EXISTING GRATING TO BE REINFORCED WITH PLANKS DURING WORK WITHIN THE WET WELL.

EX. WET WELL PLAN - ELEV 26.00'
SCALE: 1/2" = 1'-0"



NOTE: EXISTING GRATING TO BE REINFORCED WITH WOOD PLANKS DURING WORK WITHIN THE WET WELL.

EX. WET WELL SECTION A
SCALE: 1/2" = 1'-0"

NOTES:

1. ALL LIQUID LEVEL CONTROLS SHALL BE INTRINSICALLY SAFE.
2. THE UNDERSIDES OF THE ACCESS HATCH SHALL HAVE WARNING SIGNS WHICH READ "WARNING, HAZARDOUS AREA, ENTER ONLY WITH PROPER EQUIPMENT".
3. OWNER WILL BE RESPONSIBLE FOR PUMPING OUT WET WELL FOR ACCESS. CONTRACTOR SHALL COORDINATE AND SCHEDULE HIS WORK WITH THE OWNER AS NEEDED TO LIMIT THE INTERRUPTION OF SEWER SERVICE TO NO MORE THAN FOUR (4) HOURS.
4. USE ONLY PVC COATED GALVANIZED STEEL CONDUIT WITHIN 5 FEET OF THE PUMP STATION AND WET WELL. SEAL CONDUITS IN PUMP STATION AND WET WELL.



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STREET PUMP STATION
UPGRADES

SEAL

PETER CALDERAZZO
No. 11821
REGISTERED
PROFESSIONAL ENGINEER
CIVIL

KEY PLAN

SCALE

No.	DATE	BY	Description

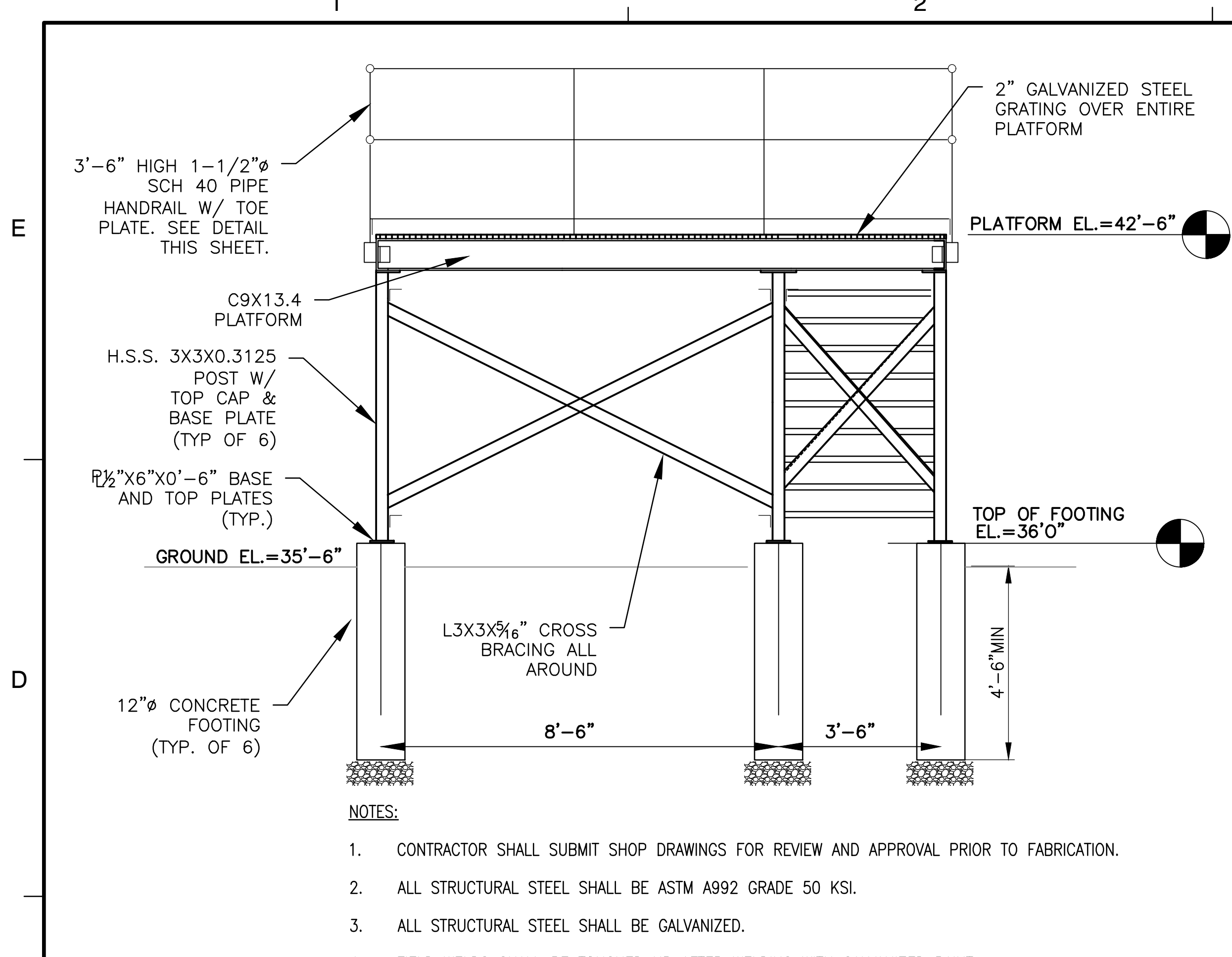
REVISIONS

DESIGNED BY	PC
DRAWN BY	MH / KP
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DATE	JAN 2018
TITLE	

**KNIGHT STREET
PUMP STATION
WET WELL WORK**

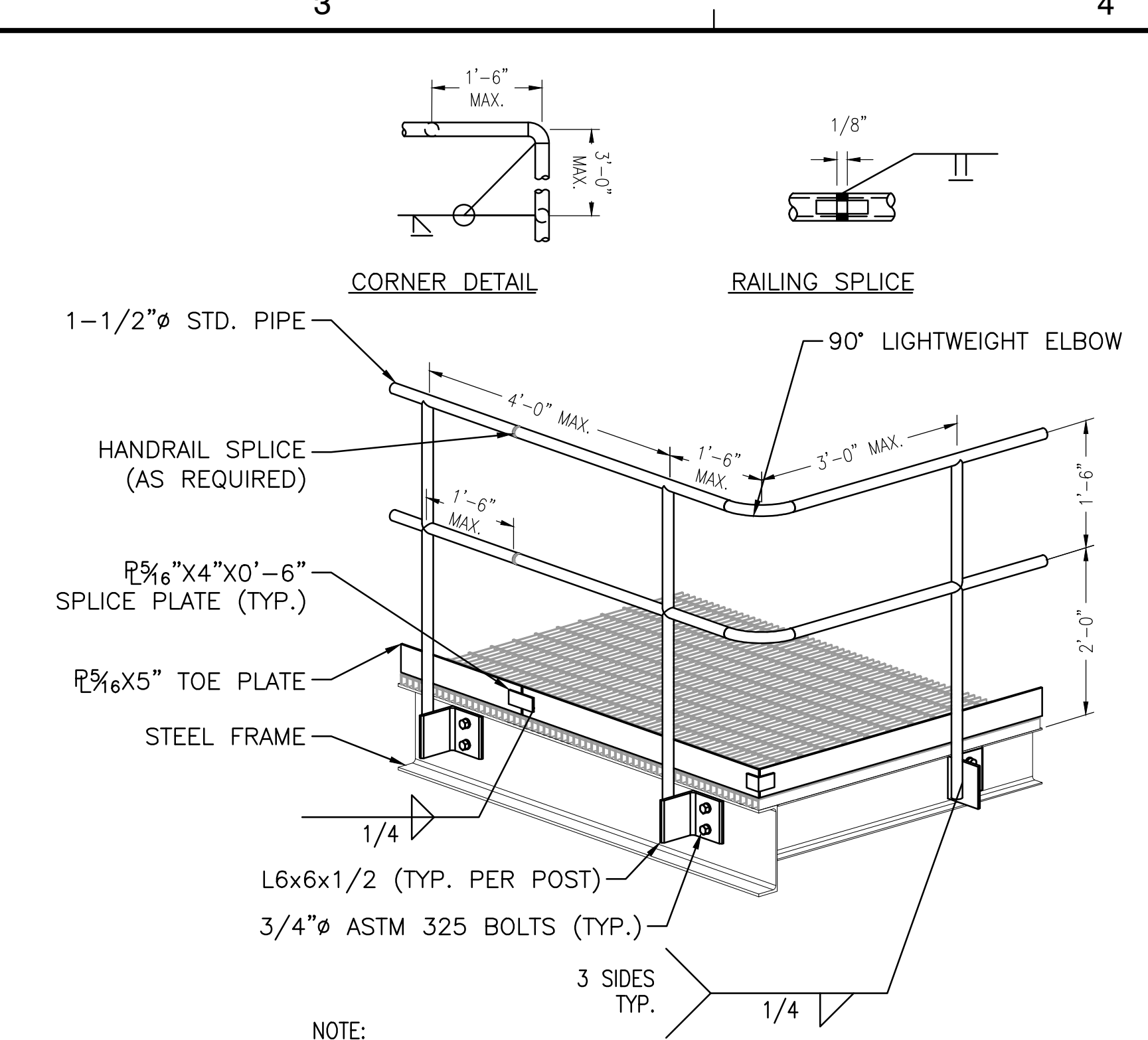
PROJECT NO. 50092430

M-5

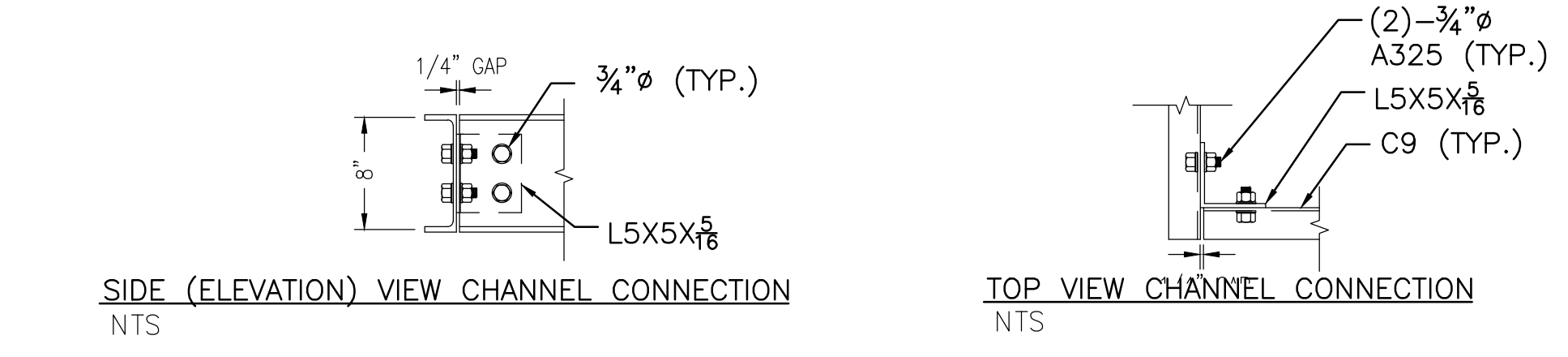


- NOTES:**
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
 2. ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50 KSI.
 3. ALL STRUCTURAL STEEL SHALL BE GALVANIZED.
 4. FIELD WELDS SHALL BE TOUCHED UP AFTER WELDING WITH GALVANIZED PAINT.

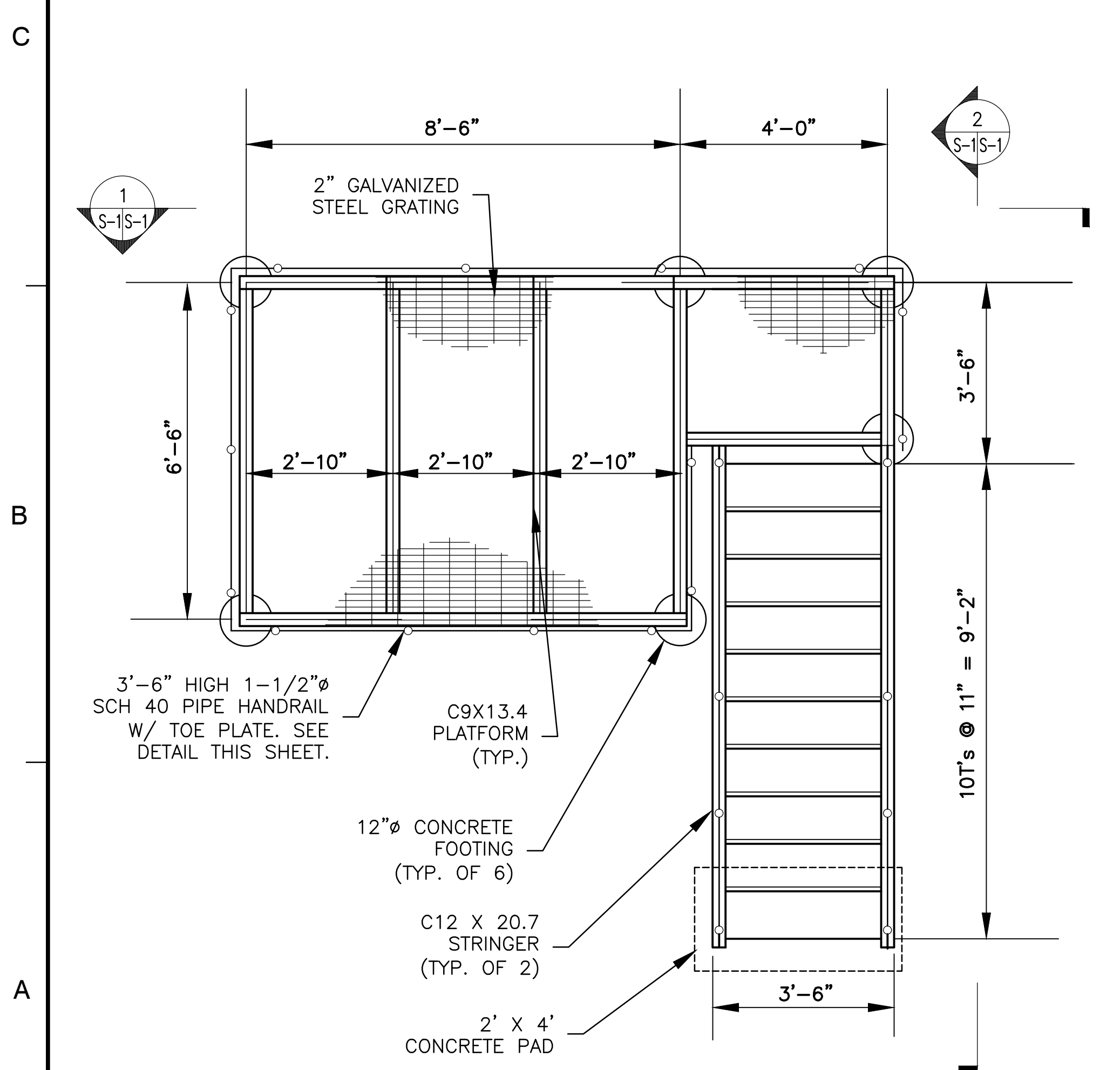
NEW ELEVATED STEEL PLATFORM - SECTION 1
SCALE: 1/2" = 1'-0"



