

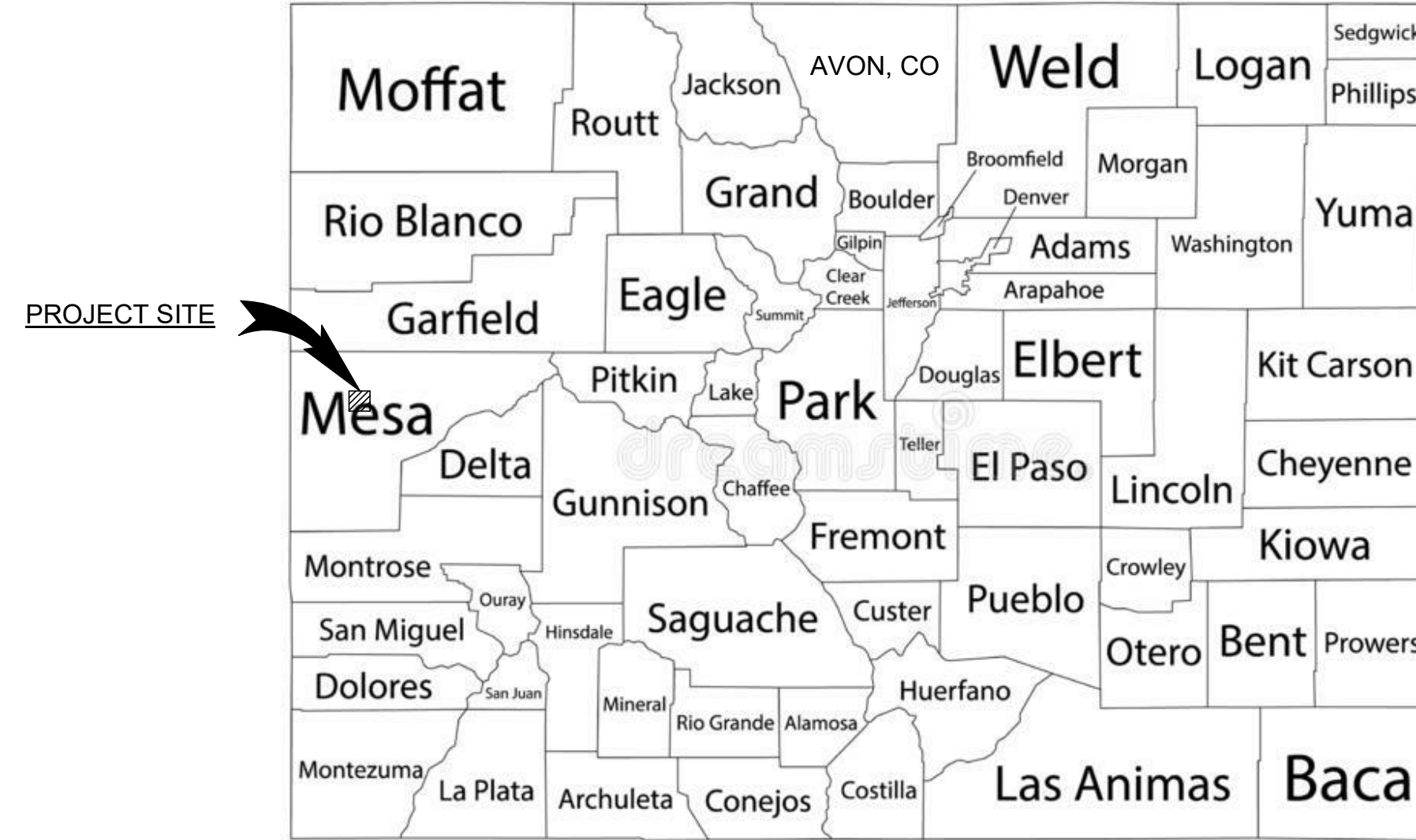
GRAND JUNCTION ODOR CONTROL IMPROVEMENTS



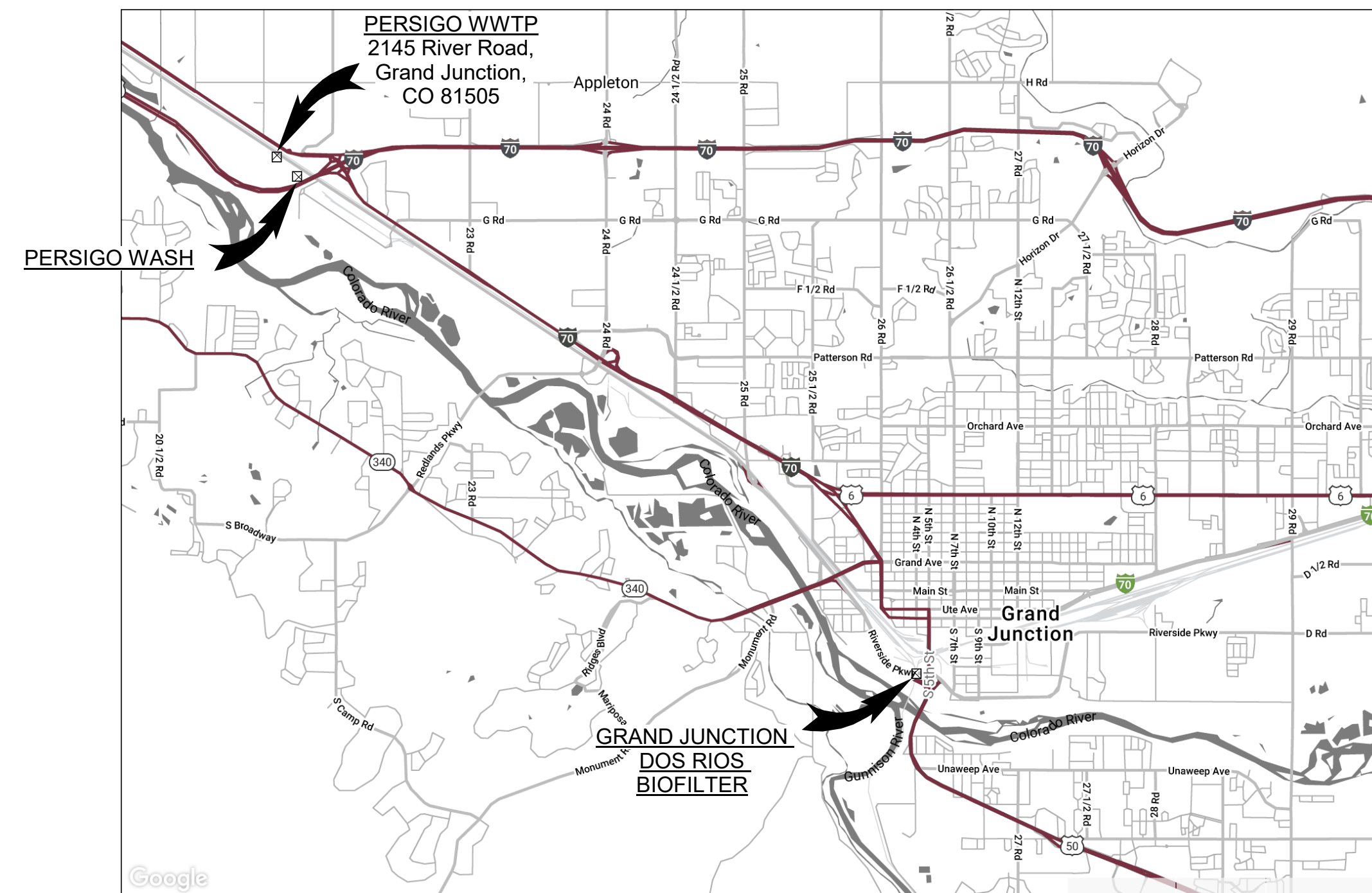
CITY OF GRAND JUNCTION

PROJECT NO. 20W23045

BID SET



AREA MAP
NO SCALE



VICINITY MAP
NO SCALE

GARVER PROJECT NO. 20W23045

AUGUST 2021



One Denver Technology Center
5251 DTC Parkway, Suite 420
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REGISTRATION NO.
20171218008



REV	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO
CITY OF GRAND JUNCTION
GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

COVER

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: RGH
DRAWN BY: EGB

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01-G001

SHEET NUMBER
001



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20171218008



01 - GENERAL		
SHEET NO.	DWG. NO.	DESCRIPTION
001	01-G001	COVER
002	01-G002	INDEX OF DRAWINGS
003	01-G003	GENERAL CONVENTIONS AND ABBREVIATIONS
004	01-G004	CIVIL NOTES AND LEGEND
005	01-G005	STRUCTURAL NOTES, LEGENDS, AND ABBREVIATIONS
006	01-G006	ELECTRICAL NOTES, LEGENDS, AND ABBREVIATIONS

20 - PERSIGO WASH SIPHON		
SHEET NO.	DWG. NO.	DESCRIPTION
028	20-C101	PERSIGO SIPHON WASH SITE PLAN
029	20-S101	PERSIGO SIPHON WASH STRUCTURAL OVERALL PLAN
030	20-S102	PERSIGO SIPHON WASH PIPE ENCASEMENT PLAN
031	20-S301	PERSIGO SIPHON WASH PIPE ENCASEMENT SECTIONS
032	20-S401	PERSIGO SIPHON WASH DETAILS

10 - PERSIGO WASTEWATER TREATMENT PLANT		
SHEET NO.	DWG. NO.	DESCRIPTION
007	10-C101	PERSIGO WWTP EXISTING SITE PLAN
008	10-C102	PERSIGO WWTP PROPOSED SITE AND GRADING PLAN
009	10-C301	PERSIGO WWTP YARD PIPING PLAN
010	10-S101	PERSIGO WWTP ODOR CONTROL STRUCTURAL OVERALL PLAN
011	10-S102	PERSIGO WWTP ODOR CONTROL BTF STRUCTURAL PLAN I
012	10-S103	PERSIGO WWTP ODOR CONTROL BTF STRUCTURAL PLAN II
013	10-S301	PERSIGO WWTP ODOR CONTROL BTF STRUCTURAL SECTIONS I
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015	10-S401	PERSIGO WWTP ODOR CONTROL BTF STRUCTURAL DETAILS I
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017	10-S403	PERSIGO WWTP ODOR CONTROL BTF STRUCTURAL DETAILS III
018	10-M101	PERSIGO WWTP ODOR CONTROL SYSTEM SCHEMATIC
019	10-M131	PERSIGO WWTP ODOR CONTROL BTF EQUIPMENT SITE PLAN
020	10-M132	PERSIGO WWTP ODOR CONTROL BTF EQUIPMENT PLAN
021	10-M133	PERSIGO WWTP MANHOLE PLAN AND SECTION
022	10-M134	PERSIGO WWTP HEADWORKS PARSHALL FLUME PLAN AND SECTION
023	10-M301	PERSIGO WWTP ODOR CONTROL SYSTEM SECTION AND ELEVATION I
024	10-M302	PERSIGO WWTP ODOR CONTROL SYSTEM SECTION AND ELEVATION II
025	10-E101	PERSIGO WWTP ODOR CONTROL ELECTRICAL SITE PLAN
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SHEET NO.	DWG. NO.	DESCRIPTION
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035	30-C301	DOS RIOS SUE INFORMATION PLAN
036	30-C302	DOS RIOS YARD PIPING PROFILES
037	30-C303	DOS RIOS YARD PIPING PROFILES I
038	30-C304	DOS RIOS YARD PIPING PROFILES II
039	30-S101	DOS RIOS ODOR CONTROL SCRUBBER FOUNDATION PLAN
040	30-S301	DOS RIOS ODOR CONTROL STRUCTURAL SECTIONS
041	30-M101	DOS RIOS FOUL AIR COLLECTION SYSTEM SCHEMATIC
042	30-M131	DOS RIOS ODOR CONTROL BTF EQUIPMENT PLAN
043	30-M301	DOS RIOS ODOR CONTROL SYSTEM SECTION AND ELEVATION I
044	30-M302	DOS RIOS ODOR CONTROL SYSTEM SECTION AND ELEVATION II
045	30-M303	DOS RIOS ODOR CONTROL SYSTEM SECTION AND ELEVATION III
046	30-E101	DOS RIOS ODOR CONTROL ELECTRICAL SITE PLAN
047	30-E131	DOS RIOS ODOR CONTROL ELECTRICAL POWER AND GROUNDING PLAN
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99 - STANDARD DETAILS		
SHEET NO.	DWG. NO.	DESCRIPTION
049	99-C501	SITE CIVIL DETAILS I
050	99-C502	SITE CIVIL DETAILS II
051	99-C503	SITE CIVIL DETAILS III
052	99-C504	SITE CIVIL DETAILS IV
053	99-C505	SITE CIVIL DETAILS V
054	99-C506	SITE CIVIL DETAILS VI
055	99-S501	STRUCTURAL DETAILS I
056	99-S502	STRUCTURAL DETAILS II
057	99-S503	STRUCTURAL DETAILS III
058	99-S504	STRUCTURAL DETAILS IV
059	99-S505	STRUCTURAL DETAILS V
060	99-M501	MECHANICAL DETAILS I
061	99-M502	MECHANICAL DETAILS II
062	99-M503	MECHANICAL DETAILS III
063	99-E501	ELECTRICAL DETAILS I
064	99-E502	ELECTRICAL DETAILS II
065	99-E503	ELECTRICAL DETAILS III
066	99-E504	DOS RIOS RTU PANEL LAYOUT
067	99-E505	DOS RIOS RTU PANEL SCHEMATIC

REV	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
 GRAND JUNCTION
 GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

INDEX OF DRAWINGS

JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: RGH
 DRAWN BY: EGB

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01-G002
 SHEET NUMBER
002

DRAWING NUMBER	DRAWING NUMBER LEGEND			
EXAMPLE: 70-M201 FACILITY AREA CODE PREDOMINATE VIEW OR ELEMENT DISCIPLINE	G - GENERAL	S - STRUCTURAL	120 - LOWER BASEMENT LEVEL	200 - ELEVATIONS
	C - CIVIL	M - MECHANICAL	130 - GROUND LEVEL	300 - SECTIONS
	X - DEMOLITION	E - ELECTRICAL	140 - SECOND OR UPPER LEVEL	400 - DETAILS
	I - INSTRUMENTATION & CONTROL	T - TELECOMMUNICATIONS	150 - ROOF LEVEL	500 - DIAGRAMS OR SCHED
	F - FIRE & LIFE SAFETY		160 - ADDITIONAL UPPER LEVELS	
	A - ARCHITECTURAL			
			(CIVIL EX. 100 - SITE PLANS	200 - GRADING & PAVING 300 - PIPING & PROFILES)

