

GENERAL NOTES:

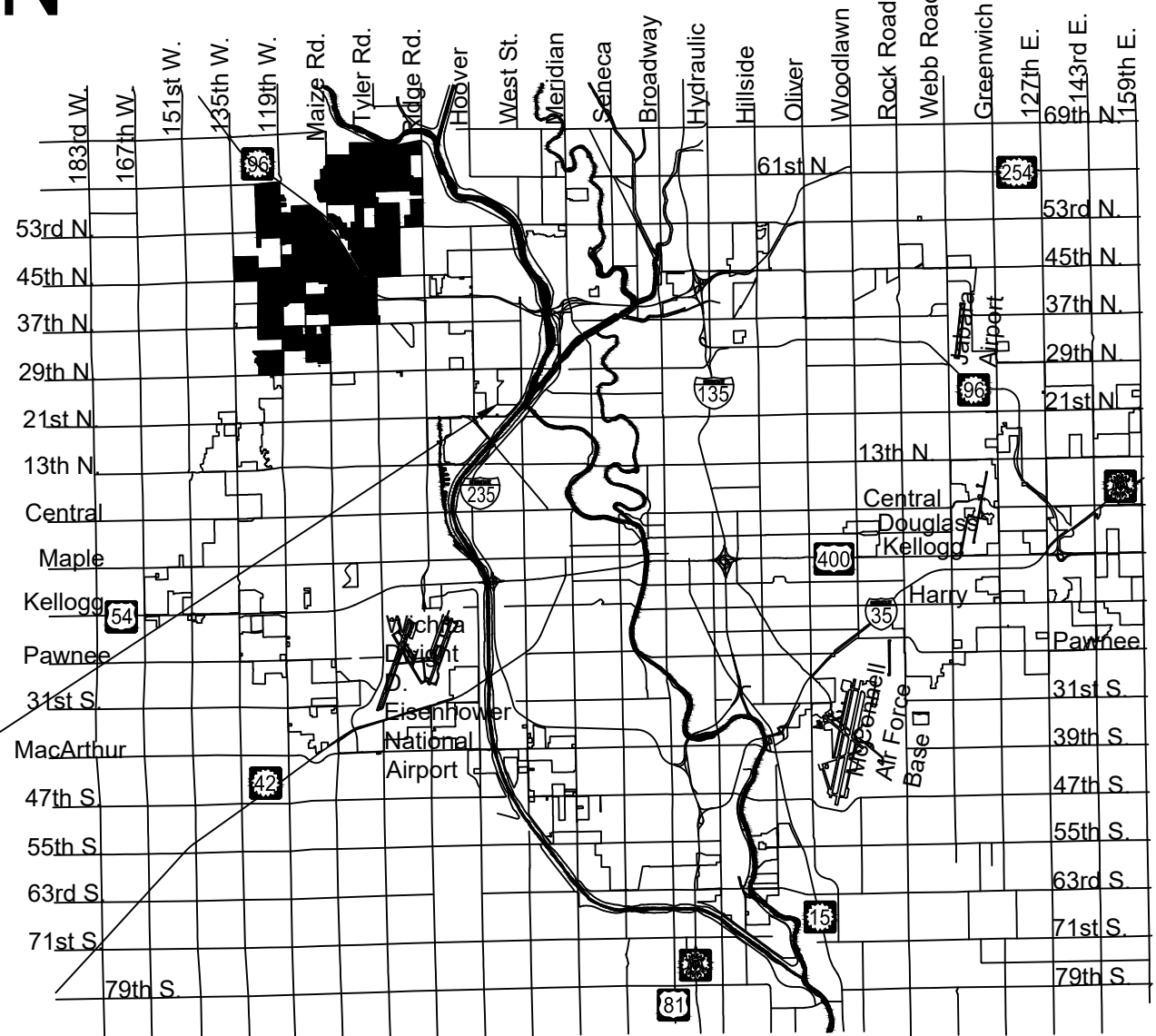
- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
- Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows:
 Kansas One-Call 687-2470
 The Contractor must notify the following in case of an emergency:
 AT&T 1-800-246-8464
 Black Hills Energy 1-800-694-8989
 City of Wichita Water & Sewer Dept. 1-316-219-8921
 City of Wichita Stormwater 1-316-268-4090
 City of Wichita Traffic 1-316-268-4034
 Cox Communications 1-888-249-3530
 Kansas Gas Service 1-888-482-4950
 Westar Energy 1-800-544-4857
- Utility service lines, poles, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations, in the opinion of the Engineer, that will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain will require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits will require additional archaeological investigations unless buried in a previously approved borrow location.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
- The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.
- The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
- If traffic will be impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Brian Coon at traffic@wichita.gov before construction can begin. The Contractor shall be responsible for all traffic control measures to facilitate construction. All construction zone markings and signage shall conform to the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) as published by the US Dept. of Transportation, Federal Highway Administration. All costs associated with construction markings and signage shall be the Contractors responsibility.
- All elevations shown are NAVD 88.
- All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.
- The Contractor shall protect from damage and support existing utilities through constructions as approved by the utility owner and the Engineer at the contractors expense.
- Contractor shall limit the extent of trench openings overnight and weekends to less than 50 feet.
- Any sidewalk, drive approach, curb, or street pavement removed to construct project must have a pavement cut permit and be replaced by the City contractor. Permits can be obtained by calling 316-268-4501 or 316-268-4480.
- All stubs and plugged pipes shall be located with green plastic tape in the same manner as risers.

- Connecting to Existing Manholes:
 Prior to laying sewer lines using existing stubs in existing manholes, the Contractor shall expose and verify the elevation, grade and alignment of existing stubs and notify the Engineer of any deviation from the plans. Where connection to an existing manhole that does not have an existing stub or the stub is unusable due to elevation grade or alignment, the Contractor shall bore cut into existing manhole wall to make connection using approved water stop gasket, and reshape the existing manhole invert to provide smooth flow. The cost to connecting to existing manholes is incidental to the project.
- Contractor shall provide positive drainage away from all manhole covers.
- The Contractor shall prevent any construction debris from entering the existing sanitary sewer during construction.
- The Contractor shall be responsible for maintaining continuous flow of sewage through construction. Contractors proposed method for maintaining sewage flow shall be submitted and approved by the Sewer Maintenance Division (316-268-4073) prior to starting and by-passing of sewage flows.
- Any over excavation from manhole and pipe removal shall be backfilled with AB-3 compacted to 90-95% ASTM D698.
- No shrink or swell factors have been applied to the earthwork quantities shown on this project. All earthwork quantities are based on raw surface volume comparisons.
- Excess dirt generated from installation of underground utilities is to remain on site. Overburdened to be stockpiled on Future Lot 58, Block B, directly North of proposed lift station.

LIFT STATION & SANITARY SEWER EXTENSION

to serve
 Main 26, Southwest Interceptor
 Emerald Bay Estates 3rd Addition
CITY OF WICHITA, KANSAS
 Gary Janzen, P.E. City Engineer
 Project Number 468-85243
 O.C.A. NO. 621103

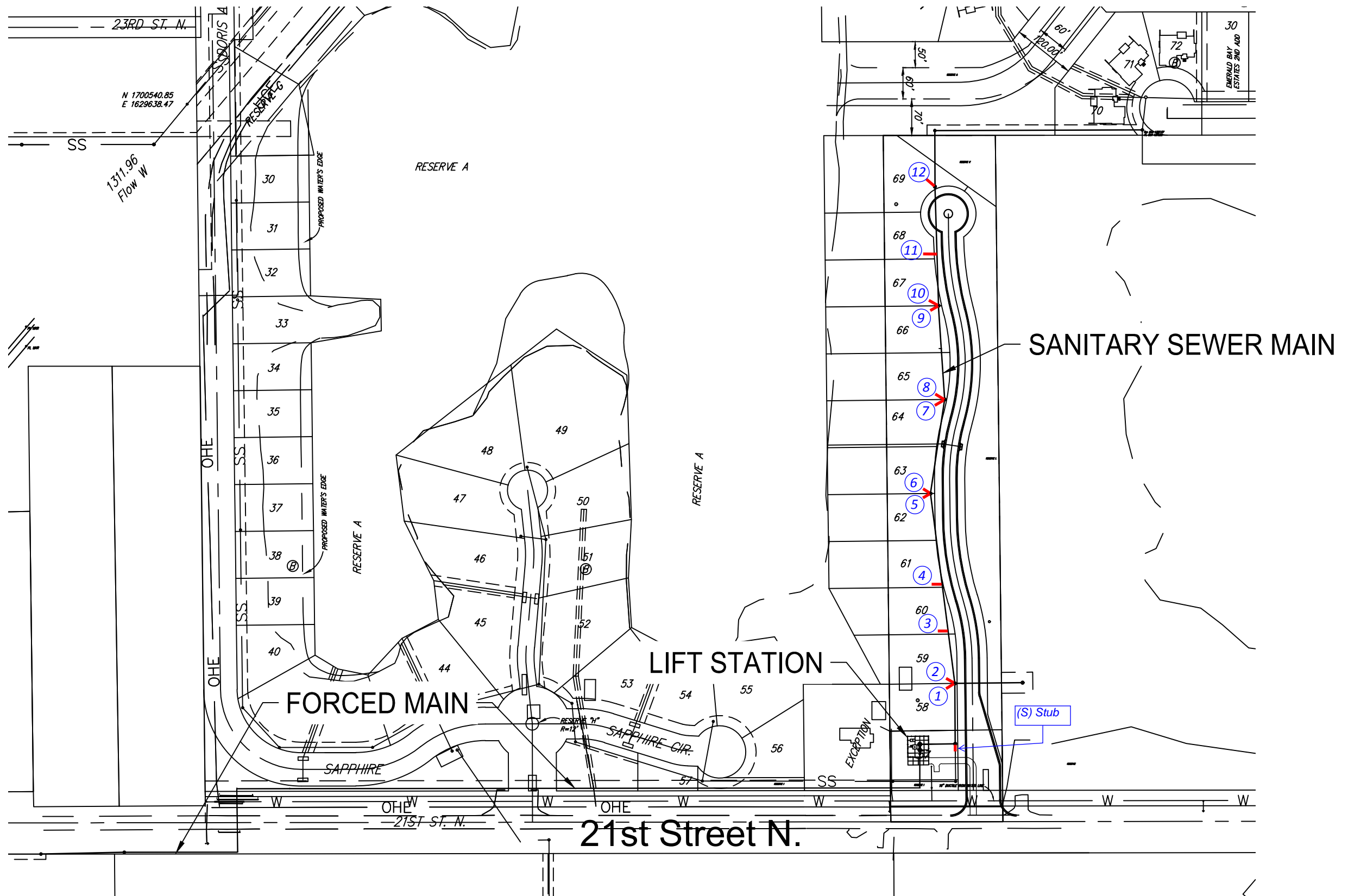
Nowak Construction - Contractor
J. Wagner - City of Wichita, Field Project Engineer
S. Stripling - City of Wichita, Inspector
As-built
 Release Date: 2/15/2019
 Completion Date:
 pdf: 4/24/2019 apr



Vicinity Map

SHEET INDEX

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07	Lift Station Plan
08	Lift Station Section
09	Lift Station Details
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11	Lift Station Utility Shelter Electrical Plan
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Benchmarks

BENCHMARK:
 CHISELED SQUARE WITH DIVOT ON THE TOP OF CONCRETE PAD, 1655' NORTH AND 888' EAST OF THE SOUTHEAST CORNER OF THE SW 1/4 OF SEC 2, T27S, R1W. ELEVATION = 1323.11 (NAVD88, G12A)

BENCHMARK:
 CHISELED SQUARE WITH DIVOT ON THE EAST SIDE OF CONCRETE GATE FOUNDATION FOR 4900 W 21ST ST N., WICHITA, KS. ELEVATION = 1323.85 (NAVD88, G12A)

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BY	DESCRIPTION	DATE	REV.

CITY OF WICHITA, KS
 Project #: 468-85239
 OCA: 744452
Emerald Bay 3rd Sanitary Sewer Plans

Titlesheet

JOB NO.: 17264861
 DATE: .
 DESIGNED BY: .
 DRAWN BY: .

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DRAWING NUMBER

SHEET NUMBER **01** OF **28**

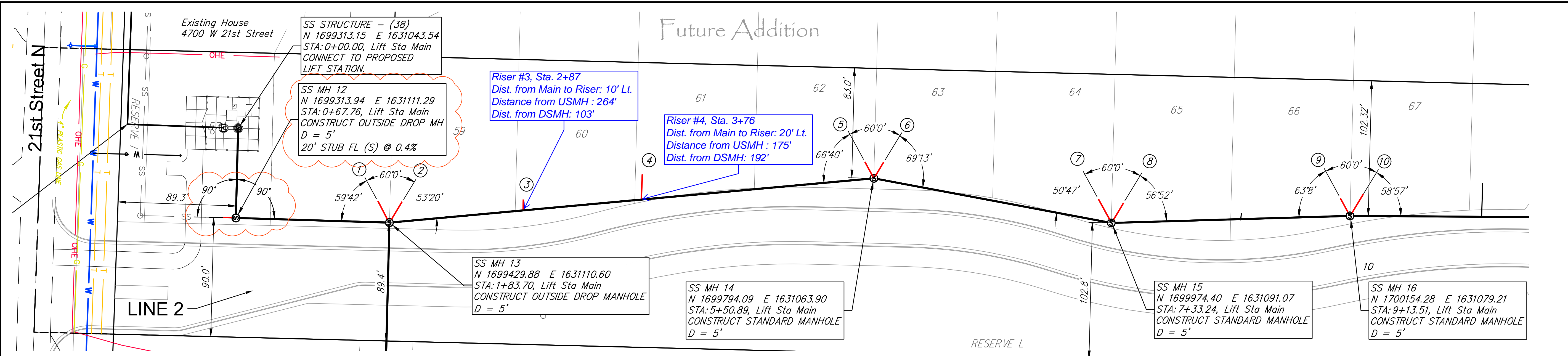


924 N. Main
 Wichita, KS 67203
 (316) 264-8008

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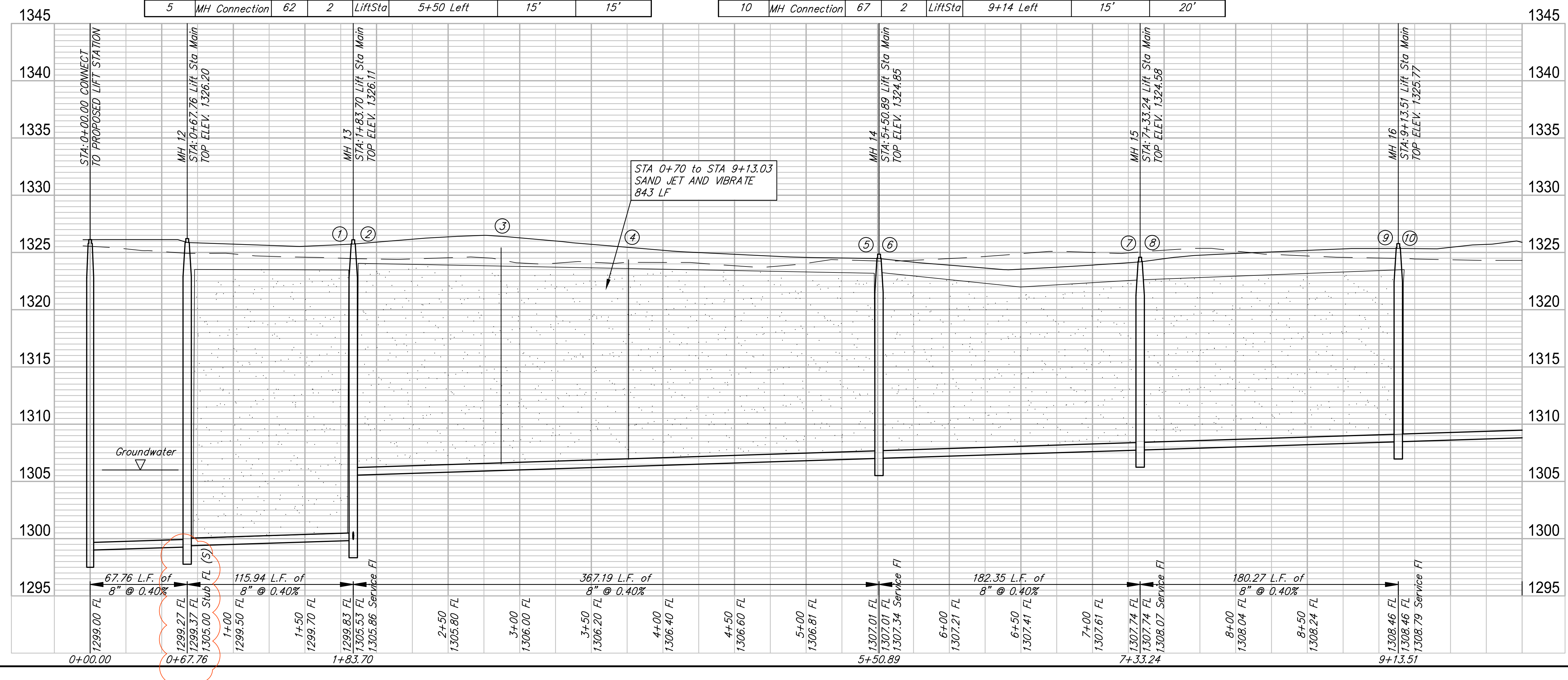
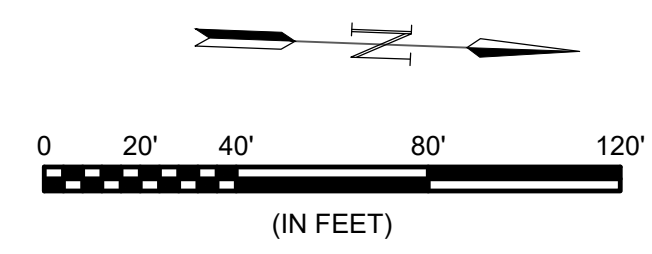


SEWER SEVICE RISER TABLE

NUMBER	TYPE	SERVING			STATION/DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROX. LENGTH 4" PIPE	
						VERTICAL	HORIZONTAL
1	MH Connection	58	2	LiftSta	1+84 Left	20'	18'
2	MH Connection	59	2	LiftSta	1+84 Left	20'	18'
3	8"X4" Tee	60	2	LiftSta	2+87 Left	18'	10'
4	8"X4" Tee	61	2	LiftSta	3+76 Left	18'	20'
5	MH Connection	62	2	LiftSta	5+50 Left	15'	15'

SEWER SEVICE RISER TABLE

NUMBER	TYPE	SERVING			STATION/DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROX. LENGTH 4" PIPE	
						VERTICAL	HORIZONTAL
6	MH Connection	63	2	LiftSta	5+50 Left	15'	15'
7	MH Connection	64	2	LiftSta	7+33 Left	14'	20'
8	MH Connection	65	2	LiftSta	7+33 Left	15'	20'
9	MH Connection	66	2	LiftSta	9+14 Left	15'	15'
10	MH Connection	67	2	LiftSta	9+14 Left	15'	20'



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REV.	DATE	DESCRIPTION	BY

City of Wichita, KS
 Project #: 468-85239
 OCA: 744452
 Emerald Bay 3rd
 Sanitary Sewer Plans

LIFT STATION
 SANITARY SEWER
 MAIN

JOB NO.: 17264861
 DATE: .
 DESIGNED BY: EJG
 DRAWN BY: EJG

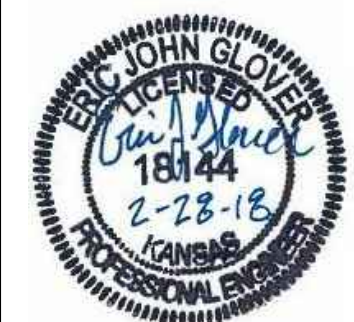
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SHEET NUMBER **02** OF **28**



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City of Wichita, KS
 Emerald Bay 3rd
 Sanitary Sewer Plans