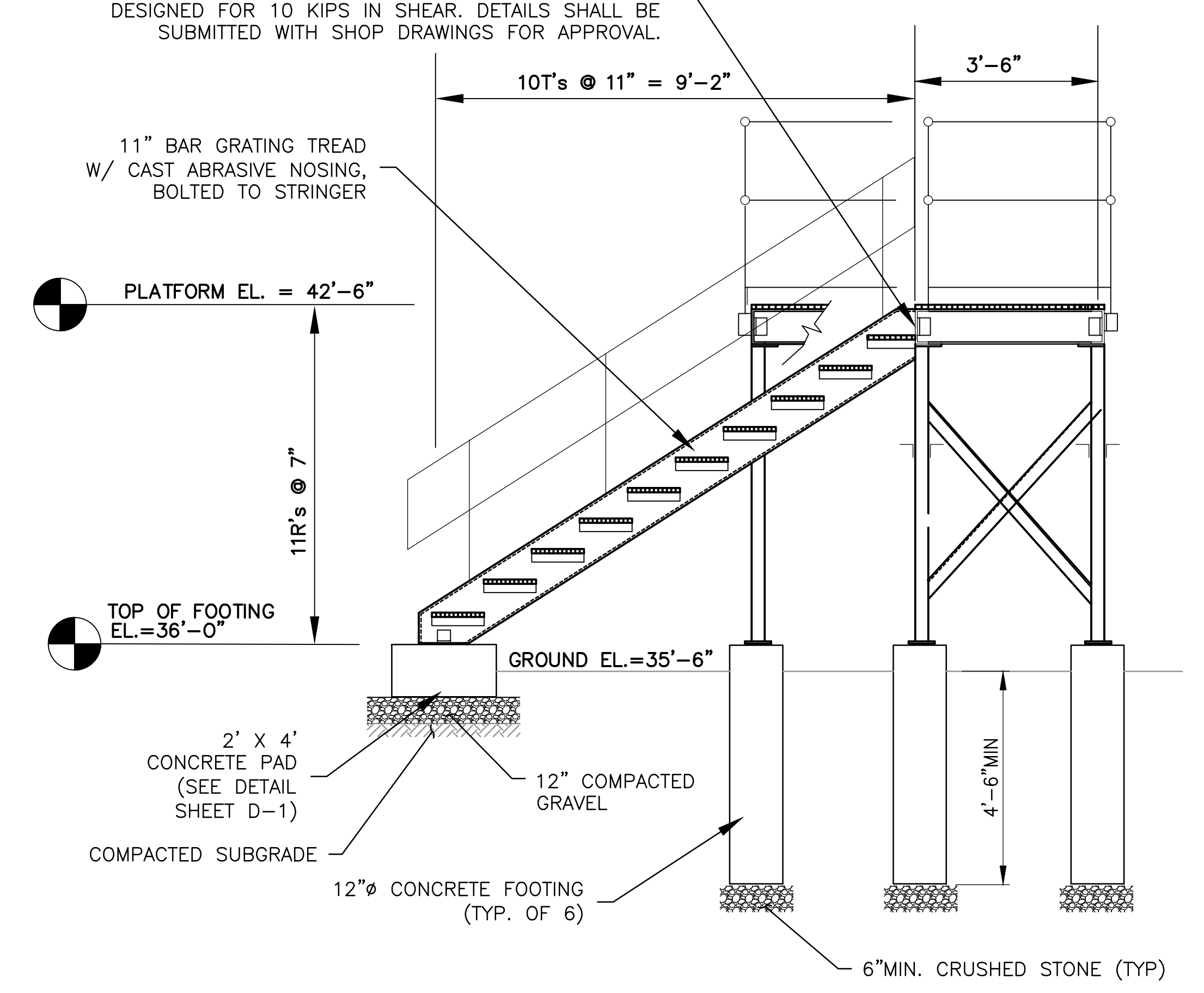
- NOTE:**
1. ALL EXPOSED CORNERS MUST HAVE A 2" RADIUS ELBOW (UNO).
- DETAIL - NEW HAND RAIL SYSTEM**
NTS



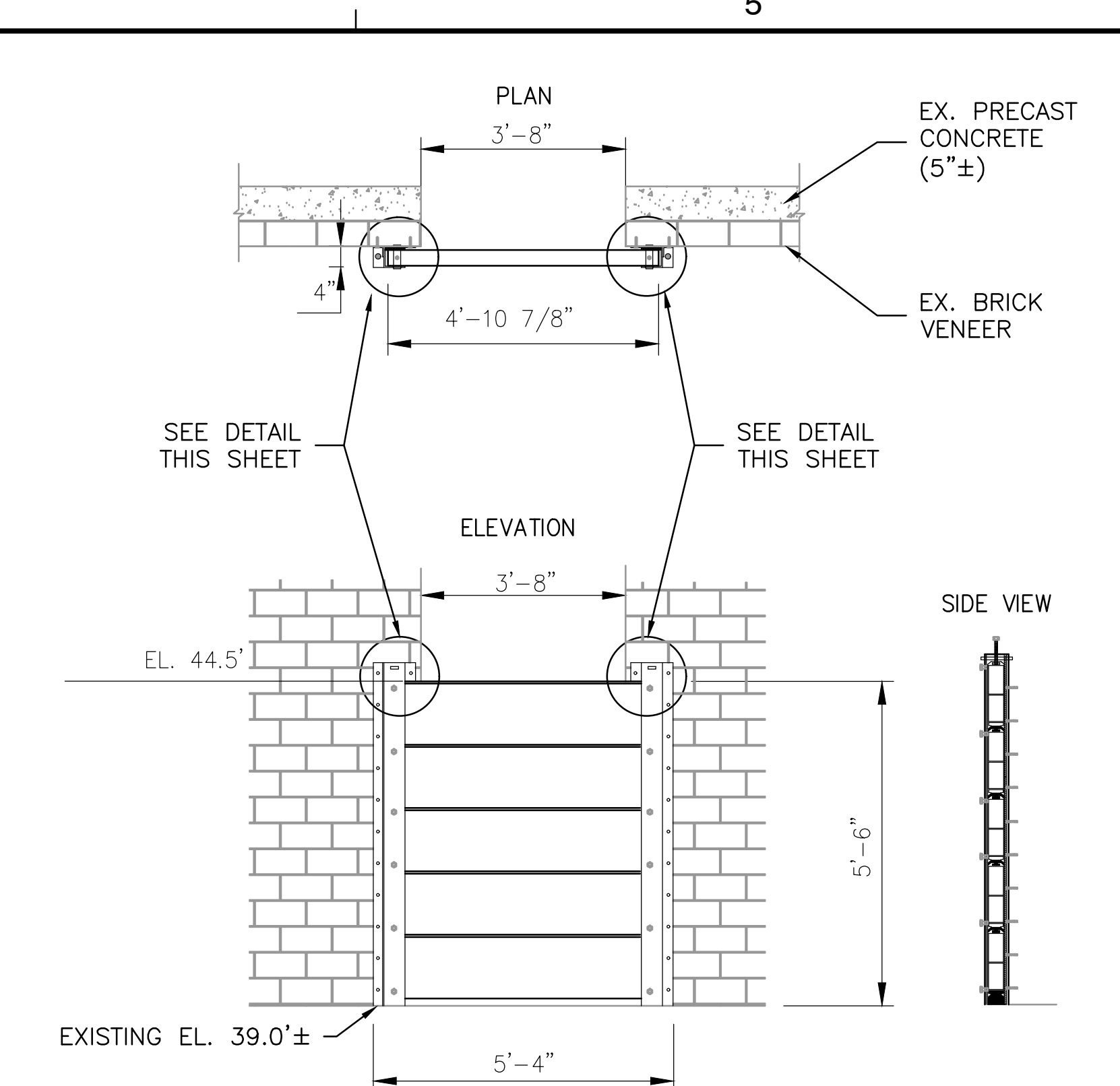
CONNECTION OF STAIR TO CHANNEL SHALL BE DESIGNED FOR 10 KIPS IN SHEAR. DETAILS SHALL BE SUBMITTED WITH SHOP DRAWINGS FOR APPROVAL.



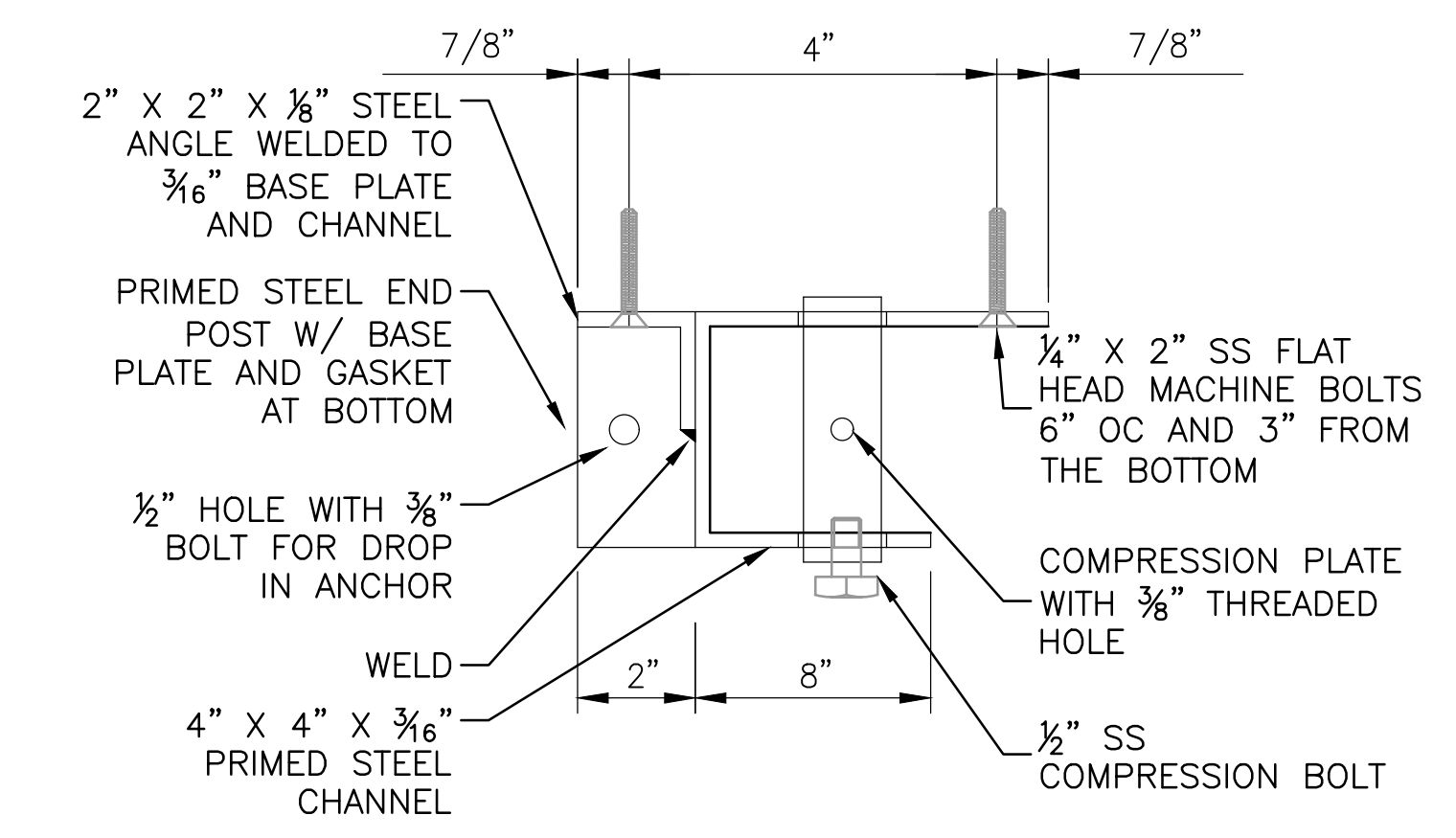
NEW ELEVATED STEEL PLATFORM - PLAN VIEW
SCALE: 1/2" = 1'-0"



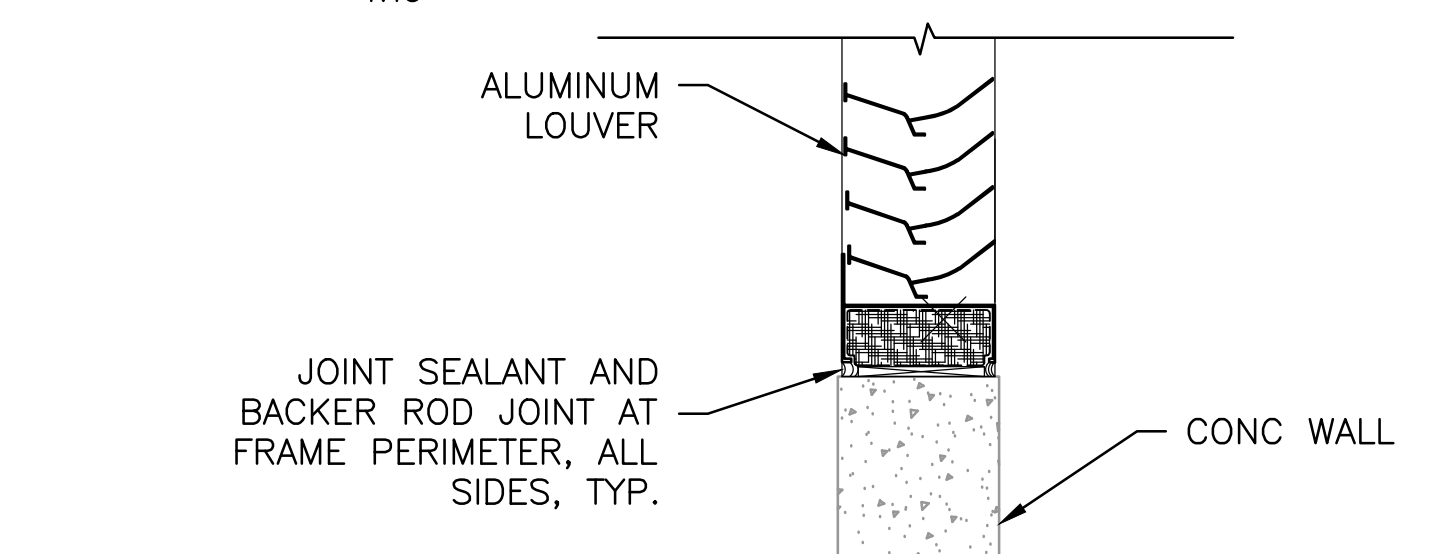
NEW ELEVATED STEEL PLATFORM - SECTION 2
SCALE: 1/2" = 1'-0"



