

SANITARY SEWER FORCE MAIN to serve PEGASUS ADDITION LIFT STATION (LIFT STATION #71)

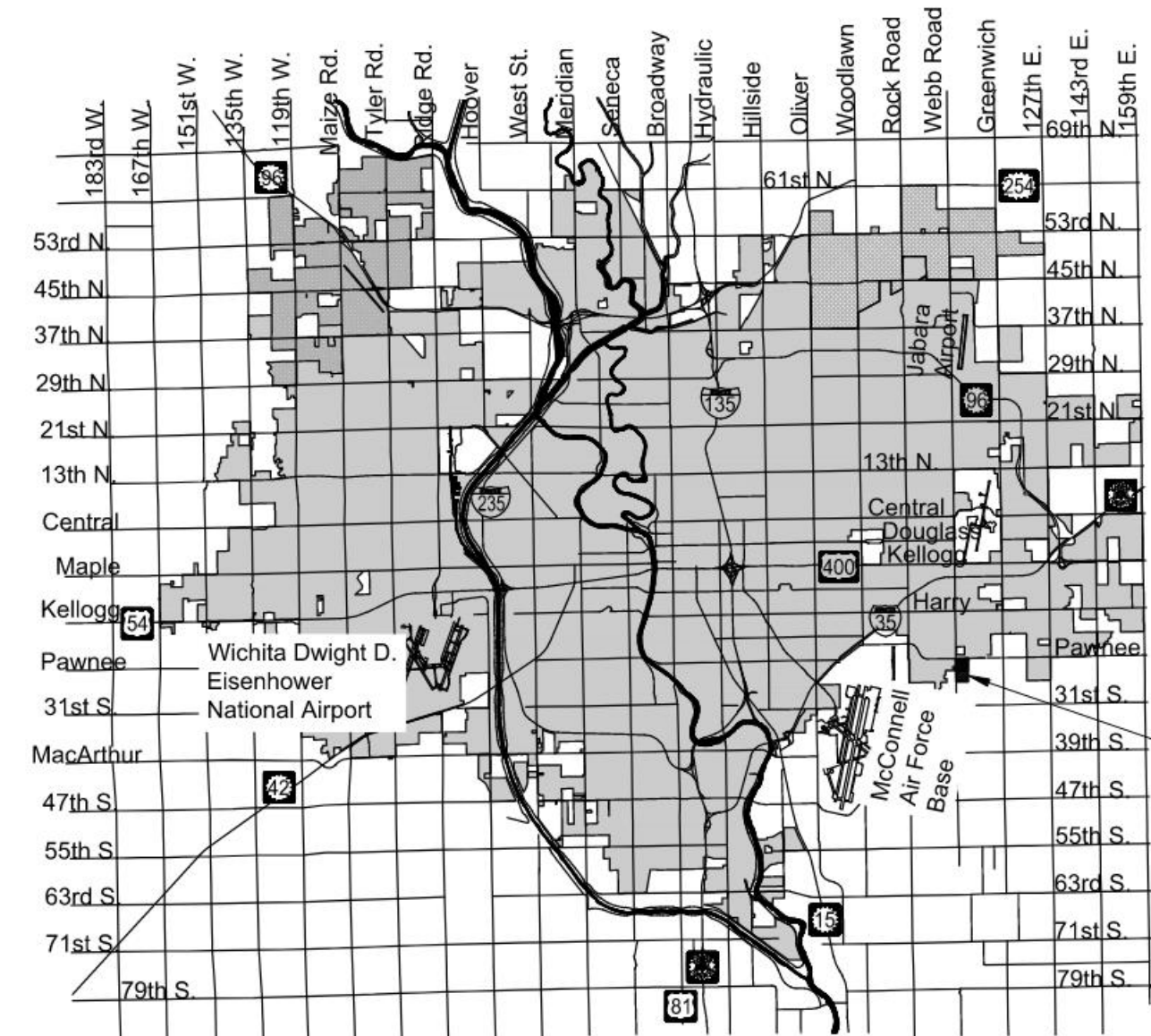
CITY OF WICHITA, KANSAS

Paul Gunzelman, P.E. City Engineer

Project Number: 468-2024-011711

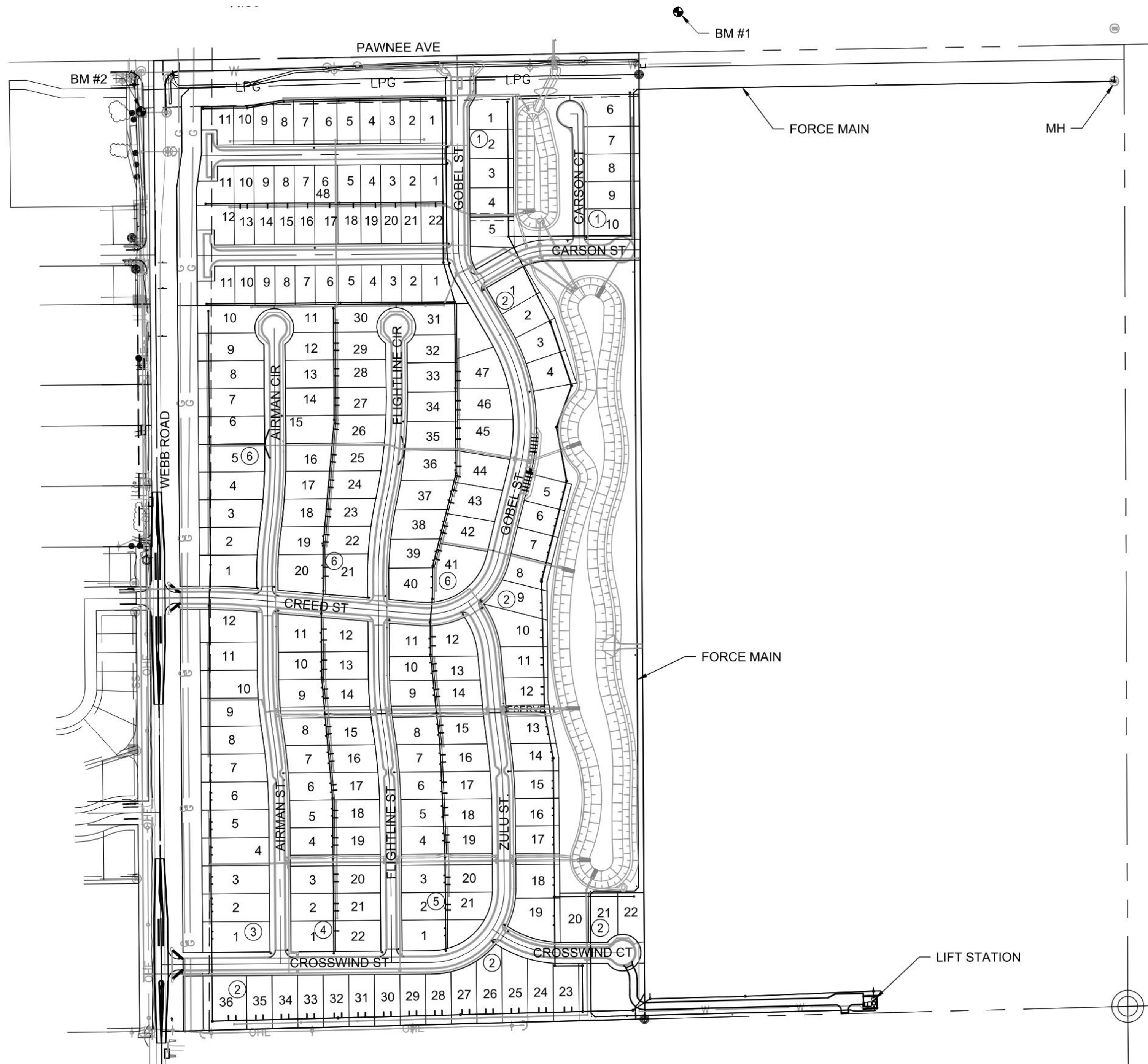
Org Code number: 53200124

Munis Number: S4004



Vicinity Map

PROJECT LOCATION



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Benchmarks

BENCHMARK #1:
CHISELED SQUARE WITH DIVOT ON NW CORNER OF STORM INLET
ON WEST SIDE OF WEBB ROAD
ELEVATION = 1391.76 (NAVD88, G18)

BENCHMARK #2:
CHISELED SQUARE WITH DIVOT ON NORTH CURB OF ENTRANCE
ISLAND TO BRENTWOOD SOUTH ADDITION
ELEVATION = 1390.37 (NAVD88, G18)



NOTE: All coordinates listed are modified NAD83 Kansas State Plane Zone South unless otherwise noted. To convert listed coordinates to NAD83 Kansas State Plane Zone South coordinates multiply the northing and easting by the project scale factor of 0.99990477. Elevation datum is NAVD88 Geoid 12B unless otherwise noted.



GARVER
1995 Midfield Road
Wichita, KS 67209
(316) 264-8008
www.GarverUSA.com
Project No. 2400521

FEB. 2025

PLANS PREPARED BY

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
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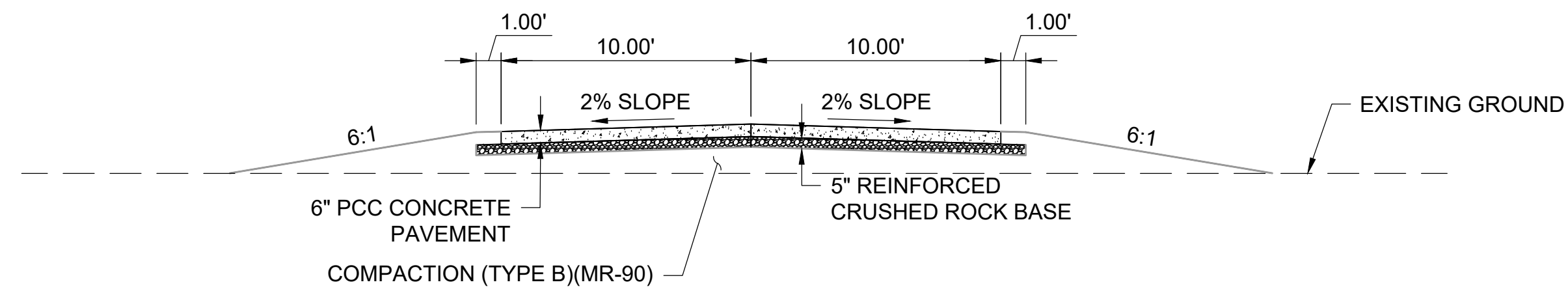
The Contractor must notify the following in case of an emergency:

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
Conoco Pipe Line Co.	1-877-267-2290
Cox Communications	1-888-249-3530
Evergny	1-800-544-4857
Kansas Gas Service (ONEOK)	1-888-482-4950
Sedgwick County Electric Cooperative	1-866-542-4732
Southern Star Central Gas	1-800-324-9696
- 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, 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 responsibly.
- All elevations shown are NAVD 88, G12A.
- 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:

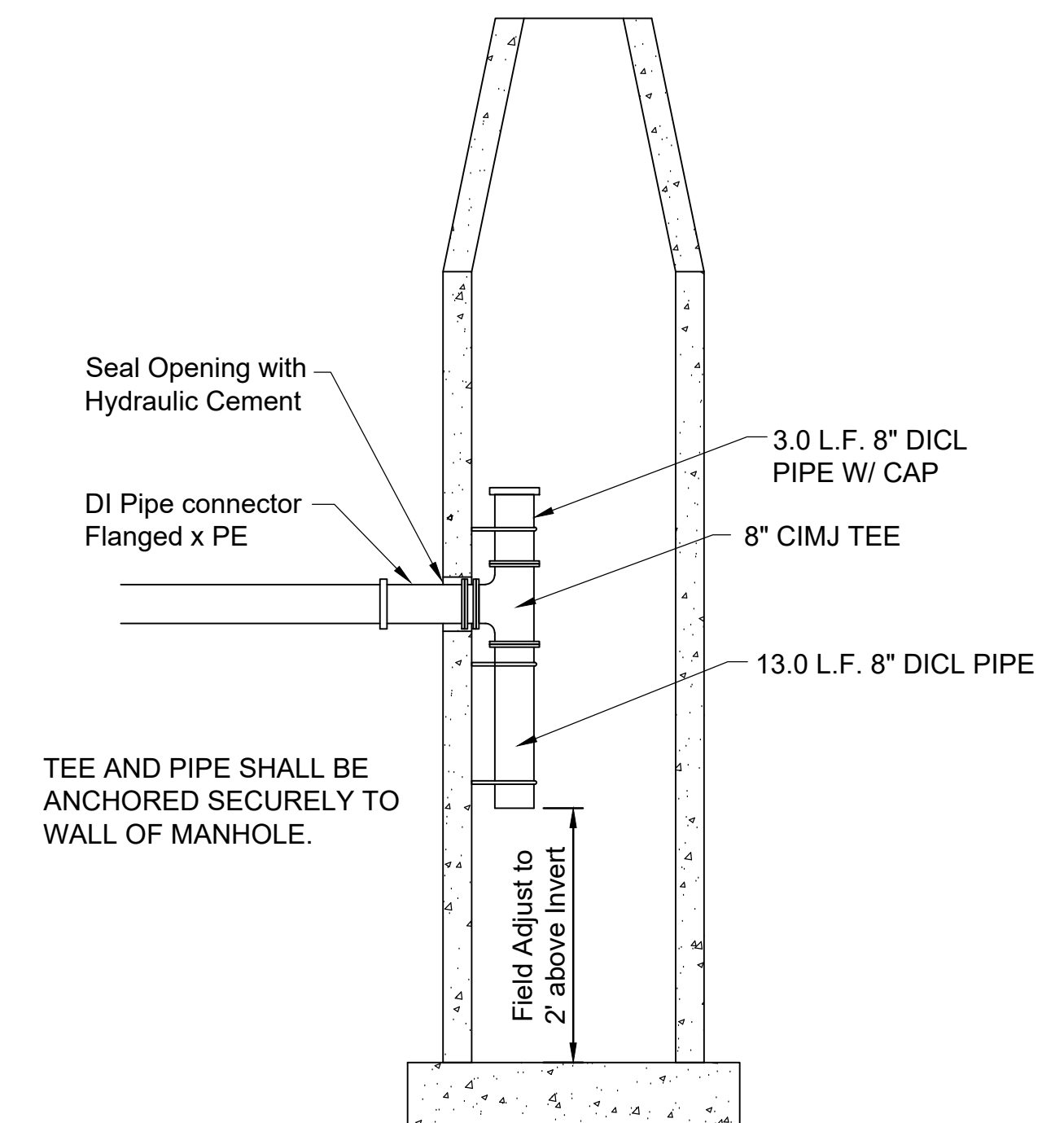
Prior to laying sewer lines using existing stubs in existing manholes, the Contractor shall expose and verify the elevation, grade and alignment of existing stubs and notify the Engineer of any deviation from the plans. Where connection to an existing manhole that does not have an existing stub or the 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 when adjacent grade allows.
- 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.
- 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 sanitary sewer due to flowable fill and sand backfill is to remain on site and coordinated with companion SWD Project.
- All disturbed areas on this project shall be seeded with temporary seeding per City of Wichita Specifications.
- Due to the depths of some of the SS lines on this project, areas that require flowable fill at depths greater than 15' shall be placed in two separate lifts and allowed to cure overnight between lifts.
- Tree Trimming shall be done using equipment specifically designed for the task. Equipment Buckets and other devices shall not be used to trim trees. Cost of tree trimming and removal shall be subsidiary to the bid item "Site Clearing". Brush, limbs, and other debris generated by tree trimming and tree removal shall be disposed of at an off-site location selected by the Contractor.
- Developer:

Bryon Lagaly (316) 295-7782	bryanlagaly@gmail.com
Kirk Richards (316) 390-2219	kirk@k2propertieswichita.com
- Lift Station Address:

1009 E CROSSWIND CT
WICHITA, KS 67207



TYPICAL SECTION LIFT STATION ROAD



FORCE MAIN CONNECTION DETAIL

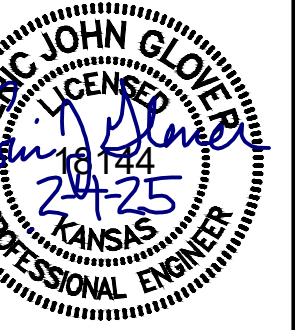
NOTE: Interior of manhole to be coated with Zebtron or other approved liner. Coating and all other parts and labor installing shall be considered incidental to the bid item for "Connection to Existing MH".

Field adjust connection to manhole below the top of cone section of manhole.



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1995 Midfield Road
Wichita, KS 67209
(316) 264-8008



REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
WICHITA, KANSAS

**PEGASUS ADDITION
LIFT STATION - FORCE MAIN
(LIFT STATION #71)**

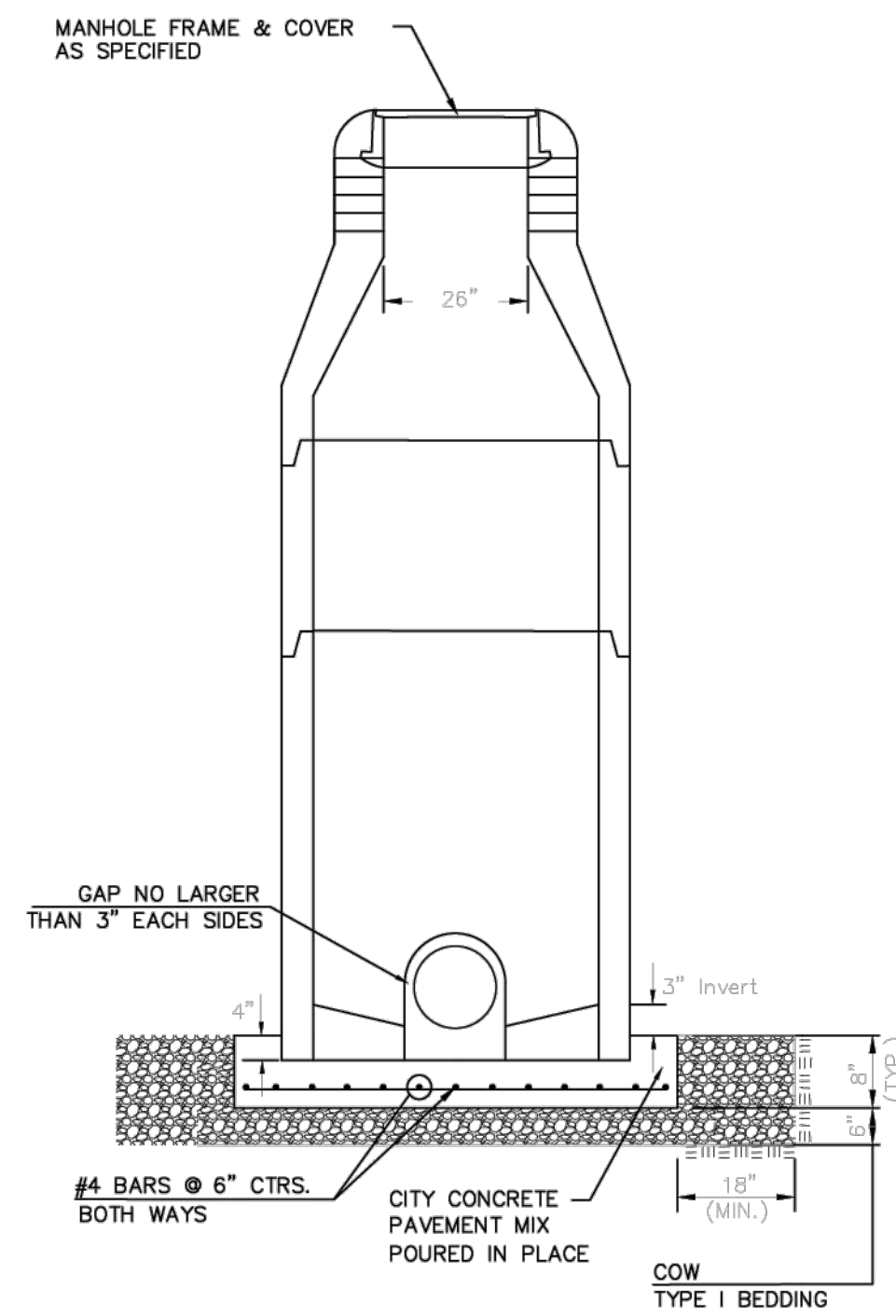
GENERAL NOTES

JOB NO.: 2400521
DATE: FEB. 2025
DESIGNED BY: EJJ
DRAWN BY: DRS

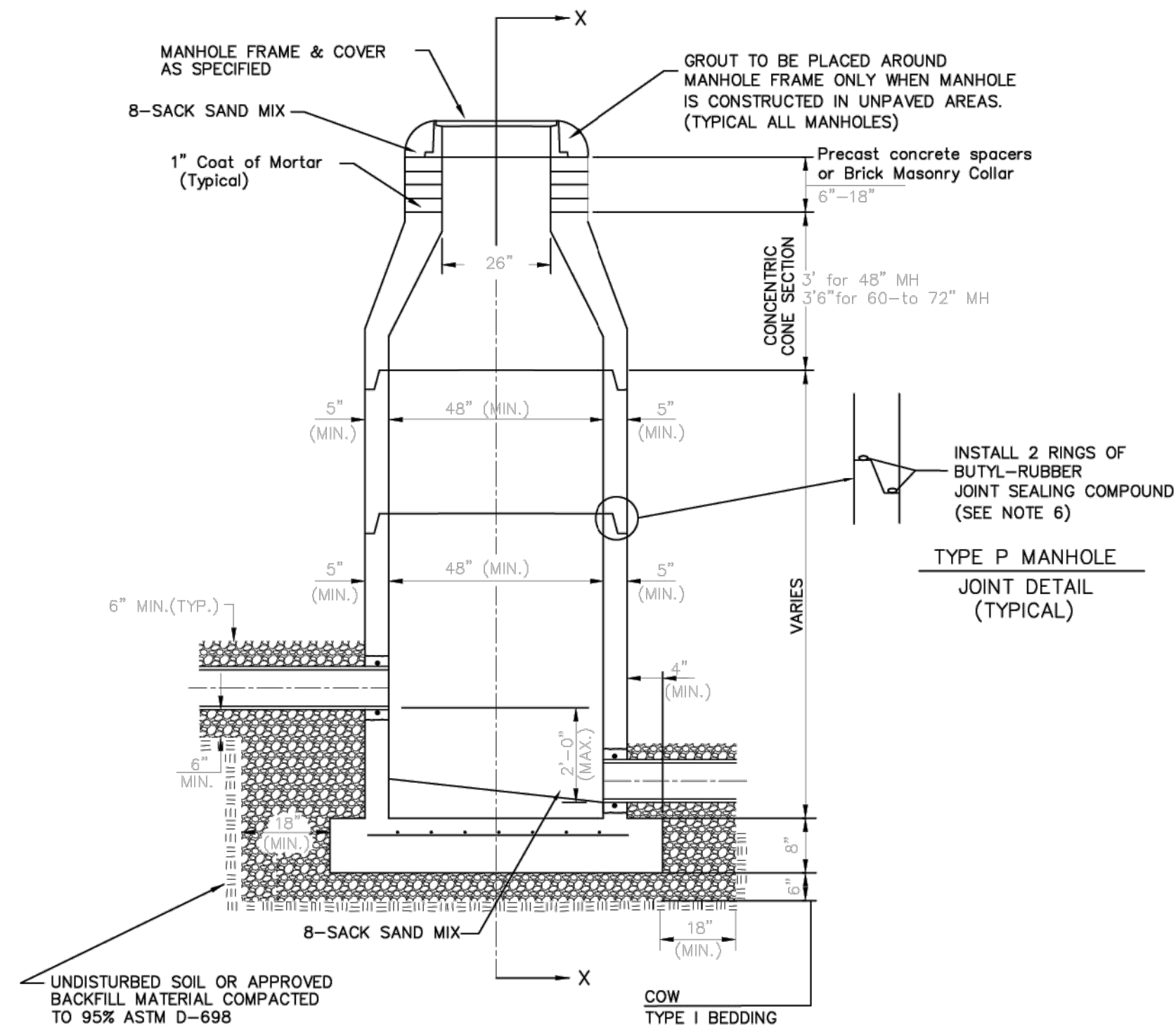
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER

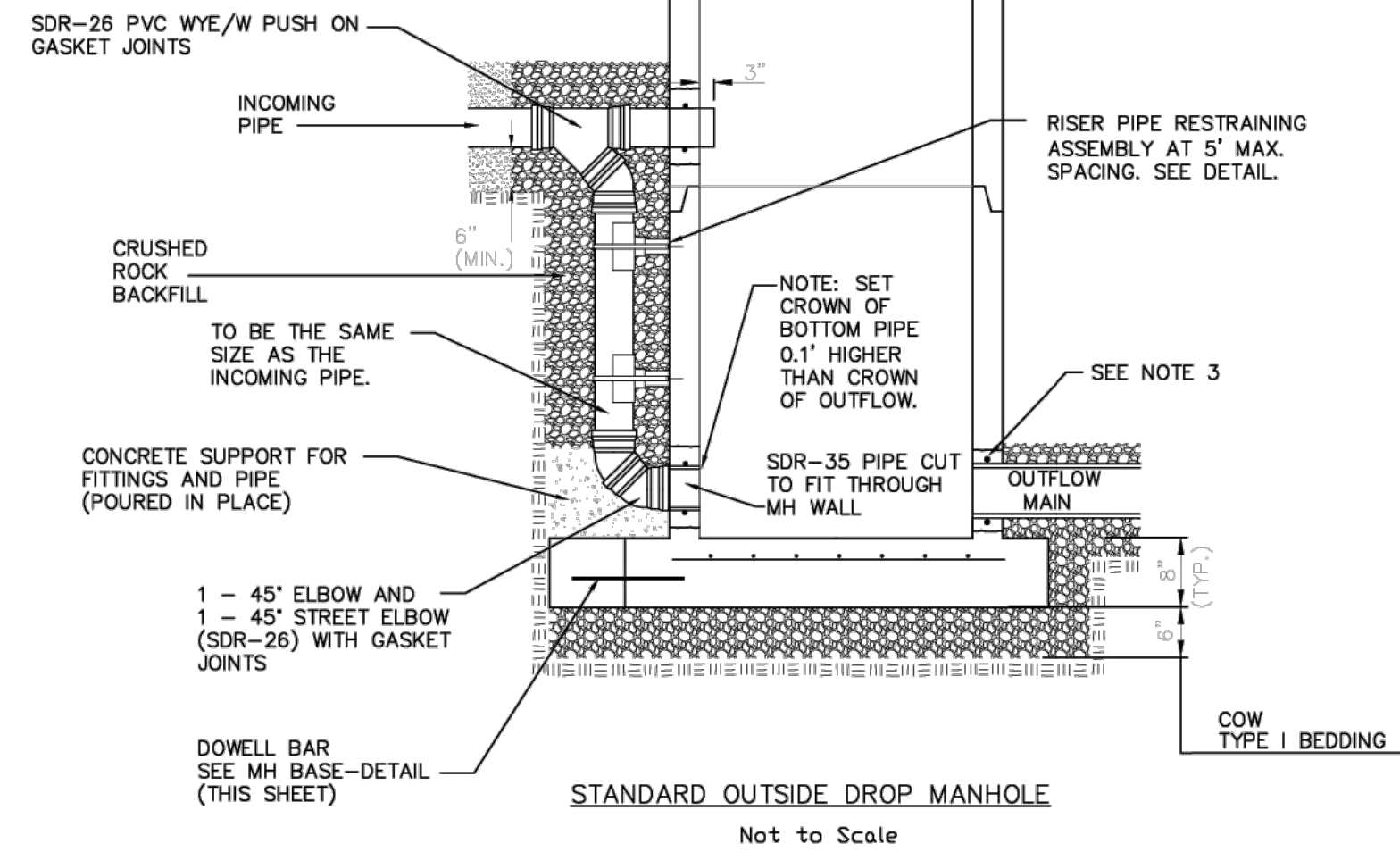
SHEET NUMBER **2** OF **38**



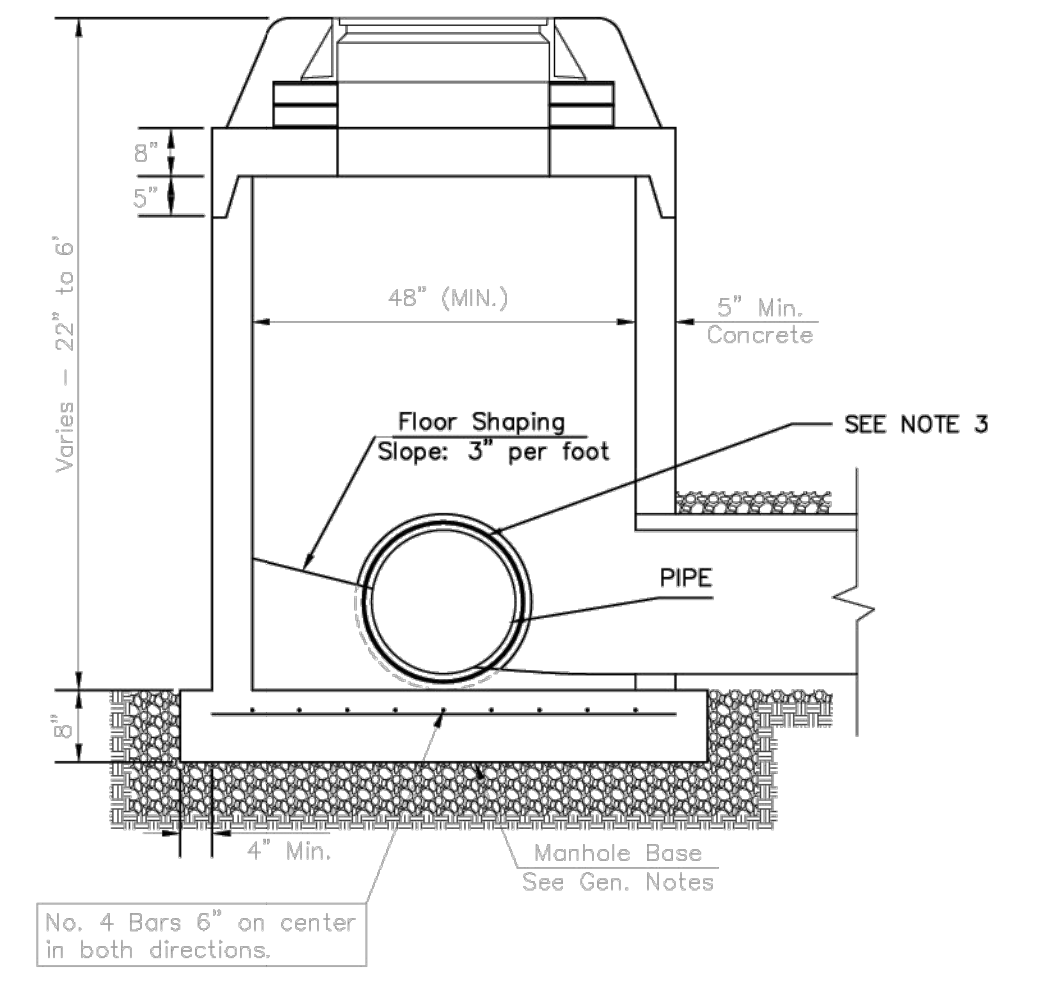
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale

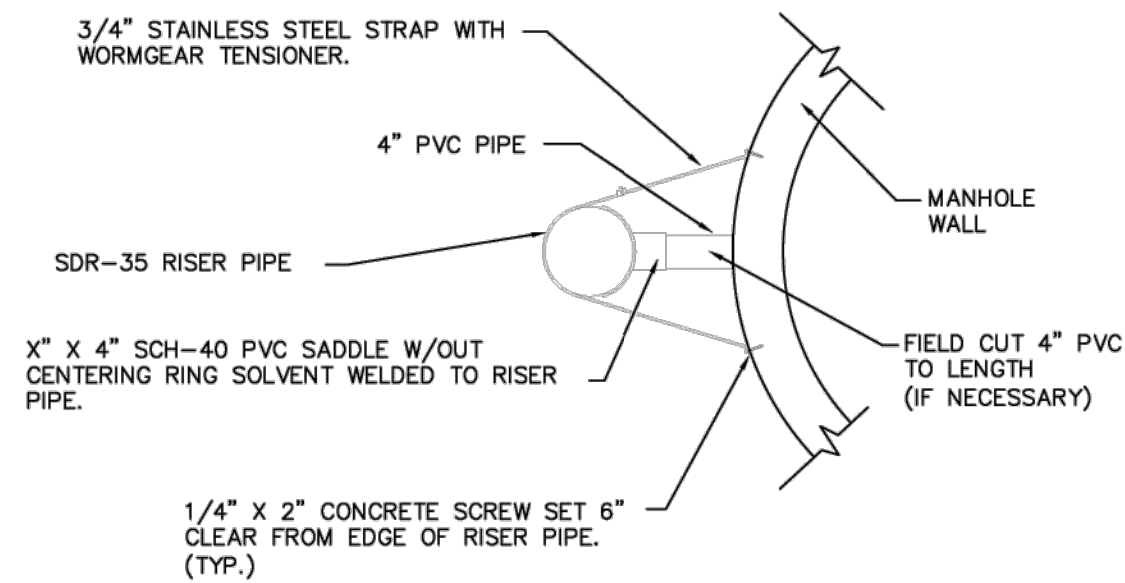


STANDARD OUTSIDE DROP MANHOLE
Not to Scale



SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL

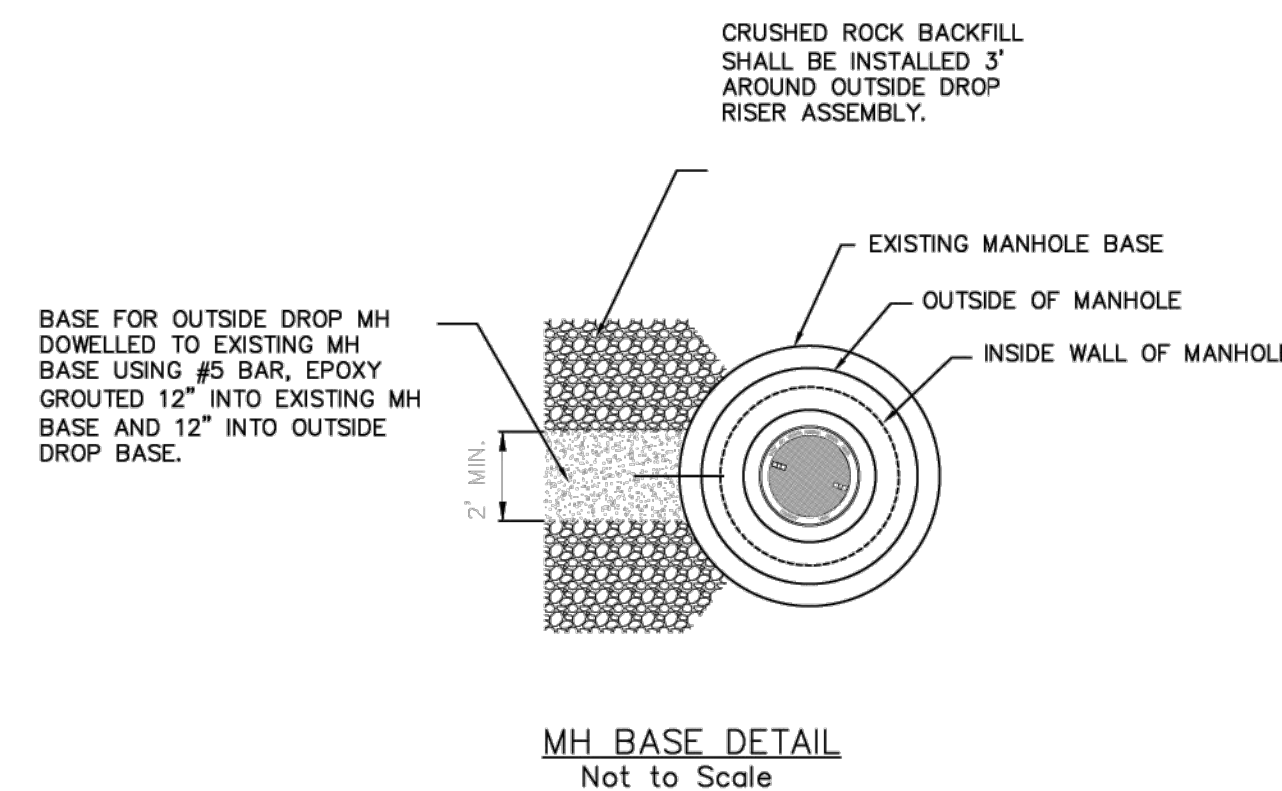


RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS		
DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"

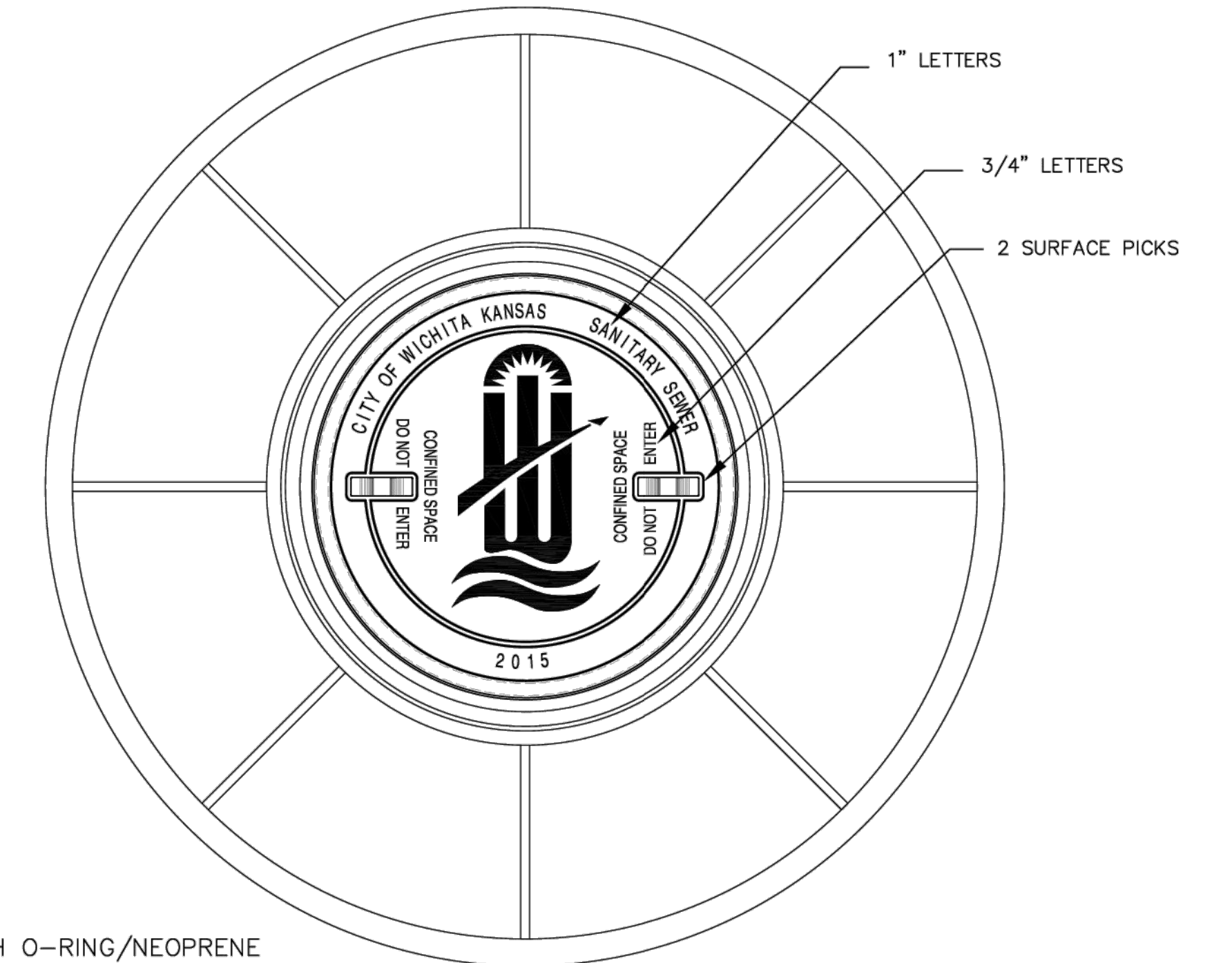
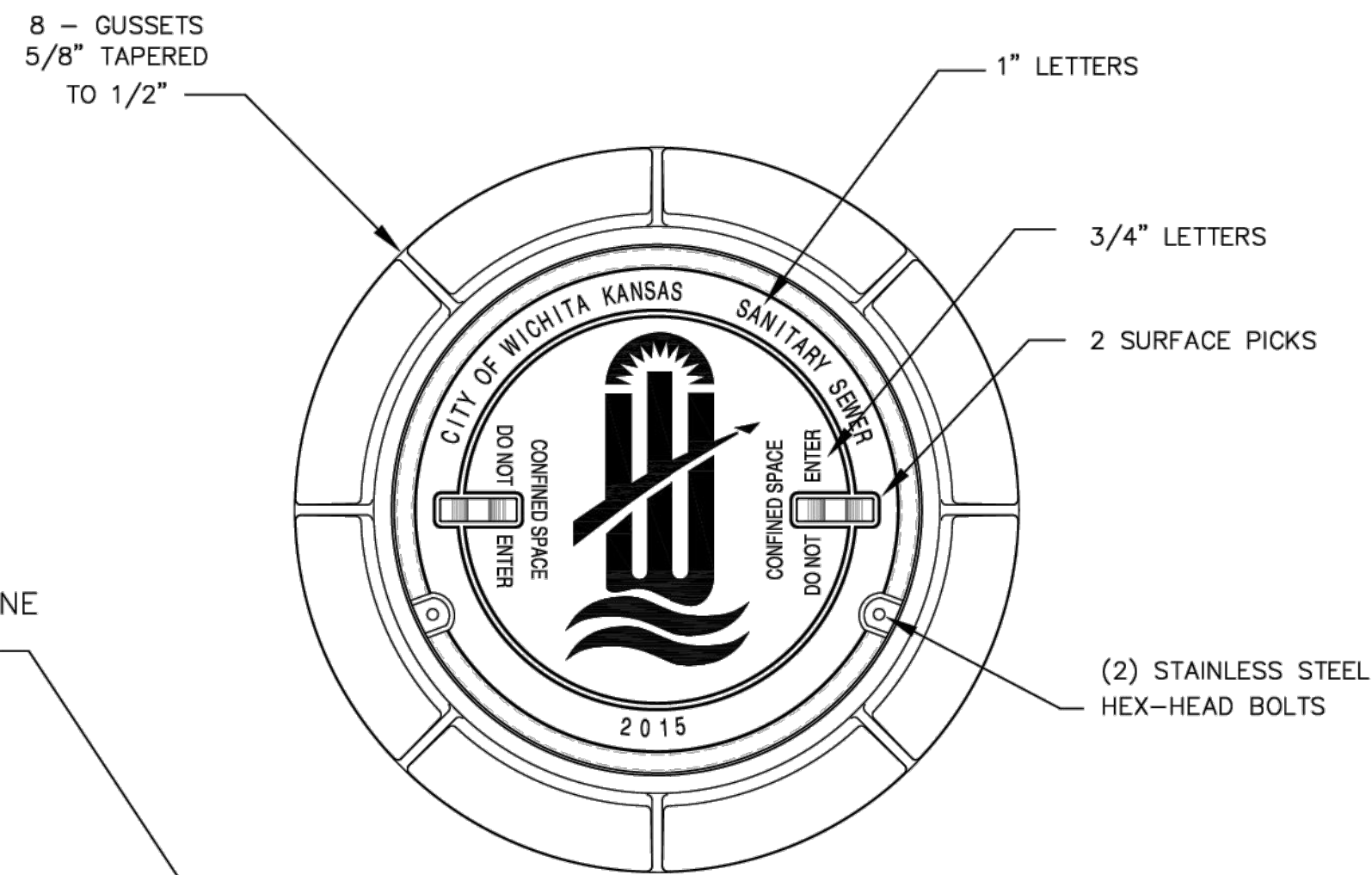
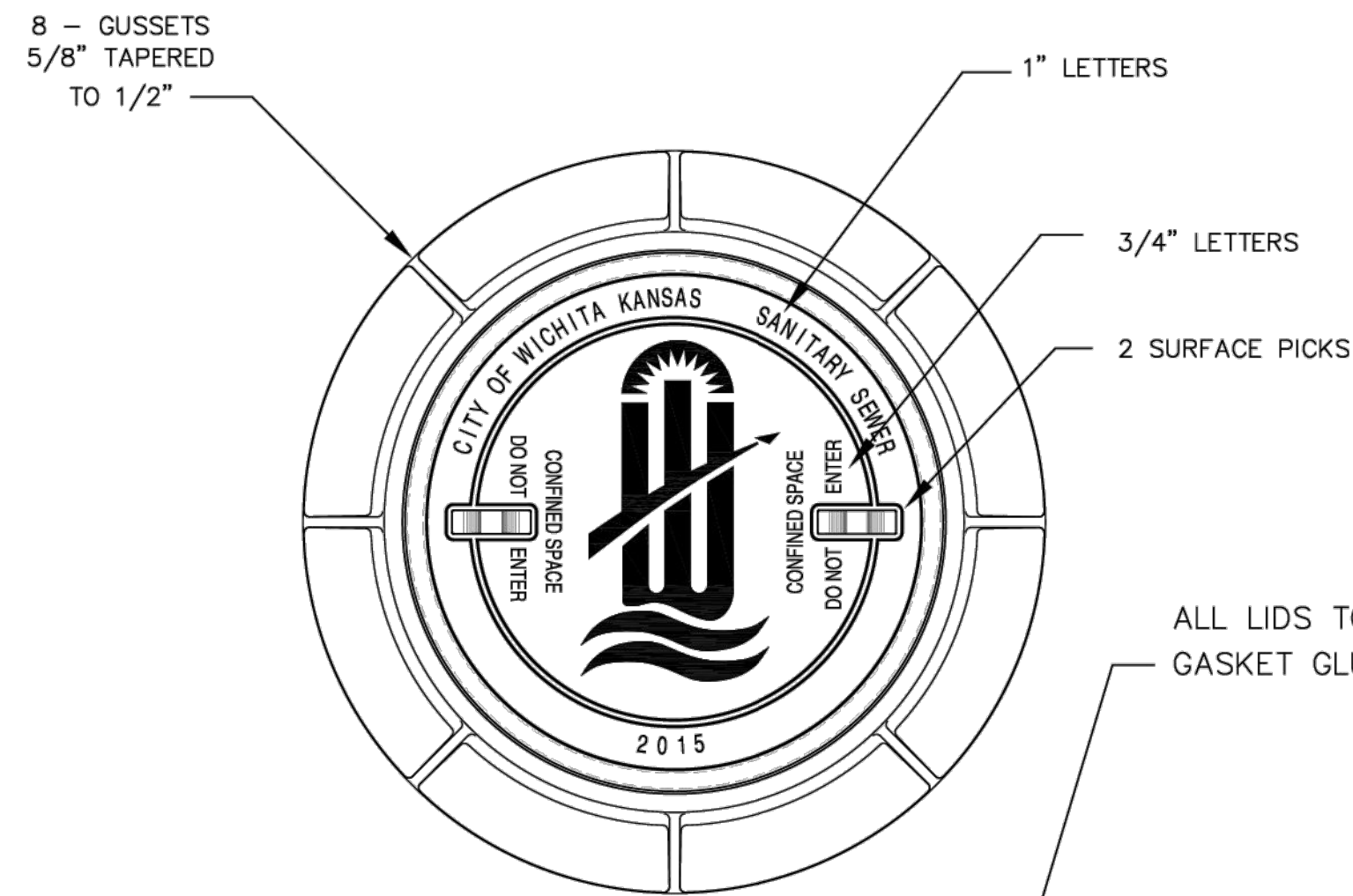
PRECAST MANHOLE GENERAL NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
- EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
- JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
- ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS, AS INDICATED BY THE PLANS.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
- TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
- OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTION ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
- THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
- PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
- THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.



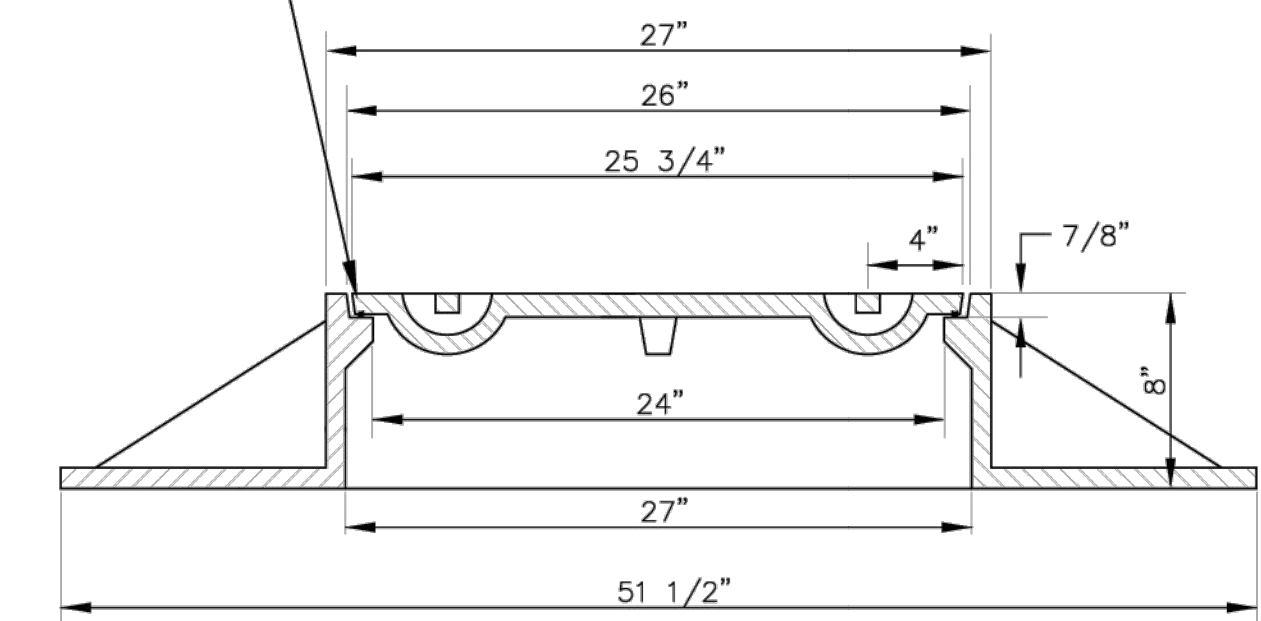
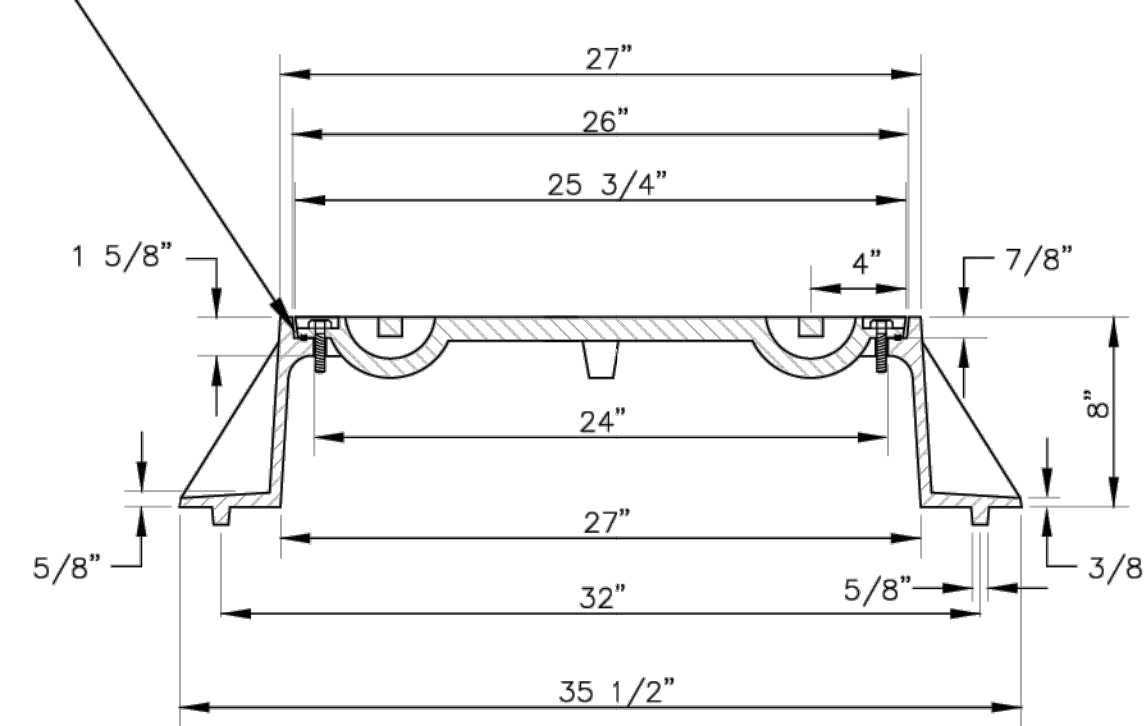
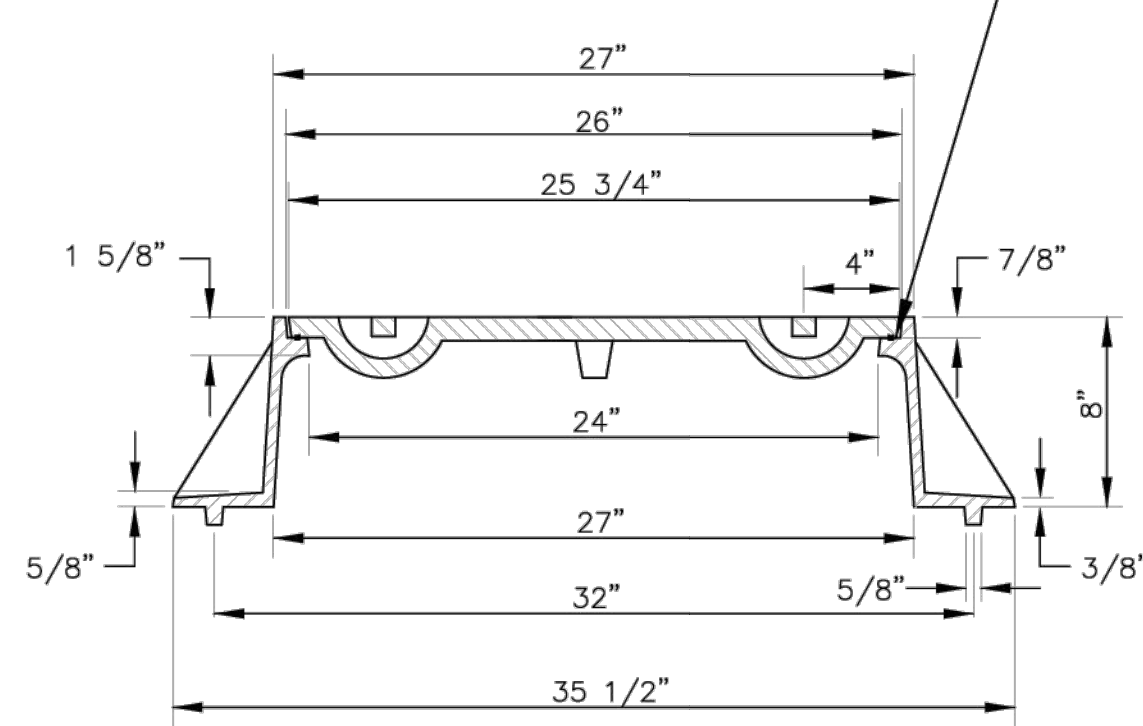
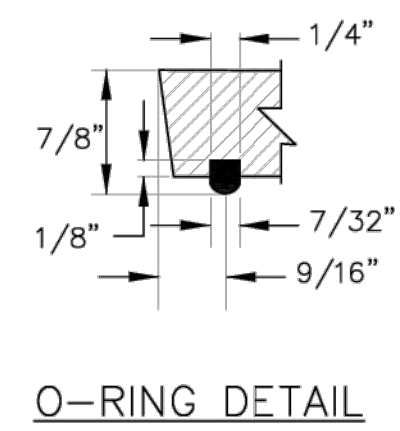
MH BASE DETAIL
Not to Scale

REVISION NOVEMBER 2019	RISER PIPE RESTRAINING ASSEMBLY REVISED ON MANHOLE DRAWING	
PRECAST SANITARY SEWER MANHOLE		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER 2400521	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 3
		38



ALL LIDS TO BE FURNISHED WITH O-RING/NEOPRENE GASKET GLUED IN THE COVER BEARING SURFACE.