GENERAL CONVENTIONS

SYMBOL	DESCRIPTION
	TITLE DENOTES A PLAN VIEW LAYOUT (THIS EXAMPLE IS PLAN VIEW No. 1 ON SHEET A101)
	TITLE DENOTES AN ELEVATION, SECTION, OR DETAIL VIEW LAYOUT (THIS EXAMPLE IS DETAIL 1 ON SHEET A201 WHICH HAS A BACK REFERENCE ON SHEET A101)
	CALLOUT DENOTES A CUT SECTION TYPICAL REFERENCE (THIS EXAMPLE OCCURS ON SHEET A101 REFERENCING SECTION No. 1 ON SHEET A201)
	CALLOUT DENOTES AN ELEVATION REFERENCE (THIS EXAMPLE OCCURS ON SHEET A101 REFERENCING ELEVATION No. 1 ON SHEET A201)
	CALLOUT DENOTES AN ENLARGED AREA TYPICAL REFERENCE (THIS EXAMPLE OCCURS ON SHEET A101 REFERENCING DETAIL No. 1 ON SHEET A401)
	CALLOUT DENOTES A STANDARD DETAIL REFERENCE
	CALLOUT DENOTES A KEYED NOTE REFERENCE
	CLOUDED REGION INDICATES A REVISED AREA
	SYMBOL INDICATES A ROOM / AREA DESIGNATION WITH ROOM NUMBER AND SQUARE FOOTAGE
	SYMBOL INDICATES A STRUCTURAL GRIDLINE OR DATUM
	SYMBOL INDICATES A DATUM IN A SECTION OR ELEVATION

ABBREVIATIONS

ABBREV	DESCRIPTION
ABV	ABOVE
AFF	ABOV FINISH FLOOR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUE
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AUX	AUXILIARY
AWWA	AMERICAN WATER WORKS ASSOCIATION
BKR	BREAKER
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STRUCTURE
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTERLINE
CMU	CONCRETE MASONRY UNIT
COGEN	COMBINED HEAT AND POWER GENERATION
COL	COLUMN
CONT	CONTINUOUS
DIA	DIAMETER
EA	EXHAUST AIR, EXPANSION ANCHOR, EACH
EL, ELEV	ELEVATION
ELEC	ELECTRICAL
ENCL	ENCLOSURE
FA	FIRE ALARM
FFE	FINISHED FLOOR ELEVATION
FL	FLOW LINE
FLR	FLOOR
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET, FOOT
GA	GAUGE, GAGE
GALV	GALVANIZED
GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GRND	GROUND
H, HT	HEIGHT
HOA	HAND-OFF-AUTOMATIC
HORIZ	HORIZONTAL
HP	HORSEPOWER, HEAT PUMP
HYD	HYDRANT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
kVA	KILOVOLT-AMPERES
KW	KILOWATTS
LBS, #	POUNDS
LF	LINEAR FEET
MAX	MAXIMUM
N/A	NOT AVAILABLE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED
OH	OVERHEAD
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
PD	PROCESS DRAIN
PIV	POST INDICATOR VALVE
PNL	PANEL
PRV	PRESSURE RELIEVE VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH

ABBREVIATIONS

ABBREV	DESCRIPTION
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
RE:	REFERENCE, REFER
REINF	REINFORCEMENT
REQD	REQUIRED
RM	ROOM
RTU	REMOTE TELEMETRY UNIT
SEC	SECTION
SF	SQUAURE FEET
SHT	SHEET
SPEC	SPECIFICATIONS
SQ	SQUARE
STA	STATION
STD	STANDARD
SURF	SURFACE
SUSP	SUSPEND, SUSPENDED
T&B	TOP AND BOTTOM
THRU	THROUGH
TYP	TYPICAL
U/F	UNDER FLOOR
U/G	UNDER GROUND
U/S	UNDER SLAB
UL	UNDERWRITERS LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
V	VOLT, VALVE
VA	VOLT-AMPERE
VERT	VERTICAL
W	WATT, WIRE, WIDTH, WINDOW, WATER
W/	WITH
W/O	WITHOUT
WS	WATERSTOP
WT	WATERTIGHT, WEIGHT
XMFR	TRANSFORMER



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REGISTRATION NO.
20171218008



Digitally Signed 08/20/2021

REV	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO

 GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

GENERAL CONVENTIONS AND ABBREVIATIONS

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: RGH
DRAWN BY: EGB

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DRAWING NUMBER

01-G003

SHEET NUMBER **003**

GENERAL CIVIL NOTES

- 1. SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR SAFETY, MEANS, OR METHODS OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL APPROPRIATE AGENCIES BEFORE WORK COMMENCES TO VERIFY THE TYPE, LOCATION, PROTECTION REQUIREMENTS, DEPTH OF ALL EXISTING UTILITIES, DRAINAGE FACILITIES, AND OTHER OBSTRUCTIONS.
3. CAUTION: UNDERGROUND UTILITIES SHOWN ARE TAKEN FROM EXISTING RECORDS AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY.

PAVING AND GRADING NOTES

- 1. ANY PAVEMENT DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION AT THE CONTRACTORS EXPENSE.
2. ANY DISTURBED AREAS NOT SPECIFICALLY DESIGNATED TO BE GRADED SHALL BE RESTORED TO EQUAL OR BETTER CONDITION AND SHALL BE GRADED TO DRAIN AS APPROVED BY THE ENGINEER.

CIVIL LEGEND NOTES

- 1. GRAY SCALED LINE TYPES AND SYMBOLS INDICATE EXISTING ITEMS. BOLD SCALED LINE TYPES AND SYMBOLS INDICATE PROPOSED ITEMS.
2. ADDITIONAL PROCESS LINES MAY BE DENOTED BY A LINE TYPE WITH THE FLOW STREAM IDENTIFIER.

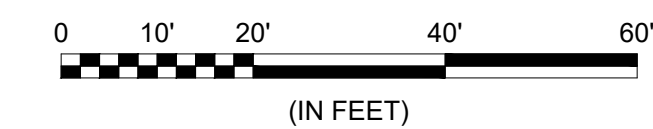
YARD PIPING NOTES

- 1. MINIMUM COVER OVER PIPING SHALL BE 3'-0", MEASURED FROM FINISHED GRADE.
2. PROVIDE MINIMUM PIPE COVER, AS SPECIFIED. IN GENERAL LAY PIPE TO UNIFORM GRADES BETWEEN THE ELEVATIONS SHOWN, UNLESS OTHERWISE APPROVED.
3. ALL JOINTS SHALL BE WATERTIGHT.
4. THRUST AT FITTINGS SHALL BE RESISTED BY RESTRAINED JOINTS AS SPECIFIED AND AS REQUIRED TO RESIST THRUST, UNLESS OTHERWISE APPROVED BY ENGINEER.

CIVIL LEGEND

Table with 4 columns: SYMBOL, DESCRIPTION, SYMBOL, DESCRIPTION. Lists symbols for communication, cable TV, easement line, fence, floodplain, floodway, flowline, gas line, overhead electric, process drain, property line, right-of-way, sanitary sewer, sewer service line, storm drain, silt fence, top of bank, toe of slope, tree line, underground electric, underground telephone, water edge, water line, water service line, potable water, non-potable water, indicates abandoned line, 12" indicates size of line, existing pipe to be abandoned, existing pipe to be removed, shrub/bush, tree.

Table with 2 columns: SYMBOL, DESCRIPTION. Lists symbols for bench mark, bollard, catch basin/junction box, cleanout, concrete headwall, electric box, electric duct marker, electric manhole, electric meter, fiber optic box, fiber optic cable riser/peDESTAL, fiber optic manhole, fire hydrant, flared end section (FES), gas meter, gas regulator, guy wire anchor, irrigation control valve, light pole, manhole, monitoring well, process drain manhole, property pin, rip rap, sanitary sewer manhole, sign, slope direction indicator, sprinkler head, storm drain manhole, survey control point, telephone junction box, telephone manhole, telephone pedestal, television pedestal, utility pole, valve, water meter, yard hydrant/spigot.



CIVIL LEGEND (CONT'D)

Table with 4 columns: SYMBOL, DESCRIPTION, SYMBOL, DESCRIPTION. Lists symbols for demolish, existing asphalt, proposed asphalt, existing concrete, proposed concrete, gravel road or drive.

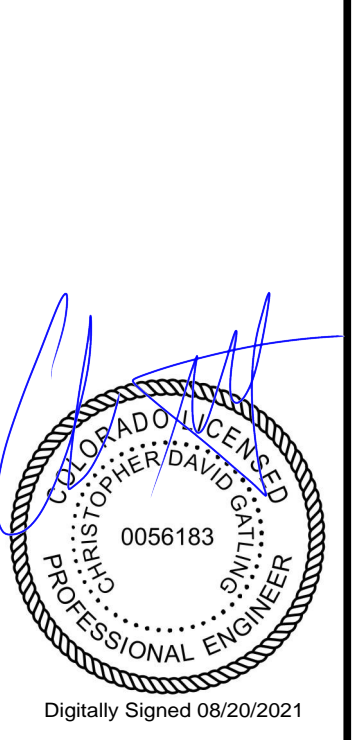
ABBREVIATIONS

Table with 4 columns: ABBREV, DESCRIPTION, ABBREV, DESCRIPTION. Lists abbreviations for ABANDON, ABOVE FINISHED FLOOR, ALUMINUM SULFATE, APPROXIMATE, ASPHALT, ASSEMBLY, BACK OF CURB, BUILDING, BLOCK, BENCHMARK, BOTTOM, CAST IRON, CAST IRON PIPE, CONSTRUCTION JOINT, CENTERLINE, CLASS, CONCRETE MASONRY UNIT, CONCRETE, CONNECTION, CONTINUOUS, CONTROL POINT, DUCTILE IRON, DIAMETER, DUCTILE IRON PIPE, EACH, EFFLUENT, ELEVATION, ELECTRICAL, EDGE OF PAVEMENT, EQUAL, EXISTING, EXPANSION, FLOOR CONSTRUCTION JOINT, FLARED END SECTION, FINISHED FLOOR ELEVATION, FIRE HYDRANT, FINISH GRADE, FLOWLINE, FLANGED, FIBERGLASS REINFORCED PIPE, FEET, FOOT, FOOTING, GUTTER, GAS LINE, GRADE, GATE VALVE, HORIZONTAL, HIGHWAY, INSIDE DIAMETER, INCHES, INFLUENT, INVERT, JOINT, LENGTH, LINEAR FEET, LONG, LINEAL, LINEAR, LOCATION, LEFT, MANUFACTURER, MAXIMUM, MILLION GALLONS PER DAY, MANHOLE, MINIMUM, MISCELLANEOUS, MECHANICAL JOINT, NORTH, NORTHEAST, NORTHWEST, NOT IN CONTRACT, NUMBER, NOT TO SCALE, NORMAL WATER SURFACE LEVEL, ON CENTER, OUTSIDE DIAMETER, OVERFLOW, POINT OF CURVE, PROCESS DRAIN, PLAIN END, POINT OF INTERSECTION, PLATE, PLACES, PUSH ON, POWER POLE, POINT OF REVERSE CURVE, POUNDS PER SQUARE INCH, POINT OF TANGENT, POLYVINYL CHLORIDE, RADIUS, REINFORCED CONCRETE PIPE, REDUCER, REINFORCEMENT, REQUIRED, RESTRAINED JOINT, RIGHT-OF-WAY, RADIUS POINT, RESILIENT SEAT, RIGHT, SOUTH, SLUDGE, SCHEDULE, STORM DRAIN, STORM DRAIN MANHOLE, SOUTHEAST, SECTION, SQUARE FEET, SHEET, SPECIFICATIONS, SQUARE, SANITARY SEWER, STATION, STANDARD, SIDEWALK, SOUTHWEST, TOP AND BOTTOM, TEMPORARY BENCHMARK, TIME CLOCK, TOP OF CURB, TEMPORARY, TEMPERED, THICKNESS, TOP OF CURB, TOP OF SIDEWALK, TYPICAL, UNLESS NOTED OTHERWISE, VOLT, VALVE, VERTICAL, VENTILATOR, WIDTH, WATER, WITH, WITHOUT, WATER LINE, WATERSTOP, WATER TRANSMISSION MAIN, WELDED WIRE FABRIC, BY.



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REGISTRATION NO. 20171218008



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Table with 4 columns: BY, DESCRIPTION, DATE, REV. (Revision table)



CIVIL NOTES AND LEGEND

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: CDG
DRAWN BY: OCC

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SHEET NUMBER 004

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REV	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO
GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

STRUCTURAL NOTES,
LEGENDS, AND
ABBREVIATIONS

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: KAM
DRAWN BY: EGB

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DRAWING NUMBER
01-G005
SHEET NUMBER **005**

GENERAL NOTES:

- GENERAL NOTES AND STANDARD DETAILS SHALL NOT REPLACE OR OVER RULE ANY STRUCTURE SPECIFIC NOTE, DETAIL, OR SPECIFICATION. STRUCTURE SPECIFIC NOTES AND DETAILS SHALL GOVERN OVER GENERAL NOTES AND STANDARD DETAILS.
- RISK CATEGORY ----- III
- DESIGN LIVE LOADS - 2018 IBC
ROOF WITHOUT REDUCTION ----- 20 PSF
FLOORS:
CORRIDORS ----- 100 PSF
ASSEMBLY AREAS ----- 100 PSF
BALCONIES ----- 100 PSF
RESTROOMS ----- 80 PSF
OFFICES ----- 50 PSF
STAIRS ----- 100 PSF
MOVABLE FILE ROOMS ----- 150 PSF
INDUSTRIAL AREAS ----- 250 PSF
EQUIPMENT ROOMS ----- 250 PSF
AREAS WITH UNRESTRICTED VEHICULAR ACCESS----- AASHTO HS20
- WIND LOAD PARAMETERS - ASCE 7-16
BASIC WIND SPEED ----- 109 MPH
EXPOSURE CATEGORY ----- C
GCPI +/- 0.18 (ENCLOSED BUILDINGS)
- SEISMIC DESIGN PARAMETERS - 2018 IBC
IMPORTANCE FACTOR, I ----- 1.25
SITE CLASS ----- D
SEISMIC SPECTRAL ACCELERATIONS
S_s -----PERSIGO WWTP SITE-----0.235g, DOS RIOS SITE-----0.237g
S₁ -----PERSIGO WWTP SITE-----0.065g, DOS RIOS SITE-----0.065g
SEISMIC DESIGN CATEGORY ----- B
DESIGN SPECTRAL ACCELERATIONS
S_{DS} -----PERSIGO WWTP SITE-----0.251g, DOS RIOS SITE-----0.253g
S_{D1} -----PERSIGO WWTP SITE-----0.105g, DOS RIOS SITE-----0.105g
RESPONSE MODIFICATION FACTOR, R ----- SEE INDIVIDUAL PLANS
BASIC SEISMIC FORCE RESISTING SYSTEM -- SEE INDIVIDUAL PLANS
SEISMIC RESPONSE COEFFICIENT, C_s ----- SEE INDIVIDUAL PLANS
ANALYSIS PROCEDURE ----- EQUIVALENT LATERAL FORCE
- SNOW LOADS PARAMETERS - ASCE 7-16
GROUND SNOW LOAD, P_g ----- 30 PSF
IMPORTANCE FACTOR, I ----- 1.10
EXPOSURE FACTOR, C_e ----- 1.00
THERMAL FACTOR, C_t ----- 1.00
- THE STRUCTURE SHOULD NOT BE CONSIDERED TO BE STABLE DURING CONSTRUCTION UNTIL ALL ELEMENTS ARE IN PLACE AND CONNECTED. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING ALL TEMPORARY CONSTRUCTION BRACING, AS REQUIRED.
- CONSTRUCTION METHODS, PROCEDURES, AND SEQUENCES ARE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL TAKE THE ALL NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION, NEW AND EXISTING, AT ALL STAGES.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO ANY PERTINENT WORK. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE NOTED ON THE SHOP DRAWINGS.
- COORDINATE WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, STRUCTURAL, AND ELECTRICAL DRAWINGS, AND VERIFY THE LOCATIONS AND SIZES OF THE CHASES, OPENING, INSERTS, SLEEVES, FINISHES, CONDUITS, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE DRAWINGS AND EXISTING CONDITIONS TO DETERMINE WHERE OPENINGS ARE REQUIRED IN WALLS AND SLABS.
- STANDARD DETAILS APPLY UNLESS INDICATED OTHERWISE ON SPECIFIC STRUCTURE DRAWINGS.