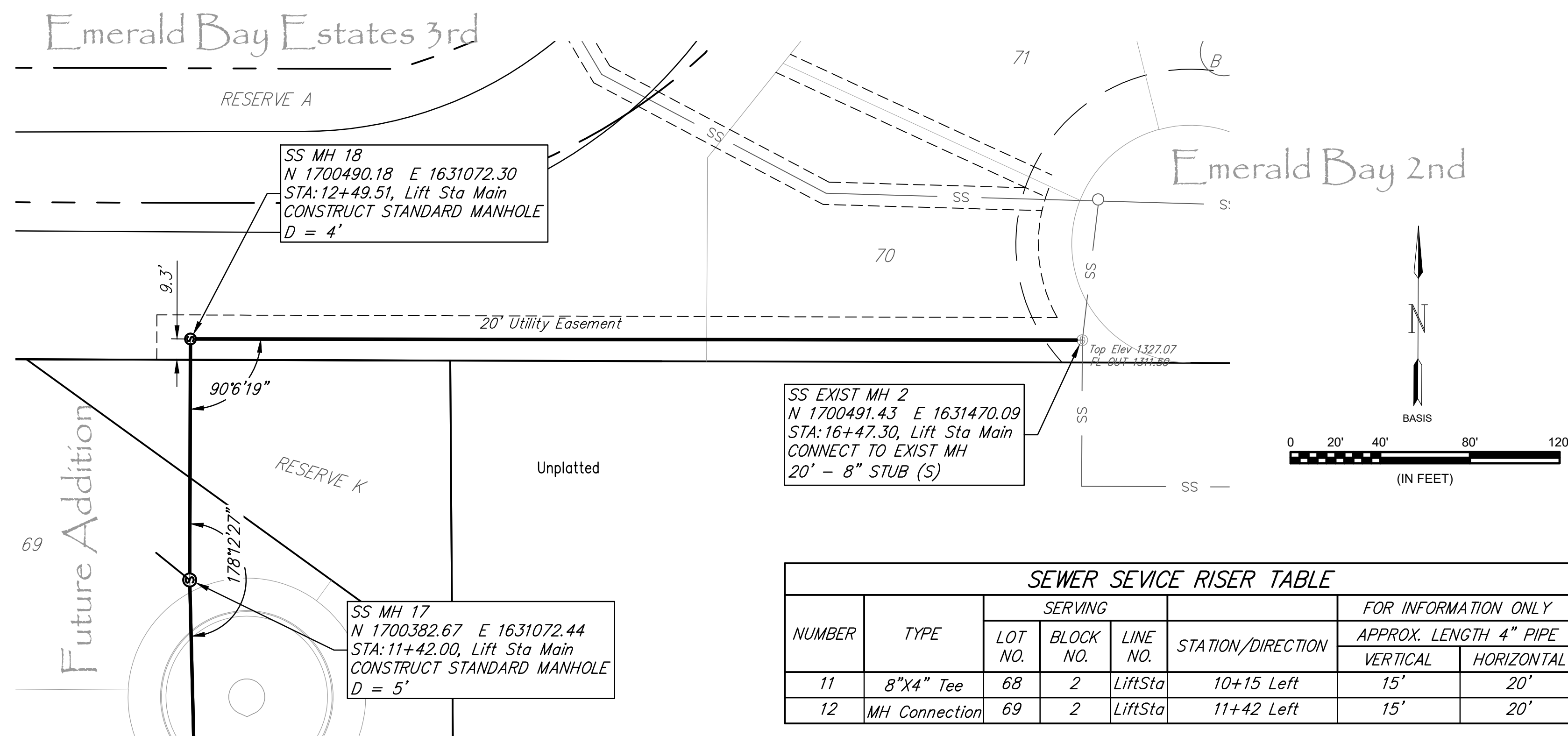
LIFT STATION
 SANITARY SEWER
 MAIN

JOB NO.: 17264861
 DATE: .
 DESIGNED BY: EJG
 DRAWN BY: EJG

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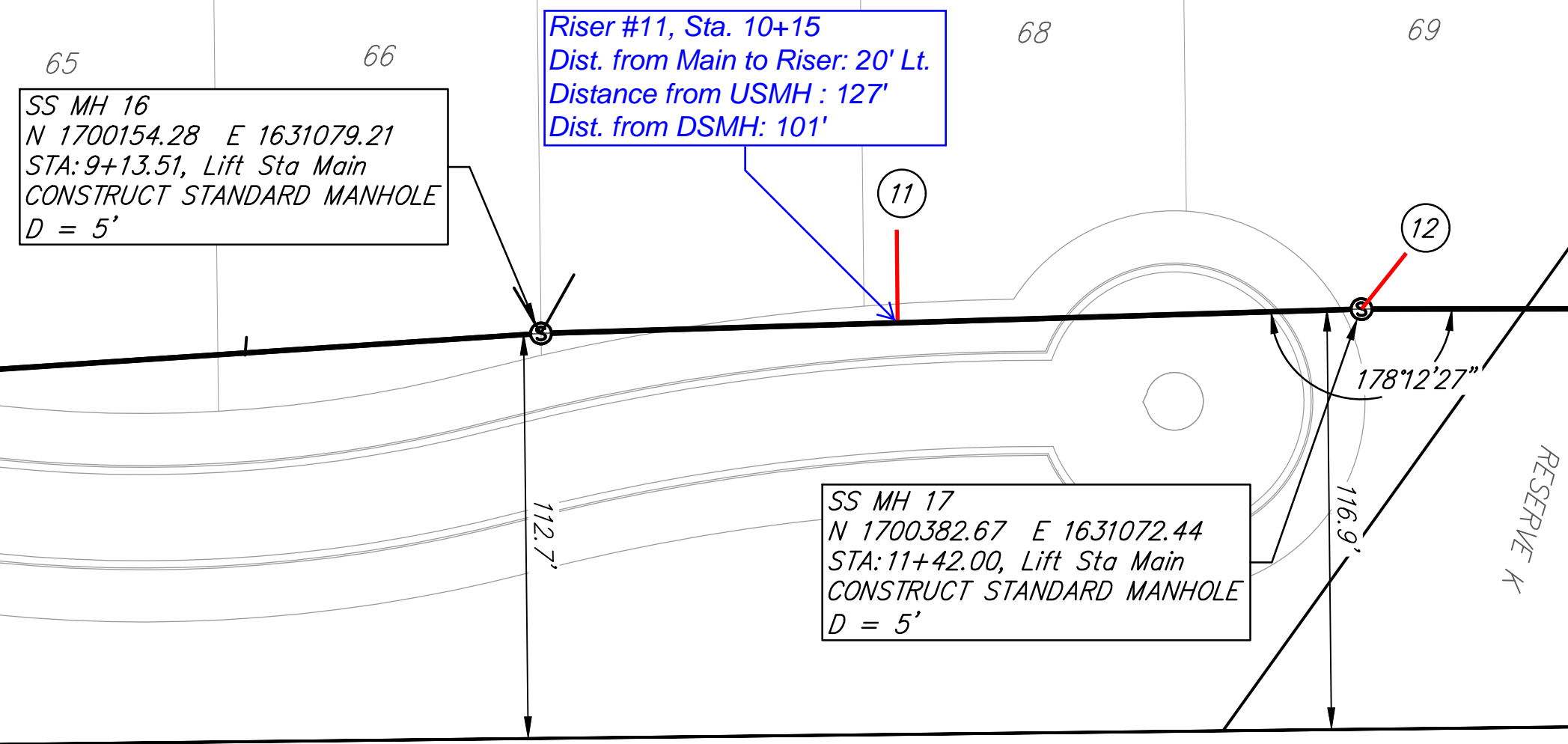
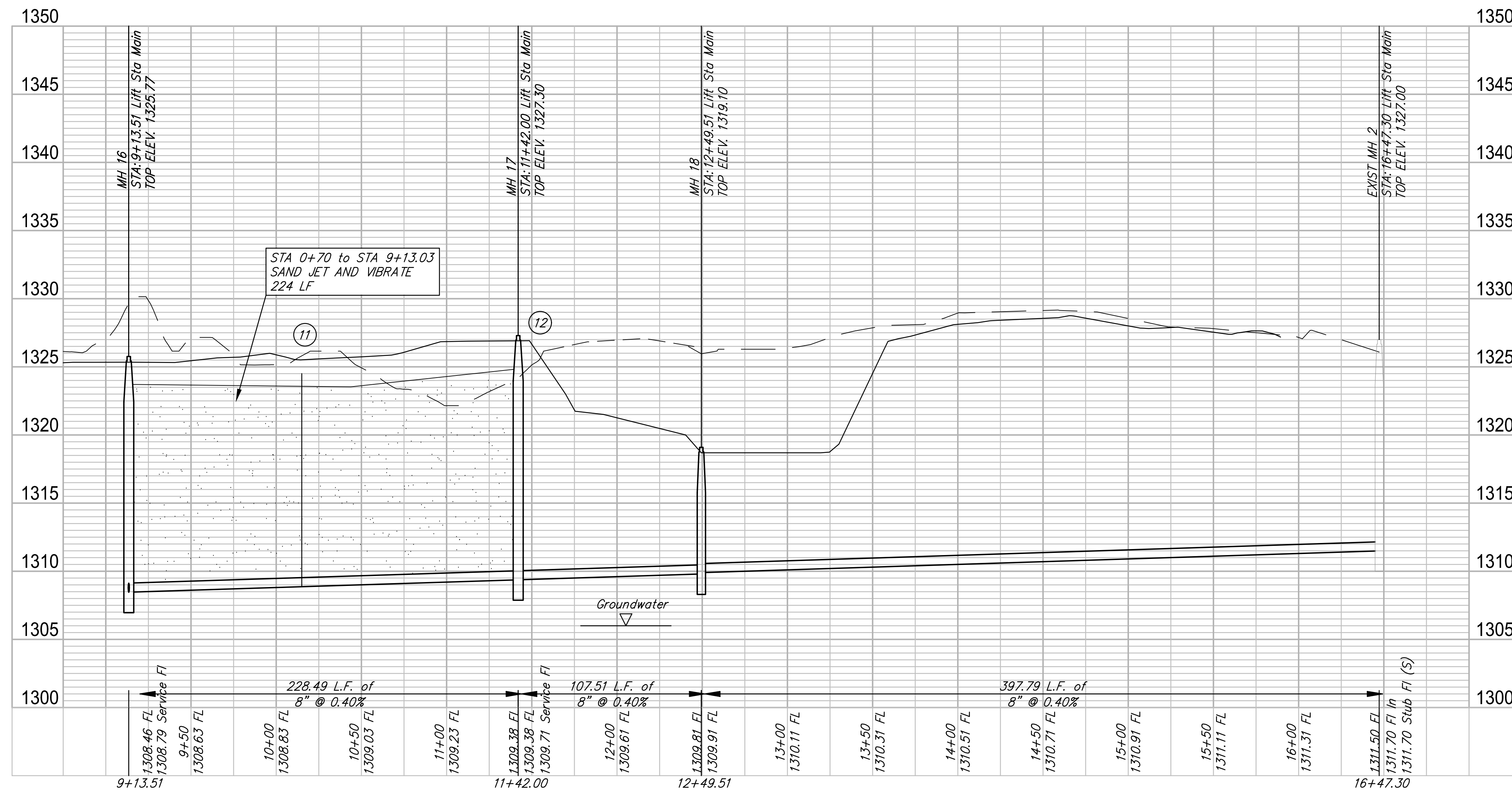
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SHEET NUMBER **03** OF **28**



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						VERTICAL	HORIZONTAL
11	8"X4" Tee	68	2	LiftSta	10+15 Left	15'	20'
12	MH Connection	69	2	LiftSta	11+42 Left	15'	20'

(X) SEE SHEET 6 FOR RISER TABLE



SS MH 16
 N 1700154.28 E 1631079.21
 STA: 9+13.51, Lift Sta Main
 CONSTRUCT STANDARD MANHOLE
 D = 5'

Riser #11, Sta. 10+15
 Dist. from Main to Riser: 20' Lt.
 Distance from USMH : 127'
 Dist. from DSMH: 101'

SS MH 17
 N 1700382.67 E 1631072.44
 STA: 11+42.00, Lift Sta Main
 CONSTRUCT STANDARD MANHOLE
 D = 5'

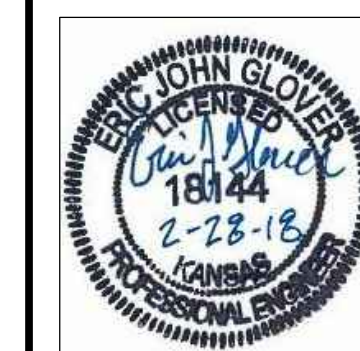
SS MH 18
 N 1700490.18 E 1631072.30
 STA: 12+49.51, Lift Sta Main
 CONSTRUCT STANDARD MANHOLE
 D = 4'

SS MH 17
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 STA: 11+42.00, Lift Sta Main
 CONSTRUCT STANDARD MANHOLE
 D = 5'

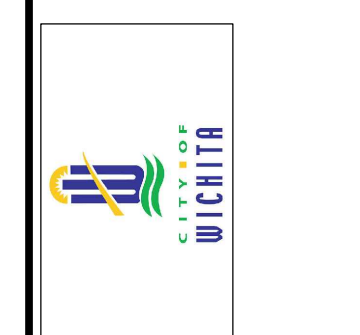
SS EXIST MH 2
 N 1700491.43 E 1631470.09
 STA: 16+47.30, Lift Sta Main
 CONNECT TO EXIST MH
 20' - 8" STUB (S)



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City of Wichita, KS

Emerald Bay 3rd Sanitary Sewer Plans

Sanitary Sewer L2

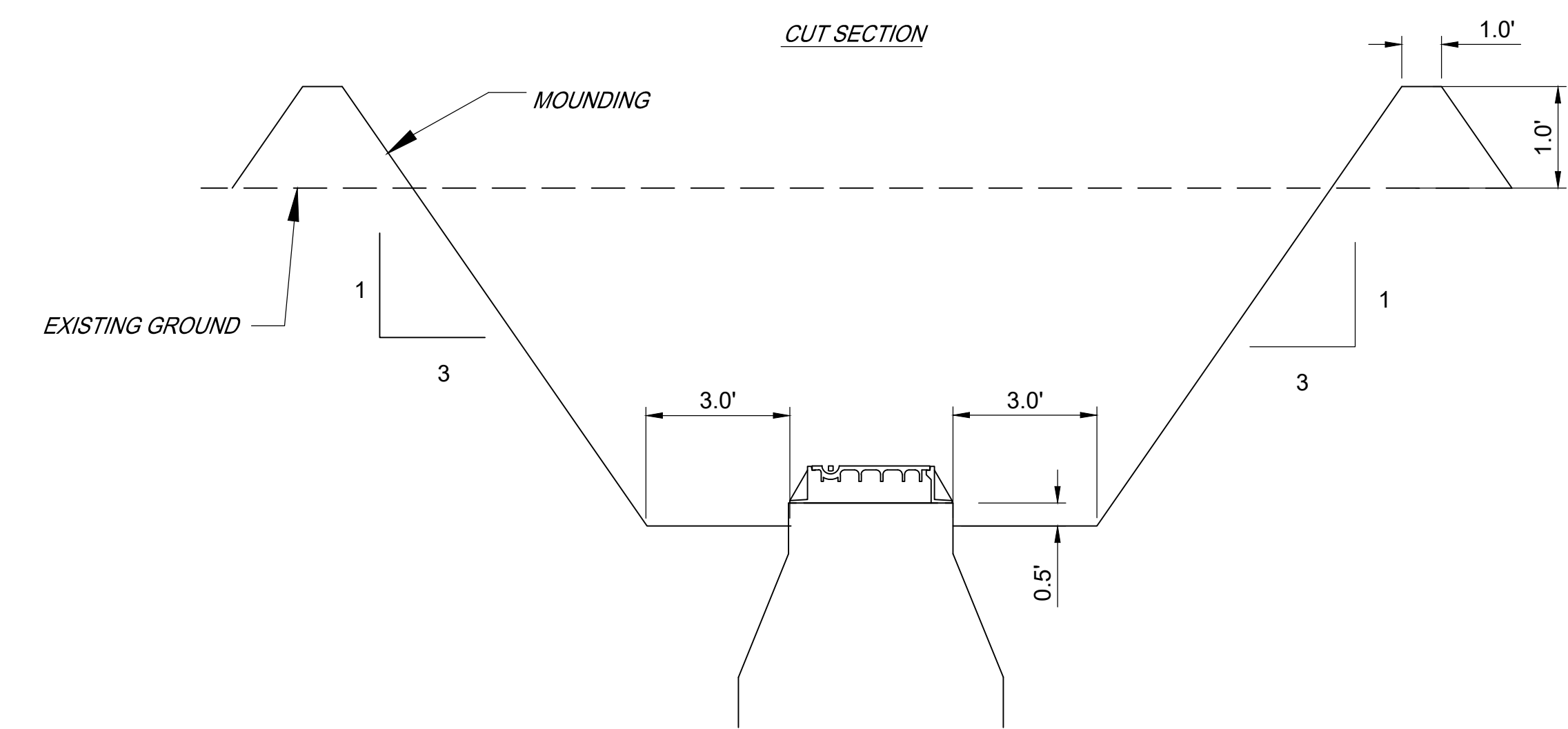
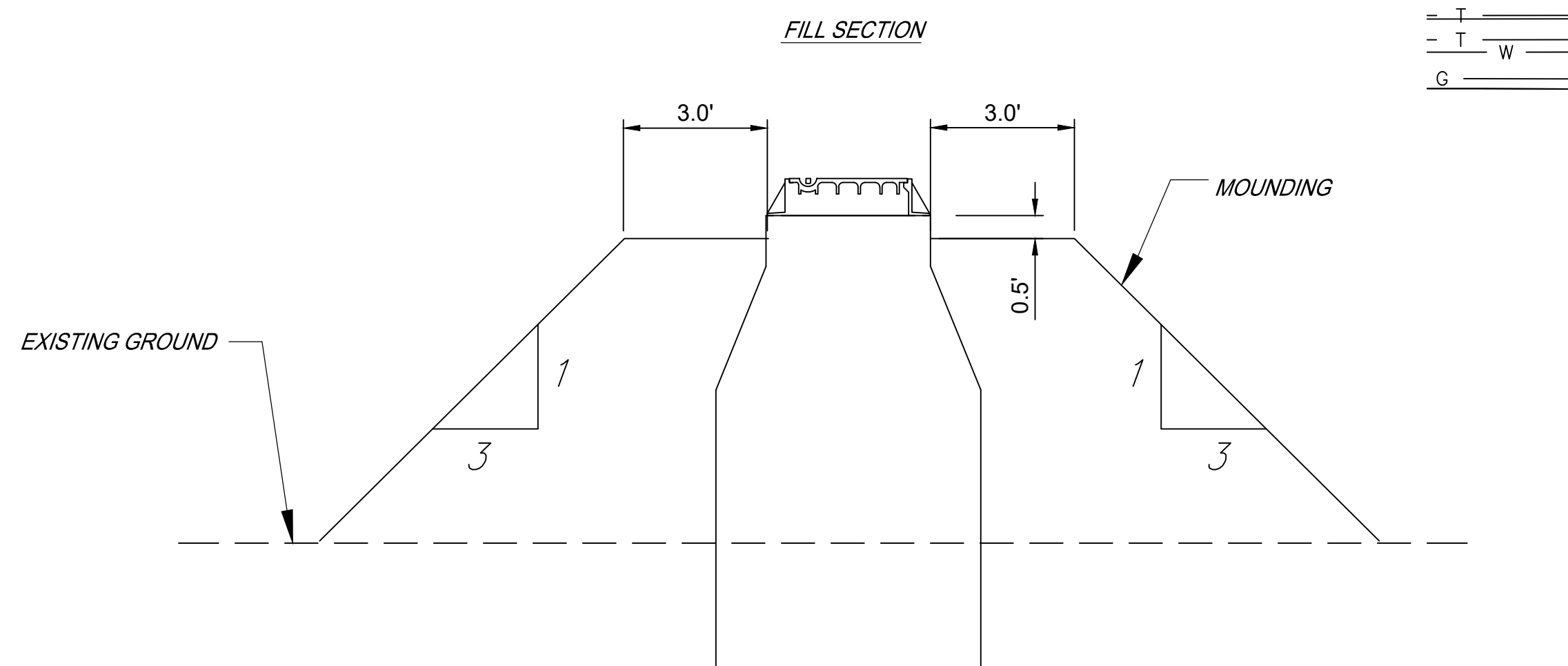
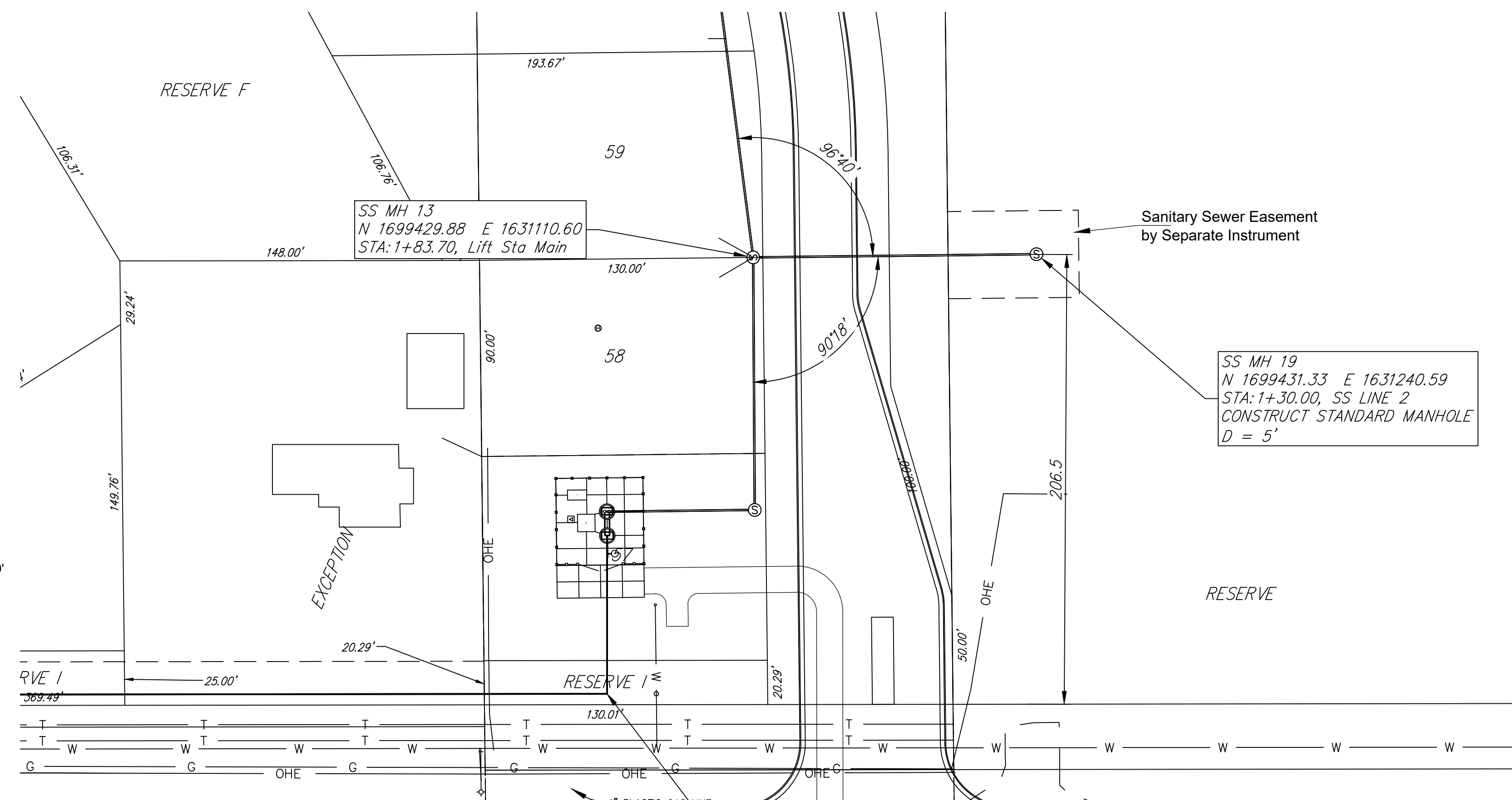
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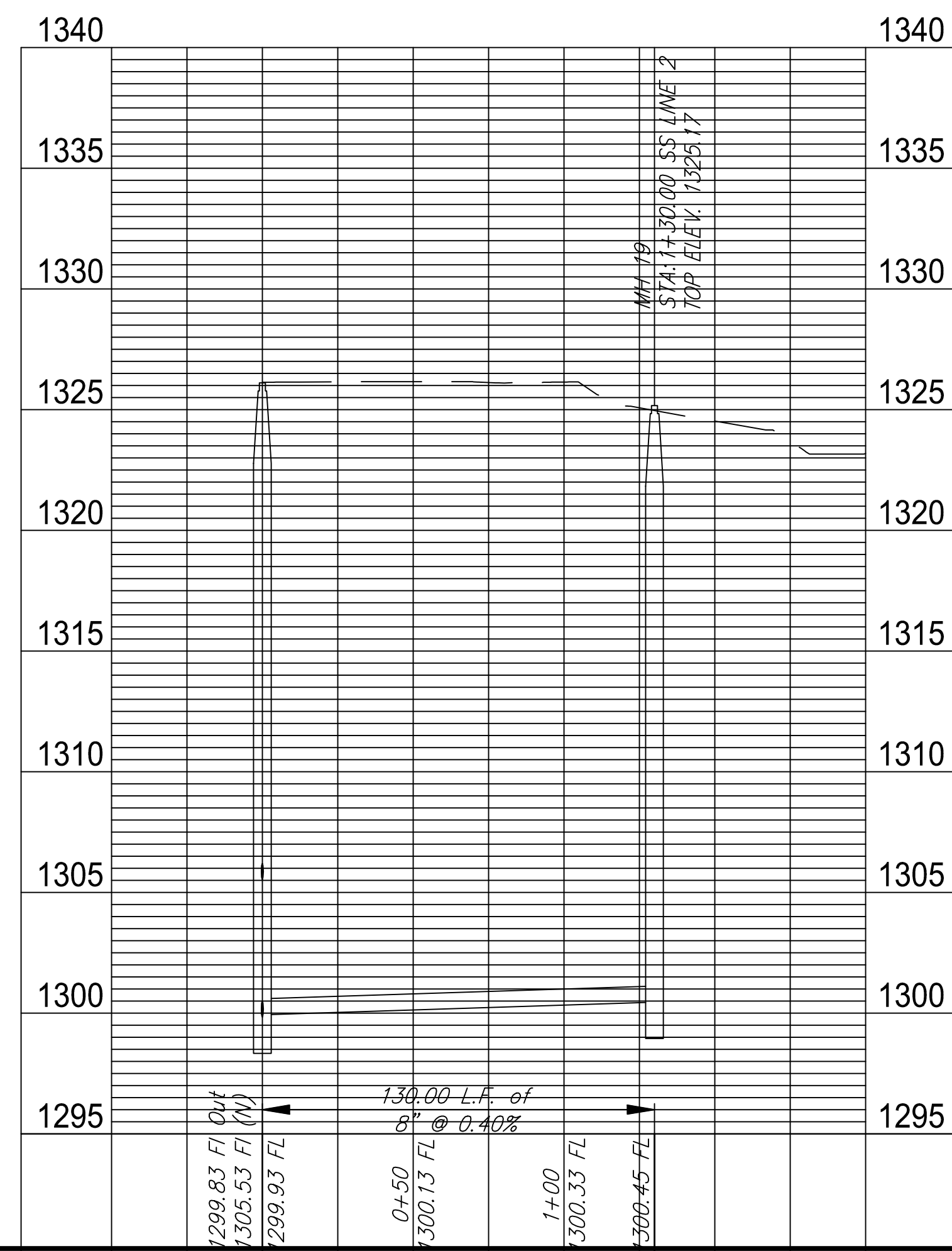
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Manhole Grading Detail
 (Typical)