ALL LIDS TO BE FURNISHED WITH O-RING/NEOPRENE GASKET GLUED IN THE COVER BEARING SURFACE.



STANDARD MANHOLE FRAME & COVER

DEETER #1261 OR EJIW #1936-Z1

BOLT DOWN MANHOLE FRAME & COVER

DEETER #1261 OR EJIW #1936-Z1

WIDE FLANGED FRAME & COVER

DEETER #1261A

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
2. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
3. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
4. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER". THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN WITH CITY OF WICHITA DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

REVISED: MARCH 2016



MANHOLE FRAME AND COVER (SANITARY SEWER)

CITY ENGINEER
GARY JANZEN, P.E.

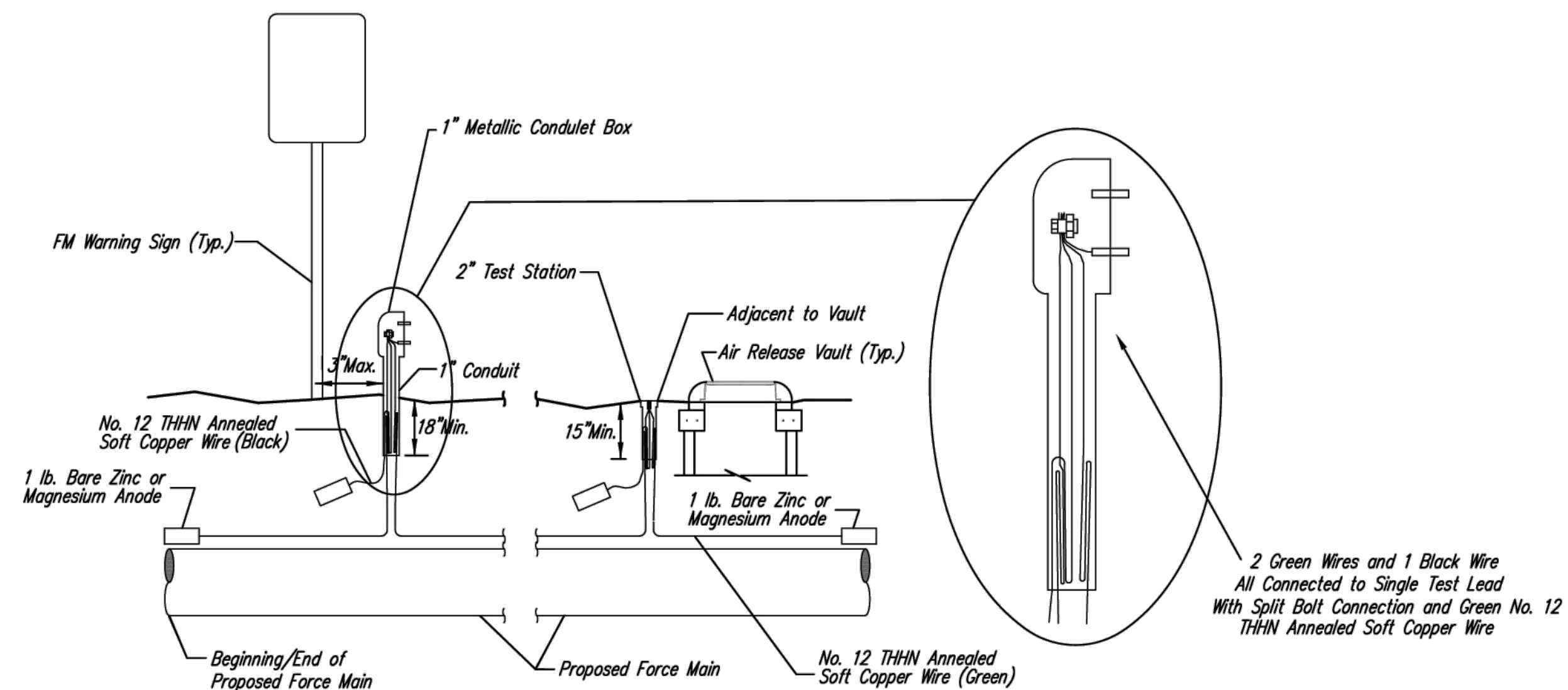
PROJECT NUMBER: 2400521
OCA NUMBER: .
DATE:

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

4

38



TRACER WIRE

Conductive type pipe locator/tracer wire shall be installed to locate all sanitary sewer force main pipe regardless of pipe material. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the force mains and pulled with the pipe. Split-bolt connectors shall be used at splice locations. Electrical tape shall cover all splices so no bare wire is exposed. Test stations shall be installed adjacent to all air release vaults and force main warning signs. Any exceptions to the location of test stations shall be approved by the engineer. At each test station, the tracer wire shall be connected to a 1 lb. Zinc or magnesium anode. Anodes shall also be attached to the tracer wire at both the beginning and the end of the proposed sewer line. A typical layout of the tracer wire and test station is provided in the above figure.

WIRE

The tracer wire shall be Green No. 12 THHN annealed soft copper wire with thermal plastic insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. The insulation sheathing shall be removed such that 1" bare copper wire is exposed at all points of connection.

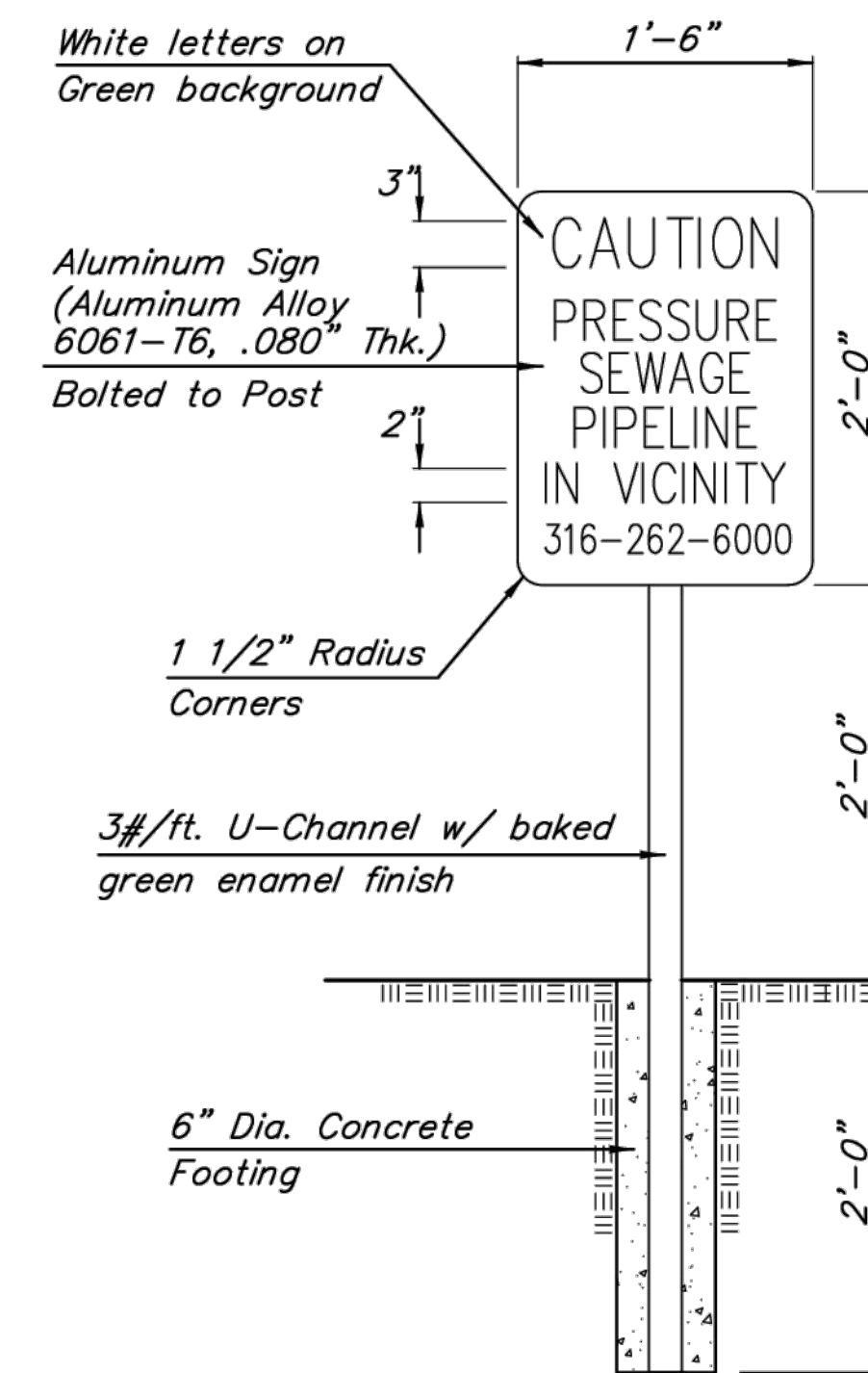
TEST STATIONS

The test station for the force main warning signs applications shall be a 1 inch galvanized "condulet" style test station as manufactured by AGRA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for air release vault applications shall be 2 inch flush style test station T2PS3B as manufactured by HANDLEY Industries or approved equal. The conduit style shall be attached to a 1 inch rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "Sewer" stamped or molded into the lid. All test stations shall be manufactured using molded green tops or sufficiently coated with green enamel paint. The tracer wire and the anode wire shall be installed to allow 10 inches of wire within the test station. In concrete environments such as sidewalks or in the downtown area the contractor shall use the flush style test station. The location of all test stations shall be approved by the engineer, recorded, and shown in the as-built drawings.

ANODES

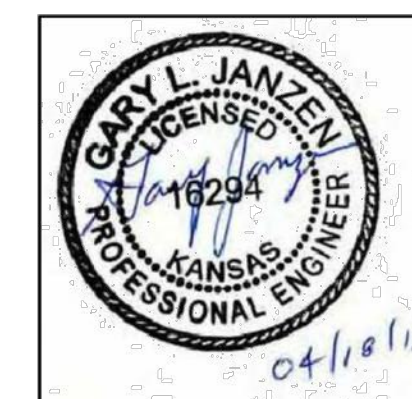
The anodes shall be 1 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the sanitary sewer force main at each test station. The anodes shall be connected to Black No. 12 THHN annealed soft copper wire which shall be extended to the test station.


SEWER TRACER WIRE DETAIL
COST IS SUBSIDIARY TO PIPE INSTALLATION

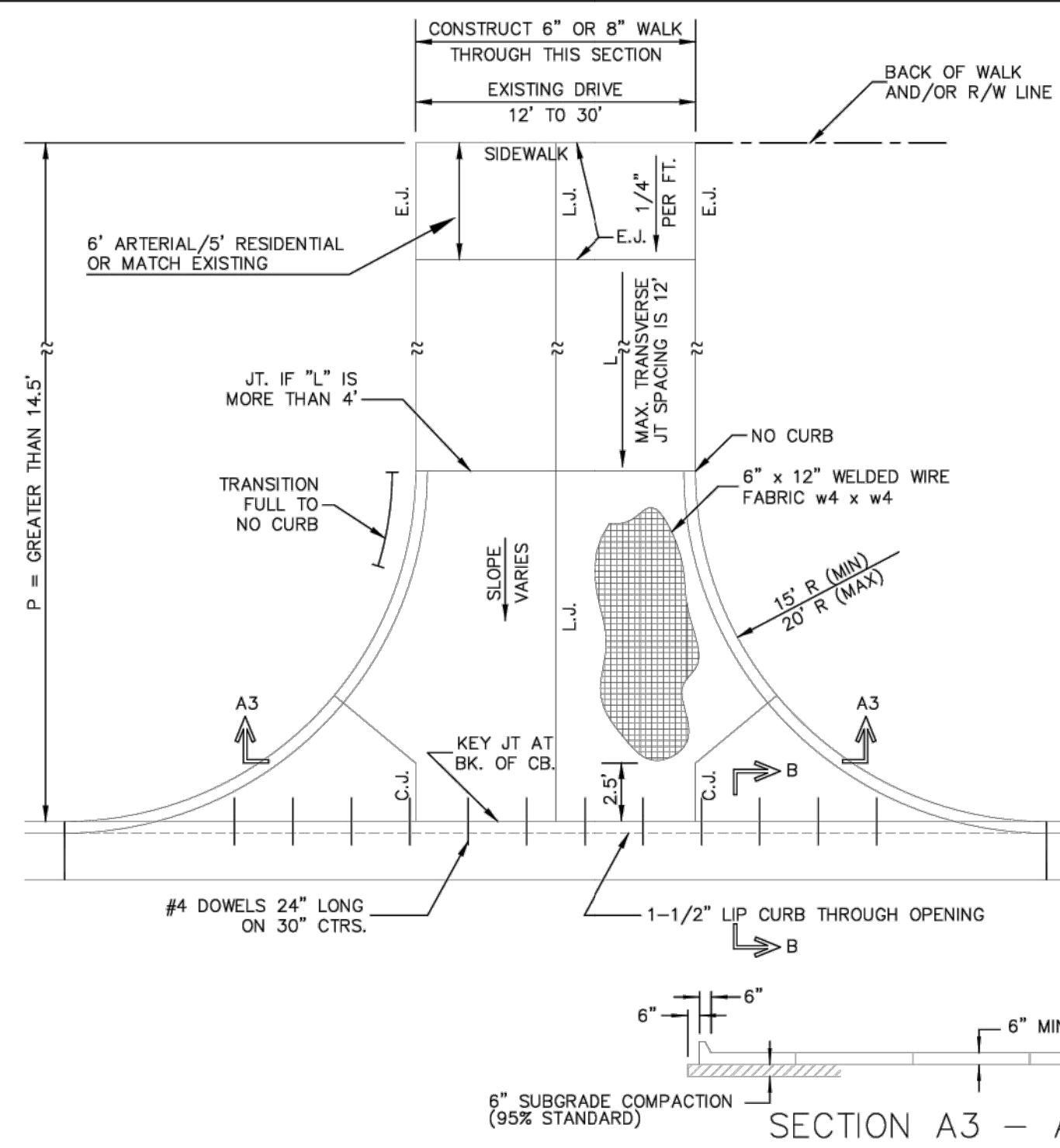


FORCE MAIN WARNING SIGN DETAIL

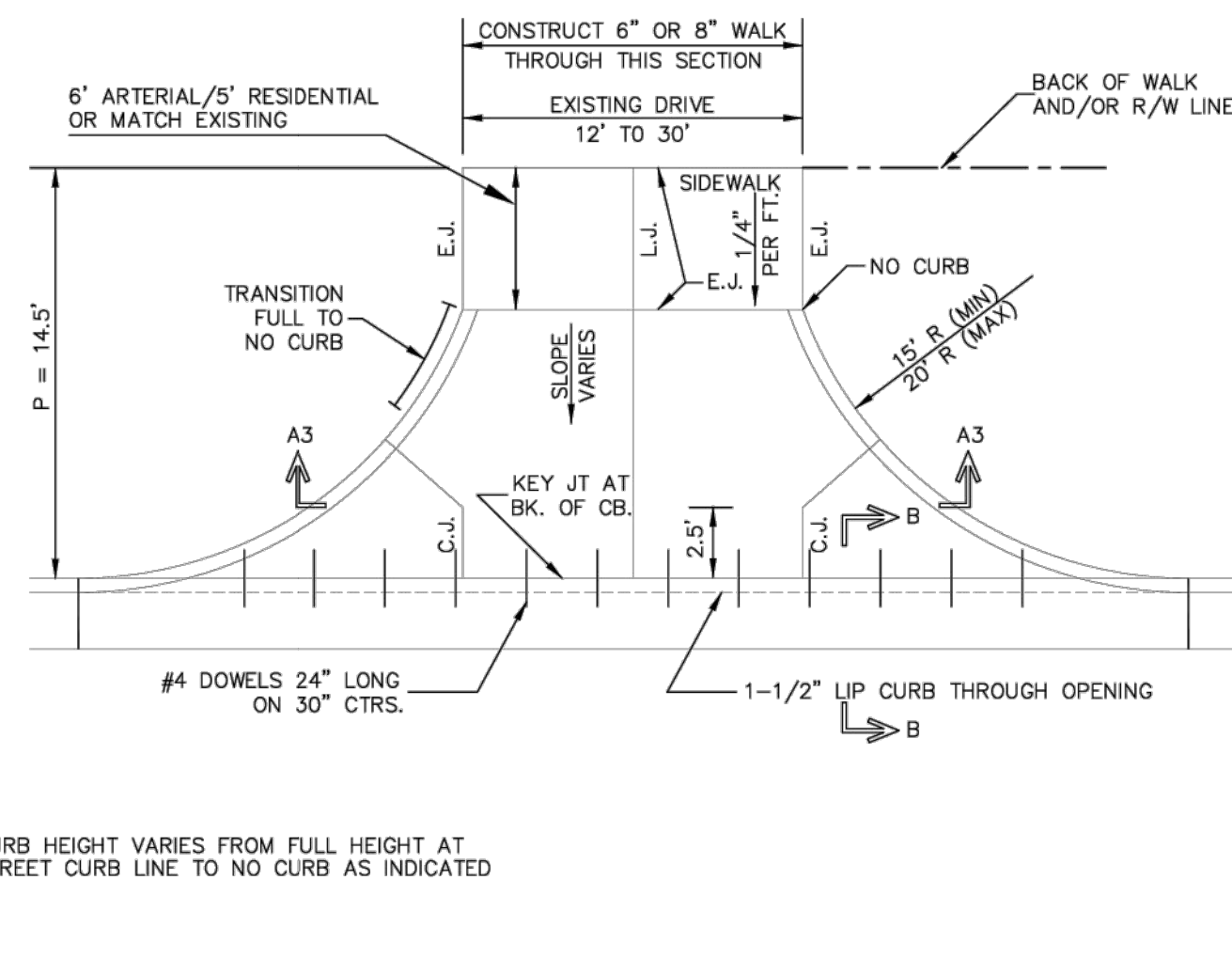
Note: Install Metal Warning Signs at Locations as Shown on the Plans. Exact Locations of Warning Signs shall be Approved by the Engineer.



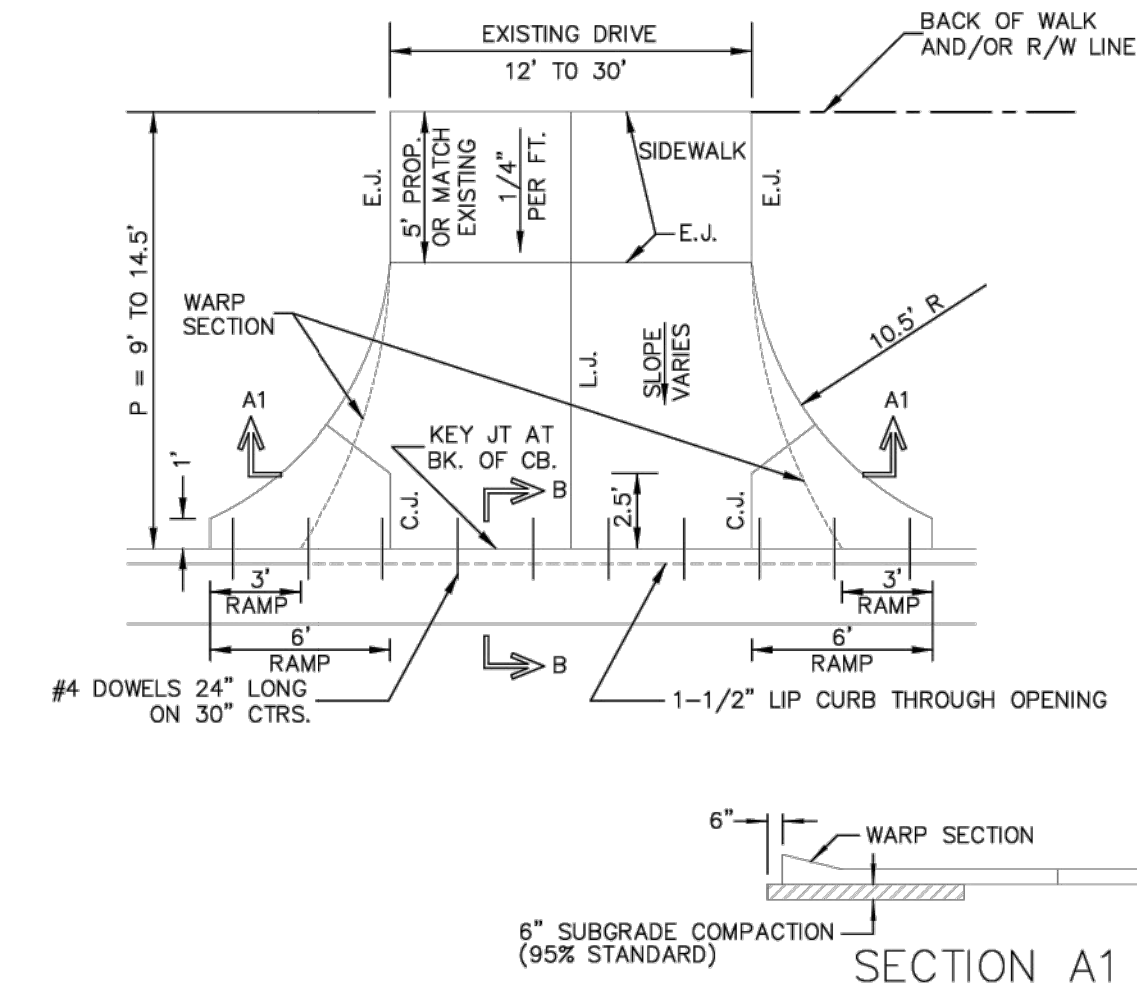
 CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION			TRACER WIRE & WARNING SIGN FOR SANITARY SEWER FORCE MAIN		
			CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE	SHEET 5 38		
2400521	.	12/2012			
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501					



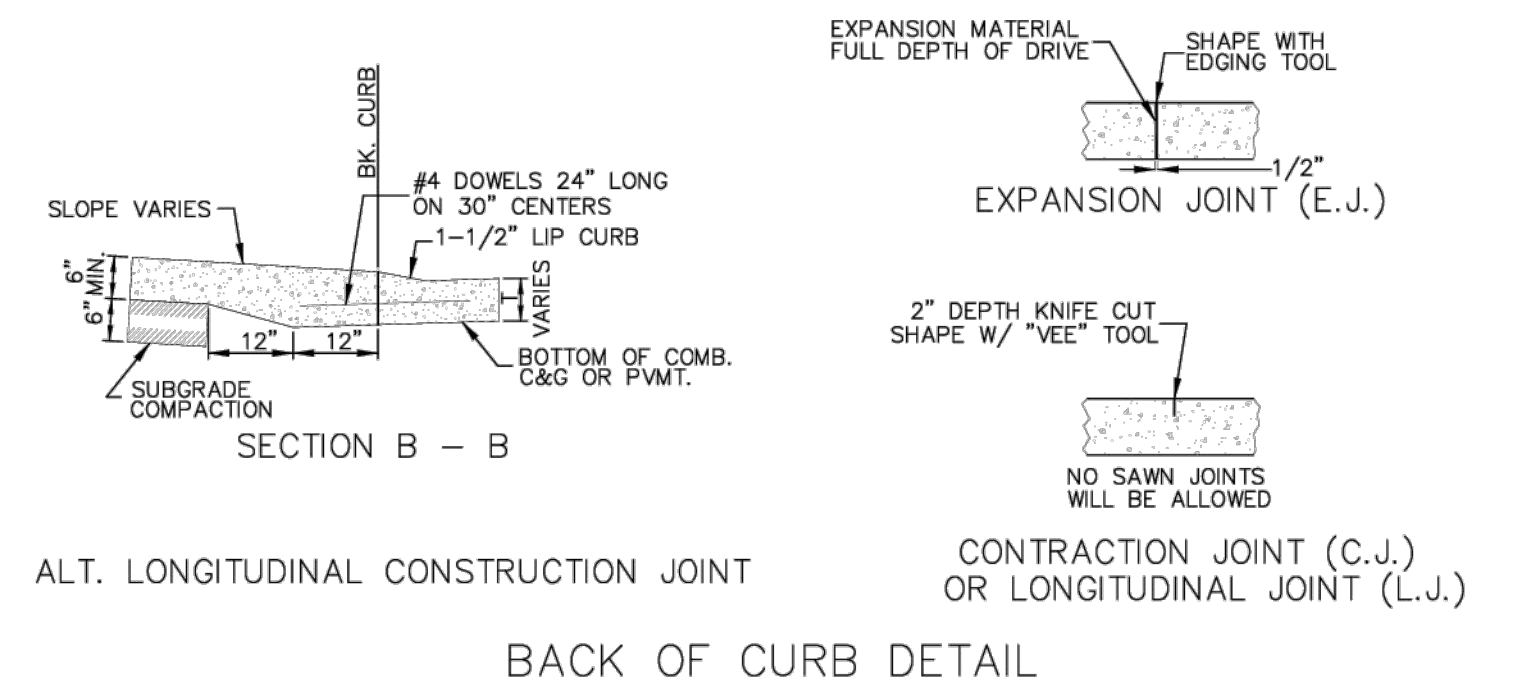
FULL RADIUS DRIVES (ARTERIAL/COLLECTOR DRIVEWAY)



FULL RAMP DRIVES (P = 4.0' & 6.5')



RADIUS RAMP DRIVES (RESIDENTIAL DRIVEWAY)

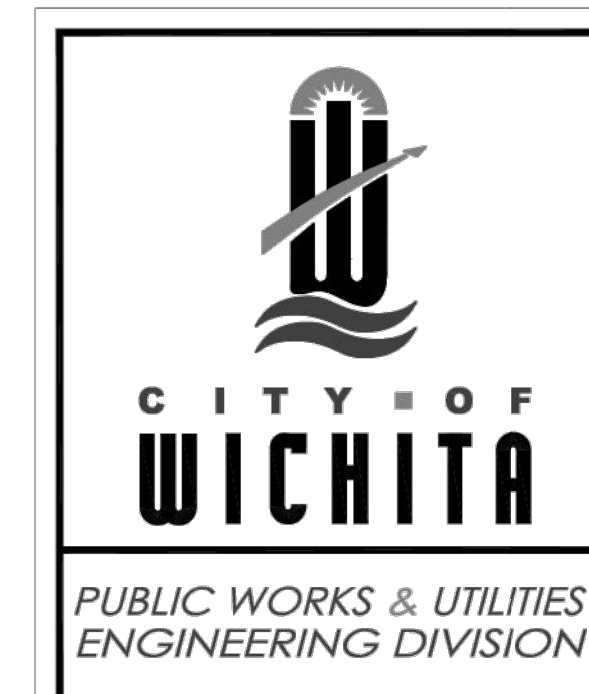


BACK OF CURB DETAIL

GENERAL NOTES

1. DRIVEWAY CONSTRUCTION DETAILED ON THIS SHEET IS FOR USE WITH FULL HEIGHT STREET CURBS AND IN AREAS WITHOUT FULL WALK CONSTRUCTION IN THE PARKING. SEE OTHER DETAIL SHEETS FOR DRIVEWAY CONSTRUCTION WITH ROLL CURB AND/OR FULL WALK.
2. ONE LONGITUDINAL JOINT SHALL BE CONSTRUCTED ALONG THE CENTERLINE OF DRIVES HAVING A WIDTH DIMENSION OF 24' OR LESS. TWO LONGITUDINAL JOINTS SHALL BE CONSTRUCTED WITH EQUAL SPACINGS NOT TO EXCEED 10' FOR DRIVES WITH A WIDTH DIMENSION GREATER THAN 24'.
3. DRIVEWAY WIDTH DENOTED AS WIDTH ON THE DETAIL DRAWINGS SHALL BE A MINIMUM OF 12' AND A MAXIMUM OF 30'. THE MAXIMUM OPENING FOR RADIUS TYPE DRIVES WITH CURBS THROUGH THE RADIUS SHALL NOT EXCEED 52' AT THE STREET CURB LINE.
4. CONTRACTION JOINT SPACING IN THE DRIVEWAY WALK SECTION SHALL BE A MINIMUM OF 3' AND A MAXIMUM OF 6' AND ARE TO BE EQUALLY SPACED WITHIN THIS RANGE. WALK SECTION SHALL BE CONSTRUCTED TO THE SAME THICKNESS AS THE DRIVEWAY.
5. ADDITIONAL THICKNESS OF DRIVE AS INDICATED IN THE DRAWINGS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE DRIVEWAY CONSTRUCTION.
6. ONE HALF INCH EXPANSION JOINTS SHALL BE INSTALLED WHEREVER DRIVE CONSTRUCTION ABUTS SIDEWALK. ONE HALF INCH EXPANSION JOINTS SHALL ALSO BE INSTALLED ALONG THE PROPERTY LINE AND/OR BACK OF WALK LINE WHEN DRIVE CONSTRUCTION ALONG THIS LINE ABUTS CONCRETE PARKING LOTS OR CONCRETE DRIVE EXTENSION.
7. DRIVEWAYS ONLY ON RESIDENTIAL PROPERTIES ONLY CAN BE CONSTRUCTED WITH 6" IN THICKNESS AND CAN BE WITHOUT REINFORCEMENT.
8. ALL DRIVEWAYS TO NONRESIDENTIAL PROPERTY SHALL BE A MINIMUM OF 8" IN THICKNESS AND SHALL HAVE REINFORCEMENT WITH 6"x12", W4xW4.

REVISED: NOVEMBER 2015



STANDARD DRIVE ENTRANCES FULL HEIGHT CURB

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER: 2400521
OCA NUMBER: .
DATE:

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

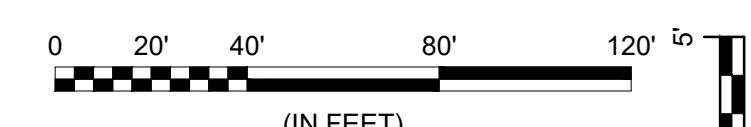
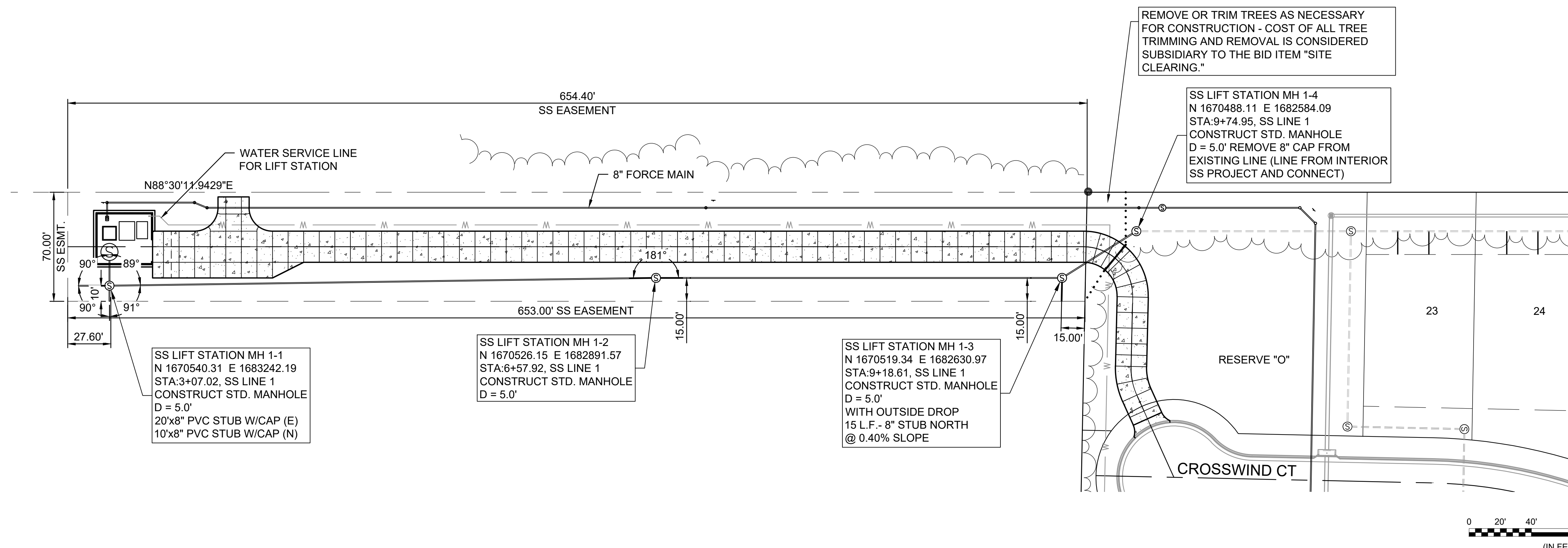
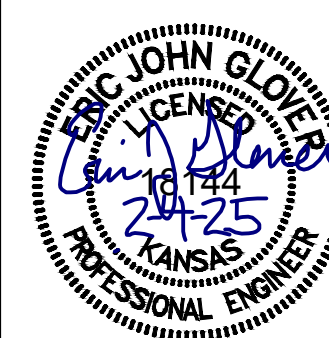
SHEET
6

38

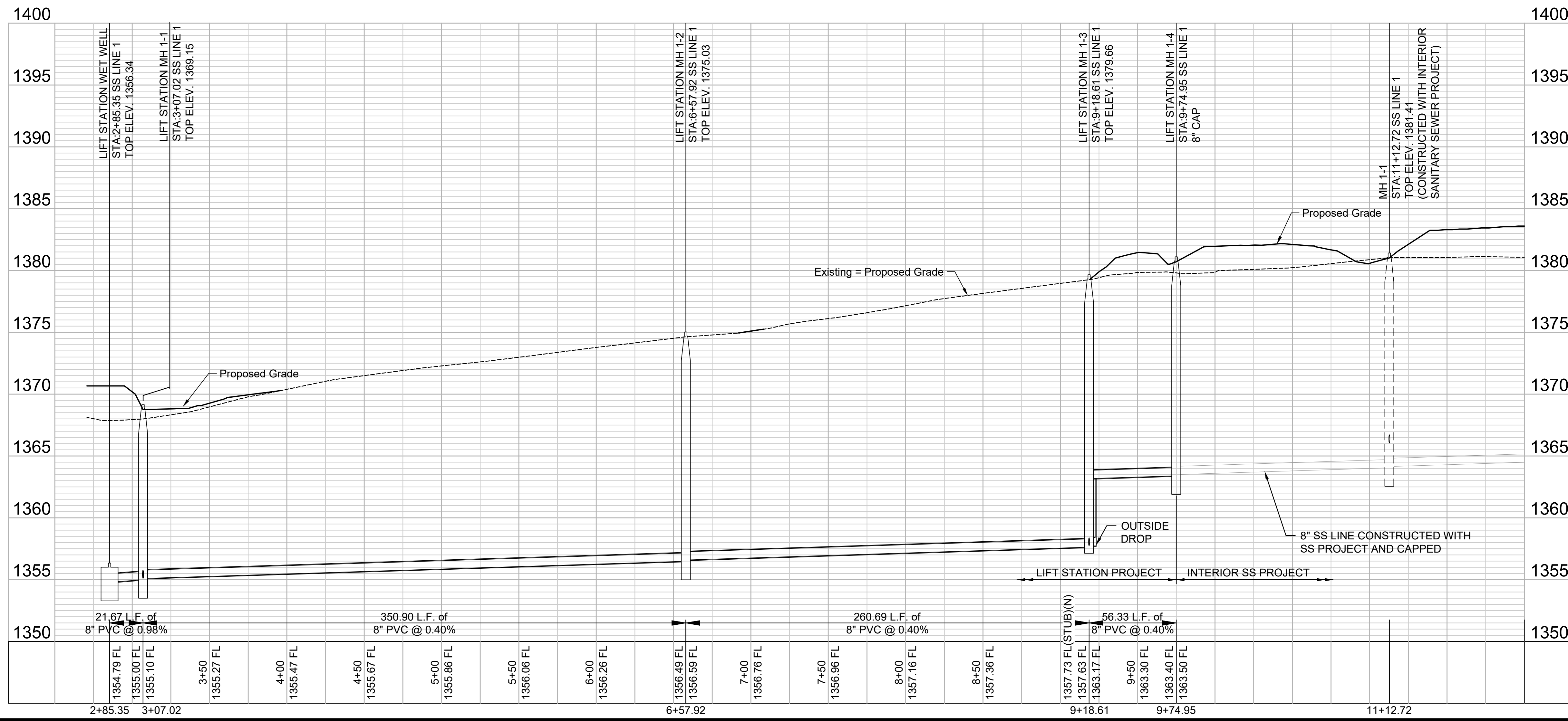


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VERTICAL



File: L:\2024\11-2400521 - Pegasus Addition Design\Drawings\SS LIFT STATION\SS GRAVITY LINE.dwg Last Save: 2/6/2025 1:16 PM Last saved by: DRS\standrich
Last plotted by: Standrich, Darryl R. Plot Style: --- Plot Scale: 1:2.5849 Plot Date: 2/11/2025 3:19 PM Plotter used: None

REV.	DATE	DESCRIPTION

CITY OF WICHITA
WICHITA, KANSAS

PEGASUS ADDITION
LIFT STATION - FORCE MAIN
(LIFT STATION #71)

SS GRAVITY LINE

JOB NO.: 2400521
DATE: FEB. 2025
DESIGNED BY: EJG
DRAWN BY: DRS

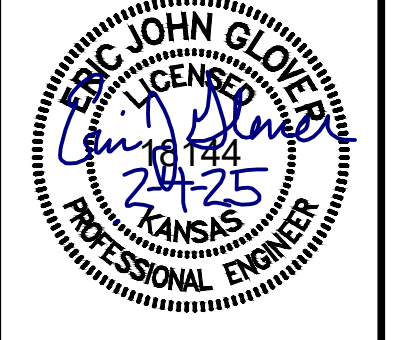
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER



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CITY OF WICHITA
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 PEGASUS ADDITION
 LIFT STATION - FORCE MAIN
 (LIFT STATION #71)

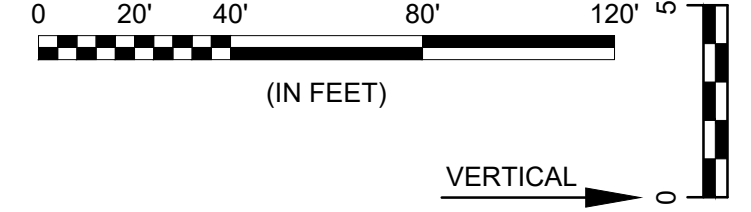
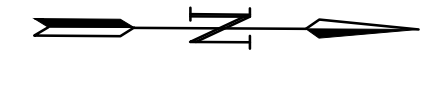
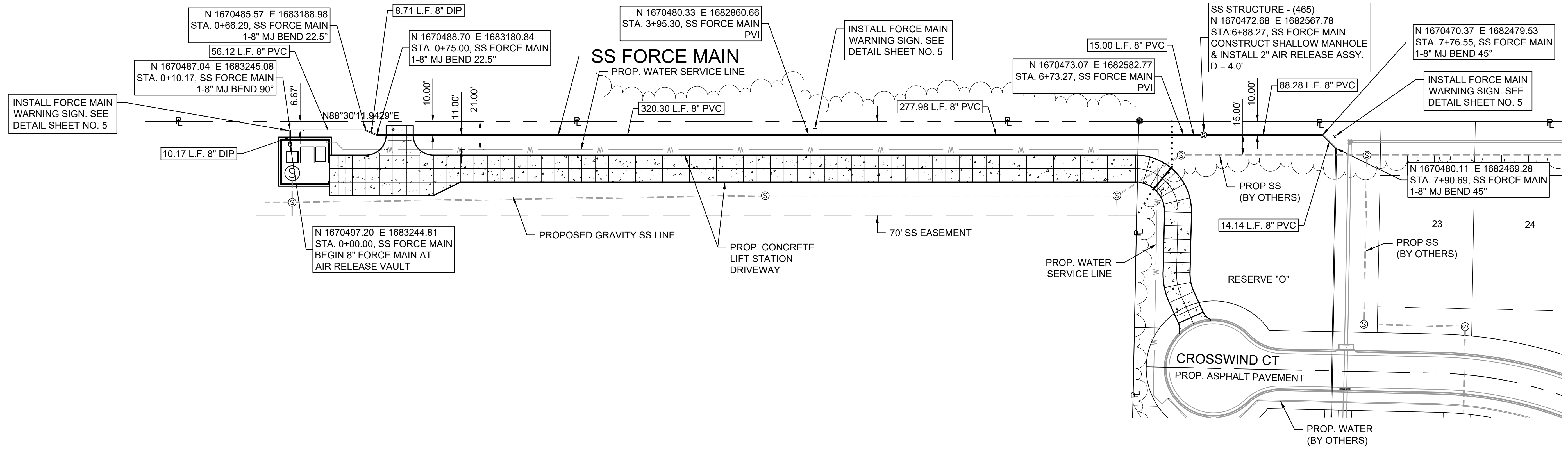
FORCE MAIN
 (1 OF 5)

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: EJG
 DRAWN BY: DRS

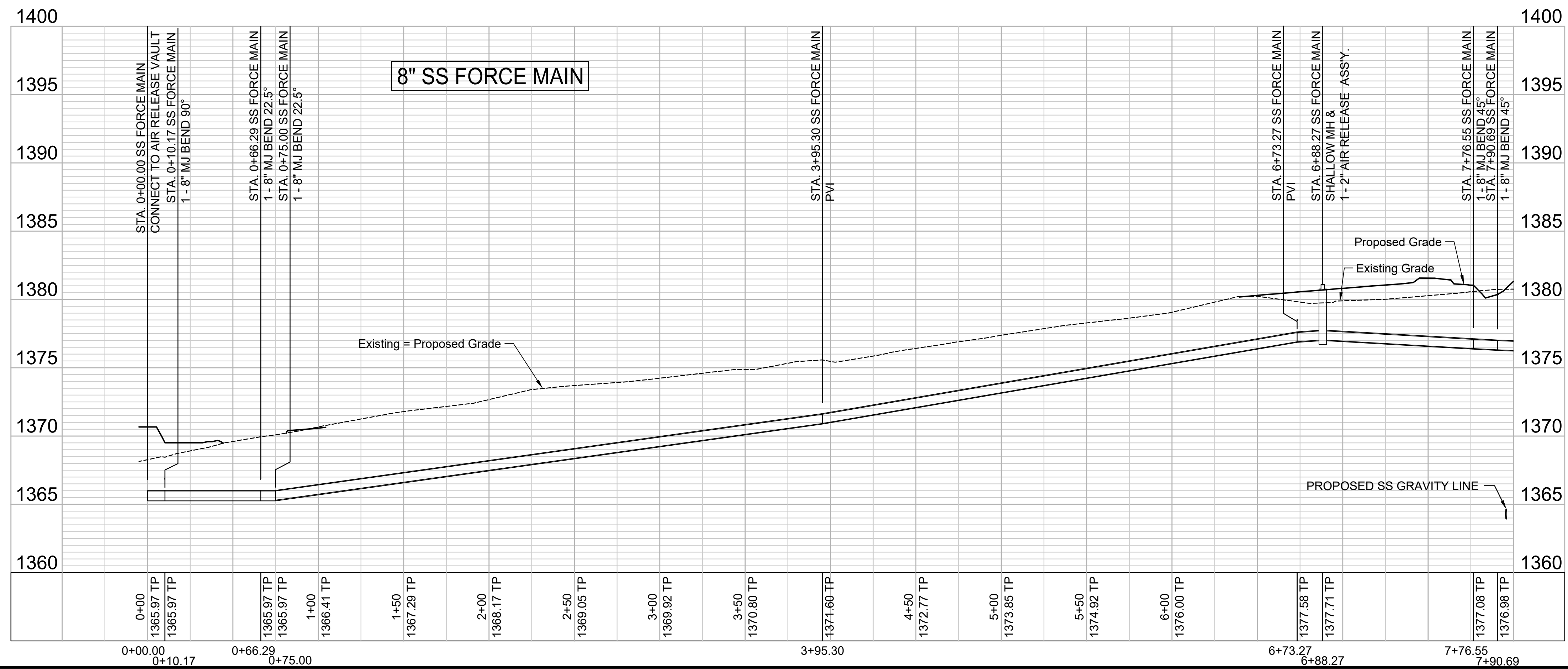
BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER

SHEET NUMBER **9** OF **38**



NOTE:
 ALL BENDS OVER 11.25° SHALL EITHER HAVE REACTION BLOCKING OR SHALL BE RESTRAINED JOINTS.