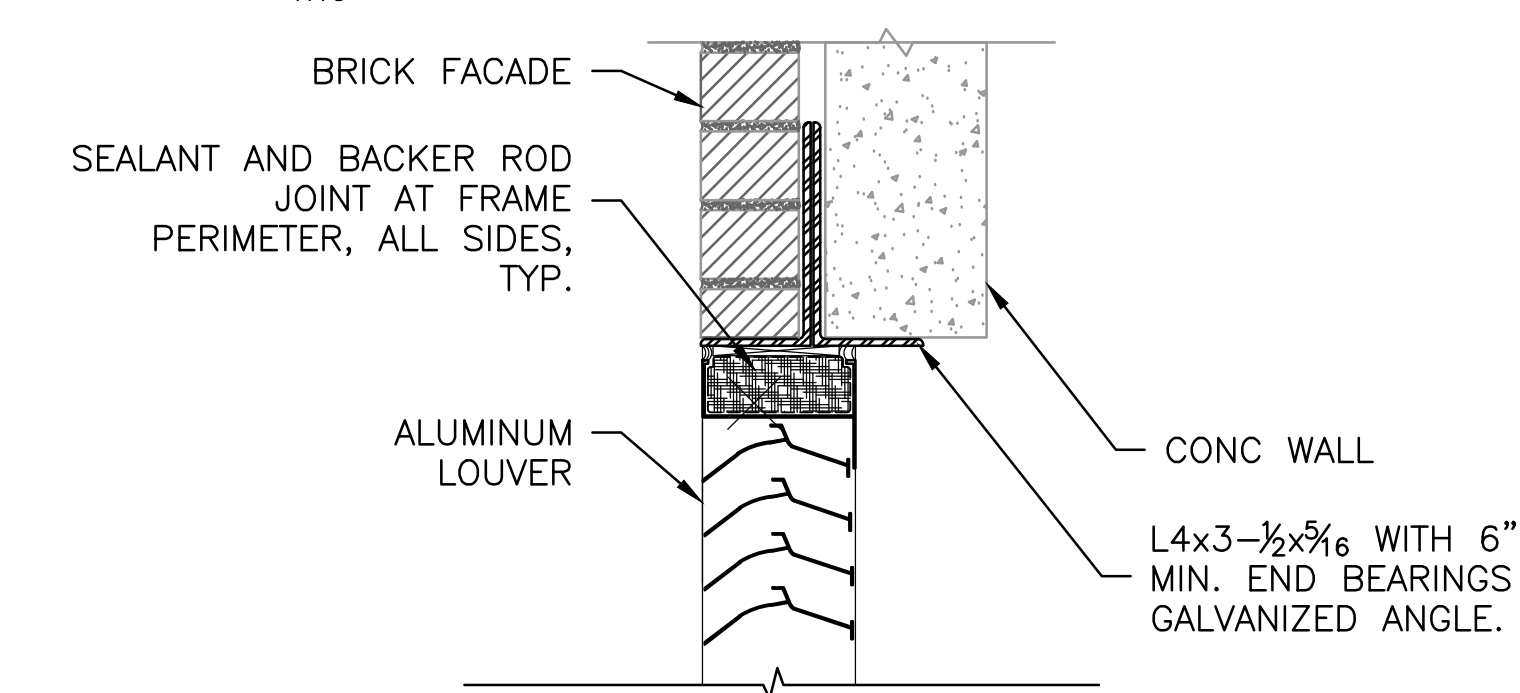
EAST NATICK I DOOR FLOOD BARRIER
NTS



DETAIL - WALL MOUNT "C" CHANNEL WALL SUPPORT BRACKET
NTS



LOUVER SILL DETAIL - KNIGHT STREET PS
NTS



LOUVER HEAD DETAIL - EAST NATICK I PS
NTS



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AUTHORITY**

EAST NATICK I, EAST
NATICK II, AND KNIGHT
STREET PUMP STATION
UPGRADES



KEY PLAN

SCALE

No.	DATE	BY	Description
REVISIONS			
DESIGNED BY		PC	
DRAWN BY		MH / KP	
CHECKED BY		CB	
DATE		JAN 2018	

TITLE
**ELEVATED
PLATFORM AND
MISCELLANEOUS
DETAILS**

PROJECT NO. 50092430

S-1

**WARWICK SEWER
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NATICK II, AND KNIGHT
STREET PUMP STATION
UPGRADES

SEAL

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KEY PLAN

SCALE

No.	DATE	BY	Description

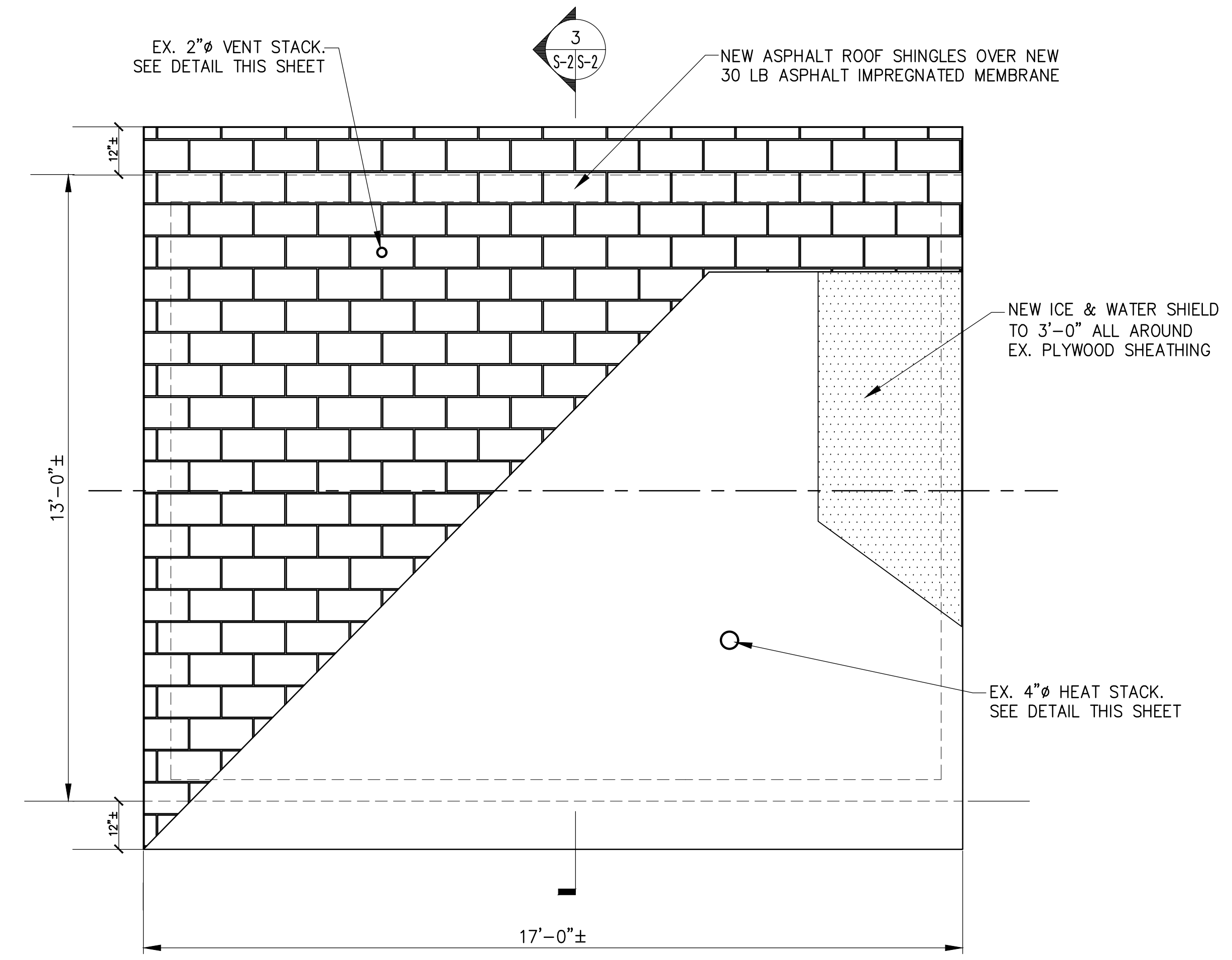
REVISIONS

DESIGNED BY	PC
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DATE	JAN 2018