STRUCTURAL STEEL NOTES:

- UNLESS OTHERWISE SPECIFIED, HOT-ROLLED STEEL BUILDING MEMBERS USING W-SHAPES SHALL BE ASTM A992; M-, S-, AND C- SHAPES ASTM A36; SQUARE, RECTANGULAR & ROUND HSS SHAPES ASTM A 500 GRADE B; ANGLES AND MISCELLANEOUS STIFFENER PLATES ASTM A 36.
- ALL SHEAR CONNECTIONS NOT DETAILED OR OTHERWISE NOTED SHALL BE STANDARD AISC WELDED OR AISC BOLTED CONNECTIONS AND SHALL HAVE SUFFICIENT CAPACITY TO SUPPORT THE END REACTION EQUAL TO ONE - HALF THE TOTAL UNIFORM CAPACITY SHOWN IN THE ALLOWABLE UNIFORM LOAD TABLES OF THE AISC ALLOWABLE STRESS DESIGN MANUAL - 14TH EDITION.
- WELDING SHALL CONFORM WITH AWS D1.1 STRUCTURAL WELDING CODE.
- ALL BOLTS FOR BEAM CONNECTIONS SHALL BE ASTM F593, TYPE 316 STAINLESS STEEL WITH A MINIMUM DIAMETER OF 1/2" UNO. ALL BOLTED CONNECTIONS SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED AS SLIP CRITICAL. WASHERS SHALL BE INSTALLED UNDER NUTS OF FASTENERS WHEN REQUIRED BY THE SPECIFICATION FOR STRUCTURAL JOINTS.
- ALL ANCHOR RODS SHALL BE ASTM F593, TYPE 304 OR 316 STAINLESS STEEL UNO.

GENERAL CONCRETE NOTES:

- STRUCTURAL CONCRETE FOR BUILDING MEMBERS SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH OF 4,000 PSI UNO.
- CONCRETE FOR SLABS SUBJECTED TO VEHICULAR WHEEL LOADS SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH OF 4,000 PSI.
- HOLD SLUMP TO 3 TO 4 INCHES IN ALL FLOOR SLABS.
- ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 3/4".
- NON-PRESTRESSED CONCRETE REINFORCEMENT SHALL CONFORM TO ASTM A 615 GRADE 60.
- REINFORCEMENT LAP SPLICES SHALL CONFORM TO DETAIL 1/99-S501.
- CONCRETE COVER OVER REINFORCEMENT SHALL CONFORM TO THE MINIMUM REQUIRED BY DETAIL 2/99-S501, UNO.
- REINFORCEMENT DETAILING AND PLACEMENT SHALL CONFORM TO ACI 318 AND ACI 315.
- NO REINFORCING BAR SHALL BE WELDED OR FIELD BENT IN ANY MANNER, UNLESS SPECIFICALLY SHOWN OR NOTED ON THE DRAWINGS.
- PROVIDE FULL EMBEDMENT FOR ALL DOWELS. IF NOT OTHERWISE SPECIFIED, DOWEL SIZE AND SPACING SHALL BE THE SAME AS MAIN REINFORCING.
- MECHANICAL EQUIPMENT PADS ON FLOOR SLABS SHALL BE 6" THICK AND REINFORCED WITH #4 @ 12" EW, UNO.
- TREMIES REQUIRED ON ALL POURS DEEPER THAN 5 FEET.
- PROVIDE A MINIMUM OF SEVEN (7) DAYS BETWEEN ADJACENT POURS. CONCRETE SHALL MEET OR EXCEED DESIGN COMPRESSIVE STRENGTH PRIOR TO PLACING ADJACENT POURS.
- CONTRACTOR SHALL SUBMIT TO ENGINEER FOR APPROVAL A SCHEDULE AND SEQUENCE OF CONCRETE PLACEMENT. SEQUENCE SHALL INCLUDE PERMITTING CURE TIME BETWEEN PLACEMENTS AT ADJACENT PROPOSED PLACEMENTS.
- WALKWAYS AND SIDEWALKS SHALL BE POURED WITH SLIGHT SLOPE AND NO LOW SPOTS SO THEY WILL DRAIN FREE. ALL SLOPES SHALL COMPLY WITH ADA REQUIREMENTS.
- ALL CONSTRUCTION JOINTS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE. ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON THE SHOP DRAWINGS FOR REVIEW. UNLESS INDICATED OTHERWISE, ALL CONSTRUCTION JOINTS TO BE KEYS. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN WALLS AND BEAMS, UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
- SUBSTITUTION OF EXPANSION OR DRILLED AND GROUTED-IN ANCHORS FOR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS WILL NOT BE PERMITTED UNLESS APPROVED BY ENGINEER.
- USE MANUFACTURER'S CERTIFIED DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT ANCHORAGE AND DETAILS. VERIFY EQUIPMENT SIZE AND WEIGHTS WITH ENGINEER PRIOR TO CONSTRUCTION OF ANY AND ALL EQUIPMENT PADS.

ABBREVIATIONS

ABBREV	DESCRIPTION	ABBREV	DESCRIPTION
AL	ALUMINUM	PCF	POUNDS PER CUBIC FOOT
ARCH	ARCHITECT, ARCHITECTURAL	PJP	PARTIAL JOINT PENETRATION
BG	BACK GOUGE	PLF	POUNDS PER LINEAR FOOT
CCJ	CRACK CONTROL JOINT	SIM	SIMILAR
CJP	COMPLETE JOINT PENETRATION	SSL	SHORT SLOT
EF	EACH FACE	STL	STEEL
EJ	EXPANSION JOINT	TOB	TOP OF BEAM
ES	EVENLY SPACED, EACH SIDE	TOC	TOP OF CONCRETE
EW	EACH WAY	TOF	TOP OF FOOTING
EXST	EXISTING	TOS	TOP OF STEEL
EXT	EXTERIOR	VCJ	VERTICAL CONSTRUCTION JOINT
FD	FLOOR DRAIN		
FND	FOUNDATION		
FS	FOOTING STEP, FAR SIDE		
IJ	ISOLATION JOINT		
INT	INTERIOR		
KIP	1,000 POUNDS		
KLF	KIPS PER LINEAR FOOT		
KSF	KIPS PER SQUARE FOOT		
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		
LSL	LONG SLOT		
MECH	MECHANICAL		
NS	NEAR SIDE		
OH	OPPOSITE HAND		
OVS	OVERSIZED		

LEGEND:

⊕	CENTERLINE	%	PERCENT	=====	WATERSTOP
°	DEGREES	⌈	PLATE	↔	DIRECTION OF DECK SPAN
⌈	FLANGE	±	PLUS / MINUS		
⊕	GRIDLINE				

FOUNDATION NOTES:

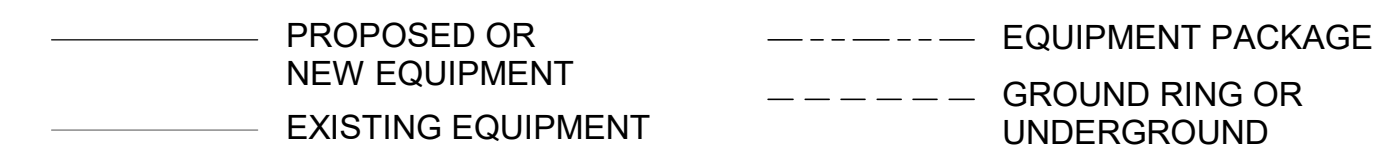
- DESIGN FOUNDATION BEARING PRESSURE PER GEOTECHNICAL REPORT.
- FLOOR SLAB CONSTRUCTION JOINTS (C.J.) SHALL BE PLACED AS SHOWN ON FOUNDATION PLANS AND SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.
- FLOOR SLAB ISOLATION JOINTS SHALL BE 30# FELT UNO.
- CONCRETE FLOOR AND SLAB ON GRADE MAY BE PLACED IN LANES. SPACING OF JOINTS SHALL BE AS SHOWN ON THE FOUNDATION PLAN. WHEN LANE PLACEMENT IS USED, CONSTRUCTION JOINTS SHALL BE USED FOR THE JOINTS BETWEEN LANES. SAW CUT CRACK CONTROL JOINTS SHALL BE PROVIDED ACROSS EACH LANE AT SPACING SHOWN ON PLANS.
- ALL CONCRETE CORNERS SHALL BE CHAMFERED 3/4" ON THE EXTERIOR EXPOSED CORNER.
- COMPACTED GRANULAR FILL OR BASE COURSE ROCK AS INDICATED AND SPECIFIED.
- ALL PRESSURE PIPING BENEATH SLABS SHALL BE CONCRETE ENCASED.

Revit File: BM 360/20W23045 - Grand Junction Persigo Biotrickling Des/GJPPBD - GENERAL.rvt
Plot Date: 8/20/2021 10:55:42 AM

GENERAL NOTES:

- 1. 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.
2. ALL RACEWAYS AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES.
3. 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...

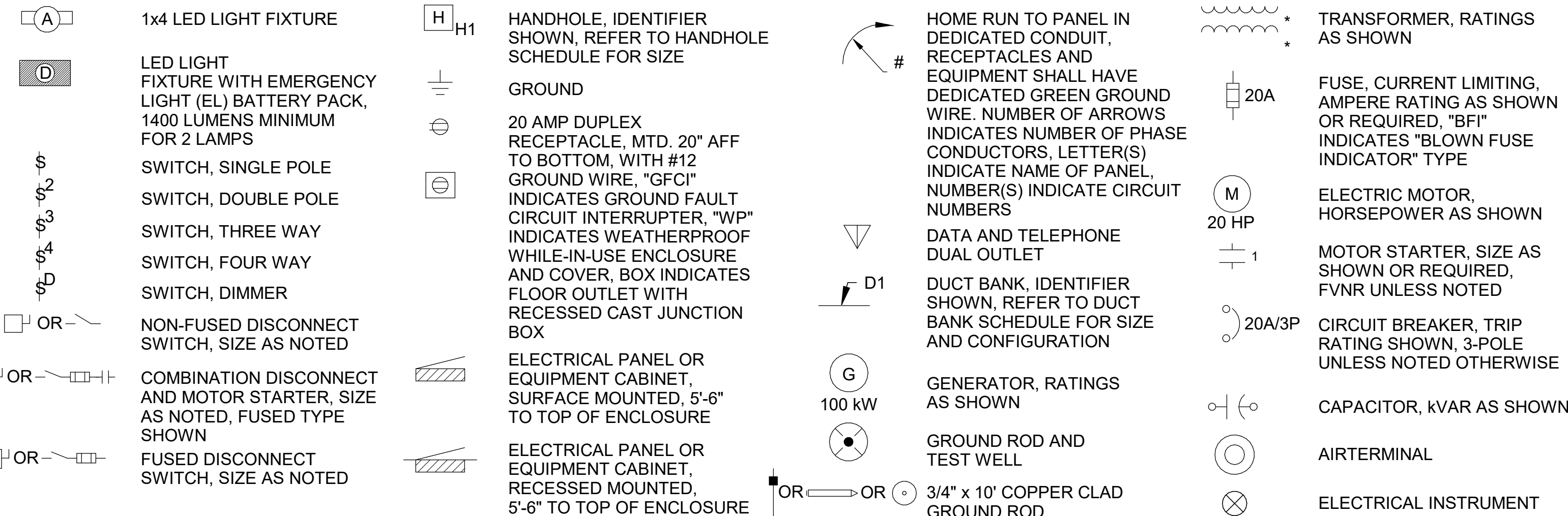
EQUIPMENT LINE TYPES



GENERAL NOTES:

- 1. SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET BUT NOT BE UTILIZED ON THE PROJECT.
2. LIGHTING LEGEND SHOWS EXAMPLE IDENTIFIERS, REFER TO LIGHT FIXTURE SCHEDULE FOR SPECIFIC REQUIREMENTS.