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REV.	DATE	DESCRIPTION

CITY OF WICHITA
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 PEGASUS ADDITION
 LIFT STATION - FORCE MAIN
 (LIFT STATION #71)

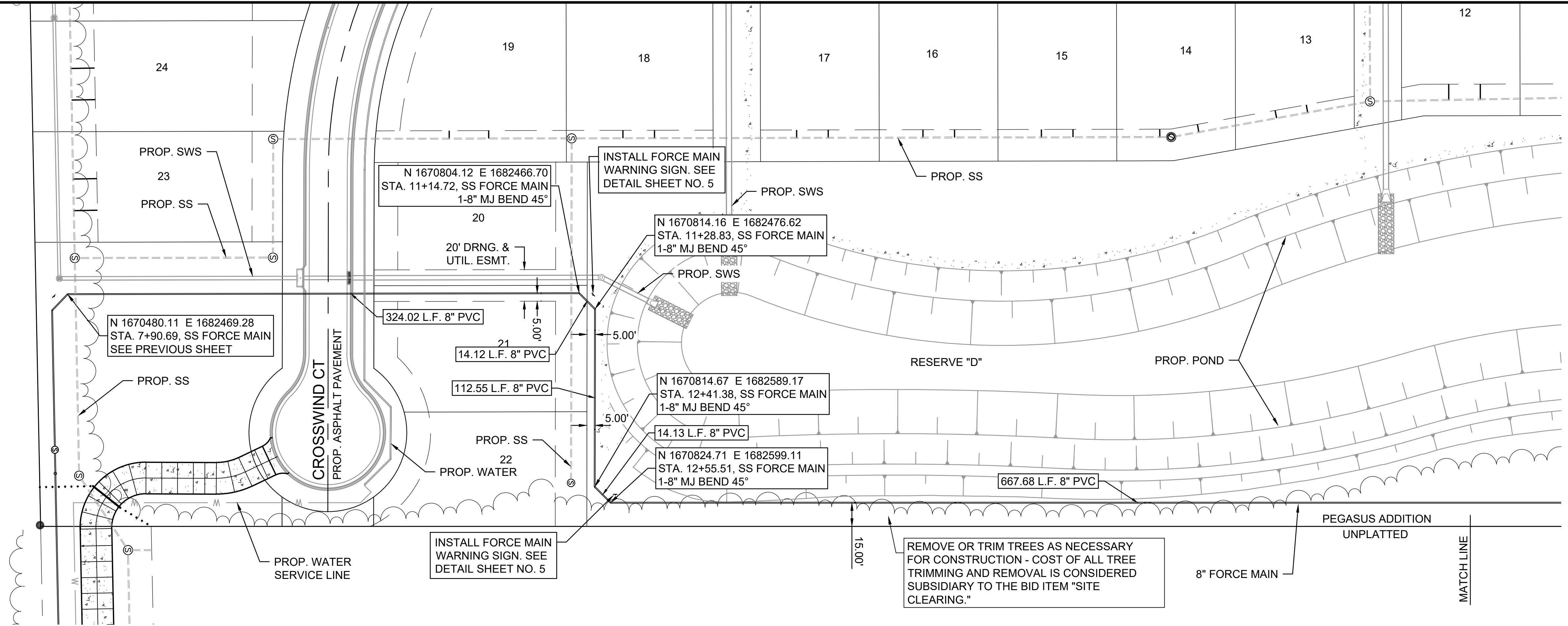
FORCE MAIN
 (2 OF 5)

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: E.JG
 DRAWN BY: DRS

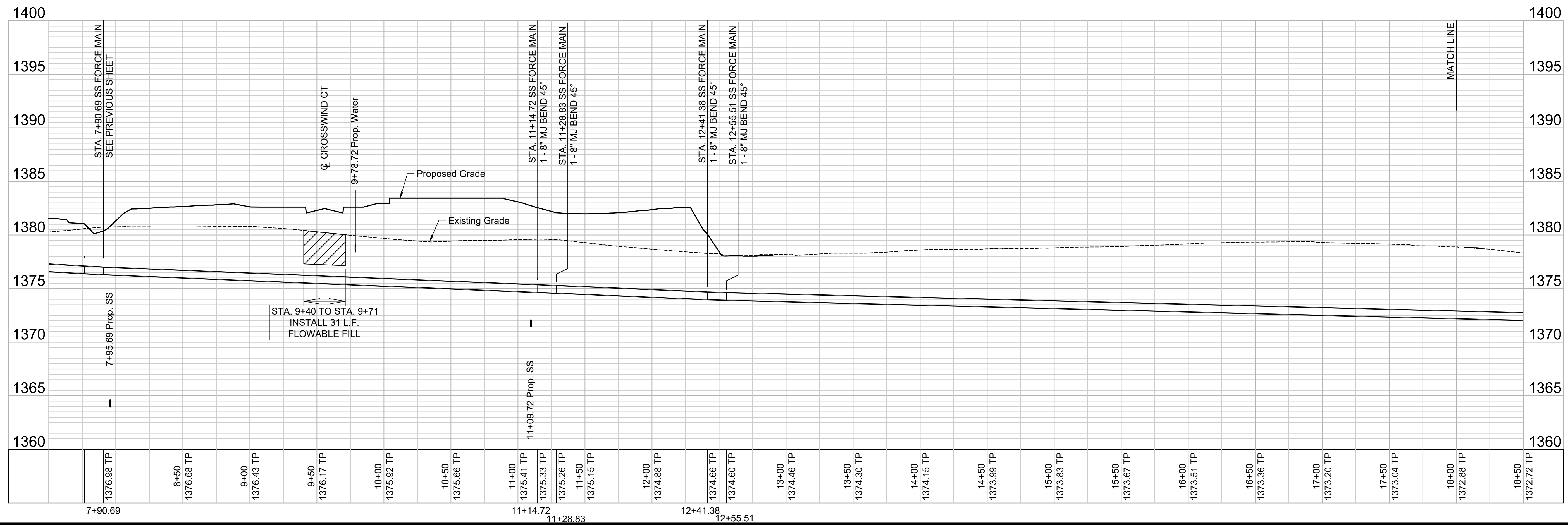
BAR IS ONE INCH ON ORIGINAL DRAWING
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DRAWING NUMBER

SHEET NUMBER **10** OF **38**



NOTE:
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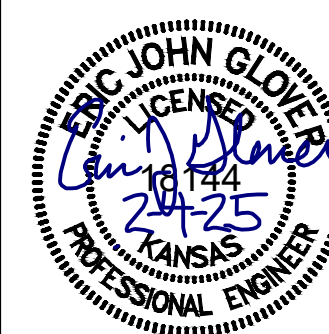


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CITY OF WICHITA
 WICHITA, KANSAS
 PEGASUS ADDITION
 LIFT STATION - FORCE MAIN
 (LIFT STATION #71)

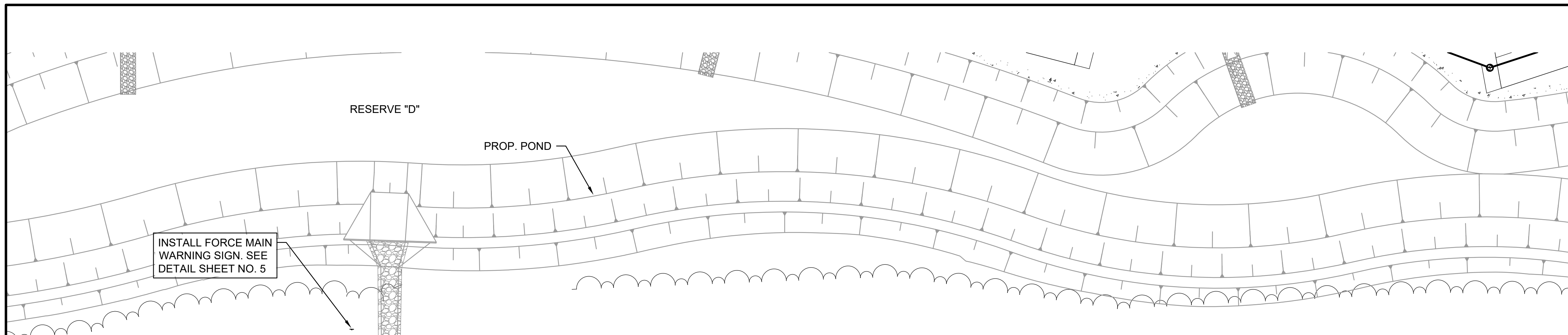
FORCE MAIN
 (3 OF 5)

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: EJJ
 DRAWN BY: DRS

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

DRAWING NUMBER

SHEET NUMBER **11** OF **38**



INSTALL FORCE MAIN WARNING SIGN. SEE DETAIL SHEET NO. 5

RESERVE "D"

PROP. POND

PEGASUS ADDITION
 UNPLATTED

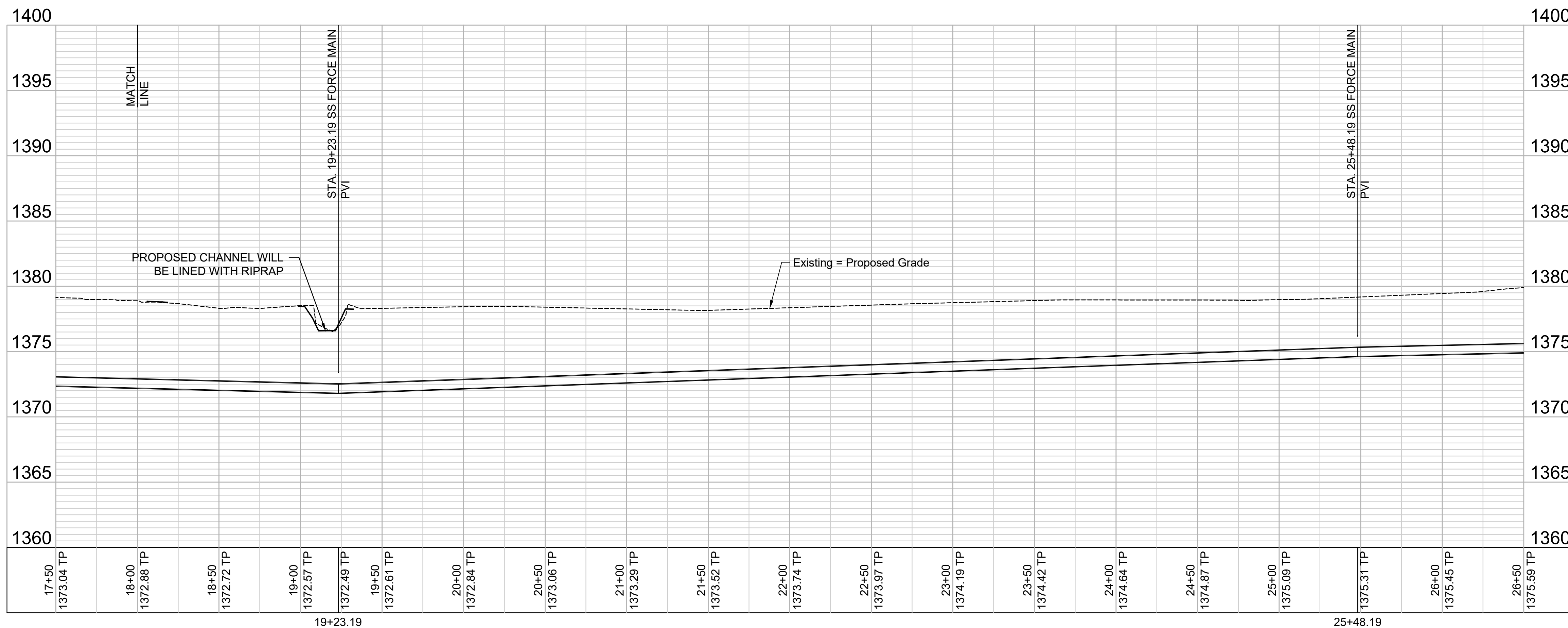
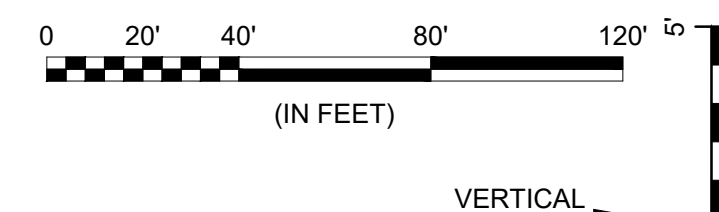
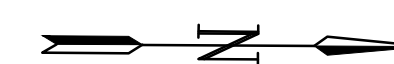
625.00 L.F. 8" PVC

8" FORCE MAIN

N 1671492.38 E 1682595.05
 STA. 19+23.19, SS FORCE MAIN
 PVI

N 1672117.37 E 1682591.25
 STA. 25+48.19, SS FORCE MAIN
 PVI

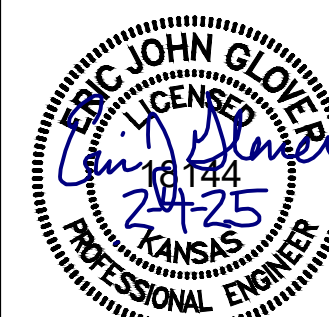
NOTE:
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 WICHITA, KANSAS

**PEGASUS ADDITION
 LIFT STATION - FORCE MAIN
 (LIFT STATION #71)**

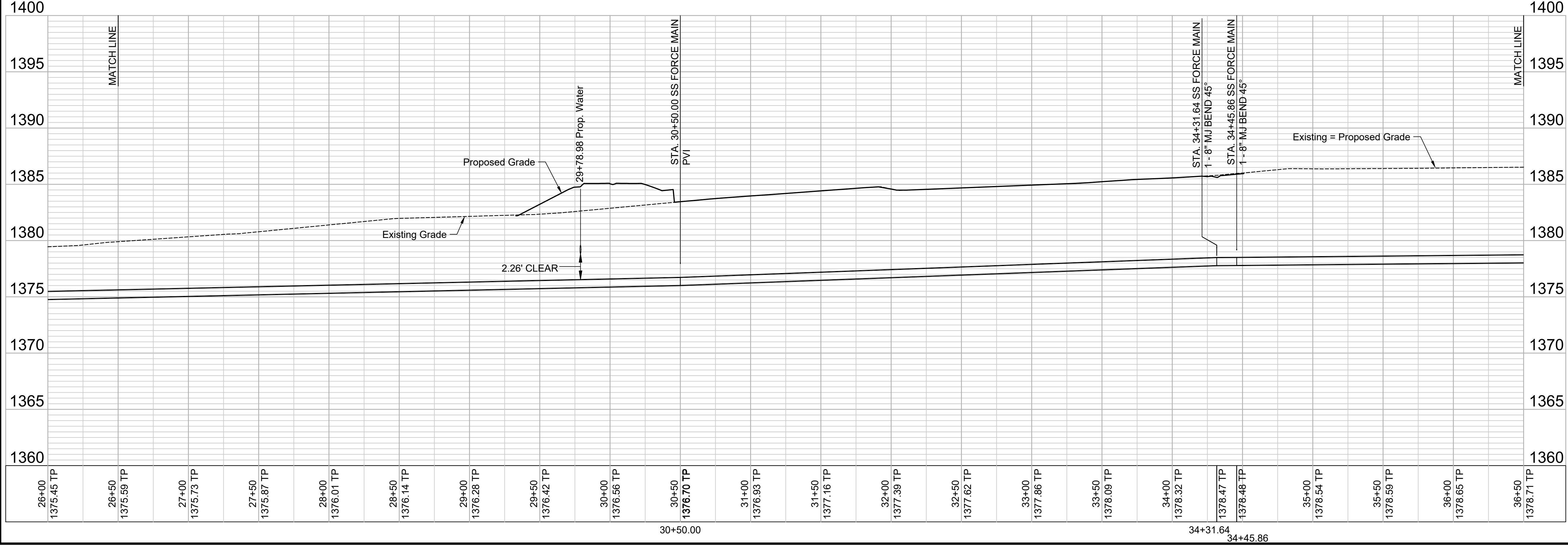
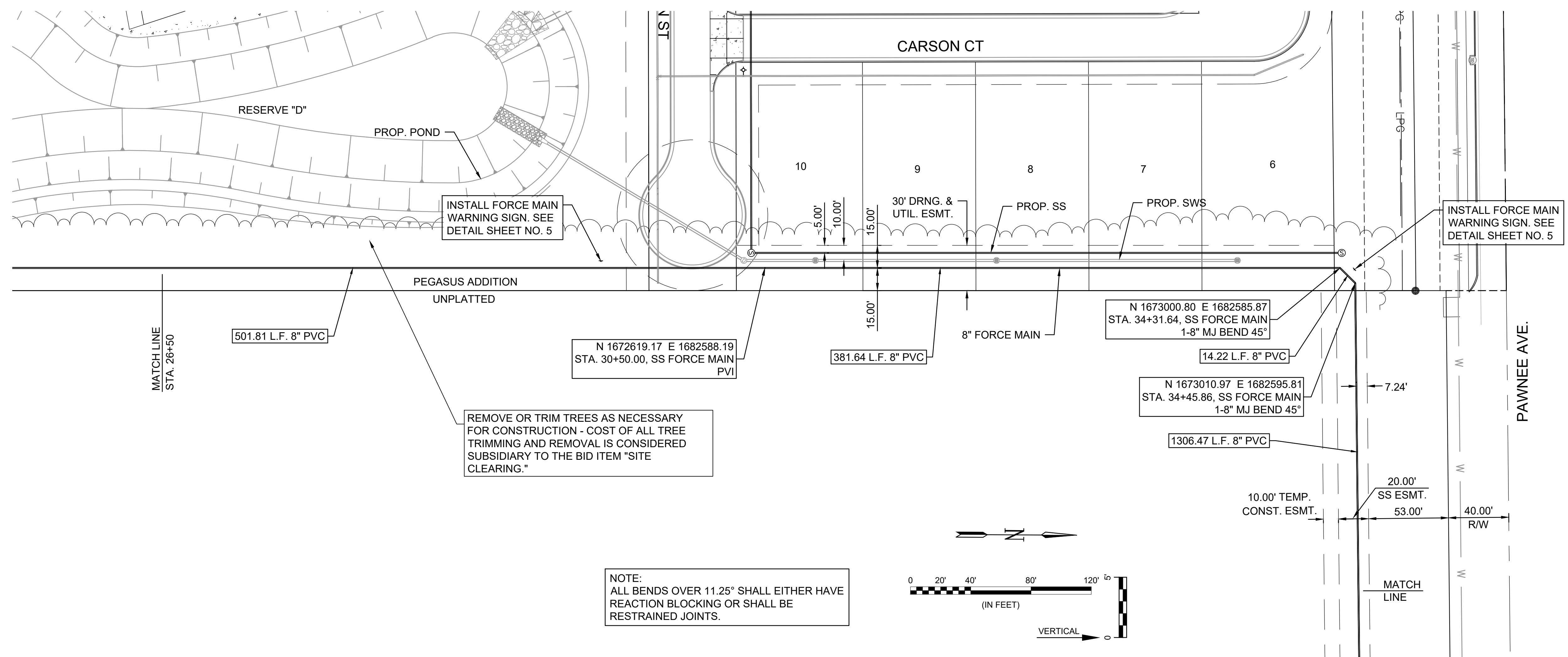
**FORCE MAIN
 (4 OF 5)**

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: E.JG
 DRAWN BY: DRS

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

DRAWING NUMBER

SHEET NUMBER **12 OF 38**

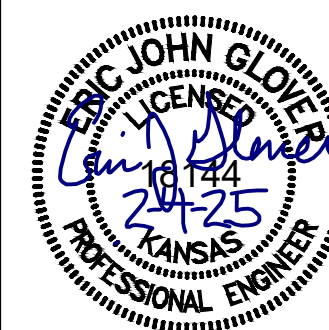


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**PEGASUS ADDITION
 LIFT STATION - FORCE MAIN
 (LIFT STATION #1)**

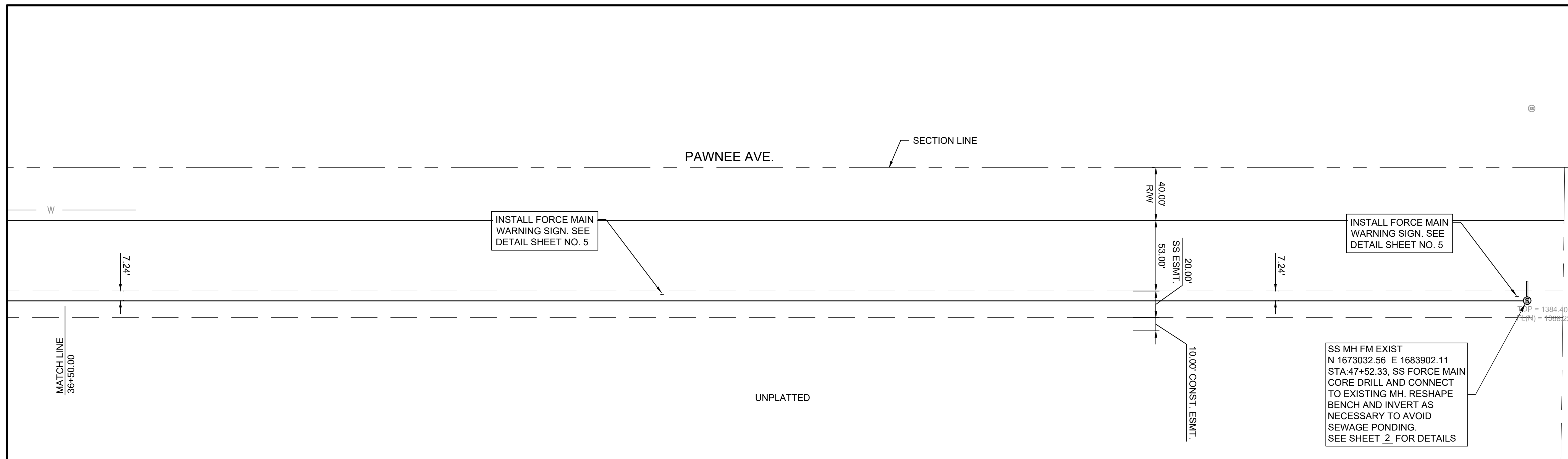
**FORCE MAIN
 (5 OF 5)**

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: EJJ
 DRAWN BY: DRS

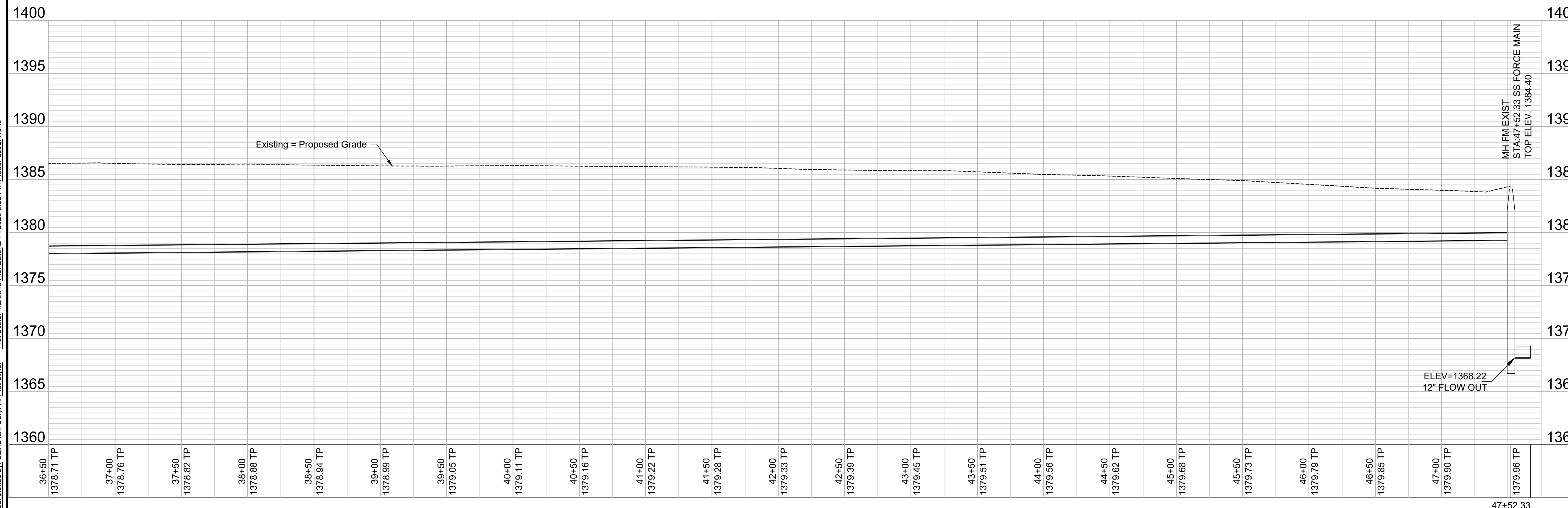
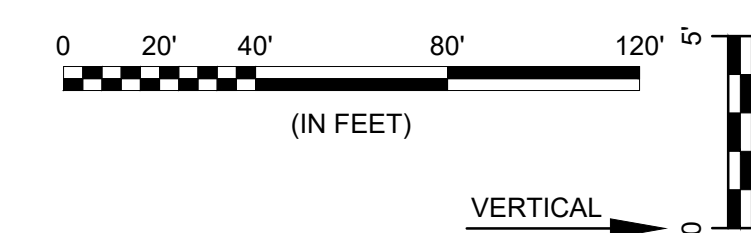
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 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER

SHEET NUMBER **13 OF 38**



NOTE:
 ALL BENDS OVER 11.25° SHALL EITHER HAVE REACTION BLOCKING OR SHALL BE RESTRAINED JOINTS.

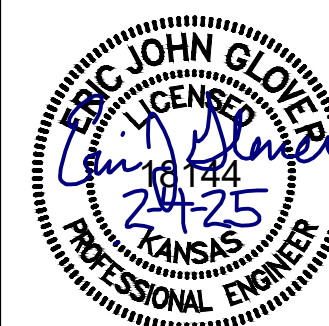


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CITY OF WICHITA
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 PEGASUS ADDITION
 LIFT STATION - FORCE MAIN
 (LIFT STATION #71)

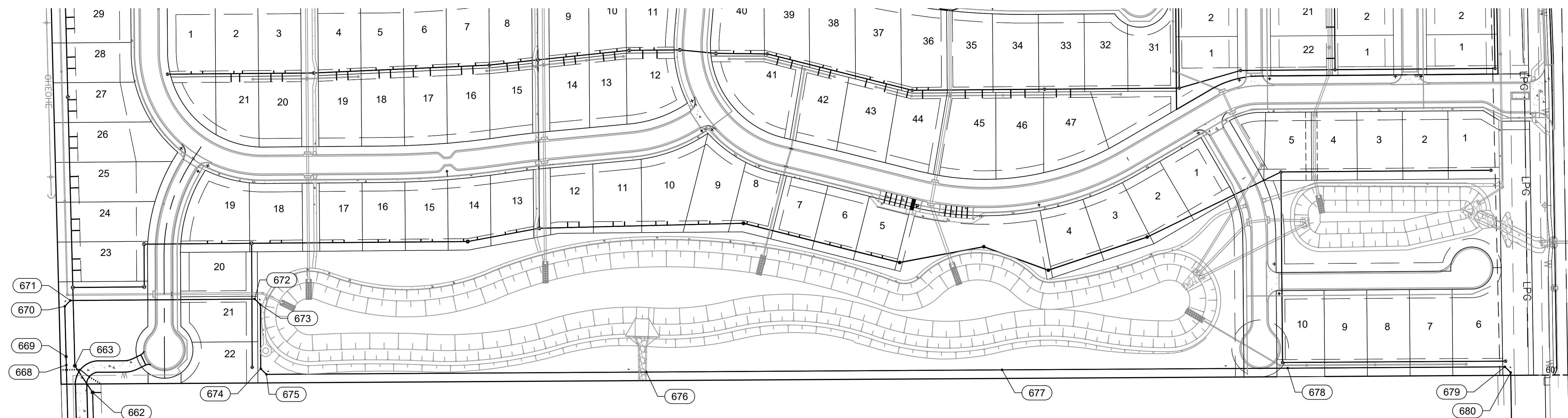
FORCE MAIN COORDINATES

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: .
 DRAWN BY: .

BAR IS ONE INCH ON ORIGINAL DRAWING
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DRAWING NUMBER

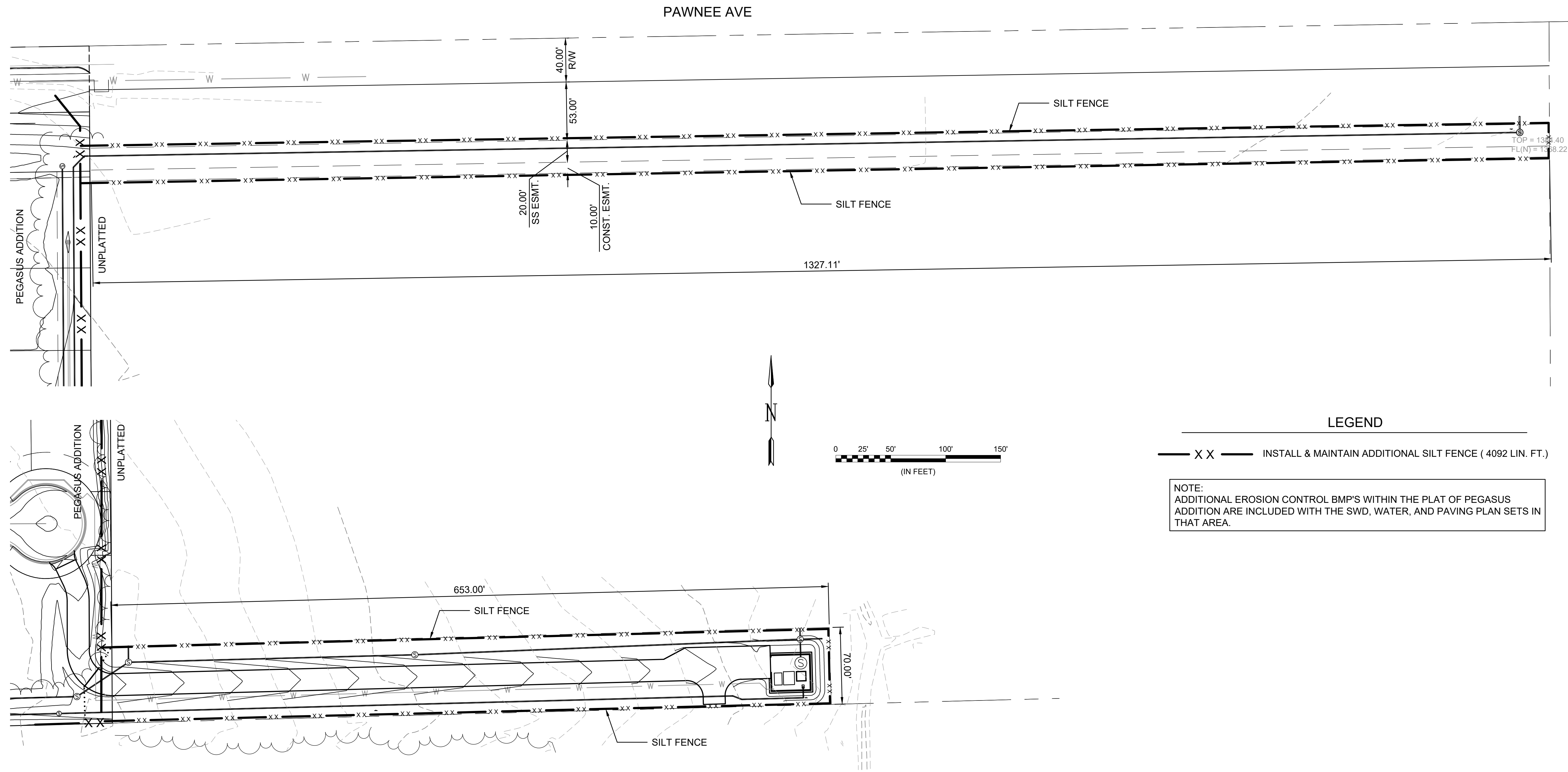
SHEET NUMBER **14 OF 38**



Sanitary Sewer Point Table					
Point #	Northing	Easting	Grid Northing	Grid Easting	Description
660	1670540.31	1683242.19	1670381.23	1683081.89	LS MH 1-1
661	1670526.15	1682891.57	1670367.07	1682731.31	LS MH 1-2
662	1670519.34	1682630.97	1670360.26	1682470.73	LS MH 1-3
663	1670488.11	1682584.09	1670329.03	1682423.85	LS MH 1-4
664	1670487.04	1683245.08	1670327.96	1683084.78	90° BEND
665	1670485.57	1683188.98	1670326.49	1683028.69	22.5° BEND
666	1670488.70	1683180.84	1670329.61	1683020.55	22.5° BEND
667	1670480.33	1682860.66	1670321.25	1682700.40	PVI
668	1670473.07	1682582.77	1670313.99	1682422.54	PVI
669	1670472.68	1682567.78	1670313.60	1682407.55	AIR RELEASE
670	1670470.37	1682479.53	1670311.29	1682319.31	45° BEND
671	1670480.11	1682469.28	1670321.03	1682309.05	45° BEND
672	1670804.12	1682466.70	1670645.01	1682306.48	45° BEND
673	1670814.16	1682476.62	1670655.05	1682316.40	45° BEND
674	1670814.67	1682589.17	1670655.56	1682428.93	45° BEND
675	1670824.71	1682599.11	1670665.60	1682438.87	45° BEND
676	1671492.38	1682595.05	1671333.21	1682434.81	PVI
677	1672117.37	1682591.25	1671958.14	1682431.01	PVI
678	1672619.17	1682588.19	1672459.89	1682427.96	PVI
679	1673000.80	1682585.87	1672841.48	1682425.64	45° BEND
680	1673010.97	1682595.81	1672851.65	1682435.58	45° BEND
681	1673032.56	1683902.11	1672873.24	1683741.75	EXIST MH

File: L:\2024\141-2400521 - Pegasus Addition Design\Drawings\141-2400521-COORDINATES.dwg Last Save: 2/5/2025 1:18 PM Last saved by: DRS\standrich
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LEGEND

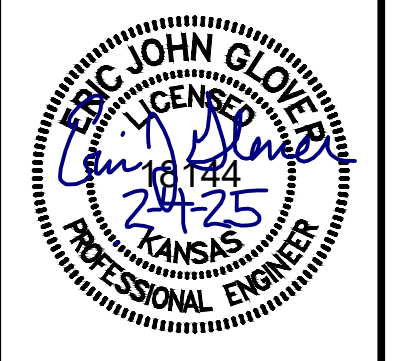
— X X — INSTALL & MAINTAIN ADDITIONAL SILT FENCE (4092 LIN. FT.)

NOTE:
 ADDITIONAL EROSION CONTROL BMP'S WITHIN THE PLAT OF PEGASUS ADDITION ARE INCLUDED WITH THE SWD, WATER, AND PAVING PLAN SETS IN THAT AREA.



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REV.	DATE	DESCRIPTION	BY

CITY OF WICHITA
 WICHITA, KANSAS
PEGASUS ADDITION
LIFT STATION - FORCE MAIN
(LIFT STATION #71)

EROSION CONTROL PLAN

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: .
 DRAWN BY: .

BAR IS ONE INCH ON ORIGINAL DRAWING
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DRAWING NUMBER



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1995 Midfield Road
 Wichita, KS 67209
 (316) 264-8008



REV.	DATE	DESCRIPTION

CITY OF WICHITA
 WICHITA, KANSAS
 PEGASUS ADDITION
 LIFT STATION - FORCE MAIN
 (LIFT STATION #1)

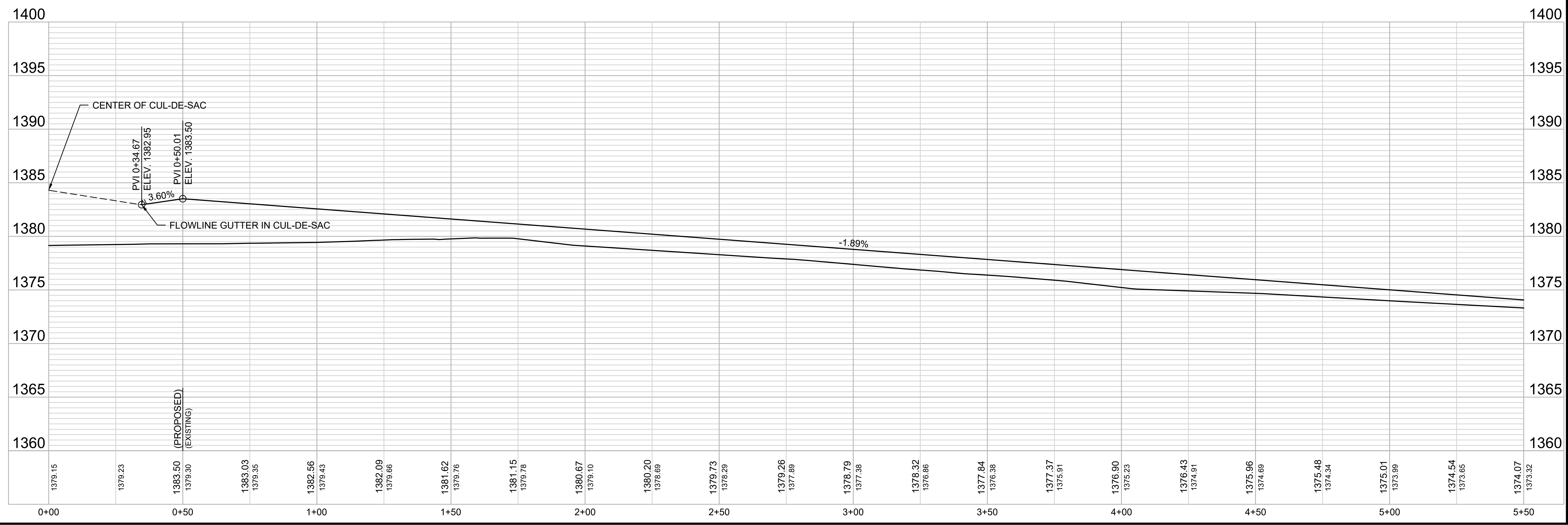
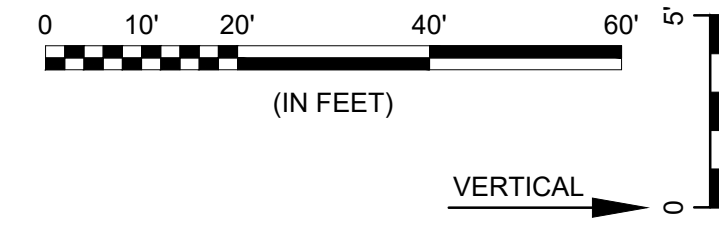
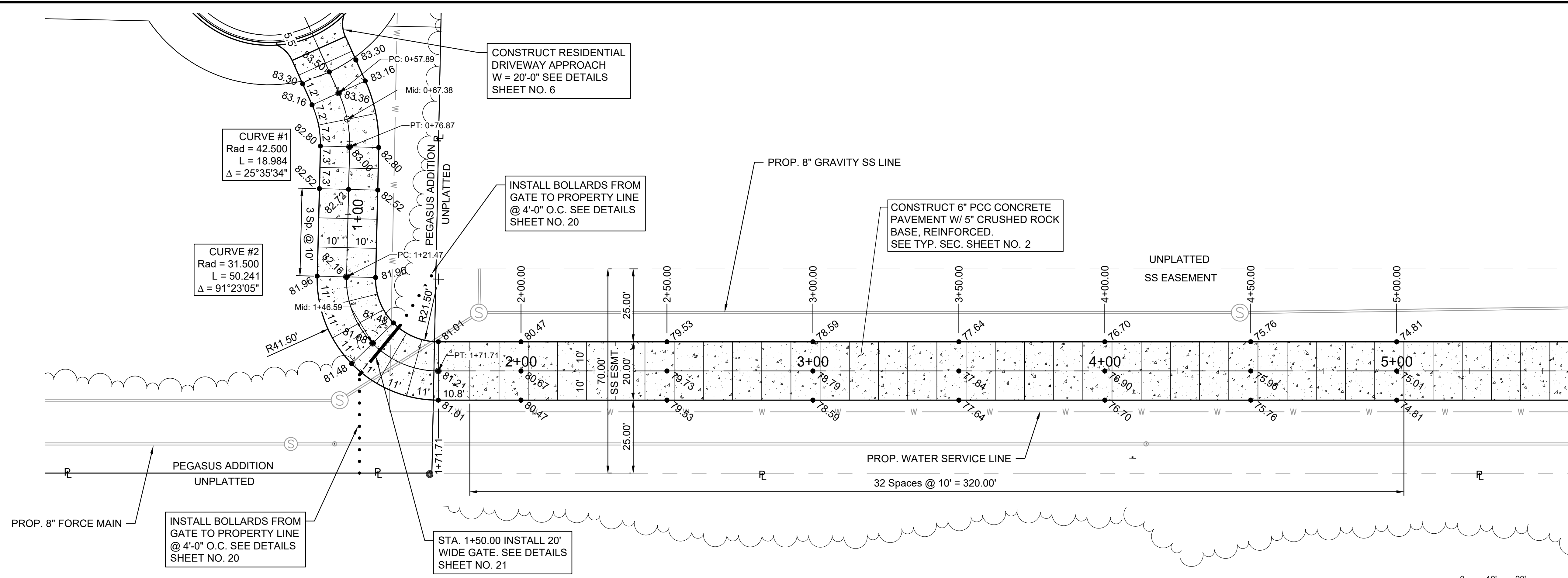
LIFT STATION
 ROAD (1 of 2)

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: E.JG
 DRAWN BY: DRS

BAR IS ONE INCH ON ORIGINAL DRAWING
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DRAWING NUMBER

SHEET NUMBER **16** OF **38**

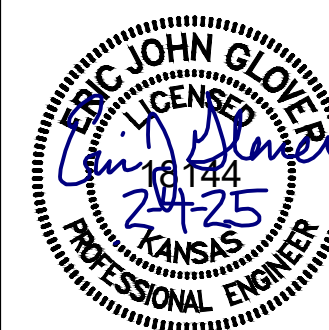


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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
 WICHITA, KANSAS

PEGASUS ADDITION
 LIFT STATION - FORCE MAIN
 (LIFT STATION #71)

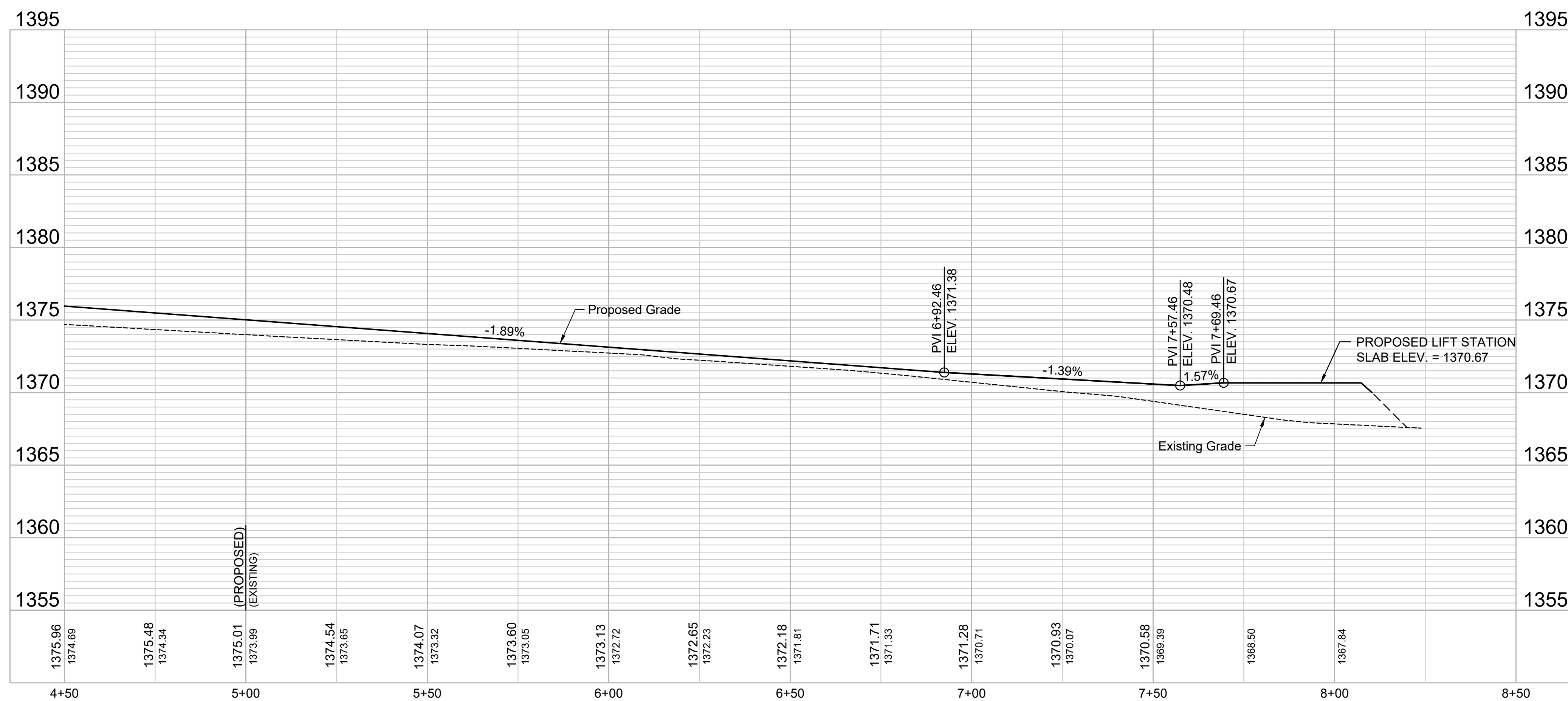
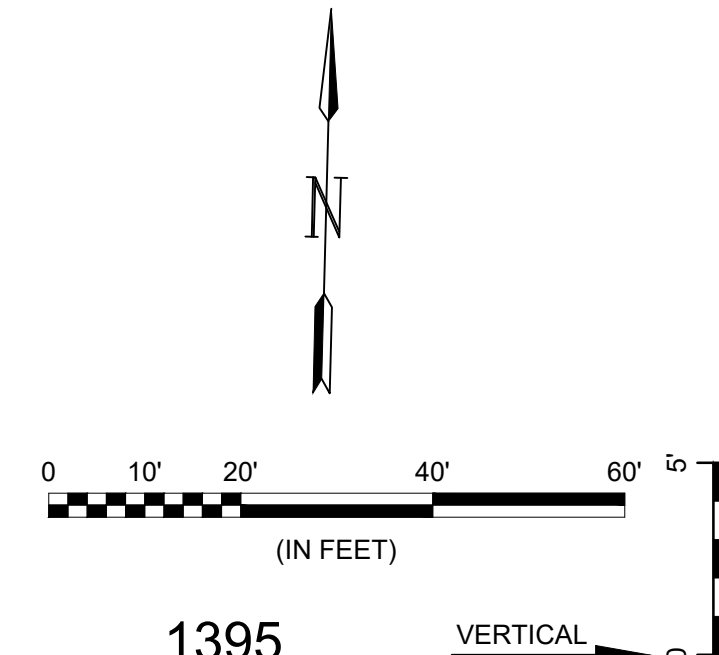
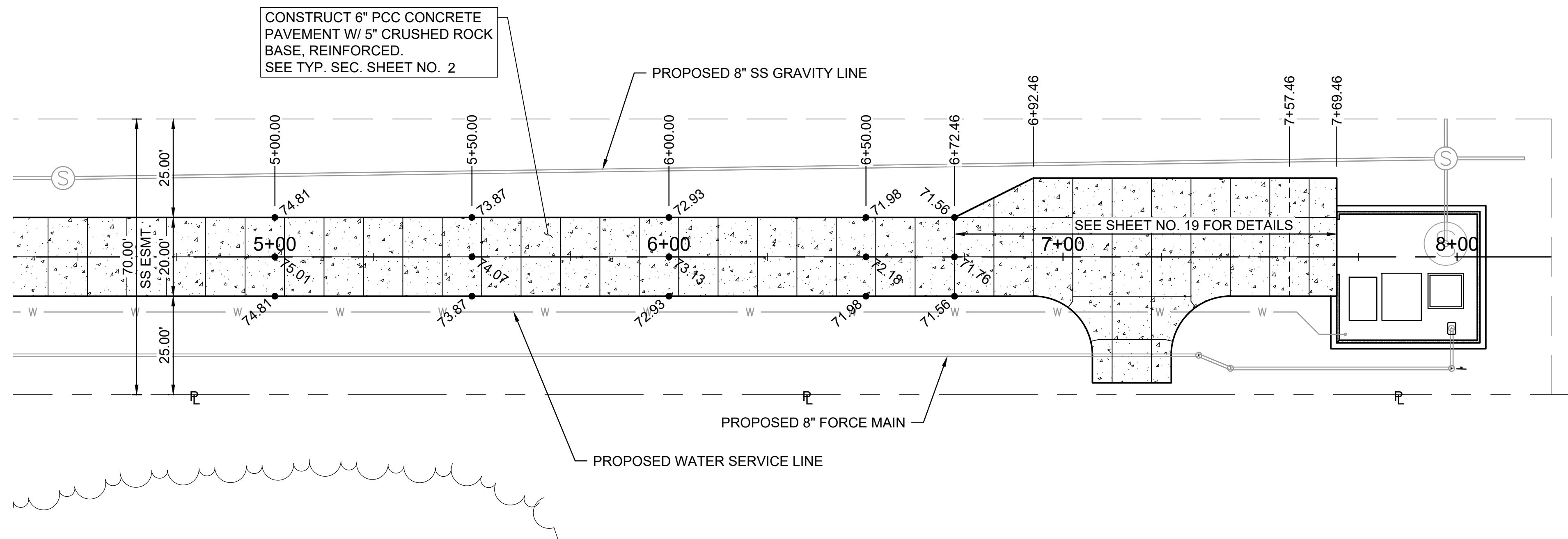
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 ROAD (2 of 2)

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: EJJ
 DRAWN BY: DRS

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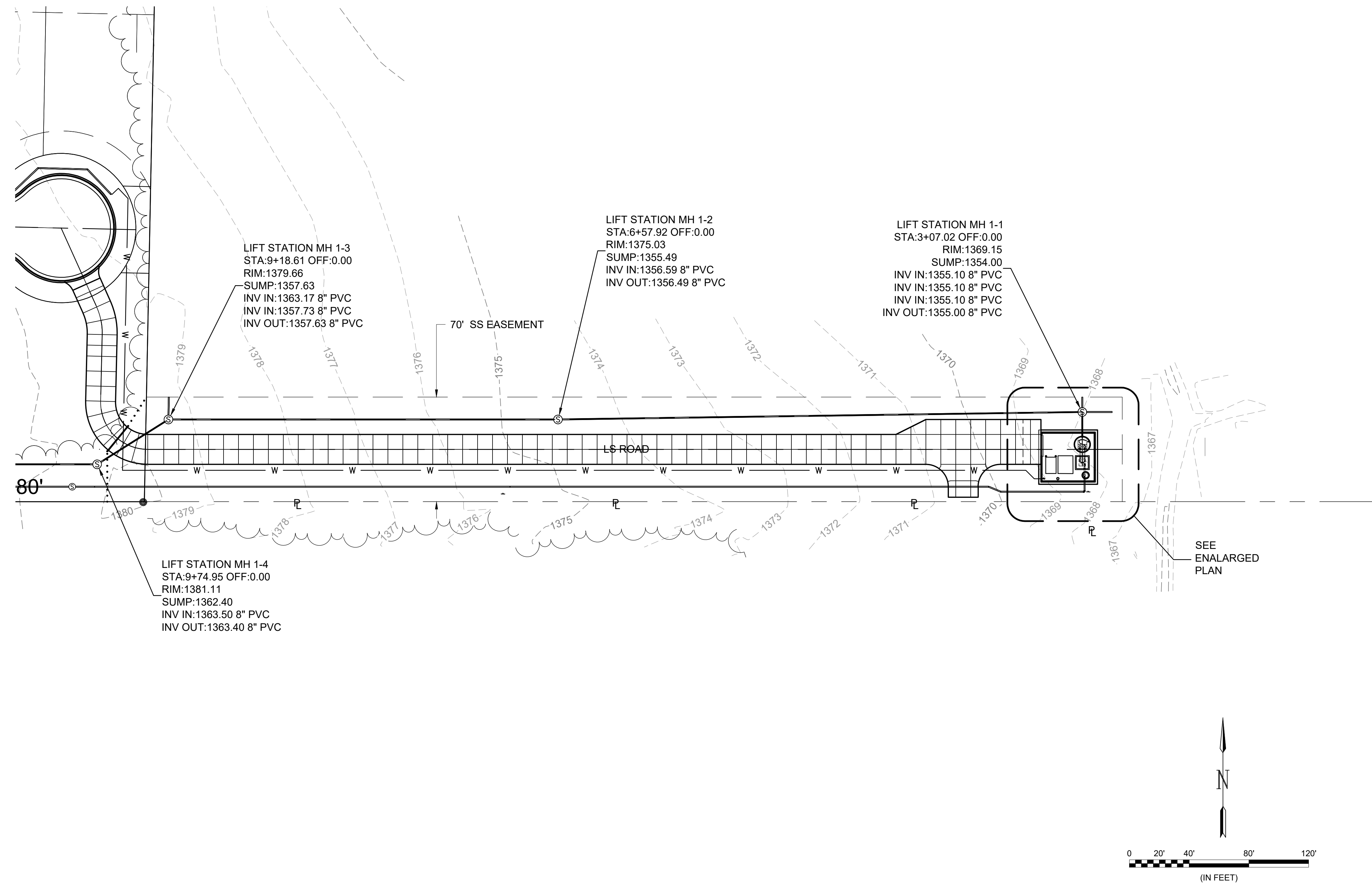
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SHEET NUMBER **17** OF **38**



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 Last plotted by: Standrich, Darryl R. Plot Style: --- Plot Scale: 1:2,586 Plot Date: 2/11/2025 3:26 PM Plotter used: None



NOTES

1. THE PRICES BID ON THE BID FORM 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 BUT NOT BE LIMITED TO 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 SHALL INCLUDE ALL SANITARY SEWER PIPE AND FORCE MAIN EXTENDED OUTSIDE THE SLAB AS SHOWN IN THE SITE PLAN AND DETAILS.
2. ALL PROCESS PIPING ON THE LIFT STATION SITE SHALL BE DUCTILE IRON WITH P401 EPOXY LINING.
3. PIPE PENETRATIONS THROUGH THE WET WELL, VALVE VAULT, AND CONCRETE PAD SHALL BE GROUTED WATERTIGHT WITH NON-SHRINK GROUT AND WATER STOP GASKETS OR LINK SEAL, AS REQUIRED.
4. 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 10-FOOT DIAMETER WET WELL SHALL NOT EXCEED THE RATE OF 2.5 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.
5. THE CONTRACTOR TO INSTALL PERMANENT PIPE SUPPORTS.
6. ALL HARDWARE INSIDE THE WETWELL 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.
7. WET WELL AND VALVE VAULT DESIGN SHALL BE SUBJECT TO THE SAME DESIGN REQUIREMENTS AS PRECAST MANHOLES.
8. THE INTERIOR OF THE WET WELL SHALL BE COATED WITH A SANITARY SEWER MANHOLE EPOXY COATING PER SPECIFICATION SECTION 09 97 26.13
9. 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.
10. ALL PIPING INSIDE WET WELL SHALL BE COATED IN ACCORDANCE WITH HIGH PERFORMANCE COATINGS SPECIFICATION 09 96 00.
11. 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 COORDINATE THESE SERVICES TO THE SITE SHALL BE INCIDENTAL TO OTHER ITEMS IN THE PROJECT.
12. THE CONTRACTOR SHALL VERIFY ALL REQUIREMENTS AND DIMENSIONS OF THE CONCRETE PADS FOR THE GENERATOR AND PRE-FAB CONTROL BUILDING PRIOR TO CONSTRUCTION.
13. NO ELECTRICAL CONNECTIONS WILL BE ALLOWED WITHIN THE WET WELL.
14. CONTACT THE CITY OF WICHITA SEWER TREATMENT PLANT AT (316) 303-8701 PRIOR TO LIFT STATION START-UP.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMIT AND REVIEW FEES.
16. THE UTILITY SHELTER SHALL BE PAINTED TO BLEND IN WITH THE SURROUNDINGS AND PAINTED A COLOR THAT IS SELECTED AND APPROVED BY THE OWNER.
17. THE CONTRACTOR SHALL CONTACT THE WICHITA SEWER TREATMENT PLANT TO COORDINATE TYPE OF QUICK CONNECT TO BE USED.
18. THE CONTRACTOR SHALL VERIFY THAT THE VALVE VAULT HATCH SIZE IS ADEQUATE FOR EASY ACCESS TO EMERGENCY PUMPING CONNECTION.