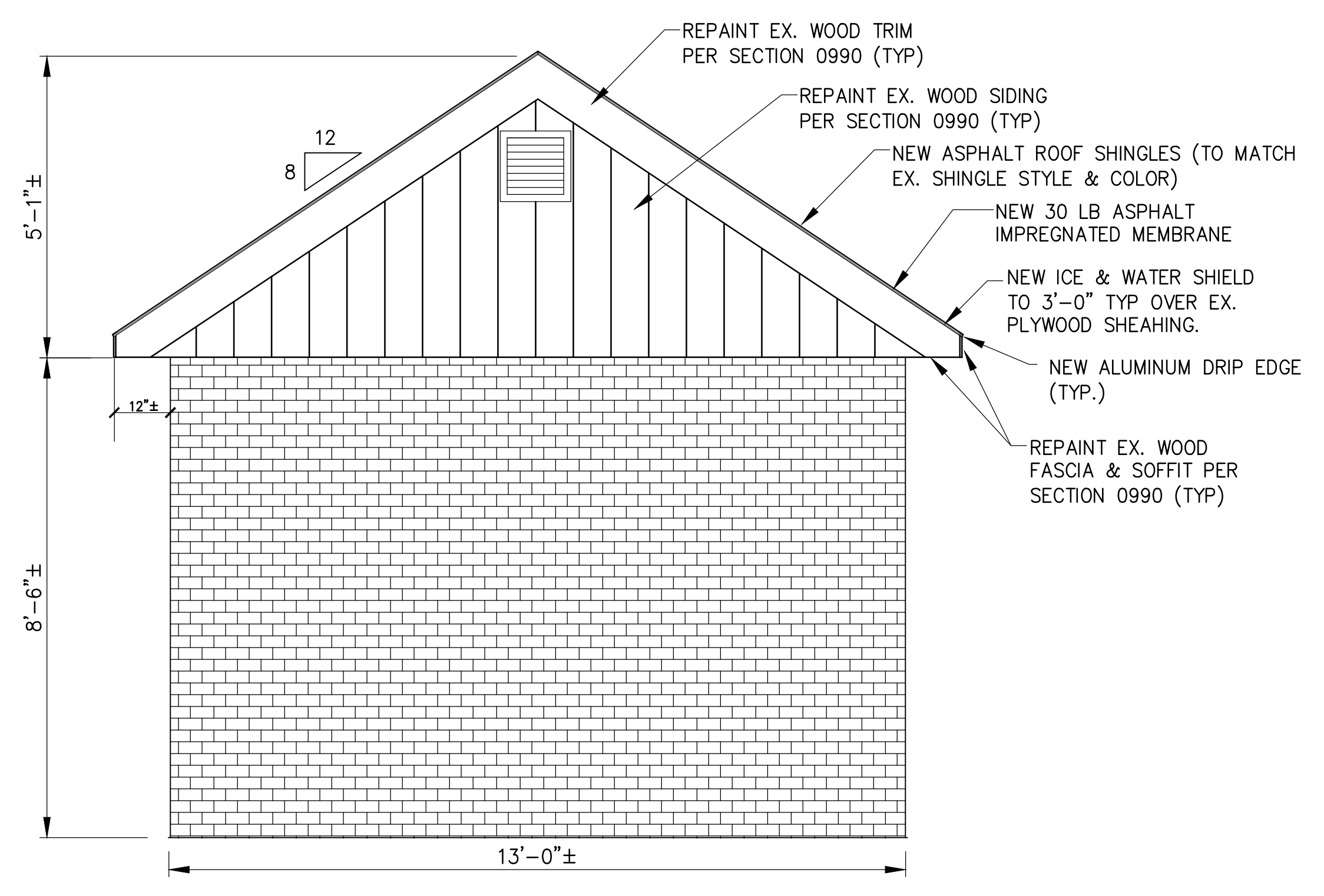
TITLE

**ROOF
UPGRADES
EAST NATICK 1
PUMP STATION**

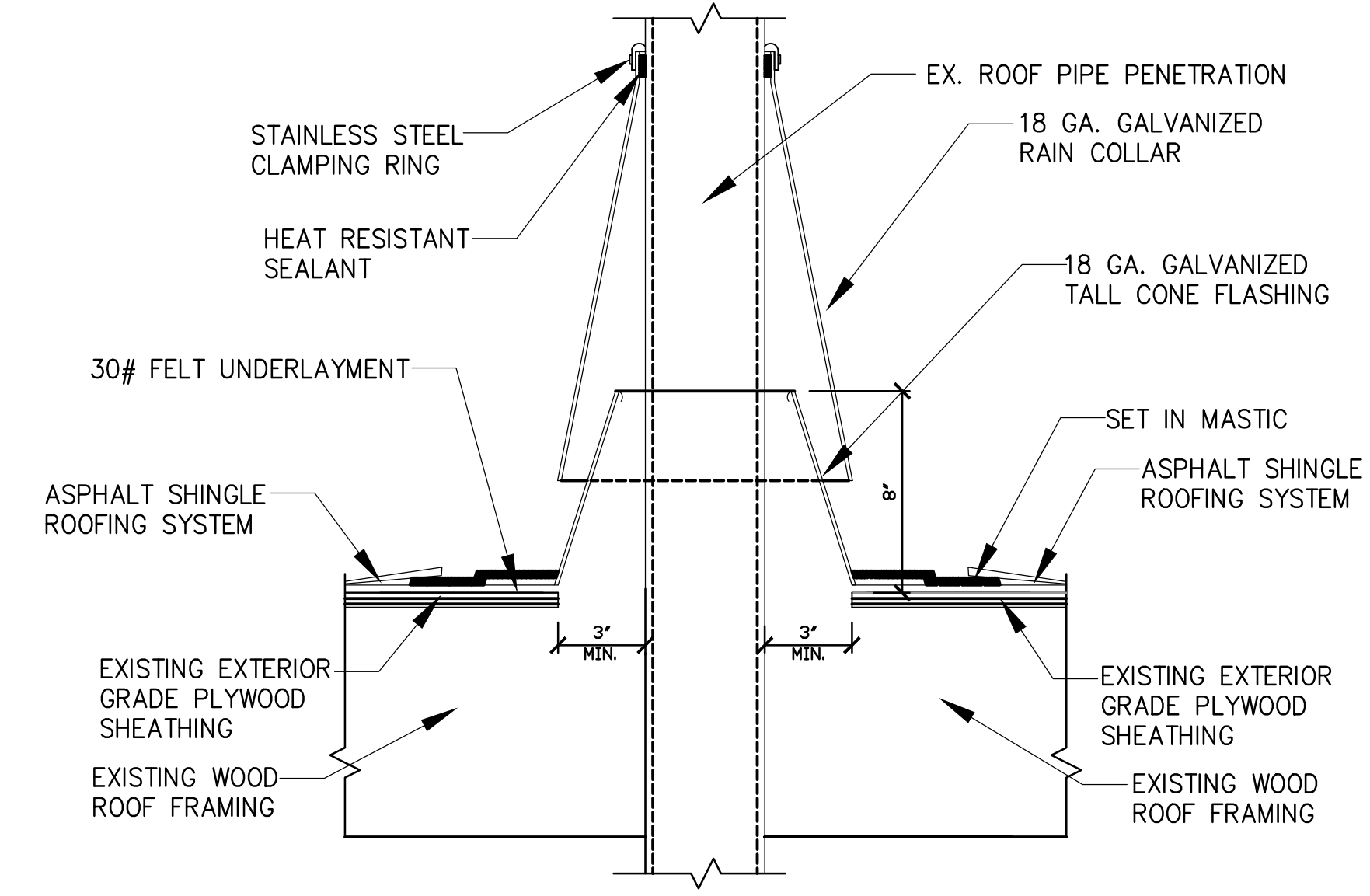
PROJECT NO. 50092430



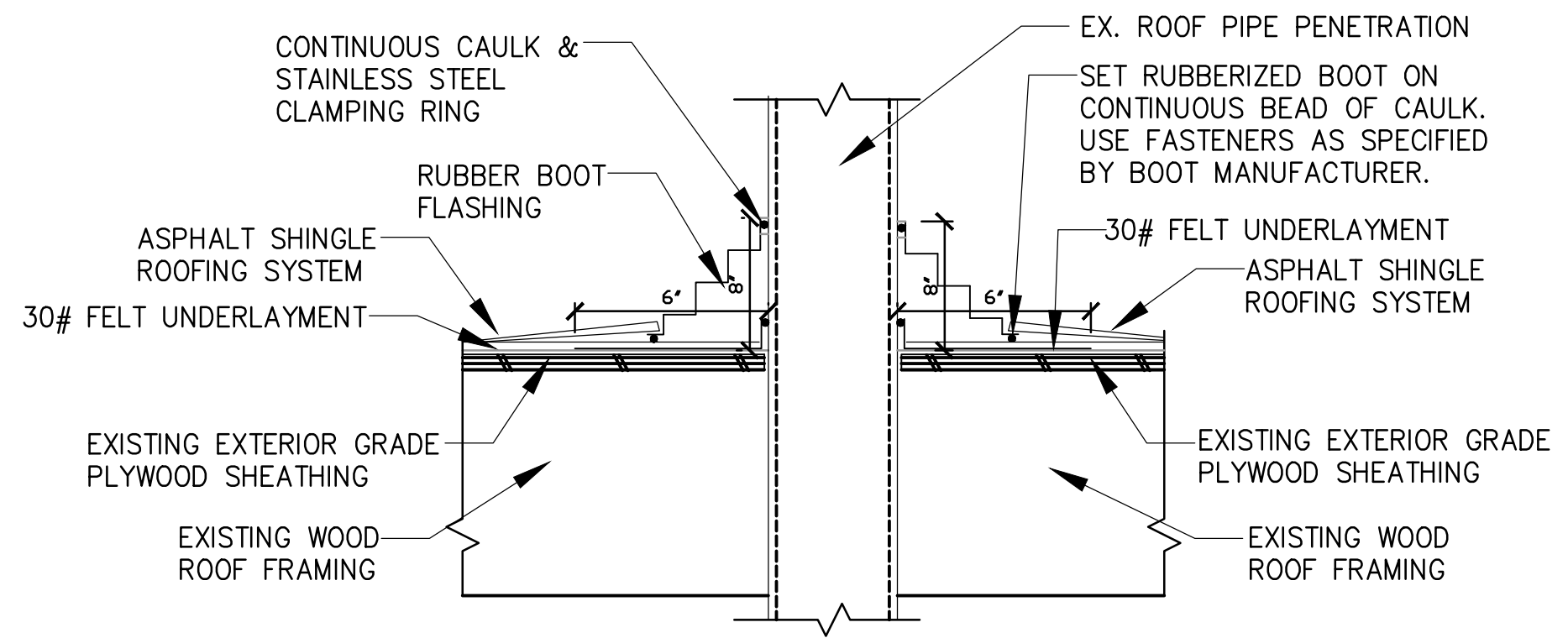
ROOF PLAN – EAST NATICK I PUMP STATION
SCALE: 1/2"=1'-0"



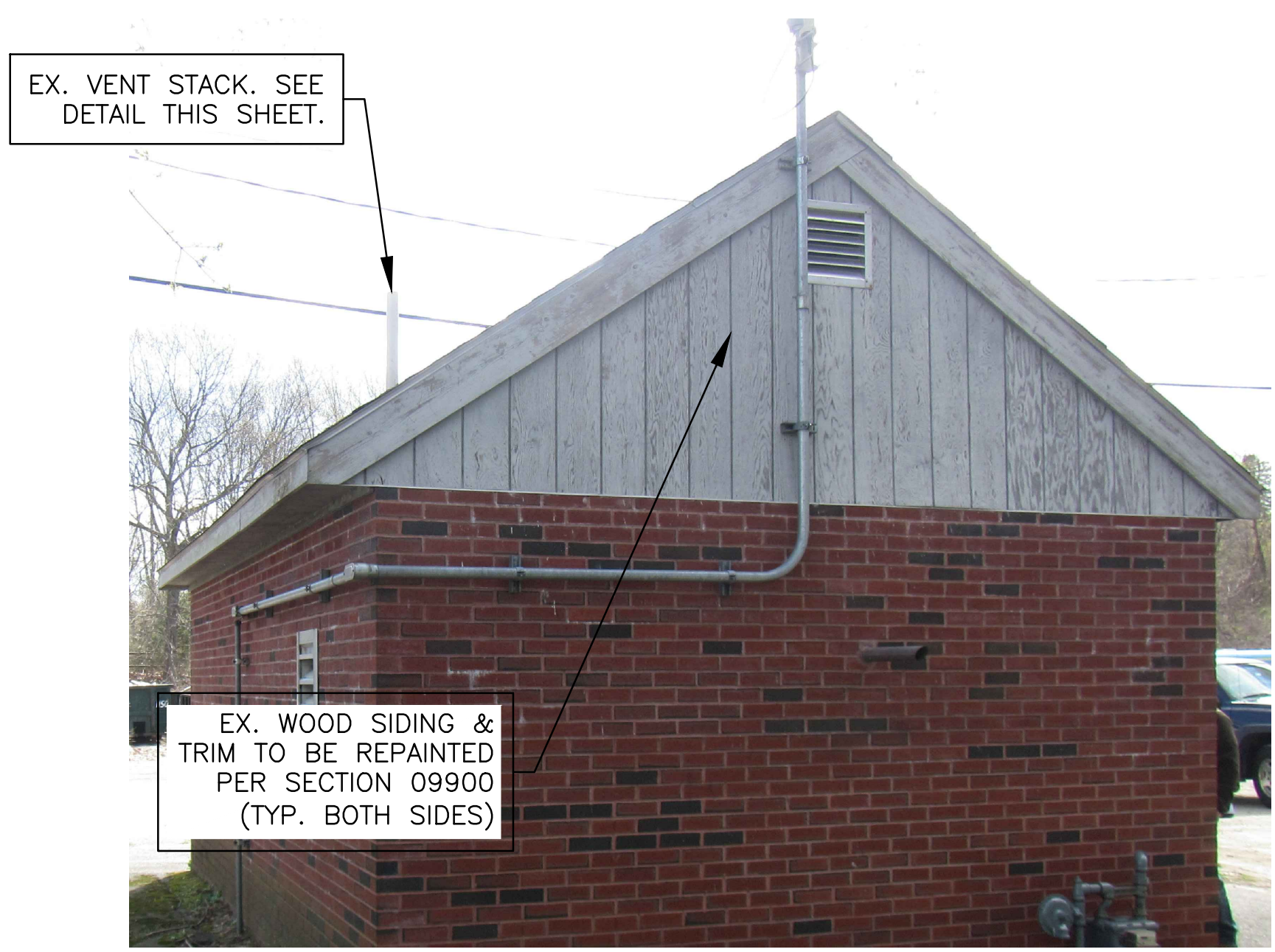
SECTION THRU PUMP STATION (TYP BOTH SIDES)
SCALE: 1/2"=1'-0"