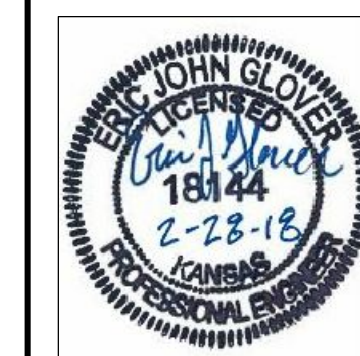


1+83.70

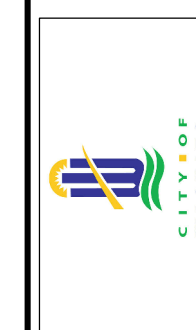
1+30.00



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REV.	DATE	DESCRIPTION	BY



City of Wichita, KS

Emerald Bay 3rd Sanitary Sewer Plans

Lift Station Site Plan

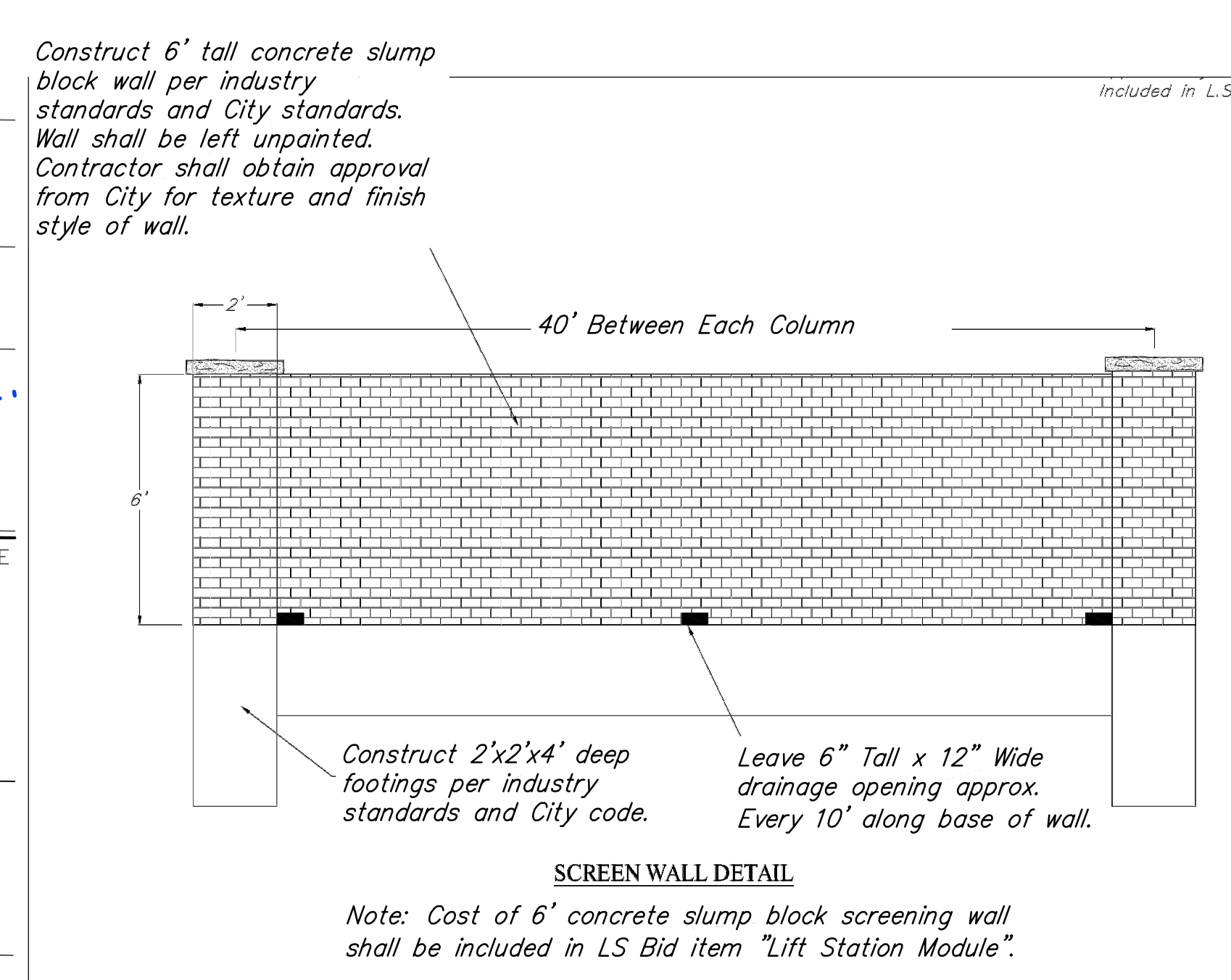
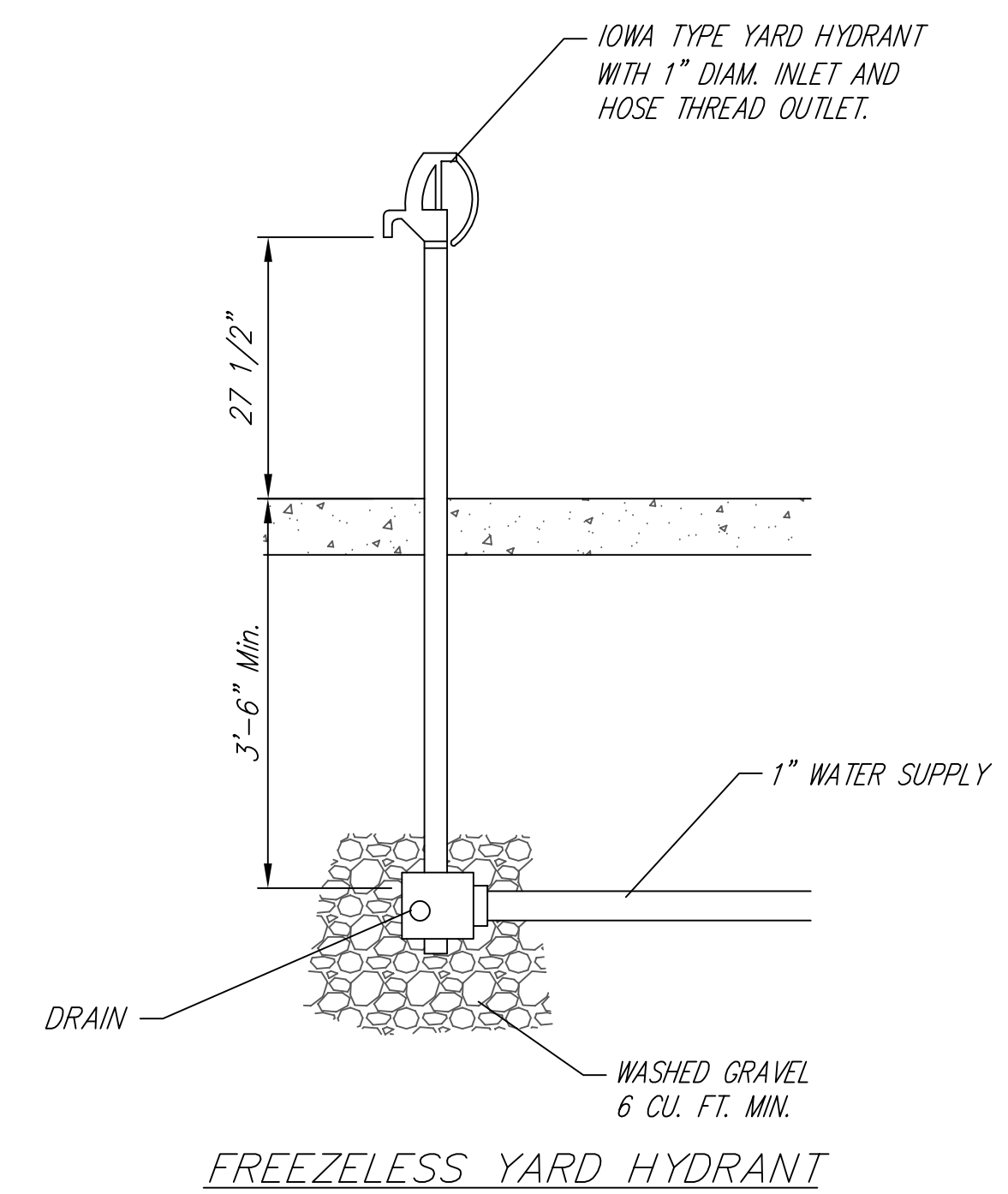
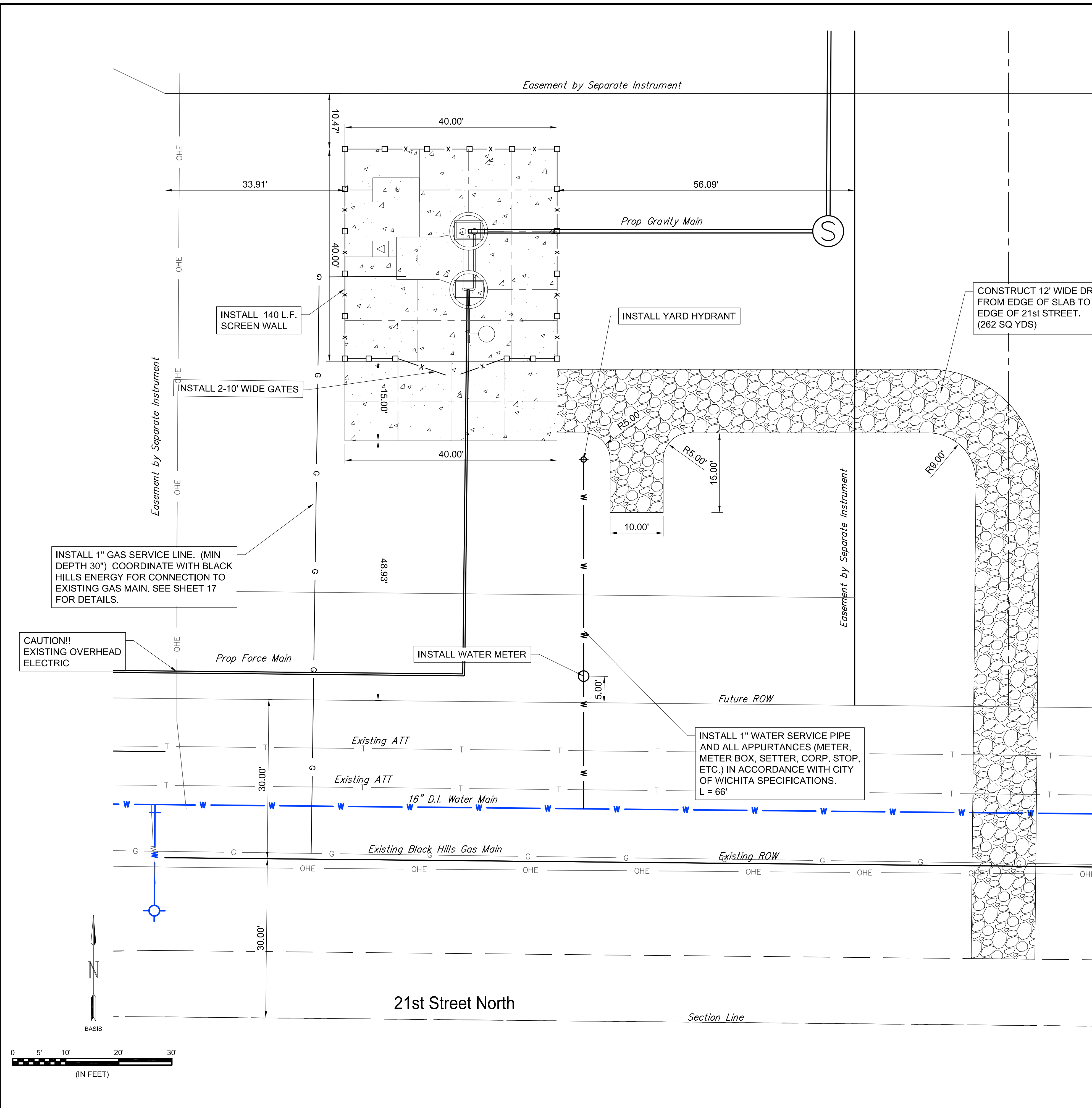
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 DESIGNED BY: E.JG
 DRAWN BY: .

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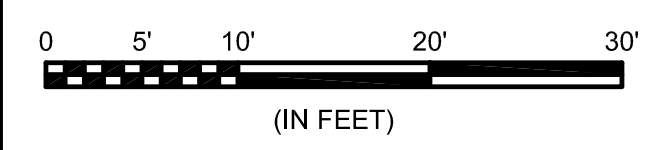
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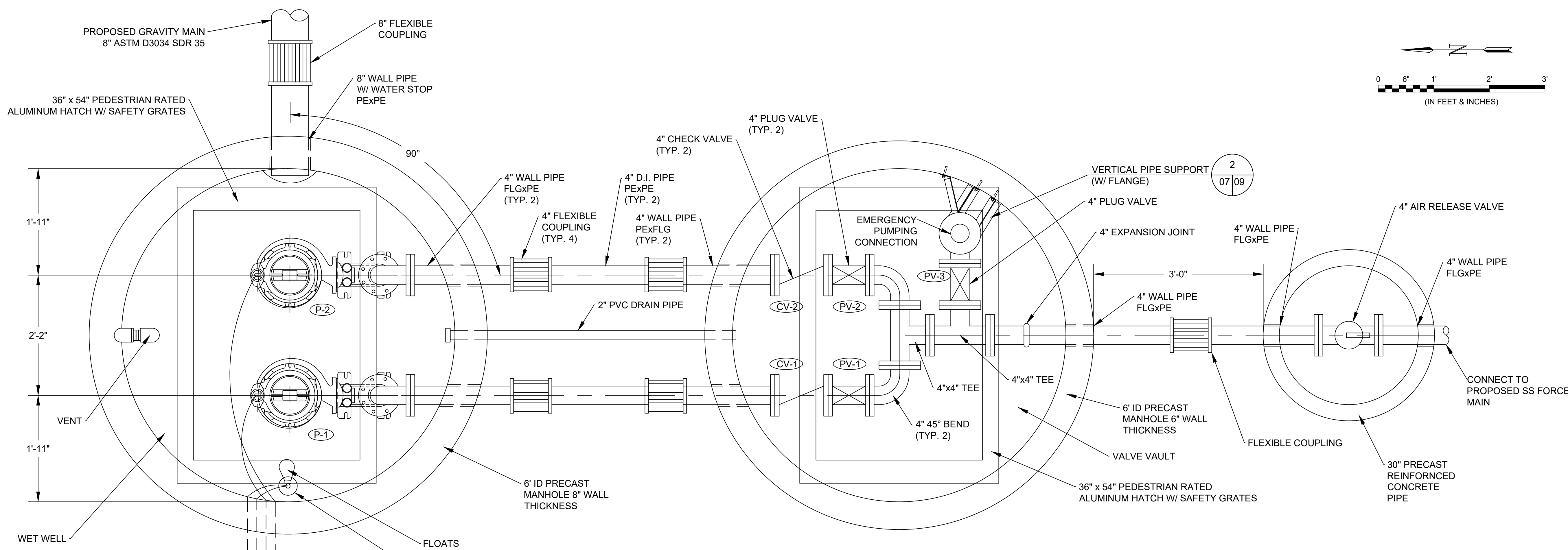
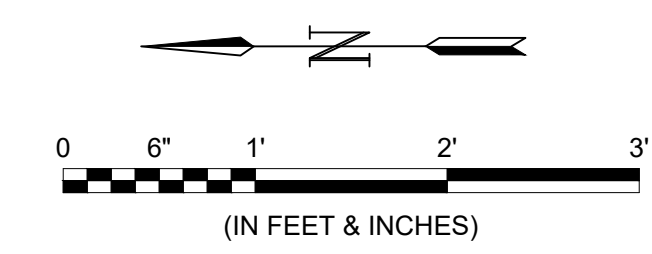


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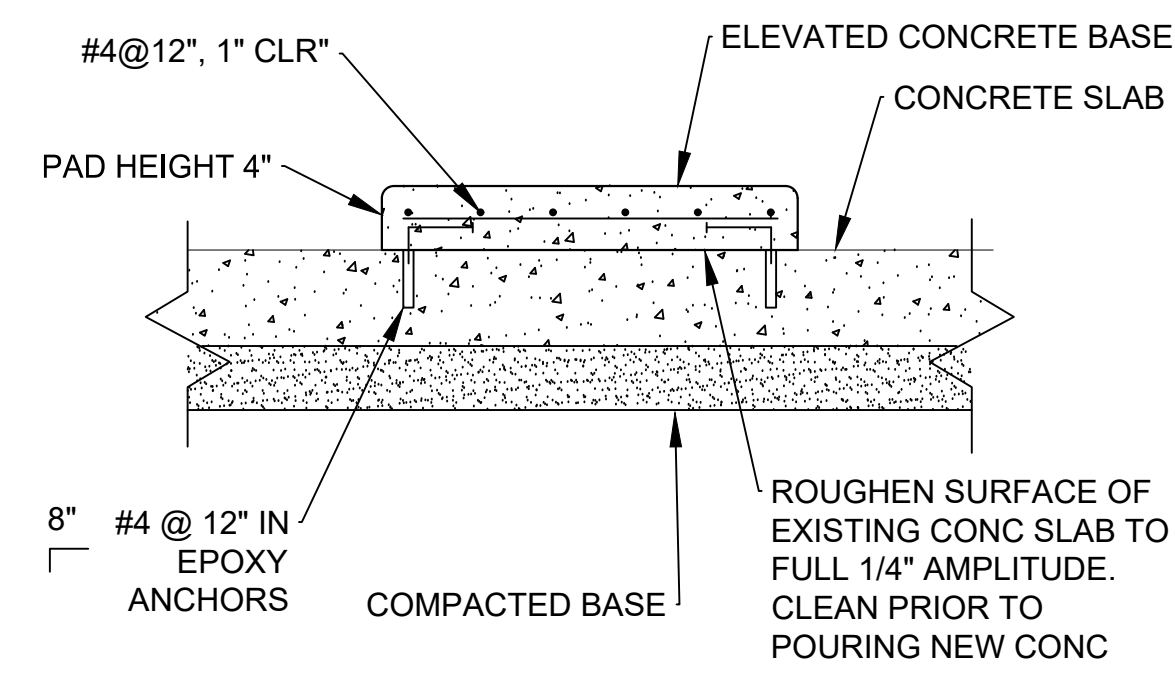




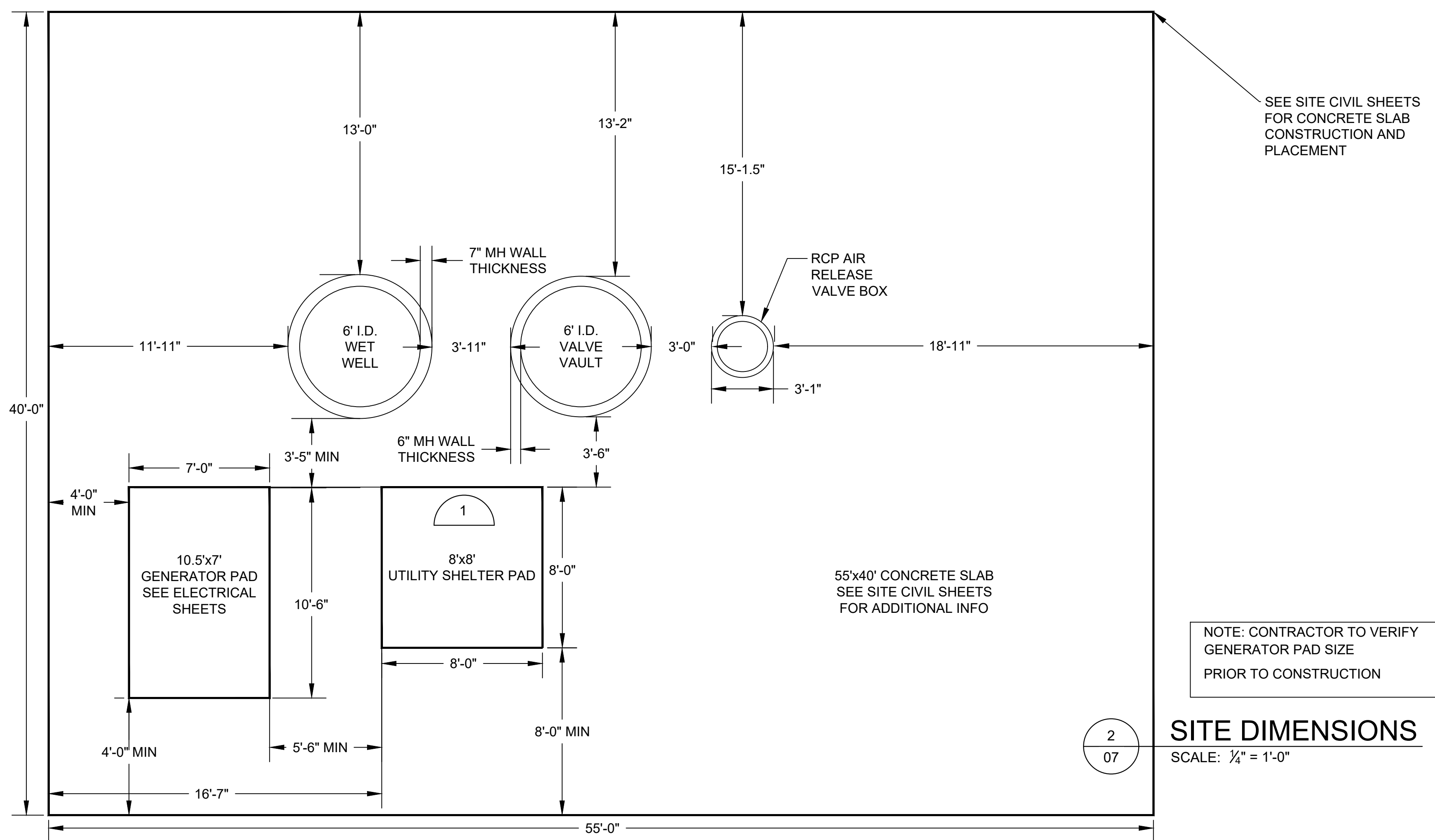
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NOTE: ANCHOR EQUIPMENT TO CONCRETE USING SST CONCRETE ANCHORS SPECIFIED.



1 **ELEVATED PAD SECTION**
 SCALE: NONE



NOTE: CONTRACTOR TO VERIFY GENERATOR PAD SIZE PRIOR TO CONSTRUCTION

2 **SITE DIMENSIONS**
 SCALE: 1/4" = 1'-0"

REV.	DATE	DESCRIPTION	BY

CITY OF WICHITA, KS
 WICHITA, KANSAS
 EMERALD BAY LIFT STATION

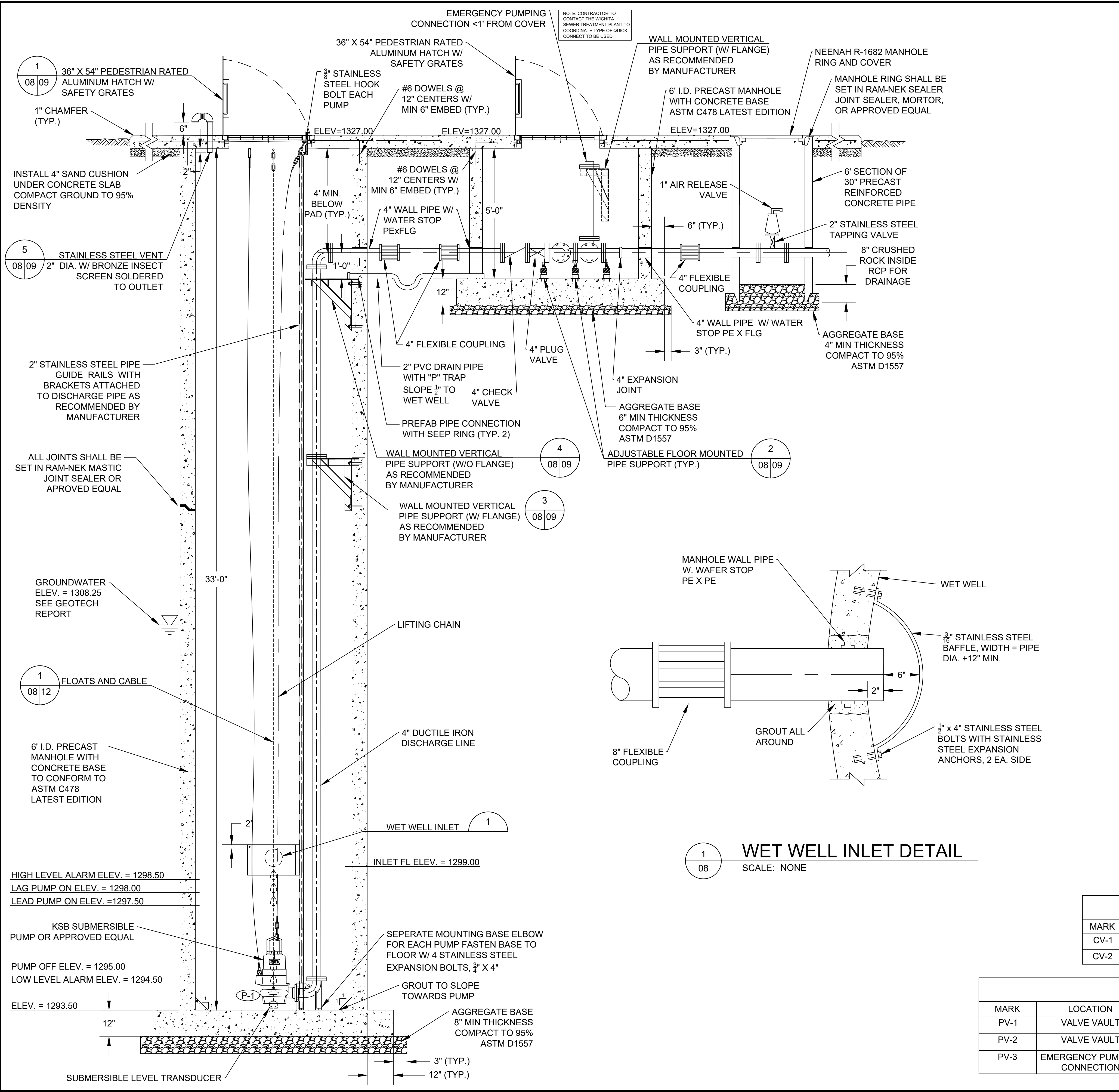
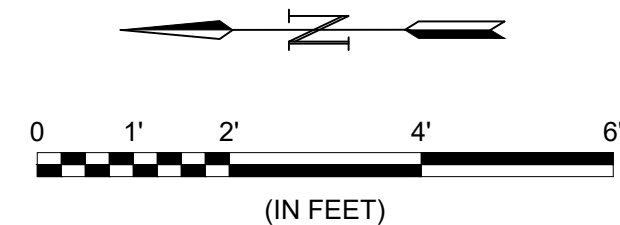
LIFT STATION PLAN