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
 WICHITA, KANSAS

PEGASUS LIFT STATION
 LIFT STATION #71

OVERALL SITE PLAN

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: WNW
 DRAWN BY: TRP

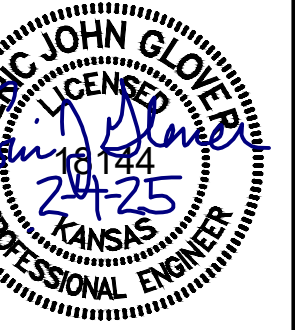
BAR IS ONE INCH ON ORIGINAL DRAWING
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DRAWING NUMBER
C-101
 SHEET NUMBER **18 OF 38**



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 Wichita, KS 67209
 (316) 264-8008



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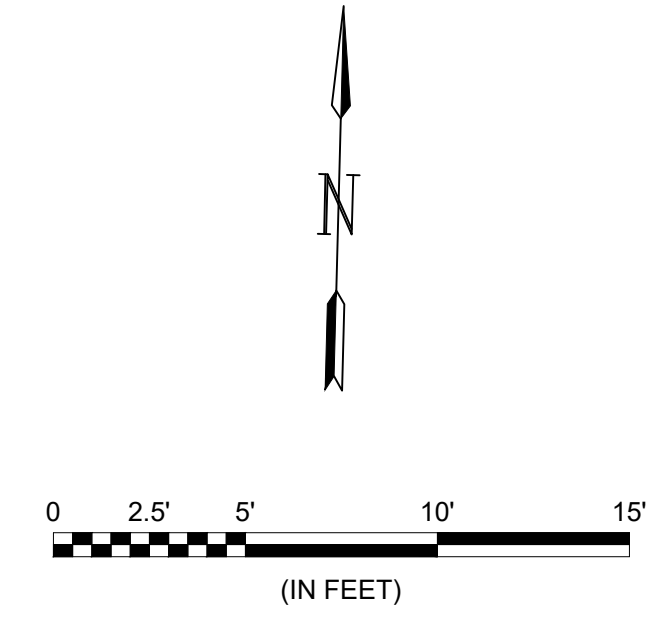
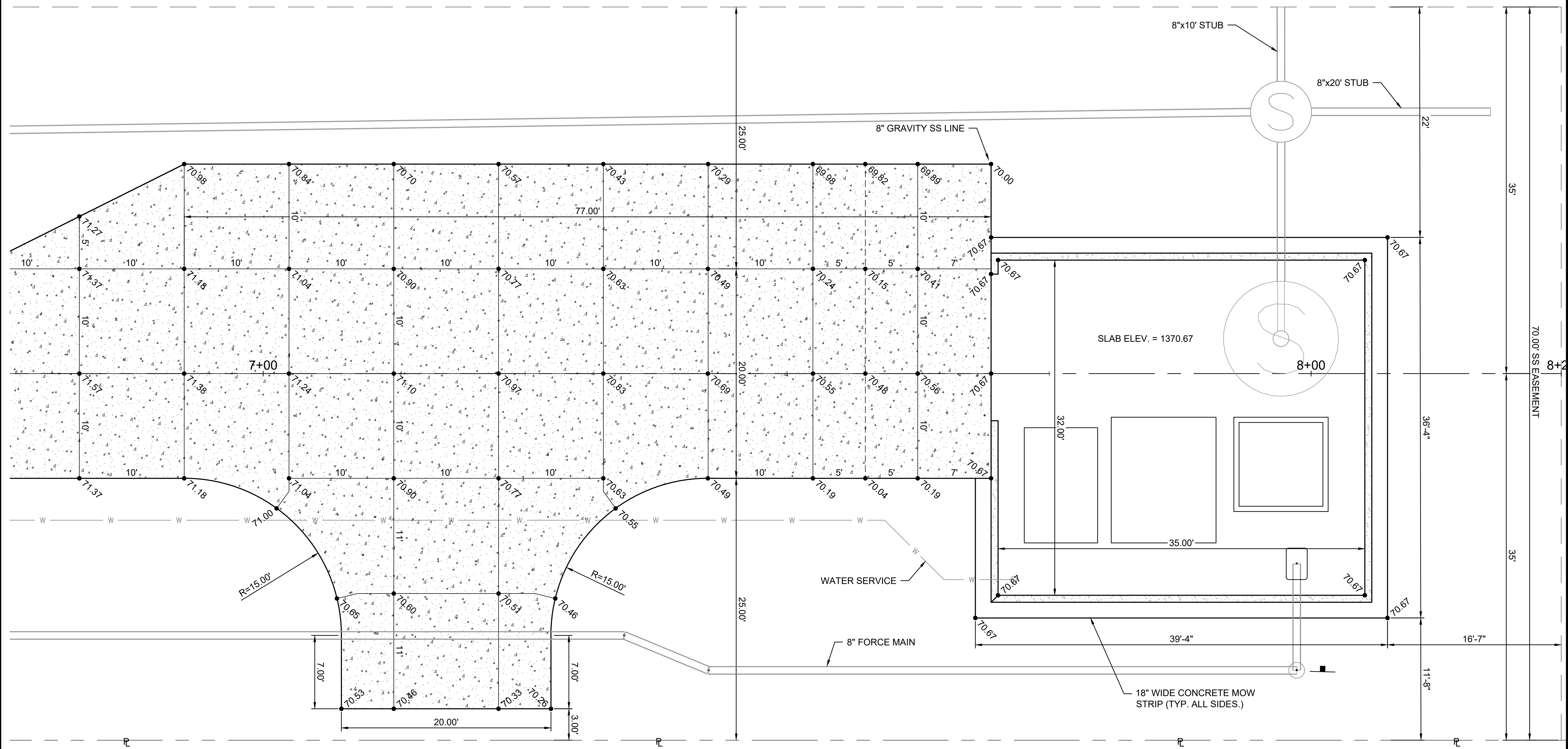
CITY OF WICHITA
 WICHITA, KANSAS
 PEGASUS ADDITION
 LIFT STATION - FORCE MAIN
 (LIFT STATION #71)

LIFT STATION PLAN

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: E.JG
 DRAWN BY: DRS

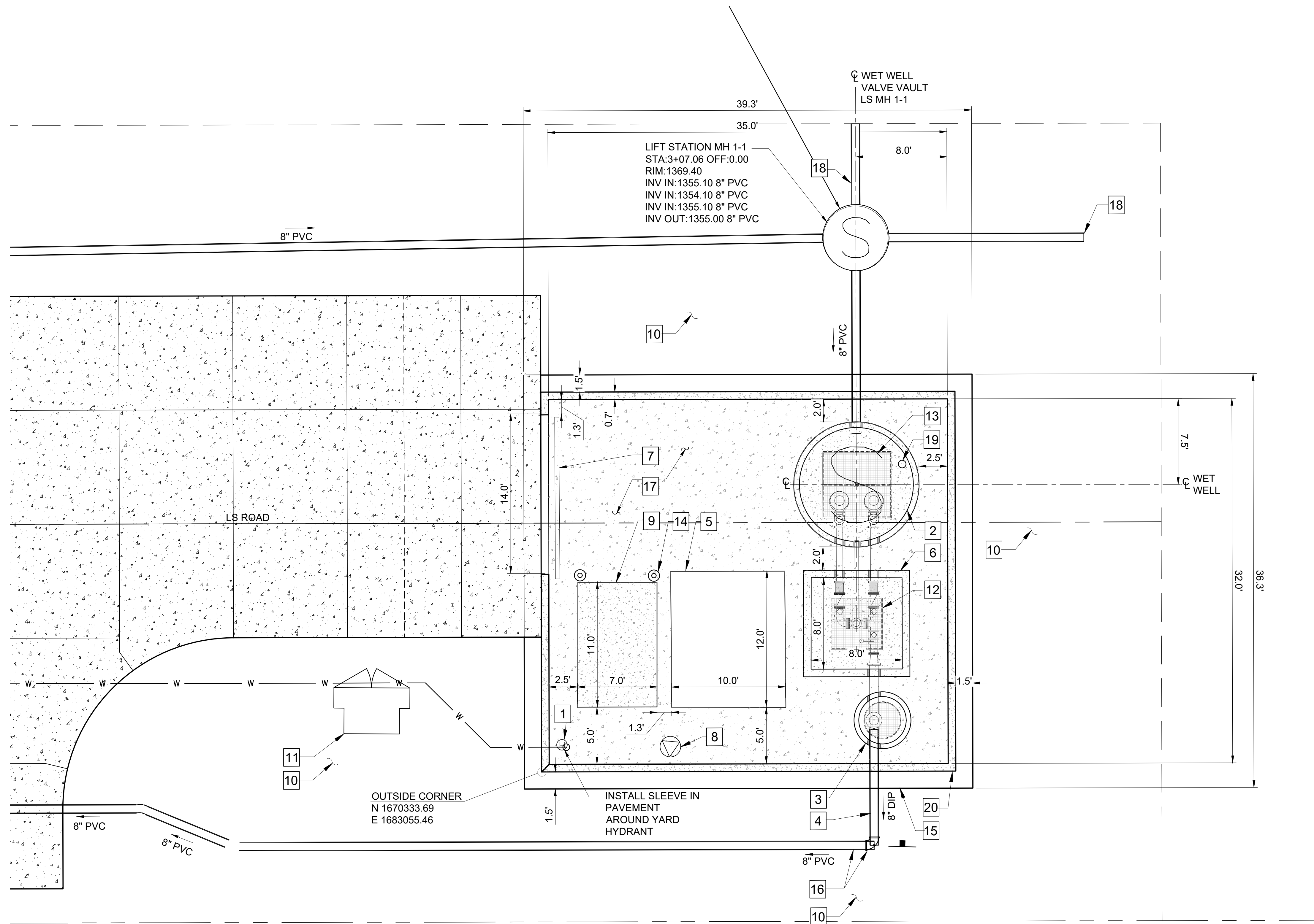
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DRAWING NUMBER
C-102
 SHEET NUMBER **19 OF 38**



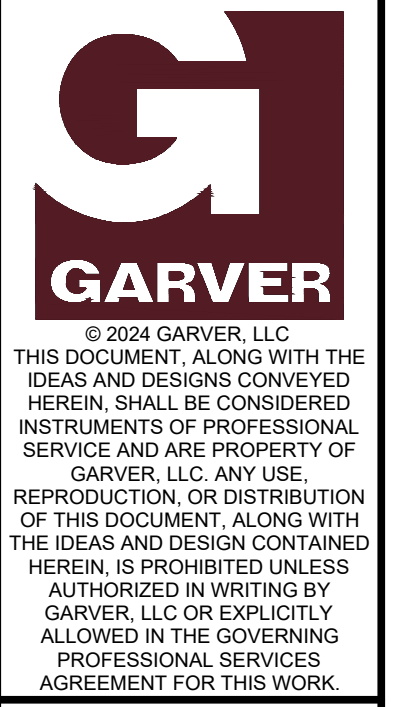
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 Last plotted by: Standrich, Darryl R. Plot Style: --- Plot Scale: 1:2.586 Plot Date: 2/11/2025 3:28 PM Plotter used: None



KEYNOTES

- 1 YARD HYDRANT, SEE DETAIL C-501
CONTRACTOR TO COORDINATE ROUTING AND CONNECTION OF 1 INCH WATER SERVICE LINE WITH CITY OF WICHITA.
- 2 WET WELL, 10 FOOT INTERIOR DIAMETER PRE-CAST WITH EPOXY COATING IN ACCORDANCE WITH SPEC 09 97-23.
- 3 4' ID PRECAST MANHOLE FOR ARV, SEE DETAIL C-501
- 4 ALL DUCTILE IRON PIPE (DIP) TO BE RESTRAINED JOINT.
- 5 10 X 12 CONTROL SHED AND CONCRETE PAD - JACOBS MANUFACTURING PRE FAB. TOP OF SLAB ELEVATION OF CONCRETE PAD TO BE SET 6" ABOVE GRADE.
- 6 PRECAST VALVE VAULT 8 X 8 X 8
- 7 14' ACCESS GATE, SEE DETAIL C-502
- 8 TELEMETRY TOWER, SEE ELECTRICAL DRAWINGS.
- 9 11' X 7' GENERATOR PAD, SEE ELECTRICAL DRAWINGS.
- 10 SEE GRADING DRAWINGS FOR FINISHED GRADE.
- 11 NEW PAD MOUNTED TRANSFORMER WITH METER.
- 12 54" X 54" DOUBLE LEAF HATCH - PEDESTRIAN RATED.
- 13 6' X 4' DOUBLE LEAF HATCH - H20 TRAFFIC RATED W/ FIBERGLASS SAFETY GRATE (COMPOSITE/FIBERGLASS) CONTRACTOR TO SUPPLY TWO (2) D-RINGS CAST INTO WET WELL TOP FOR PERSONNEL TIE-OFF.
- 14 SAFETY BOLLARD, SEE DETAIL C-501
- 15 MOW STRIP, SEE DETAIL C-501
- 16 8 INCH DIP FM TO 90°. PVC BY OTHERS BEYOND.
- 17 8" THICK STEEL REINFORCED CONCRETE SLAB. TOC EL 1370.67. CONCRETE PAVING TO BE SLOPED TO CREATE POSITIVE STORM WATER DRAINAGE OFF THE PAD SEE DETAIL. CONTRACTOR TO SUBMIT CONCRETE PAVING PLAN TO INCLUDE PROPOSED JOINTS.
- 18 FUTURE GRAVITY STUB OUTS TO INCLUDE CAPS. LENGTH OF STUB OUT TO BE COORDINATED WITH THE CITY OF WICHITA.
- 19 WET WELL VENT PIPE. SEE DETAIL C-502
- 20 SCREENING WALL, SEE DETAIL C-504
FOOTER FOR SCREENING WALL TO BE MODIFIED IN THE VICINITY OF PRECAST STRUCTURES IF REQUIRED



BY	DESCRIPTION	DATE	REV.

BY	DESCRIPTION	DATE	REV.

CITY OF WICHITA
 WICHITA, KANSAS

PEGASUS LIFT STATION
 LIFT STATION #71

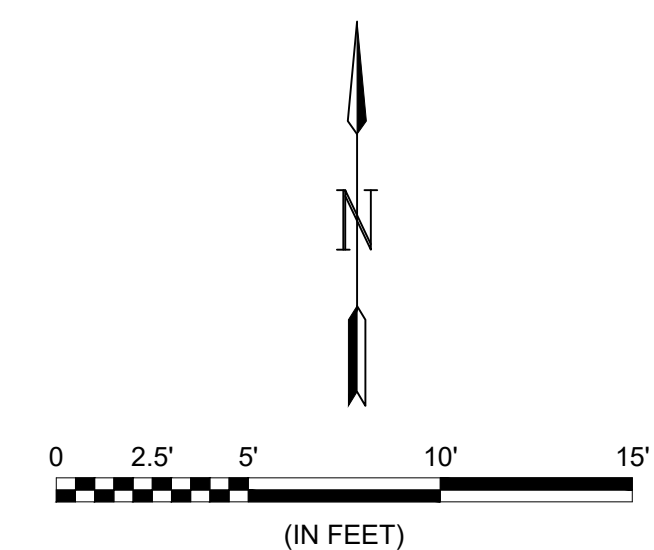
SITE PLAN

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: WWN
 DRAWN BY: TRP

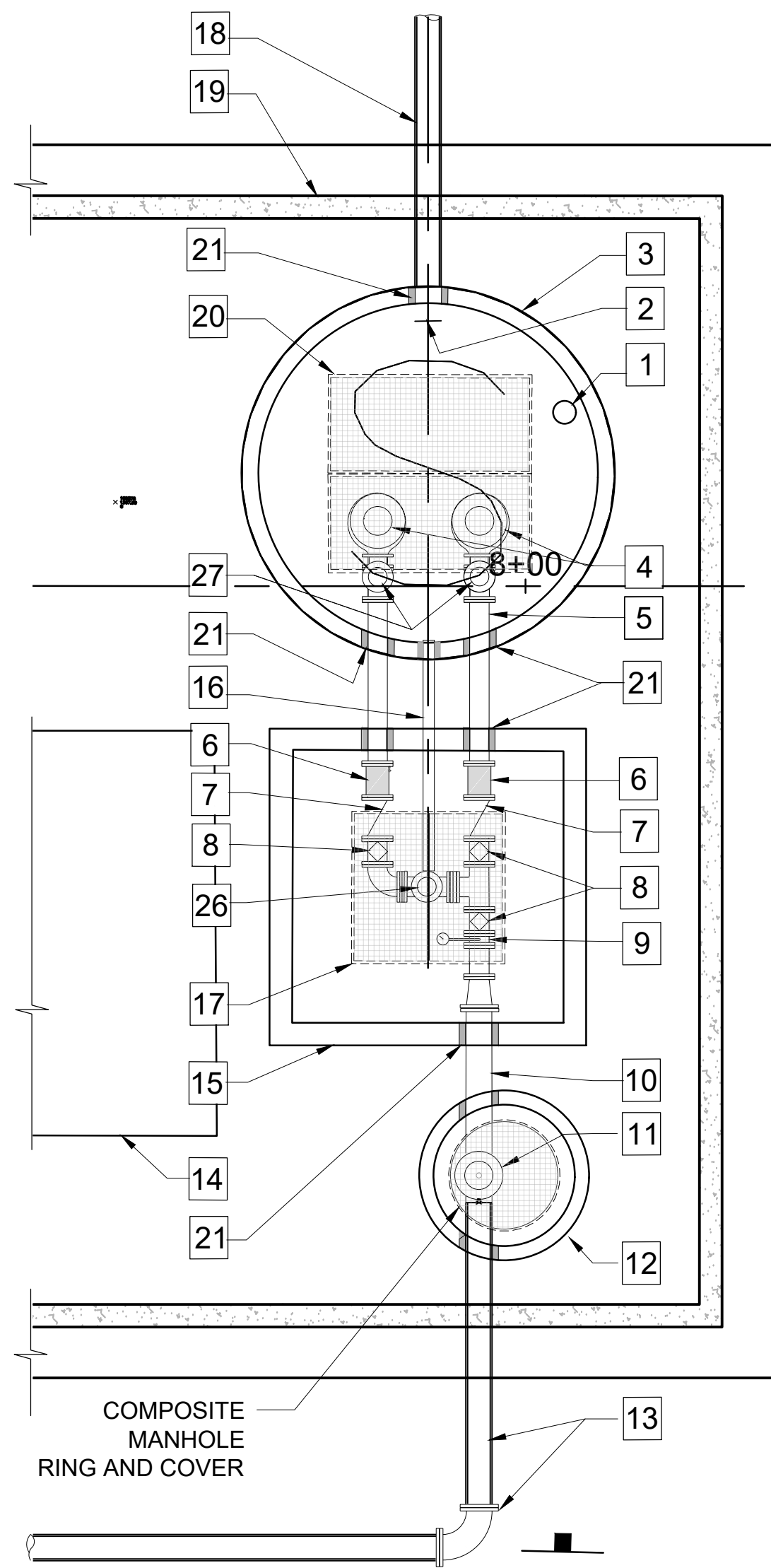
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DRAWING NUMBER
C-103

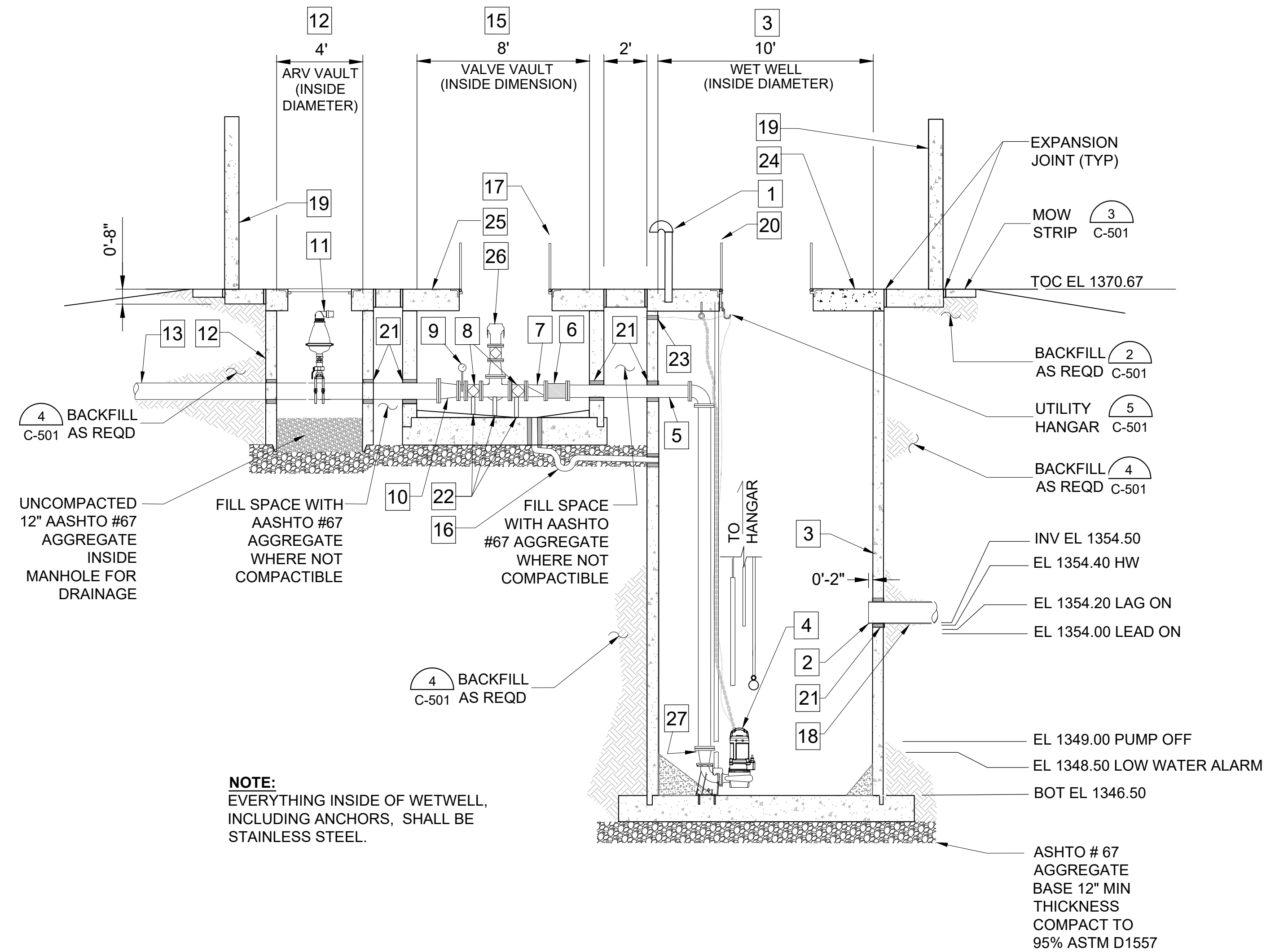
SHEET NUMBER **20** OF **38**



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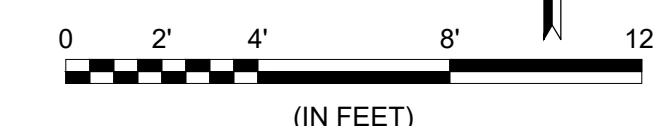
1 PLAN DETAIL
C-301 SCALE 1" = 4'-0"



A SECTION - LIFT STATION - LOOKING WEST
C-301 | C-301 SCALE: 1" = 4'-0"

KEYNOTES

- 1 VENT PIPE ⁰¹
C-502
- 2 8 INCH GRAVITY SEWER. INV EL AT WET WELL CONNECTION = 1354.50. MAINTAIN 2" PROTRUSION INTO WETWELL
- 3 WET WELL PRE-CAST 10'-0" INTERIOR DIAMETER.
RIM EL= 1369.00
BOTTOM EL = 1346.50
- 4 KSB SUBMERSIBLE PUMPS (2)
BOTTOM OF SUMP EL = = 1347.25
"KSB-KRT F100-254/224XEG-S 30HP, 460V, 215MM IMPELLER DESIGN CONDITION = 360 GPM @ 49' TDH. PUMP TO BE INSTALLED WITH ADEQUATE CLEAR SPACE OFF WET WELL FLOOR IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS.
- 5 6 INCH DIP DISCHARGE PIPING.
ELEVATION EXITING WET WELL / INTO VALVE VAULT = 1364.00
- 6 6 INCH DIP DISMANTLING JOINTS
- 7 6 INCH CHECK VALVE
- 8 6 INCH PLUG VALVE
- 9 PRESSURE GAUGE
- 10 8 X 6 CONCENTRIC REDUCER
- 11 AIR RELEASE VALVE ⁰⁶
C-501
- 12 ARV VAULT. 4' ID PRECAST MANHOLE ⁰³
004
- 13 8 INCH DIP FM TO 90°. PVC BY OTHERS BEYOND
- 14 10 X 12 CONTROL SHED - JACOBS MANUFACTURING PRE FAB
- 15 PRECAST VALVE VAULT 8 X 6 X 8
- 16 4 INCH DRAIN LINE FROM VAULT BACK TO WET WELL WITH DUCK BILL VALVE IN WET WELL
- 17 54" x 54" PEDESTRIAN RATED ALUMINUM HATCH
- 18 8" PVC FROM LIFT STATION MH 1-1
- 19 SCREENING WALL, SEE DETAIL ¹
E-104
FOOTER FOR SCREENING WALL TO BE MODIFIED IN THE VICINITY OF PRECAST STRUCTURES IF REQUIRED.
- 20 6' X 4' ALUMINUM HATCH - H20 TRAFFIC RATED W/ FIBERGLASS SAFETY GRATE
- 21 PIPE SEALS ⁰⁵
C-502
- 22 PIPE SUPPORTS ⁰⁴
C-502
- 23 TO PUMP CONTROL PANEL ¹ ⁵
E-104 C-501
SEE ELECTRICAL DETAIL
- 24 WET WELL LID SHOULD BE PRECAST WITH TOP ELEVATION OF 1371.00
- 25 VALVE BOX LID SHOULD BE PRECAST WITH TOP ELEVATION OF 1371.00
- 26 4" FEMALE CAMLOCK EMERGENCY PUMPING CONNECTION. VERIFY IN FIELD COMPATIBILITY WITH PORTABLE CITY PUMP.
- 27 6" X 4" CONCENTRIC REDUCER



REV.	DATE	DESCRIPTION	BY

CITY OF WICHITA
WICHITA, KANSAS

PEGASUS LIFT STATION
LIFT STATION #71

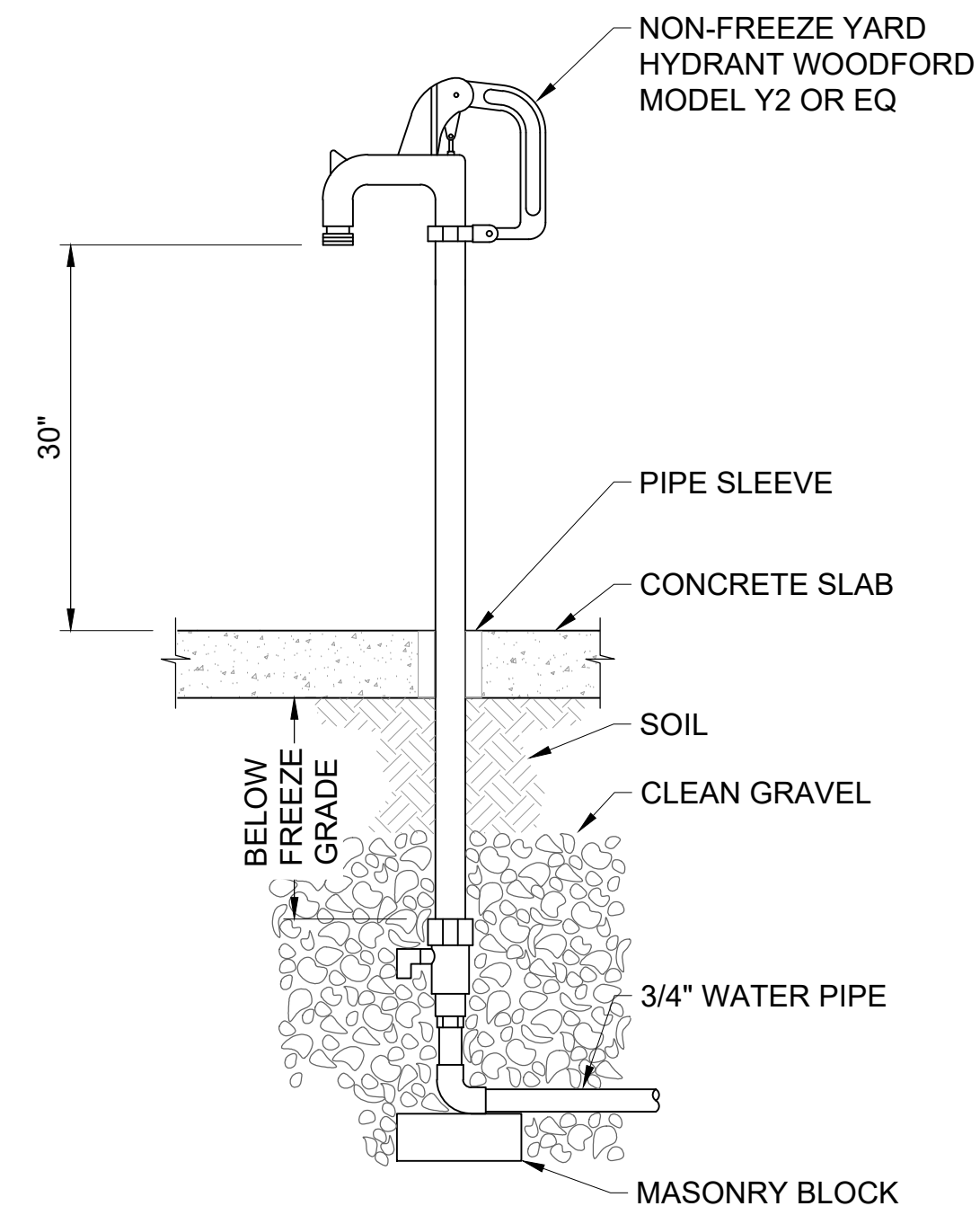
PLAN DETAIL AND SECTION

JOB NO.: 2400521
DATE: FEB. 2025
DESIGNED BY: WWN
DRAWN BY: TRP

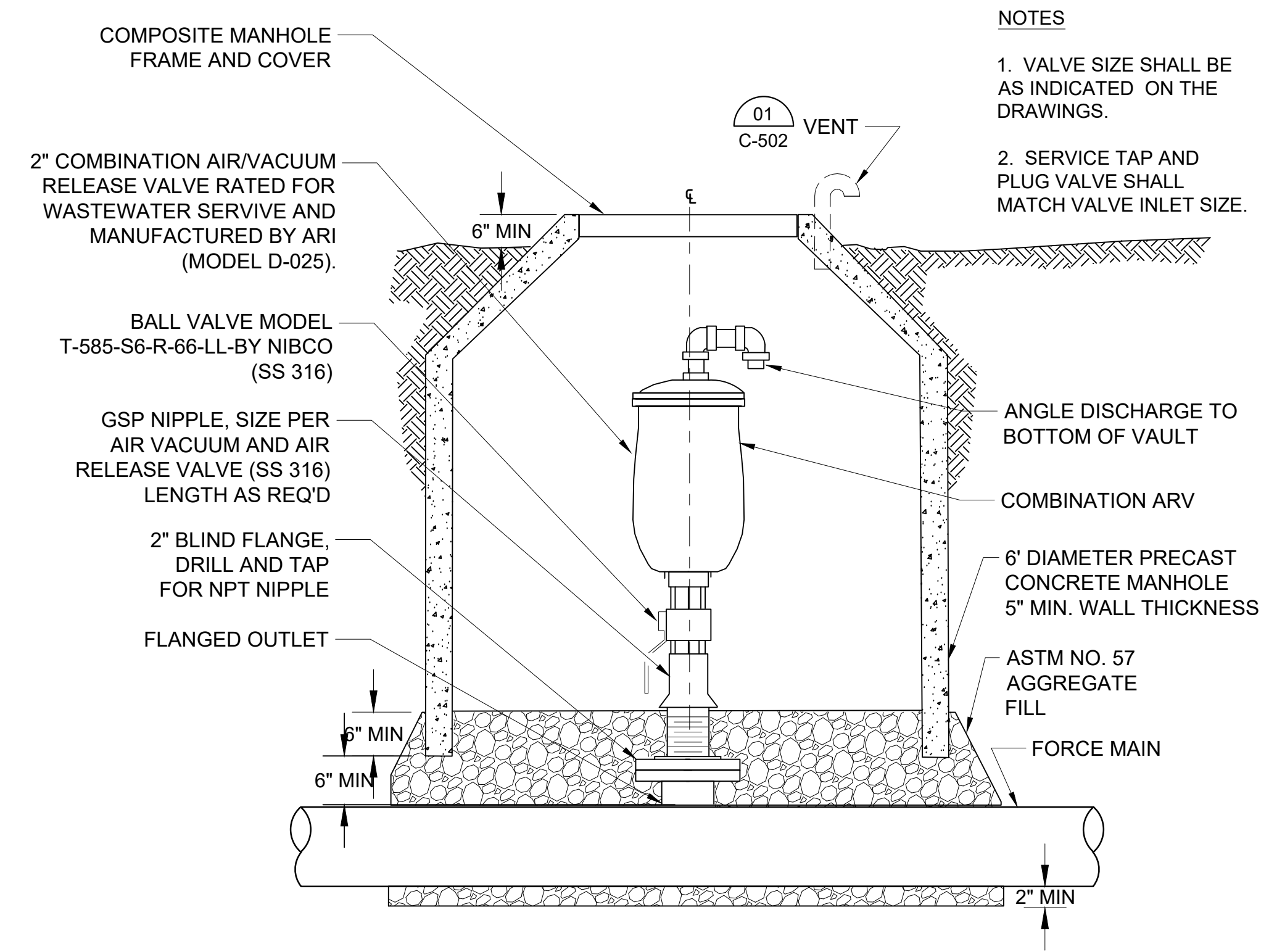
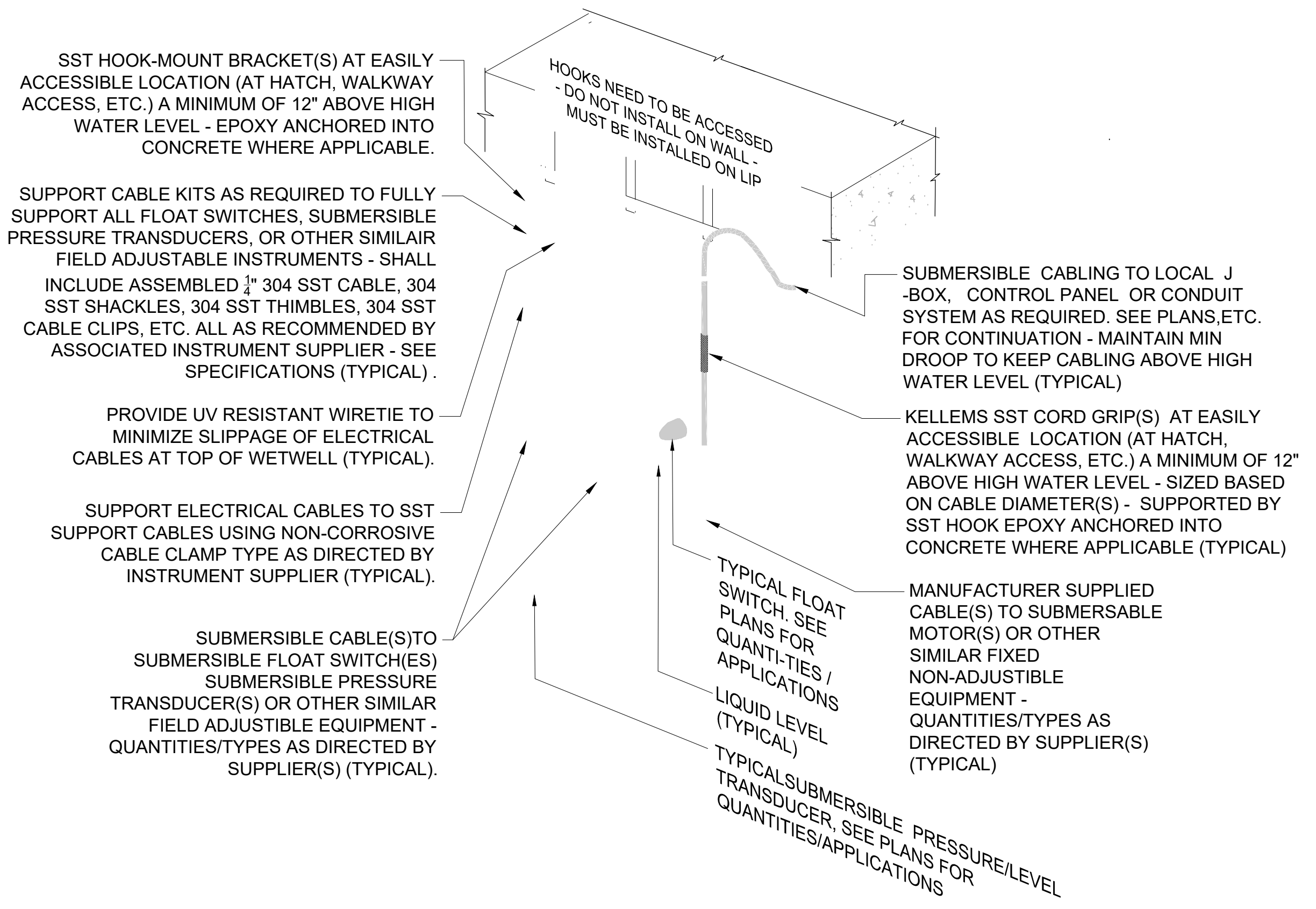
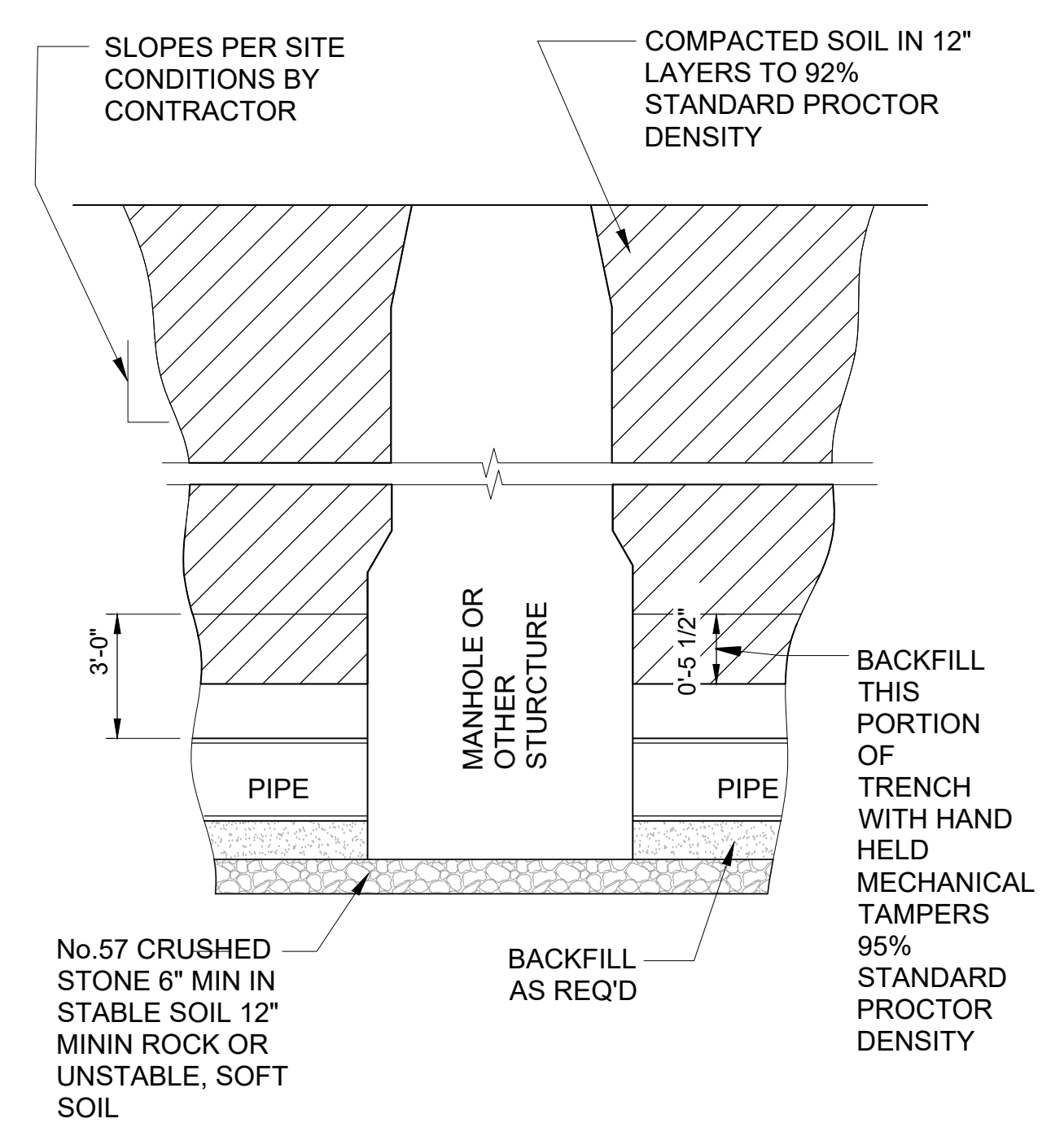
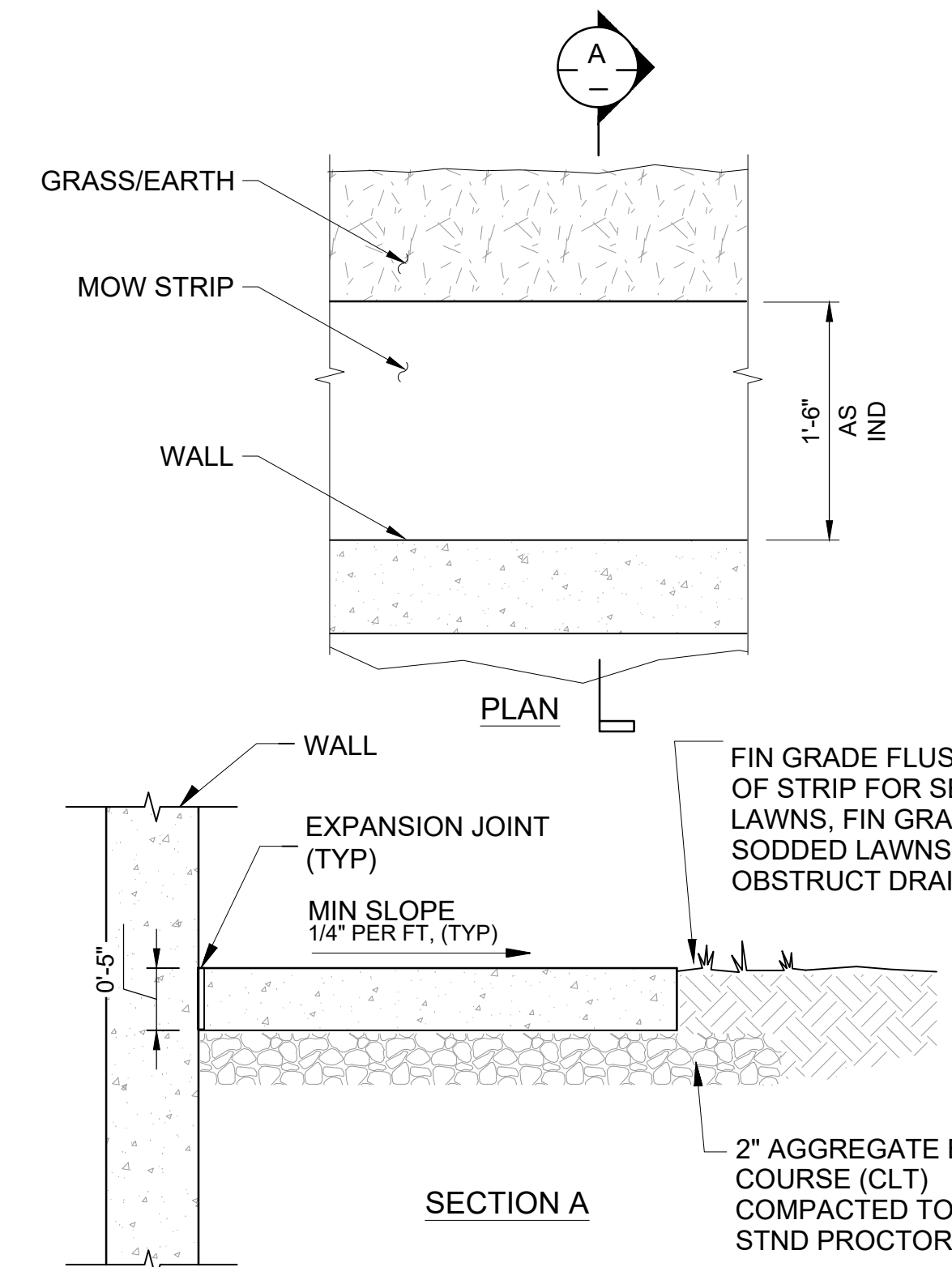
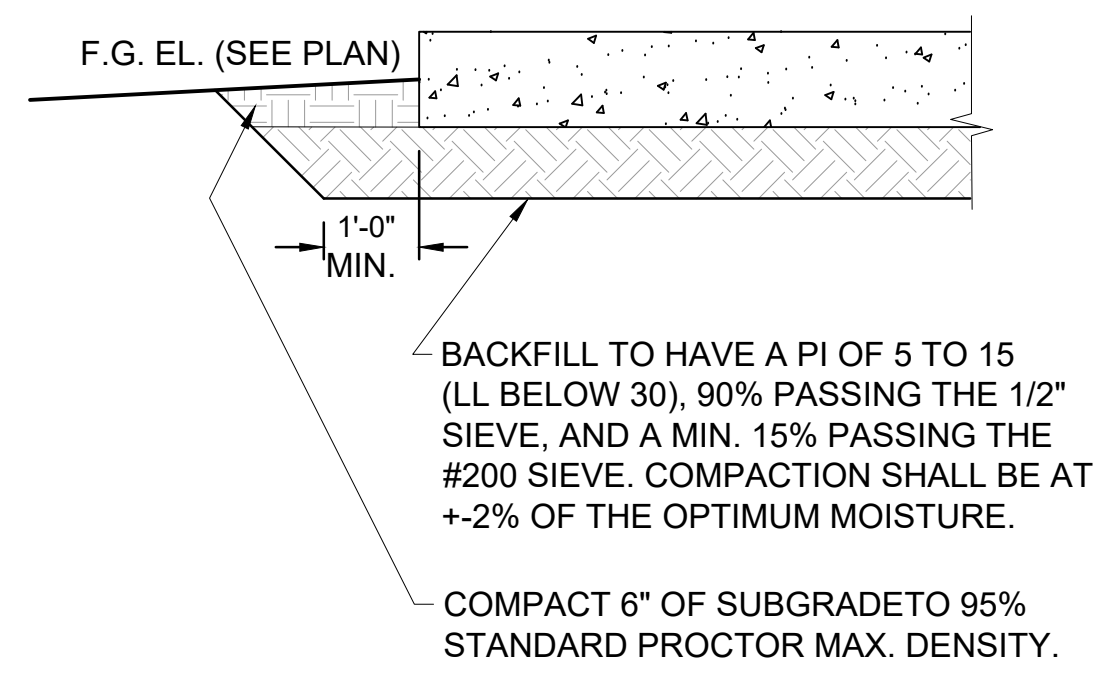
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DRAWING NUMBER
C-104

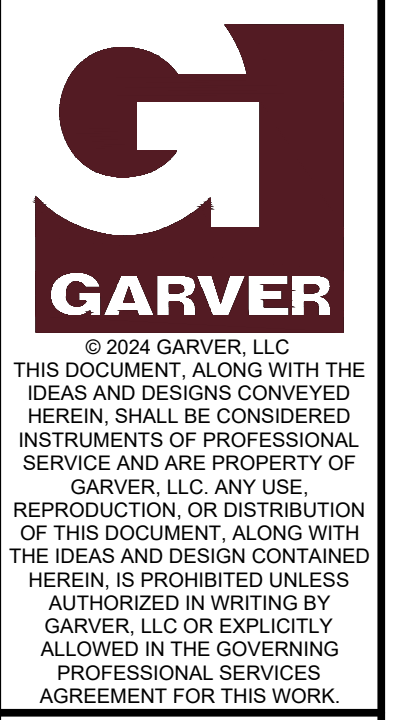
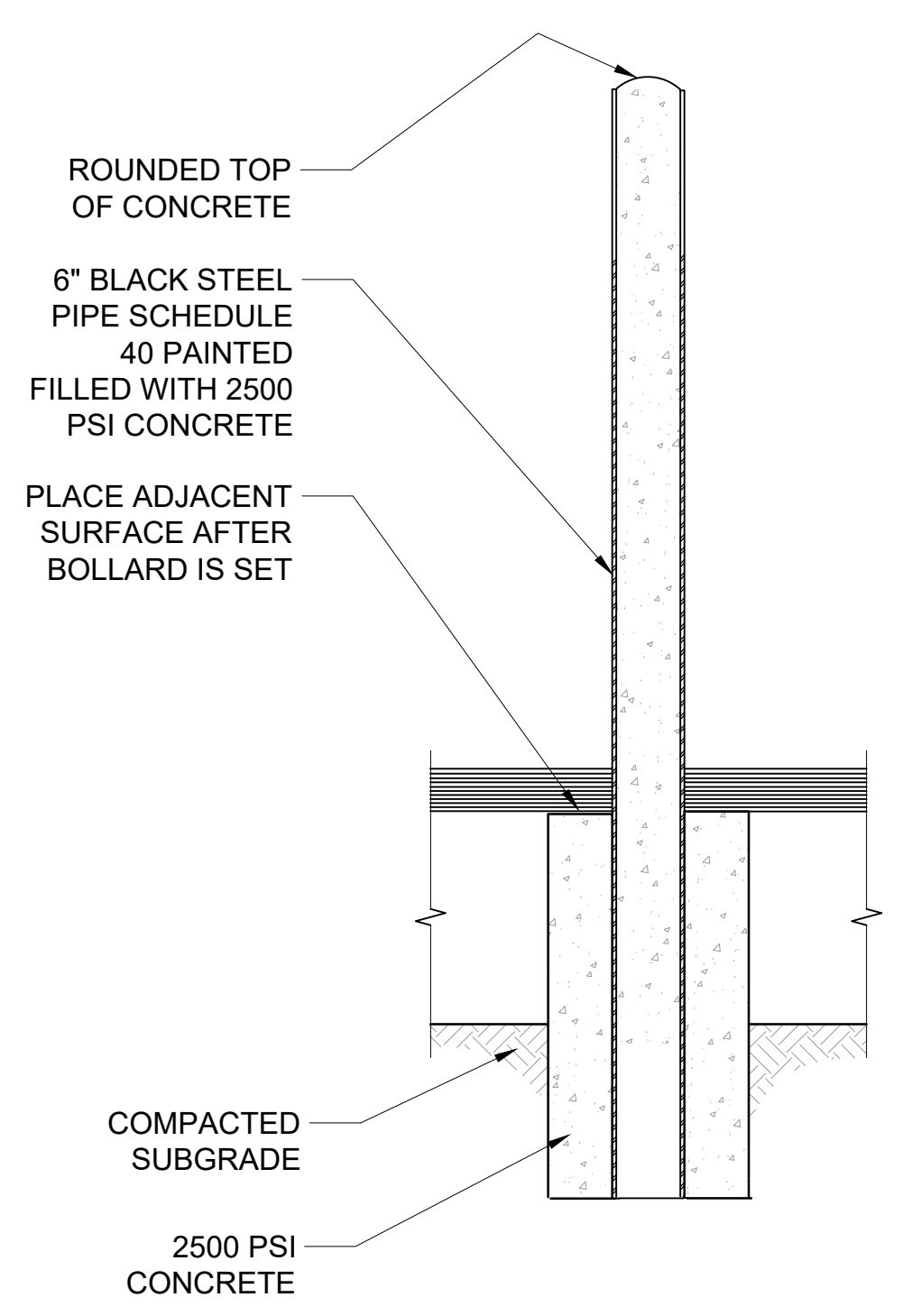
SHEET NUMBER **21** OF **38**



- NOTES:
1. ALL YARD HYDRANTS SHALL BE PROVIDED WITH HOSE RACK.



- NOTES
1. VALVE SIZE SHALL BE AS INDICATED ON THE DRAWINGS.
 2. SERVICE TAP AND PLUG VALVE SHALL MATCH VALVE INLET SIZE.



BY	DESCRIPTION	DATE	REV.

BY	DESCRIPTION	DATE	REV.