1 HEAT STACK DETAIL
SCALE: NTS



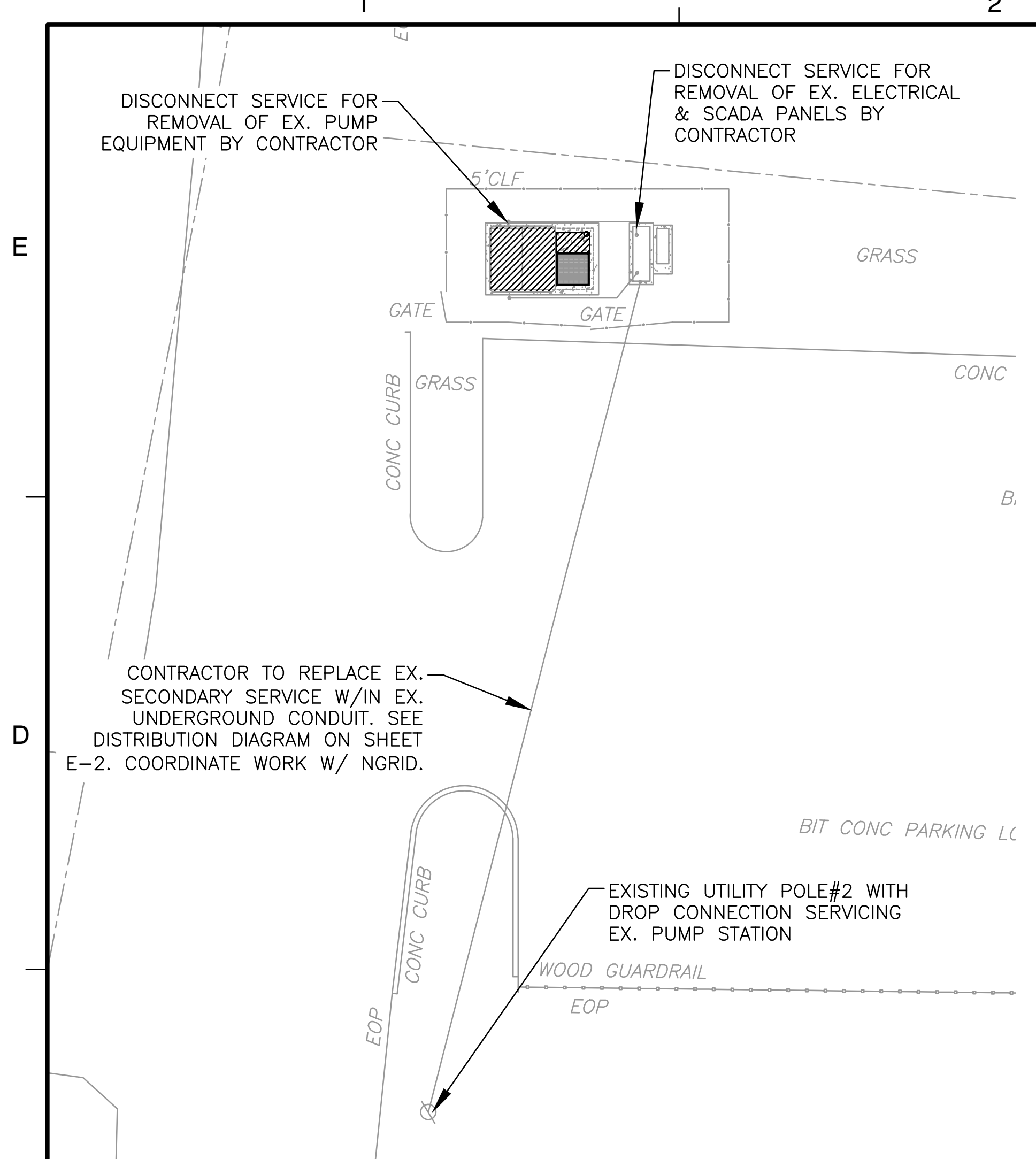
2 VENT STACK DETAIL
SCALE: NTS



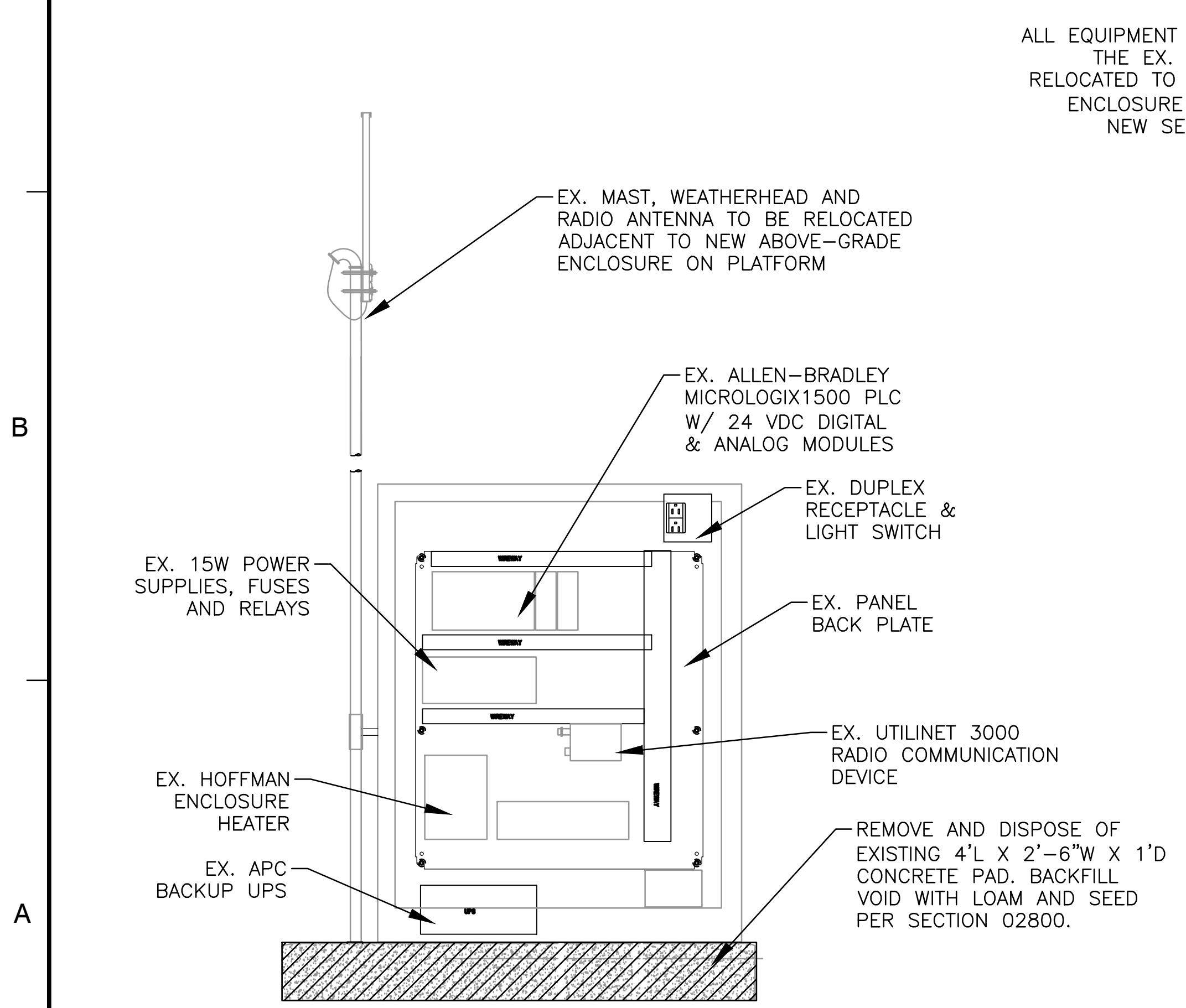
EX. STATION ROOF REPAIRS
SCALE: NTS



EX. STATION ROOF UPGRADES
SCALE: NTS



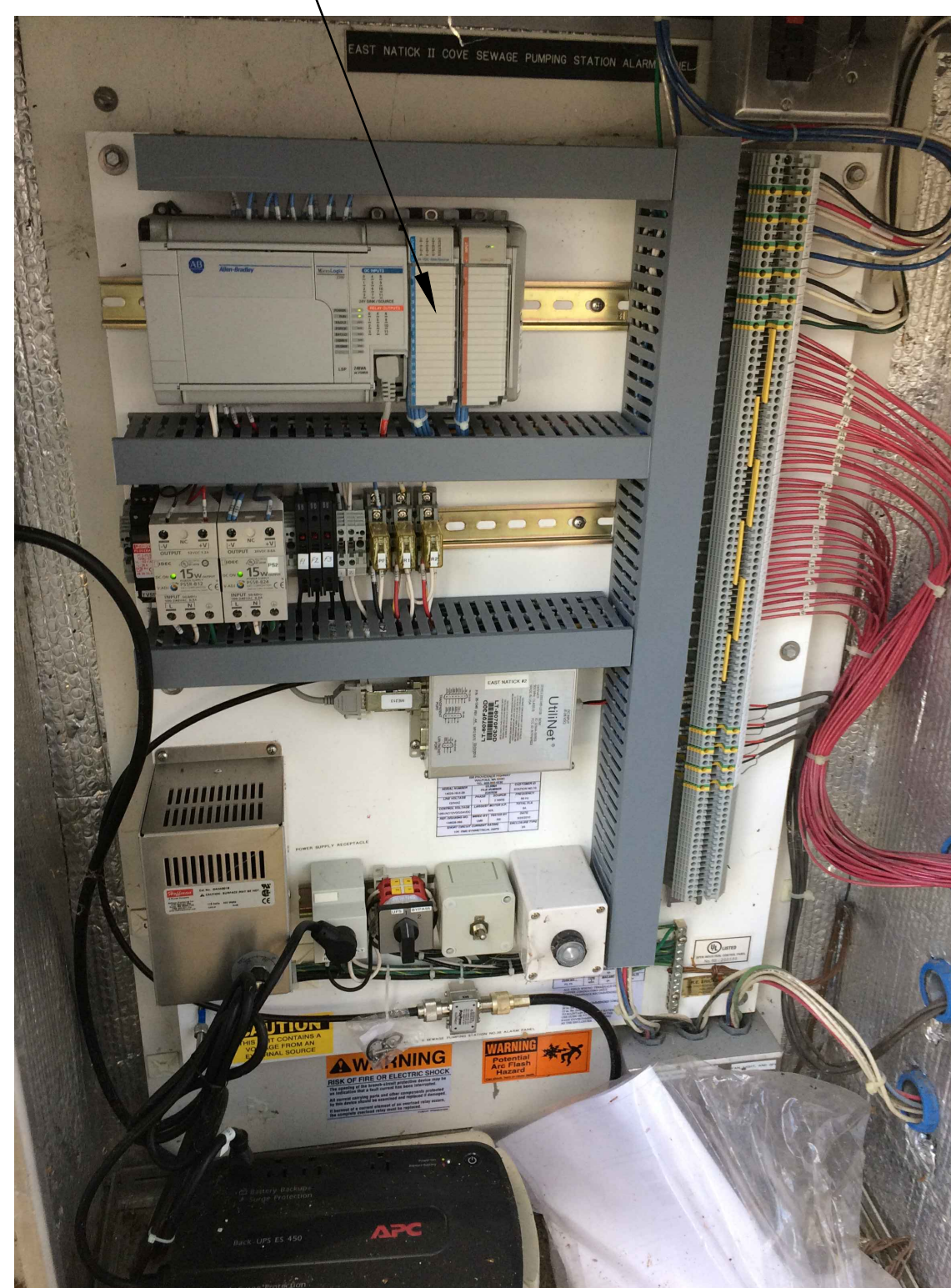
PUMP STATION ELECTRICAL DEMO PLAN
SCALE: 1"=10'



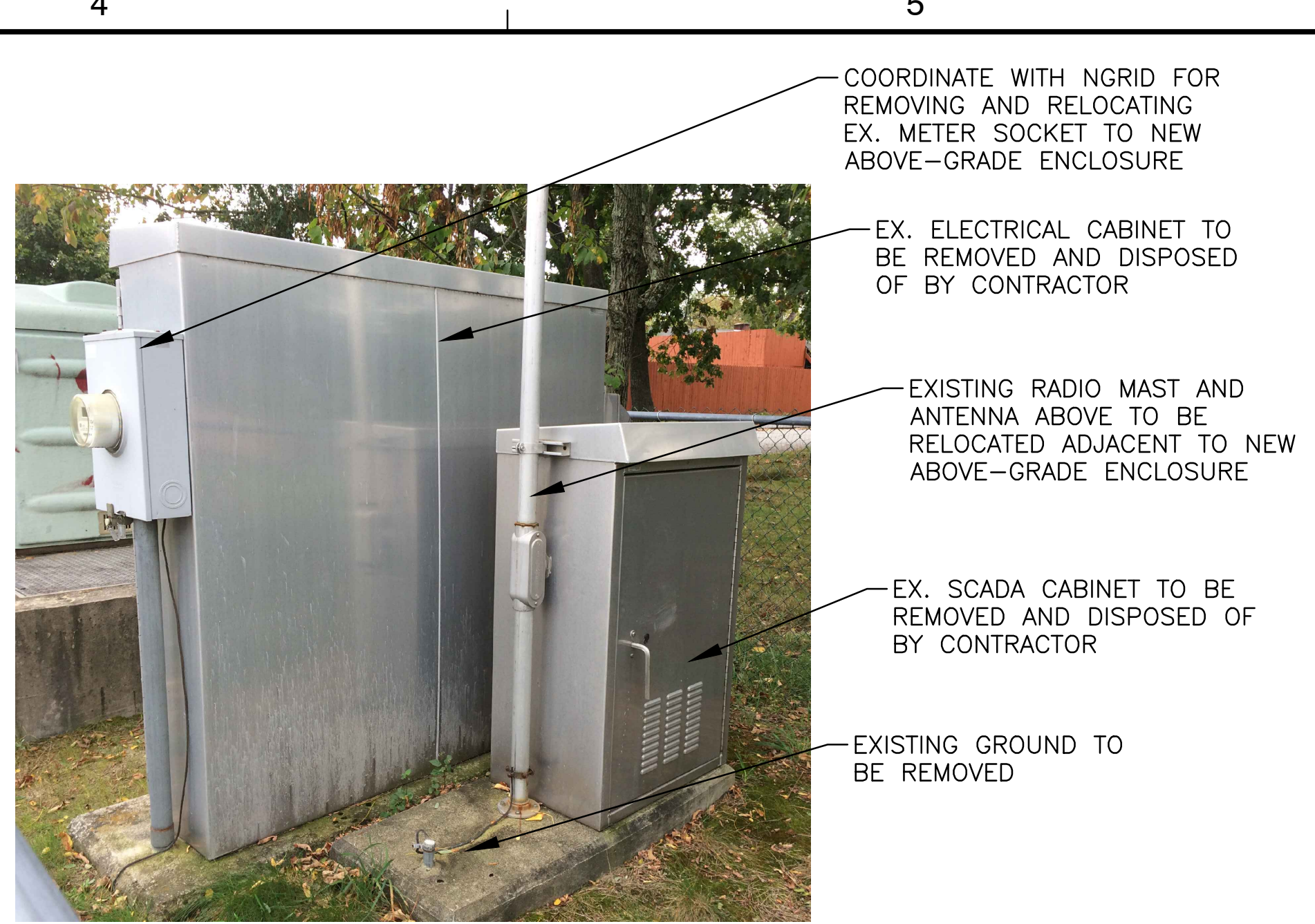
EX. SCADA CABINET INTERIOR
SCALE: NTS



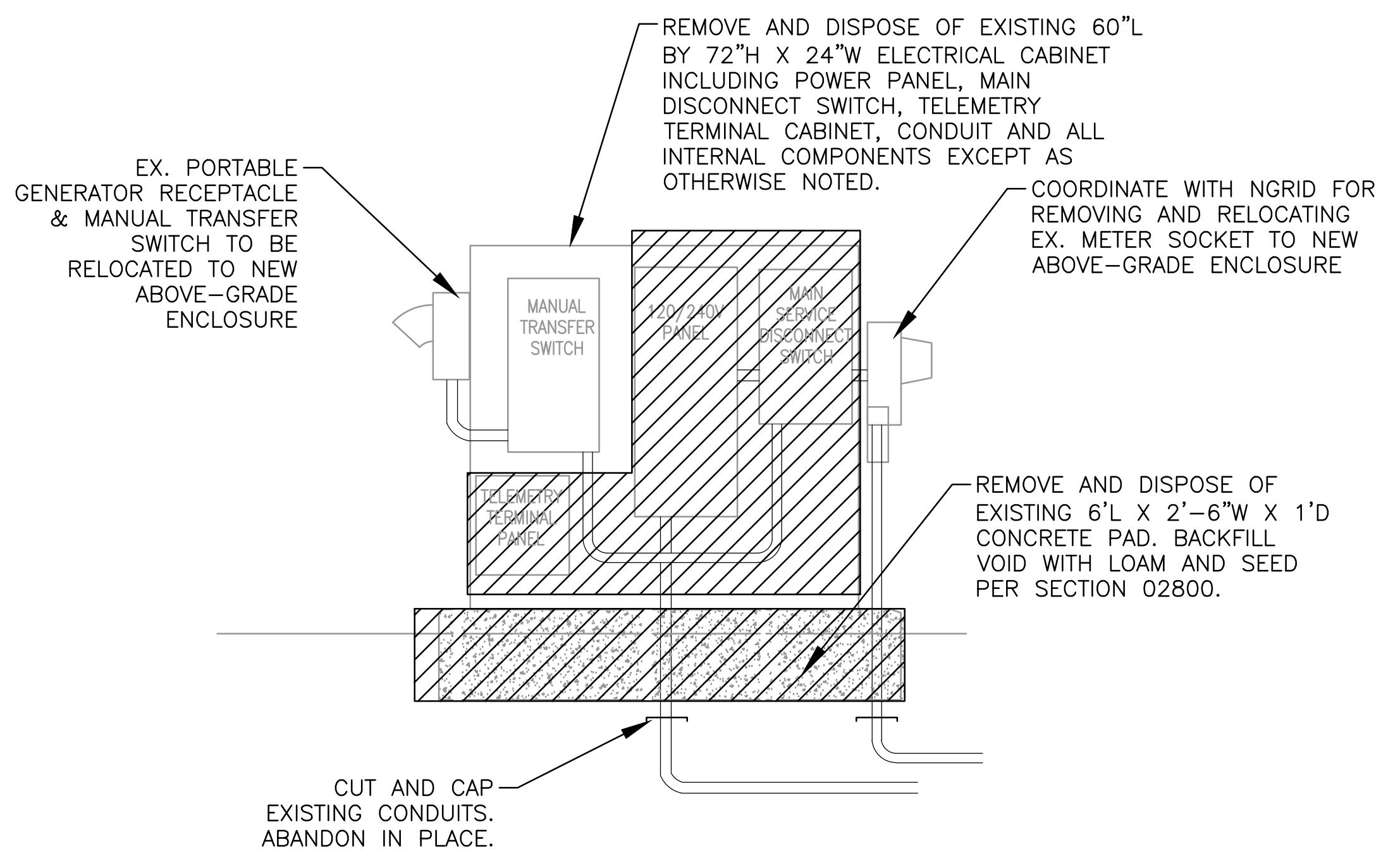
EX. ELECTRICAL CABINET INTERIOR
SCALE: NTS



EX. SCADA CABINET EQUIPMENT
SCALE: NTS



EX. ELECTRICAL & SCADA CABINETS
SCALE: NTS



EX. ELECTRICAL CABINET DEMO WORK
SCALE: NTS

- NOTES:
- COORDINATE RELOCATION OF EX. SCADA EQUIPMENT WITH OWNER'S INDEPENDENT INSTRUMENTATION SYSTEM INTEGRATOR..

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STREET PUMP STATION
UPGRADES

SEAL
JOSEPH GIGANTIello
REGISTERED PROFESSIONAL ENGINEER ELECTRICAL
1/16/18

KEY PLAN

SCALE

No.	DATE	BY	Description

REVISIONS

DESIGNED BY: YM

DRAWN BY: MH / KP

CHECKED BY: JG

DATE: JAN 2018

TITLE
ELECTRICAL DEMO - EAST NATICK II PUMP STATION

PROJECT NO. 50092430

No.	DATE	BY	Description

REVISIONS

DESIGNED BY	YM
DRAWN BY	MH / KP
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DATE	JAN 2018

TITLE
**EAST NATICK II
PUMP STATION
NEW WORK &
NOTES**

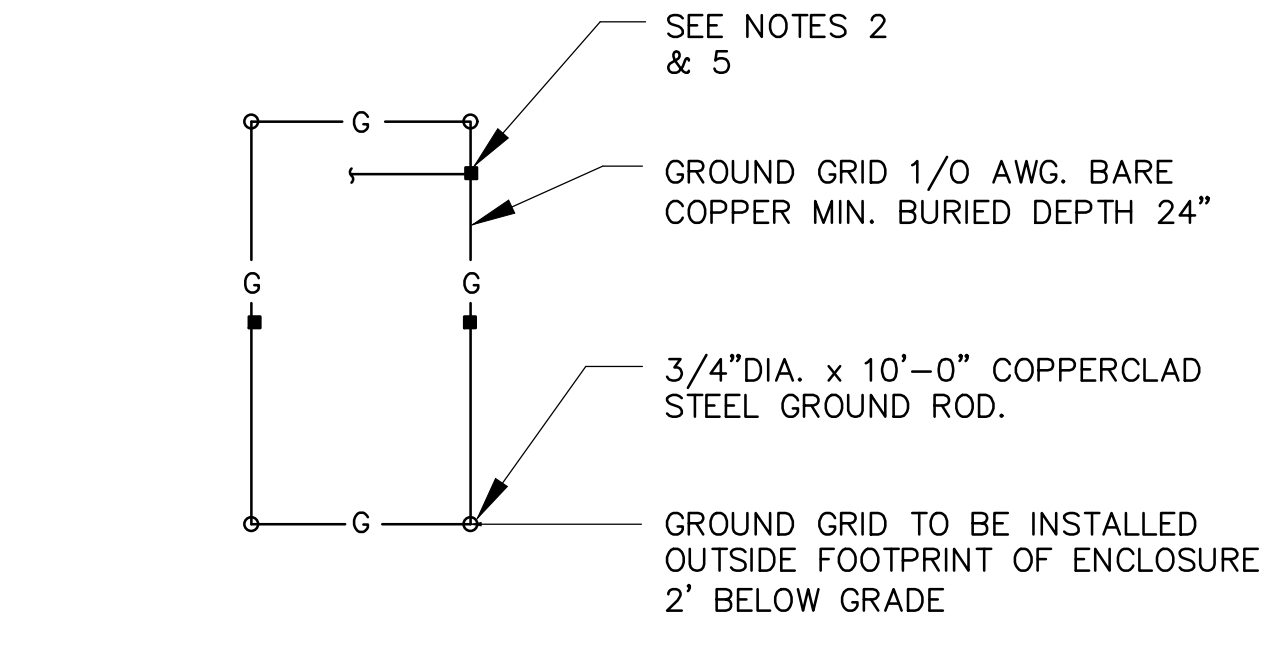
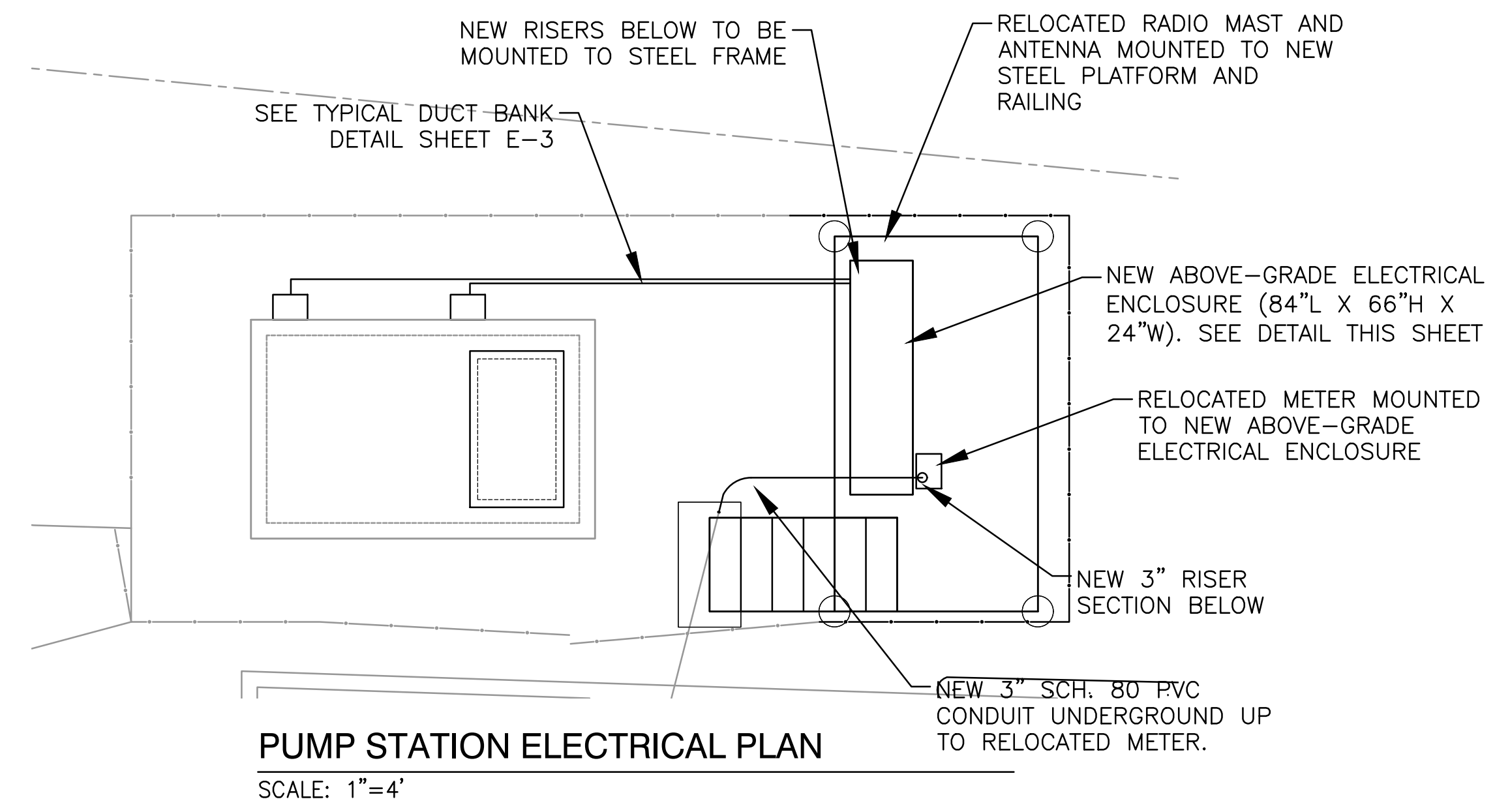
PROJECT NO. 50092430