JOB NO.: 17264861
 DATE:
 DESIGNED BY: JGC
 DRAWN BY: JCH

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- NOTES:
- THE PRICE BID FOR FURNISHING AND INSTALLING THE LIFT STATION, INCLUDING THE WET WELL, VALVE VAULT, AND OTHER MISCELLANEOUS APPURTENANCES, SHALL INCLUDE ALL COSTS FOR FURNISHING AND INSTALLING THE LIFT STATION AS INDICATED IN THE PLANS COMPLETE IN PLACE AND IN OPERATION. THIS PRICE SHALL INCLUDE THE COST OF CONSTRUCTING AND/OR INSTALLING COMPACTED SUBGRADE, CONCRETE PAVEMENT, ELECTRICAL CONDUIT, ELECTRICAL WIRING, DISCONNECT SWITCH, PUMP CONTROLS, ELECTRICAL POWER SUPPLY, FINISHED GRADING, LANDSCAPING, FENCING, AND ANY OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK AND PLACE THE LIFT STATION INTO SATISFACTORY OPERATION. THE PRICE BID SHALL INCLUDE ALL SANITARY SEWER PIPE AND FORCE MAIN EXTENDED OUTSIDE THE SLAB AS SHOWN IN THE SITE PLAN AND DETAILS.
 - ALL INTERIOR PIPING SHALL BE CEMENT LINED AND EPOXY COATED DUCTILE IRON PIPE.
 - PIPE PENETRATIONS THROUGH THE WET WELL, VALVE VAULT, AND CONCRETE PAD SHALL BE GROUTED WATERTIGHT WITH NON-SHRINK GROUT AND WATER STOP GASKETS AS REQUIRED.
 - THE CONTRACTOR SHALL PERFORM AN EXFILTRATION TEST ON THE COMPLETE WET WELL. THE WET WELL SHALL BE TESTED INDIVIDUALLY BY SECURELY PLUGGING ALL INLET AND OUTLET PIPES. THE WET WELL SHALL BE FILLED TO ITS FULL DEPTH AND THEN OBSERVED FOR AT LEAST SIX HOURS. EXFILTRATION LOSS FROM THE 6-FOOT DIAMETER WET WELL SHALL NOT EXCEED THE RATE OF 1.70 GALLONS PER FOOT OF WET WELL DEPTH PER DAY. IF EXFILTRATION EXCEEDS THE MAXIMUM LIMITS, THE CONTRACTOR SHALL REPAIR THE LEAKS AND DEFECTS, AND THEN RETEST.
 - THE CONTRACTOR SHALL SUPPORT ALL PIPING INSIDE THE WET WELL AND VALVE VAULT AS REQUIRED.
 - ALL HARDWARE INSIDE THE WET AND VALVE VAULT, INCLUDING BUT NOT LIMITED TO THE GUIDE BAR, HOIST CHAIN, CHAIN CATCH, HOOKS, NUTS, BOLTS, ETC. SHALL BE STAINLESS STEEL. NYLON ROPE WILL NOT BE ALLOWED IN THE WET WELL.
 - WET WELL AND VALVE VAULT DESIGN SHALL BE SUBJECT TO THE SAME DESIGN REQUIREMENTS AS PRECAST MANHOLES.
 - THE INTERIOR OF THE WET WELL SHALL BE COATED WITH A SANITARY SEWER MANHOLE COATING PER SPECIFICATION SECTION 09 97 26.13
 - BACKFILL UNDER AND AROUND THE WET WELL AND UNDER THE VALVE VAULT AND PAD SHALL BE A LOW VOLUME CHANGE MATERIAL COMPACTED TO 95% ASTM D-1557.
 - THE CONTRACTOR SHALL COORDINATE WITH WESTAR ENERGY AND KANSAS GAS SERVICE TO EXTEND ELECTRIC AND GAS SERVICES TO THE PUMP STATION SITE. THE CONTRACTOR SHALL VERIFY THE ELECTRICAL AND GAS SERVICE COSTS & REQUIREMENTS PRIOR TO BIDDING. THE CONTRACTOR SHALL ALLOW A MINIMUM OF 3 WEEKS FOR THESE SERVICES TO BE COMPLETED. ALL COST INCURRED TO EXTEND THESE SERVICES TO THE SITE SHALL BE INCIDENTAL TO OTHER ITEMS IN THE PROJECT.
 - THE CONTRACTOR SHALL VERIFY ALL REQUIREMENTS AND DIMENSIONS OF THE GENERATOR PAD WITH THE GENERATOR SUPPLIER PRIOR TO CONSTRUCTION.
 - NO ELECTRICAL CONNECTIONS WILL BE ALLOWED WITHIN THE WET WELL.
 - CONTACT THE CITY OF WICHITA SEWER TREATMENT PLANT AT (316) 303-8701 PRIOR TO LIFT STATION START-UP.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMIT AND REVIEW FEES.
 - THE UTILITY SHELTER SHALL BE PAINTED TO BLEND IN WITH THE SURROUNDINGS AND PAINTED A COLOR THAT IS SELECTED AND APPROVED BY THE OWNER.

1 08 WET WELL INLET DETAIL SCALE: NONE

PUMP SCHEDULE						
MARK	TYPE	GPM	HEAD (FT)	HP	RPM	VOLT./PHASE
P-1	SUBMERSIBLE	91	40	6.5	1160	460/3
P-2	SUBMERSIBLE	91	40	6.5	1160	460/3

CHECK VALVE SCHEDULE						
MARK	LOCATION	TYPE	STATUS	SIZE	FITTINGS	OPERATOR
CV-1	VALVE VAULT	V608	NEW	4"	FLANGE	LEVER & SPRING
CV-2	VALVE VAULT	V608	NEW	4"	FLANGE	LEVER & SPRING

PLUG VALVE SCHEDULE						
MARK	LOCATION	TYPE	STATUS	SIZE	FITTINGS	OPERATOR
PV-1	VALVE VAULT	V405	NEW	4"	FLANGE	GEAR ACTUATOR WITH 2" NUT
PV-2	VALVE VAULT	V405	NEW	4"	FLANGE	GEAR ACTUATOR WITH 2" NUT
PV-3	EMERGENCY PUMPING CONNECTION	V405	NEW	4"	MJ	GEAR ACTUATOR WITH 2" NUT

REV.	DATE	DESCRIPTION	BY

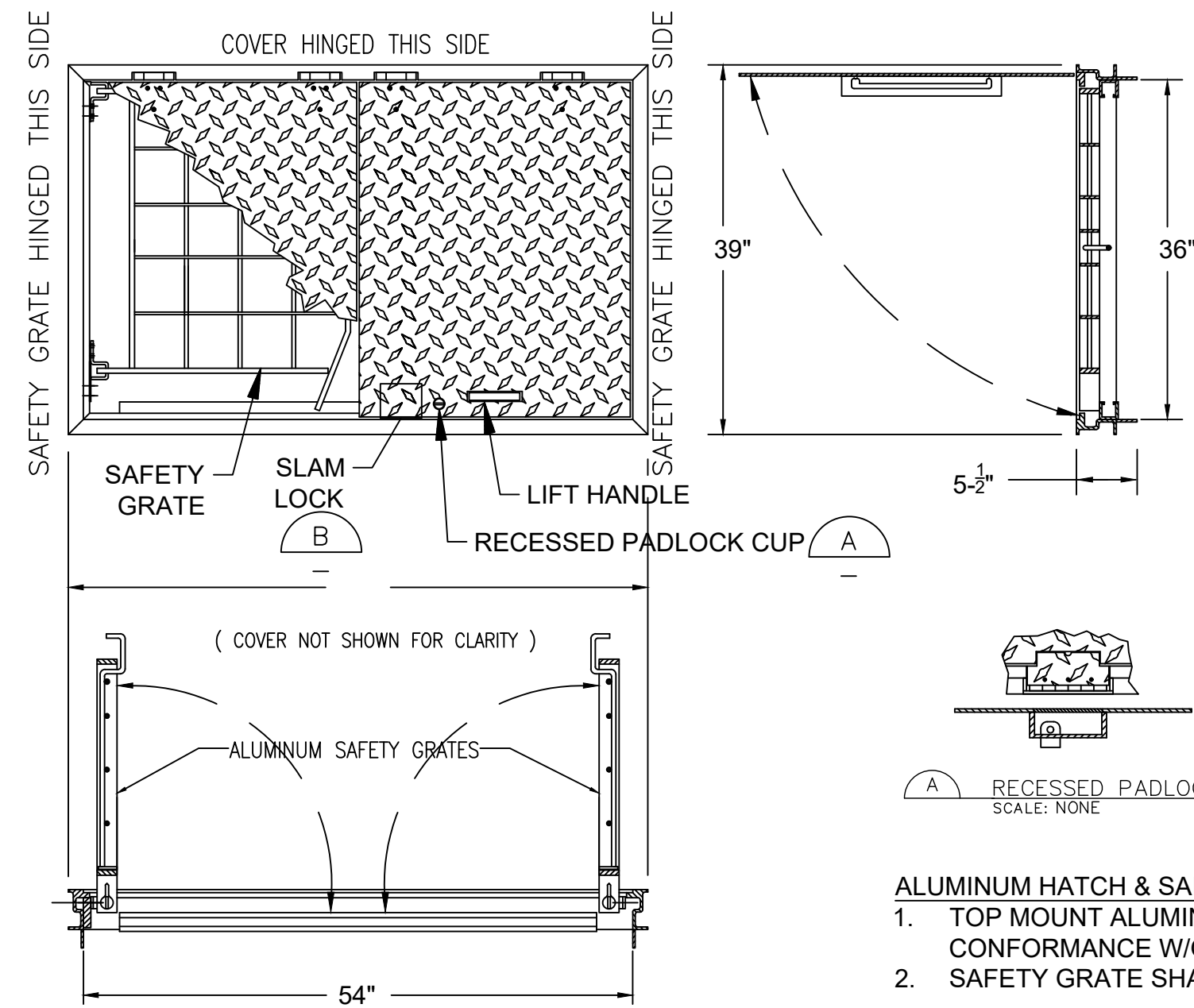
CITY OF WICHITA, KS
 WICHITA, KANSAS
 EMERALD BAY LIFT STATION

LIFT STATION PLAN

JOB NO.: 17264861
 DATE:
 DESIGNED BY: JGC
 DRAWN BY: JCH

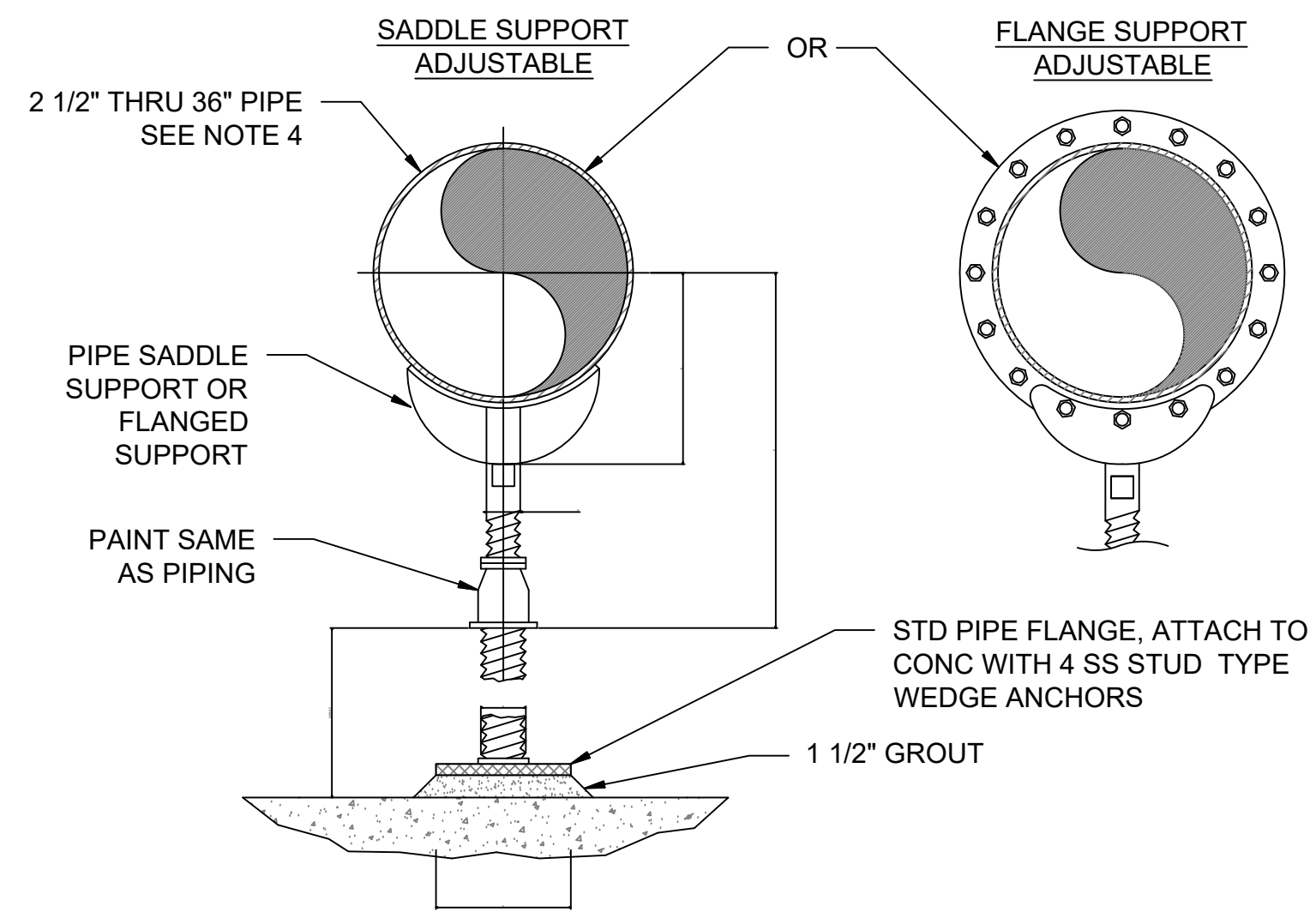
BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER



- ALUMINUM HATCH & SAFETY GRATE SPECIFICATIONS:**
1. TOP MOUNT ALUMINUM SAFETY GRATE SHALL COVER OPENING IN CONFORMANCE W/OSHA 1910.23.
 2. SAFETY GRATE SHALL HAVE A MINIMUM OF 300 PSF LOADING CAPACITY.

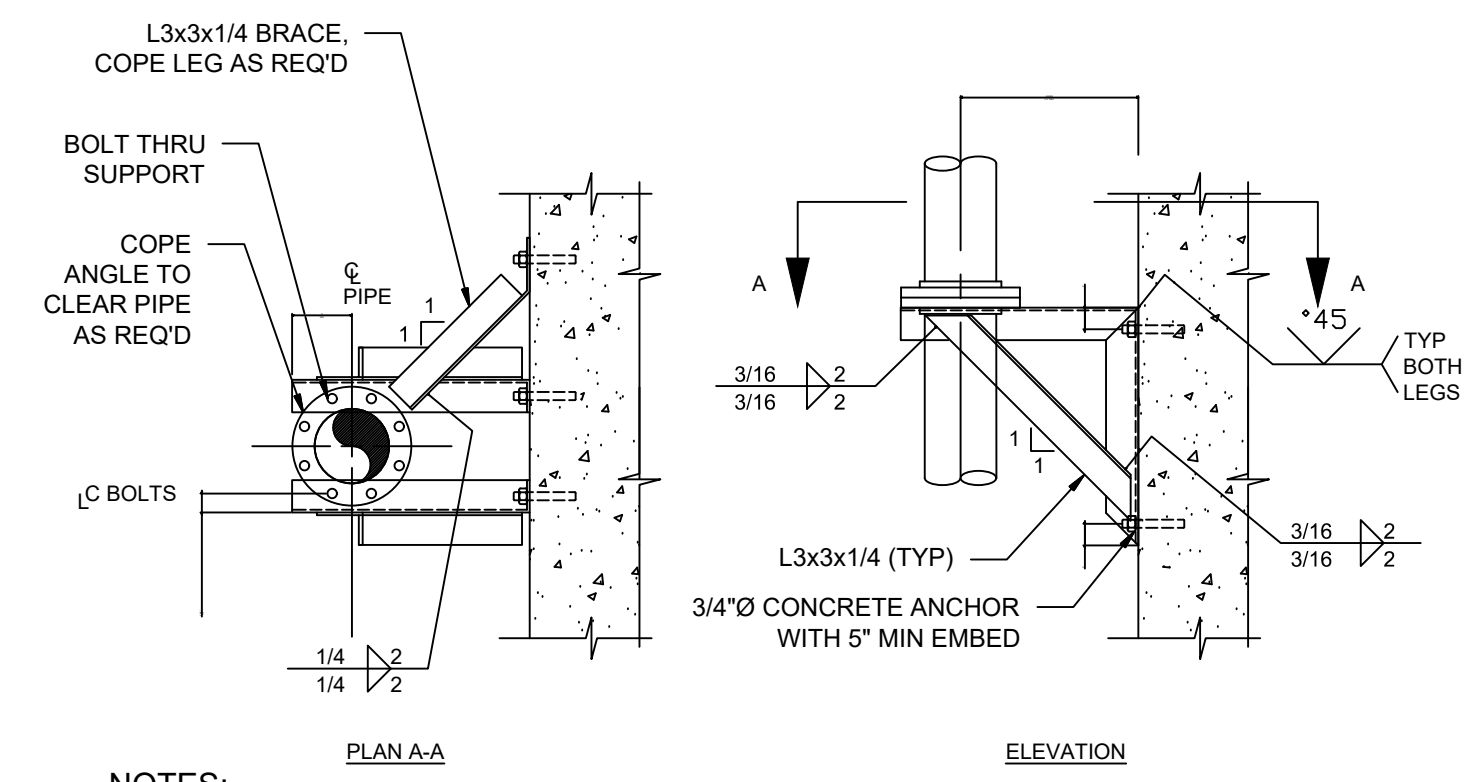
1
09 **ALUMINUM HATCH W/ SAFETY GRATE**
SCALE: NONE



PIPE SIZE	A	B	C	D	E	
					MIN	MAX
2-1/2"	2-1/2"	3-1/2"	9"	1-1/2"	8"	13"
3"	2-1/2"	3-3/4"	9"	1-1/2"	8-1/4"	13-1/4"
3-1/2"	2-1/2"	4"	9"	1-1/2"	8-1/2"	13-1/2"
4"	3"	4-1/4"	9"	2-1/2"	9-1/4"	14"
5"	3"	4-7/8"	9"	2-1/2"	10"	14-3/4"
6"	3"	5-1/2"	9"	2-1/2"	10-1/2"	15-1/4"
8"	3"	6-7/8"	9"	2-1/2"	11-3/4"	15-1/2"
10"	3"	8-1/2"	9"	2-1/2"	13-1/2"	18-1/4"
12"	3"	9-15/16"	9"	2-1/2"	15"	19-3/4"
14"	4"	10-15/16"	11"	3"	16-1/4"	20-3/4"
16"	4"	12-3/8"	11"	3"	17-3/4"	22-1/4"
18"	6"	13-7/8"	13-1/2"	3-1/2"	19-1/2"	24"
20"	6"	15-3/8"	13-1/2"	3-1/2"	21"	25-1/2"
24"	6"	17-15/16"	13-1/2"	4"	23-3/4"	28-1/4"
30"	6"	21-5/16"	13-1/2"	4"	27"	31-1/2"
32"	6"	22-1/2"	13-1/2"	4"	28-1/4"	32-3/4"
36"	6"	24-1/2"	13-1/2"	4"	30-1/4"	34-3/4"

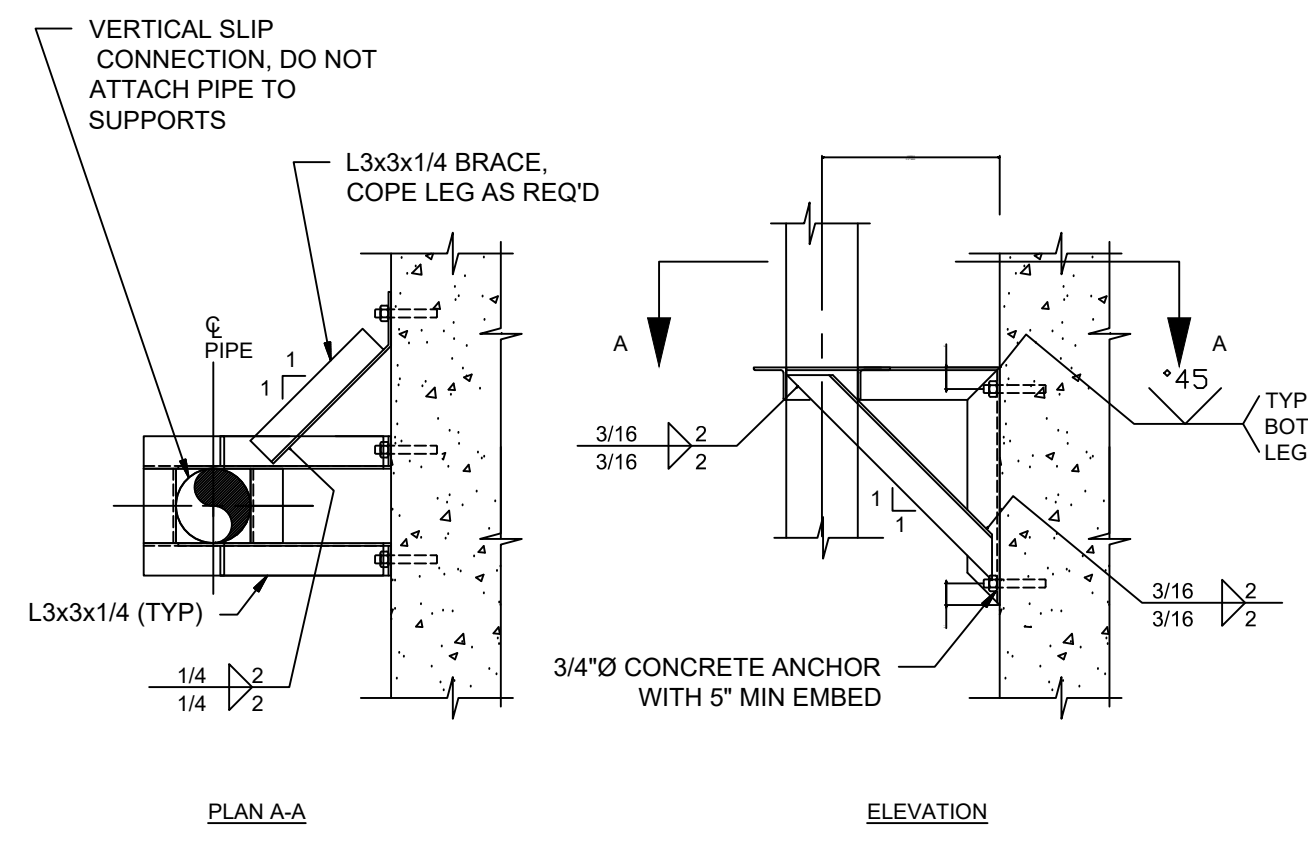
- NOTES:**
1. PROVIDE HALF ROUND RIGID INSULATION AND INSULATION PROTECTION SHIELD WHERE PIPING IS INSULATED
 2. PROVIDE NEOPRENE WAFFLE INSULATION PAD, SIMILAR TO MASON TYPE "W" OR KORFUND 40, UNDER SUPPORT FOOT WHEN PIPING IS ISOLATED OR SUPPORT IS ADJACENT TO MECHANICAL EQUIPMENT.
 3. FOR BASE, HEIGHT AND FLANGE DIMENSIONS, SEE TABLE
 4. USE 2 1/2" SUPPORTS FOR PIPES LESS THAN 2 1/2"Ø