CITY OF WICHITA
WICHITA, KANSAS

PEGASUS LIFT STATION
LIFT STATION #71

DETAILS I

JOB NO.: 2400521
DATE: FEB. 2025
DESIGNED BY: WNW
DRAWN BY: TRP

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

DRAWING NUMBER
C-501

SHEET NUMBER **22** OF **38**

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REV.	DATE	DESCRIPTION	BY

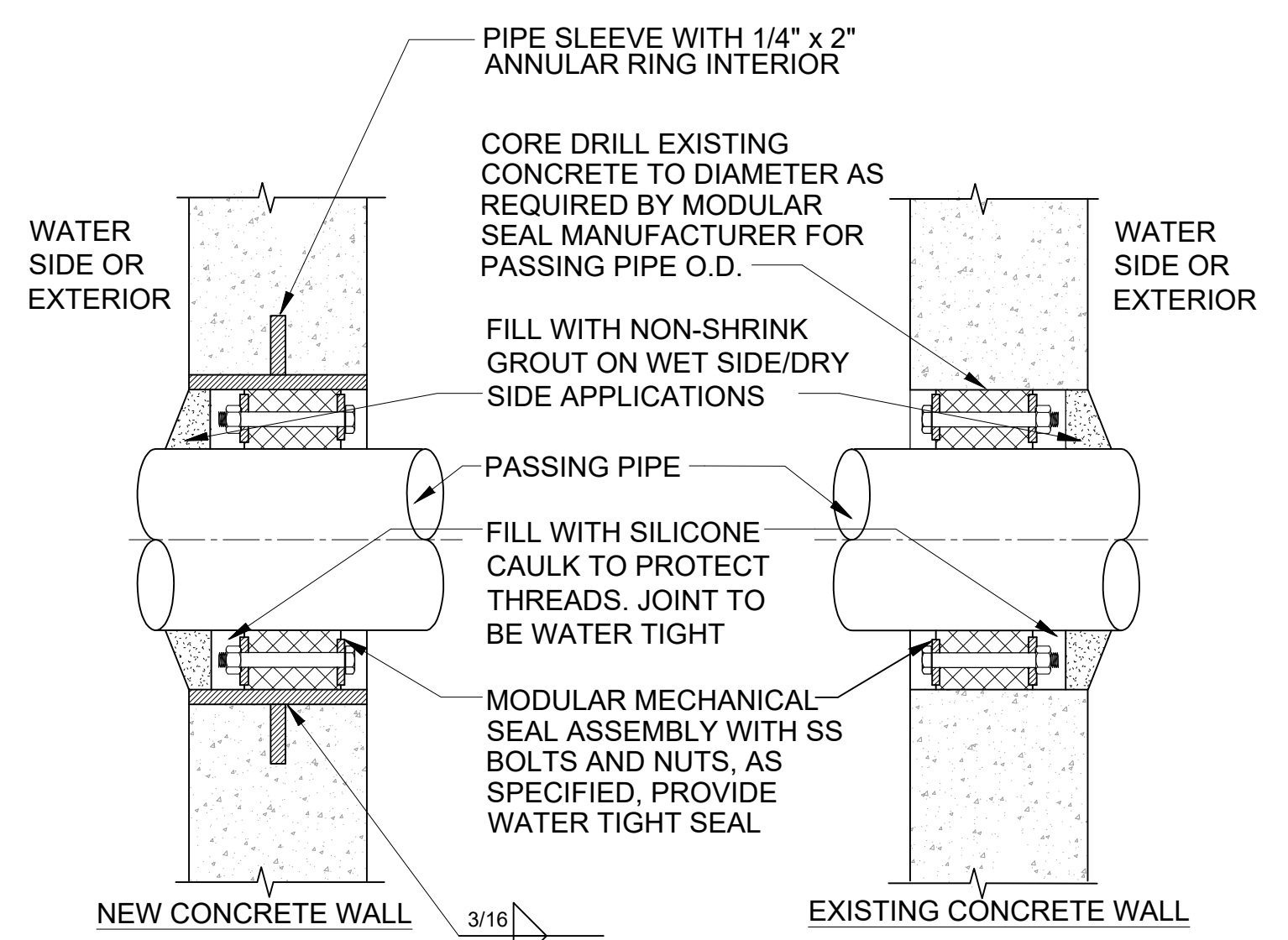
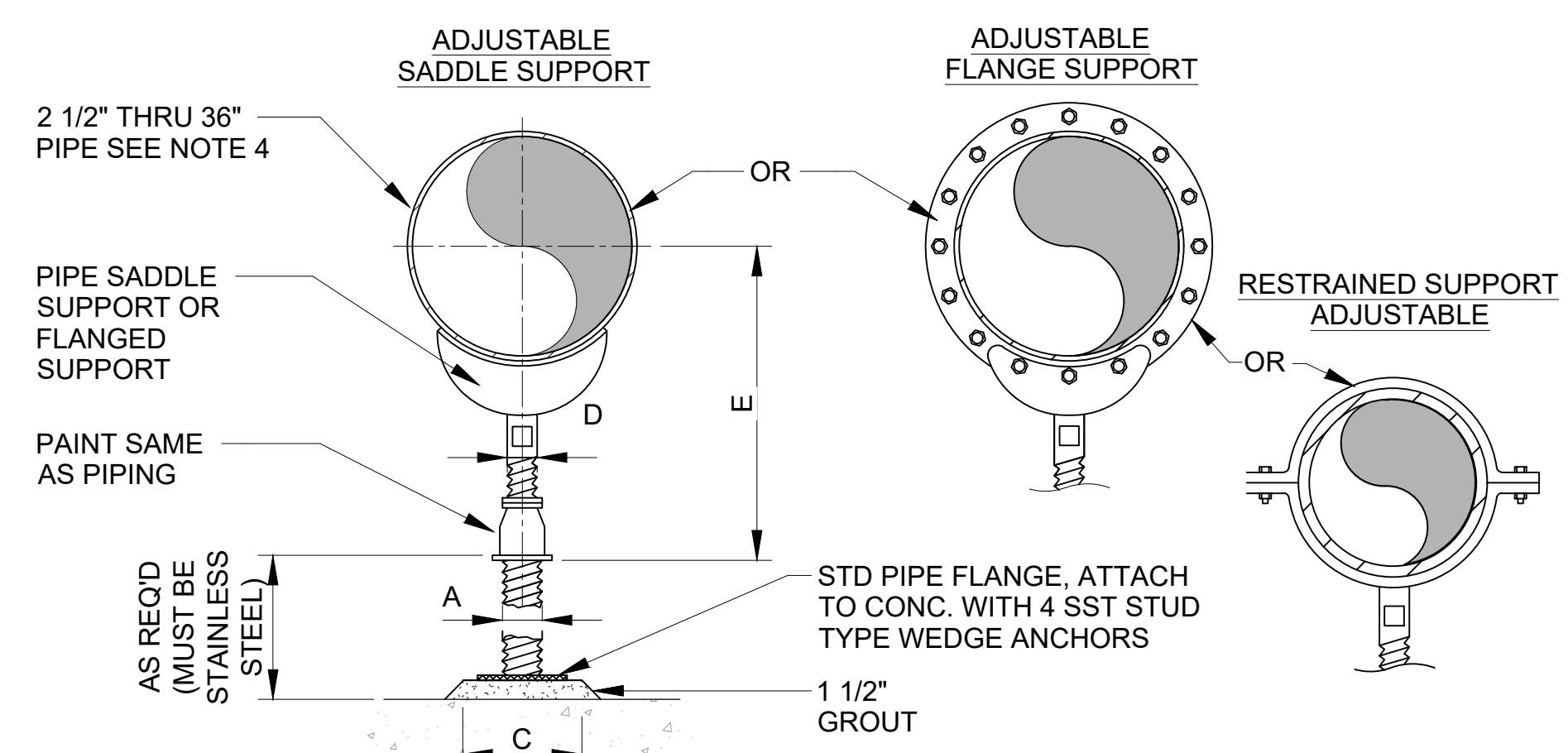
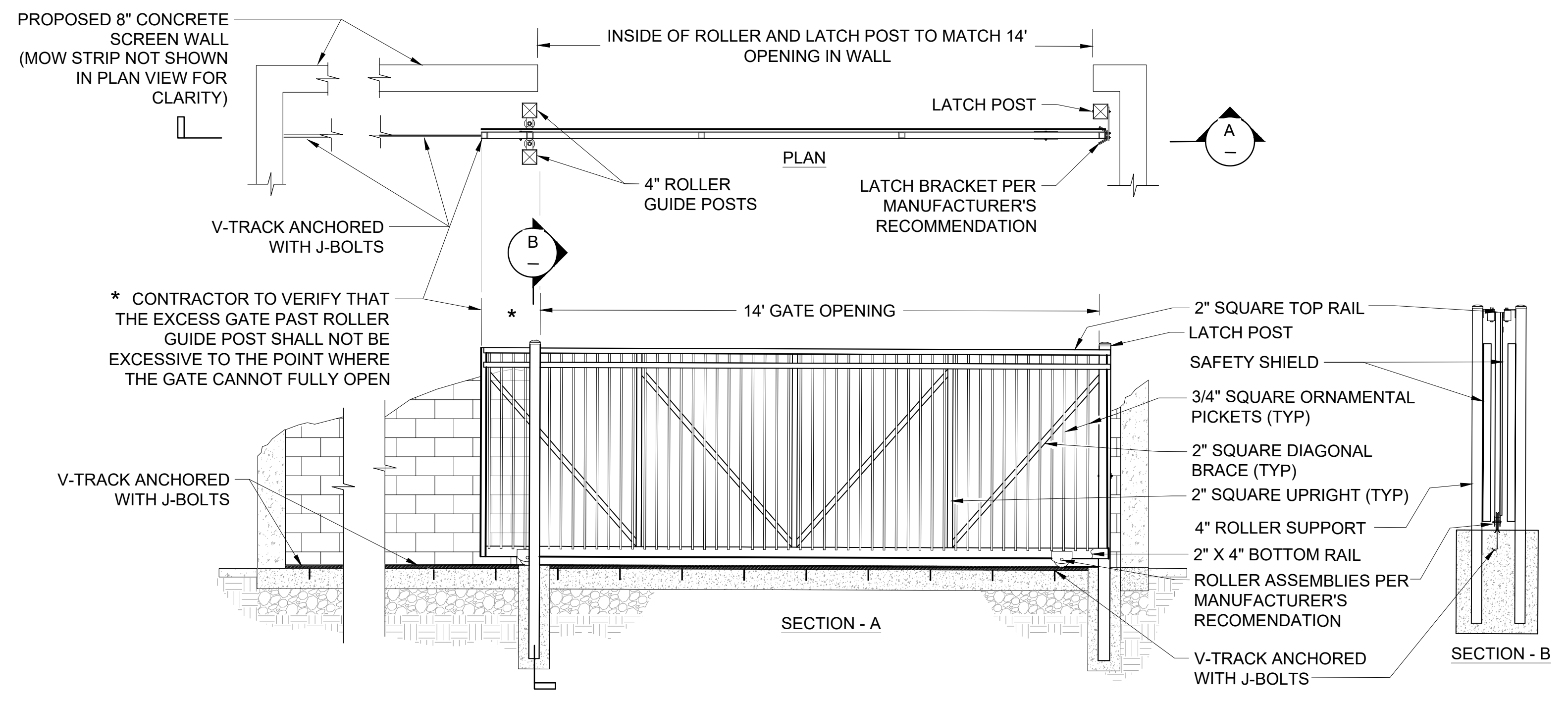
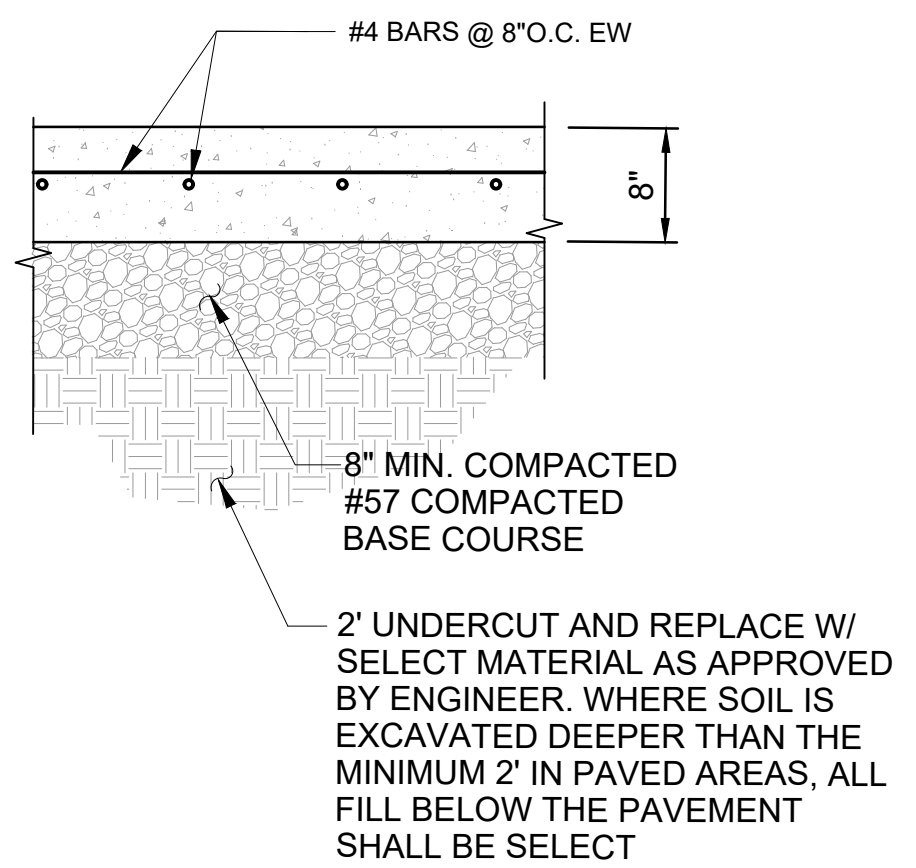
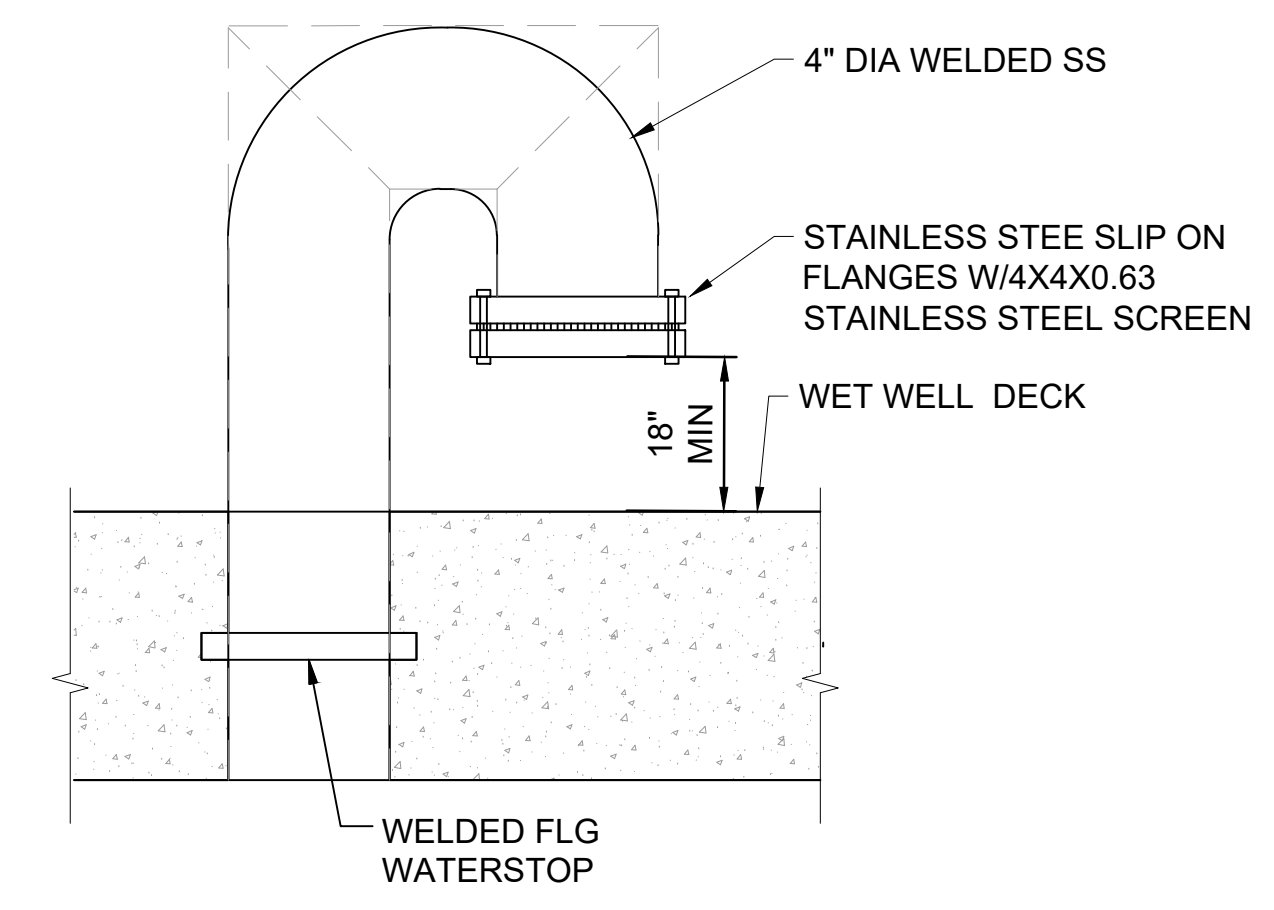
DETAILS II

JOB NO.: 2400521
DATE: FEB. 2025
DESIGNED BY: WWN
DRAWN BY: TRP

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

DRAWING NUMBER
C-502

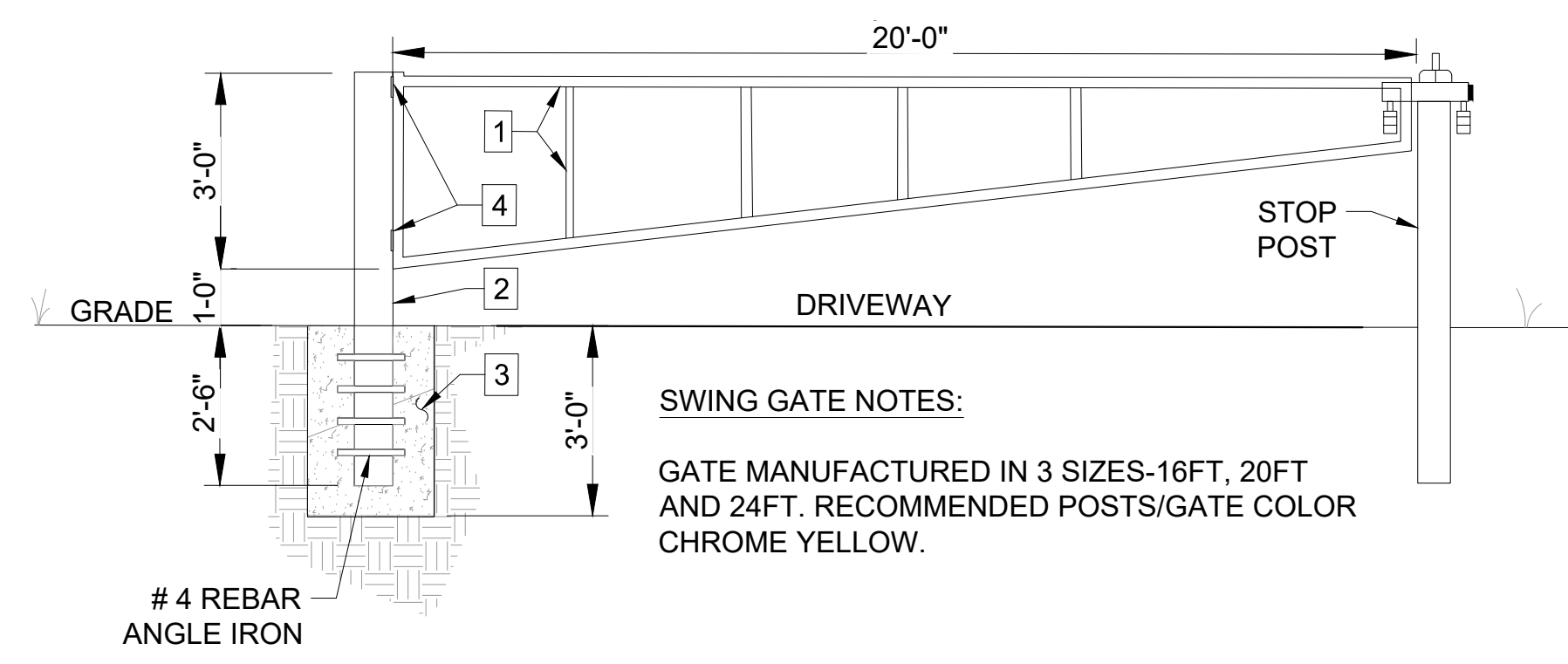
SHEET NUMBER **23** OF **38**



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

- NOTES:
- PROVIDE HALF ROUND RIGID INSULATION AND INSULATION PROTECTION SHIELD WHERE PIPING IS INSULATED.
 - 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.
 - FOR BASE, HEIGHT AND FLANGE DIMENSIONS, SEE TABLE.
 - USE 2 1/2" SUPPORTS FOR PIPES LESS THAN 2 1/2" DIAMETER.

- KEY NOTES:
- 2" GATE FRAME (SQUARE OR ROUND) 11 GAUGE APPROVED COLOR - CHROME YELLOW.
 - 6" MINIMUM POST (SQUARE OR ROUND) . ROUND POST - SCHEDULE 40. SQUARE POST 1/4" STOCK. POSTS 7FT W/CAP. APPROVED COLOR - CHROME YELLOW.
 - 24" X 36" CONCRETE POST FOOTINGS.
 - SEALED 5" HEAVY DUTY BARREL HINGES (TYPICAL 2 PLACES).



File: L:\2024\141-2400521 - Pegasus Addition Design\Drawings\SS LIFT STATION\141-2400521 SITE PLAN - PUMP STATION DETAILS.dwg Last Save: 2/11/2025 3:03 PM Last saved by: TRP\win Last plotted by: Standrich, Darryl R. Plot Style: --- Plot Scale: 1:2.585 Plot Date: 2/11/2025 3:31 PM Plotter used: None



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BY	DESCRIPTION	DATE	REV.

CITY OF WICHITA
 WICHITA, KANSAS

PEGASUS LIFT STATION
 LIFT STATION #71

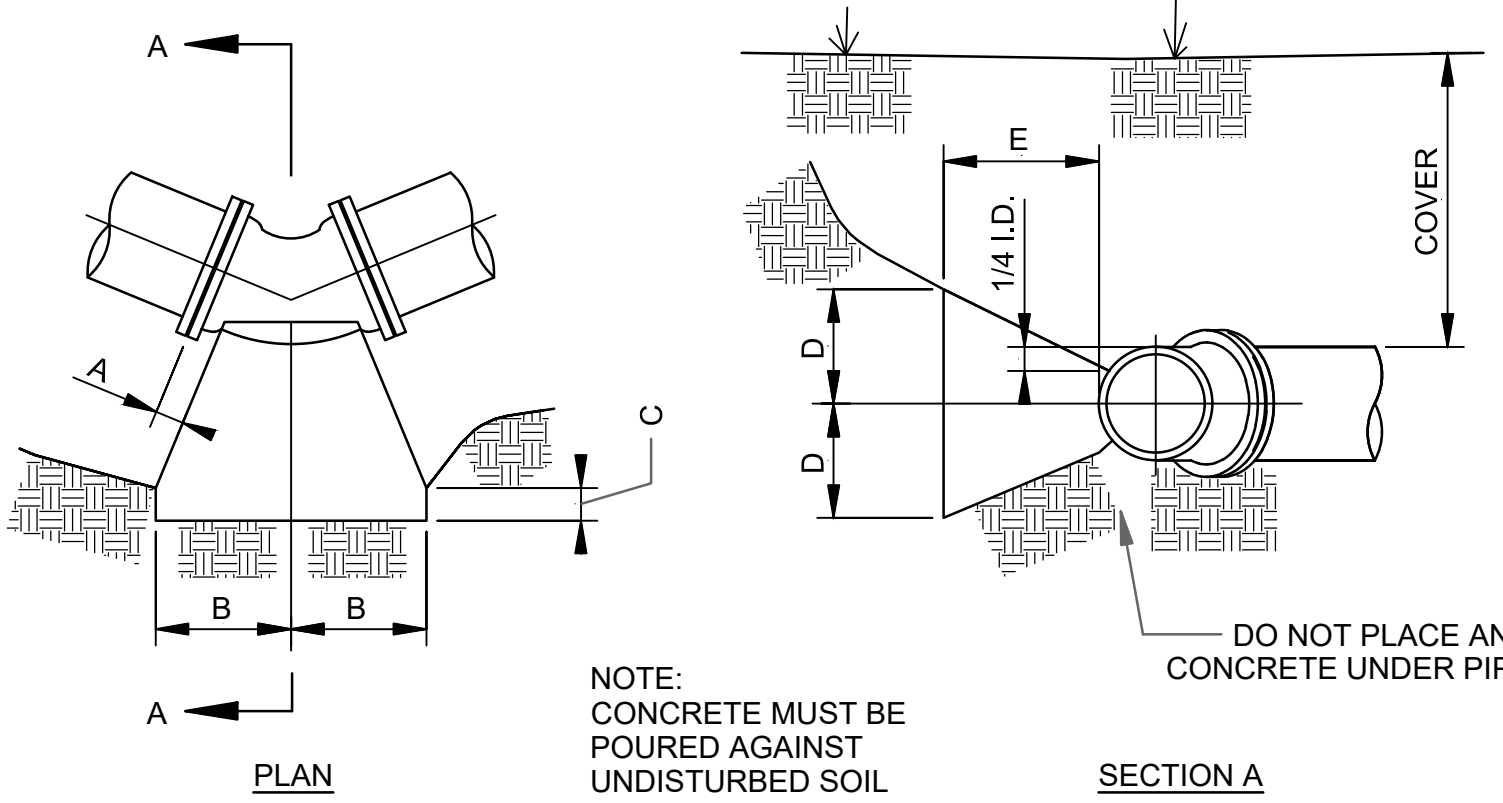
DETAILS III

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: WWN
 DRAWN BY: TRP

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

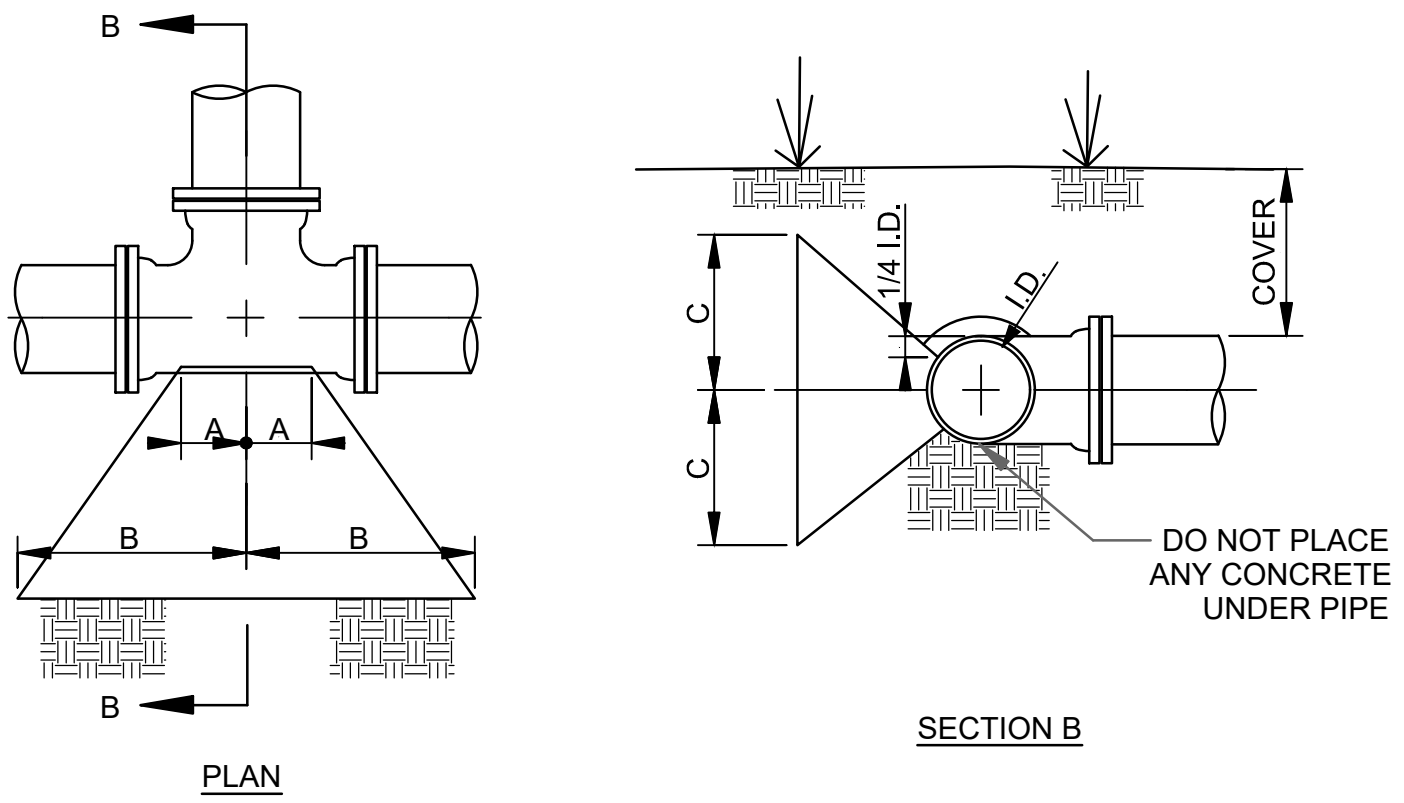
DRAWING NUMBER
C-503

SHEET NUMBER **24** OF **38**



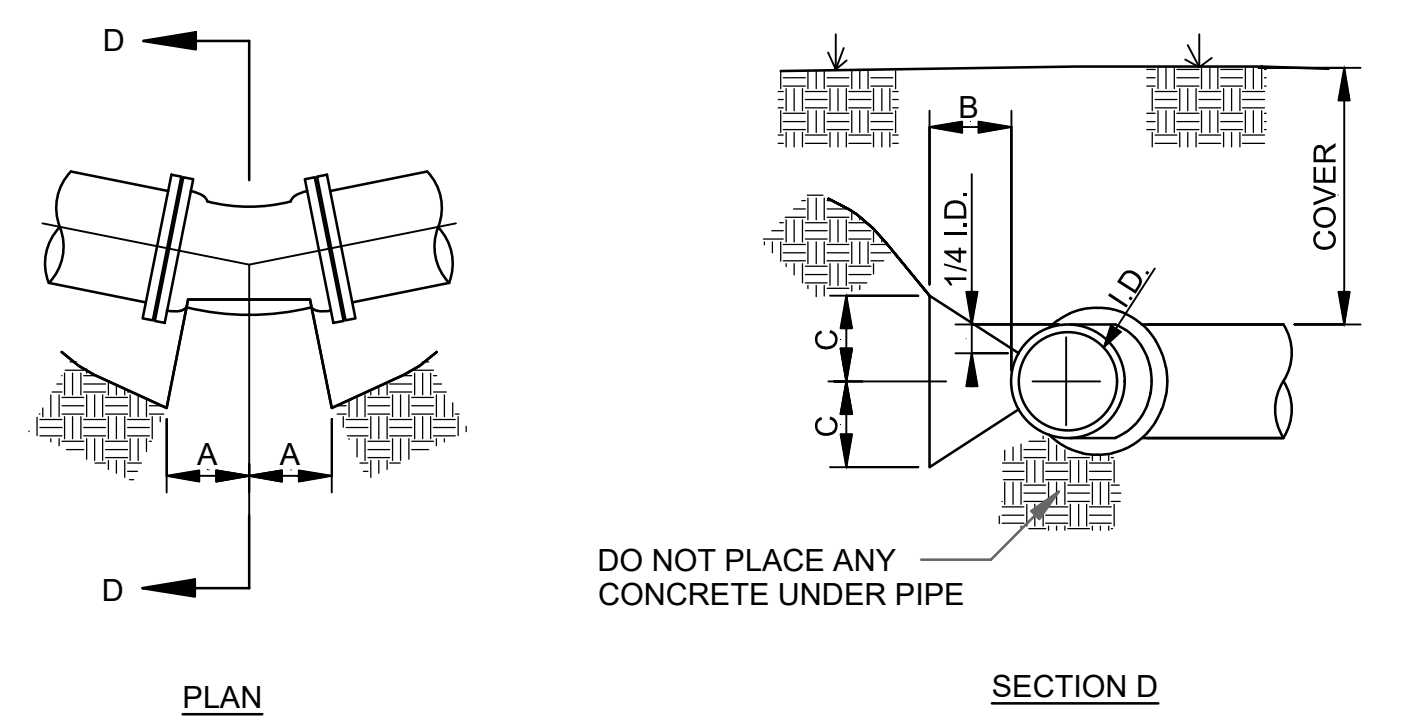
TYPICAL CONCRETE BRACING FOR 45° BENDS

PIPE DIA.	A	B	C	D	E	MIN COVER
4"	4 1/2"	3 1/2"	1'-0"	6"	1'-1"	2'-6"
6"	4 1/2"	6 1/2"	9"	9"	1'-2"	2'-6"
8"	4 1/2"	10"	3"	1'-0"	1'-2"	2'-6"
10"	4 1/2"	1'-1 1/2"	-	1'-3"	1'-4"	3'-0"
12"	6"	1'-4 1/2"	-	1'-6"	1'-8"	3'-0"
14"	6"	1'-4 1/2"	-	1'-9"	1'-8"	3'-0"
16"	6"	1'-7"	-	2'-0"	1'-10"	3'-0"
18"	6"	1'-9 1/2"	-	2'-3"	2'-4"	3'-0"
20"	6"	1'-11"	-	2'-6"	2'-4"	3'-6"
24"	7"	2'-3"	-	3'-0"	2'-10"	3'-6"
30"	8"	2'-6"	-	3'-3"	2'-10"	4'-0"
36"	8"	2'-10"	-	3'-6"	3'-3"	4'-6"
48"	8"	3'-1"	-	3'-9"	3'-6"	4'-6"
54"	9"	3'-4"	-	4'-0"	4'-0"	5'-0"



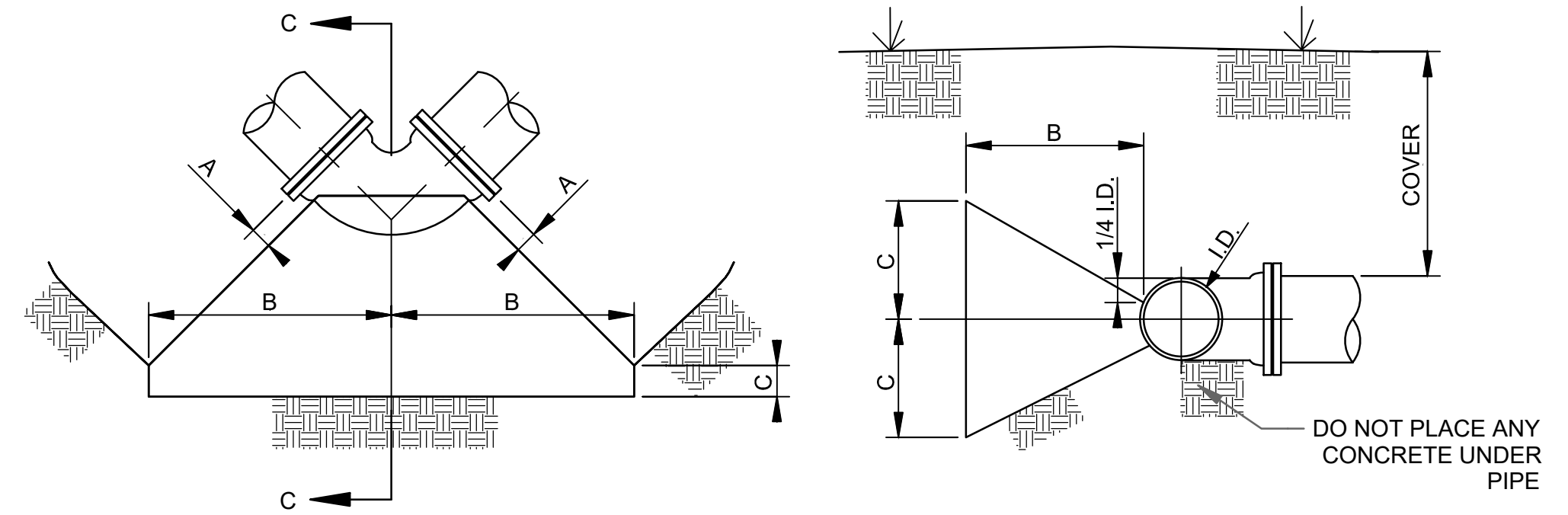
TYPICAL CONCRETE BRACING FOR TEES

PIPE DIA.	A	B	C	MIN COVER
4"	5"	5"	6"	2'-6"
6"	6"	8"	9"	2'-6"
8"	7"	1'-1"	1'-0"	2'-6"
10"	9"	1'-6"	1'-3"	3'-0"
12"	10"	1'-10"	1'-6"	3'-0"
14"	11 1/2"	1'-9"	1'-9"	3'-0"
16"	1'-0 1/2"	2'-0"	2'-0"	3'-0"
18"	1'-2"	2'-4"	2'-3"	3'-0"
20"	1'-3 1/2"	2'-6"	2'-6"	3'-6"
24"	1'-7 1/2"	3'-0"	3'-0"	3'-6"
30"	1'-10"	3'-4"	3'-9"	4'-0"
36"	2'-1"	3'-6"	4'-6"	4'-6"
48"	2'-7"	4'-0"	5'-0"	4'-6"
54"	3'-3"	4'-3"	5'-4"	5'-0"



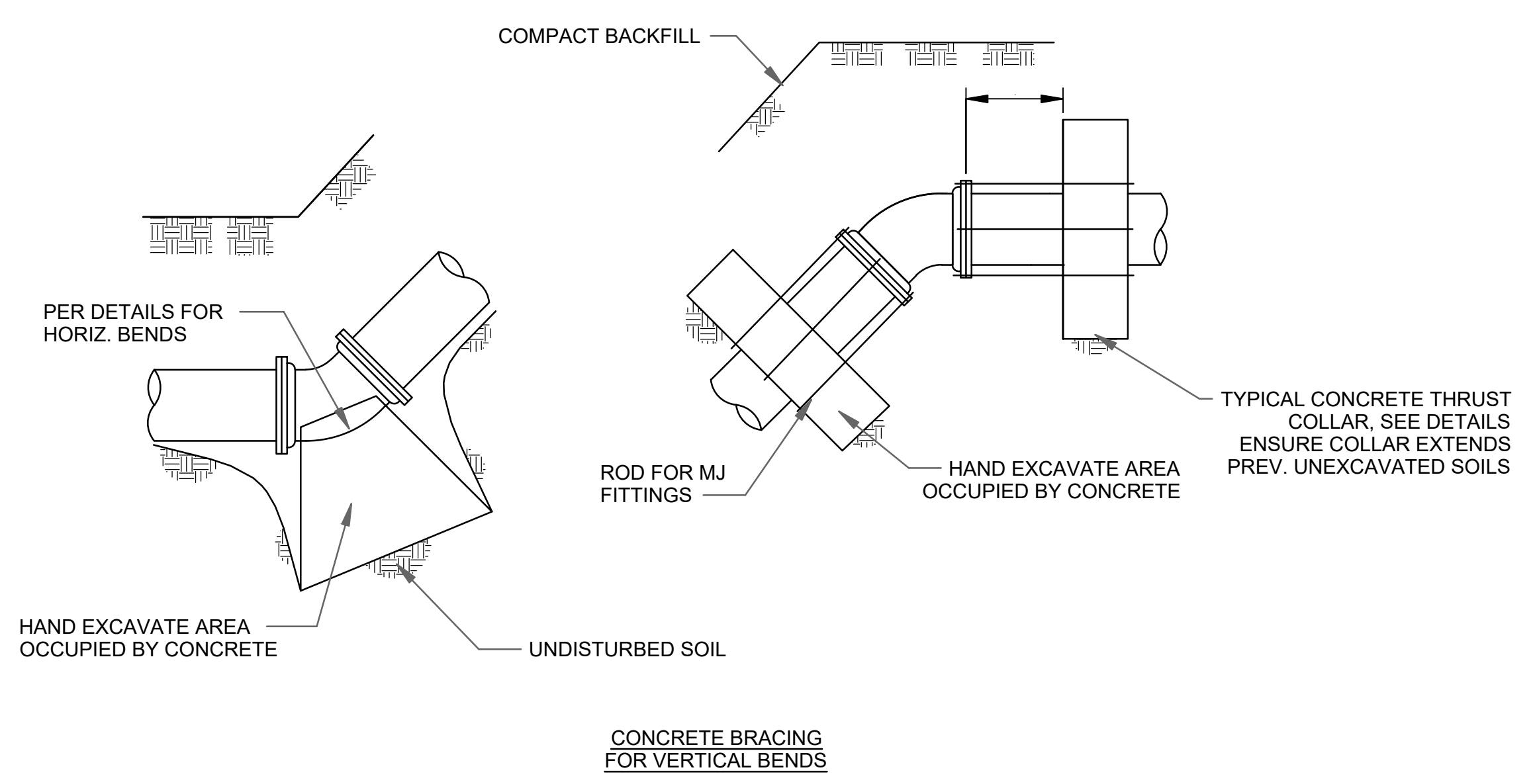
TYPICAL CONCRETE BRACING FOR 11 1/4° AND 22 1/2° BENDS

PIPE DIA.	22 1/2° BENDS				11 1/4° BENDS			
	A	B	C	MIN COVER	A	B	C	MIN COVER
4"	2"	1'-1"	4"	2'-6"	2"	1'-0"	3"	2'-6"
6"	4"	1'-0"	6"	2'-6"	2"	1'-0"	4"	2'-6"
8"	6"	1'-0"	8"	3'-0"	4"	1'-0"	5"	3'-0"
10"	8"	1'-1"	10"	3'-0"	5"	1'-0"	6"	3'-0"
12"	11"	1'-7"	1'-0"	5'-0"	6"	1'-0"	7"	3'-0"
14"	12"	2'-1"	1'-2"	5'-0"	8"	1'-0"	8"	3'-0"
16"	1'-1"	2'-5"	1'-8"	5'-0"	10"	1'-0"	9"	3'-0"
18"	1'-0"	2'-1"	1'-10"	5'-0"	1'-0"	1'-0"	10"	3'-6"
20"	1'-2"	2'-1"	2'-1"	5'-0"	1'-1"	1'-0"	1'-0"	3'-6"
24"	1'-5"	2'-10"	2'-6"	5'-0"	1'-3"	1'-0"	1'-3"	4'-0"
30"	1'-9"	2'-10"	2'-8"	5'-0"	1'-7"	1'-3"	1'-5"	4'-6"
36"	2'-0"	3'-2"	3'-1"	5'-0"	1'-10"	1'-3"	1'-9"	4'-6"
48"	2'-6"	3'-10"	3'-6"	5'-0"	2'-4"	1'-6"	2'-2"	5'-0"
54"	2'-10"	4'-0"	3'-10"	5'-0"	2'-8"	1'-6"	2'-5"	5'-0"



TYPICAL CONCRETE BRACING FOR 90° BENDS

PIPE DIA.	A	B	C	D	E	MIN COVER
4"	4 1/2"	6"	1'-8"	6"	1'-10"	2'-6"
6"	4 1/2"	1'-0"	1'-7"	9"	1'-9"	2'-6"
8"	4 1/2"	1'-6"	1'-6"	1'-0"	1'-9"	2'-6"
10"	4 1/2"	2'-1"	1'-1"	1'-3"	1'-11"	3'-0"
12"	4 1/2"	2'-6"	1'-0"	1'-6"	1'-11"	3'-0"
14"	6"	2'-6"	1'-2"	1'-9"	2'-0"	3'-0"
16"	6"	2'-11"	1'-0"	2'-0"	2'-1"	3'-0"
18"	6"	3'-4"	1'-0"	2'-3"	2'-2"	3'-0"
20"	6"	3'-6"	1'-1"	2'-6"	2'-3"	3'-6"
24"	7"	4'-3"	8"	3'-0"	2'-5"	3'-6"
30"	8"	4'-7"	6"	3'-3"	2'-5"	4'-0"
36"	8"	5'-0"	6"	3'-6"	2'-10"	4'-6"
48"	9"	5'-4"	4"	3'-9"	3'-1"	4'-6"
54"	9"	5'-6"	4"	4'-0"	3'-7"	5'-0"

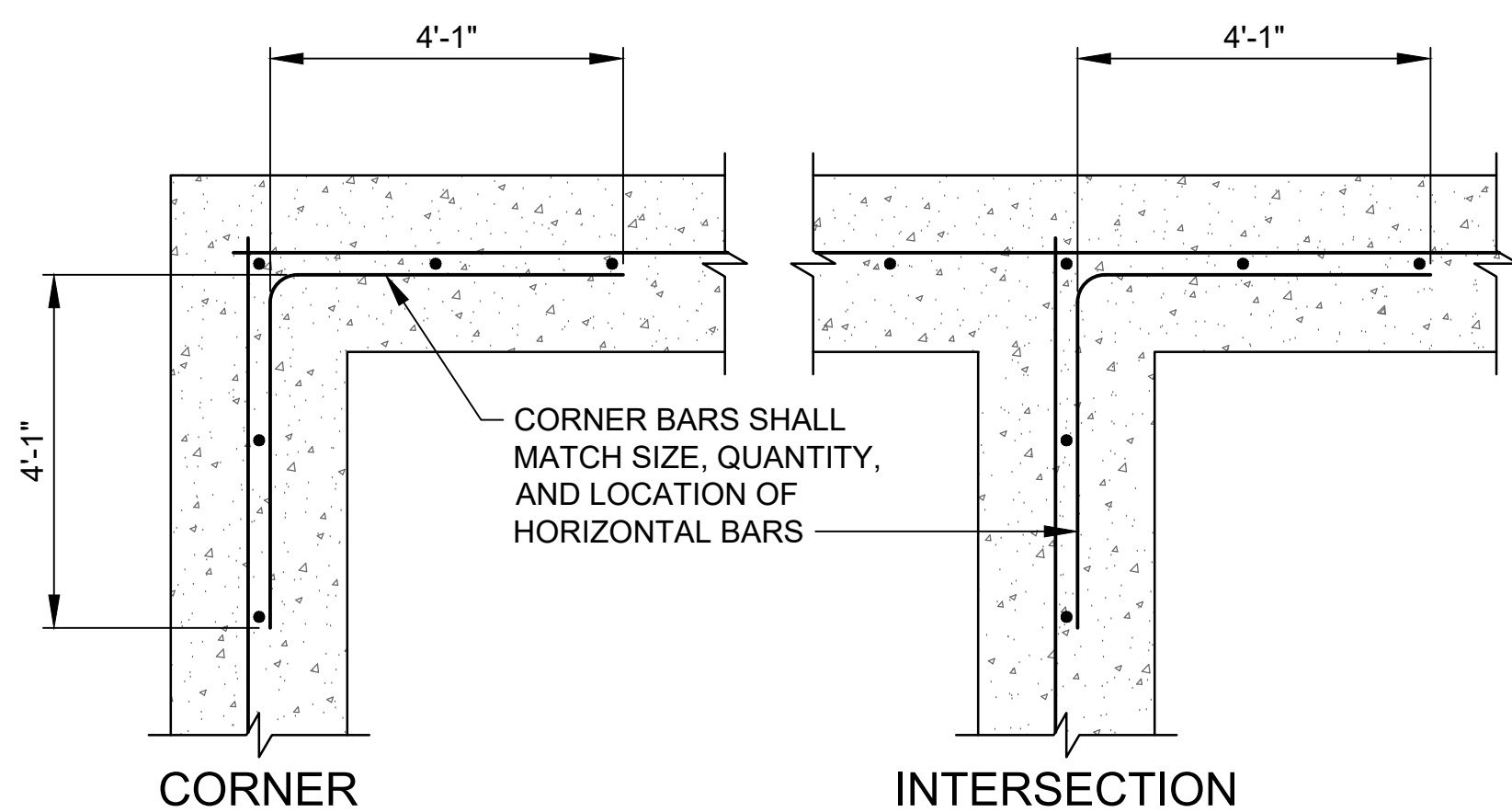


- GENERAL NOTES:
- GENERAL DIMENSIONS SHALL BE CONSIDERED AS MINIMUMS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL AS REQUIRED FOR ACTUAL FIELD CONDITIONS ENCOUNTERED. CONTRACTOR TO ENSURE ALL THRUST RESTRAINT IS ADEQUATE
 - ALL CONCRETE FOR THRUST RESTRAINT SHALL BEAR AGAINST FIRM UNDISTURBED SOILS
 - CONTRACTOR SHALL WRAP ALL ACCESSORIES BOLTS, NUTS, CONNECTIONS, ETC. IN PLASTIC SUCH THAT THEY CAN BE REMOVED WITHOUT THE NEED FOR CONCRETE REMOVAL
 - UNLESS INDICATED OTHERWISE IN PLANS, ALL FITTINGS SHALL BE RJ OR MJ WITH RESTRAINING FOLLOWER GLANDS. RESTRAINING FOLLOWER GLANDS SHALL BE MEGA-LUG, ROMAC, OR EQUAL. RETAINER GLANDS NOT ALLOWED.

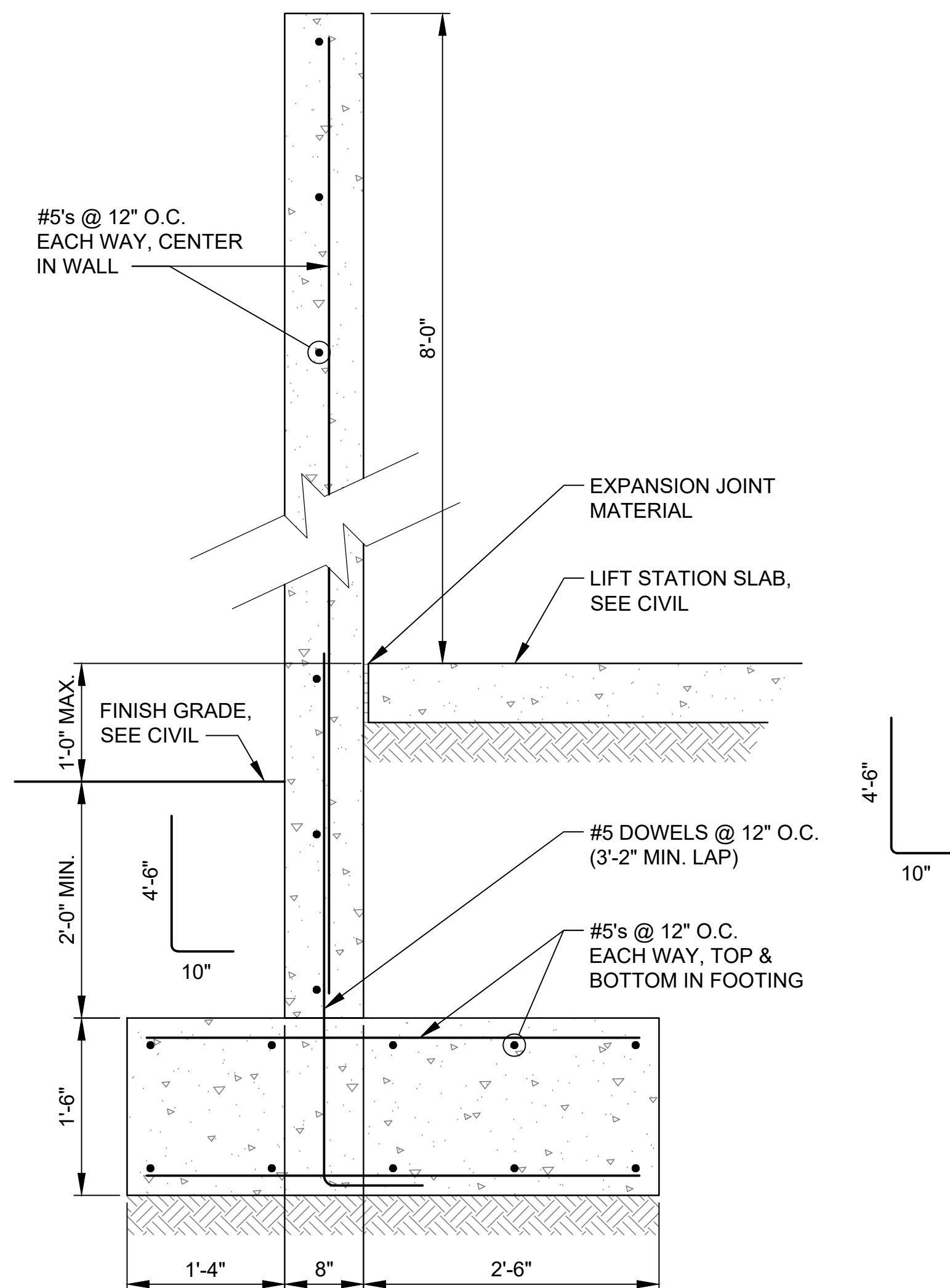
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 Last plotted by: Standrich, Darryl R. Plot Style: --- Plot Scale: 1:2.586 Plot Date: 2/11/2025 3:31 PM Plotter used: None

STRUCTURAL GENERAL NOTES

1. THE WALL SHALL HAVE A FORM LINER WITH APPEARANCE OF A 4"x16" SLUMP BLOCK, SPLIT FACE OR SIMILAR APPEARANCE. CONCRETE SHALL BE COLORED CONCRETE WITH BEIGE, TAN OR BUFF-TYPE COLOR. PAINTED OR STAINED CONCRETE WILL NOT BE ACCEPTED. EXACT FORM LINER AND COLOR SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL. THE CONCRETE SHALL THEN BE SEALED WITH A CLEAR SEALANT PER THE MANUFACTURER'S RECOMMENDATION.
2. CONCRETE:
F_c = 4,500 PSI @ 28 DAYS
WATER TO CEMENT RATIO: 0.45 MAX.
3. REINFORCING:
ASTM A615 GR. 60 F_y = 60 KSI

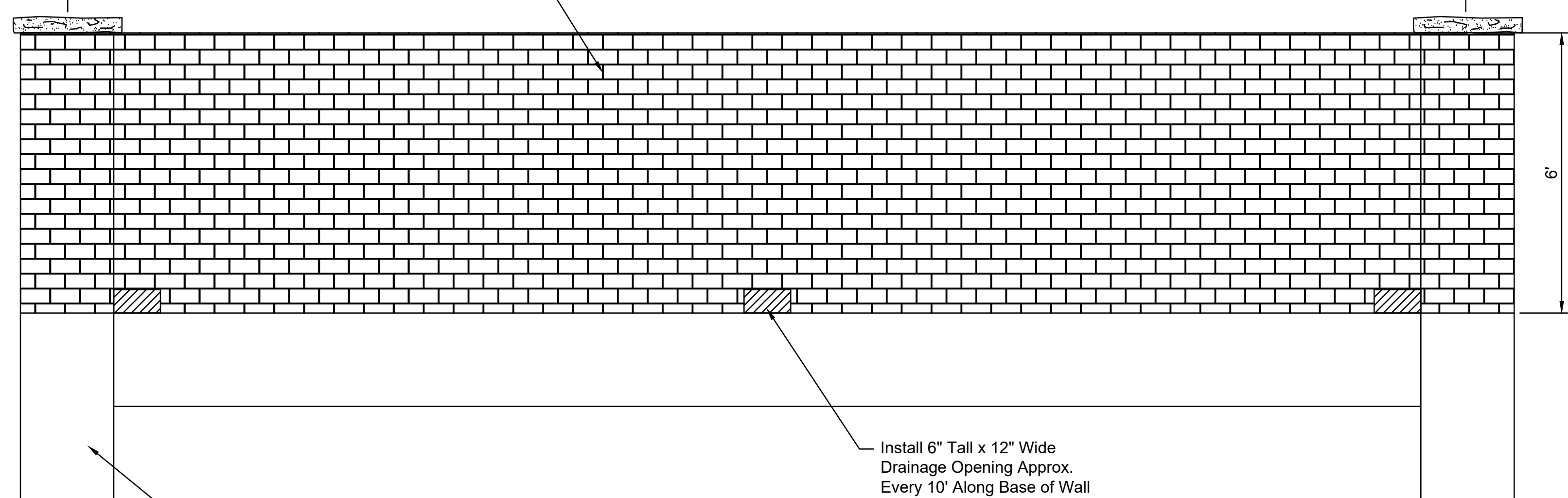


NOTE:
FOOTING CORNER BARS SIMILAR.