ELECTRICAL NOTES :

- METER EQUIPMENT BY NGRID. METER SOCKET BY ELECTRICAL CONTRACTOR PER NGRID SPECIFICATIONS.
- ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH OSHA, NFPA STANDARDS, THE ELECTRIC CODE AND THE LOCAL GOVERNING AUTHORITIES. THE DRAWINGS AND SPECIFICATIONS DO NOT ATTEMPT TO INDICATE ALL WORK REQUIRED BY CODES AND AUTHORITIES.
- BOND ALL ELECTRICAL EQUIPMENT TO GROUND GRID USING EXOTHERMIC CONDITIONS.
- INSTALL A GREEN GROUNDING CONDUCTOR WITHIN EACH RACEWAY SIZED IN ACCORDANCE WITH THE ELECTRIC CODE UNLESS OTHERWISE NOTED.
- PROVIDE WATERTIGHT AND GASTIGHT SEALS INSIDE AND OUTSIDE OF CONDUITS THAT PENETRATE BUILDINGS BELOW GRADE, O.Z. GEDNEY OR APPROVED EQUAL. PROVIDE WEATHERTIGHT SEAL AT PENETRATIONS ABOVE GRADE.
- TEST ALL EQUIPMENT AND SYSTEMS INSTALLED TO CERTIFY COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, CODES, LOCAL AUTHORITIES AND REGULATIONS. INCLUDE LABOR AND COSTS FOR TESTING, REVIEWS, APPROVALS AND CERTIFICATIONS.
- EXACT LOCATION, MOUNTING HEIGHTS OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED WITH THE EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS.
- PROVIDE ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.
- FLEXIBLE METAL CONDUIT WITH PVC COATING SHALL BE USED FOR CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT.
- SUPPORT ALL WORK FROM THE BUILDING STRUCTURE.
- WIRE AND CONDUIT SIZES INDICATED ON HOMERUNS SHALL BE CONTINUOUS THROUGHOUT CIRCUIT. ALL CONDUCTORS INSTALLED UNDERGROUND SHALL BE COPPER, SIZE AS INDICATED, USE -2/RHW-2 INSULATION, 600 VOLTS RATED UNLESS OTHERWISE INDICATED.
- ALL CONDUITS SHALL BE GALVANIZED RIGID STEEL, UNLESS OTHERWISE NOTED.
- CONNECT 1/0 AWG. BARE COPPER GROUND CONDUCTOR TO SERVICE ENCLOSURE.
- SEE RISER DIAGRAM THIS SHEET FOR NEW SECONDARY SERVICE RISER CONDUIT AND CABLE. PROVIDE PER NGRID SPECIFICATIONS.
- UPGRADES TO EX. SCADA COMPONENTS INCLUDING FINAL TERMINATION OF WIRING FROM NEW PUMP CONTROL PANEL TO BE COMPLETED BY OWNER'S INSTRUMENTATION SYSTEM VENDOR.

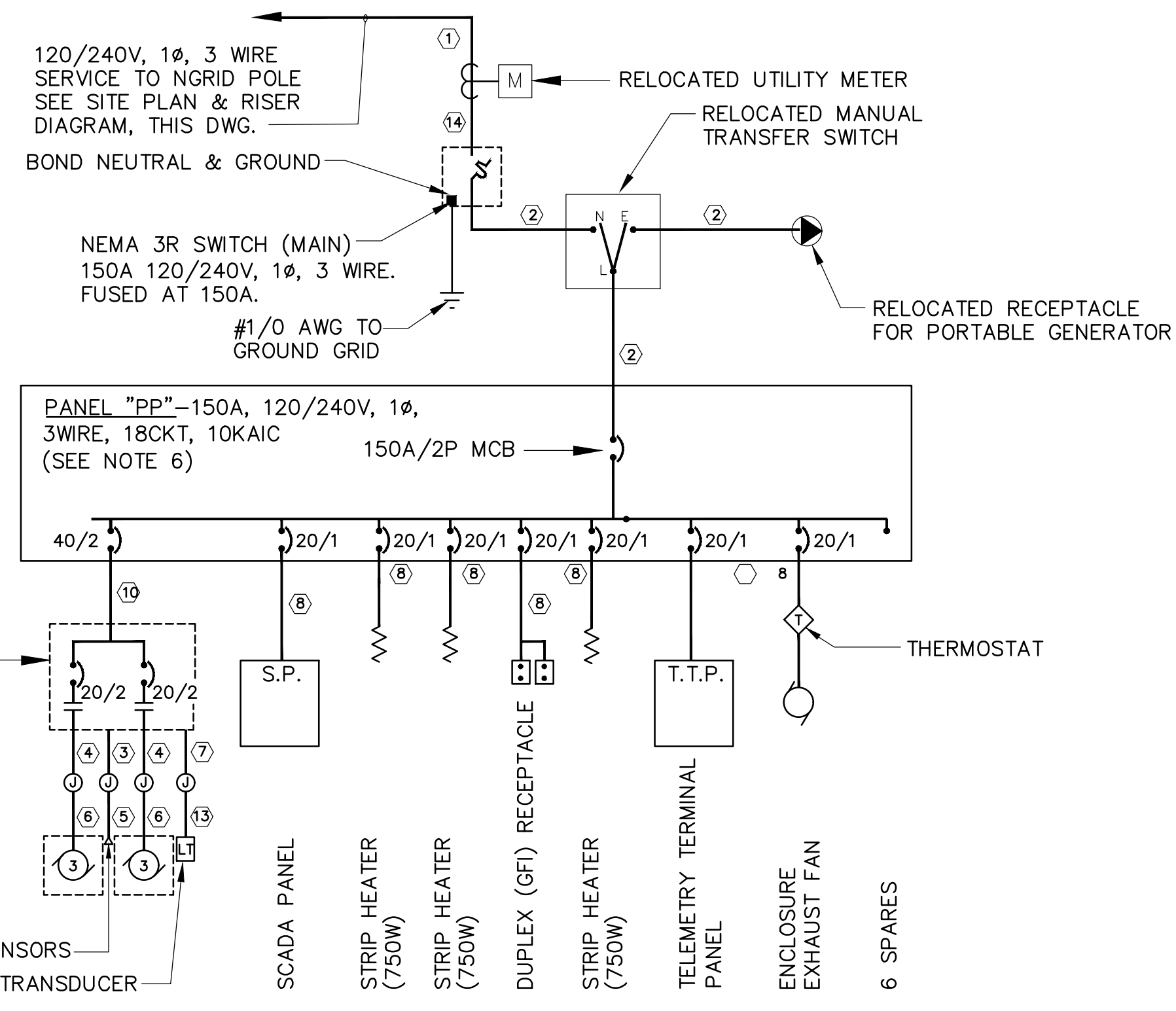
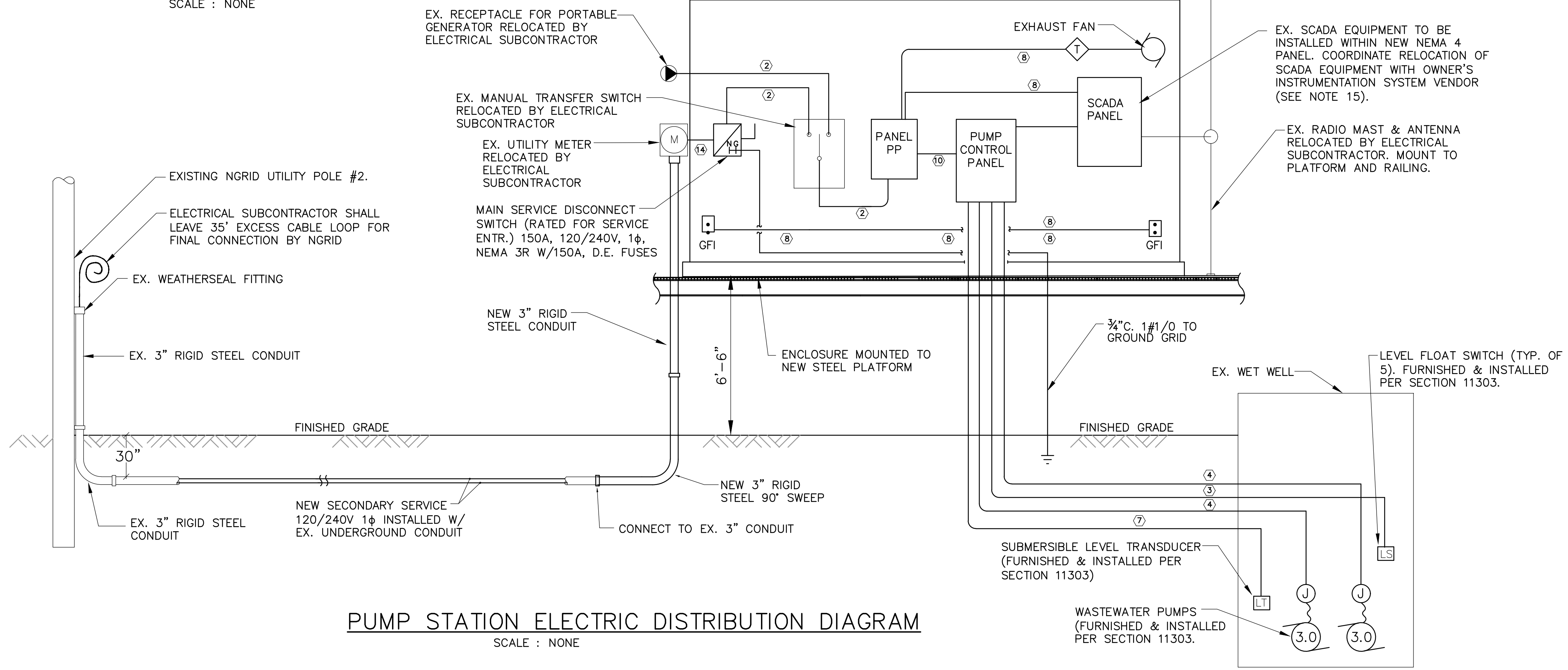
FEEDER SCHEDULE

- 3#1/0, 2" GRS/PVC - RUN 30" BELOW FINISHED GRADE.
- 3#1/0 & 1#6 G, 2" GRS.
- 10#14, 3/4" PVC - RUN 30" BELOW FINISHED GRADE.
- 3#12, 5#14, 1#12G, 1" PVC - RUN 30" BELOW FINAL GRADE.
- SAME AS 3 EXCEPT SIGNAL CABLE IS FURNISHED BY CONTROL PANEL SUPPLIER, CONDUIT NOT REQUIRED.
- SAME AS 4 EXCEPT POWER CABLE IS FURNISHED BY PUMP SUPPLIER, CONDUIT NOT REQUIRED.
- 4-20 MA TWISTED PAIR COPPER SHIELDED #16AWG, 3/4" PVC - RUN 30" BELOW FINISHED GRADE.
- 2#12, 1#12G, 3/4" PVC.
- 4#12, 1#12G, 1" PVC - RUN 30" BELOW FINISHED GRADE.
- 3#8, 1#10G, 1" GRS
- 2#14, 3/4" GRS.
- 4#14, 3/4" GRS.
- SAME AS 7 EXCEPT SIGNAL CABLE IS FURNISHED BY CONTROL PANEL SUPPLIER, CONDUIT NOT REQUIRED.
- 3#1/0, 2" GRS