2
09 **ADJUSTABLE FLOOR MOUNTED PIPE SUPPORT**
SCALE: NONE



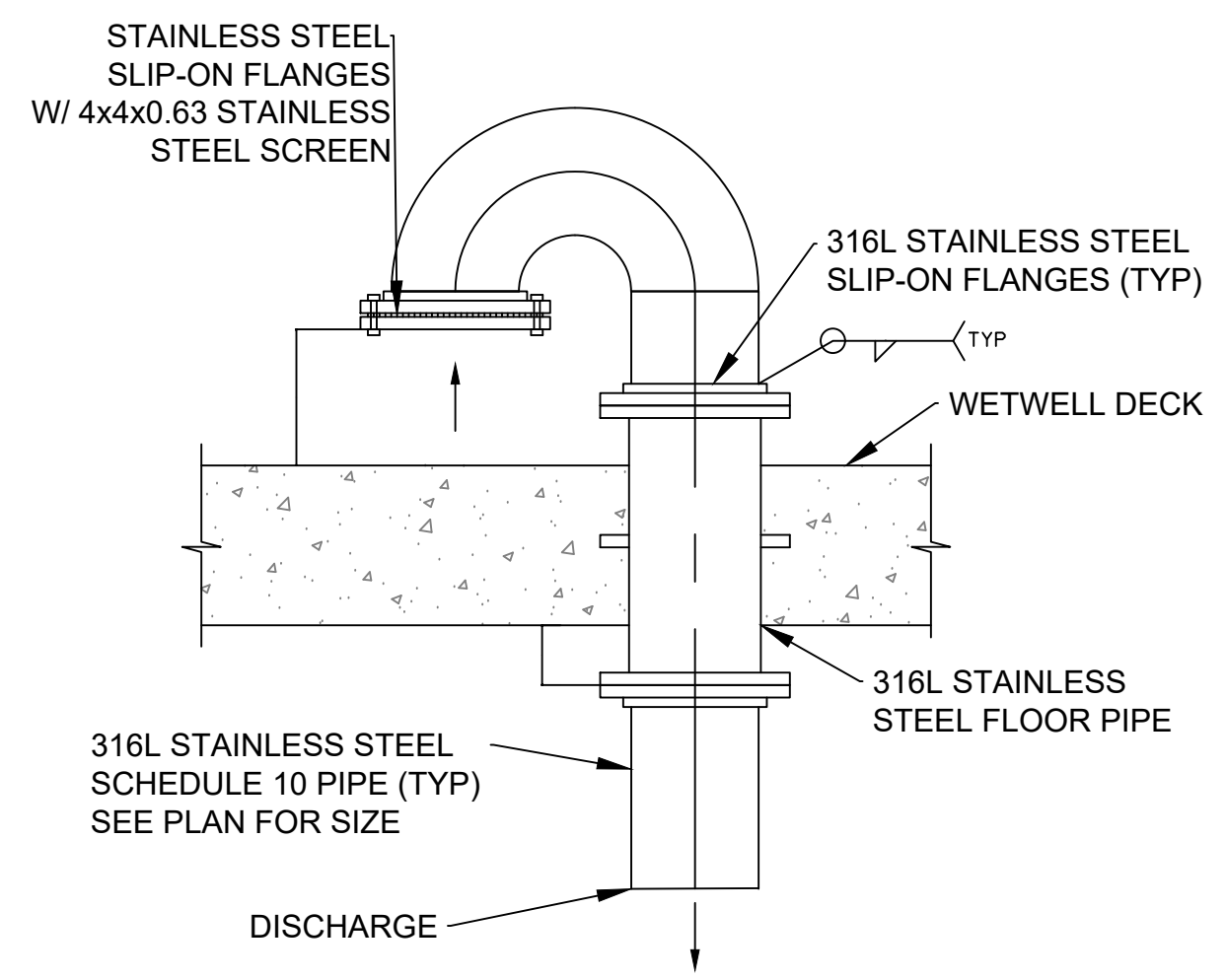
- NOTES:**
1. PIPE SUPPORT IS TO BE USED FOR 4"Ø AND LARGER PIPE.
 2. MAXIMUM ALLOWABLE VERTICAL LOAD = 900 POUNDS.
 3. IF SUPPORT IS SUBMERGED OR LOCATED BELOW THE TOP OF WALL IN WATER BEARING STRUCTURE, MATERIAL FOR ANCHOR BOLTS AND STRAP SHALL BE STAINLESS STEEL. IN ALL OTHER AREAS, MATERIAL FOR ANCHOR BOLTS AND STRAP SHALL BE HOT-DIP GALVANIZED STEEL UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

3
09 **WALL MOUNTED VERTICAL PIPE SUPPORT (W/ FLANGE)**
SCALE: NONE

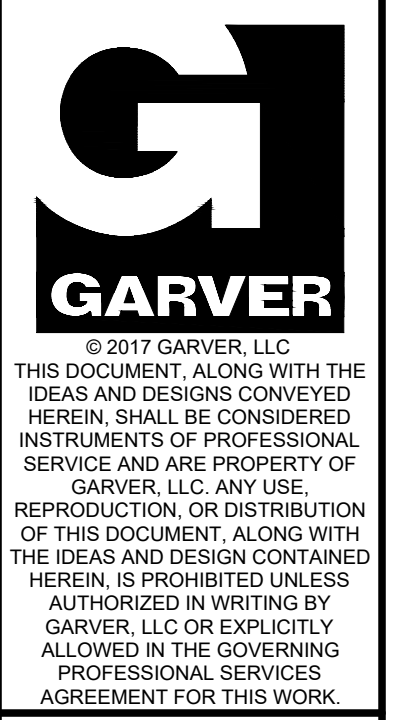


- NOTES:**
1. PIPE SUPPORT IS TO BE USED FOR 4"Ø AND LARGER PIPE.
 2. IF SUPPORT IS SUBMERGED OR LOCATED BELOW THE TOP OF WALL IN WATER BEARING STRUCTURE, MATERIAL FOR ANCHOR BOLTS AND STRAP SHALL BE STAINLESS STEEL. IN ALL OTHER AREAS, MATERIAL FOR ANCHOR BOLTS AND STRAP SHALL BE HOT-DIP GALVANIZED STEEL UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

4
09 **WALL MOUNTED VERTICAL PIPE SUPPORT (W/O FLANGE)**
SCALE: NONE



5
09 **STAINLESS STEEL VENT DETAIL**
SCALE: NONE



BY	DESCRIPTION	DATE	REV.

CITY OF WICHITA, KS
WICHITA, KANSAS
EMERALD BAY LIFT STATION

LIFT STATION DETAILS

JOB NO.: 17264861
DATE:
DESIGNED BY: JGC
DRAWN BY: JCH

BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER

SHEET NUMBER **09** OF **28**



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA, KS
 WICHITA, KANSAS
 EMERALD BAY LIFT STATION

ONLINE DIAGRAM AND PANEL ELEVATION DRAWING

JOB NO.: 17264861
 DATE:
 DESIGNED BY: JCW
 DRAWN BY: SAH

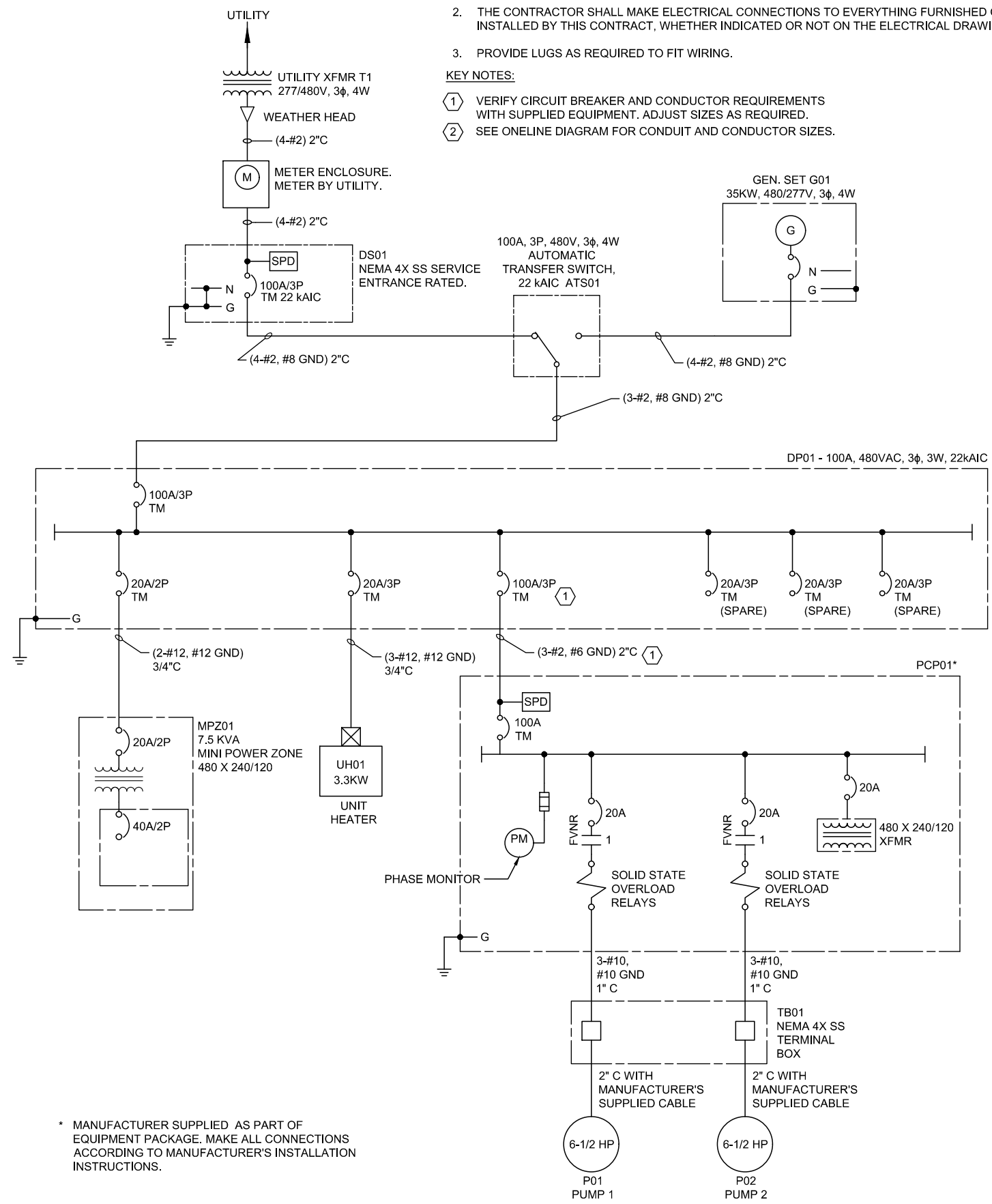
BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
 DRAWING NUMBER
E1
 SHEET NUMBER
10

GENERAL NOTES:

- ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 NATIONAL ELECTRICAL CODE, NFPA 101 LIFE SAFETY CODE, NFPA 70E ELECTRICAL SAFETY CODE, STATE ELECTRICAL CODE, AND LOCAL ELECTRICAL CODE.
- THE CONTRACTOR SHALL MAKE ELECTRICAL CONNECTIONS TO EVERYTHING FURNISHED OR INSTALLED BY THIS CONTRACT, WHETHER INDICATED OR NOT ON THE ELECTRICAL DRAWINGS.
- PROVIDE LUGS AS REQUIRED TO FIT WIRING.

KEY NOTES:

- VERIFY CIRCUIT BREAKER AND CONDUCTOR REQUIREMENTS WITH SUPPLIED EQUIPMENT. ADJUST SIZES AS REQUIRED.
- SEE ONLINE DIAGRAM FOR CONDUIT AND CONDUCTOR SIZES.



1 EMERALD BAY LIFT STATION ONELINE DIAGRAM
 E1 SCALE: NONE

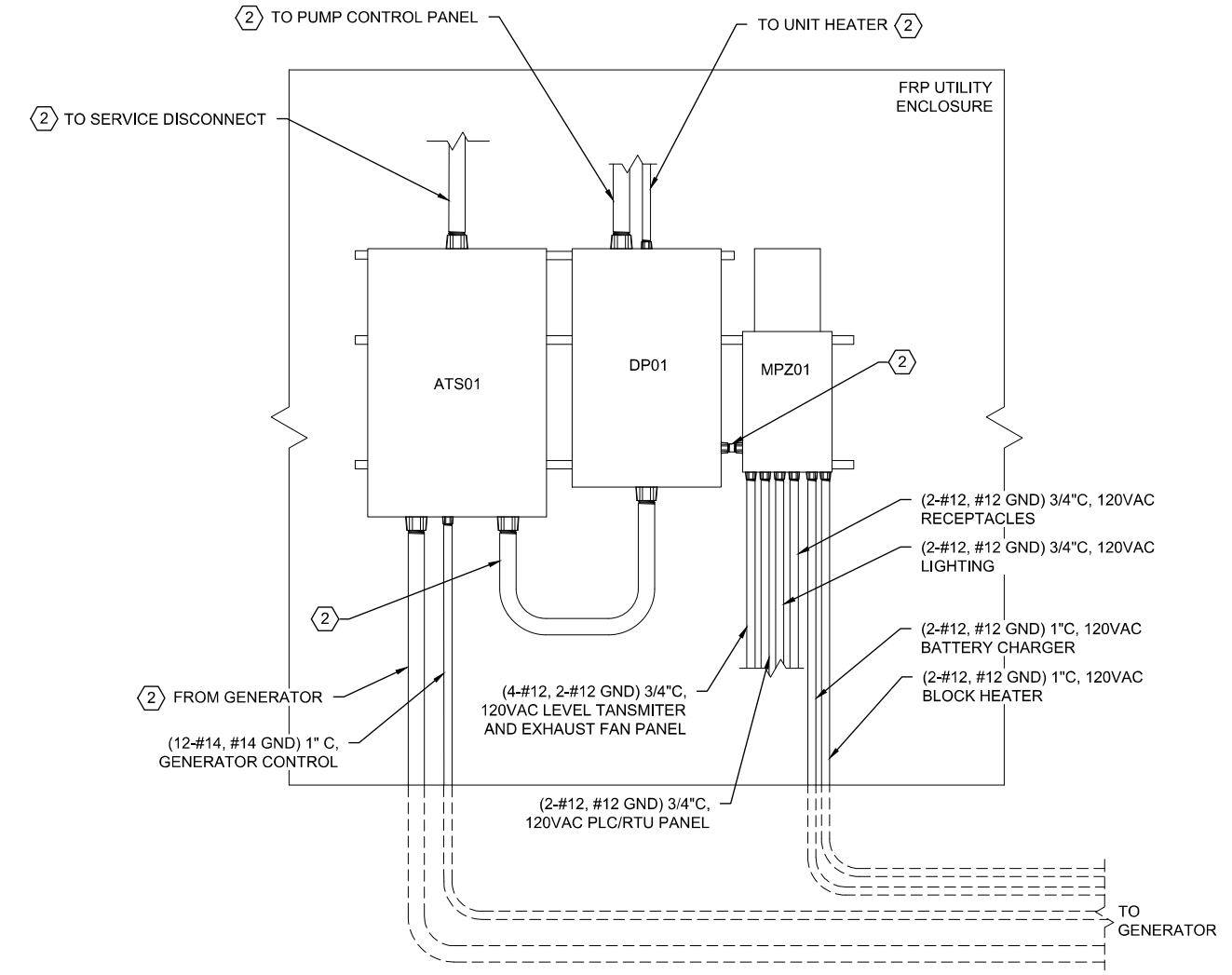
PROVIDE CONNECTIONS AT GENERATOR FOR BATTERY CHARGER, BLOCK HEATER, AND CONTROLS FROM ATS AS REQUIRED. COORDINATE CIRCUIT SIZES FOR EQUIPMENT AND CONTROL CABLING REQUIREMENTS WITH GENERATOR MANUFACTURER PRIOR TO INSTALLATION.

- 120VAC TO MPZ FOR BATTERY CHARGER
- 120VAC TO MPZ FOR BLOCK HEATER
- CONTROL TO ATS
- TO ATS

2 EMERALD BAY GENERATOR ELEVATION
 E1 SCALE: NONE

GENERAL NOTE:

ELECTRICAL CONTRACTOR SHALL VERIFY CONDUIT QUANTITIES NEEDED. ALL CONDUITS REQUIRED MAY NOT BE SHOWN IN THIS RISER DIAGRAM.



3 EMERALD BAY POWER PANELS ELEVATION
 E1 SCALE: NONE

File: L:\2017\17264861 - Emerald Bay Lift Station Drawings\EBLS-E1.dwg, Last Save: 2/28/2018 3:39 PM, Last saved by: JCHaydock
 Last plotted by: Haydock, Joseph C., Plot Style: AECmono.ctb, Plot Scale: 1/0.4255, Plot Date: 2/28/2018 3:52 PM, Plotter used: DWG To PDF.pc3

* MANUFACTURER SUPPLIED AS PART OF EQUIPMENT PACKAGE. MAKE ALL CONNECTIONS ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA, KS
 WICHITA, KANSAS
 EMERALD BAY LIFT STATION

LIFT STATION
 ELECTRICAL SITE PLAN

JOB NO.: 17264861
 DATE:
 DESIGNED BY: SAH
 DRAWN BY: SAH

BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER


E2

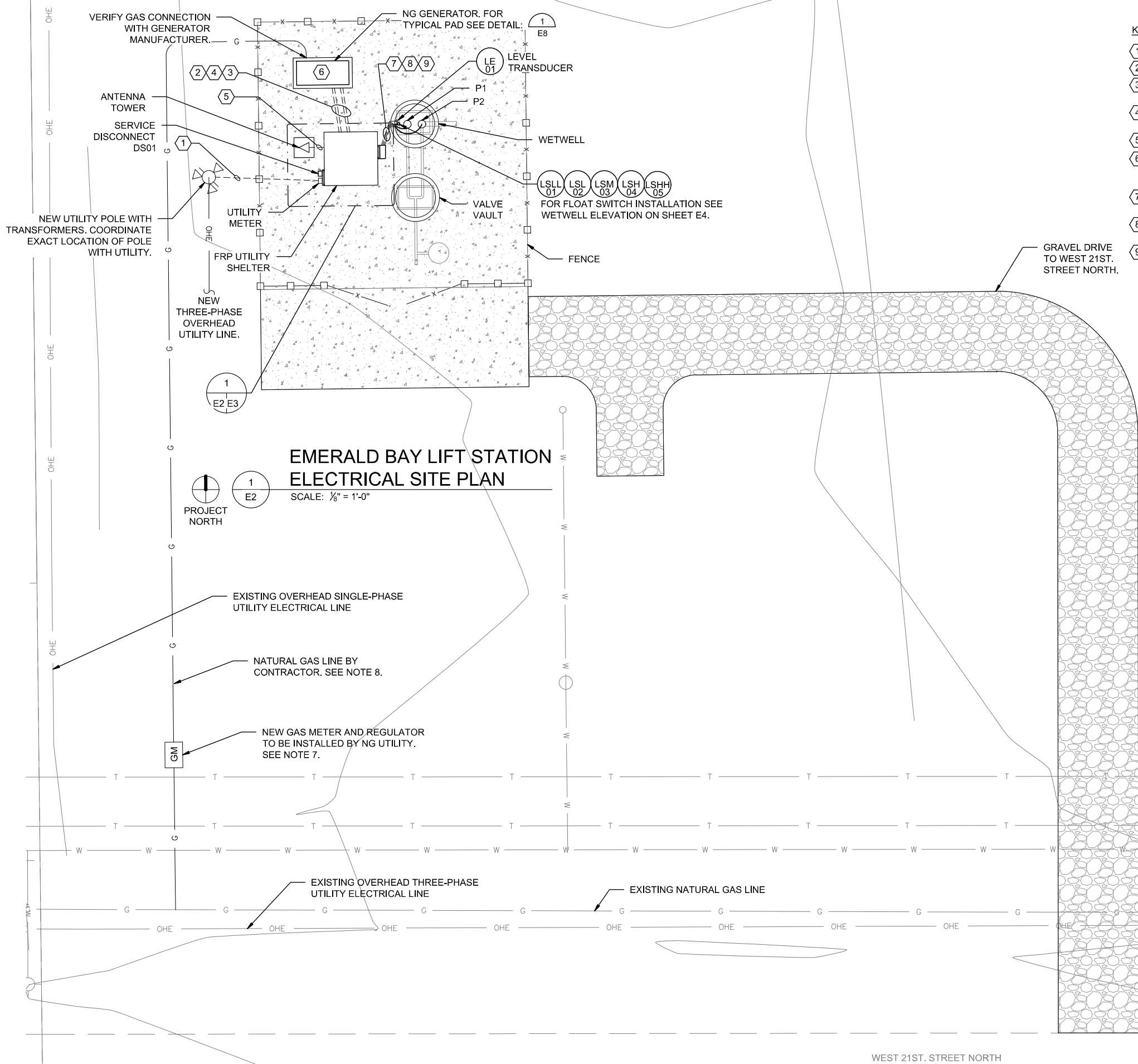
SHEET NUMBER **11**

KEY NOTES:

- 1 SEE ONLINE ON SHEET E1 FOR CONDUIT AND CONDUCTOR SIZING.
- 2 (12-#14, #14 GND) 1" C CONTROL, FROM ATS TO GENERATOR.
- 3 (2) (2-#12, #12 GND) 1" C, 120VAC POWER FROM MPZ IN UTILITY SHELTER TO GENERATOR FOR BATTERY CHARGER AND BLOCK HEATER.
- 4 SEE ONELINE ON SHEET E1 FOR CONDUIT AND CONDUCTOR SIZING FOR 480VAC FROM GENERATOR TO AUTOMATIC TRANSFER SWITCH.
- 5 (RF CABLE) 2" C, SIGNAL. FROM ANTENNA TO PLC/RTU CONTROL PANEL.
- 6 MAKE ALL REQUIRED CONNECTIONS BETWEEN GENERATOR, AUTOMATIC TRANSFER SWITCH, AND MINI POWER ZONE ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 7 (2) (MANUFACTURER'S SUPPLIED PUMP CORDS) 2" C, 480 VAC, FROM WET WELL, THROUGH VENTRIB TROUGH, TO JUNCTION BOX TB01.
- 8 (MANUFACTURER'S SUPPLIED CABLES) 2" C, SIGNAL. FROM FLOAT SWITCHES LS01/02/03/04 AT WETWELL, THROUGH VINTRIB TROUGH, TO TB01.
- 9 (MANUFACTURER SUPPLIED CABLE) 1" C, SIGNAL. FROM LEVEL TRANSDUCER LE01, THROUGH VENTRIB TROUGH, TO JUNCTION BOX TB01.