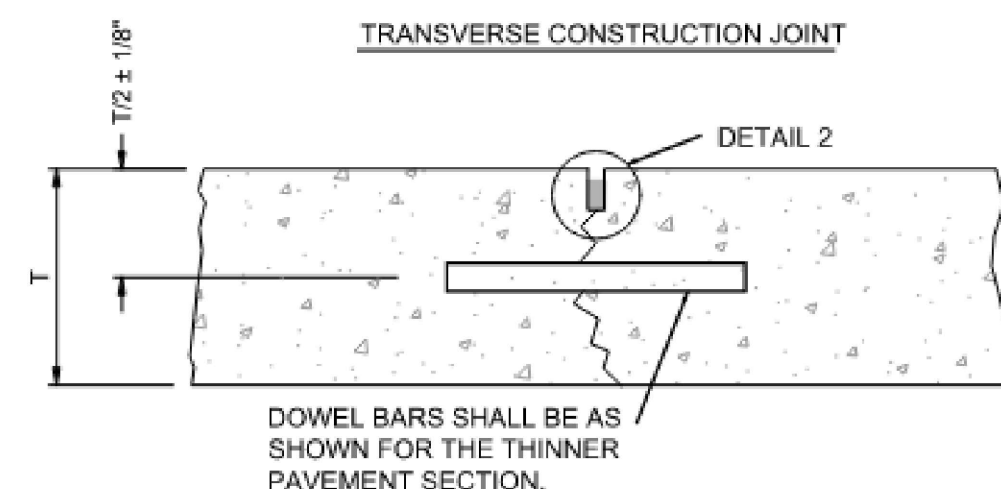
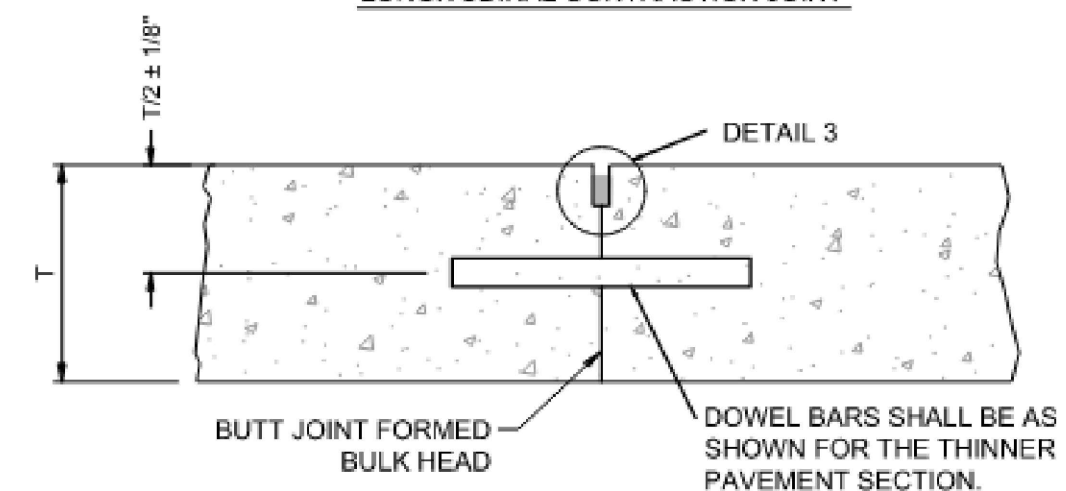
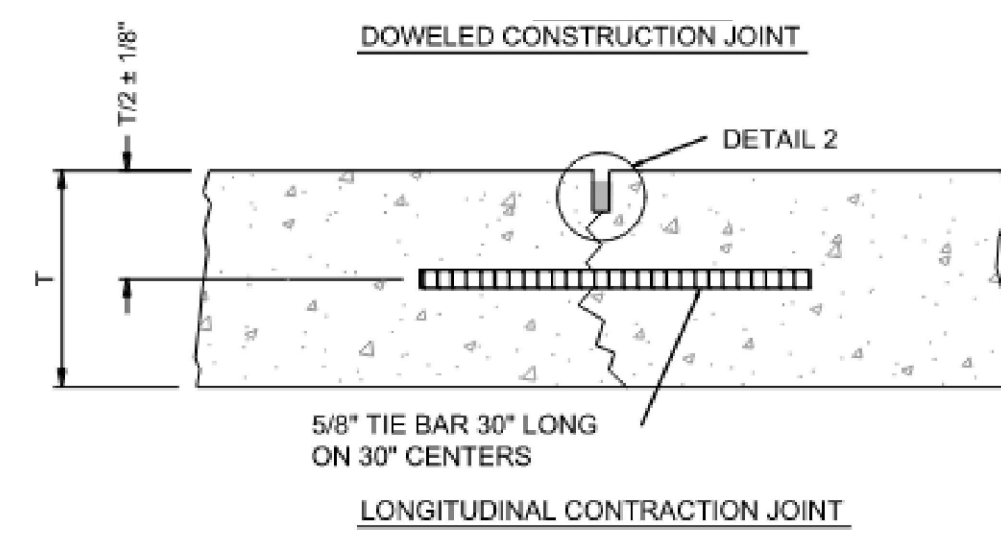
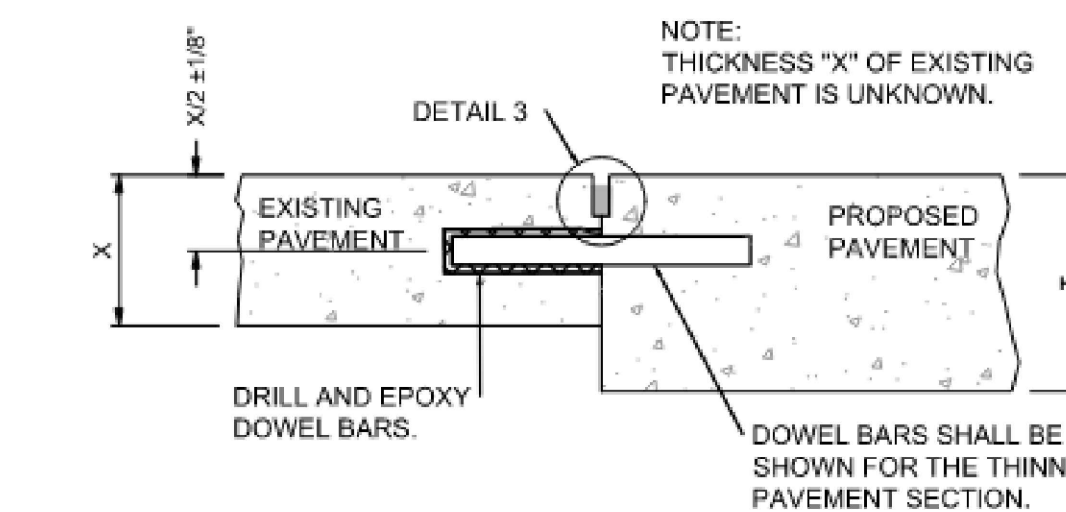
Construct 6" tall concrete slump block wall per industry standards and City standards. See Notes, this Sheet

31'-8" Between Columns



Construct 2' x 2' x 4' Deep Footings per Industry Standards and City Code

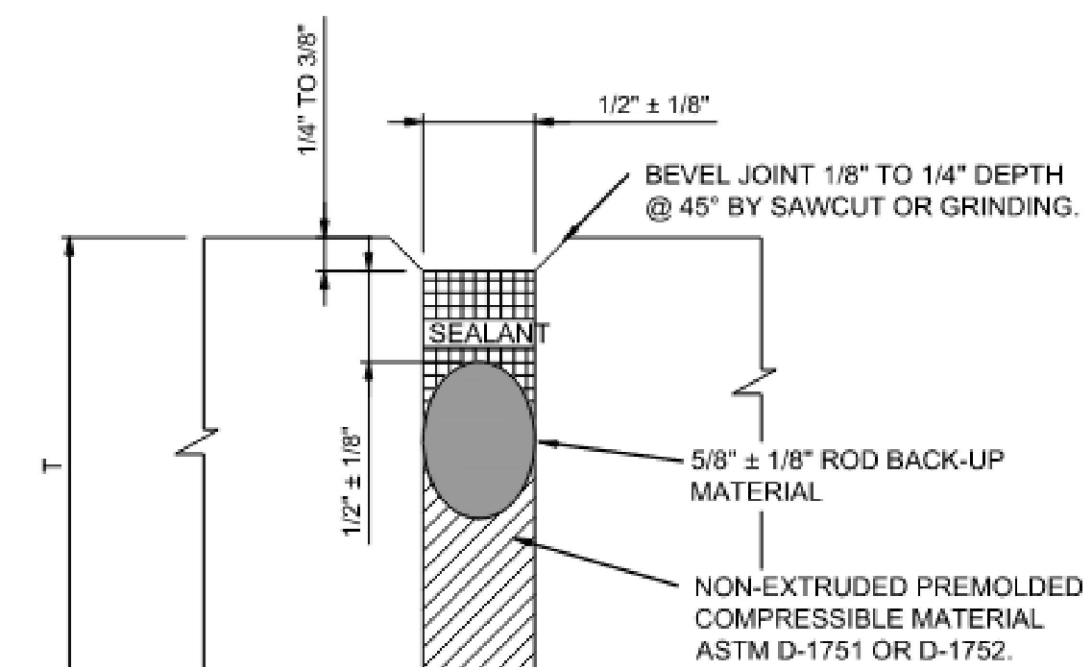
Note: Cost of 6" concrete slump block screening wall shall be included in LS Bid item "Lift Station Module".



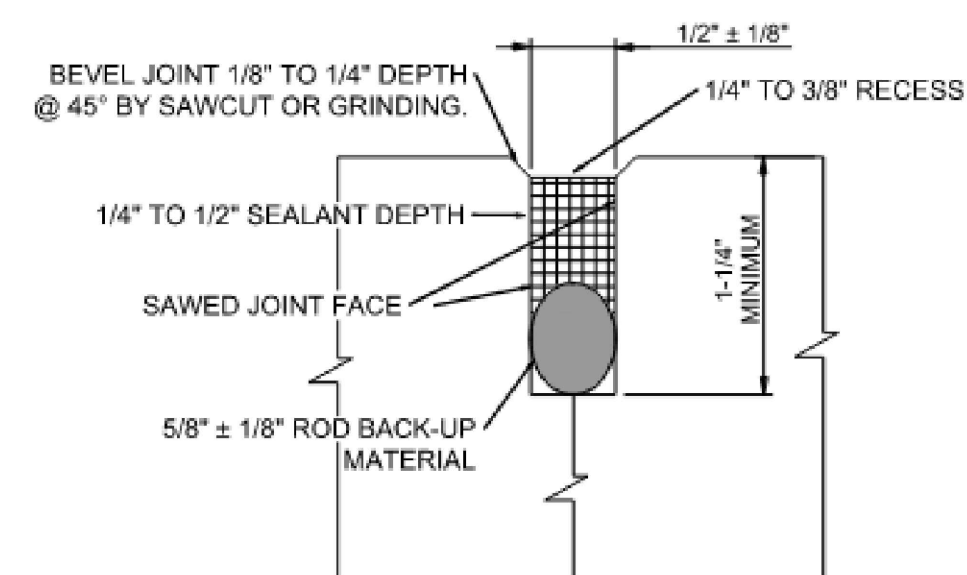
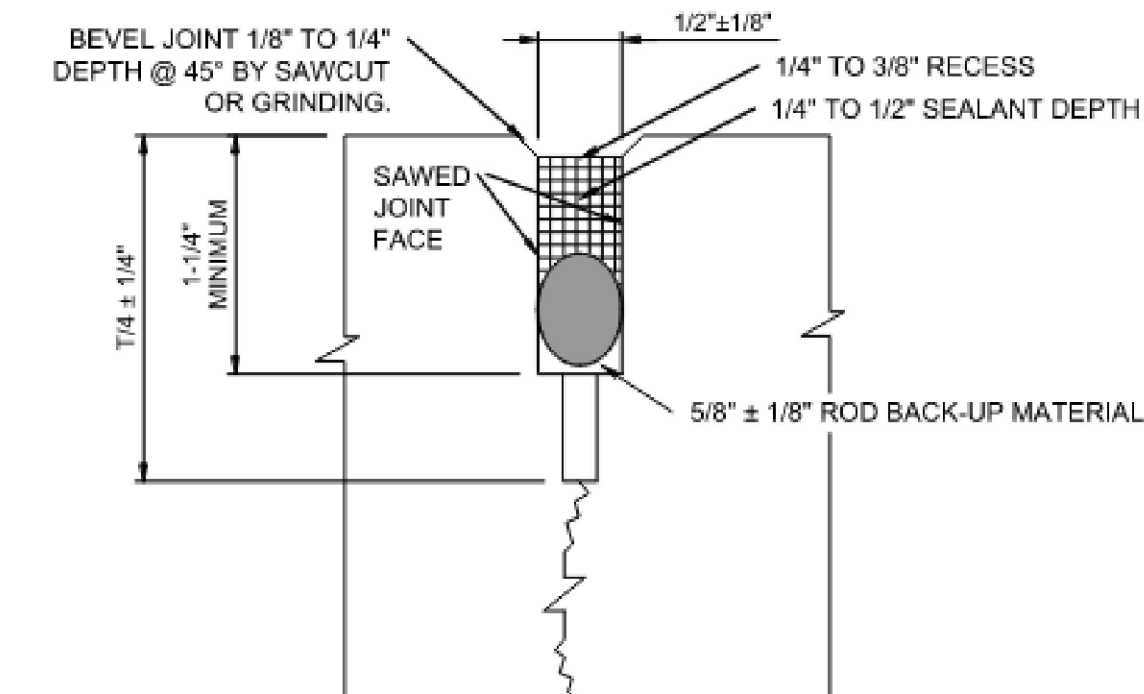
- CONCRETE PAVEMENT JOINTS:**
1. PROVIDE LONGITUDINAL CONTRACTION JOINT ALONG CENTER OF ALL DRIVES
 2. PROVIDE TRANSVERSE CONTRACTION JOINTS AT 15' CENTERS MAX.
 3. PROVIDE CONSTRUCTION JOINTS AT EDGES WHERE EXISTING PAVEMENT MEETS PROPOSED PAVEMENT
 4. PROVIDE JOINT LAYOUT PLAN TO ENGINEER FOR APPROVAL BEFORE BEGINNING CONSTRUCTION
 5. INSTALL ISOLATION JOINT AT PAVEMENT INTERACTION WITH ALL CONCRETE FIXED STRUCTURES INCLUDED BUT NOT LIMITED TO LIGHT FOUNDATIONS, INLETS, MANHOLES, VAULTS AND BUILDING.

DOWEL BAR SPECIFICATIONS

SLAB THICKNESS	DOWEL DIAMETER	DOWEL LENGTH	DOWEL SPACING
6" TO 7"	3/4"	18"	12"
8" TO 12"	1"	19"	12"



NOTE:
THICKEN PAVEMENT MINIMUM OF 2" AT ISOLATION JOINT. THICKENED EDGE OVER 36" MINIMUM.



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
WICHITA, KANSAS

PEGASUS LIFT STATION
LIFT STATION #71

DETAILS IV

JOB NO.: 2400521
DATE: FEB. 2025
DESIGNED BY: WWN
DRAWN BY: TRP

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

DRAWING NUMBER

C-504

SHEET NUMBER **25** OF **38**

EQUIPMENT

SYMBOL	DESCRIPTION
	ELECTRIC MOTOR
	VARIABLE SPEED DRIVE
	REDUCED VOLTAGE SOFT STARTER
	FULL VOLTAGE NON-REVERSING STARTER
	FULL VOLTAGE REVERSING STARTER
	SUBMERSIBLE PUMP CONTROL AND STATUS MODULE
	OPERATOR INTERFACE TERMINAL
	GRAPHIC DISPLAY TERMINAL (VFD)
	ELECTRIC GENERATOR
	HYDRAULIC MOTOR
	AIR MOTOR
	SHAFT
	COUPLING
	DYNAMIC PUMP
	SCREW PUMP OR CONVEYOR

ACCESSORIES AND APPURTENANCES

SYMBOL	DESCRIPTION
	DYNAMIC COMPRESSOR
	POSITIVE DISPLACEMENT PUMP
	POSITIVE DISPLACEMENT COMPRESSOR
	EDUCTOR/EJECTOR
	HEATER, GENERAL
	HEATER W/FAN (INDUCED DRAFT)
	HEATER W/FAN (FORCED DRAFT)
	HEAT EXCHANGER, GENERAL
	HYDRAULIC CYLINDER
	AIR CYLINDER
	MIXER

VALVES

SYMBOL	DESCRIPTION
	UNION
	PLUG
	BLIND FLANGE
	HOSE CONNECTION
	SPRAY NOZZLE/DIFFUSER
	DRAIN
	FLEXIBLE CONNECTION, GENERAL
	FLEXIBLE HOSE
	QUICK CONNECTOR
	THREADED TAP
	FILTER
	'Y' TYPE STRAINER
	STRAINER
	EXPANSION JOINT
	FLOOR CLEANOUT
	GAUGE
	SILencer

VALVE OPERATORS

SYMBOL	DESCRIPTION
	HAND OPERATOR
	HAND OPERATOR (LONG)
	CHAIN OPERATOR
	FLOAT OPERATOR
	AIR DIAPHRAGM OPERATOR
	POSITIONER
	SOLENOID OPERATOR
	CYLINDER OPERATOR
	PRESSURE BALANCED DIAPHRAGM OPERATOR

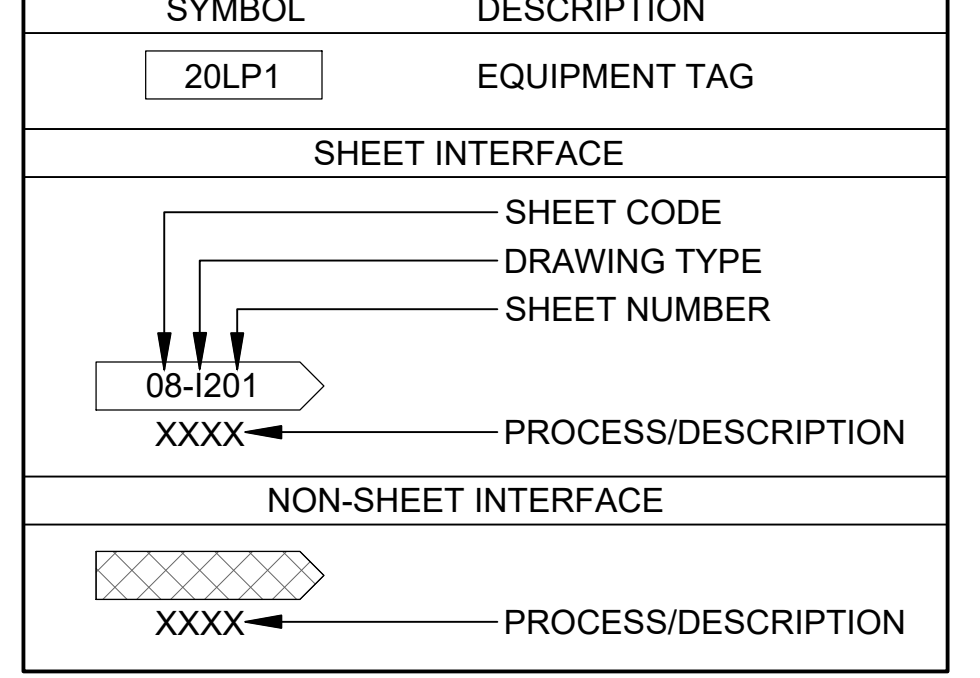
INSTRUMENT PRIMARY ELEMENTS

SYMBOL	DESCRIPTION
	STOP CHECK VALVE
	DIAPHRAGM VALVE (SELF CONTAINED)
	AIR RELIEF
	PRESSURE CONTROL
	PRESSURE RELIEF VALVE
	VACUUM RELIEF VALVE
	STOP GATE
	SLIDE GATE
	HOSE VALVE (HV-X) OR (V-X) X = NO. IN SPECS
	SAMPLE
	TELESCOPING VALVE

INSTRUMENT PRIMARY ELEMENTS

SYMBOL	DESCRIPTION
	THREADED TAP
	THERMOWELL
	WEIR
	SIGHT FLOW INDICATOR
	ROTAMETER
	FLOW ORIFICE
	FLOW ORIFICE IN QUICK CHANGE FITTING
	SINGLE PORT PITOT
	AVERAGING PITOT STATION
	VENTURI TUBE
	FLUME
	POSITIVE DISPLACEMENT FLOWMETER
	MASS FLOWMETER
	SONIC FLOWMETER
	MAGNETIC FLOWMETER
	INSERTION MAGNETIC FLOWMETER
	PH ELECTRODE ASSEMBLY
	SUBMERSIBLE PRESSURE SENSOR
	ULTRASONIC LEVEL TRANSMITTER
	RADAR LEVEL TRANSMITTER
	CONDUCTIVITY LEVEL PROBE
	FLOAT SWITCH
	TURBINE ELEMENT
	VORTEX SENSOR
	TARGET ELEMENT
	WATER HAMMER ARRESTER

GENERAL IDENTIFICATION



SIGNAL CONDITIONERS

SYMBOL	DESCRIPTION
	ANALOG TO DIGITAL
	DIGITAL TO ANALOG
	CURRENT TO PRESSURE
	PRESSURE TO CURRENT
	FREQUENCY TO CURRENT
	CURRENT BOOST/ REPEATER

SIGNAL CONDITIONERS

SYMBOL	DESCRIPTION
	SUM
	DIFFERENCE
	SQUARE ROOT
	CHARACTERIZATION
	INTEGRATION

VALVE OPERATORS

SYMBOL	DESCRIPTION
	SILencer

VALVE OPERATORS

SYMBOL	DESCRIPTION
	HAND OPERATOR
	HAND OPERATOR (LONG)
	CHAIN OPERATOR
	FLOAT OPERATOR
	AIR DIAPHRAGM OPERATOR
	POSITIONER
	SOLENOID OPERATOR
	CYLINDER OPERATOR
	PRESSURE BALANCED DIAPHRAGM OPERATOR

INSTRUMENTS OR FUNCTIONS

SYMBOL	DESCRIPTION
	MOTOR OPERATOR
	DIGITAL OPERATOR
	ELECTRO-HYDRAULIC OPERATOR
	FAIL ARROWS INDICATE OPEN PORTS
	LIMIT SWITCH
	MOTOR OPERATOR WITH INTEGRAL CONTROL DEVICES

AUX INSTRUMENTS OR FUNCTIONS

SYMBOL	DESCRIPTION
	TEST POINT, TERMINAL BLOCK WITH SLIDING LINK AND MINI-BANANA SOCKETS
	PURGE OR FLUSHING DEVICE
	INTERLOCK LOGIC WITH REFERENCE
	ANNULAR SEAL
	DIAPHRAGM SEAL
	RESET FOR LATCH TYPE OPERATOR
	LOOP POWER SUPPLY

EQUIPMENT LINE TYPES

LINE	DESCRIPTION
	PROPOSED OR NEW EQUIPMENT
	EXISTING EQUIPMENT

PIPING LINE TYPES

LINE	DESCRIPTION
	PROCESS LINE - PRIMARY
	PROCESS LINE - SECONDARY
	PROCESS LINE - EXISTING
	PACKAGE BOUNDARY
	AREA/BUILDING BOUNDARY
	SHOWN ELSEWHERE
	AIR

PIPING, MISCELLANEOUS

SYMBOL	DESCRIPTION
	SLOPE ARROW, ARROW DIRECTION DOWN
	OUTSIDE GRADE LEVEL
	LINE HEAT TRACED AND INSULATED ST = STEAM TRACED ET = ELECTRIC TRACED

INSTRUMENT LINE TYPES

LINE	DESCRIPTION
	PROCESS CONNECTION
	UNDEFINED SIGNAL
	PNEUMATIC SIGNAL
	ELECTRIC SIGNAL
	HYDRAULIC SIGNAL
	CAPILLARY OR FILLED TUBE
	ELECTROMAGNETIC OR SONIC SIGNAL (GUIDED)
	ELECTROMAGNETIC OR SONIC SIGNAL (UNGUIDED)
	INTERNAL SYSTEM LINK (SOFTWARE OR DATA LINK)
	MECHANICAL LINK

INSTRUMENT POWER SUPPLY

- POWER SUPPLY, TYPE AND LEVEL SHOWN, ABBREVIATIONS AS FOLLOWS:
 AS - AIR SUPPLY
 IA - INSTRUMENT AIR
 PA - PLANT AIR
 ES - ELECTRIC SUPPLY
 GS - GAS SUPPLY

MEANING OF FUNCTIONAL INSTRUMENT IDENTIFICATION LETTERS

FIRST LETTER	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER FLAME		USER CHOICE	USER CHOICE	USER CHOICE
C	CONDUCTIVITY (ELECTRICAL)			CONTROL	
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL			
E	VOLTAGE (EMF)		PRIMARY ELEMENT		
F	FLOW RATE	RATIO(FRACTION)			
G	GAUGING(DIMENSIONAL)		GLASS		
H	HAND(MANUALLY INITIATED)				HIGH
I	CURRENT(ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME OR TIME-SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT(PILOT)		LOW
M	MOTION	MOMENTARY			MIDDLE OR INTERMEDIATE
N	USER CHOICE		USER CHOICE	USER CHOICE	USER CHOICE
O	USER CHOICE		ORIFICE(RESTRICTION)		
P	PRESSURE OR VACUUM		POINT(TEST POINT)		
Q	QUANTITY OR EVENT	INTEGRATE OR TOTALIZE			
R	RADIATION		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNC.	MULTIFUNCTION
V	VIBRATION OR MECHANICAL ANALYSIS			VALVE, DAMPER, OR LOUVER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE			RELAY OR COMPUTE	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

DIGITAL SYSTEM INTERFACES

SYMBOL	DESCRIPTION
	ANALOG INPUT
	ANALOG OUTPUT
	DISCRETE INPUT
	DISCRETE OUTPUT

INSTRUMENTS OR FUNCTIONS

SYMBOL	DESCRIPTION
	HMI SCREEN DISPLAY ELEMENT
	PANEL MOUNTED DEVICE
	FIELD DEVICE

EQUIPMENT AND INSTRUMENTATION TAGGING

CODE	DESCRIPTION	RANGE	COMMENT
AA	FACILITY NUMBER	01 - 99	FACILITY LOCATION OR EQUIPMENT
B	UNIT PROCESS NUMBER	1 - 9	OPTIONAL IDENTIFIER USED TO DIFFERENTIATE MULTIPLE UNIT PROCESSES WITHIN A SINGLE FACILITY
CCC	EQUIPMENT ABBREVIATION / INSTRUMENT IDENTIFICATION	A - ZZZ	ONE TO THREE LETTER ABBREVIATION
D	TRAIN OR BRANCH NUMBER	0 - 9	0 USED FOR EQUIPMENT COMMON TO AN ENTIRE UNIT PROCESS 1-9 USED FOR EACH TRAIN/BRANCH WITHIN UNIT PROCESS
EE	SEQUENTIAL NUMBER IDENTIFIER	01 - 99	OPTIONAL IDENTIFIER IF NEEDED WHEN MULTIPLE EQUIPMENT WITHIN SAME TRAIN/BRANCH
X	ALPHABETIC IDENTIFIER	A - Z	OPTIONAL IDENTIFIER WHEN NEEDED FOR FURTHER DIFFERENTIATION

REV.	DATE	DESCRIPTION

PROCESS & INST. DIAGRAM NOTES, LEGEND, ABBREV.

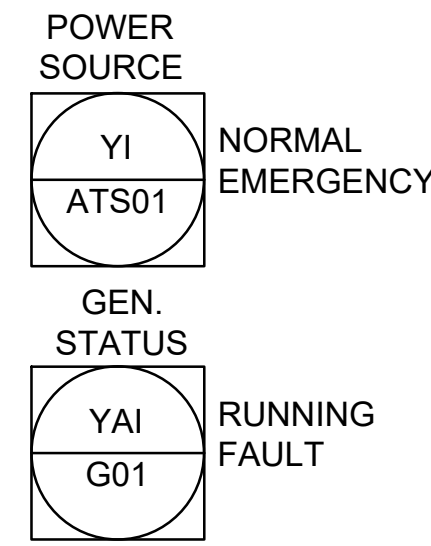
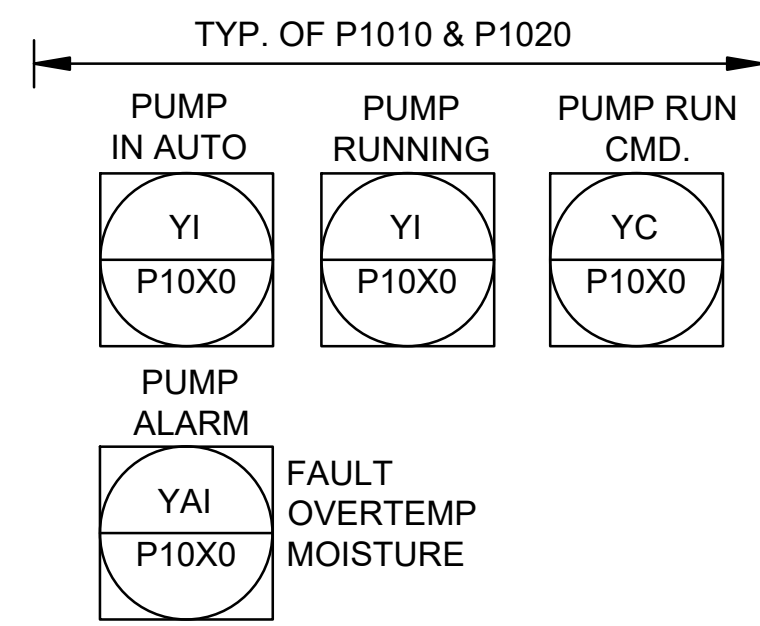
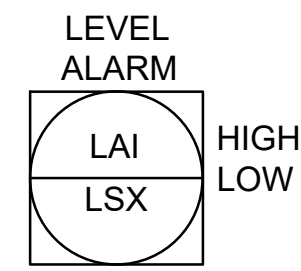
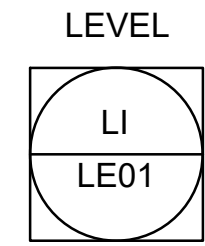
JOB NO.: 2400521
 DATE: FEB 2025
 DESIGNED BY: BCS
 DRAWN BY: ASG
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
 DRAWING NUMBER
I-101
 SHEET NUMBER **26** OF **38**

File: L:\2024\141-2400521 - Pegasus Addition Design\Drawings\SS LIFT STATION\1-01 PROCESS & INSTRUMENTATION DIAGRAM NOTES.dwg Last Save: 1/14/2025 2:53 PM Last saved by: ASGinger
 Last plotted by: Ginger, Adam S. Plot Style: --- Plot Scale: 1:2.565 Plot Date: 2/12/2025 11:49 AM Plotter used: None

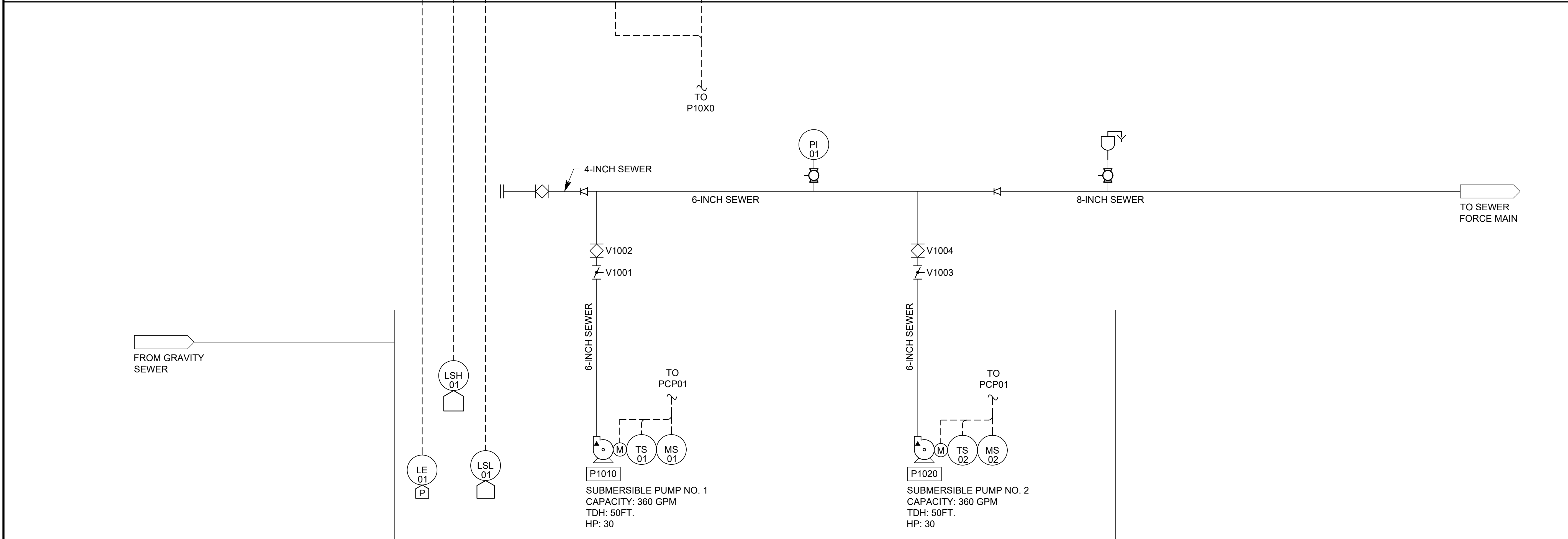
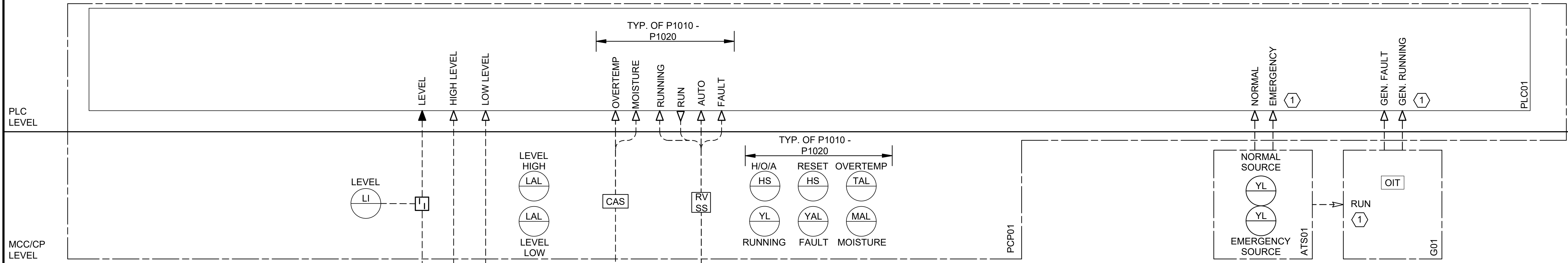
GENERAL NOTES:

- FOR EQUIPMENT TAGS WITH "X", INSERT CORRESPONDING EQUIPMENT NUMBER.
- EQUIPMENT SHOWN TO BE PROVIDED AS PART OF A VENDOR-SUPPLIED PUMP STATION PACKAGE. THIS DIAGRAM IS REPRESENTATIVE OF STANDARD INSTRUMENTATION AND CONTROLS. VENDOR DESIGN MAY VARY. REFER TO VENDOR DRAWINGS.
- CONTRACTOR TO COORDINATE WITH PUMP STATION VENDOR FOR REQUIRED CONTROL SIGNALS BETWEEN INSTRUMENTATION AND CONTROL PANEL. ALL SIGNALS MAY NOT BE SHOWN.

HMI LEVEL
PLC LEVEL
MCC/CP LEVEL



1 GENERATOR CONTROLLED BY ATS. MINIMUM SIGNALS REQUIRED SHOWN. CONTRACTOR AND SUPPLIER TO DETERMINE ADDITIONAL IO AS NEEDED.

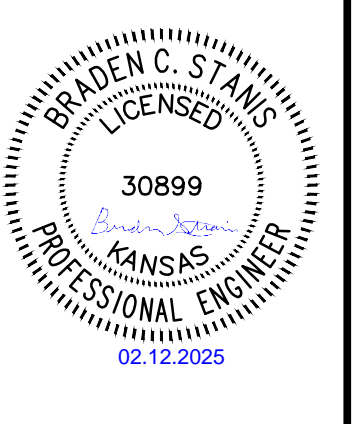


SUBMERSIBLE PUMP NO. 1
CAPACITY: 360 GPM
TDH: 50FT.
HP: 30

SUBMERSIBLE PUMP NO. 2
CAPACITY: 360 GPM
TDH: 50FT.
HP: 30



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REV.	DATE	DESCRIPTION	BY

CITY OF WICHITA
WICHITA, KANSAS
PEGASUS LIFT STATION

LIFT STATION P&ID

JOB NO.: 2400521
DATE: FEB 2025
DESIGNED BY: BCS
DRAWN BY: ASG

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

DRAWING NUMBER
I-102

SHEET NUMBER **27** OF **38**

File: L:\2024\141-2400521 - Pegasus Addition Design\Drawings\SS LIFT STATION\1-101 LIFT STATION P&ID.dwg, Last Save: 1/14/2025 2:52 PM, Last saved by: ASGinger, Last plotted by: Ginger, Adam S., Plot Style: ---, Plot Scale: 1:2,595, Plot Date: 2/12/2025 11:51 AM, Plotter used: None

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Last plotted by: Standrich, Darryl R. Plot Style: 1:2.565 Plot Date: 2/11/2025 3:34 PM Plotter used: None

CONTROL SCHEMATIC SYMBOLS		RECEPTACLE SYMBOLS		GENERAL ELECTRICAL LINE STYLES		PHASE GRAPHICS																	
TRANSFORMER, RATINGS AS SHOWN SURGE PROTECTION DEVICE TRANSFER SWITCH ATS - AUTOMATIC TRANSFER SWITCH MTS - MANUAL TRANSFER SWITCH GENERATOR POWER METER PHASE MONITOR 600AF/3P, L SIG 400AT CIRCUIT BREAKER, RATINGS AS NOTED. <table border="1"> <tr><td>L</td><td>LONG TIME</td></tr> <tr><td>S</td><td>SHORT TIME</td></tr> <tr><td>I</td><td>INSTANTANEOUS</td></tr> <tr><td>G</td><td>GROUND</td></tr> </table> VARIABLE FREQUENCY DRIVE (VFD) REDUCED VOLTAGE SOFT-START DISCONNECT FUSED DISCONNECT MOTOR 40 HP HORSEPOWER AS NOTED DRAW OUT CONSTRUCTION FULL VOLTAGE NON-REVERSING MOTOR STARTER. SIZE AS NOTED. FULL VOLTAGE REVERSING MOTOR STARTER. SIZE AS NOTED. KEY INTERLOCK GROUND INDUCTOR/LINE REACTOR CAPACITOR KVAR AS NOTED MEDIUM VOLTAGE CIRCUIT BREAKER CURRENT TRANSFORMER VOLTAGE TRANSFORMER	L	LONG TIME	S	SHORT TIME	I	INSTANTANEOUS	G	GROUND	WIRING WITHIN PANEL WIRING TO FIELD DEVICE ELECTRICALLY CONNECTED NOT ELECTRICALLY CONNECTED ELECTRICAL CONNECTION TERMINAL BLOCK LOCAL TERMINAL BLOCK EXTERNAL CIRCUIT BREAKER SINGLE POLE CIRCUIT BREAKER THREE POLE FUSE, AMPERE RATING AS NOTED FUSED TERMINAL BLOCK, AMPERE RATING AS NOTED GROUND HS (MOMENTARY) PB NC HS (MOMENTARY) PB NO HS (MAINTAINED) PB WITH RED MUSHROOM HEAD OPERATOR HS THREE POSITION X = CLOSED O = OPEN HS TWO POSITION MOTOR OVERLOAD ELECTRONIC OVERLOAD ELECTRONIC THREE POLE OVERLOAD THERMAL OVERLOAD THERMAL THREE POLE POTENTIOMETER ELAPSED TIME METER HEATER VFD LINE REACTOR PILOT LIGHT - COLOR AS INDICATED <ul style="list-style-type: none"> A - AMBER G - GREEN R - RED B - BLUE W - WHITE PTT PTT - PUSH-TO-TEST	SOLENOID RELAY COIL CR - CONTROL RELAY M - MOTOR STARTER COIL RELAY CONTACT NC RELAY CONTACT NO TIME DELAY RELAY COIL NO TIME DELAY CLOSE WHEN ENERGIZED NC TIME DELAY OPEN WHEN ENERGIZED NO TIME DELAY OPEN WHEN DE-ENERGIZED NC TIME DELAY CLOSE WHEN DE-ENERGIZED SWITCH - THREE POLE SWITCH - LIMIT NORMALLY OPEN (NO) SWITCH - LIMIT NORMALLY OPEN HELD CLOSED (NOHC) SWITCH - LIMIT NORMALLY CLOSED (NC) SWITCH - LIMIT NORMALLY CLOSED HELD OPEN (NCHO) <table border="1"> <tr><th>A</th><th>B</th></tr> <tr><td></td><td>PRESSURE</td></tr> <tr><td></td><td>LEVEL</td></tr> <tr><td></td><td>TEMPERATURE</td></tr> <tr><td></td><td>FLOW</td></tr> </table> NORMALLY OPEN, CLOSES ON RISING "B" NORMALLY CLOSED, OPENS ON RISING "B" HELD CLOSED, OPENS ON DROPPING "B" HELD OPEN, CLOSES ON DROPPING "B"	A	B		PRESSURE		LEVEL		TEMPERATURE		FLOW	20 AMP DUPLEX RECEPTACLE, MTD, 18" AFF TO BOTTOM, UNLESS NOTED OTHERWISE, WITH #12 GROUND WIRE. <ul style="list-style-type: none"> "GFCI" INDICATES GROUND FAULT CIRCUIT INTERRUPTER. "WP" INDICATES HEAVY-DUTY, WEATHERPROOF WHILE-IN-USE ENCLOSURE AND COVER. BOX INDICATES FLOOR OUTLET WITH RECESSED CAST JUNCTION BOX DUPLEX FLOOR/CEILING RECEPTACLE ELECTRICAL TAGS CONDUIT WIRE TAG 2(3#14+#14G+4#14SPARE) DENOTES TWO (2) SETS OF; <ul style="list-style-type: none"> THREE (3) NO. 14 AWG CONDUCTORS ONE (1) NO. 14 AWG GROUND CONDUCTOR FOUR (4) NO. 14 AWG SPARE CONDUCTORS. CONDUIT RUN TAG XXXX = PANEL/EQUIPMENT IDENTIFIER Y = CONDUIT FUNCTION P = (480VAC POWER) L = (240/120VAC POWER) C = (CONTROL/DISCRETE) S = (SIGNAL/ANALOG) N = (COMMUNICATION) ## = SEQUENTIAL CIRCUIT NUMBER CONDUIT HOME RUN TAG HOME RUN TO PANEL IN DEDICATED CONDUIT. RECEPTACLES AND EQUIPMENT SHALL HAVE DEDICATED GREEN GROUND WIRE. PULL BOX TAG XX = FACILITY NUMBER Y = ELECTRICAL/CONTROLS P (480VAC/POWER) E (240/120VAC/CONTROL) S (SIGNAL) H (MEDIUM VOLTAGE) N (FIBER) ZZ = SEQUENTIAL NUMBER A = DUCT BANK PROFILE LETTER	EQUIPMENT PACKAGE GROUND ABOVE GRADE ELECTRICAL BELOW GRADE ELECTRICAL LIGHTNING PROTECTION CONDUCTORS WIRE CONTINUATION SECURITY SYMBOLS SURVEILLANCE CAMERA SECURITY & ACCESS: <ul style="list-style-type: none"> DS = DOOR SWITCH KP = KEY PAD MD = MOTION DETECTOR ML = MAGNETIC LOCK OC = OCCUPANCY SENSOR PC = PHOTO CELL WS = WINDOW SWITCH DATA & COMMUNICATION SYMBOLS PHONE OUTLET DATA OUTLET DATA AND TELEPHONE DUAL OUTLET TELEVISION OUTLET LIGHTING SWITCH SYMBOLS SWITCH, SINGLE POLE SWITCH, THREE WAY SWITCH, FOUR WAY SWITCH, DIMMER ELECTRICAL EQUIPMENT SYMBOLS ELECTRICAL PANEL OR EQUIPMENT CABINET, SURFACE MOUNTED, 5'-6" TO TOP OF ENCLOSURE ELECTRICAL PANEL OR EQUIPMENT CABINET, RECESSED MOUNTED, 5'-6" TO TOP OF ENCLOSURE JUNCTION BOX SAFETY NON-FUSED DISCONNECT SWITCH SAFETY FUSED DISCONNECT SWITCH CONDUIT & CABLE TRAY SYMBOLS CABLE TRAY BEND CABLE TRAY JUNCTION / TEE CABLE TRAY RISE / DROP CABLE TRAY CROSS FITTING CABLE TRAY TRANSITION / REDUCER CONDUIT JUNCTION BOX / TEE / TAKEOFF CONDUIT BEND CONDUIT JUNCTION BOX / RISE / DROP CABLE TRAY RISE / DROP	EXISTING ELEMENTS NEW ELEMENTS EXISTING ELEMENTS TO BE REMOVED/DEMOLISHED FUTURE CONSTRUCTION NEW ELEMENT GENERAL ELECTRICAL SYMBOLS REVISION CLOUD AND NUMBER SHOWN ON PLANS POINT OF CONNECTION - NEW TO EXISTING DEMO TO POINT KEYED NOTE REFERENCE ROOM NAME 101 150 SF SYMBOL INDICATES A ROOM / AREA DESIGNATION, WITH ROOM NUMBER AND SQUARE FOOTAGE SYMBOL INDICATES A STRUCTURAL GRIDLINE OR DATUM SYMBOL INDICATES A LEVEL DATUM IN A SECTION OR ELEVATION 30-TOC EL 288.50 CALLOUT DENOTES A VIEW REFERENCE ABOUT A MATCHLINE CENTERLINE CALLOUT DENOTES A STANDARD DETAIL REFERENCE. EXAMPLE: D03/0000-000 SPECIFICATION DIVISION: 00 SPECIFICATION SECTION: 000 DETAIL REFERENCE: 000 DUCT-BANK SECTION CUT SECTION "#" DUCT BANK TAG "A" BRANCH "1" OF DUCT BANK "A" SHEET REFERENCE #A1 90-E601
L	LONG TIME																						
S	SHORT TIME																						
I	INSTANTANEOUS																						
G	GROUND																						
A	B																						
	PRESSURE																						
	LEVEL																						
	TEMPERATURE																						
	FLOW																						
						GROUNDING & LIGHTNING PROTECTION GROUND ROD AND TEST WELL GROUND ROD LIGHTNING AIR TERMINAL LIGHT FIXTURE ANNOTATIONS TYP LIGHT FIXTURE LIGHT FIXTURE WITH EMERGENCY BATTERY PACK LIGHTING FIXTURE SYMBOLS RECESSED LIGHT EMERGENCY EXIT SIGN WITH LIGHTS EMERGENCY EXIT SIGN WITH DIRECTION POLE MOUNTED LIGHT WALL MOUNTED EXTERIOR LIGHT ELECTRICAL SHEET NOTE ALL GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL ELECTRICAL DRAWINGS IN THIS SET. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THE CONTAINED REFERENCE DRAWINGS																	

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BY	DATE	REV.	DESCRIPTION

CITY OF WICHITA
 WICHITA, KANSAS

PEGASUS LIFT STATION

ELECTRICAL SYMBOLS LEGEND
 JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: BCS
 DRAWN BY: ASG
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
 DRAWING NUMBER
E-101
 SHEET NUMBER **28** OF **38**