LIGHTING, POWER & SYSTEM LEGEND



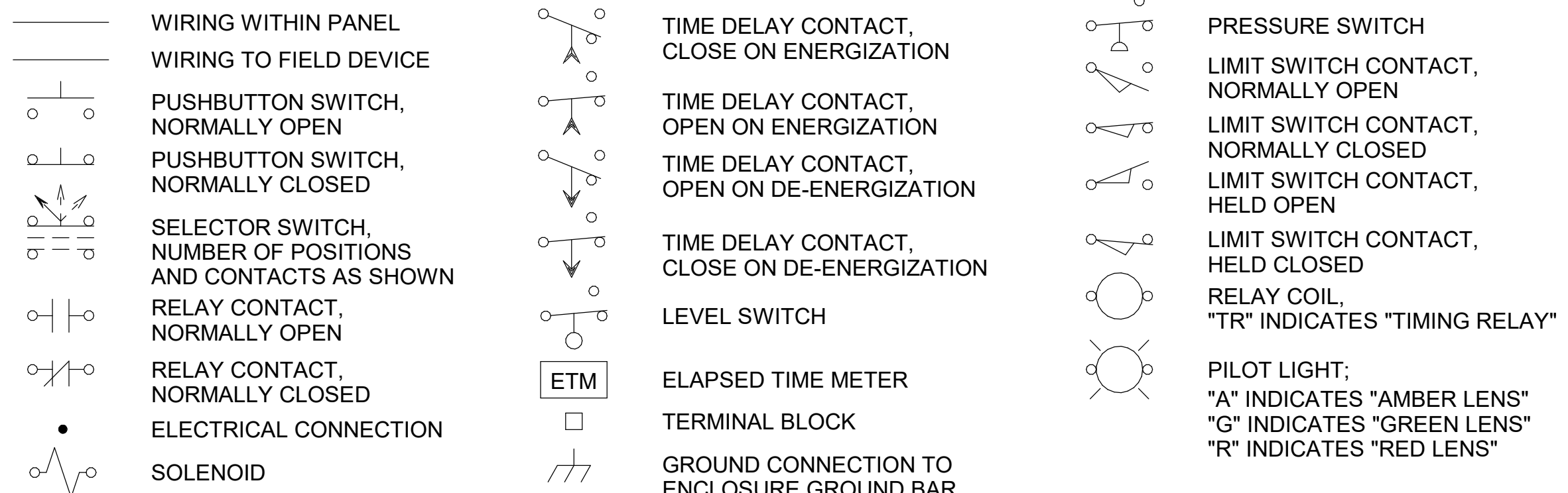
ABBREVIATIONS

Table with columns ABBREV and DESCRIPTION. Lists abbreviations such as AMP, ABC, ACS, ACU, AFG, AIC, AM, ANN, AP, AS, ATS, BFI, BI, C, CB, CCTV, CGRS, COM, CP, CPT, CR, CRI, CS, CU, dB, DDC, DEB, DISC, EC, EF, EG, EMT, ENCL, ETM, FACP, FC, FDS, FLA, FOC, FS, FVNR, FVR, GDT, GND, GRS, HID, HR, Hz, IDS, IG, ISP, JB, KVAR, kWh, LA, LLF, LO, LOR, LRA.

ABBREVIATIONS

Table with columns ABBREV and DESCRIPTION. Lists abbreviations such as LV, MBTU, MCA, MCB, MCC, MCP, MLO, MOC, MS, MTD, N.O., NCTO, NEC, NEMA, NEUT, NFDS, NL, NOTC, OHP, OHS, OL, PB, PEC, PF, PFCC, PH, Ø, PL, PMR, PTT, RECPT, RLA, RVAT, RVSS, S, SA, SDBC, SE, SN, SSOL, STP, SW, TC, TD, TDD, TDE, TEL, THD, UG, UGE, UGP, UGS, UH, UL, UTP, VFD, VM, WH, WM, WP.

CONTROL SCHEMATIC LEGEND



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REGISTRATION NO. 20171218008



Digitally Signed 08/20/2021

Table with columns BY, DESCRIPTION, DATE, REV. A grid for revision tracking.

CITY OF GRAND JUNCTION logo and GRAND JUNCTION ODOR CONTROL IMPROVEMENTS project title.

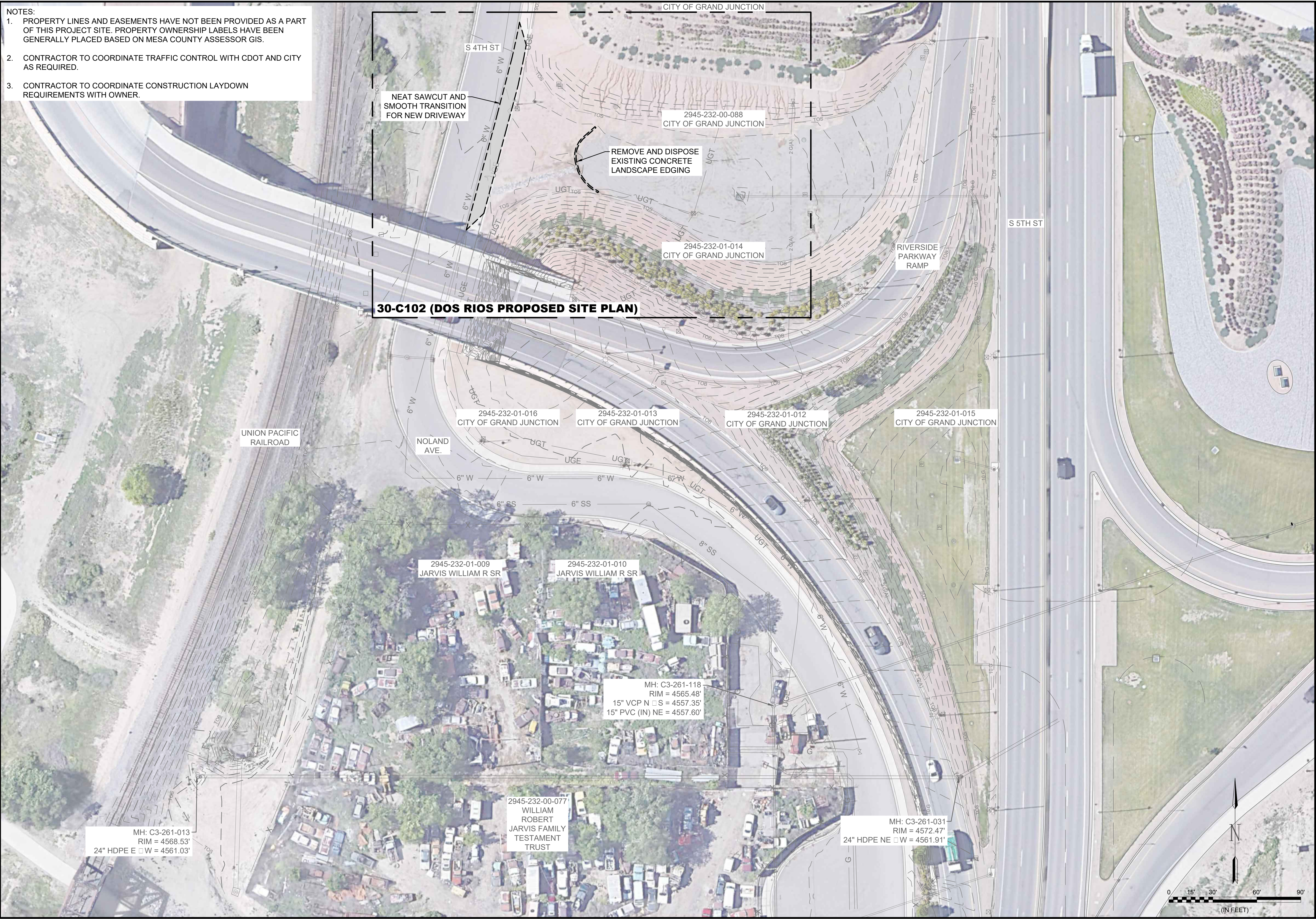
ELECTRICAL NOTES, LEGENDS, AND ABBREVIATIONS

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: SAH
DRAWN BY: SAH

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

DRAWING NUMBER 01-G006
SHEET NUMBER 006

- NOTES:
1. PROPERTY LINES AND EASEMENTS HAVE NOT BEEN PROVIDED AS A PART OF THIS PROJECT SITE. PROPERTY OWNERSHIP LABELS HAVE BEEN GENERALLY PLACED BASED ON MESA COUNTY ASSESSOR GIS.
 2. CONTRACTOR TO COORDINATE TRAFFIC CONTROL WITH CDOT AND CITY AS REQUIRED.
 3. CONTRACTOR TO COORDINATE CONSTRUCTION LAYDOWN REQUIREMENTS WITH OWNER.



30-C102 (DOS RIOS PROPOSED SITE PLAN)

MH: C3-261-013
RIM = 4568.53'
24" HDPE E □ W = 4561.03'

2945-232-00-077
WILLIAM
ROBERT
JARVIS FAMILY
TESTAMENT
TRUST

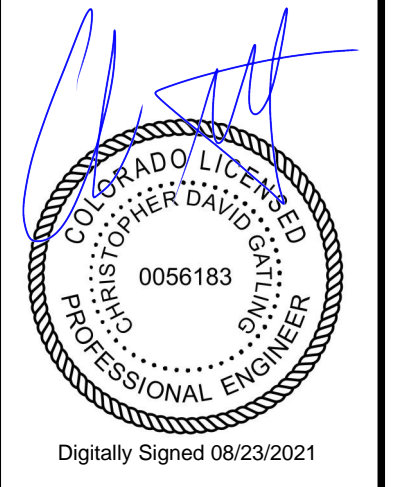
MH: C3-261-118
RIM = 4565.48'
15" VCP N □ S = 4557.35'
15" PVC (IN) NE = 4557.60'

MH: C3-261-031
RIM = 4572.47'
24" HDPE NE □ W = 4561.91'



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20171218008



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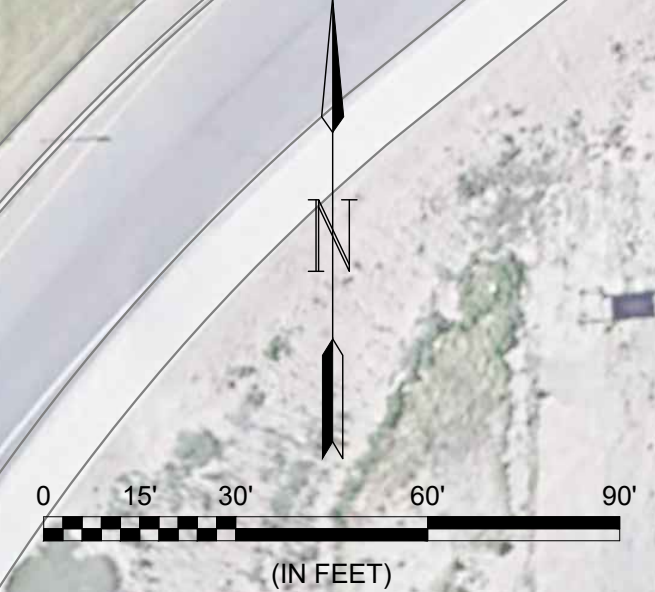
CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO
Grand Junction
COLORADO
GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

DOS RIOS EXISTING
SITE PLAN

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: CDG
DRAWN BY: TNP




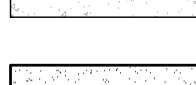
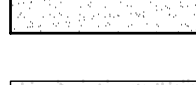
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DRAWING NUMBER
30-C101
SHEET NUMBER
033



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SITE LAYOUT COORDINATES			
POINT #	DESCRIPTION	NORTHING	EASTING
1	SW PAD CORNER	32430.86	90926.12
2	NW PAD CORNER	32453.49	90957.94
3	NW FENCE CORNER	32462.11	90929.20
4	NE FENCE CORNER	32448.34	90981.41
5	SE FENCE CORNER	32402.04	90960.92
6	SW FENCE CORNER	32427.33	90919.90
7	PAVEMENT TIE-IN	32375.90	90876.70
8	PAVEMENT TIE-IN	32517.76	90913.06

-  EXISTING ASPHALT PAVEMENT
-  NEW CONCRETE PAVEMENT 3
99-C502
-  EXISTING CONCRETE PAVEMENT
-  NEW GRAVEL PAVEMENT 2
99-C502
-  EXISTING GRAVEL PAVEMENT

- NOTES:
- CONTRACTOR SHALL LOCATE DOWNGRADE STORM CURB INLETS AND PLACE EROSION CONTROL GRAVEL BAGS AROUND INLETS.
 - FINAL FILTER PAD AND TRANSFORMER PAD ELEVATIONS SHALL MATCH.
 - FINAL TIE-IN PAVEMENT ELEVATIONS SHALL SMOOTH TRANSITION TO EXISTING SIDEWALK AND ASPHALT ROAD. CURB SHALL TRANSITION OVER 2FT TO A ROLLED CURB ALONG THE LENGTH OF THE NEW PAVEMENT.
 - VERIFY GATES WILL NOT PRIOR TO FURNISHING FENCING LAYOUT.
 - CONTRACTOR SHALL USE EMBANKMENT EROSION CONTROL METHODS AS NECESSARY TO MINIMIZE WASHOUT DURING CONSTRUCTION ACTIVITIES.
 - CONTRACTOR SHALL SUBMIT JOINTING PLAN TO BE APPROVED BY ENGINEER.