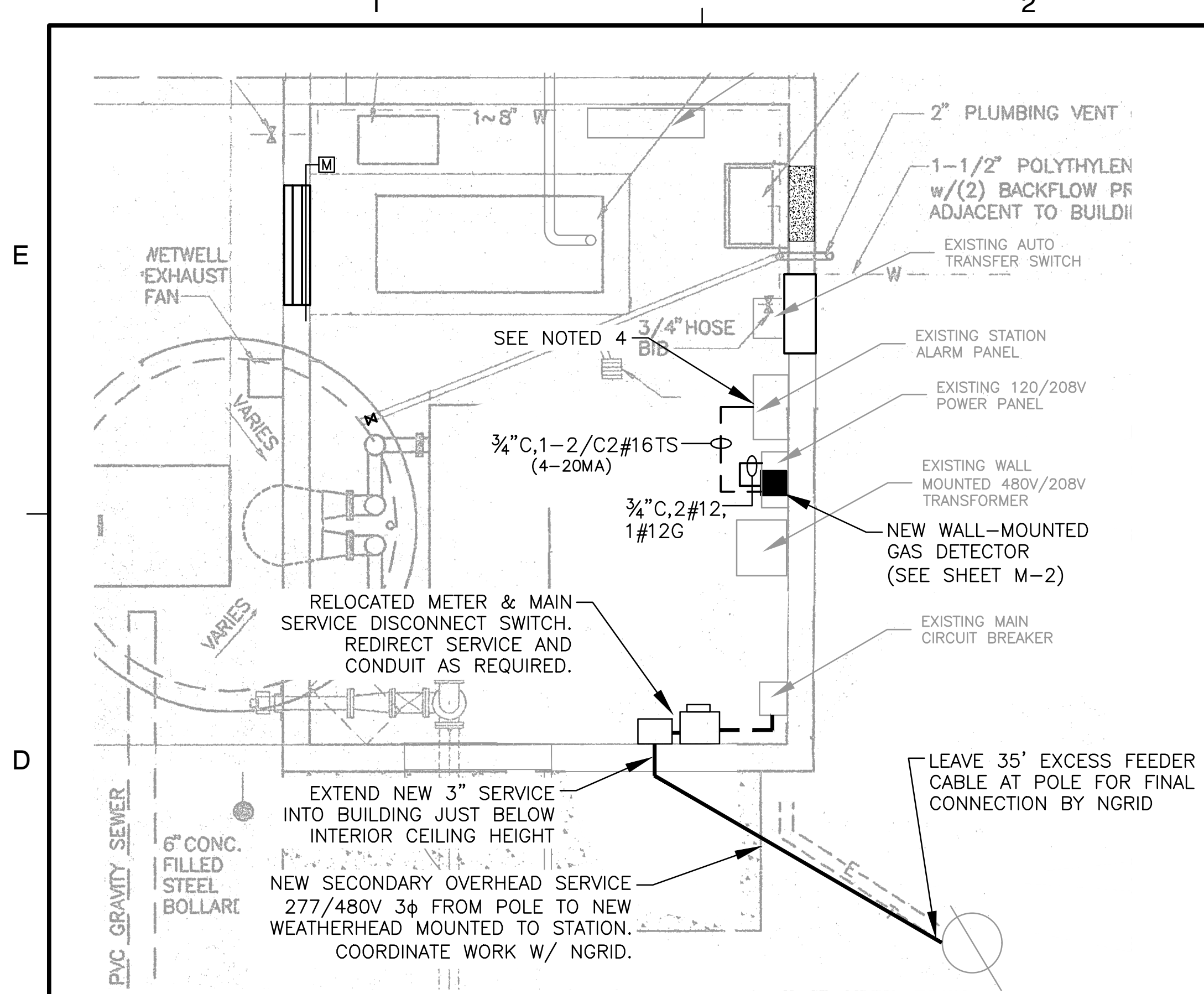
NEW SERVICE ENCLOSURE GROUND GRID

SCALE: NONE

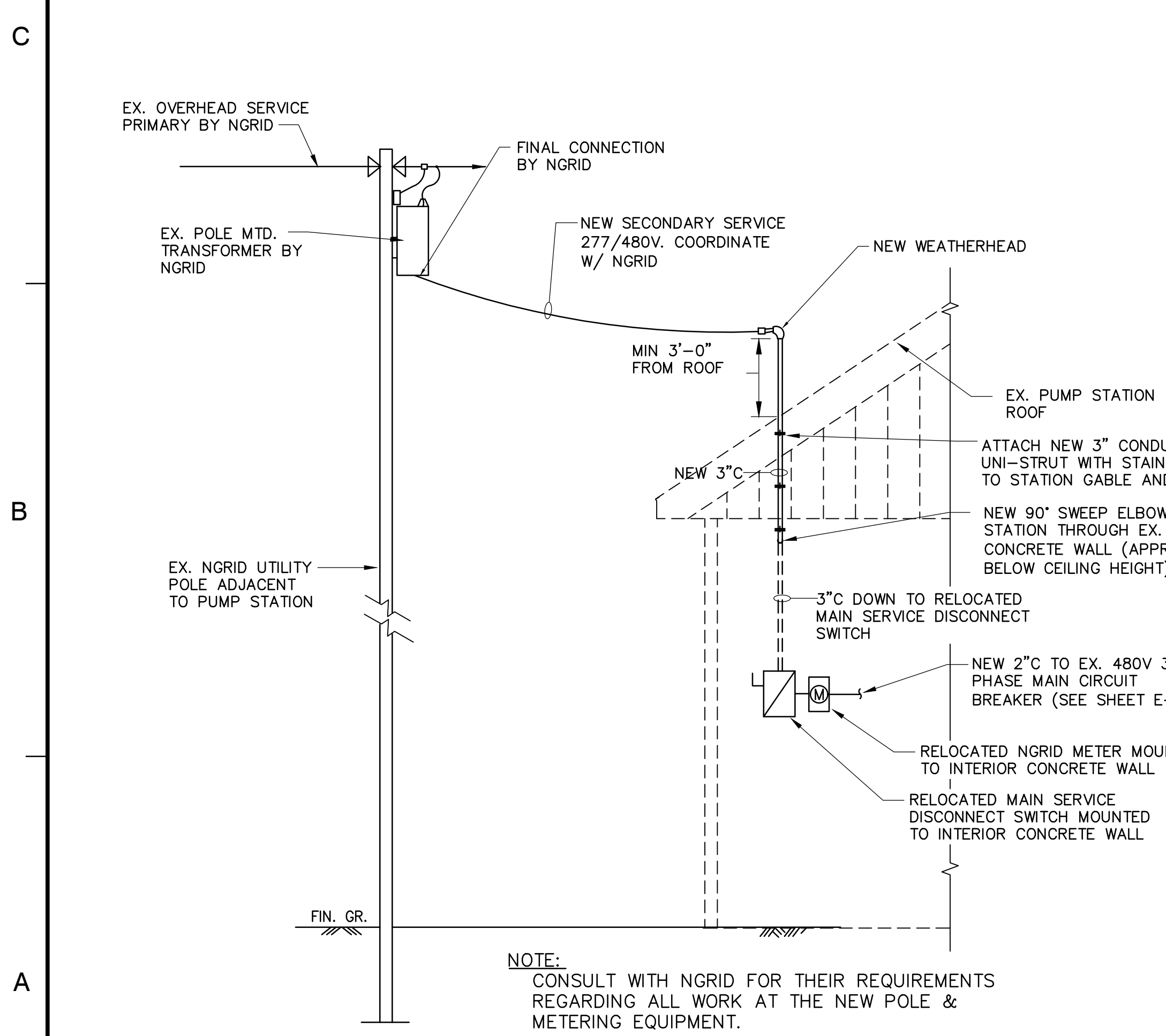


ELECTRICAL ONE LINE DIAGRAM

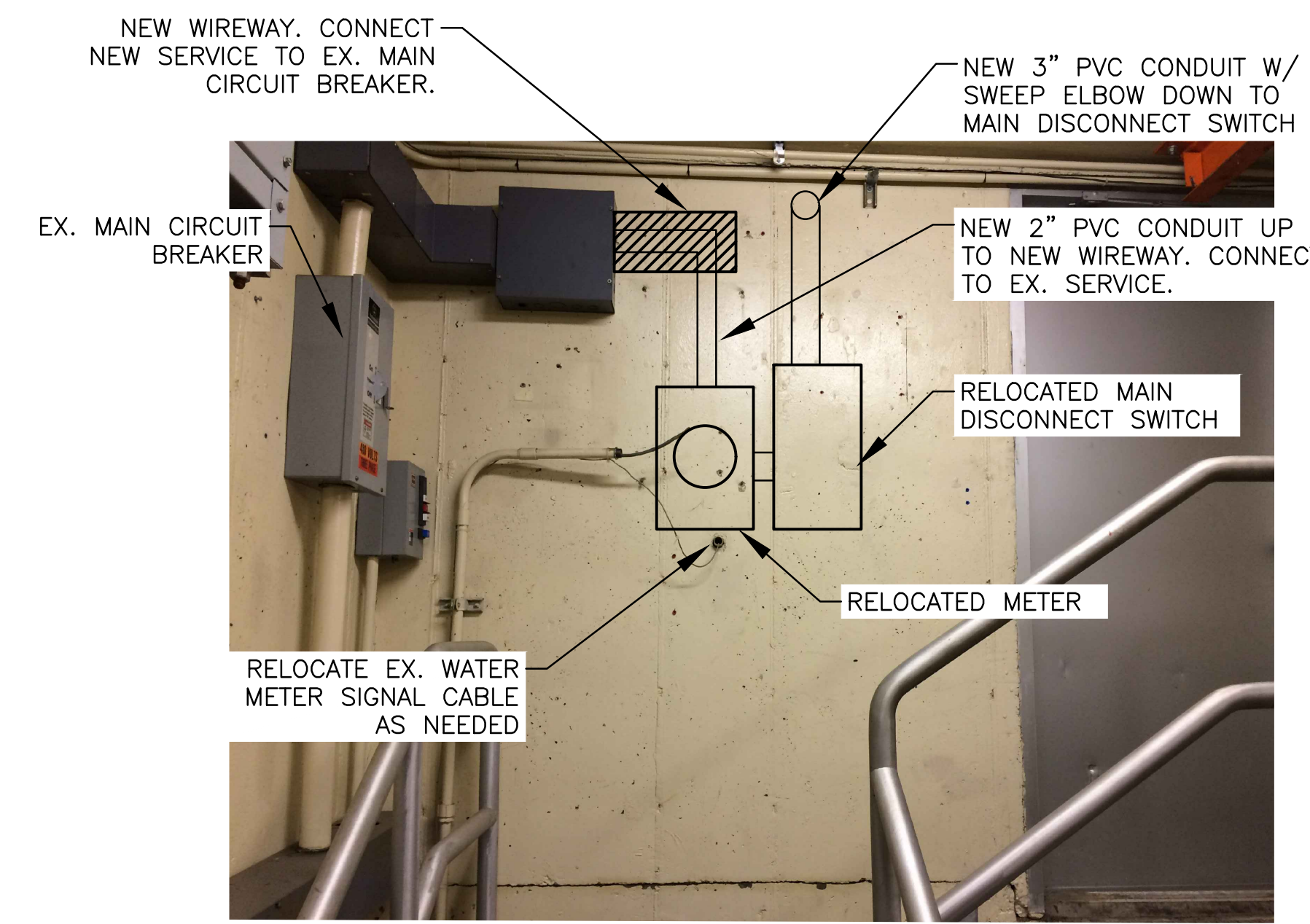
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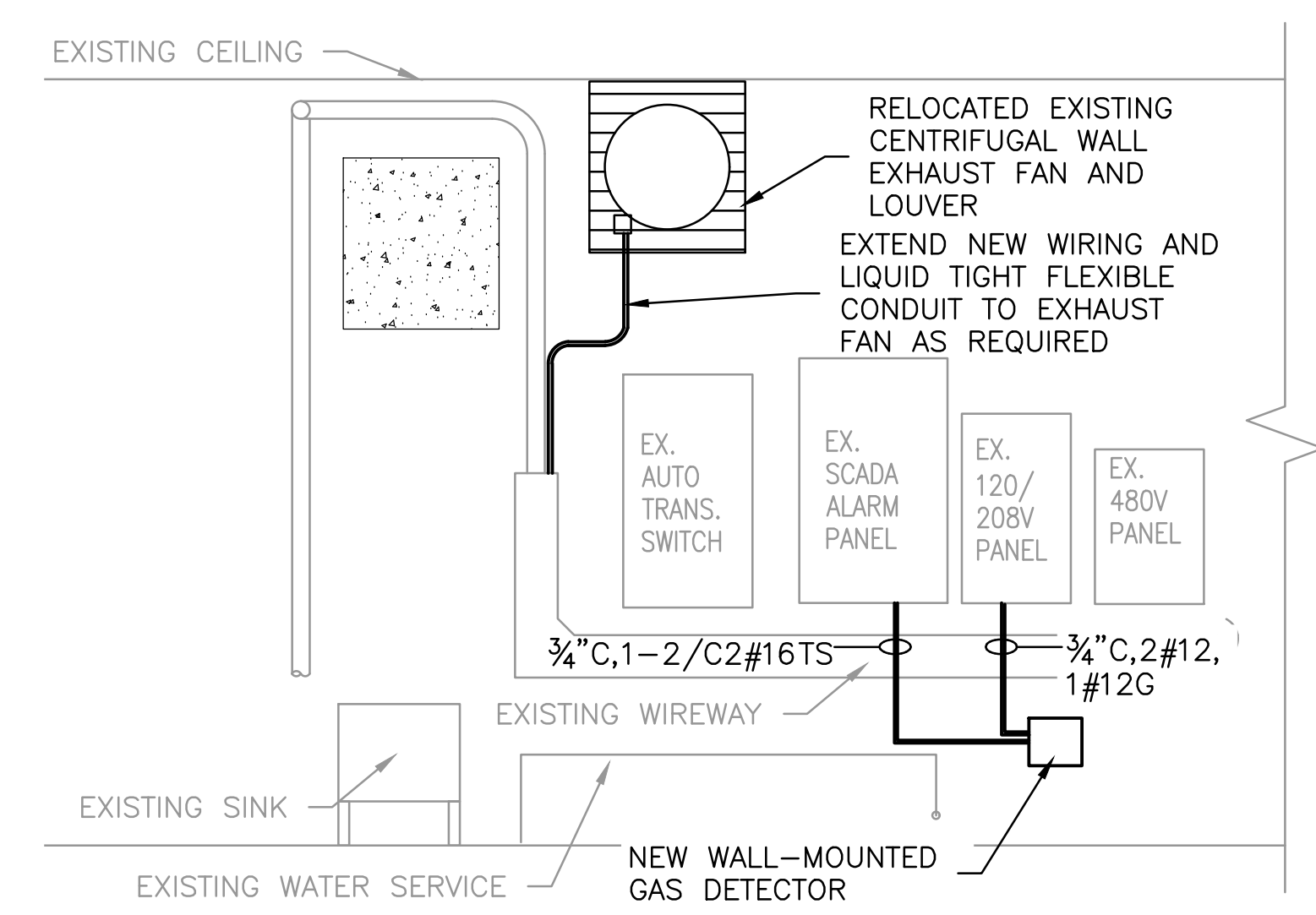
PUMP STATION NEW WORK PLAN
SCALE: 3/8"=1'