GENERAL NOTES

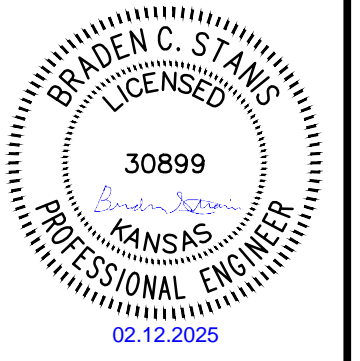
- THESE NOTATIONS ARE INTENDED TO BE GENERAL IN NATURE. THEY MAY OR MAY NOT APPLY TO SOME OR ALL OF THE PLAN SHEETS AND SPECIFICATIONS.
- CONDUIT RUNS INDICATED ON THE PLAN SHEETS ARE INTENDED TO BE SCHEMATIC ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD ROUTING ALL CONDUIT RUNS AND SHALL COORDINATE ANY DEVIATION FROM ROUTING AS INDICATED HEREIN WITH THE ENGINEER. ALL CONDUIT SHALL BE INSTALLED IN SUCH A MANNER AS TO PREVENT CONFLICTS WITH EQUIPMENT. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS OR STRUCTURAL CONDITIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD ROUTING ALL CONDUITS NOT INDICATED ON THE PLAN SHEETS. THIS INCLUDES CIRCUITS FOR LIGHTING, RECEPTACLES AND OTHER MISCELLANEOUS EQUIPMENT CIRCUITS.
- ALL CONDUITS SHALL BE ROUTED AND SUPPORTED IN SUCH A MANNER AS TO NOT COMPROMISE THE STRUCTURAL INTEGRITY OF WALLS, FLOORS, CEILINGS, AND ROOFS. WHERE REQUIRED, THE CONTRACTOR SHALL PROVIDE ADDITIONAL STRUCTURAL SUPPORTING MEMBERS FOR THE INSTALLATION AND SHALL COORDINATE SUCH MEMBERS WITH ENGINEER.
- ALL SURFACE MOUNTED PANELS AND PANELBOARDS ON THE INTERIOR OF EXTERIOR WALLS OR IN OTHER LOCATIONS CONSIDERED DAMP OR WET SHALL BE MOUNTED SO AS TO MAINTAIN A 1/4" MINIMUM AIR SPACE BETWEEN THE ENCLOSURE AND THE WALL.
- PULLBOXES, IF SHOWN ON THE PLANS, ARE SCHEMATIC IN NATURE. THE CONTRACTOR SHALL PROVIDE ADDITIONAL PULLBOXES WHERE REQUIRED TO MAKE A WORKABLE INSTALLATION.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS WHETHER OR NOT THEY ARE REFERENCED ON THE DRAWINGS.
- ALL CONDUIT RUNS PASSING THROUGH EXPANSION JOINTS SHALL HAVE EXPANSION OR EXPANSION AND DEFLECTION TYPE FITTINGS. FOR LOCATIONS OF EXPANSION JOINTS, REFER TO THE STRUCTURAL DRAWINGS.
- THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUITS REPRESENT SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. IF EQUIPMENT SUPPLIED BY THE MANUFACTURER HAS A LARGER LOAD THAN THE VALUE SHOWN OR INDICATED, THE CABLE, CONDUIT AND ELECTRICAL EQUIPMENT MAY BE ENLARGED AS REQUIRED TO ACCOMMODATE THE HIGHER LOADING. HOWEVER, THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
- ALL MOTOR STARTER CONTROL POWER TRANSFORMERS SHALL BE SIZED TO PROVIDE SUFFICIENT VOLT-AMPERE CAPACITY FOR OPERATING ALL LOCAL AND REMOTE ELECTRICAL DEVICES ASSOCIATED WITH CONTROL OF THE MOTOR IN ADDITION TO THE STARTER COIL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL LOADING REQUIREMENTS FOR CONTROL POWER TRANSFORMERS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING PROPERLY SIZED STARTER OVERLOADS FOR ALL EQUIPMENT INSTALLED.
- MOTOR CONTROL CENTERS AND ALL FREE STANDING PANELS SHALL BE SET ON CONCRETE HOUSEKEEPING PADS.
- IN GENERAL, SEPARATE POWER, CONTROL AND SIGNAL WIRING. PROVIDE SEPARATE CONDUIT, PULL AND JUNCTION BOXES. PROVIDE SUITABLE CABLE BARRIER WITHIN PULL OR JUNCTION BOXES WHERE SEPARATION OF WIRING IS NOT SHOWN ON THE DRAWINGS. CONTROL AND SIGNAL CONDUCTORS OF LIKE VOLTAGES MAY BE COMBINED INTO A SINGLE CONDUIT, AS LONG AS NEC CONDUIT FILL REQUIREMENTS ARE MET.
- UNLESS OTHERWISE NOTED ALL CONDUIT TO BE ROUTED EXPOSED. ALL EXPOSED CONDUIT AND PORTIONS OF THE CONDUIT SYSTEM SHALL BE SURFACE MOUNTED. SEE SPECIFICATIONS FOR CONDUIT, BOXES, SUPPORTS, HANGAR, UNISTRUT AND OTHER PORTIONS OR THE CONDUIT SYSTEM MATERIAL REQUIREMENTS.
- VERIFY LOCATION OF ALL EQUIPMENT PRIOR TO INSTALLATION.
- PROVIDE SEPARATE CONDUITS FOR 480VAC POWER CIRCUITS. SIGNAL AND CONTROL CONDUCTORS OF LIKE VOLTAGES MAY BE COMBINED IN A SINGLE CONDUIT WHERE COMPLIANT WITH NEC CONDUIT FILL REQUIREMENTS.
- CONTRACTOR TO SUBMIT CONDUIT ROUTING PLANS TO ENGINEER PRIOR TO CONSTRUCTION.
- IN AREAS WHERE THERE ARE OVERHEAD BRIDGE CRANES, HOISTS, DOORS OR OTHER SIMILAR ITEMS, NO CONDUITS SHALL BE INSTALLED IN SUCH A MANNER AS TO CONFLICT WITH PROPER OPERATION OF SUCH EQUIPMENT.
- CONTRACTOR SHALL FURNISH AND INSTALL ITEMS AS NECESSARY FOR COMPLETE AND FUNCTIONAL SYSTEMS. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS AND OTHER SECTIONS OF THE PLANS FOR ITEMS AS MAY BE REQUIRED AND SHALL PROVIDE CONDUIT, WIRING AND TERMINATIONS FOR ALL ITEMS AS REQUIRED.
- CONTRACTOR SHALL REFER TO OTHER PLAN SHEETS FOR LOCATIONS OF FIREWALLS. ALL CONDUIT PENETRATIONS IN THESE WALLS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO NOT REDUCE THE RATING OF THE FIREWALL THROUGH THE USE OF BOXES, SEALANTS AND OTHER ACCESSORIES AS MAY BE REQUIRED.
- CONTRACTOR SHALL REFER TO MECHANICAL PLAN SHEETS AND SPECIFICATIONS FOR ITEMS RELATED TO THE MECHANICAL SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL ITEMS AS NECESSARY FOR COMPLETE AND OPERABLE MECHANICAL HEREIN INCLUDING, BUT NOT LIMITED TO: CONTROL POWER TRANSFORMERS, STARTERS, THERMOSTATS, CONTROL STATIONS, AND OTHER ELECTRICAL ITEMS AS RELATED TO THE INSTALLATION OF THE MECHANICAL SYSTEMS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DISCONNECTS FOR ALL MECHANICAL MOTORS UNLESS THE EQUIPMENT IS FURNISHED WITH AN INTEGRAL DISCONNECT FROM THE MANUFACTURER. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL CONDUIT, WIRING AND TERMINATIONS FOR ALL COMPONENTS AS MAY BE NECESSARY FOR THE MECHANICAL SYSTEMS.
- ALL RECEPTACLES IN OUTDOOR AND ANTICIPATED WET AREAS SHALL BE GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLES WITH HEAVY-DUTY WEATHERPROOF COVERS.
- EQUIPMENT LOCKOUTS SHALL BE IN STRICT ACCORDANCE WITH OWNER'S REQUIREMENTS.
- ALL CONDUITS SHALL HAVE A GROUNDING CONDUCTOR, SIZED PER NEC.
- ALL LIGHTING FIXTURES INSTALLED IN INSULATED LOCATIONS SHALL BE RATED FOR SUCH INSTALLATION REGARDLESS OF THE FIXTURE SCHEDULE DESIGNATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NEW SERVICE INSTALLATIONS WITH OWNER, ENGINEER AND SERVICE UTILITY. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS AS REQUIRED BY SERVICE UTILITY FOR NEW SERVICE CONNECTIONS.
- UNLESS NOTED OTHERWISE, ALL CONTROL PANELS SHALL BE FABRICATED SUCH THAT ALL OPERATORS AND INDICATING DEVICES INDICATED ON THE SCHEMATICS BE LOCATED ON THE FRONT DOOR OR COVER OF THE PANEL. OPERATING AND INDICATING DEVICES SHALL BE VISIBLE AND OPERABLE WITHOUT HAVING TO OPEN THE CONTROL PANEL UNLESS OTHERWISE IDENTIFIED ON THE DRAWING.
- DUCT BANKS INDICATED AND THE BELOW GRADE CONDUIT ROUTING AS SHOWN IS DIAGRAMMATIC IN NATURE AND SHOWN FOR REFERENCE ONLY. THE CONTRACTOR SHALL REVIEW PLAN SHEETS RELATED TO INDIVIDUAL STRUCTURES AND VERIFY CONDUITS THAT MAY BE REQUIRED. THE CONTRACTOR SHALL VERIFY NUMBER OF CONDUITS AS INDICATED IN THE DUCT BANK PRIOR TO INSTALLATION WITH THE ENGINEER. PROVIDE AT A MINIMUM ONE SPARE CONDUIT EQUAL IN SIZE TO THE LARGEST CONDUIT IN USE. IN EACH DUCT BANK, FOR EACH SET OF FOUR USED CONDUITS IN EACH DUCT BANK PROVIDE A SPARE CONDUIT EQUAL TO THE LARGEST CONDUIT IN USE: (1-4 CONDUITS, 1 SPARE; 5-8 CONDUITS, 2 SPARE; AND SO ON).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HEAT TRACING FOR ALL EXPOSED WATER LINES TO BE INSTALLED UNDER THIS PROJECT. THE CONTRACTOR SHALL REVIEW OTHER SECTIONS OF THE PLANS AND SPECS AND PROVIDE SUITABLE HEAT TRACING COMPONENTS AS MAY BE REQUIRED, WHETHER INDICATED ON THE ELECTRICAL PLAN SHEETS OR NOT.
- VERIFY LOCATION OF ALL LIGHTING FIXTURES WITH OWNER AND ENGINEER PRIOR TO INSTALLATION. COORDINATE LIGHT FIXTURE LOCATIONS AND MOUNTING HEIGHTS WITH HVAC DUCTS AND OVERHEAD CONDUIT RUNS. USE RIGID CONDUIT WHEN SUSPENDING LIGHT FIXTURES TO PREVENT SWAYING.
- USE CRIMPED OR BOLTED CONNECTIONS FOR ALL BONDING CONNECTIONS BETWEEN CONDUCTORS AND BUILDING SYSTEM COMPONENTS. USE EXOTHERMIC WELDED CONNECTIONS FOR ALL UNDERGROUND PORTIONS OF THE GROUNDING SYSTEM WITH THE EXCEPTION OF GROUND ROD TEST WELLS.
- MINIMUM LIGHTNING PROTECTION ITEMS WHERE SHOWN. FINAL LIGHTNING PROTECTION SYSTEM SHALL BE DEVELOPED AND SUBMITTED BY MASTER INSTALLER/DESIGNER CERTIFIED BY UL OR LPI AS REQUIRED IN SPECIFICATION SECTION 26 41 13.

ABBREVIATIONS

A, AMP	AMPERES	MLO	MAIN LUG ONLY
AC	ALTERNATING CURRENT	MOC	MAXIMUM OVER CURRENT PROTECTION
AF	AMP FRAME	MS	MOTOR STARTER
AFF	ABOVE FINISHED FLOOR	MTD	MOUNTED
AIC	AMPS INTERRUPTING CAPACITY	MV	MEDIUM VOLTAGE
AM	AMP-METER	N	COMMUNICATION CIRCUIT
ARMS	ARC REDUCTION MAINTENANCE SWITCH	NC	NORMALLY CLOSED
AT	AMP TRIP	NCHC	NORMALLY CLOSED HELD OPEN
ATS	AUTOMATIC TRANSFER SWITCH	NCTC	NORMALLY CLOSED TIMED CLOSED
AWG	AMERICAN WIRE GAUGE	NCTO	NORMALLY CLOSED TIMED OPEN
BFI	BLOWN FUSE INDICATOR	NEC	NATIONAL ELECTRICAL CODE
C	CONDUIT, CONTROL/DISCRETE CIRCUIT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CAS	CONTROL AND STATUS RELAY	NEUT	NEUTRAL
CB	CIRCUIT BREAKER	NFDS	NON-FUSED DISCONNECT SWITCH
CCTV	CLOSED CIRCUIT TELEVISION	NO	NORMALLY OPEN
COM	COMMON	NOHC	NORMALLY OPEN HELD CLOSED
CP	CONTROL PANEL	NOTC	NORMALLY OPEN TIMED CLOSED
CPT	CONTROL POWER TRANSFORMER	NOTO	NORMALLY OPEN TIMED OPEN
CR	CONTROL RELAY	OHE	OVERHEAD ELECTRIC
CRI	COLOR RENDERING INDEX	OIT	OPERATOR INTERFACE TERMINAL
CT	CURRENT TRANSFORMER	OL	OVERLOAD
DB	DECIBEL	OOR	ON-OFF-REMOTE
DC	DIRECT CURRENT	P	480VAC POWER CIRCUIT, POLE
DISC	DISCONNECT	PP	POWER PANEL
DP	DISTRIBUTION PANEL	PB	PUSH BUTTON OR PULLBOX
DWG	DRAWING	PCC	POINT OF COMMON COUPLING
EF	EXHAUST FAN	PEC	PHOTO ELECTRIC CELL
EG	EQUIPMENT GROUND	PF	POWER FACTOR
EMT	ELECTRICAL METALLIC TUBING	PFCC	POWER FACTOR CORRECTION CAPACITOR
ENCL	ENCLOSURE	PH, Ø	PHASE
ETM	ELAPSED TIME METER	PL	PILOT LIGHT
FACP	FIRE ALARM CONTROL PANEL	PM	PHASE MONITOR
FDS	FUSED DISCONNECT SWITCH	PTT	PUSH-TO-TEST
FLA	FULL LOAD AMPERES	RECPT	RECEPTACLE
FOC, FO	FIBER OPTIC CABLE	RVAT	REDUCED VOLTAGE AUTO-TRANSFORMER
FRP	FIBERGLASS REINFORCED POLYESTER	RVSS	REDUCED VOLTAGE SOFT STARTER
FS	FLOAT SWITCH	S	SECOND, SIGNAL/ANALOG CIRCUIT
FVNR	FULL VOLTAGE NON-REVERSING STARTER	SS	STAINLESS STEEL
FVR	FULL VOLTAGE REVERSING STARTER	SA	SURGE ARRESTER
G, GEN	GENERATOR	SDBC	SOFT DRAWN BARE COPPER
GDT	GRAPHIC DISPLAY TERMINAL	SE	SERVICE ENTRANCE
G, GND	GROUND	SPD	SURGE PROTECTION DEVICE
GRS	GALVANIZED RIGID STEEL	SSOL	SOLID STATE OVERLOAD RELAY
HH	HANDHOLE	STP	SHIELDED TWISTED PAIR
HID	HIGH INTENSITY DISCHARGE	SV	SOLENOID VALVE
HMI	HUMAN MACHINE INTERFACE	SW	SWITCH
HOR	HAND-OFF-REMOTE	SWB, SWBD	SWITCHBOARD
HR	HOUR	SWGR	SWITCHGEAR
HS	HAND SWITCH	T, XFMR	TRANSFORMER
HV	HIGH VOLTAGE	TC	TIME CLOCK
HZ	HERTZ	TD	TIME DELAY
IG	ISOLATED GROUND	TEL	TELEPHONE
JB	JUNCTION BOX	THD	TOTAL HARMONIC DISTORTION
KAIC	KILOAMP INTERRUPTING CAPACITY	TM	THERMAL MAGNETIC TRIP
KVAR	KILOVOLT-AMPERE, REACTIVE	UG	UNDERGROUND
KWH	KILOWATT-HOUR	UGE	UNDERGROUND ELECTRIC
L	240/208/120VAC CIRCUIT	UH	UNIT HEATER
LA	LIGHTNING ARRESTER	UL	UNDERWRITERS LABORATORIES, INC
LCP	LOCAL CONTROL PANEL	UTP	UNSHIELDED TWISTED PAIR
LLF	LIGHT LOSS FACTOR	V	VOLTS
LOR	LOCAL-OFF-REMOTE	VAC	VOLTAGE ALTERNATING CURRENT
LP	LIGHTING PANEL	VFD, V	VARIABLE FREQUENCY DRIVE
LRA	LOCKED ROTOR AMPERES	VM	VOLT-METER
LV	LOW VOLTAGE	WH	WEATHER HEAD
MCA	MINIMUM CIRCUIT AMPACITY	WM	WATT METER
MCB	MAIN CIRCUIT BREAKER	WP	WEATHERPROOF
MCC	MOTOR CONTROL CENTER	1P	SINGLE POLE
MCP	MOTOR CIRCUIT PROTECTOR	3P	THREE POLE
MH	MANHOLE		



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
WICHITA, KANSAS

PEGASUS LIFT STATION

ELECTRICAL NOTES AND ABBREVIATIONS

JOB NO.: 2400521
DATE: JAN. 2025
DESIGNED BY: BCS
DRAWN BY: ASG

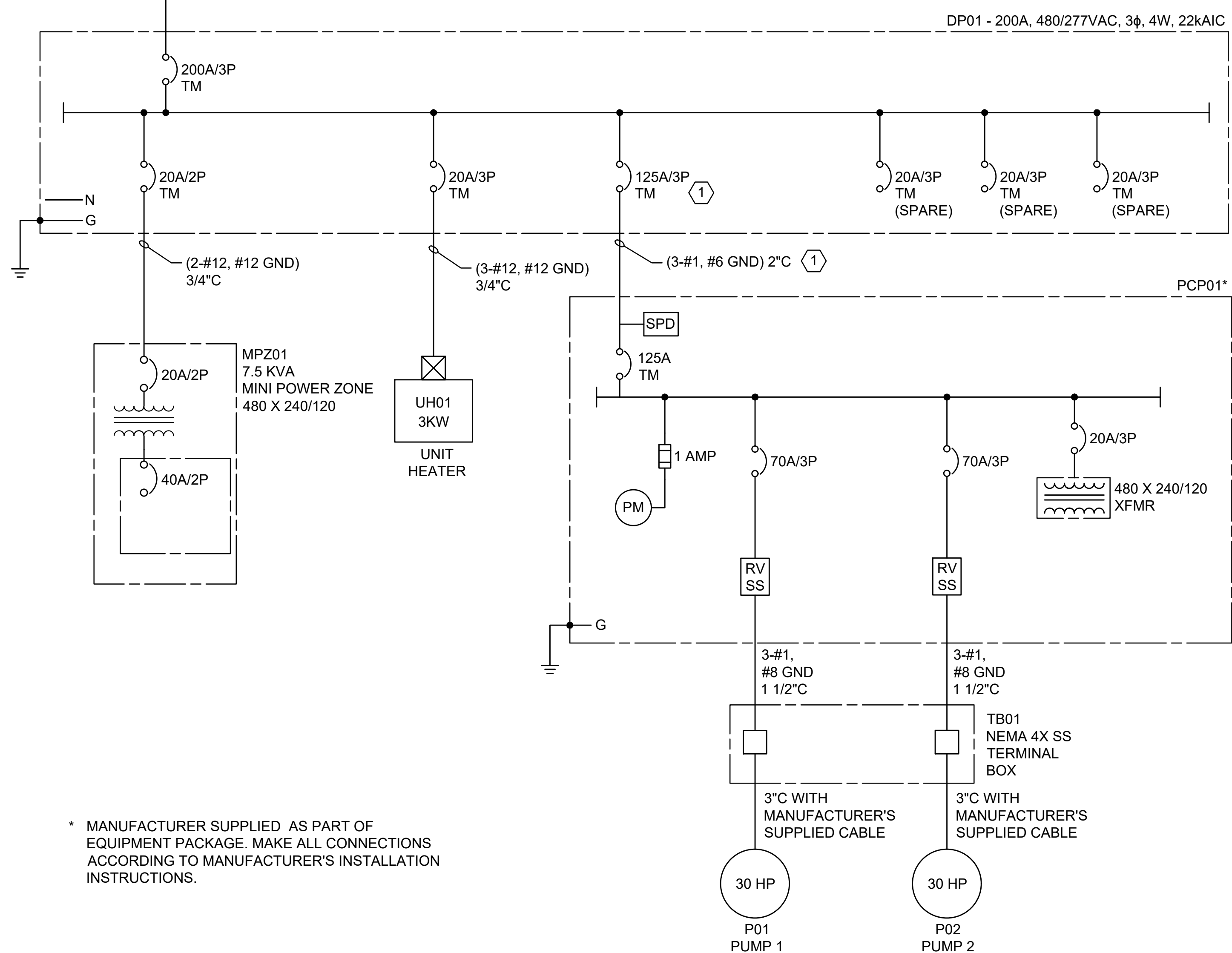
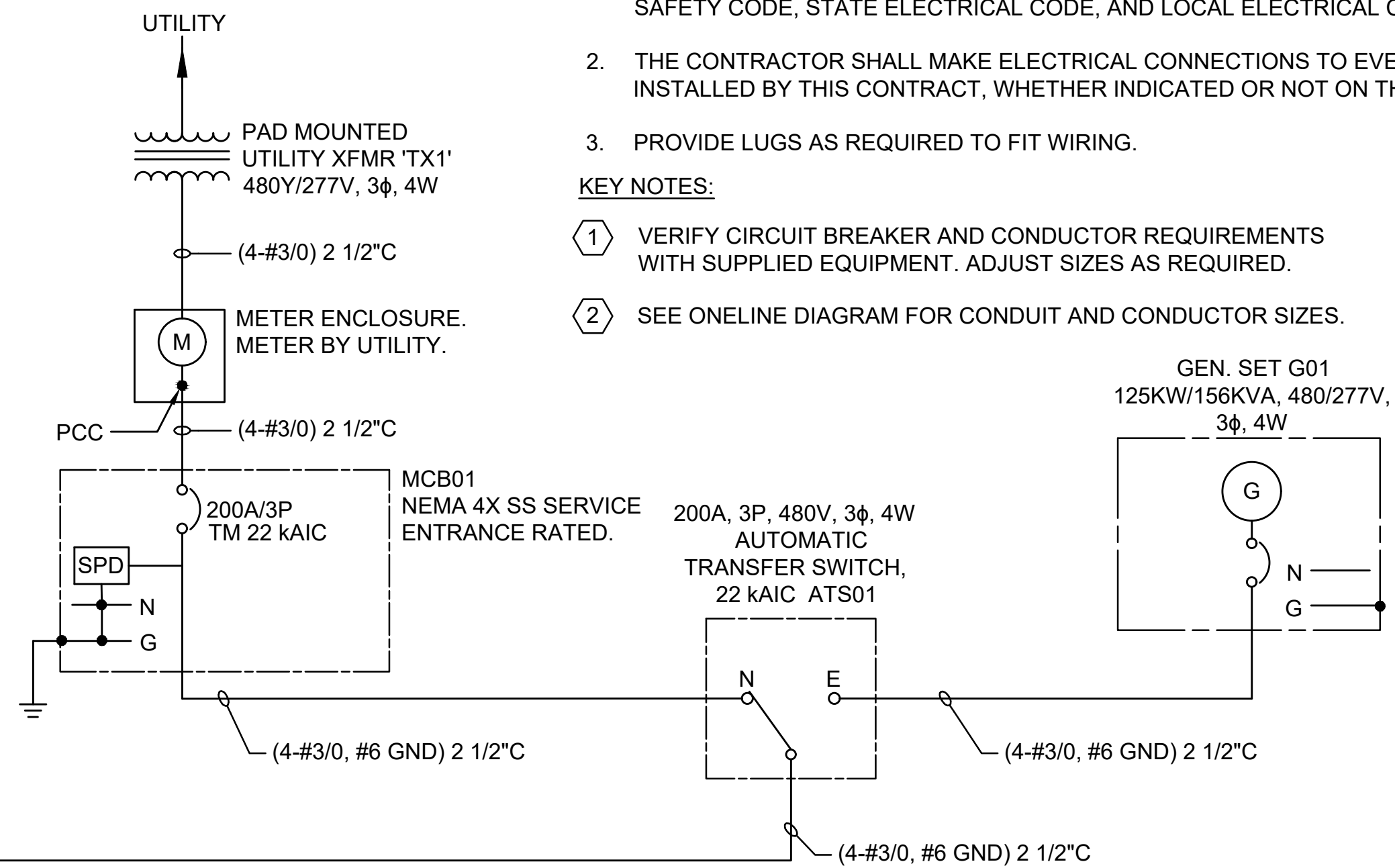
BAR IS ONE INCH ON ORIGINAL DRAWING
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DRAWING NUMBER
E-102

SHEET NUMBER **29** OF **38**

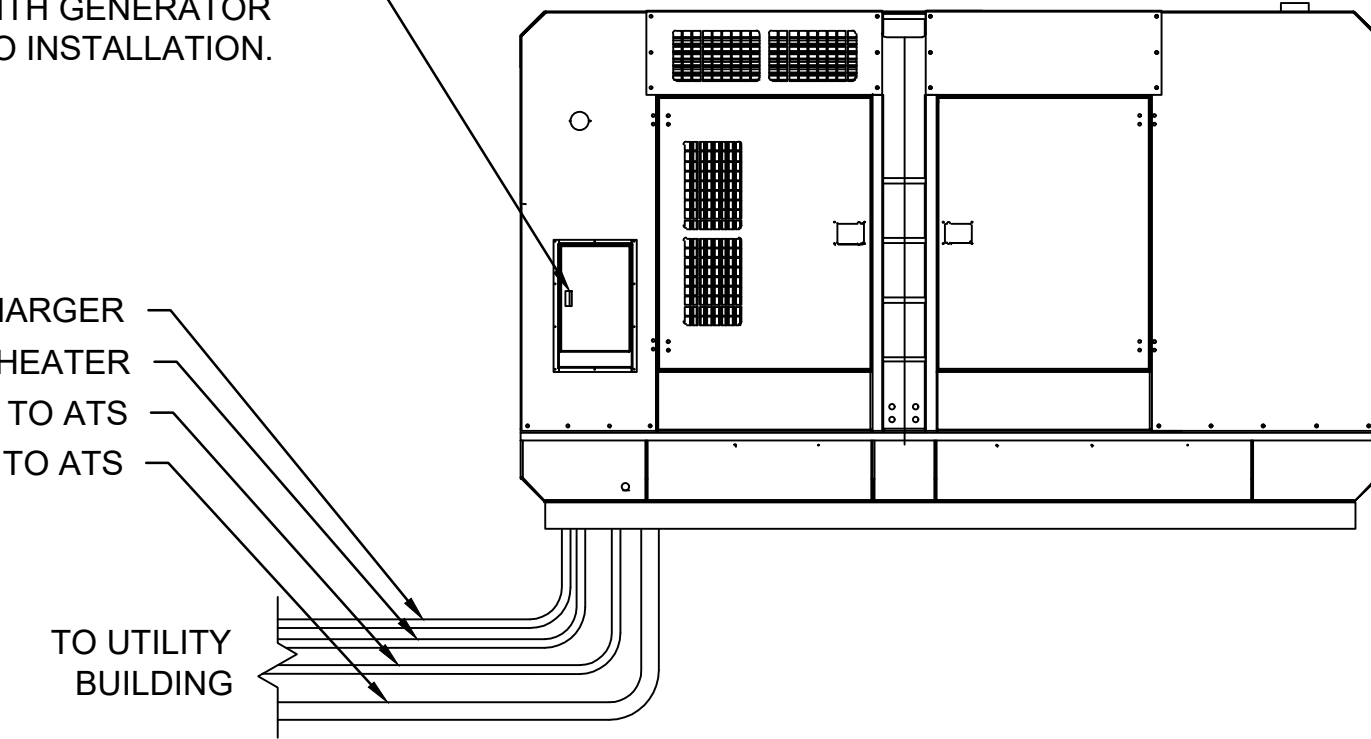
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Last plotted by: G\ingger, Adam S. Plot Style: --- Plot Scale: 1:2.595 Plot Date: 2/12/2025 1:18 PM Plotter used: None



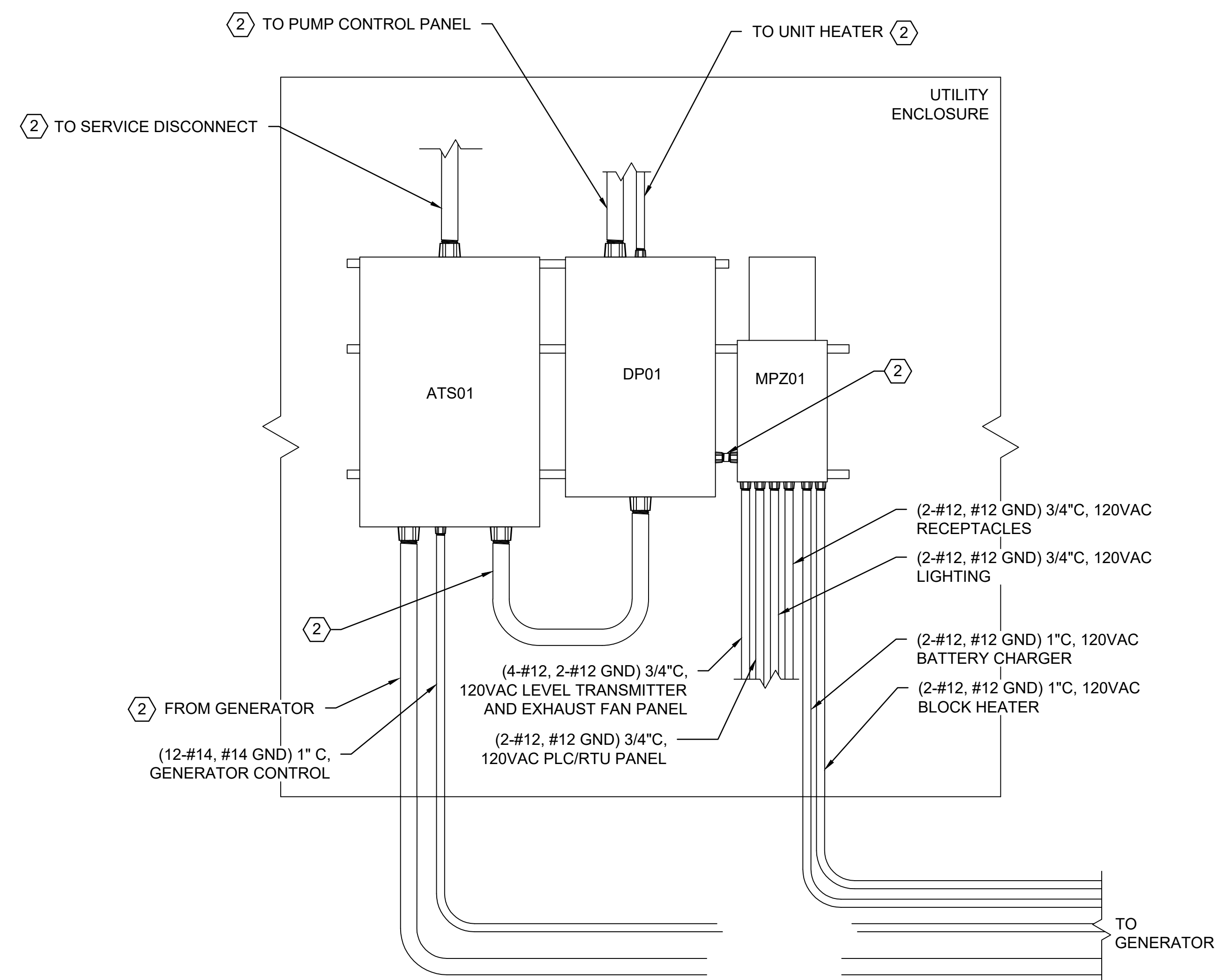
1 PEGASUS ADDITION LIFT STATION ONELINE DIAGRAM
E-103 SCALE: NONE

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.

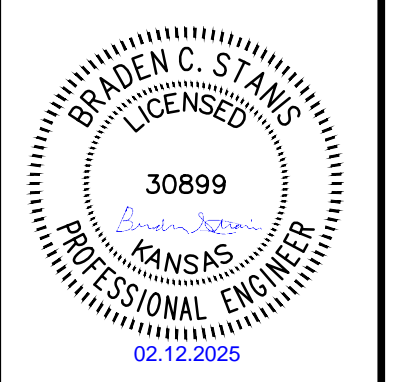
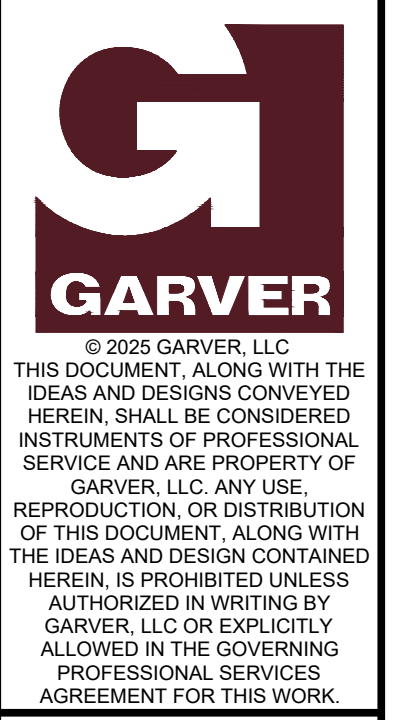


2 PEGASUS ADDITION - GENERATOR ELEVATION
E-101 SCALE: NONE

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



3 PEGASUS ADDITION POWER PANELS ELEVATION
E-103 SCALE: NONE



REV.	DATE	DESCRIPTION	BY



ONELINE DIAGRAM AND PANEL ELEVATION DRAWING

JOB NO.: 2400521
DATE: FEB 2025
DESIGNED BY: BCS
DRAWN BY: ASG

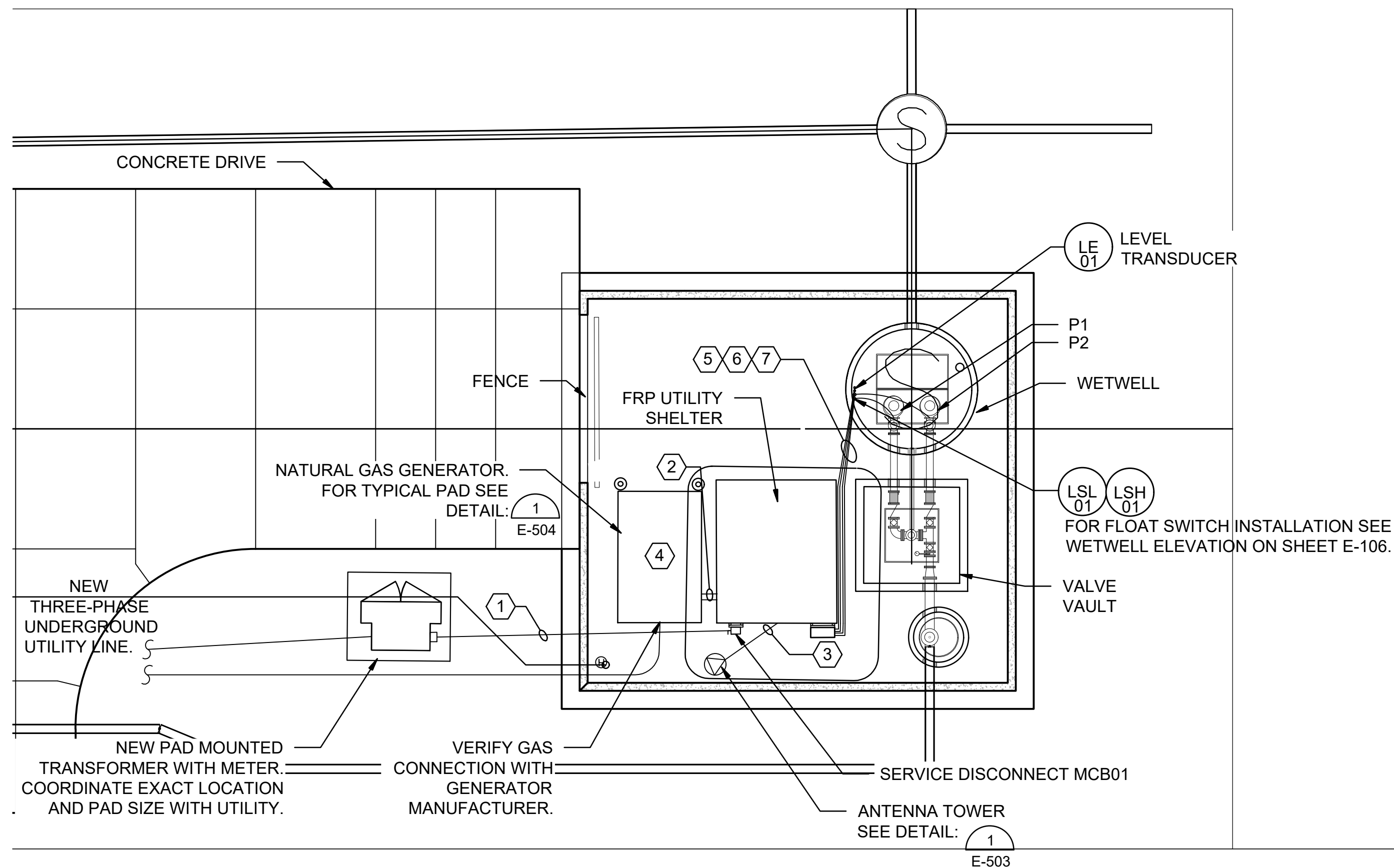
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER
E-103

SHEET NUMBER **30** OF **38**

PEGASUS LIFT STATION

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 Last plotted by: GINGER, Adam S. Plot Style: --- Plot Scale: 1:2.585 Plot Date: 2/12/2025 2:06 PM Plotter used: None



KEY NOTES:

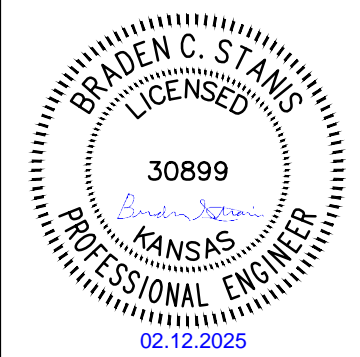
- ① SEE ONLINE ON SHEET E1 FOR CONDUIT AND CONDUCTOR SIZING.
- ② SEE ONLINE ON SHEET E1 FOR CONDUIT AND CONDUCTOR SIZING FROM GENERATOR TO EQUIPMENT IN UTILITY SHELTER.
- ③ (RF CABLE) 2" C, SIGNAL. FROM ANTENNA TO PLC/RTU CONTROL PANEL.
- ④ MAKE ALL REQUIRED CONNECTIONS BETWEEN GENERATOR, AUTOMATIC TRANSFER SWITCH, AND MINI POWER ZONE ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- ⑤ (2) (MANUFACTURER'S SUPPLIED PUMP CORDS) 3" C, 480 VAC, FROM WET WELL, THROUGH VENTRIB TROUGH, TO JUNCTION BOX TB01.
- ⑥ (MANUFACTURER'S SUPPLIED CABLES) 2" C, SIGNAL. FROM FLOAT SWITCHES LSL01 AND LSH01 AT WETWELL, THROUGH VINTRIB TROUGH, TO TB01.
- ⑦ (MANUFACTURER SUPPLIED CABLE) 2"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: 2
E-504



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
 WICHITA, KANSAS

PEGASUS LIFT STATION

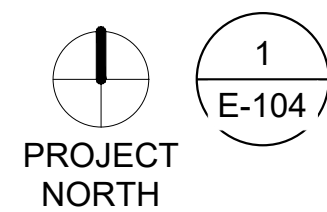
LIFT STATION ELECTRICAL SITE PLAN

JOB NO.: 2400521
 DATE: FEB 2025
 DESIGNED BY: WWN
 DRAWN BY: TRP

BAR IS ONE INCH ON ORIGINAL DRAWING
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DRAWING NUMBER
E-104

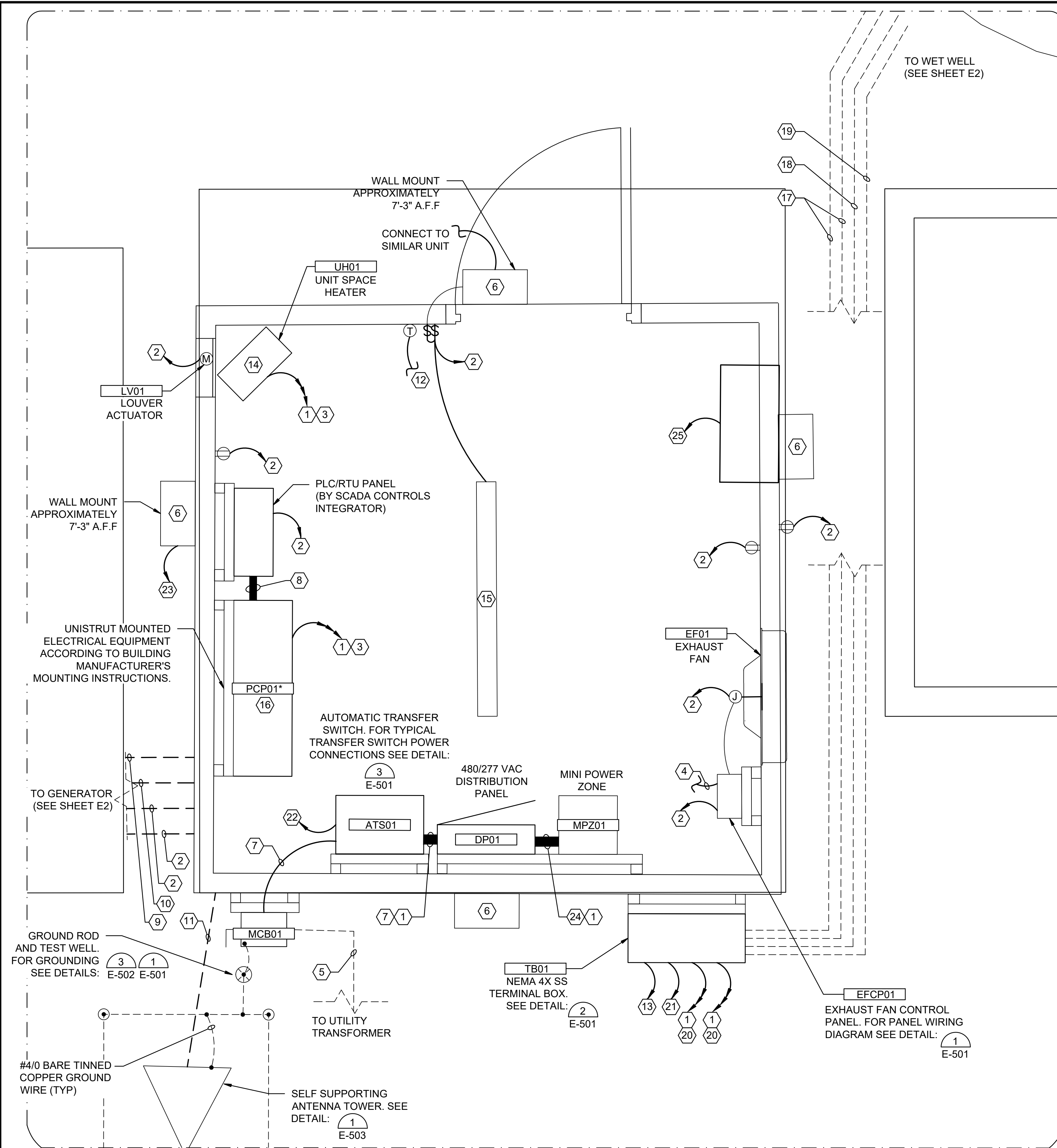
SHEET NUMBER **31** OF **38**



PEGASUS LIFT STATION ELECTRICAL SITE PLAN

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

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 Last plotted by: GINGER, Adam S. Plot Style: --- Plot Scale: 1:2.595 Plot Date: 2/12/2025 2:15 PM Plotter used: None




KEY NOTES:

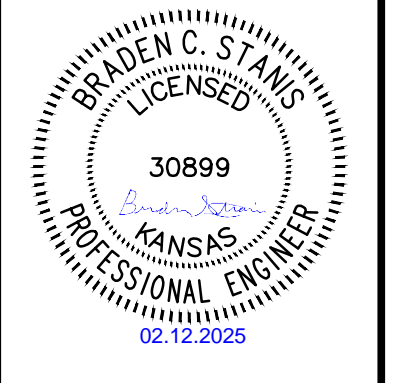
- 1 SEE ONLINE ON SHEET E1 FOR CONDUIT AND CONDUCTOR SIZING.
- 2 120VAC FROM MPZ01, SEE PANEL SCHEDULE FOR CONDUIT AND CONDUCTOR SIZES.
- 3 480VAC FROM DP01, SEE ONLINE DIAGRAM FOR CONDUIT AND CONDUCTOR SIZES.
- 4 (2-#14, #14 GND) 3/4" C, 120VAC. FROM EFCP01 FOR LOUVER ACTUATOR.
- 5 480VAC FROM UTILITY TRANSFORMER, SEE ONLINE DIAGRAM FOR CONDUIT AND CONDUCTOR SIZES. UNDERGROUND ELECTRICAL LINES ARE DIAGRAMMATIC IN NATURE, AND DO NOT NEED TO FOLLOW THIS PATH FOR INSTALLATION.
- 6 EXTERIOR LIGHT FIXTURE, SEE LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.
- 7 480VAC POWER FROM ATS01 TO MCB01.
- 8 (10-#14, 2-STP, #14 GND, 10-#14 SPARE) 2" C, I/O SIGNAL.
- 9 FROM GEN. SET G01 TO AUTOMATIC TRANSFER SWITCH ATS01.
- 10 (12-#14, #14 GND) 1" C, CONTROL. FROM AUTOMATIC TRANSFER SWITCH ATS01 TO GEN. SET G01.
- 11 (RF CABLE) 2" C, SIGNAL. FROM ANTENNA TO PLC/RTU CONTROL PANEL.
- 12 PROVIDE CONDUIT AND CABLE AS REQUIRED BY THERMOSTAT MANUFACTURERS. MAKE ALL REQUIRED CONNECTIONS.
- 13 (2-3 CONDUCTOR SHIELDED CABLE) 1" C, LEVEL TRANSDUCER SIGNAL TO PUMP CONTROL PANEL PCPC01.
- 14 UNIT SPACE HEATER. INSTALL ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. MAKE ALL REQUIRED CONNECTIONS.
- 15 INTERIOR LIGHT FIXTURE, SEE LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION.
- 16 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.
- 17 (MANUFACTURER'S SUPPLIED PUMP CORDS) 3" C, 480 VAC, FROM WET WELL THROUGH VENTRIB TROUGH TO JUNCTION BOX TB01.
- 18 (MANUFACTURER'S SUPPLIED CABLE) 2" C, SIGNAL. FROM LEVEL TRANSMITTER LT01 AT WETWELL TO TB01.
- 19 (MANUFACTURER'S SUPPLIED CABLES) 2" C, SIGNAL. FROM FLOAT SWITCHES LS01/02/03/04/05 AT WETWELL TO TB01.
- 20 480VAC POWER FOR PUMPS FROM PUMP CONTROL PANEL.
- 21 (8-#14, 2-STP, #14 GND) 2" C, FLOAT SWITCHES, PUMP SEAL, AND OVERTEMP SIGNALS TO PUMP CONTROL PANEL.
- 22 (6-#14, #14 GND, 6-#14 SPARE) 2" C, I/O SIGNAL. TO PLC/RTU PANEL.
- 23 (2-#12, #12 GND) 3/4" C, 120VAC. FROM LIGHT SWITCH IN FRP ENCLOSURE.
- 24 480VAC POWER FROM DP01 TO MPZ01.
- 25 (2-#10, #10 GND) 1" C. 115V WINDOW AC UNIT.

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 UNISTRUT MOUNTING RACKS WITH ELECTRICAL EQUIPMENT ATTACHED SHALL BE SECURED FROM THE FLOOR AND TO THE WALL. SEE
6. 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.
7. 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.
8. 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.



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
 WICHITA, KANSAS

PEGASUS LIFT STATION

LIFT STATION UTILITY SHELTER ELECTRICAL PLAN

JOB NO.: 2400521
 DATE: FEB 2025
 DESIGNED BY: BCS
 DRAWN BY: ASG

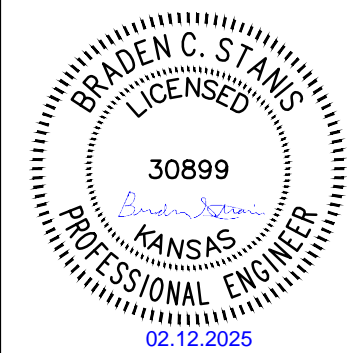
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DRAWING NUMBER
E-105

SHEET NUMBER **32** OF **38**



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
 WICHITA, KANSAS

PEGASUS LIFT STATION

WETWELL ELEVATION DIAGRAM AND MPZ01 PANEL SCHEDULE

JOB NO.: 2400521
 DATE: FEB. 2025
 DESIGNED BY: BCS
 DRAWN BY: ASG

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

DRAWING NUMBER
E-106

SHEET NUMBER **33** OF **38**

PANEL NO.:	MPZ01	PROJECT:	PEGASUS ADDITION LIFT STATION
USAGE:	PANELBOARD	CLIENT:	CITY OF WICHITA
LOCATION:	LIFT STATION	MOUNTING:	SURFACE
PHASES:	1	PANEL TYPE:	PANELBOARD
L-L VOLTS:	240V	ENGINEER:	BCS
L-G VOLTS:	120V	PROJECT NO.:	2400521
BUS AMPS:	40A	FED FROM:	DP01
MAIN CB AMPS:	40A		
AIC RATING:	10,000		

CIRCUIT SETS	WIRE	NEUT	GND	COND.	LOAD AMPS	DESCRIPTION	NOTES	BREAKER POLE	CKT. #	AMP.	BREAKER #	NOTE	DESCRIPTION	LOAD AMPS	CIRCUIT SETS	WIRE	NEUT	GND	COND.
1	#12	#12	#12	3/4"	4.5	RECEPT		1	20	1	A	2	15	1	1	#12	#12	#12	3/4"
1	#12	#12	#12	3/4"	1.4	EXHAUST FAN		1	20	3	B	4	15	1	1	#12	#12	#12	3/4"
1	#12	#12	#12	3/4"	15.0	GENERATOR BLOCK HTR		1	20	5	A	6	15	1	1	#12	#12	#12	3/4"
1	#12	#12	#12	3/4"	1.5	GENERATOR BATT.		1	20	7	B	8	20	1	1	#12	#12	#12	3/4"
						SPARE		1	20	9	A	10	20	1	1	#12	#12	#12	3/4"

LOAD SUMMARY	CON. KVA	%	DEM. 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	1.96	100%	1.96
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

2 MPZ01 PANEL SCHEDULE
 SCALE: NONE

DESCRIPTION	MANUFACTURER	CATALOG NUMBER
LED 4' LOW-PROFILE ENCLOSED AND GASKETED	LITHONIA	FEM L48 4000LM LPAFL MD 90CRI 40K
LED WALL PACK	LITHONIA	TWR 1 LED ALO-MED 40K UVOLT

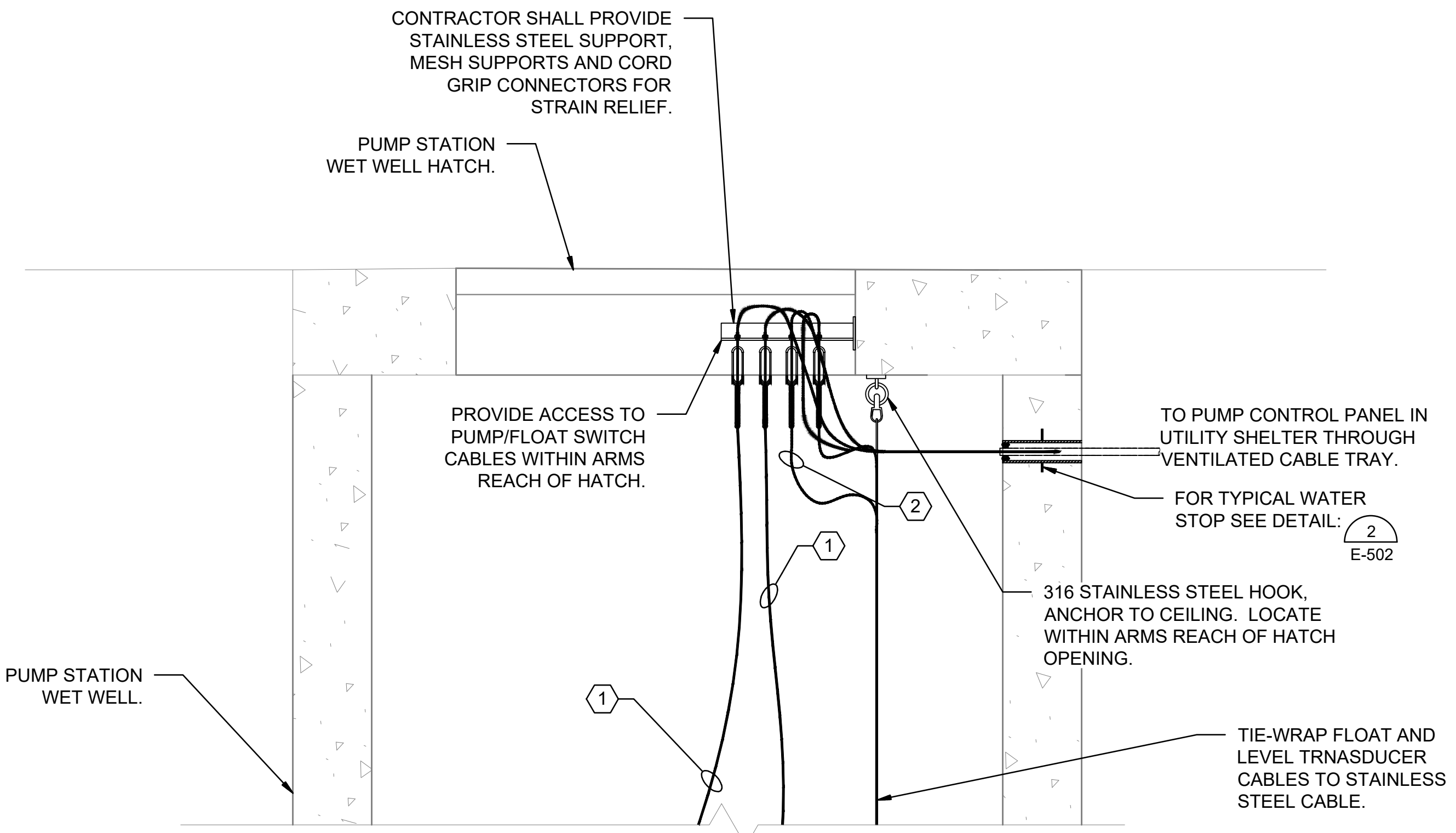
3 LIGHT FIXTURE SCHEDULE
 SCALE: NONE

KEY NOTES:

- MANUFACTURER SUPPLIED PUMP CORDS FROM WET WELL TO VENTRIB TROUGH.
- MANUFACTURER SUPPLIED CABLE FOR LEVEL TRANSDUCER TO VENTRIB TROUGH.
- COORDINATE FLOAT LEVEL SWITCH MOUNTING HEIGHTS WITH OWNER AND ENGINEER.