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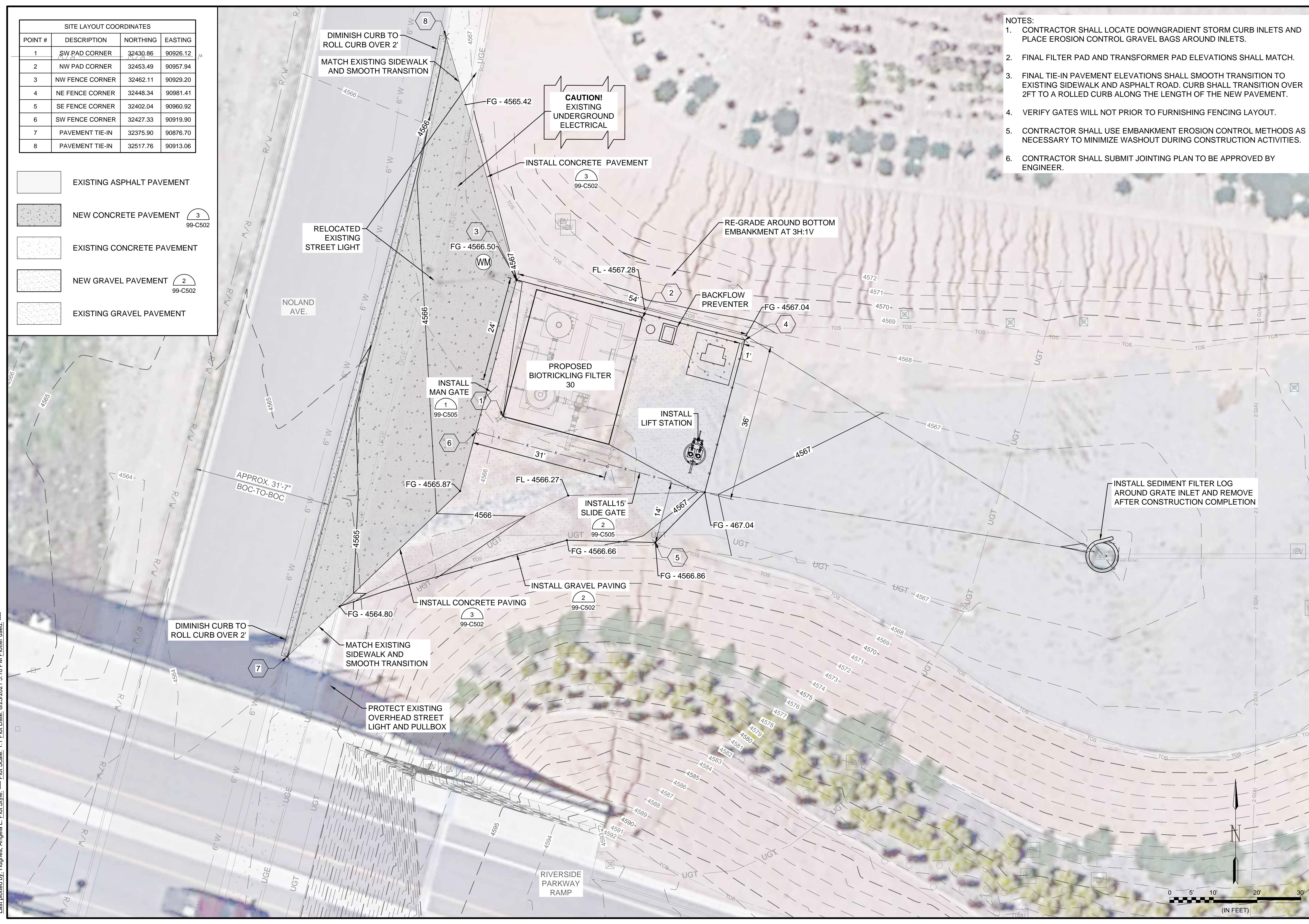
CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
Grand Junction
 CITY OF GRAND JUNCTION
 GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

DOS RIOS PROPOSED SITE PLAN

JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: CDG
 DRAWN BY: TNP

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DRAWING NUMBER
30-C102
 SHEET NUMBER
034



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 Last plotted by: Hughes, Angela L. Plot Date: 8/23/2021 5:10 PM Plotter used: ----

POTHOLING POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3000	32449.93	91050.23	4569.20	UGT
3001	32387.27	91031.84	4566.92	UGT
3002	32363.75	91017.50	4572.69	UGT
3003	32337.11	90997.04	4584.11	UGT
3004	32218.43	90986.53	4565.14	UGT
3005	32174.76	91437.28	4567.52	SSMH
3006	32558.49	91140.31	4601.95	UGT



INSET A
 30-C301/30-C301 SCALE: 1" = 10'



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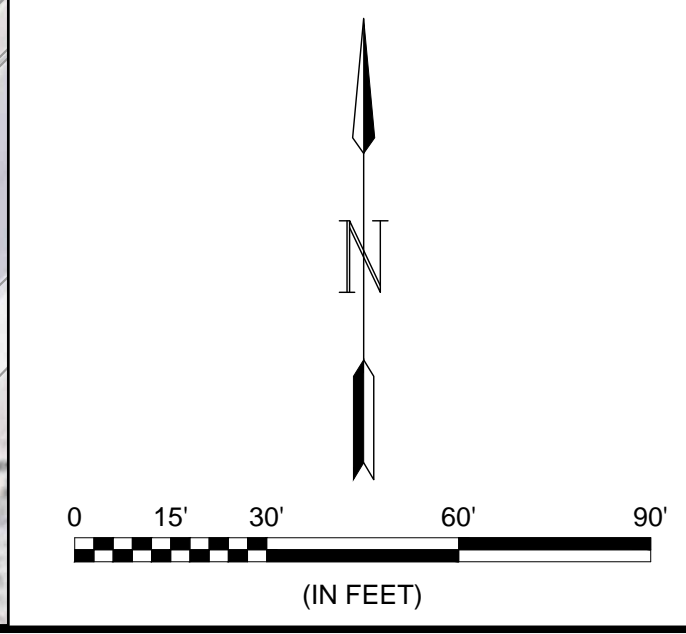
CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
Grand Junction
 CITY OF GRAND JUNCTION
 GRAND JUNCTION
 ODCR CONTROL IMPROVEMENTS

DOS RIOS SUE
 INFORMATION PLAN

JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: CDG
 DRAWN BY: ALH

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DRAWING NUMBER
30-C301
 SHEET NUMBER
035



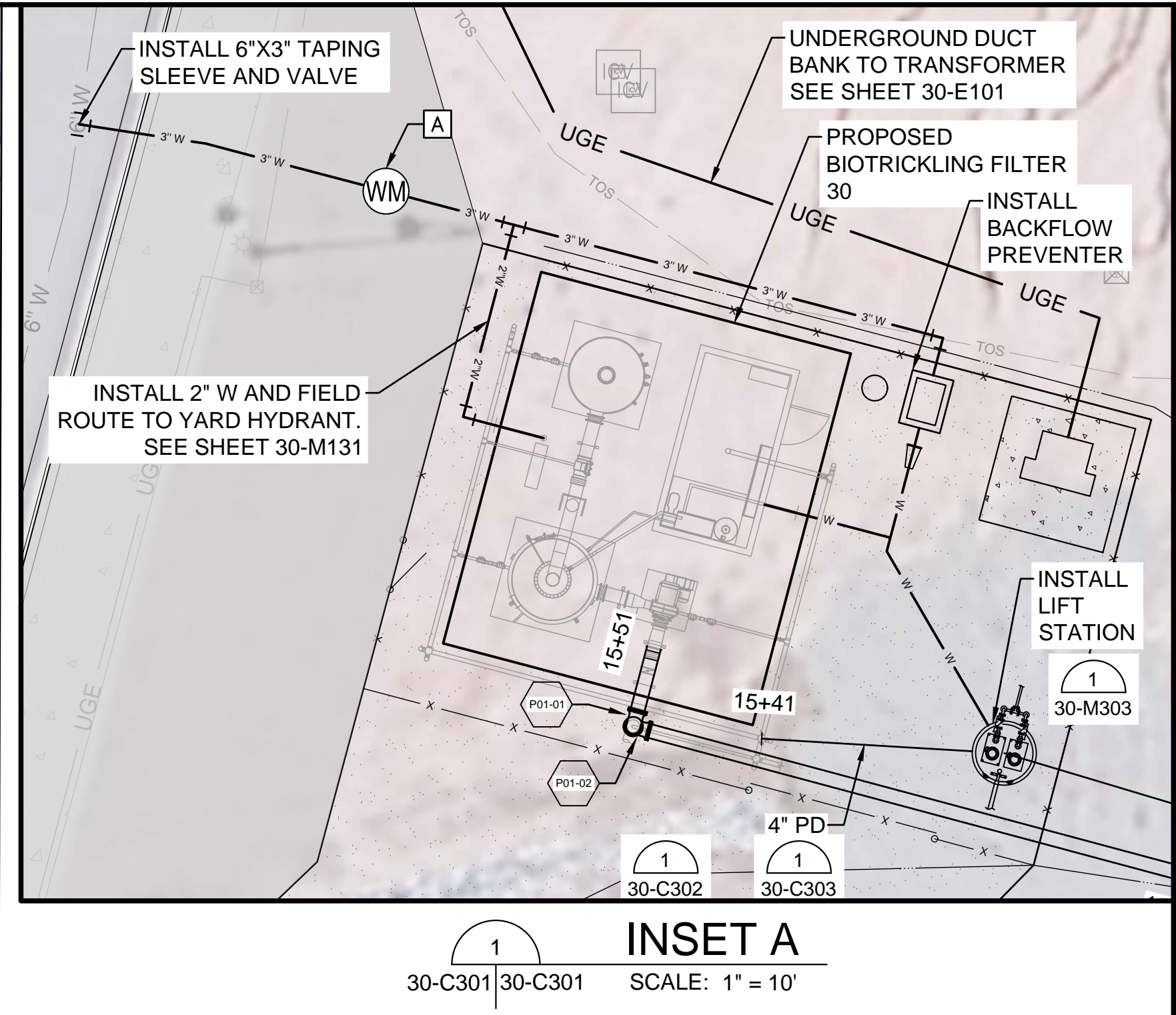
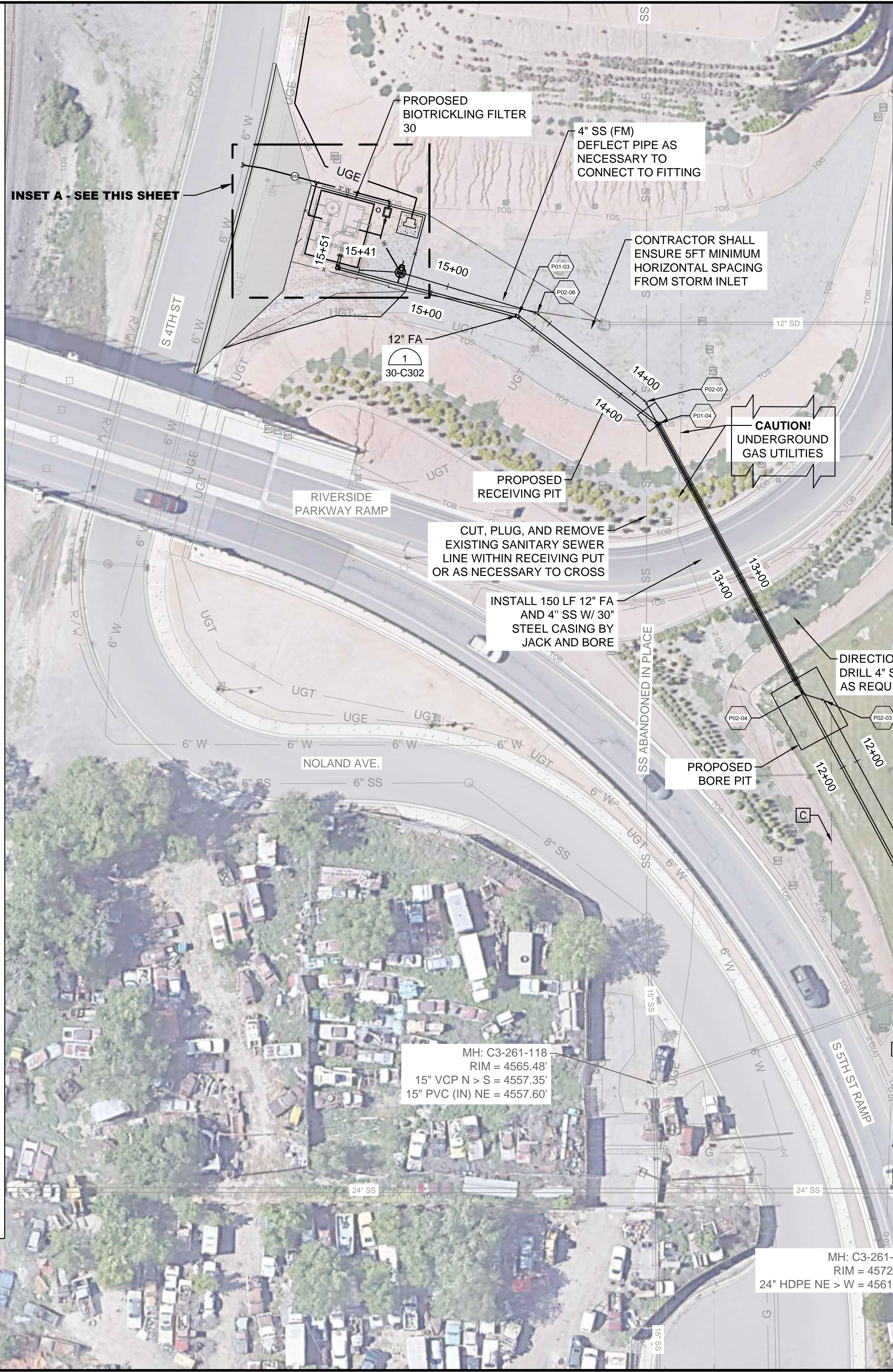
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 Last plotted by: Hughes, Angela L Plot Date: 8/23/2021 5:11 PM Plotter used:

YARD PIPING COORDINATES				
POINT #	NORTHING	EASTING	CENTERLINE ELEVATION	DESCRIPTION
P01-01	32425.16	90941.17	4570.00	12" VERT. TEE W/ GOOSENECK VENT
P01-02	32424.14	90941.77	4561.52	12" 90° BEND
P01-03	32402.28	91023.37	4561.94	12" 22.5° BEND
P01-04	32353.20	91087.33	4561.96	12" 22.5° BEND
P01-05	32126.27	91209.63	4562.14	12" 22.5° BEND
P01-06	32019.61	91220.51	4567.00	12" 22.5° BEND
P02-01	32020.36	91229.18	4565.54	4" 45° BEND
P02-02	32124.58	91218.56	4563.10	4" 22.5° BEND
P02-03	32226.70	91163.52	4563.10	4" 45° BEND
P02-04	32229.57	91153.96	4563.10	4" 45° BEND
P02-05	32363.14	91081.97	4563.20	4" 22.5° BEND
P02-06	32403.60	91032.33	4563.00	4" 22.5° BEND

- A** PIPING KEY NOTES
PIPING LAYOUT COORDINATES

- KEY NOTES:**
- INSTALL WATER METER PER DETAIL
 - BID ALTERNATE NO. 1 LOCATION - SEE SECTION 00 00 20 SECTION 4. IF ALTERNATE IS SELECTED, CORE EXISTING MH C3-261-031 AND TIE FOUL AIR PIPE DIRECTLY, PROVIDING POSITIVE SLOPE AND MIN. 3' OF COVER, IN LIEU OF CONSTRUCTION OF A NEW DOGHOUSE MANHOLE. CONTRACTOR SHALL COAT EXISTING MH IN ACCORDANCE TO SECTION 09 96 40.
 - BURIED ASPHALT PAVEMENT APPROXIMATELY 4" THICK IS ANTICIPATED APPROXIMATELY 36" BELOW GRADE IN THE AREA SHOWN.