GENERAL NOTES:

1. UNLESS OTHERWISE NOTED, ALL CONDUIT AND PORTIONS OF THE CONDUIT SYSTEM SHALL BE SURFACE MOUNTED AND THE CONDUIT SYSTEM WITHIN THE FRP UTILITY SHELTER SHALL BE GALVANIZED RIGID STEEL. ALL OTHERS SHALL BE PVC COATED RIGID STEEL. ALL BOXES, SUPPORTS, HANGERS, UNISTRUT AND ALL OTHER PORTIONS OF THE CONDUIT SYSTEM WITHIN THE FRP UTILITY SHELTER SHALL BE GALVANIZED STEEL, ALL OTHERS SHALL BE PVC COATED OR STAINLESS STEEL. ALL BELOW GRADE CONDUIT FROM THE WET WELL TO THE ELECTRICAL ENCLOSURE SHALL BE PVC COATED RIGID STEEL. ALL OTHERS SHALL BE SCHEDULE 40 PVC WITH GALVANIZED ELBOWS.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, WIRING, TERMINATIONS, DISCONNECTS, CONTROL RELAYS, CONTROL ENCLOSURES AND OTHER ITEMS AS NECESSARY FOR COMPLETE AND FUNCTIONAL LIFT STATION. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS AND OTHER SECTIONS OF THE PLANS FOR ITEMS AS MAY BE REQUIRED.
3. COORDINATE ALL CONDUIT ROUTING WITH ENGINEER PRIOR TO INSTALLATION.
4. FIELD LOCATE FINAL LOCATIONS OF ALL DIRECT BURIED CONDUITS AND PULLBOXES (IF REQUIRED). PROVIDE PULLBOXES AS REQUIRED FOR A WORKABLE INSTALLATION. ALL PULLBOXES SHALL BE APPROPRIATELY SIZED BY THE CONTRACTOR AS REQUIRED BY THE NUMBER OF CONDUITS FOR A WORKABLE INSTALLATION WITH MINIMUM SIZES AS INDICATED WITHIN THE DETAILS. COORDINATE ALL WORK WITH APPLICABLE UTILITY COMPANIES, MATERIAL SUPPLIERS, AND OWNER REPRESENTATIVES.
5. ALL LOCATIONS WITHIN THE WET WELL AS INDICATED ON THIS PLAN SHEET SHALL BE CONSIDERED A CLASS 1, DIVISION 2 HAZARDOUS LOCATION AS DEFINED IN ACCORDANCE WITH NFPA 820.
6. CONTRACTOR SHALL STRICTLY ADHERE TO THE REQUIREMENTS IN NFPA 70, ARTICLE 500, HAZARDOUS (CLASSIFIED) LOCATIONS FOR ALL AREAS REFERENCED IN THE NOTE ABOVE. THIS INCLUDES PROVIDING APPROPRIATE SEAL FITTINGS ON CONDUITS AND CABLES ALONG WITH PROVIDING EXPLOSION PROOF EQUIPMENT, RATED FOR THE CLASSIFICATION REFERENCED ABOVE, WITHIN THE HAZARDOUS AREA IF LOCATED IN THE HAZARDOUS AREA.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING GAS SERVICE AND METER LOCATION WITH UTILITY COMPANY. CONTRACTOR SHALL PAY ALL COSTS ASSOCIATED WITH PROVIDING GAS SERVICE FROM THE EXISTING MAIN THROUGH THE SITE.
8. INSTALL NATURAL GAS SYSTEM PER: 



**EMERALD BAY LIFT STATION
 ELECTRICAL SITE PLAN**

SCALE: 1/8" = 1'-0"



PROJECT NORTH

File: L:\2017\17264861 - Emerald Bay Lift Station\Drawings\EBPS-E2.dwg, Last Save: 2/28/2018 3:40 PM Last saved by: JCHaydock
 Last plotted by: Haydock, Joseph C., Plot Style: AECmono.ctb Plot Scale: 1/8"=1'-0" Date: 2/28/2018 3:53 PM Plotter used: DWG To PDF.pc3



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA, KS
 WICHITA, KANSAS
 EMERALD BAY LIFT STATION

LIFT STATION UTILITY SHELTER
 ELECTRICAL PLAN

JOB NO.: 17264861
 DATE:
 DESIGNED BY: SAH
 DRAWN BY: SAH

BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

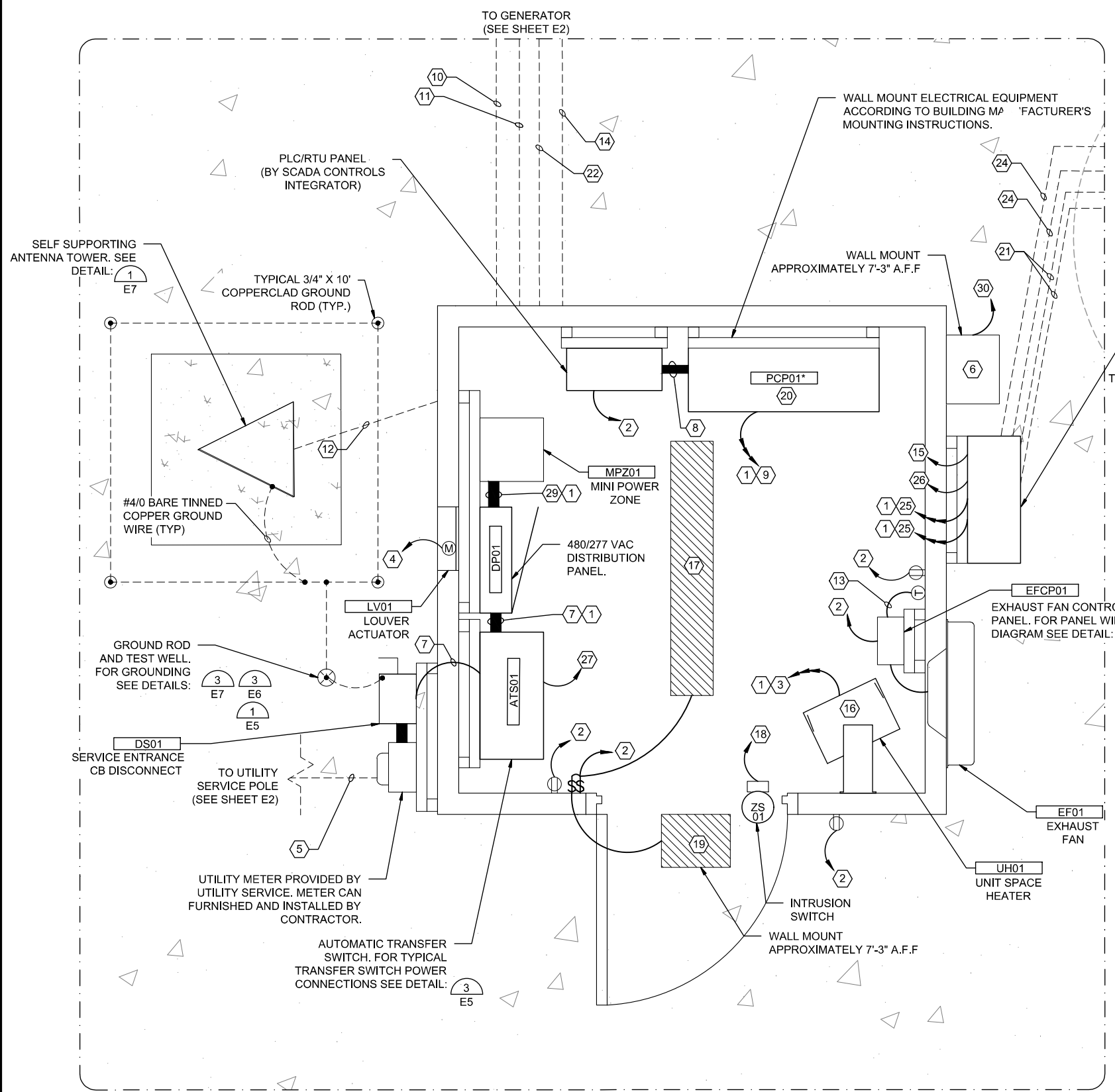
DRAWING NUMBER
E3
 SHEET NUMBER
12

KEY NOTES:

- 1 SEE ONLINE ON SHEET E1 FOR CONDUIT AND CONDUCTOR SIZING.
- 2 (2-#12, #12 GND) 3/4"C, 120VAC. FROM MPZ01.
- 3 (3-#12, #12 GND) 3/4"C, 480VAC. FROM DP01.
- 4 (2-#14, #14 GND) 3/4"C, 120VAC. FROM EFCP01 FOR LOUVER ACTUATOR.
- 5 (4-#2) 2"C, 480VAC. FROM UTILITY TRANSFORMER.
- 6 LITHONIA DSXW1LED-10C-700-40K-T3M-MVOLT. COORDINATE FINISH WITH OWNER.
- 7 480VAC POWER FROM ATS01 TO DP01.
- 8 (10-#14, 2-STP, #14 GND, 10-#14 SPARE) 2"C, I/O SIGNAL.
- 9 480VAC POWER FROM DP01 TO PUMP CONTROL PANEL PCP01.
- 10 FROM GENSET G01 TO AUTOMATIC TRANSFER SWITCH ATS01.
- 11 (12-#14, #14 GND) 1" C, CONTROL. FROM AUTOMATIC TRANSFER SWITCH ATS01 TO GENSET G01.
- 12 (RF CABLE) 2" C, SIGNAL. FROM ANTENNA TO PLC/RTU CONTROL PANEL.
- 13 PROVIDE CONDUIT AND CABLE AS REQUIRED BY THERMOSTAT MANUFACTURERS. MAKE ALL REQUIRED CONNECTIONS.
- 14 (2-#12, #12 GND) 1"C, 120VAC. FROM MPZ01 TO GENSET G01 FOR BATTERY CHARGER.
- 15 (2-3 CONDUCTOR SHIELDED CABLE) 1"C, LEVEL TRANSDUCER SIGNAL TO PUMP CONTROL PANEL PCPC01.
- 16 UNIT SPACE HEATER. INSTALL ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. MAKE ALL REQUIRED CONNECTIONS.
- 17 CEILING MOUNT LITHONIA FEM-L48-4000LM-IMAFI-MD-120-GZ10-40K-80CRI-BSL520 LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP. COORDINATE FINISH WITH OWNER.
- 18 (2-#14, #14 GND) 3/4" C, SIGNAL. FROM INTRUSION ENTRY SWITCH TO PLC/RTU CONTROL PANEL.
- 19 LITHONIA DSXW1LED-10C-700-40K-T3M-MVOLT WITH EMERGENCY BATTERY BACKUP. COORDINATE FINISH WITH OWNER.
- 20 PUMP CONTROL PANEL PCP01 PROVIDED AS PART OF EQUIPMENT PACKAGE. SEE SPECIFICATIONS FOR PUMP STATION CONTROL PANEL DETAILS. MAKE ALL CONNECTIONS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 21 (MANUFACTURER'S SUPPLIED PUMP CORDS) 2" C, 480 VAC, FROM WET WELL THROUGH VENTRIB TROUGH TO JUNCTION BOX TB01.
- 22 (2-#12, #12 GND) 1"C, 120VAC. FROM MPZ01 TO GENSET G01 FOR BLOCK HEATER.
- 23 (MANUFACTURER'S SUPPLIED CABLE) 1" C, SIGNAL. FROM LEVEL TRANSMITTER LT01 AT WETWELL TO TB01.
- 24 (MANUFACTURER'S SUPPLIED CABLES) 2" C, SIGNAL. FROM FLOAT SWITCHES LS01/02/03/04/05 AT WETWELL TO TB01.
- 25 480VAC POWER FOR PUMP FROM PUMP CONTROL PANEL.
- 26 (8-#14, 2-STP, #14 GND) 1"C, FLOAT SWITCHES, PUMP SEAL, AND OVERTEMP SIGNALS TO PUMP CONTROL PANEL.
- 27 (6-#14, #14 GND, 6-#14 SPARE) 1"C, I/O SIGNAL. TO PLC/RTU PANEL.
- 28 (MANUFACTURER SUPPLIED CABLE) 1"C, SIGNAL. FROM LEVEL TRANSDUCER LE01 TO JUNCTION BOX TB01.
- 29 480VAC POWER FROM DP01 TO MPZ01.
- 30 (2-#12, #12 GND) 3/4"C, 120VAC. FROM LIGHT SWITCH IN FRP ENCLOSURE.

GENERAL NOTES:

1. UNLESS OTHERWISE NOTED, ALL CONDUIT AND PORTIONS OF THE CONDUIT SYSTEM SHALL BE SURFACE MOUNTED AND THE CONDUIT SYSTEM WITHIN THE UTILITY SHELTER SHALL BE GALVANIZED RIGID STEEL, ALL OTHERS SHALL BE PVC COATED RIGID STEEL. ALL BOXES, SUPPORTS, HANGERS, UNISTRUT AND ALL OTHER PORTIONS OF THE CONDUIT SYSTEM WITHIN THE UTILITY SHELTER SHALL BE GALVANIZED STEEL, ALL OTHERS SHALL BE PVC COATED OR STAINLESS STEEL. ALL BELOW GRADE CONDUIT FROM THE WET WELL TO THE ELECTRICAL ENCLOSURE SHALL BE PVC COATED RIGID STEEL, ALL OTHERS SHALL BE SCHEDULE 40 PVC WITH GALVANIZED ELBOWS.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, WIRING, TERMINATIONS, DISCONNECTS, CONTROL RELAYS, CONTROL ENCLOSURES AND OTHER ITEMS AS NECESSARY FOR COMPLETE AND FUNCTIONAL LIFT STATION. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS AND OTHER SECTIONS OF THE PLANS FOR ITEMS AS MAY BE REQUIRED.
3. COORDINATE ALL CONDUIT ROUTING WITH ENGINEER PRIOR TO INSTALLATION.
4. FIELD LOCATE FINAL LOCATIONS OF ALL DIRECT BURIED CONDUITS AND PULLBOXES. PROVIDE PULLBOXES AS REQUIRED FOR A WORKABLE INSTALLATION. ALL PULLBOXES SHALL BE APPROPRIATELY SIZED BY THE CONTRACTOR AS REQUIRED BY THE NUMBER OF CONDUITS IN THE DUCT BANK FOR A WORKABLE INSTALLATION WITH MINIMUM SIZES AS INDICATED WITHIN THE DETAILS. COORDINATE ALL WORK WITH APPLICABLE UTILITY COMPANIES, MATERIAL SUPPLIERS, AND OWNER REPRESENTATIVES.
5. ALL LOCATIONS WITHIN THE WET WELL AS INDICATED ON THIS PLAN SHEET SHALL BE CONSIDERED A CLASS 1, DIVISION 2 HAZARDOUS LOCATION AS DEFINED IN ACCORDANCE WITH NFPA 820.
6. CONTRACTOR SHALL STRICTLY ADHERE TO THE REQUIREMENTS IN NFPA 70, ARTICLE 500, HAZARDOUS (CLASSIFIED) LOCATIONS FOR ALL AREAS REFERENCED IN THE NOTE ABOVE. THIS INCLUDES PROVIDING APPROPRIATE SEAL FITTINGS ON CONDUITS AND CABLES ALONG WITH PROVIDING EXPLOSION PROOF EQUIPMENT, RATED FOR THE CLASSIFICATION REFERENCED ABOVE, WITHIN THE HAZARDOUS AREA IF LOCATED IN THE HAZARDOUS AREA.
7. USE CRIMPED OR BOLTED CONNECTIONS FOR ALL CONNECTIONS BETWEEN CONDUCTORS AND BUILDING SYSTEM COMPONENTS. USE EXOTHERMIC WELDED CONNECTIONS FOR ALL UNDERGROUND PORTIONS OF THE SYSTEM WITH THE EXCEPTION OF GROUND ROD TEST WELLS.



EMERALD BAY LIFT STATION POWER PLAN

SCALE: 1" = 1'-0"



PROJECT NORTH



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 Last plotted by: Haydock, Joseph C., Plot Style: AECmono.ctb, Plot Scale: 1/0.42355, Plot Date: 2/28/2018 3:53 PM Plotter used: DWG To PDF.pc3



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PANEL NO.:	MPZ01	PROJECT:	EMERALD BAY LIFT STATION
USAGE:	PANELBOARD	CLIENT:	EMERALD BAY
LOCATION:	LIFT STATION	MOUNTING:	SURFACE
PHASES:	1	PANEL TYPE:	PANELBOARD
L-L VOLTS:	240V	ENGINEER:	JCW
L-G VOLTS:	120V	PROJECT NO.:	17264861
BUS AMPS:	40A	FFD FROM:	DP01
MAIN CB AMPS:	40A		
A/C RATING:	10,000 MINIMUM		

CIRCUIT	SETS	WIRE	CUT	GND.	COND.	LOAD	DESCRIPTION	NOTE	BREAKER	CKT.	BREAKER	NOTE	DESCRIPTION	LOAD	CIRCUIT
						AMPS								AMPS	
1	#12	#12	#12	3/4"	4.5		RECEPT		1	20	1	A	2	15	1
1	#12	#12	#12	3/4"	1.5		EXHAUST FAN		1	20	3	D	4	15	1
1	#12	#12	#12	3/4"	15.0		GENERATOR BLOCK HTR		1	20	5	A	6	20	1
1	#12	#12	#12	3/4"	1.5		GENERATOR BATT.		1	20	7	B	8	20	1
							SPARE		1	20	9	A	10	20	1
							SPARE								

LOAD SUMMARY	CON. KVA	%	DLM. KVA
RECEPTACLES	0.54	code	0.54
MOTORS	0.18	100%	0.18
LIGHTS (INT.)	0	125%	0
LIGHTS (EXT.)	0.3	125%	0.375
HVAC (HEAT)	0	100%	0
HVAC (COOL)	0	100%	0
VENTILATION	0	100%	0
KITCHEN	0	65%	0
EMERGENCY	0	100%	0
MISC.	0	100%	0
FUTURE	0	100%	0
OTHER	1.98	100%	1.98
TRACK	0	100%	0
LARGEST MTR	0	25%	0
TOTAL KVA	3 KVA		3 KVA
TOTAL AMPS	13 AMPS		13 AMPS

PANEL NOTES:
 1. PROVIDE GROUND BUS
 2. PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE

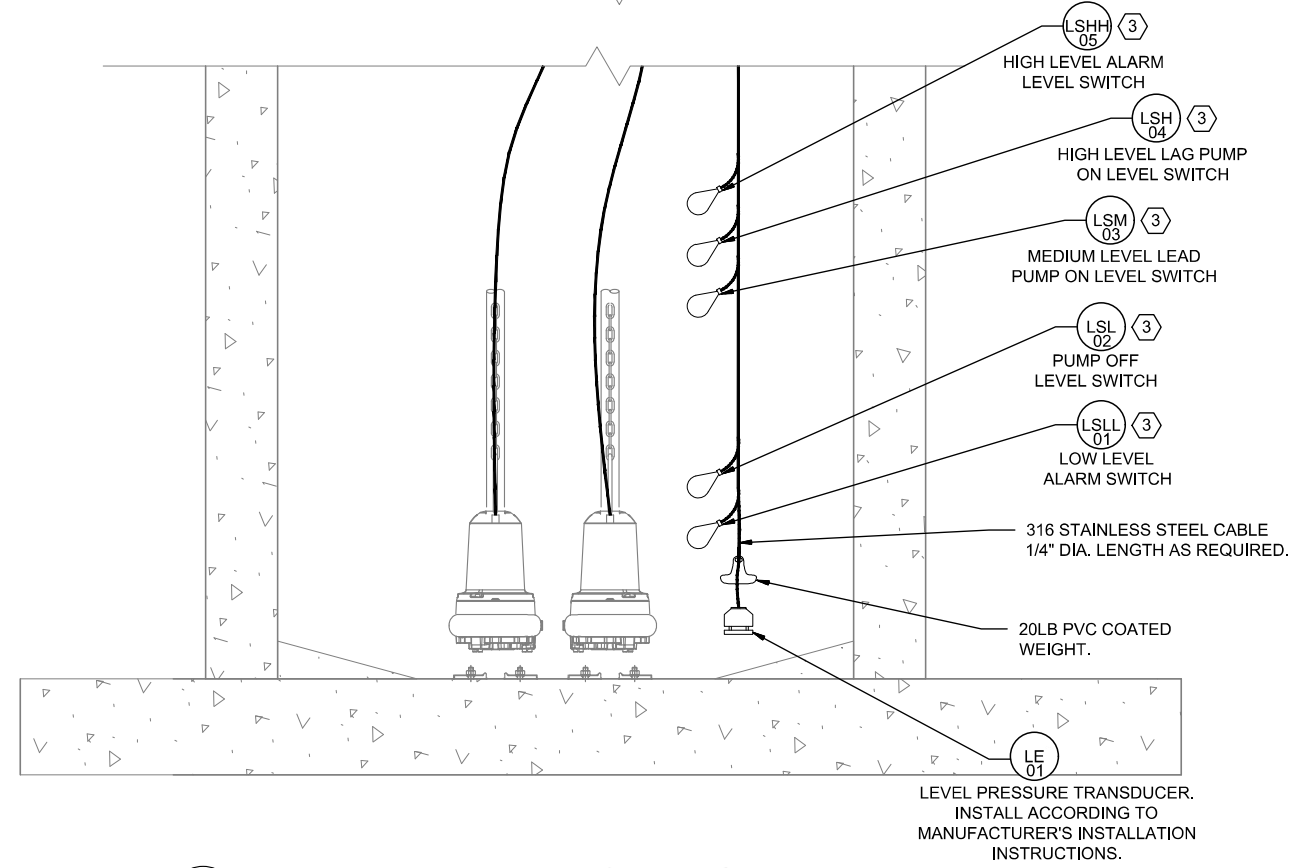
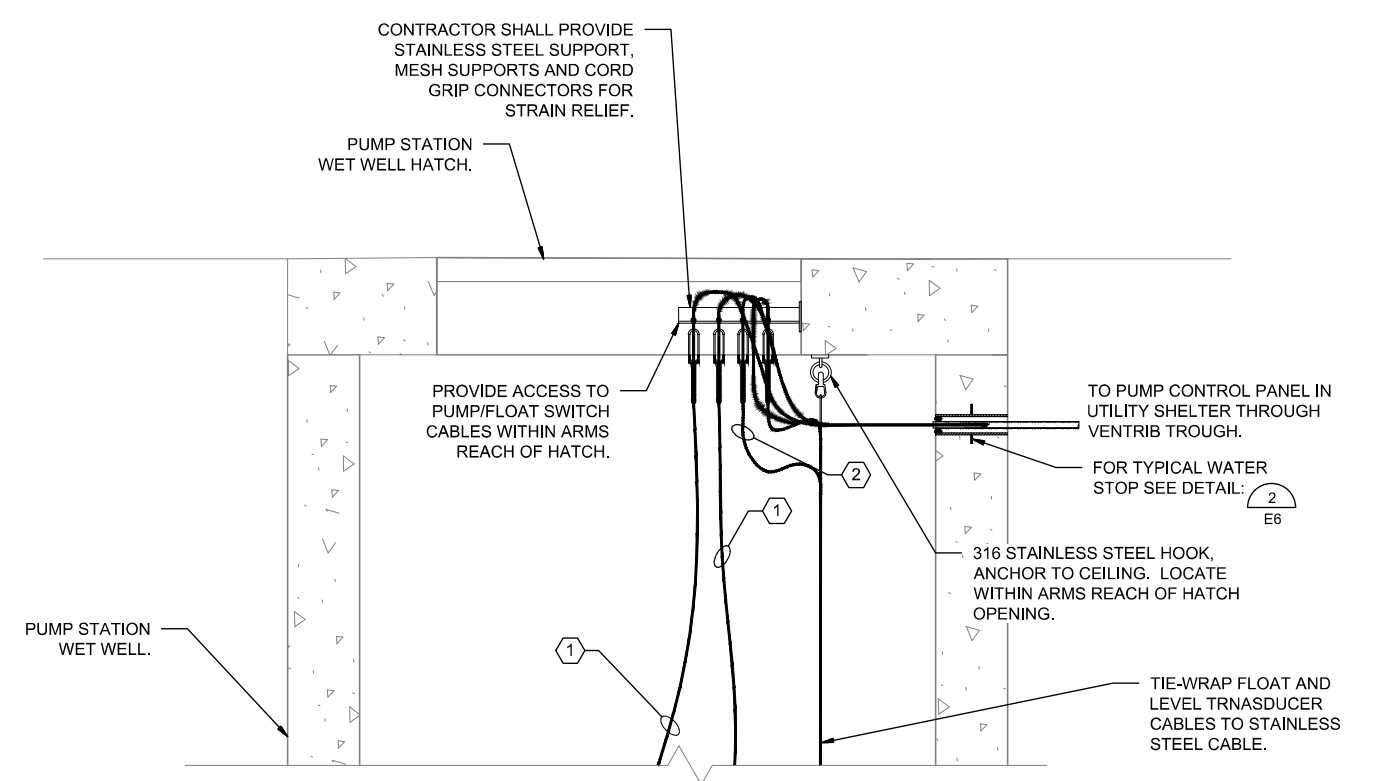
MPZ01 PANEL SCHEDULE
 SCALE: NONE

KEY NOTES:

- 1 MANUFACTURER'S SUPPLIED PUMP CORDS FROM WET WELL TO VENTRIB TROUGH.
- 2 MANUFACTURER'S SUPPLIED CABLE FOR LEVEL TRANSDUCER TO VENTRIB TROUGH.
- 3 COORDINATE FLOAT LEVEL SWITCH MOUNTING HEIGHTS WITH OWNER AND ENGINEER. SEE SHEET C7 FOR FLOAT SWITCH ELEVATIONS. PROVIDE INTRINSICALLY SAFE CONNECTION AT PUMP CONTROL PANEL.

GENERAL NOTES:

- 1. ALL BELOW GRADE CONDUIT FROM THE WET WELL TO THE ELECTRICAL ENCLOSURE SHALL BE PVC COATED RIGID STEEL.
- 2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, WIRING, TERMINATIONS, DISCONNECTS, CONTROL RELAYS, CONTROL ENCLOSURES AND OTHER ITEMS AS NECESSARY FOR COMPLETE AND FUNCTIONAL PUMP STATION. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS AND OTHER SECTIONS OF THE PLANS FOR ITEMS AS MAY BE REQUIRED.
- 3. COORDINATE ALL CONDUIT ROUTING WITH ENGINEER PRIOR TO INSTALLATION.
- 4. ALL LOCATIONS WITHIN THE WET WELL AND METER VAULT AS INDICATED ON THIS PLAN SHEET SHALL BE CONSIDERED A CLASS 1, DIVISION 2 HAZARDOUS LOCATION AS DEFINED IN ACCORDANCE WITH NFPA 820.
- 5. CONTRACTOR SHALL STRICTLY ADHERE TO THE REQUIREMENTS IN NFPA 70, ARTICLE 500, HAZARDOUS (CLASSIFIED) LOCATIONS FOR ALL AREAS REFERENCED IN THE NOTE ABOVE. THIS INCLUDES PROVIDING APPROPRIATE SEAL FITTINGS ON CONDUITS AND CABLES ALONG WITH PROVIDING EXPLOSION PROOF EQUIPMENT, RATED FOR THE CLASSIFICATION REFERENCED ABOVE, WITHIN THE HAZARDOUS AREA IF LOCATED IN THE HAZARDOUS AREA.