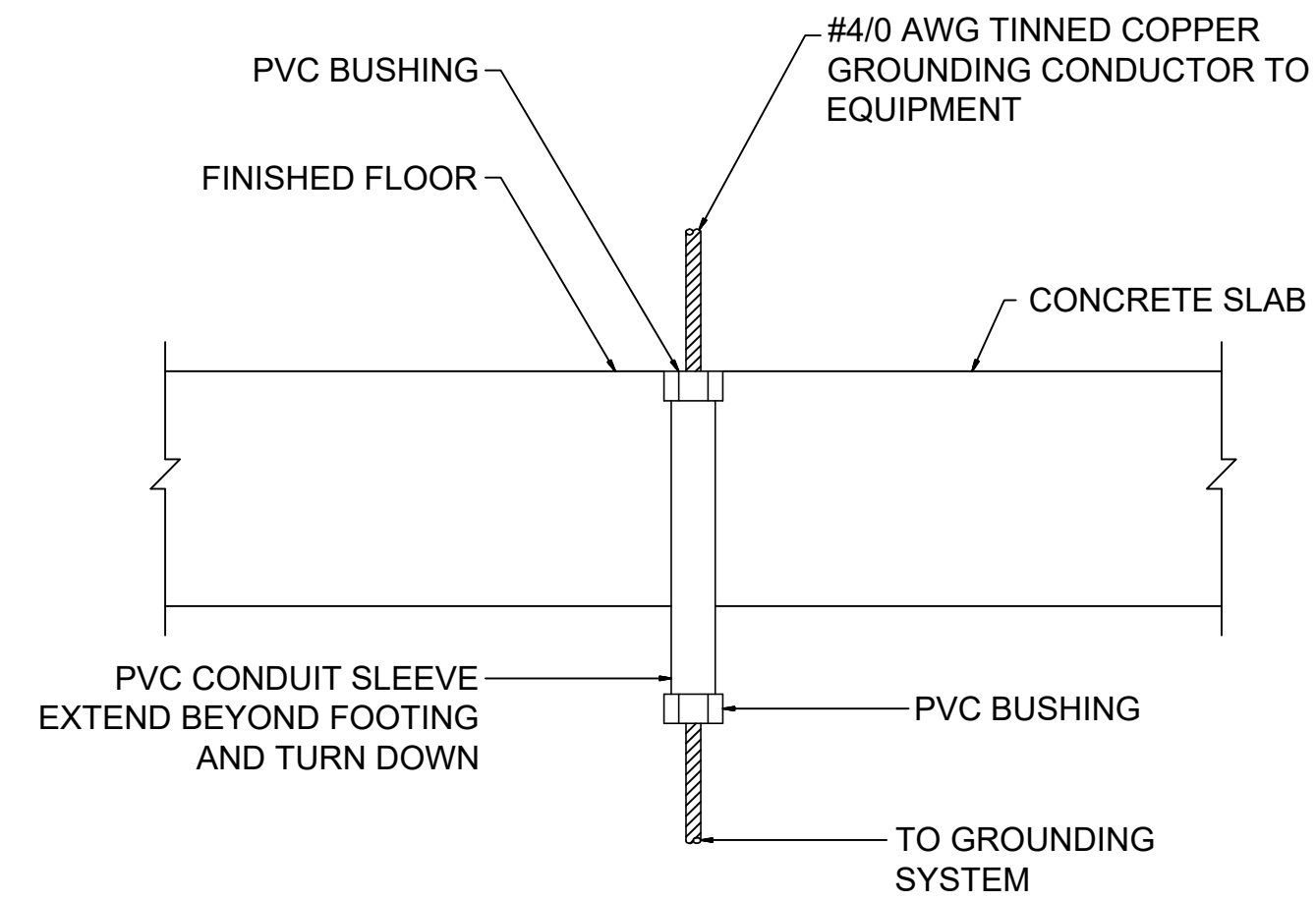
GENERAL NOTES:

- ALL BELOW GRADE CONDUIT FROM THE WET WELL TO THE ELECTRICAL ENCLOSURE SHALL BE PVC COATED RIGID STEEL.
- 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.
- COORDINATE ALL CONDUIT ROUTING WITH ENGINEER PRIOR TO INSTALLATION.
- 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.
- 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.



1 WET WELL ELEVATION DIAGRAM
 SCALE: NONE

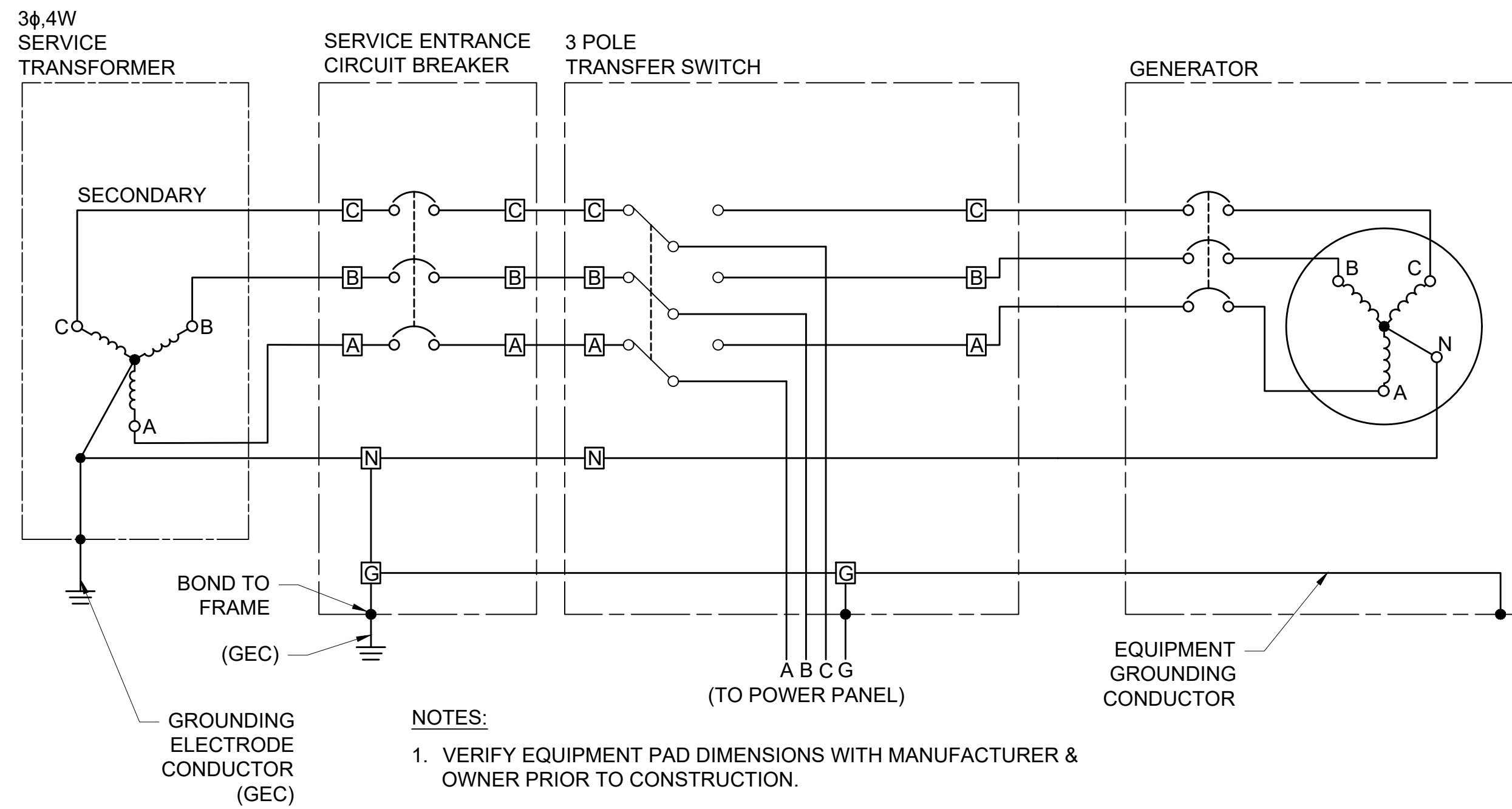
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 Last plotted by: Stanchich, Darryl R. Plot Style: --- Plot Scale: 1:2.585 Plot Date: 2/11/2025 3:37 PM Plotter used: None



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.

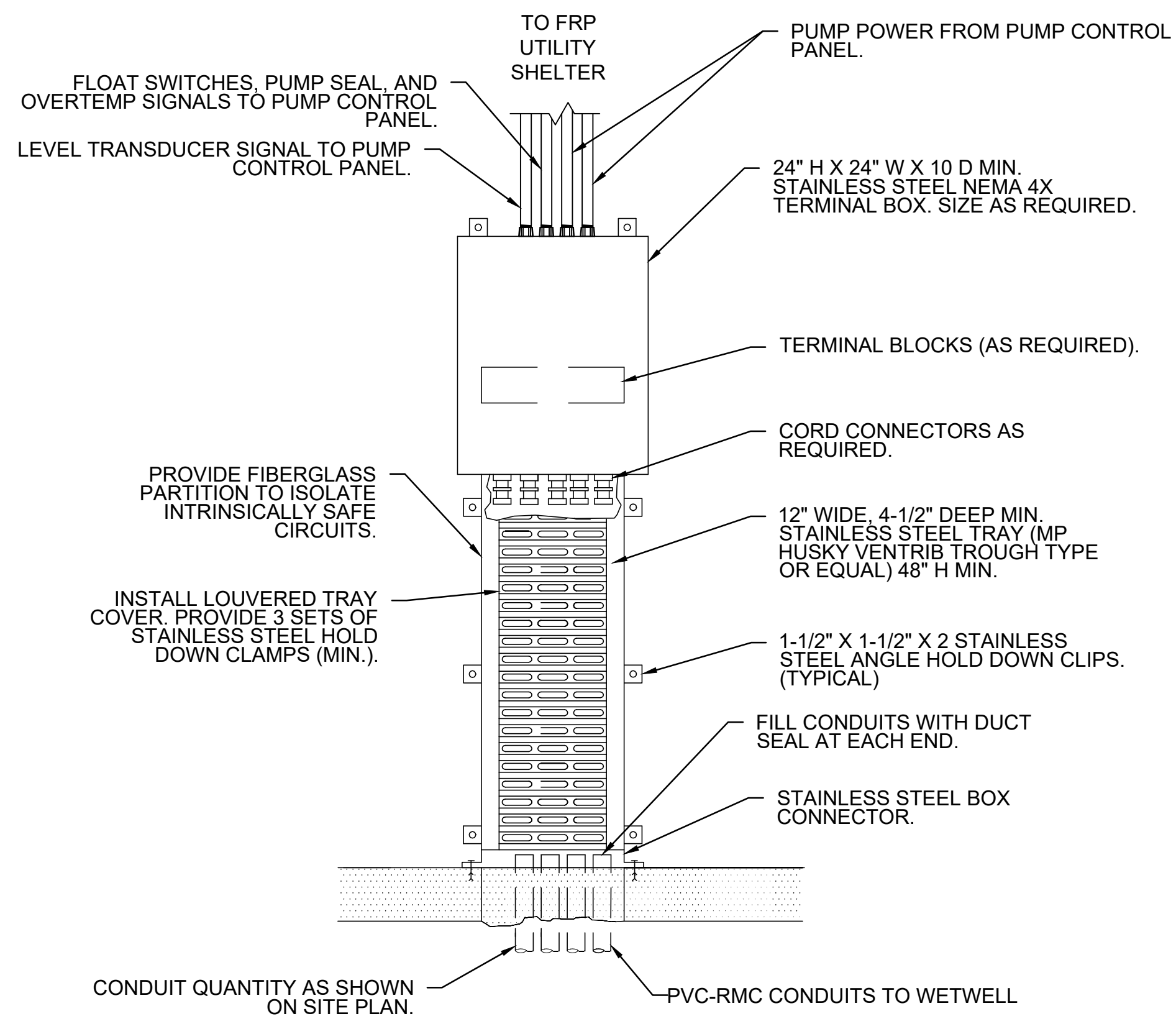
1
E-501 **GROUNDING CONDUIT SLEEVE DETAIL**
SCALE: NONE



NOTES:

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

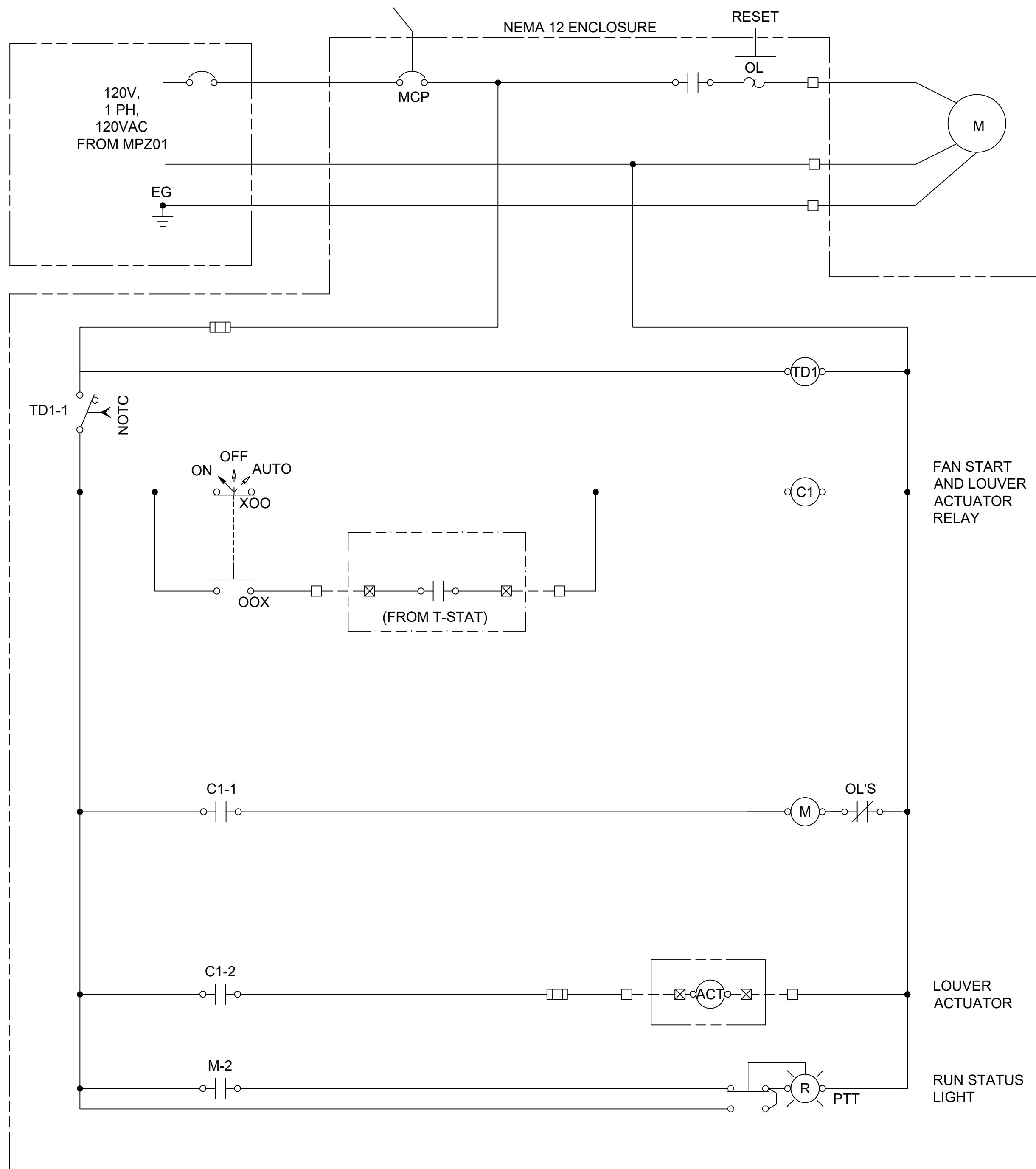
3
E-501 **3 POLE TRANSFER SWITCH CONNECTION DETAIL**
SCALE: NONE



2
E-501 **TERMINAL BOX CABLE ENTRY DETAIL**
SCALE: NONE

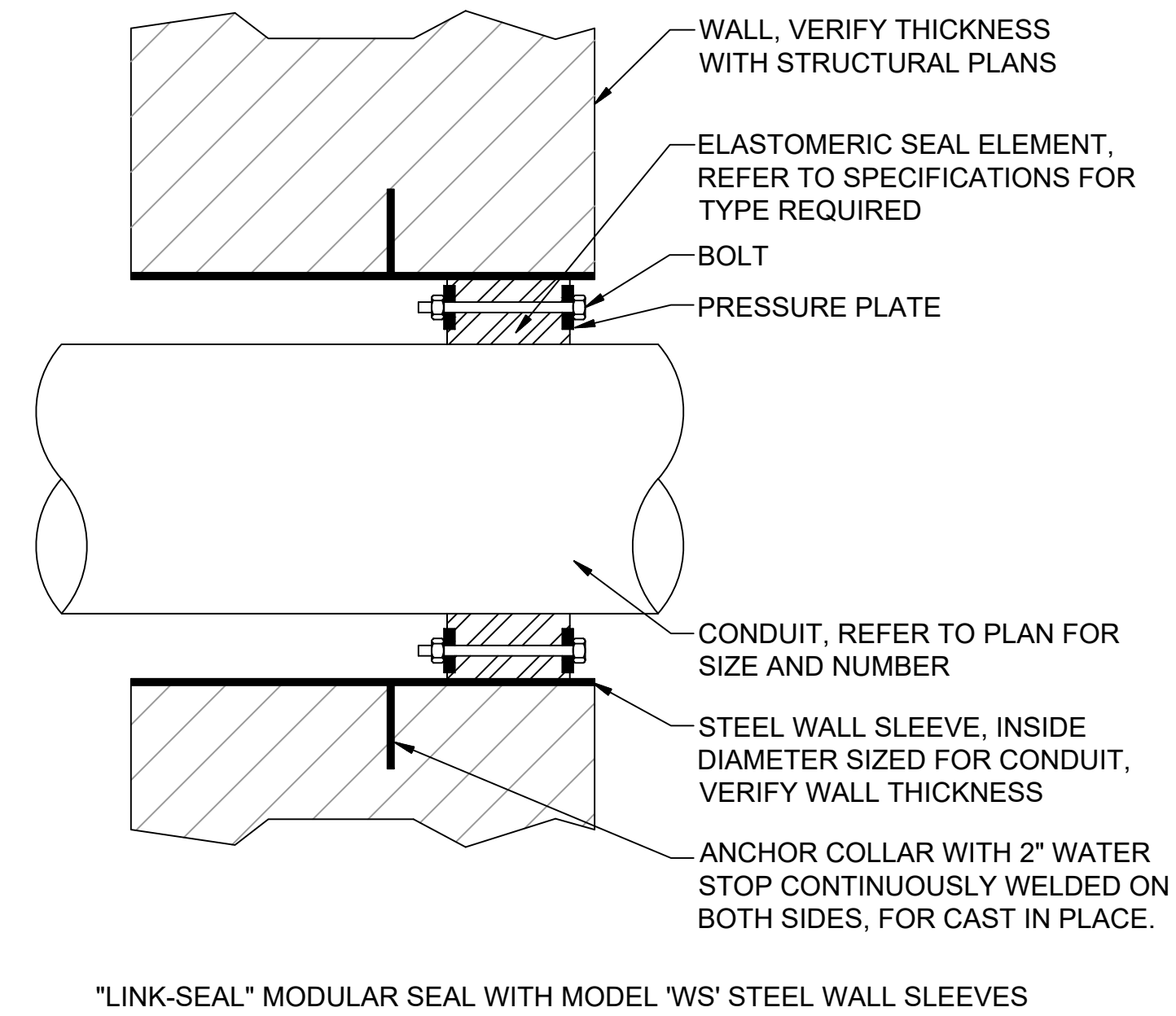
REV.	DATE	DESCRIPTION	BY

File: L:\2024\141-2400521 - Pegasus Addition Design\Drawings\SS LIFT STATION\E-500 ELECTRICAL DETAILS I THRU IV.dwg Last Save: 1/24/2025 7:17 AM Last saved by: ASGinger
Last plotted by: Standrich, Daryl R. Plot Style: --- Plot Scale: 1:2.585 Plot Date: 2/11/2025 3:38 PM Plotter used: None

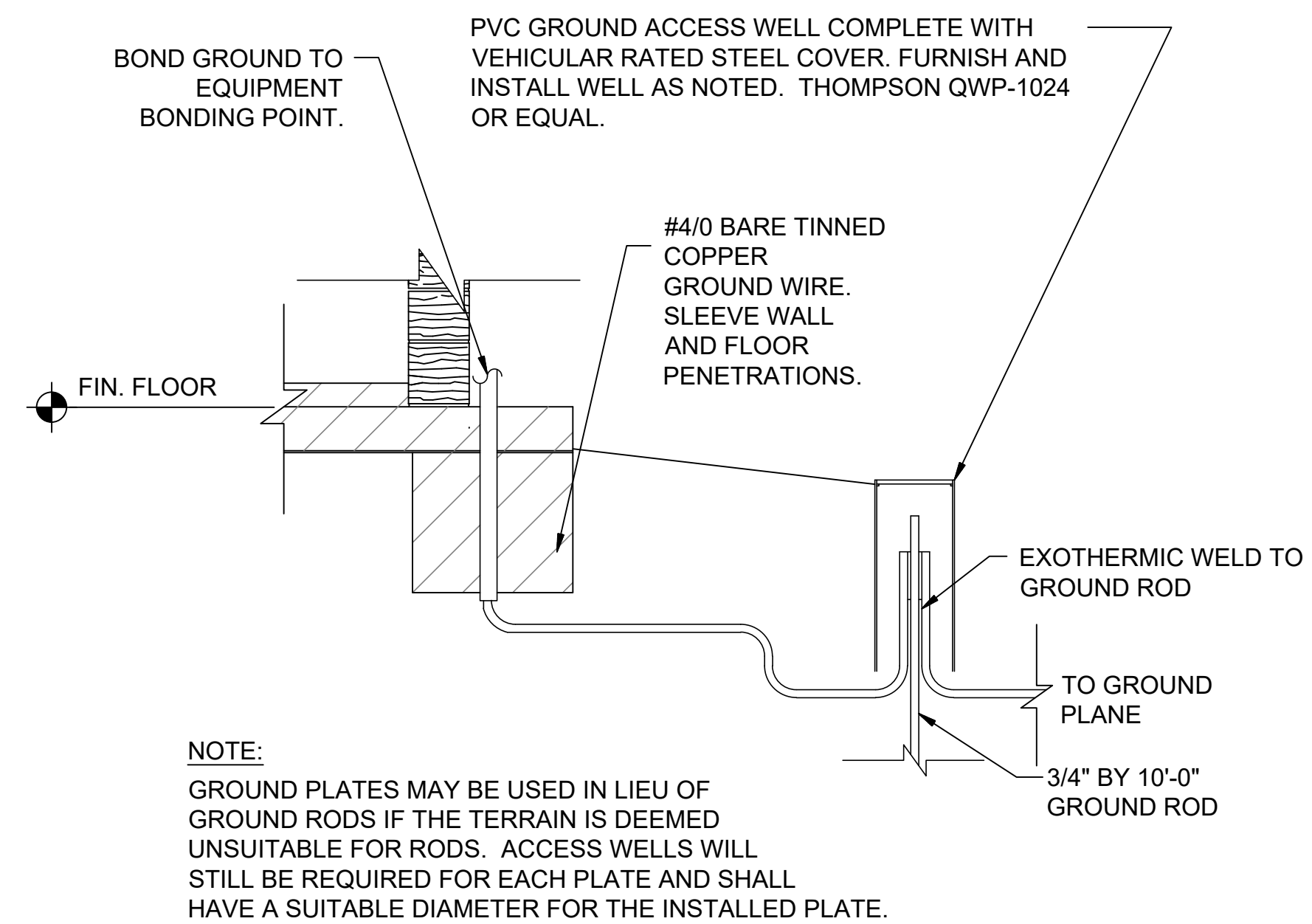


NOTES:
 1. COORDINATE T-STAT VOLTAGE REQUIREMENTS WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE LV TRANSFORMER IF REQUIRED.

1
 E-502 EXHAUST FAN PANEL SCHEMATIC DETAIL
 SCALE: NONE



2
 E-502 TYPICAL WATER STOP SEALING DETAIL
 SCALE: NONE

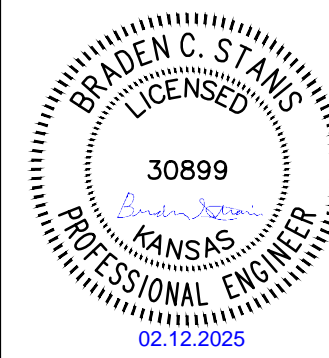


3
 E-502 GROUND ROD CONNECTION DETAIL
 SCALE: NONE

File: L:\2024\17-2400521 - Pegasus Addition Design\Drawings\SS LIFT STATION\IE-500 ELECTRICAL DETAILS I THRU IV.dwg Last Save: 1/24/2025 8:17 AM Last saved by: ASGinger
 Last plotted by: GINGER, Adam S. Plot Style: --- Plot Scale: 1:2.595 Plot Date: 2/12/2025 12:12 PM Plotter used: None



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
 WICHITA, KANSAS

PEGASUS LIFT STATION

ELECTRICAL
 DETAILS II

JOB NO.: 2400521
 DATE: FEB 2025
 DESIGNED BY: BCS
 DRAWN BY: ASG

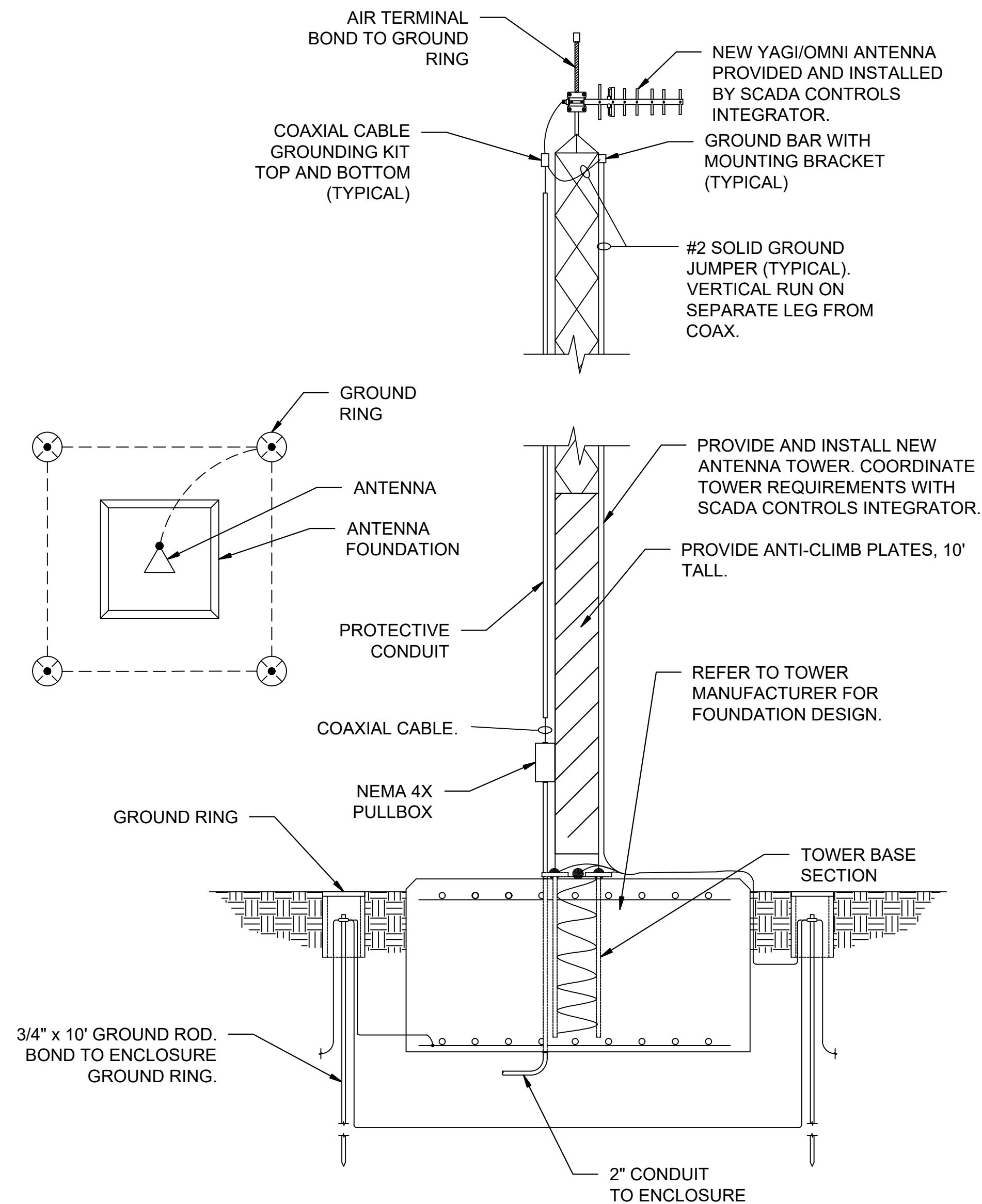
BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER

E-502

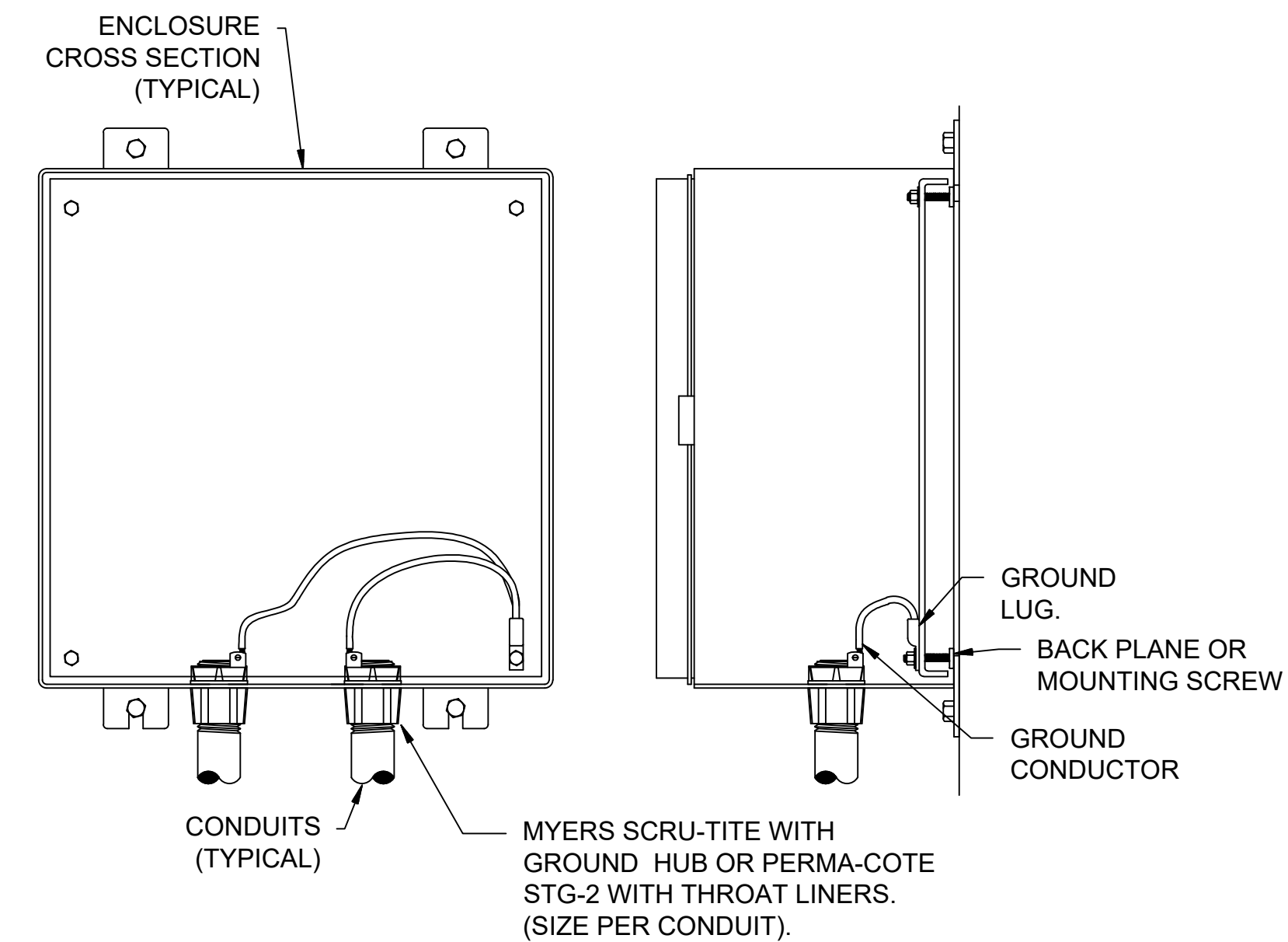
SHEET NUMBER **35** OF **38**

File: L:\2024\141-2400521 - Pegasus Addition Design\Drawings\SS LIFT STATION\IE-500 ELECTRICAL DETAILS I THRU IV.dwg Last Save: 1/24/2025 8:17 AM Last saved by: ASGinger
 Last plotted by: Ginger, Adam S. Plot Style: --- Plot Scale: 1:2.585 Plot Date: 2/12/2025 12:13 PM Plotter used: None



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

1
TYPICAL ANTENNA TOWER DETAIL
 E-503 SCALE: NONE

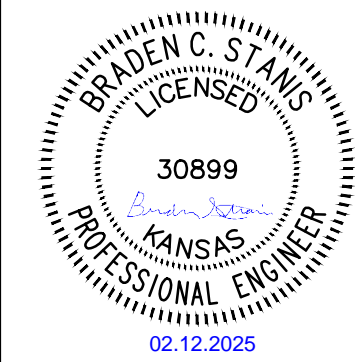


NOTES:
 1. ALL SERVICE, FEEDER, AND CONTROL CONDUITS SHALL BE GROUNDED ON BOTH ENDS.

2
CONDUIT GROUNDING DETAIL
 E-503 SCALE: NONE



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CITY OF WICHITA
 WICHITA, KANSAS

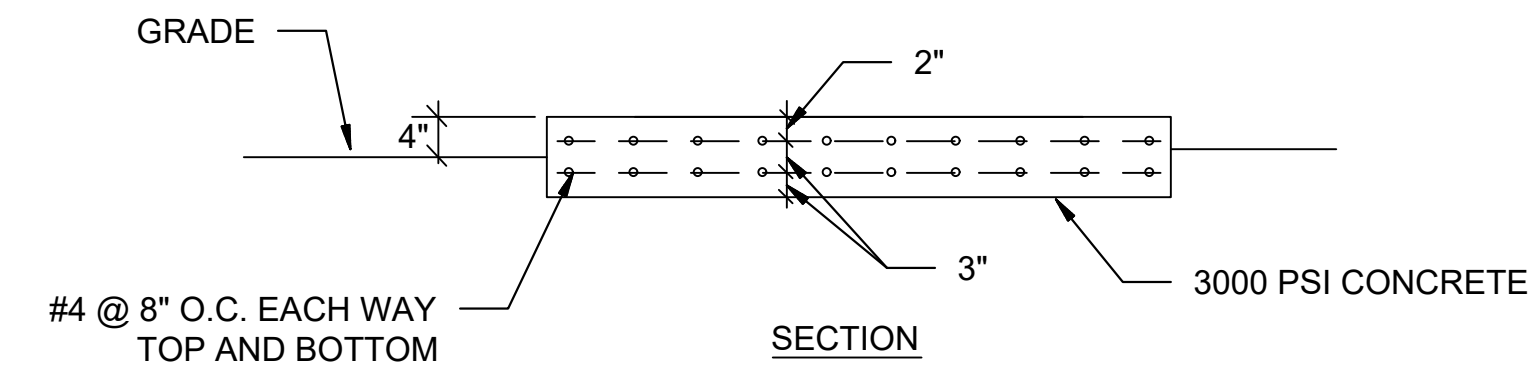
PEGASUS LIFT STATION

**ELECTRICAL
 DETAILS III**

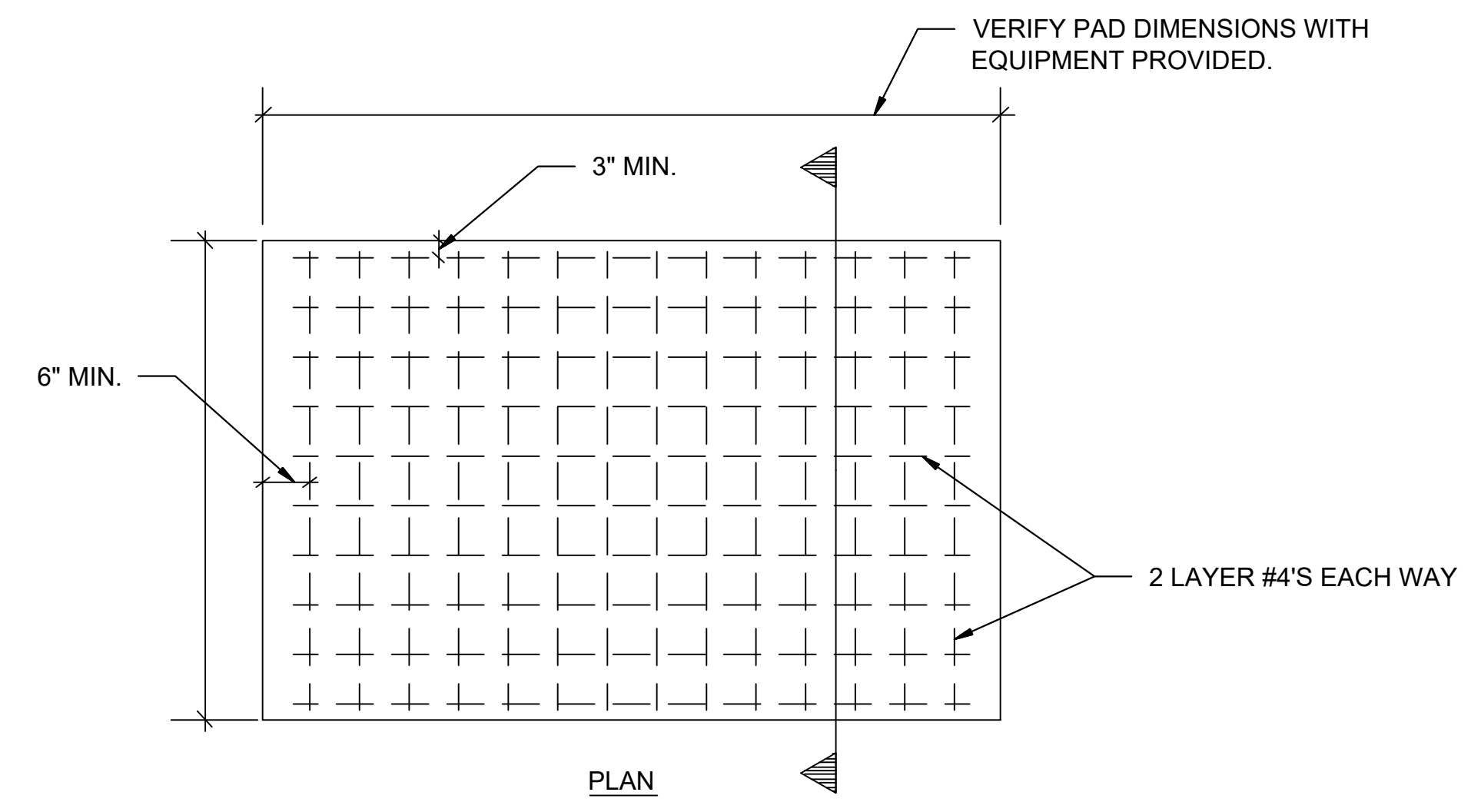
JOB NO.: 2400521
 DATE: FEB 2025
 DESIGNED BY: BCS
 DRAWN BY: ASG

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

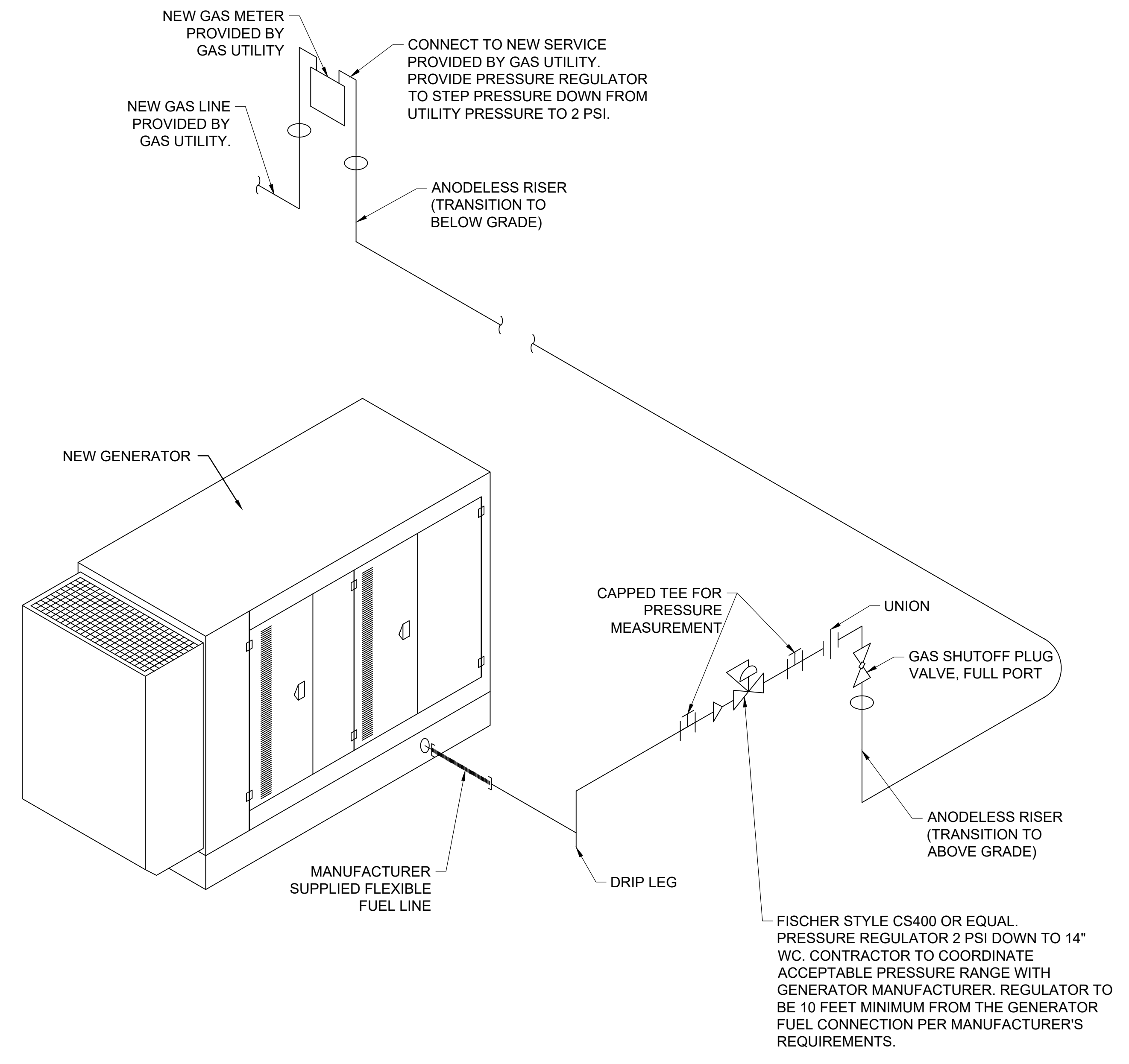
DRAWING NUMBER
E-503
 SHEET NUMBER **36** OF **38**



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.



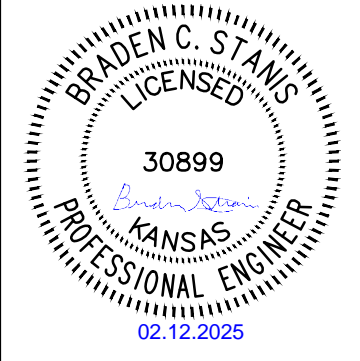
1
E-504
GENERATOR PAD DETAIL
SCALE: NONE



2
E-504
NATURAL GAS SYSTEM ISOMETRIC
SCALE: NONE



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REV.	DATE	DESCRIPTION	BY



CITY OF WICHITA
WICHITA, KANSAS
PEGASUS LIFT STATION

**ELECTRICAL
DETAILS IV**

JOB NO.: 2400521
DATE: FEB 2025
DESIGNED BY: BCS
DRAWN BY: ASG

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

DRAWING NUMBER
E-504

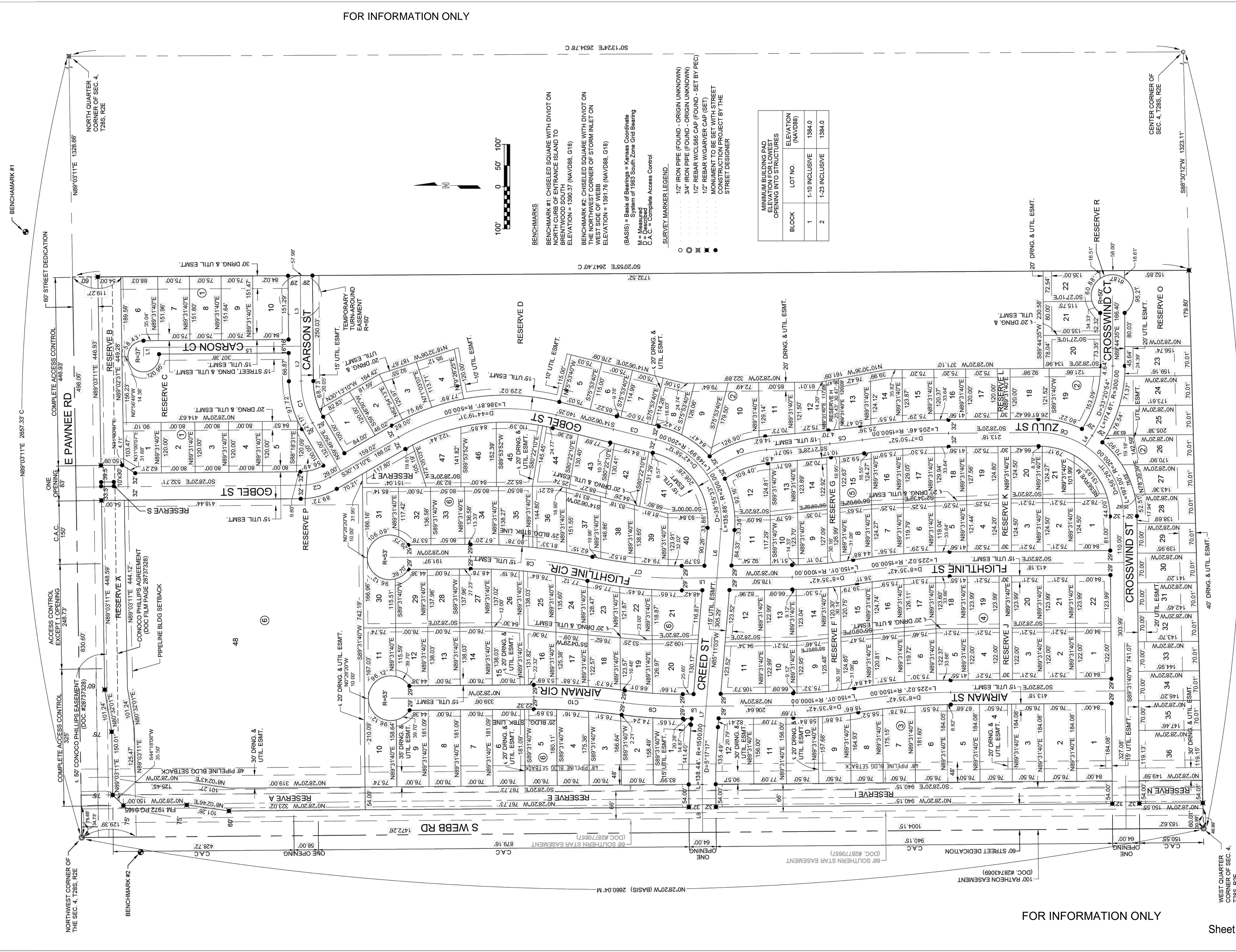
SHEET NUMBER **37** OF **38**

File: L:\2024\141-2400521 - Pegasus Addition Design\Drawings\SS LIFT STATION\IE-500 ELECTRICAL DETAILS I THRU IV.dwg Last Save: 1/24/2025 8:17 AM Last saved by: ASGinger
Last plotted by: GINGER, Adam S. Plot Style: --- Plot Scale: 1:2.565 Plot Date: 2/12/2025 12:13 PM Plotter used: None

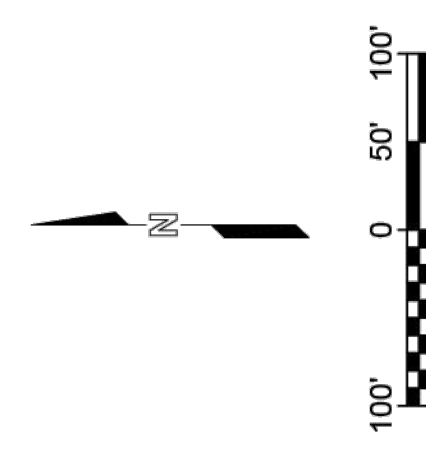
Final Plat

PEGASUS ADDITION

Wichita, Sedgwick County, Kansas



FOR INFORMATION ONLY



- BENCHMARKS**
- BENCHMARK #1: CHISELED SQUARE WITH DIVIOT ON NORTH CORNER OF CHANCE ISLAND TO BRENTWOOD SOUTH. ELEVATION = 1390.37 (NAVD88, G18)
 - BENCHMARK #2: CHISELED SQUARE WITH DIVIOT ON THE NORTHWEST CORNER OF STORM INLET ON WEST SIDE OF WEBB. ELEVATION = 1391.76 (NAVD88, G18)
- (BASIS) = Basis of Bearings = Kansas Coordinate System of 1983 South Zone Grid Bearing
- M = Measured
C.A.C. = Complete Access Control
- SURVEY MARKER LEGEND —
- 1/2" IRON PIPE (FOUND - ORIGIN UNKNOWN)
 - ⊙ 3/4" IRON PIPE (FOUND - ORIGIN UNKNOWN)
 - ⊗ 1/2" REBAR W/CL565 CAP (FOUND - SET BY PEC)
 - ⊕ 1/2" REBAR W/GARVER CAP (SET MONUMENT TO BE SET WITH STREET CONSTRUCTION PROJECT BY THE STREET DESIGNER)

BLOCK	LOT NO.	ELEVATION (NAVD88)
1	1-10 INCLUSIVE	1384.0
2	1-23 INCLUSIVE	1384.0

FOR INFORMATION ONLY



GARVER
1995 MIDFIELD RD.
Wichita, KS 67209
(316) 264-8008
www.GarverUSA.com

DWG FILE: 21141376 SURVEY BASE
PROJECT NO. 21141376
JANUARY 29, 2024