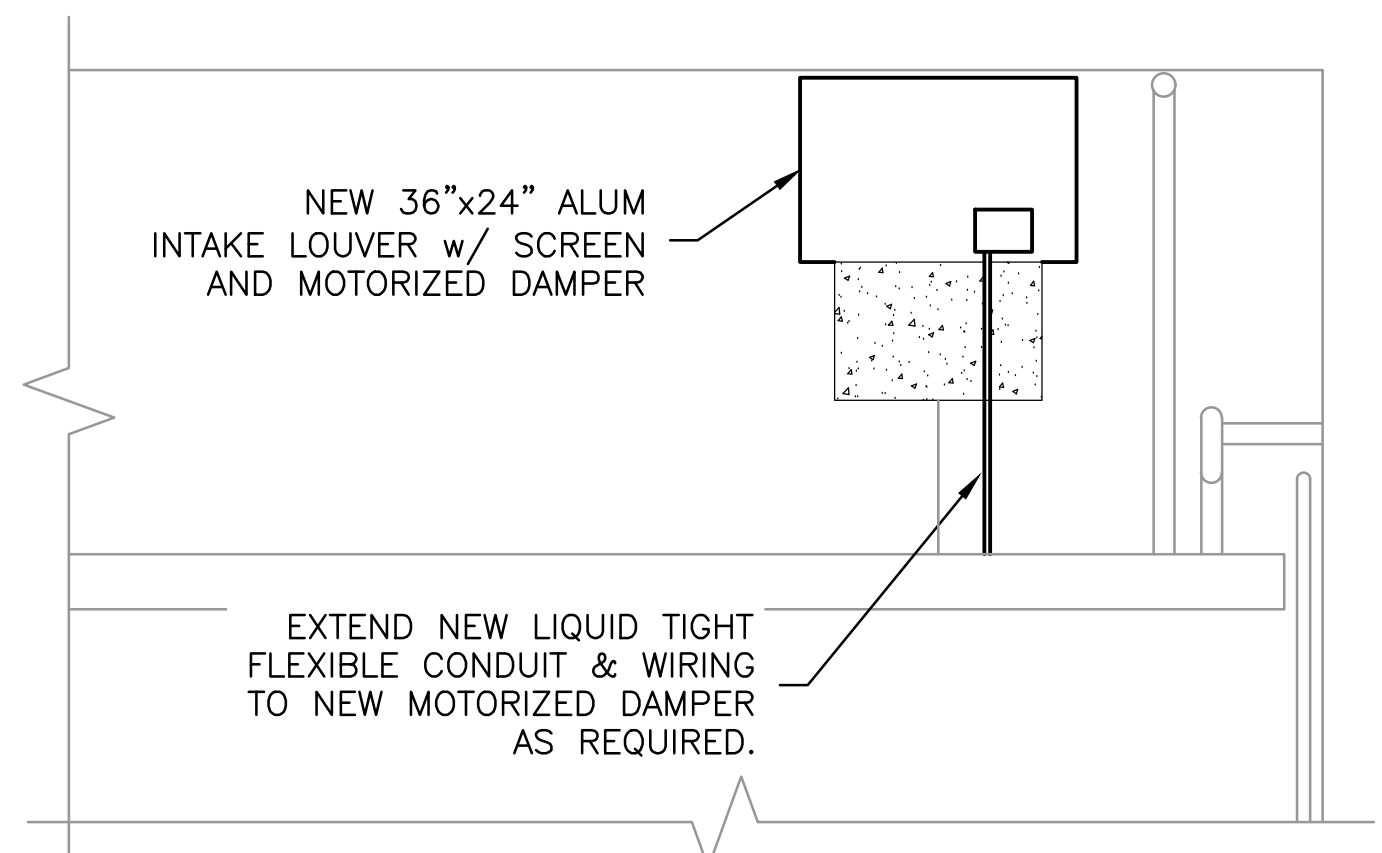
NEW PUMP STATION SERVICE DETAIL
SCALE : NONE



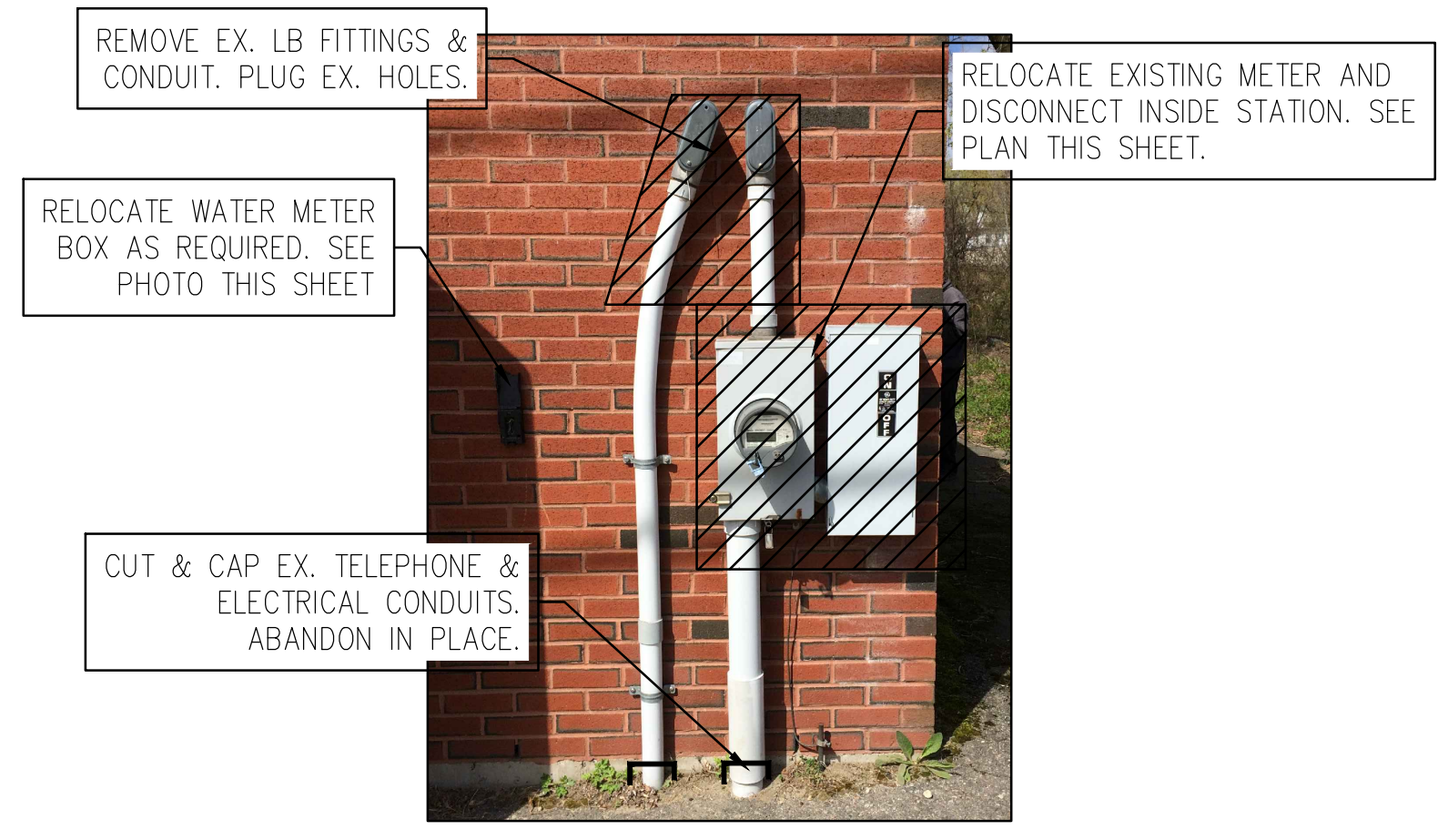
LOCATION FOR RELOCATED METER/DISCONNECT SWITCH
SCALE: NTS



INTERIOR NORTH WALL DETAIL
SCALE: NONE

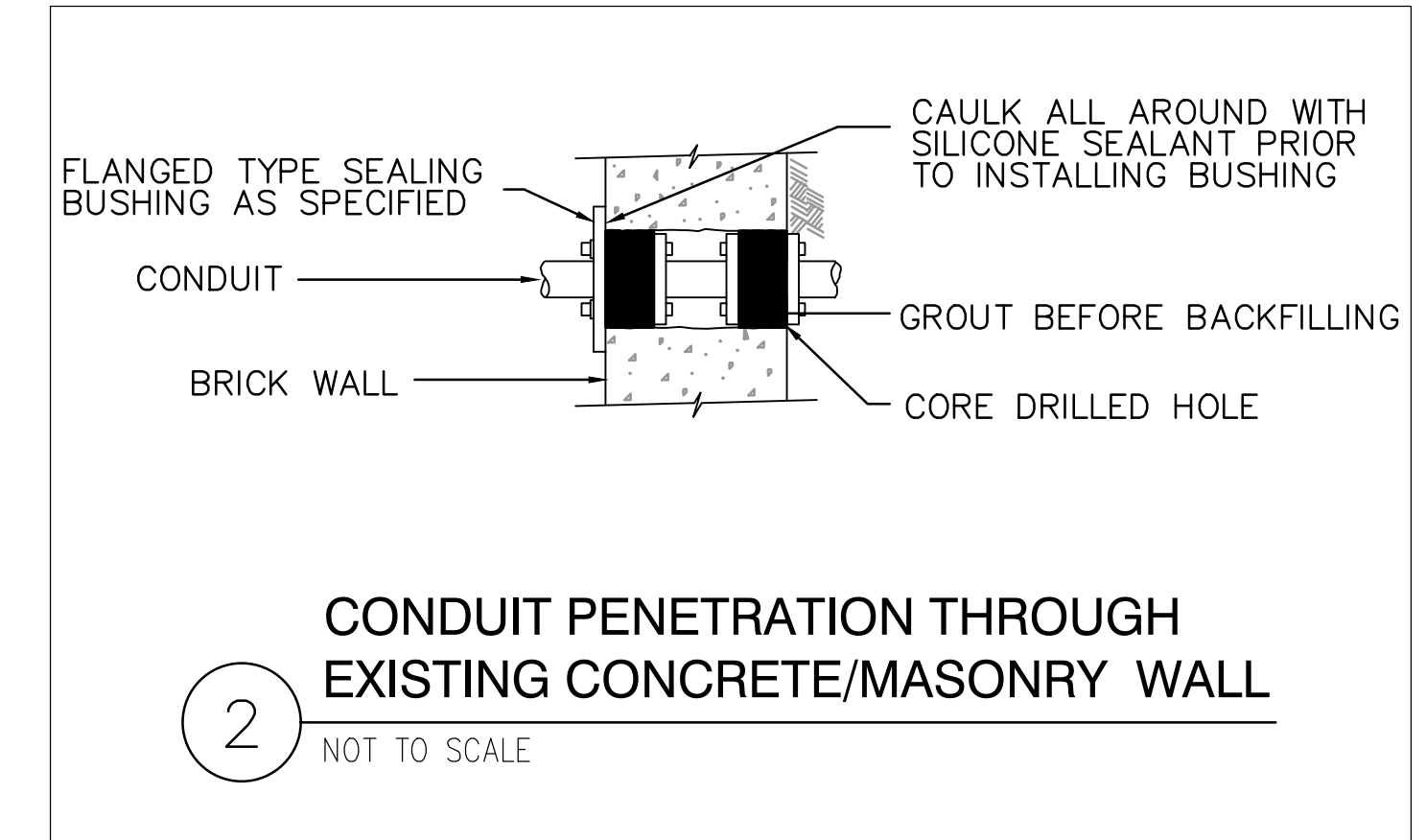


INTERIOR SOUTH WALL DETAIL
SCALE: NONE

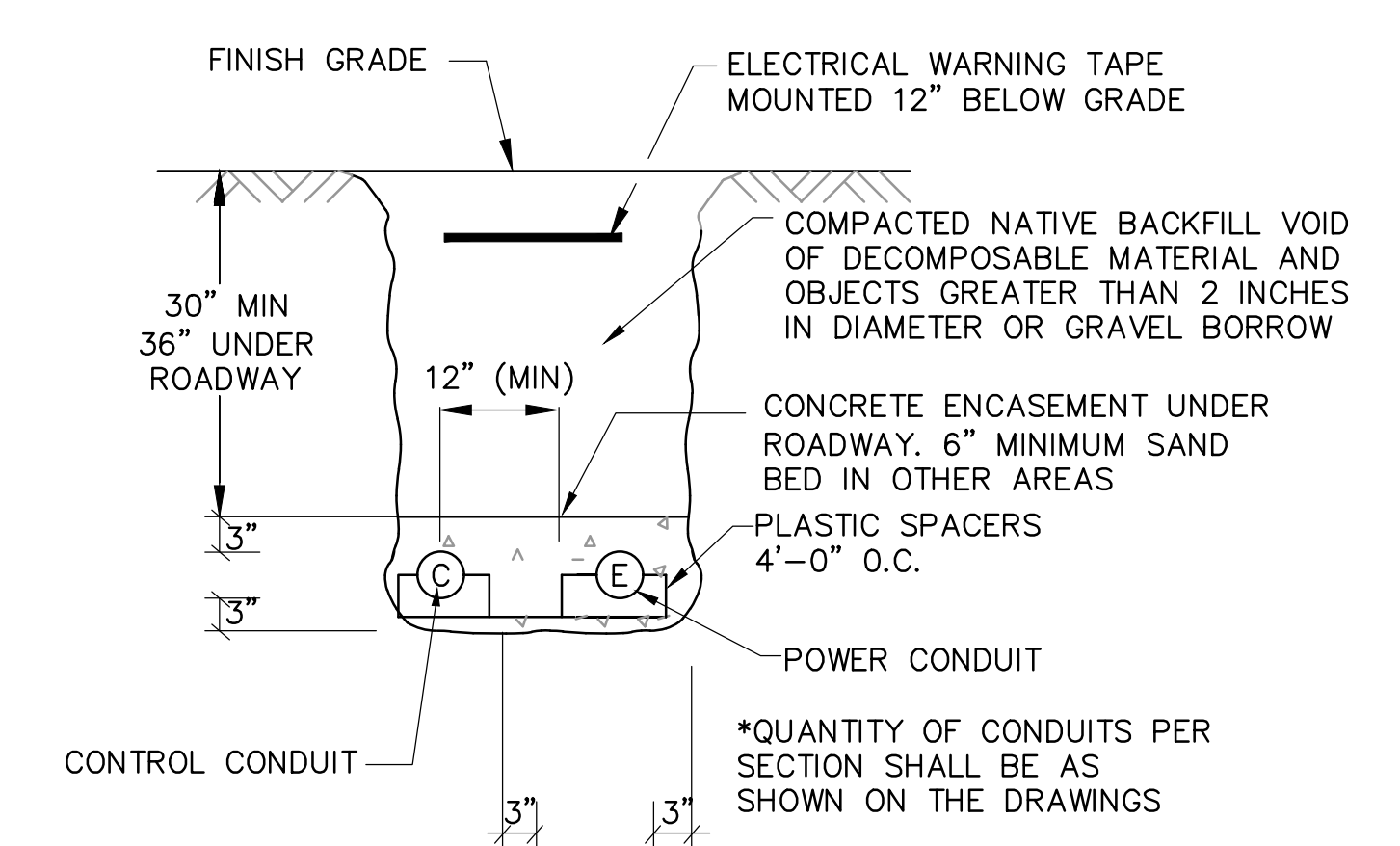


EX. METER SOCKET AND DISCONNECT
SCALE: NTS

- NOTES:
1. ALL NEW INSTALLATIONS ARE SHOWN IN BOLD.
 2. INSTALL 20 AMP SINGLE POLE CIRCUIT BREAKER IN EX. POWER PANEL. CIRCUIT BREAKER SHALL MATCH EXISTING CIRCUIT BREAKERS.
 3. ALL CONDUITS SHOWN ON THIS PLAN ARE DIAGRAMMATIC. INSTALL CONDUITS EXPOSED OVERHEAD GROUPED ON CONDUIT RACKS IN A NEAT RECTILINEAR ARRANGEMENT ALONG BUILDING WALLS.
 4. UPGRADES TO EX. STATION ALARM PANEL INCLUDING FINAL TERMINATION OF SIGNAL WIRING TO BE COMPLETED BY OWNER'S INDEPENDENT INSTRUMENTATION SYSTEM INTEGRATOR.



CONDUIT PENETRATION THROUGH EXISTING CONCRETE/MASONRY WALL
SCALE: NOT TO SCALE



TYP. DUCTBANK SECTION
SCALE: NOT TO SCALE

KEY PLAN

SCALE

No.	DATE	BY	Description

REVISIONS

DESIGNED BY	YM
DRAWN BY	MH / KP
CHECKED BY	JG
DATE	JAN 2018

TITLE
**EAST NATICK I
PUMP STATION
ELECTRICAL
WORK & DETAILS**

PROJECT NO. 50092430