WET WELL ELEVATION DIAGRAM
 SCALE: NONE

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 Last plotted by: Haydock, Joseph C., Plot Style: AECmono.ctb Plot Scale: 1:0.4255 Plot Date: 2/28/2018 3:53 PM Plotter used: DWG To PDF.pc3

REV.	DATE	DESCRIPTION	BY

CITY OF WICHITA, KS
 WICHITA, KANSAS
 EMERALD BAY LIFT STATION

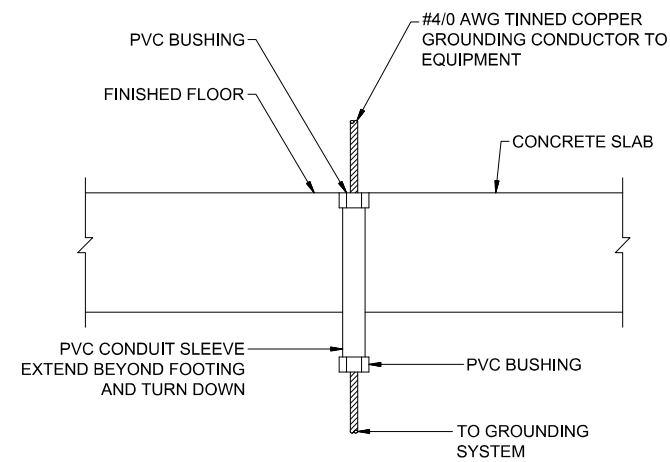
WETWELL ELEVATION
 DIAGRAM AND MPZ01
 PANEL SCHEDULE

JOB NO.: 17264861
 DATE:
 DESIGNED BY: SAH
 DRAWN BY: SAH

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DRAWING NUMBER
E4

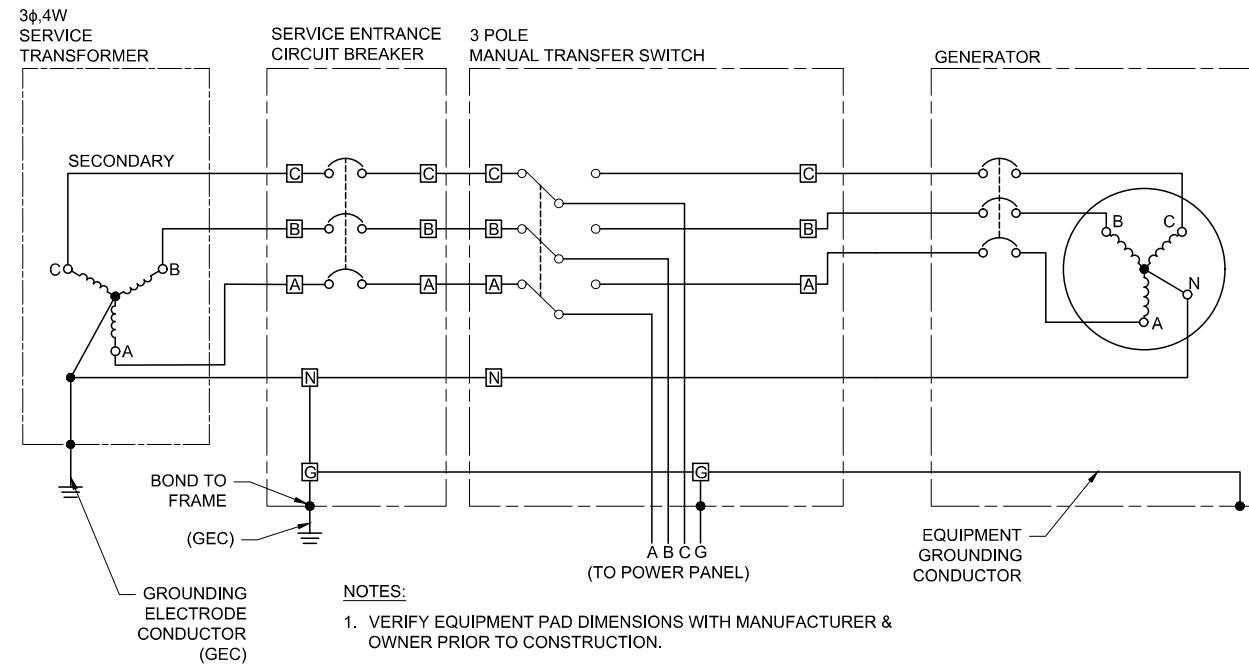
SHEET NUMBER
13



NOTES:

1. EXTEND PVC CONDUIT TO TOP OF BASE, OR PEDESTAL FOR BASE, FOR PEDESTAL MOUNTED EQUIPMENT. SUPPORT AT (2) PLACES(MIN).
2. SEAL ALL SLEEVES TO PREVENT WATER PENETRATION.

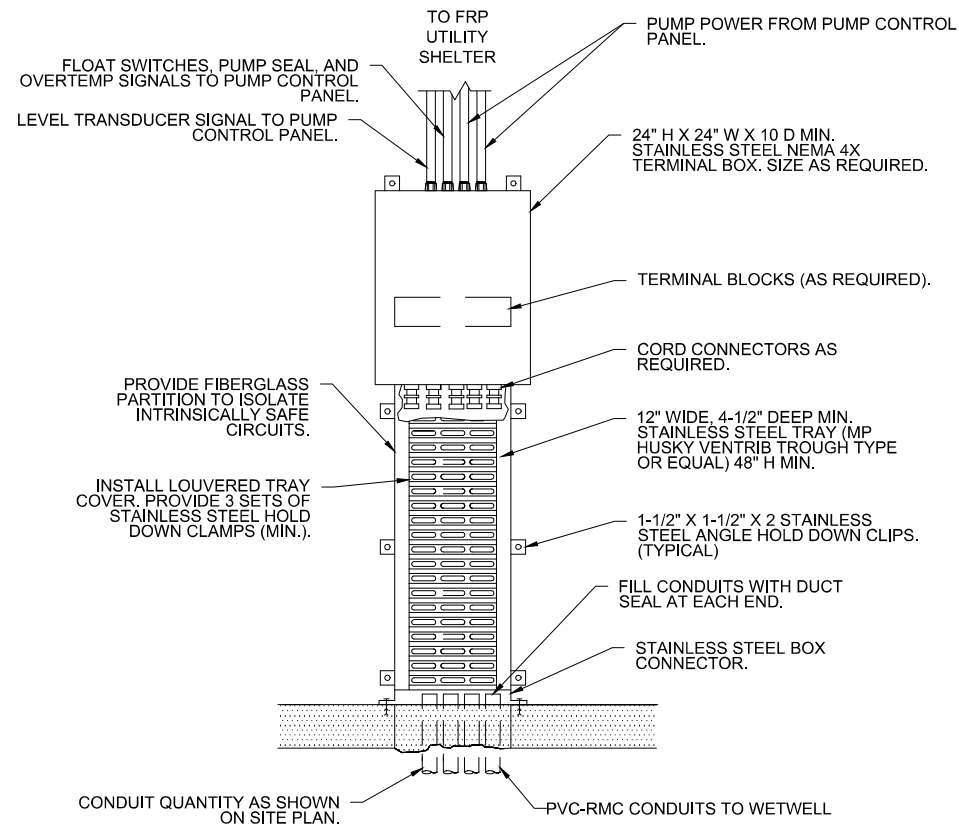
1
E5 **GROUNDING CONDUIT SLEEVE DETAIL**
SCALE: NONE



NOTES:

1. VERIFY EQUIPMENT PAD DIMENSIONS WITH MANUFACTURER & OWNER PRIOR TO CONSTRUCTION.
2. PROVIDE FRONT, BACK & SIDE CLEARANCES AS REQUIRED

3
E5 **3 POLE TRANSFER SWITCH CONNECTION DETAIL**
SCALE: NONE



2
E5 **TERMINAL BOX CABLE ENTRY DETAIL**
SCALE: NONE



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CITY OF WICHITA, KS
WICHITA, KANSAS
EMERALD BAY LIFT STATION

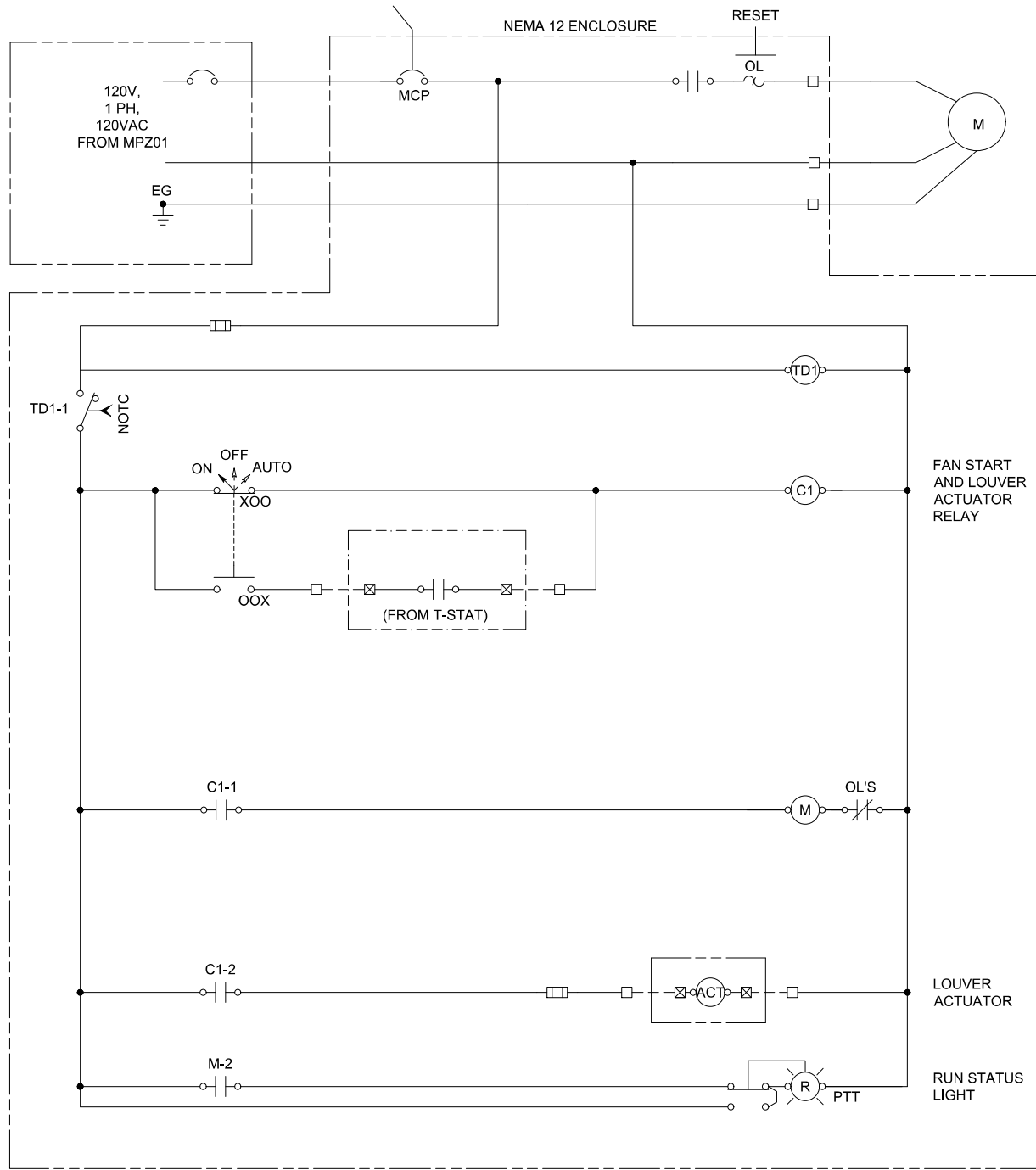
ELECTRICAL
DETAILS I

JOB NO.: 17264861
DATE:
DESIGNED BY: SAH
DRAWN BY: SAH

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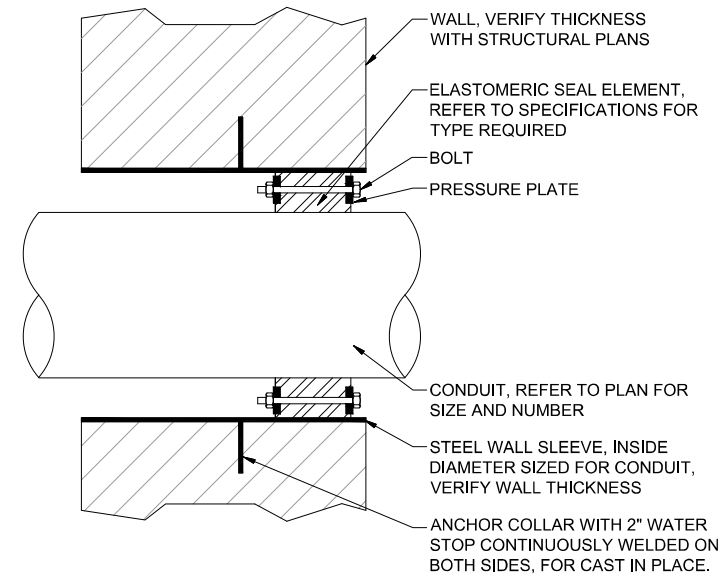
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E5

SHEET NUMBER
14



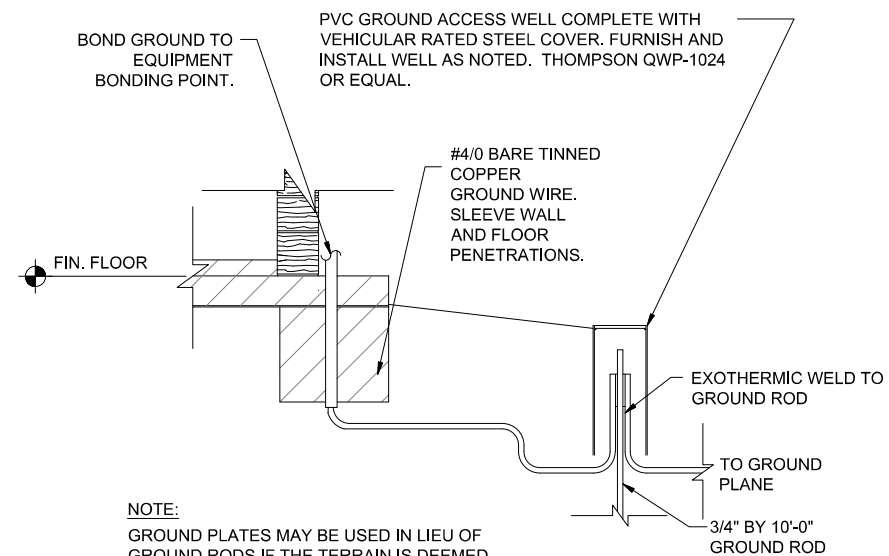
NOTES:
 1. COORDINATE T-STAT VOLTAGE REQUIREMENTS WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE LV TRANSFORMER IF REQUIRED.

1
E6 EXHAUST FAN PANEL SCHEMATIC DETAIL
SCALE: NONE



"LINK-SEAL" MODULAR SEAL WITH MODEL 'WS' STEEL WALL SLEEVES

2
E6 TYPICAL WATER STOP SEALING DETAIL
SCALE: NONE

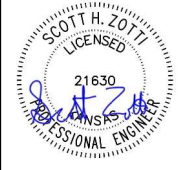


NOTE:
 GROUND PLATES MAY BE USED IN LIEU OF GROUND RODS IF THE TERRAIN IS DEEMED UNSUITABLE FOR RODS. ACCESS WELLS WILL STILL BE REQUIRED FOR EACH PLATE AND SHALL HAVE A SUITABLE DIAMETER FOR THE INSTALLED PLATE.

3
E6 GROUND ROD CONNECTION DETAIL
SCALE: NONE



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CITY OF WICHITA, KS
 WICHITA, KANSAS
 EMERALD BAY LIFT STATION

ELECTRICAL
 DETAILS II

JOB NO.: 17264861
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 DESIGNED BY: SAH
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DRAWING NUMBER

E6

SHEET NUMBER 15



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REV.	DATE	DESCRIPTION	BY

CITY OF WICHITA, KS
 WICHITA, KANSAS
 EMERALD BAY LIFT STATION

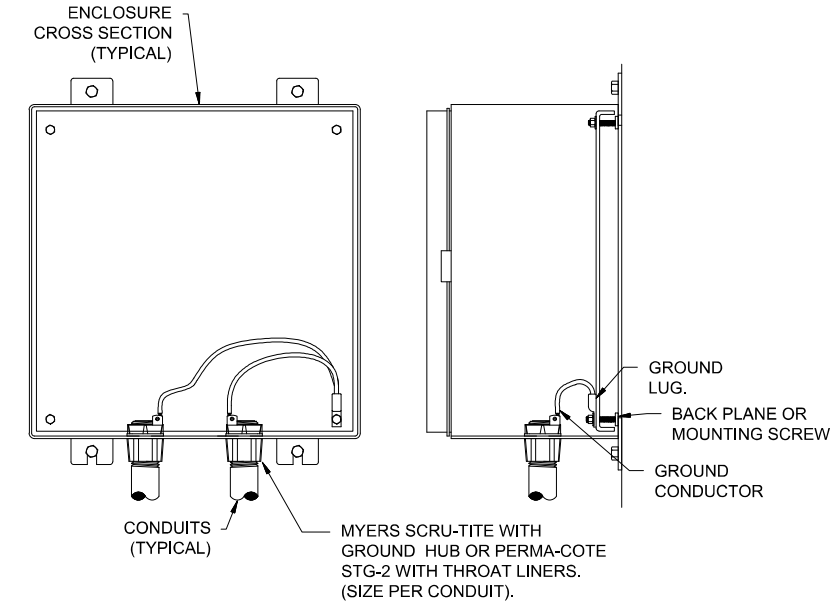
ELECTRICAL
 DETAILS III

JOB NO.: 17264861
 DATE:
 DESIGNED BY: SAH
 DRAWN BY: SAH

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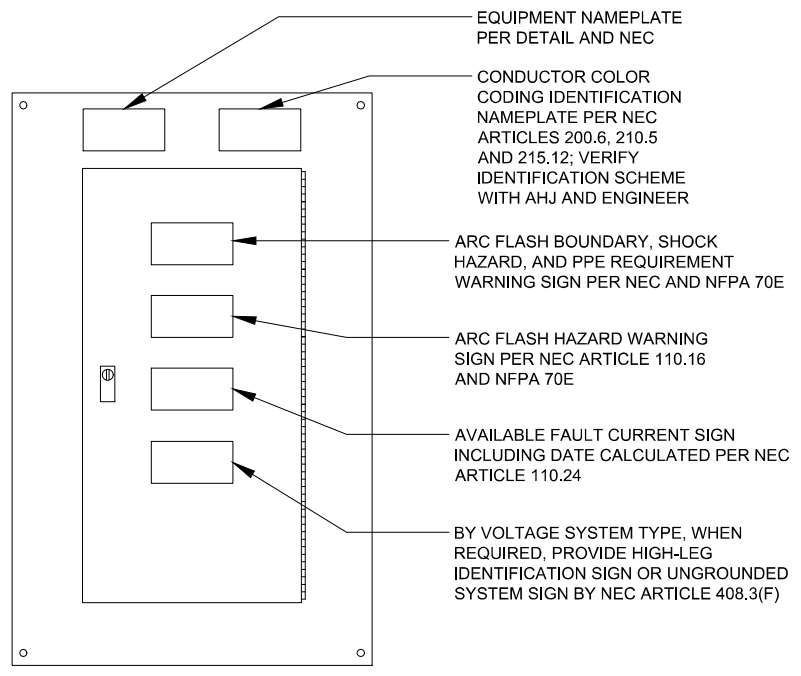
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E7

SHEET NUMBER
16



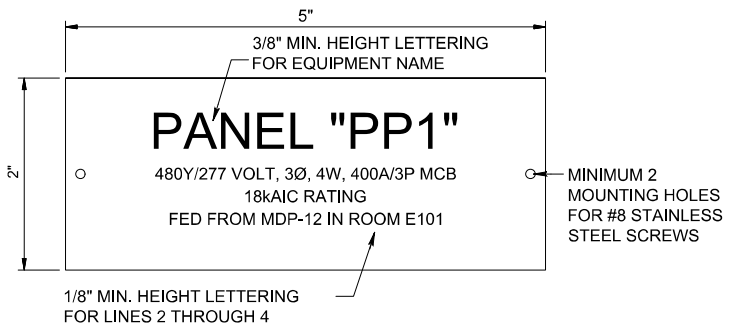
- NOTES:
1. ALL SERVICE, FEEDER AND CONTROL CONDUITS SHALL BE GROUNDED ON BOTH ENDS.

3
E7 CONDUIT GROUNDING DETAIL
 SCALE: NONE



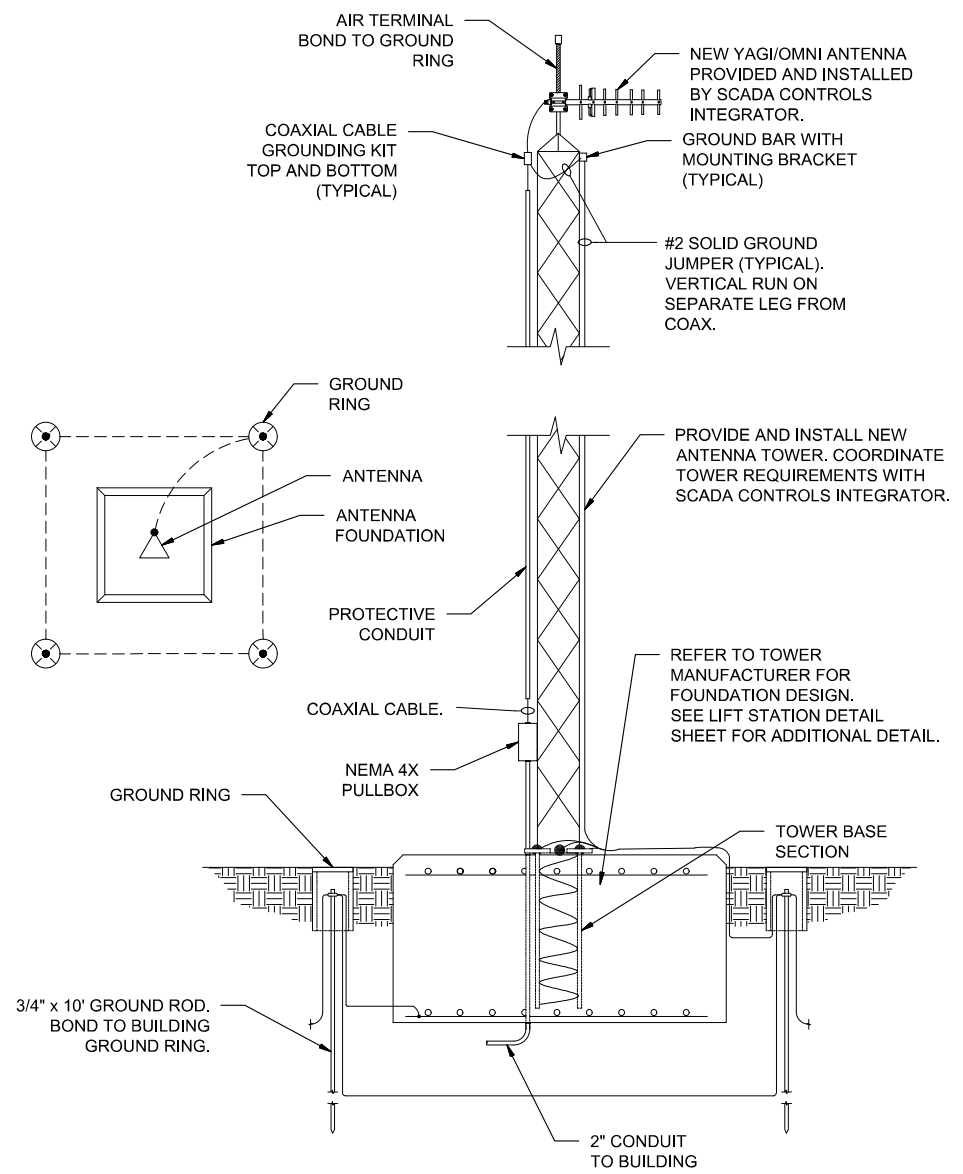
PANEL FRONT VIEW
 SCALE: NOT TO SCALE

- NOTES:
1. INSTALL ALL NAMEPLATES AND WARNING SIGNS IN ACCORDANCE WITH NEC AND NFPA 70E REQUIREMENTS.
 2. INSTALL NAMEPLATES AND WARNING SIGNS ON ALL ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO, SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SWITCHES, CONTROL PANELS AND MOTOR CONTROL CENTERS.
 3. EXTERIOR EQUIPMENT SHALL HAVE WEATHER-RESISTANT, NON-FADING NAMEPLATES AND SIGNAGE.
 4. INSTALL CIRCUIT DIRECTORY AND/OR CIRCUIT IDENTIFICATION FOR PROPER FIELD IDENTIFICATION.
 5. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.