- NOTES:**
- EXISTING PIPING IS SHOWN BASED ON AVAILABLE RECORD DRAWINGS AND INFORMATION PROVIDED TO THE ENGINEER. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND DEPTHS OF ALL PERTINENT LINES PRIOR TO CONSTRUCTION.
 - PIPING ELEVATIONS ARE FOR CONTRACTORS BENEFIT. CONTRACTOR SHALL VERIFY ELEVATIONS IN FIELD.
 - PRIOR TO INSTALLATION OF NEW PIPING, CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL PIPING OR UTILITIES (SHOWN OR NOT), INCLUDING THE EXISTING GAS LINE AND COMMUNICATIONS LINES. IF NECESSARY, VERTICAL AND HORIZONTAL ALIGNMENT OF NEW PIPING SHALL BE ADJUSTED IN COORDINATION WITH ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
 - ALL PIPES SHALL BE LAID AT A CONSTANT SLOPE BETWEEN THE ELEVATIONS GIVEN ON THESE PLANS. PIPELINES WITH NO ELEVATIONS GIVEN SHALL BE INSTALLED WITH MINIMUM 3' OF COVER OR AS REQUIRED TO AVOID CONFLICTS WITH EXISTING AND PROPOSED PIPING.
 - ALL BURIED VALVES SHALL HAVE VALVE BOX AS SPECIFIED.
 - CONTRACTOR SHALL INSTALL MJ SOLID SLEEVE AS NECESSARY TO MAKE CONNECTIONS TO EXISTING LINES.
 - CONTRACTOR SHALL PROTECT, OR REPLACE IN KIND ANY IRRIGATION LINES OR APPURTENANCES DAMAGED OR REMOVED AS PART OF THE WORK. CONTROL VALVES AND SPRINKLERS ARE SHOWN WHERE THEY WERE SURVEYED, BUT THIS MAY NOT INCLUDE ALL FACILITIES. CONTRACTOR SHALL FIELD LOCATE.
 - PIPELINES TO BE BORED IN PLACE ACROSS RIVER SIDE PARKWAY MAY BE PLACED ALONG SAME ALIGNMENT AND IN SAME CASING PIPE WITH APPROPRIATE CASING SPACERS AND CARRIERS AS APPROVED BY ENGINEER.
 - THROUGH THE FITTINGS SHALL BE RESISTED BY RESTRAINED JOINTS AS SPECIFIED AND AS REQUIRED TO RESIST THRUST. SEE 99-C503
 - SEE 99-C503 FOR PIPE TRENCH, BEDDING, AND BACKFILL DETAIL.
 - SEE 99-M502 FOR CLEANOUT DETAIL.
 - SEE 99-C502 FOR YARD HYDRANT DETAIL.
 - SEE 99-M502 FOR JACK AND BORE DETAIL.



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REGISTRATION NO. 20171218008

PROFESSIONAL ENGINEER
0056183
Digitally Signed 08/23/2021

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Last plotted by: Hughes, Angela L., Plot Style: ---, Plot Scale: 1:1, Plot Date: 8/23/2021 5:11 PM, Plotter User: ----

REV.	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO

Grand Junction
C O L O R A D O

GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

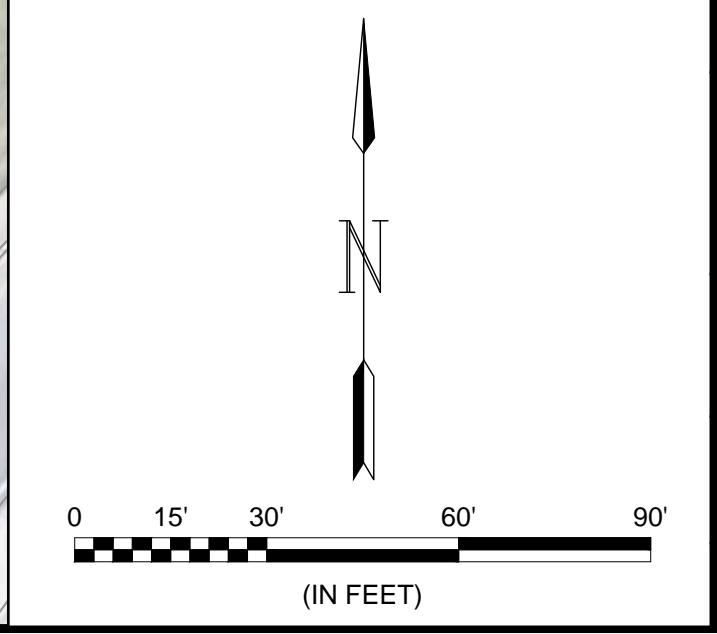
DOS RIOS YARD
PIPING PLAN

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: CDG
DRAWN BY: TNP

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

DRAWING NUMBER
30-C302

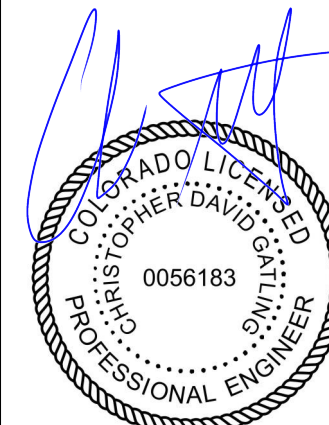
SHEET NUMBER
036





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20171218008



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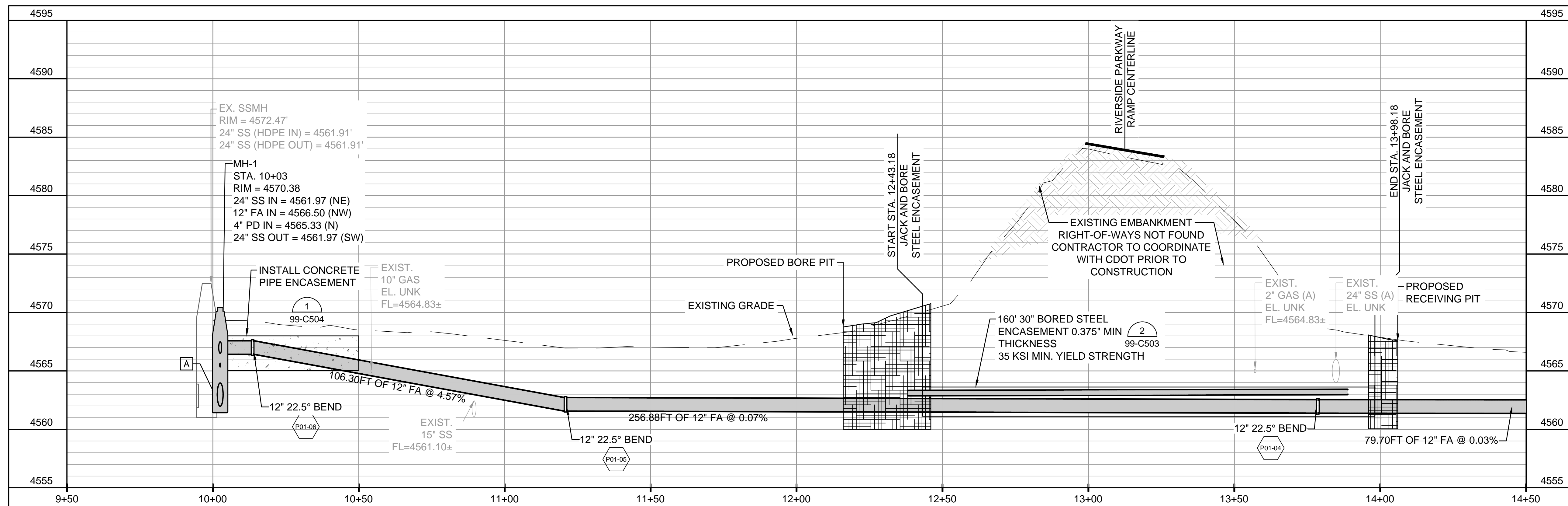
CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
Grand Junction
 CITY OF COLORADO
 GRAND JUNCTION
 ODOR CONTROL IMPROVEMENTS

DOS RIOS YARD
 PIPING PROFILES I

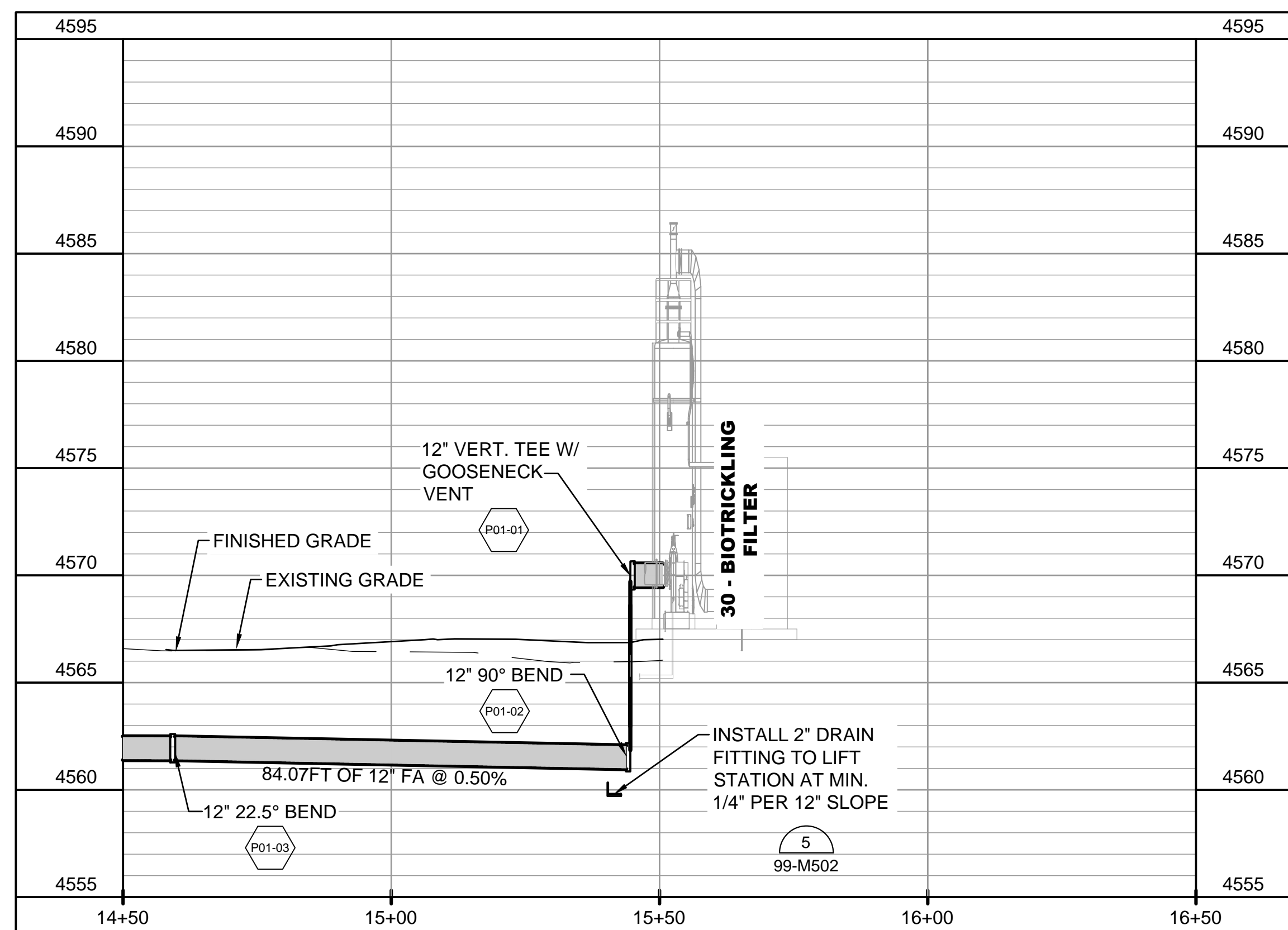
JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: CDG
 DRAWN BY: TNP

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

DRAWING NUMBER
30-C303
 SHEET NUMBER
037



1
 30-C301 | 30-C302
12" FA
 SCALE: 1" = 20'



1
 30-C301 | 30-C302
12" FA (CONT'D)
 SCALE: 1" = 20'

PIPING KEY NOTES:

- A. MANHOLE NO. 1 SHALL BE CONSTRUCTED AS A DOGHOUSE STYLE POLYMER CONCRETE MANHOLE AND TIE-IN ELEVATIONS SHALL AVOID BACKING UP LINE DURING A SURCHARGING SEWER EVENT.

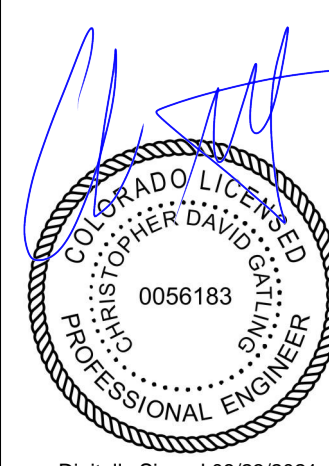
NOTES:

1. PIPING ELEVATIONS ARE FOR CONTRACTORS BENEFIT. CONTRACTOR SHALL VERIFY ELEVATIONS IN FIELD.
2. ENSURE NO LOCALIZED HIGH POINTS ARE INSTALLED WITHIN THE FOUL AIR DUCT. HIGH POINTS SHALL BE AT MANHOLE NO. 1 AND LOW POINT SHALL BE AT FITTING NO. P01-02.
3. SEE SECTION 33 05 23.16 FOR UTILITY PIPE JACKING.



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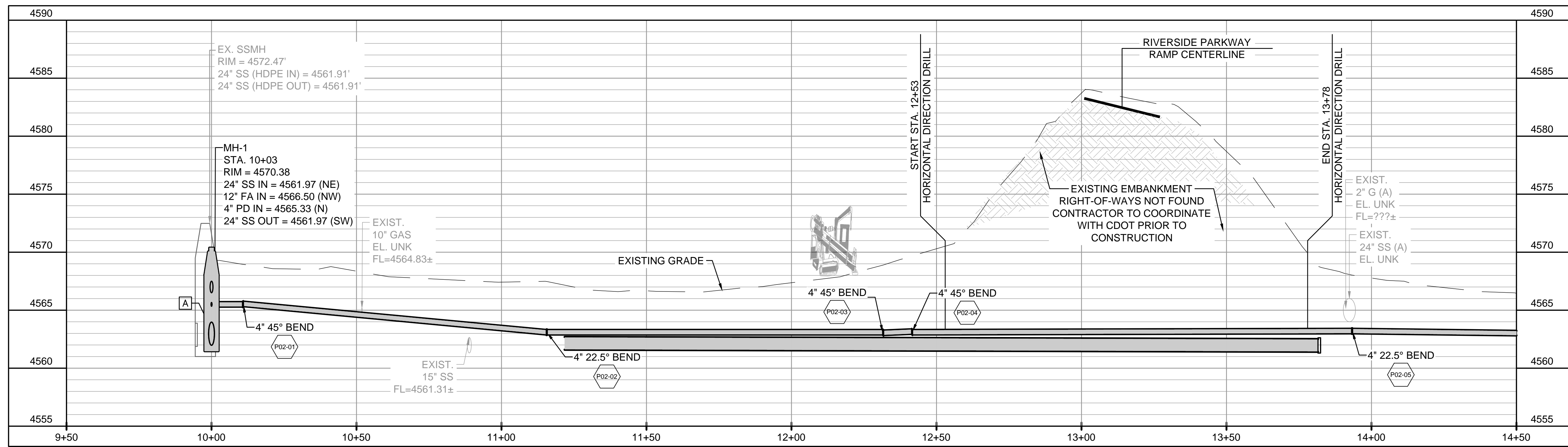
CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
 GRAND JUNCTION
 ODOR CONTROL IMPROVEMENTS

DOS RIOS YARD
 PIPING PROFILES II

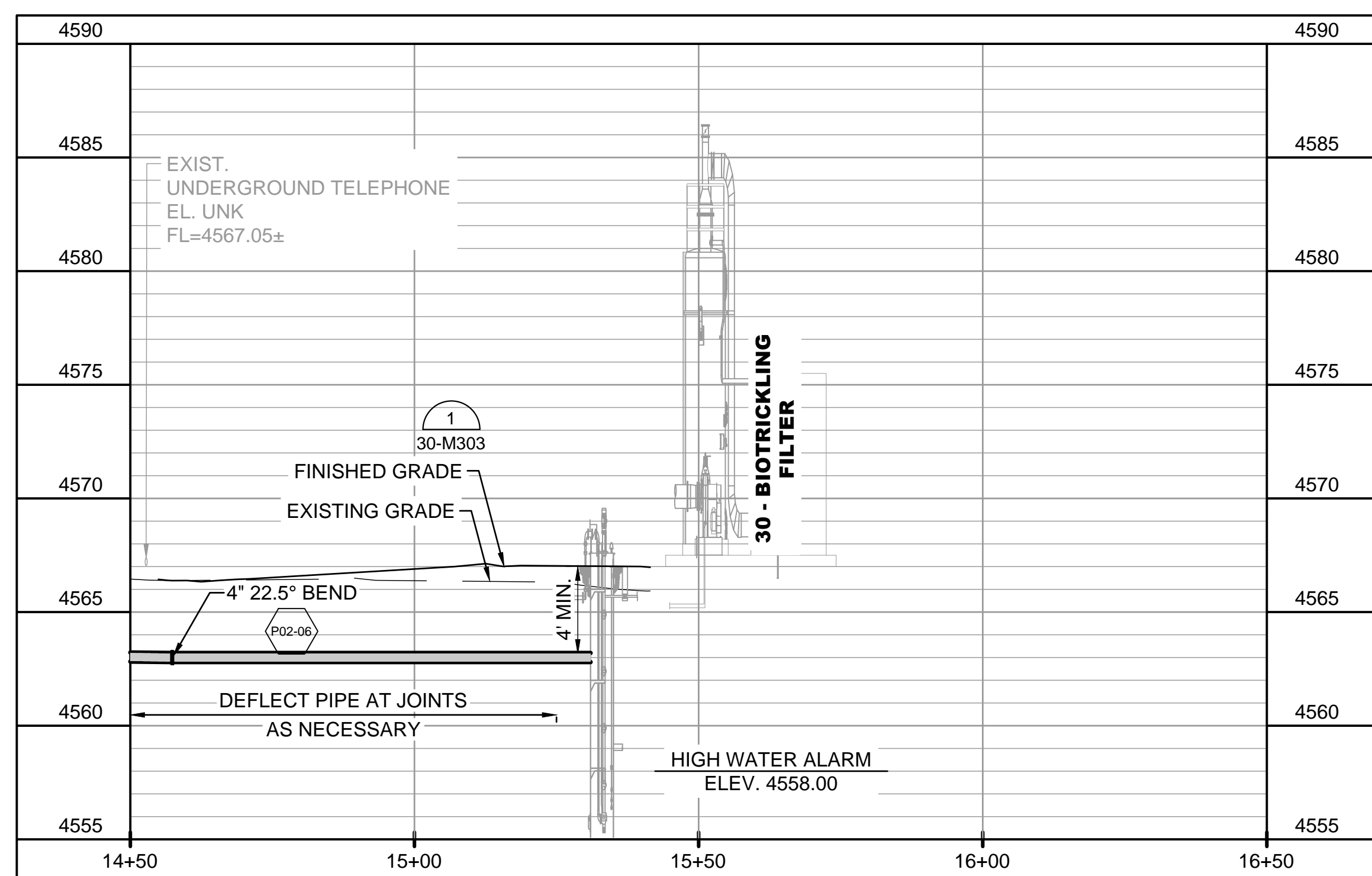
JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: CDG
 DRAWN BY: TNP

NOTES:
 1. PIPING ELEVATIONS ARE FOR CONTRACTORS BENEFIT. CONTRACTOR SHALL VERIFY ELEVATIONS IN FIELD.
 2. ENSURE NO LOCALIZED HIGH POINTS ARE INSTALLED WITHIN THE FORCE MAIN. HIGH POINTS SHALL BE AT MANHOLE NO. 1
 3. SEE SECTION 33 05 23.53 FOR HORIZONTAL DIRECTION DRILLING.

DRAWING NUMBER
30-C304
 SHEET NUMBER
038



2
 4" PD
 30-C301|30-C303 SCALE: 1" = 20'



2
 4" PD (CONT'D)
 30-C301|30-C303 SCALE: 1" = 20'

PIPING KEY NOTES:

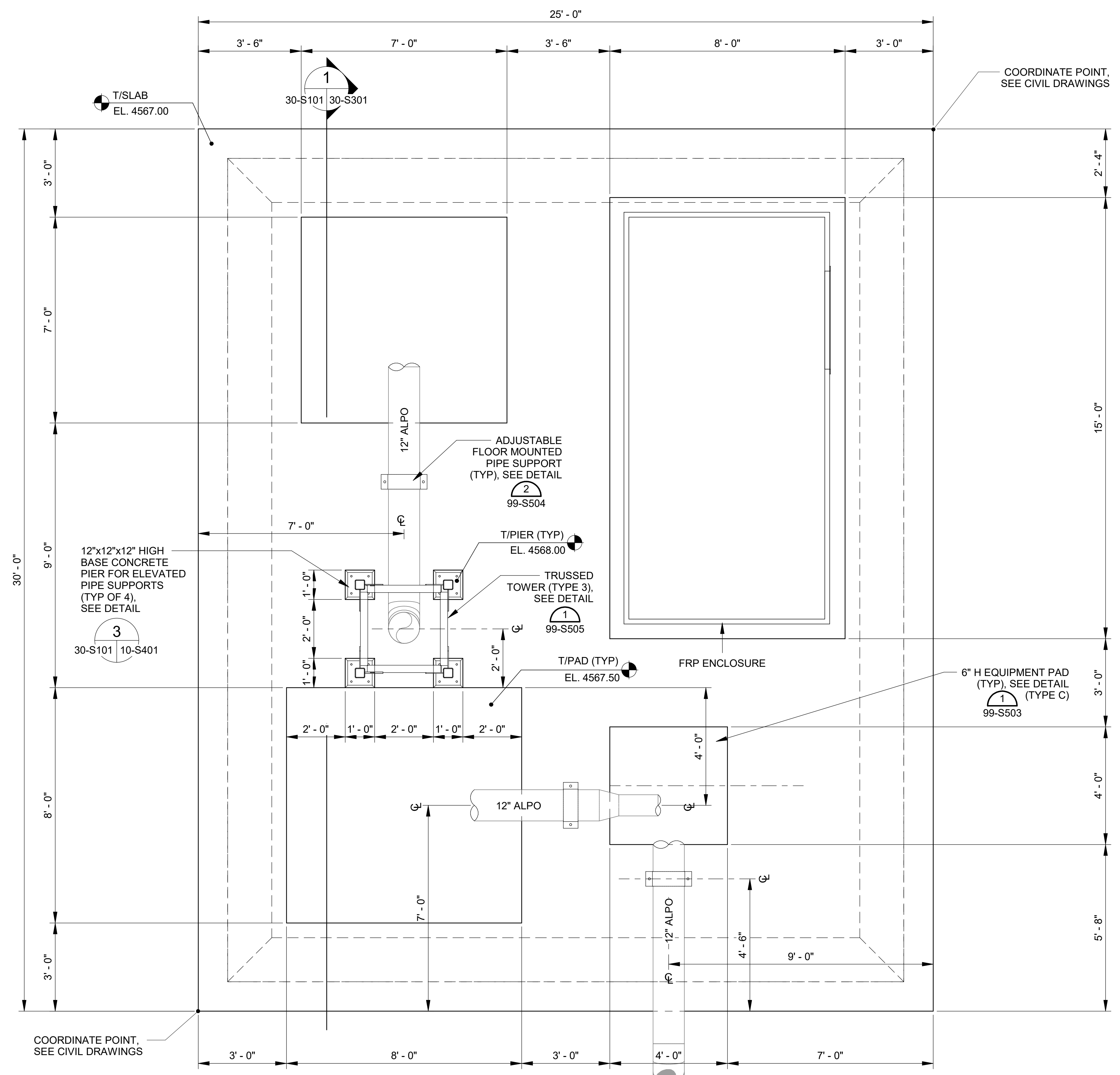
- A. MANHOLE NO. 1 SHALL BE CONSTRUCTED AS A DOGHOUSE STYLE POLYMER CONCRETE MANHOLE AND TIE-IN ELEVATIONS SHALL AVOID BACKING UP LINE DURING A SURCHARGING SEWER EVENT.

NOTES:

- 1. PIPING ELEVATIONS ARE FOR CONTRACTORS BENEFIT. CONTRACTOR SHALL VERIFY ELEVATIONS IN FIELD.
- 2. ENSURE NO LOCALIZED HIGH POINTS ARE INSTALLED WITHIN THE FORCE MAIN. HIGH POINTS SHALL BE AT MANHOLE NO. 1
- 3. SEE SECTION 33 05 23.53 FOR HORIZONTAL DIRECTION DRILLING.

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Revit File: BM 360/20W23045 - Grand Junction Persigo Biostricking Des/GJPBD - DOS RIOS BIOFILTER.rvt
 PLOT Date: 8/20/2021 11:00:54 AM



- NOTES:**
- SEE MECHANICAL SHEETS FOR PIPE LAYOUT AND DIMENSIONS.
 - PROVIDE LOCKS FOR ALL GATES, DOORS, AND ENCLOSURES AS REQUIRED BY THE OWNER. COORDINATE LOCK TYPE, KEYING, AND OTHER APPURTENANCES WITH THE OWNER. LOCKS SHALL BE COMPATIBLE WITH FLACON EB1 LOCK CYLINDERS.



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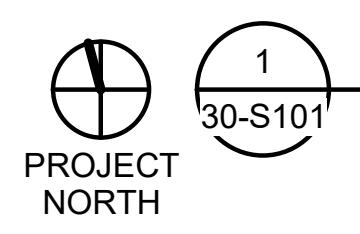
 GRAND JUNCTION
 ODOR CONTROL IMPROVEMENTS

DOS RIOS ODOR CONTROL SCRUBBER FOUNDATION PLAN

JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: KAM
 DRAWN BY: JAS

BAR IS ONE INCH ON ORIGINAL DRAWING
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DRAWING NUMBER
30-S101
 SHEET NUMBER
039

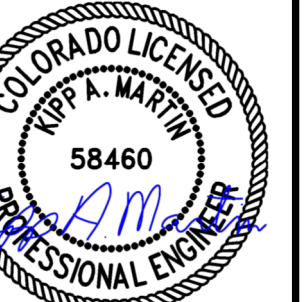


DOS RIOS ODOR CONTROL SCRUBBER FOUNDATION PLAN
 SCALE: 1/2" = 1'-0"



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CITY OF GRAND JUNCTION
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 GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

DOS RIOS ODOR CONTROL STRUCTURAL SECTIONS

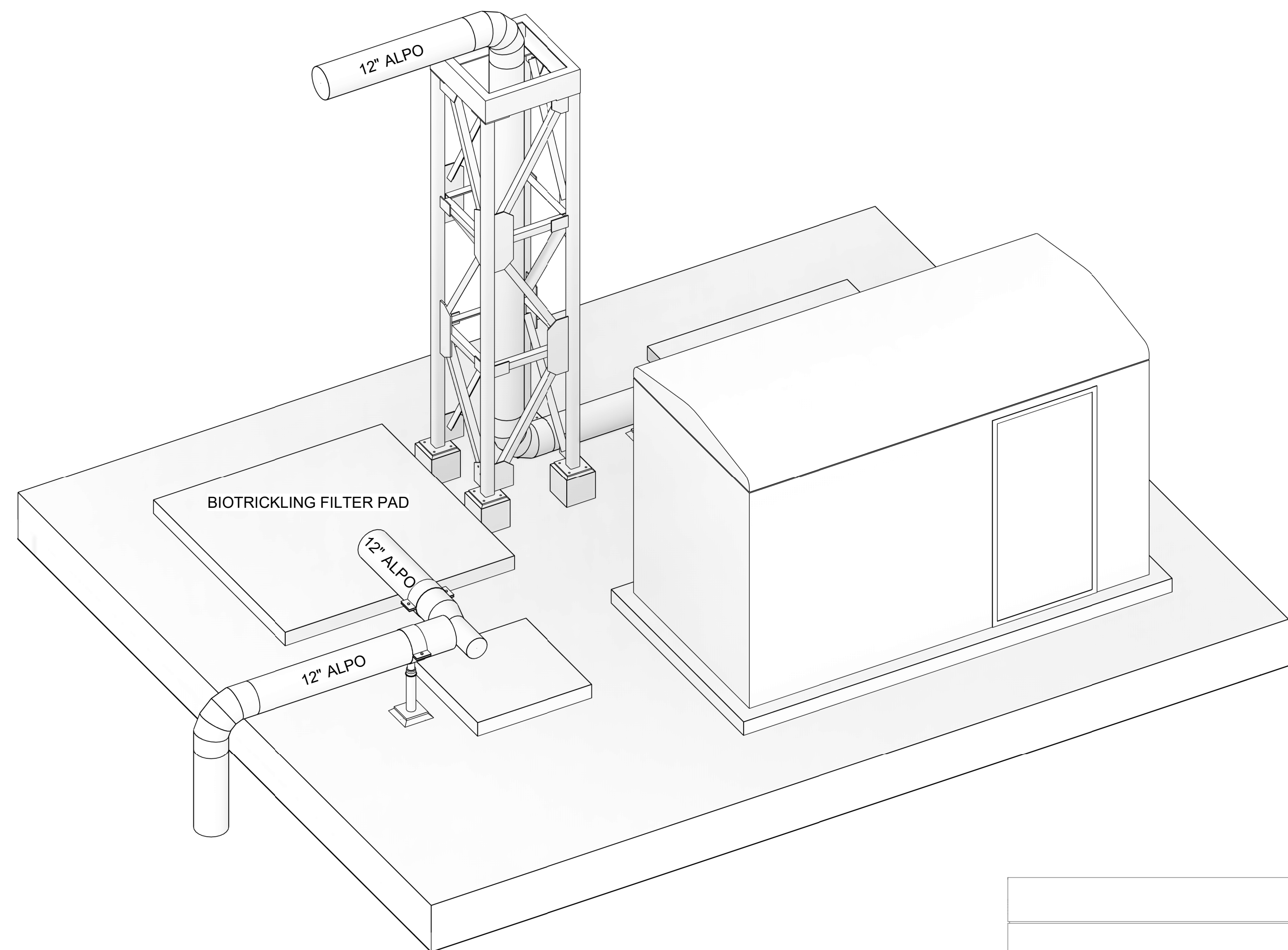
JOB NO.: 20W23045
 DATE: AUGUST 2021
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 DRAWN BY: JAS