- EQUIPMENT NAMEPLATE NOTES:
1. INSTALL 2-PLEX ACRYLIC, WHITE ON BLACK CORE, 5"x2" TILE, TEXT LINES AS INDICATED, CUSTOM ENGRAVED NAME PLATES.
 2. MOUNT WITH STAINLESS STEEL SCREWS.
 3. SEAL SCREW HOLES WITH SILICONE RUBBER.
 4. NAMEPLATE INFORMATION SHALL INCLUDE:
 - A. IDENTIFICATION NAME.
 - B. VOLTAGE SYSTEM, AND AMPACITY RATING AND TYPE.
 - C. EQUIPMENT AIC RATING.
 - D. FEEDER SOURCE OF SUPPLY DESCRIPTION.

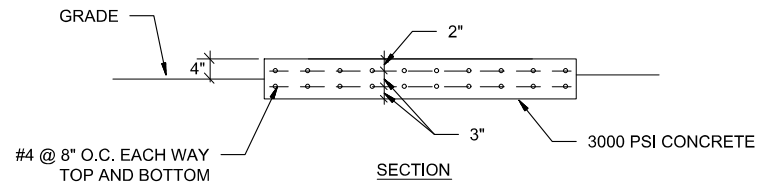
2
E7 TYPICAL ENGRAVED NAMEPLATE DETAIL
 SCALE: NONE



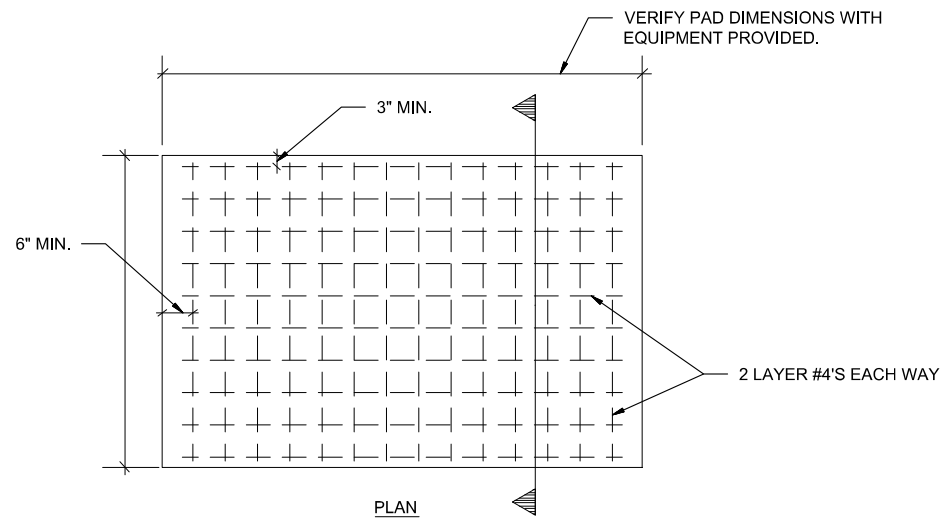
NOTE:
 CONTRACTOR TO INSTALL SELF-SUPPORTING TOWER AND STRUCTURAL BASE PER MANUFACTURER'S DESIGN. REFER TO SPECIFICATIONS FOR REQUIREMENT.

1
E7 TYPICAL ANTENNA TOWER DETAIL
 SCALE: NONE

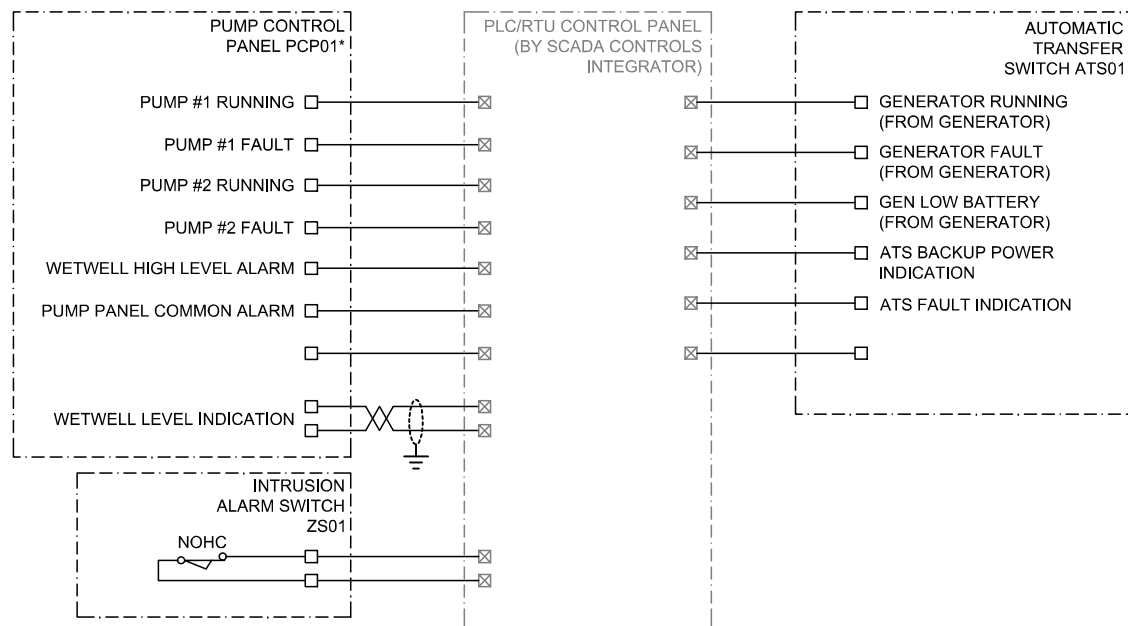
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 Last plotted by: Haydock, Joseph C. Plot Style: AECmono.ctb Plot Scale: 1.0,4255 Plot Date: 2/28/2018 3:54 PM Plotter used: DWG To PDF.pc3



1. THICKNESS AND STEEL MUST BE SIZED PER GENERATOR SIZE.
2. PAD BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR TO VERIFY ALL REQUIREMENTS WITH EQUIPMENT PROVIDED PRIOR TO GENERAL CONTRACTOR POURING PAD.



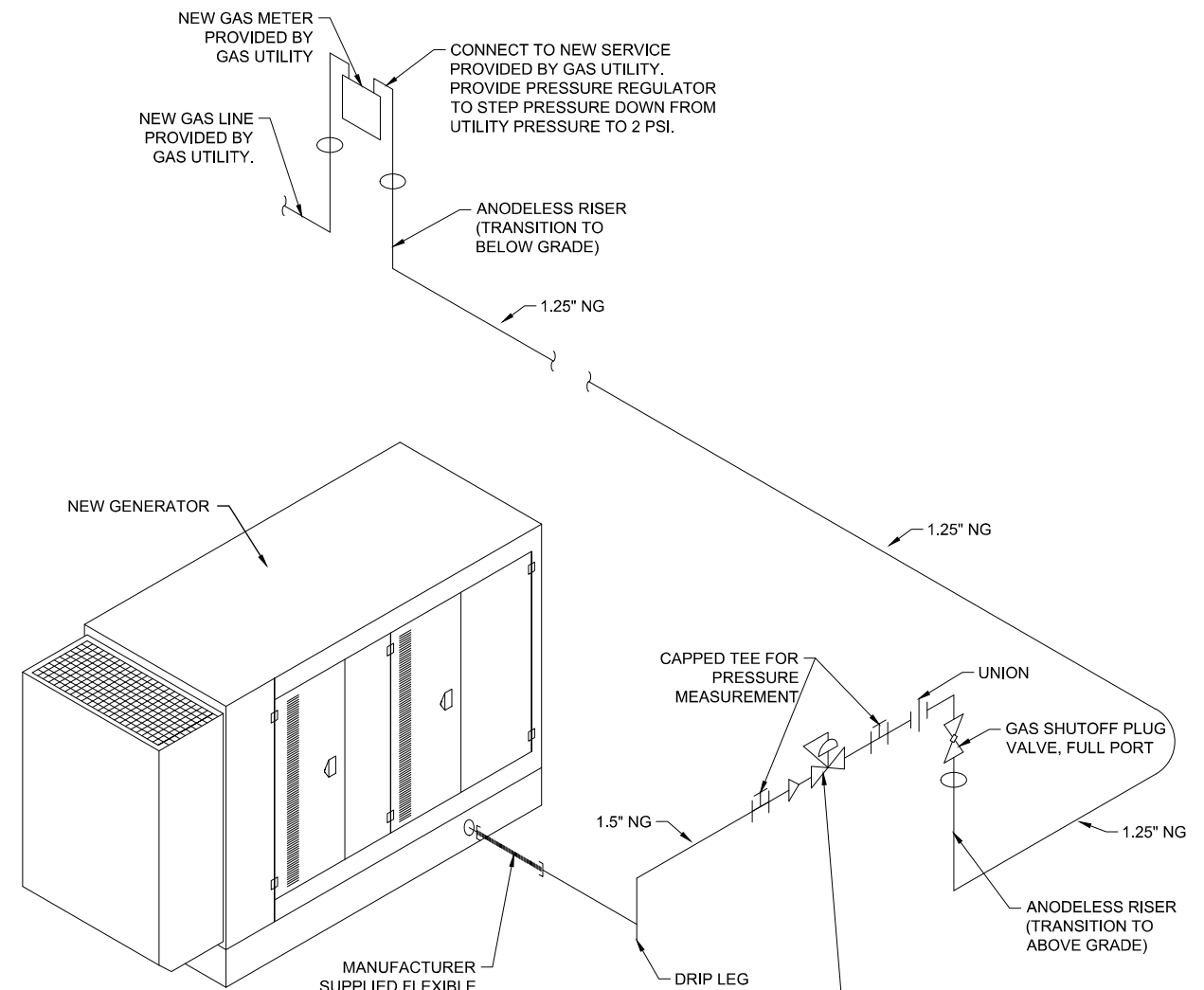
1
E8
GENERATOR PAD DETAIL
SCALE: NONE



GENERAL NOTES:

1. MINIMUM EXPECTED I/O INDICATORS SHOWN. CONTRACTOR TO VERIFY I/O AVAILABLE FROM SUPPLIED PUMP CONTROL PANEL AND COORDINATE REQUIRED CONDUCTORS TO PLC/RTU PANEL WITH SCADA CONTROLS INTEGRATOR. SCADA CONTROL INTEGRATOR TO MAKE ALL CONNECTIONS WITHIN THE PLC/RTU PANEL.

2
E8
PROPOSED I/O LIST
SCALE: NONE



SIZING METHOD:

LOW PRESSURE GAS USING SIZING EQUATION AS PRESENTED IN THE INTERNATIONAL FUEL GAS CODE. HYBRID PRESSURE METHOD IS USED.

THE 2 PSI SECTION (FROM THE METER TO THE PRESSURE REGULATOR) HAS AN EQUIVALENT LENGTH OF 200 LINEAR FEET, WHICH INCLUDES FITTINGS.

THE 14" WC SECTION (FROM THE PRESSURE REGULATOR TO THE GENERATOR CONNECTION) HAS AN EQUIVALENT LENGTH OF 40 LINEAR FEET, WHICH INCLUDES FITTINGS.

ASSUMPTIONS:

ESTIMATED TOTAL DEMAND IS 800 SCFH WITH SAFETY FACTOR. SPECIFIC GRAVITY OF NATURAL GAS IS 0.6 WITH A HEATING VALUE OF 1,000 BTU / CU. FT.

3
E8
NATURAL GAS SYSTEM ISOMETRIC
SCALE: NONE



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BY	DESCRIPTION	DATE	REV.



CITY OF WICHITA, KS
WICHITA, KANSAS
EMERALD BAY LIFT STATION

ELECTRICAL DETAILS IV

JOB NO.: 17264861
DATE:
DESIGNED BY: SAH
DRAWN BY: SAH

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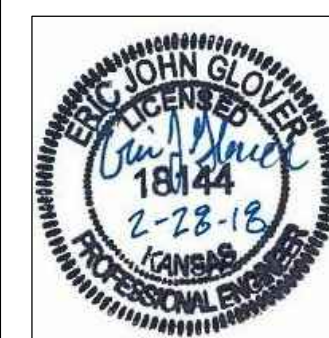
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SHEET NUMBER
17

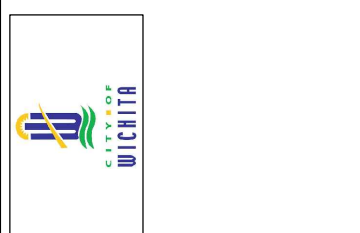
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Last plotted by: Haydock, Joseph C. Plot Style: AECmono.ctb Plot Scale: 1.0,4255 Plot Date: 2/28/2018 3:54 PM Plotter used: DWG To PDF.pc3



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REV.	DATE	DESCRIPTION	BY



City of Wichita, KS
 Project #: 999-99999
 OCA: 999-99999
 Emerald Bay 3rd Storm Water Drain Project

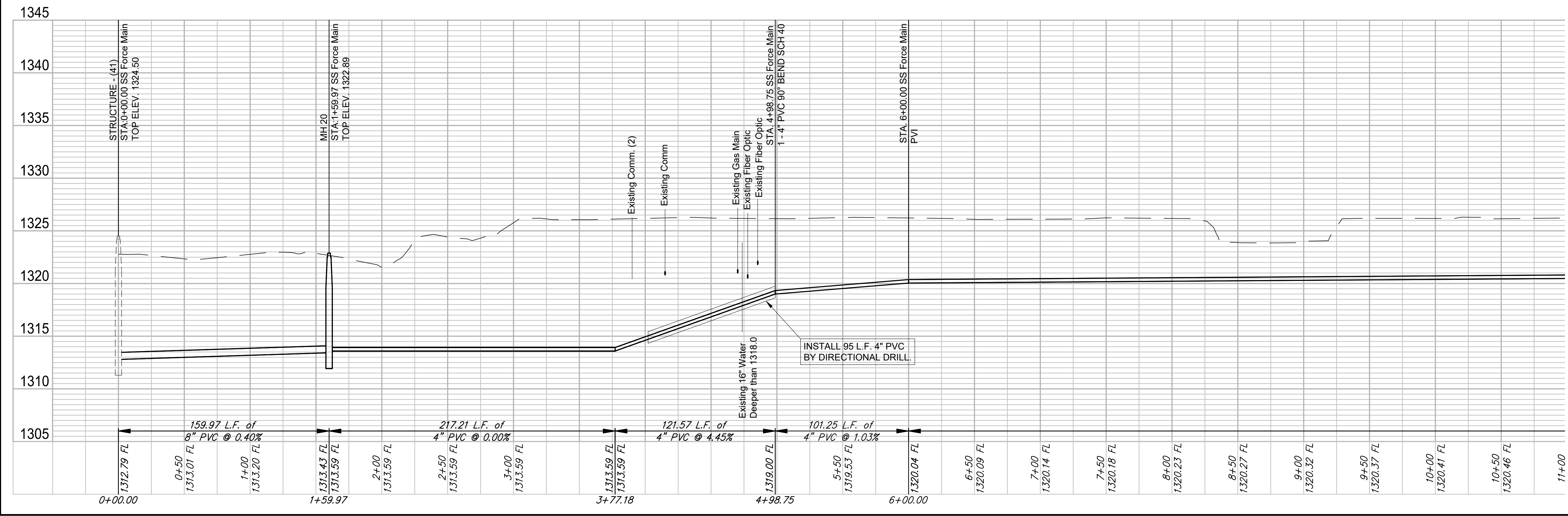
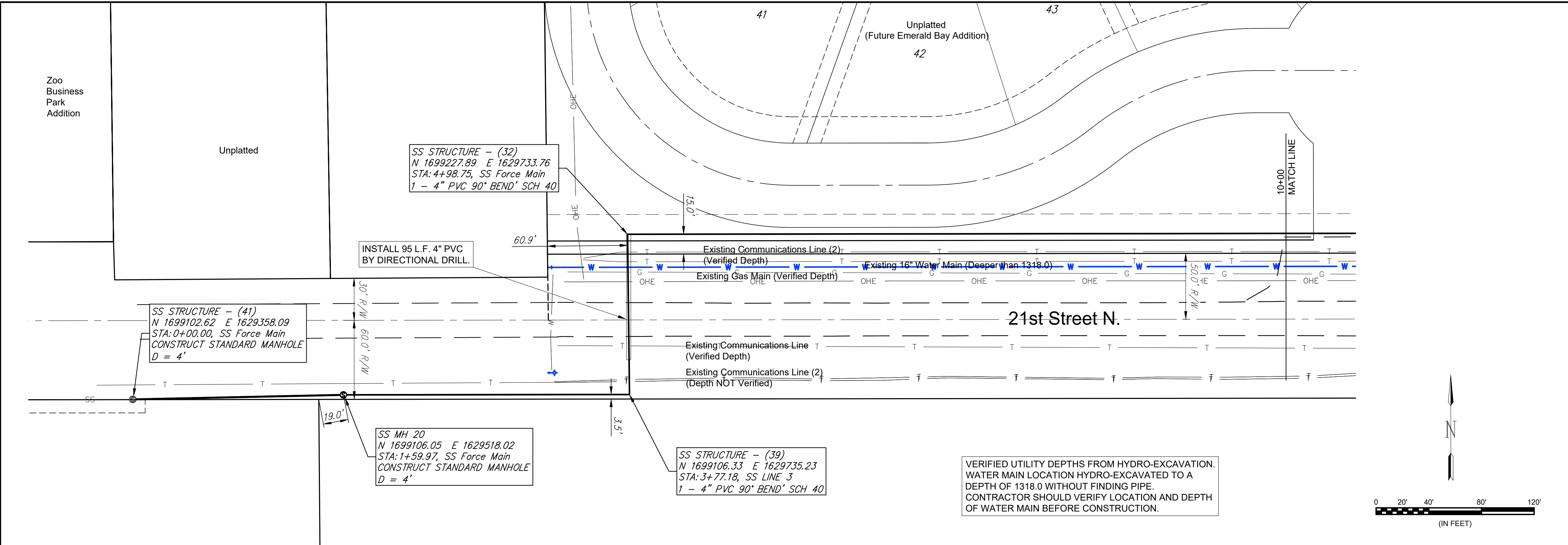
Forced Main 1 of 2

JOB NO.: 17264861
 DATE: .
 DESIGNED BY: E.JG
 DRAWN BY: E.JG

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SHEET NUMBER

TOTAL SHEETS **18** OF **28**



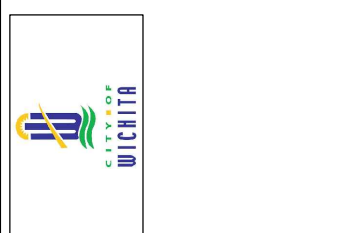
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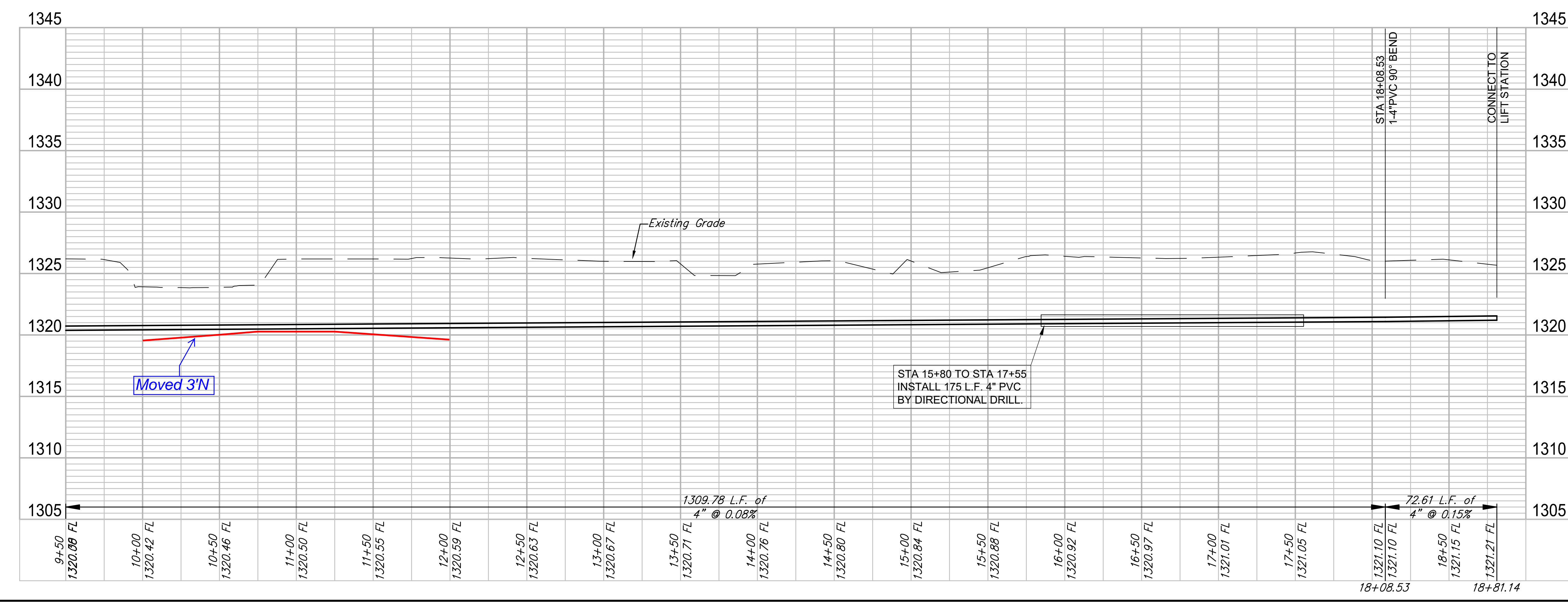
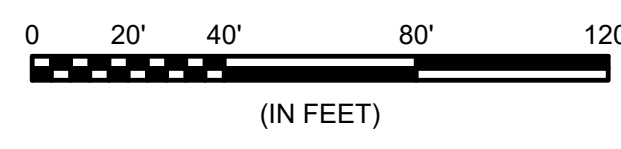
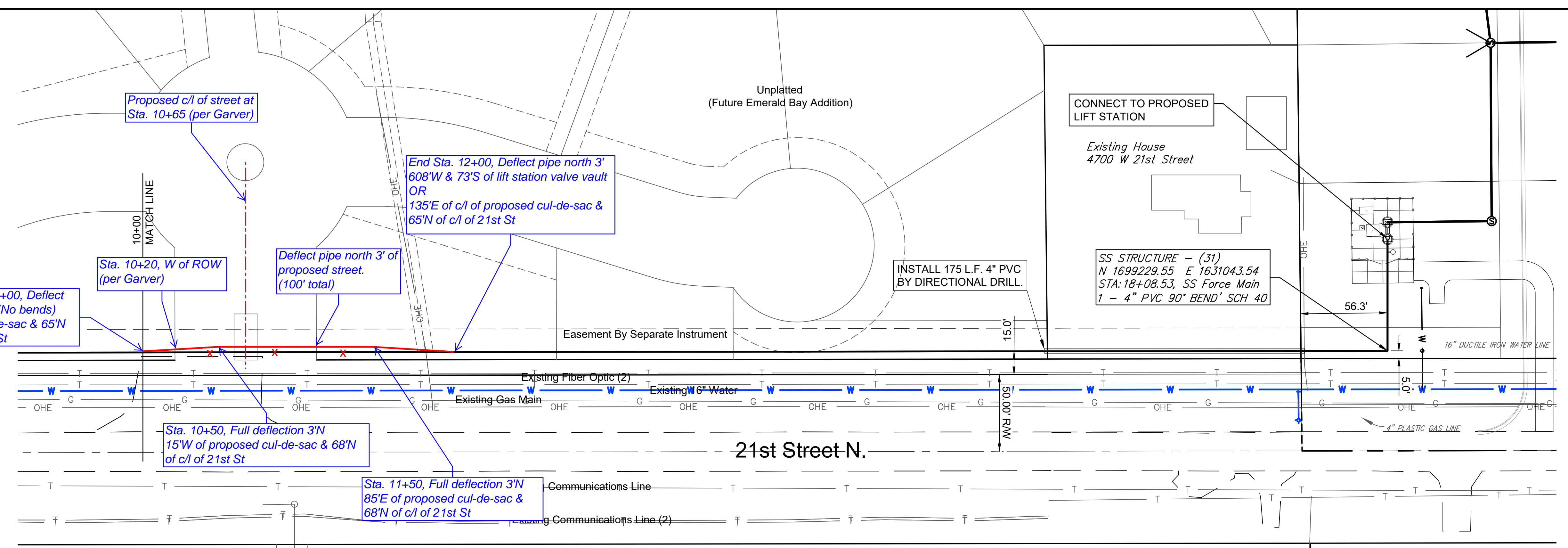
City of Wichita, KS
 Project #:
 OCA:
 Emerald Bay 3rd Storm Water Drain Project

Forced Main 2 of 2

JOB NO.: 17264861
 DATE: .
 DESIGNED BY: EJG
 DRAWN BY: .

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SHEET NUMBER
 TOTAL SHEETS **19 OF 28**



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