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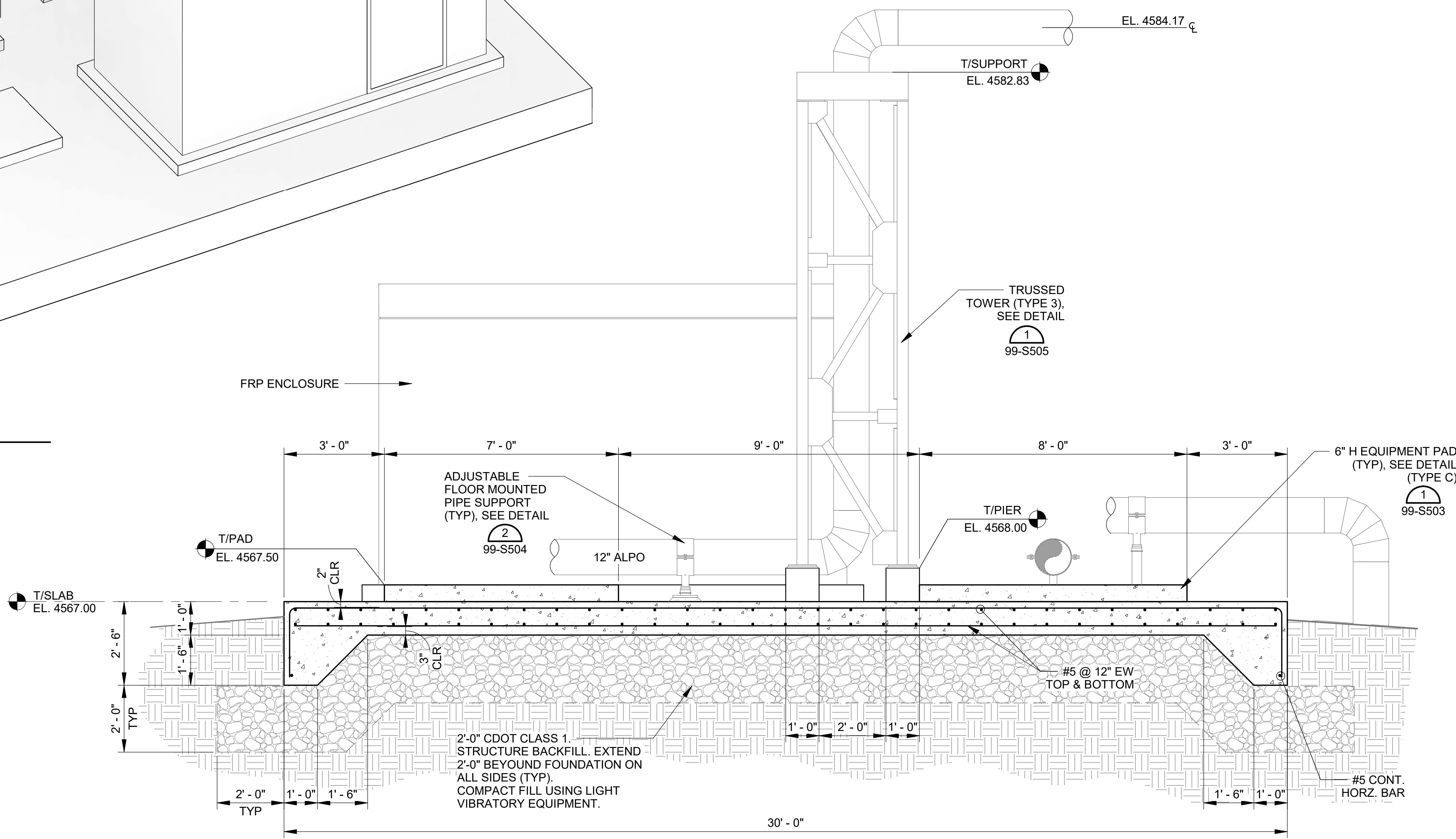
DRAWING NUMBER
30-S301
 SHEET NUMBER **040**

NOTES:

- SEE MECHANICAL SHEETS FOR PIPE LAYOUT AND DIMENSIONS.
- PROVIDE LOCKS FOR ALL GATES, DOORS, AND ENCLOSURES AS REQUIRED BY THE OWNER. COORDINATE LOCK TYPE, KEYING, AND OTHER APPURTENANCES WITH THE OWNER. LOCKS SHALL BE COMPATIBLE WITH FLACON EB1 LOCK CYLINDERS.

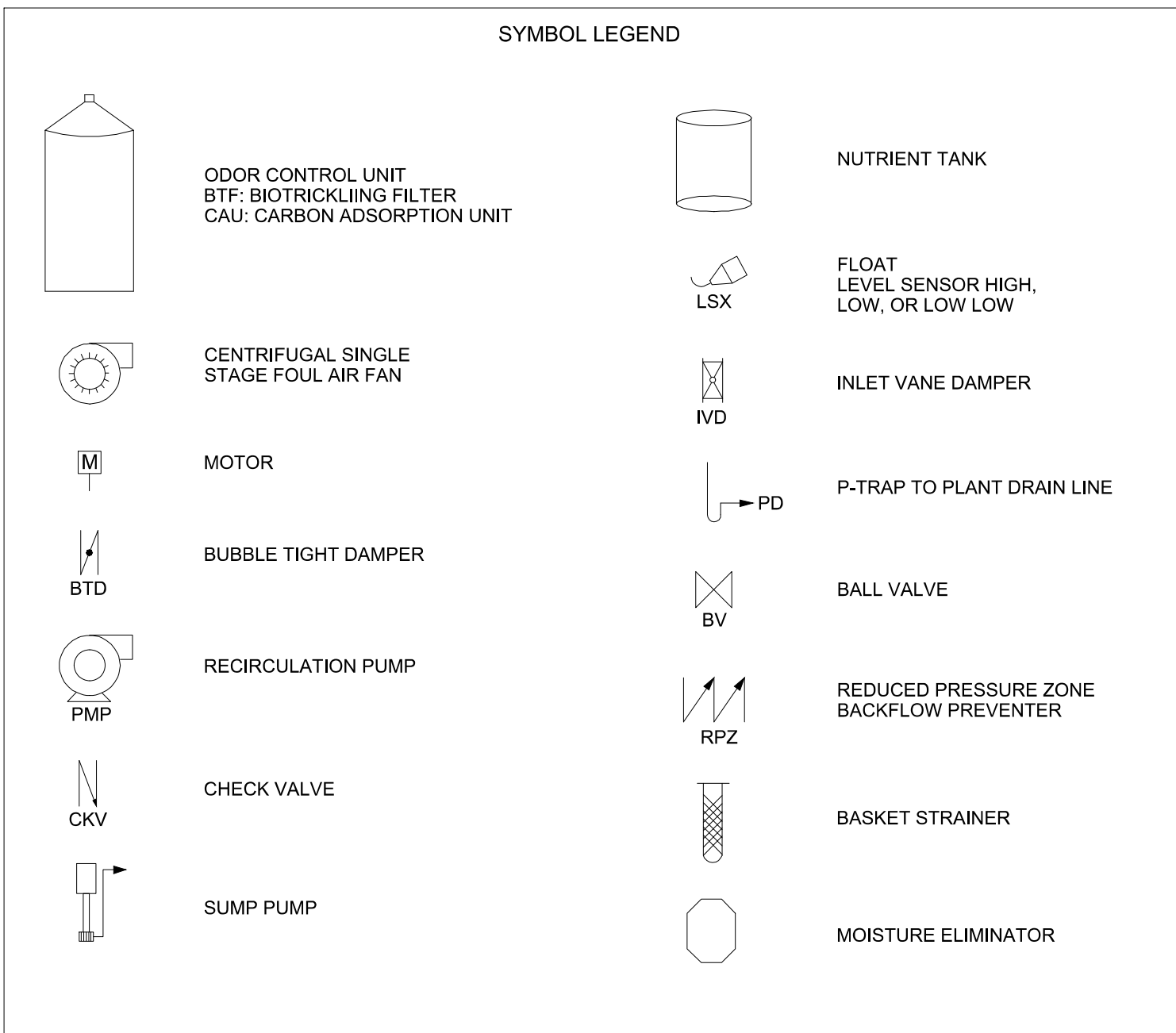


2
 30-S301
DOS RIOS ODOR CONTROL ISOMETRIC VIEW
 SCALE: NOT TO SCALE



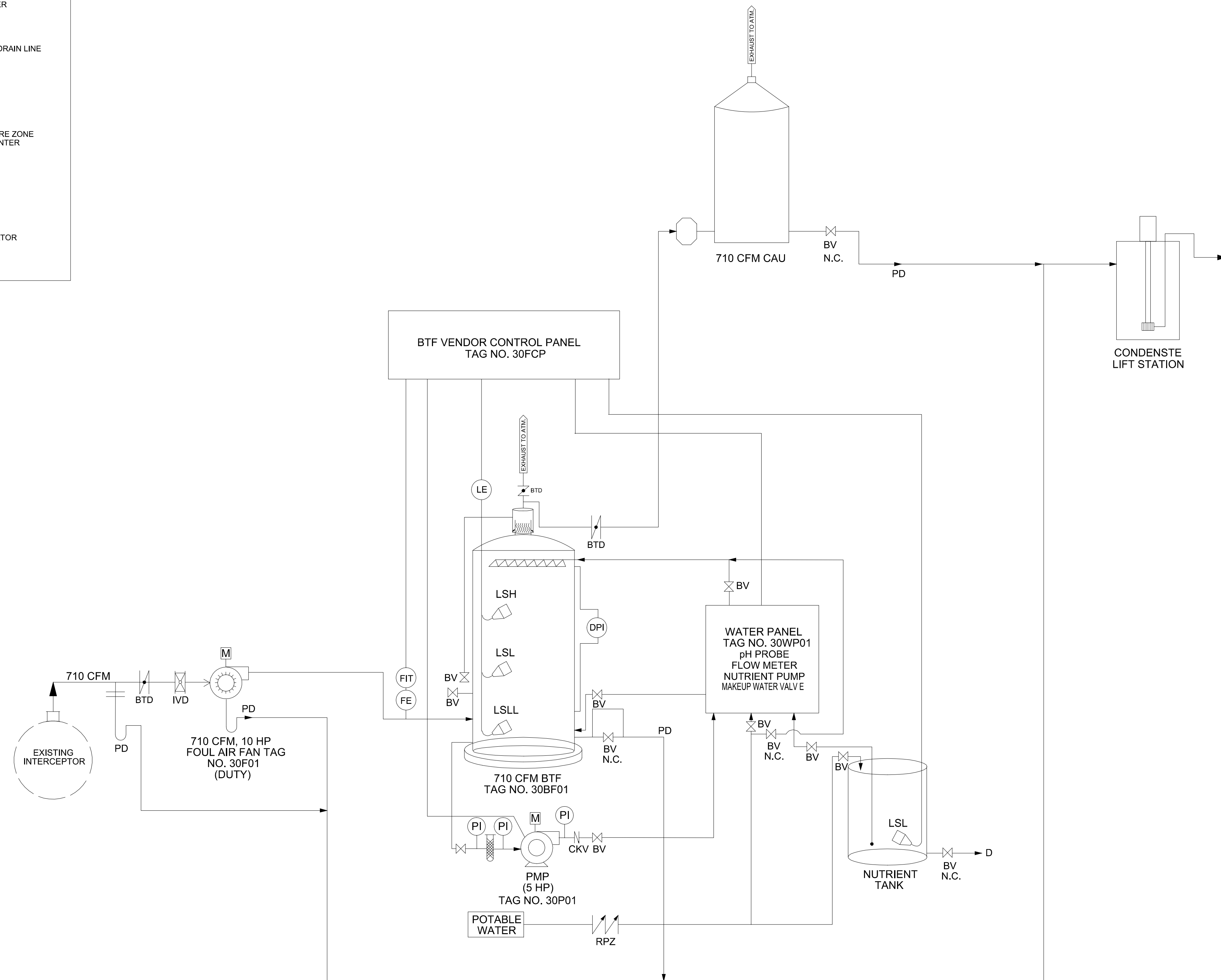
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 30-S101 | 30-S301
DOS RIOS SCRUBBER SECTION
 SCALE: 1/2" = 1'-0"

Revit File: BM 360/20W23045 - Grand Junction Persigo Biotrickling Des/GJPBD - DOS RIOS BIOFILTER.rvt
 Plot Date: 8/20/2021 11:00:57 AM



NOTES:

1. NOT ALL DAMPERS, FITTINGS AND APPURTENANCES ARE SHOWN. REFER TO OTHER DRAWINGS FOR ADDITIONAL APPURTENANCES.



DOS RIOS ODOR CONTROL SYSTEM SCHEMATIC



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REGISTRATION NO.
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Grand Junction
CITY OF GRAND JUNCTION
GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

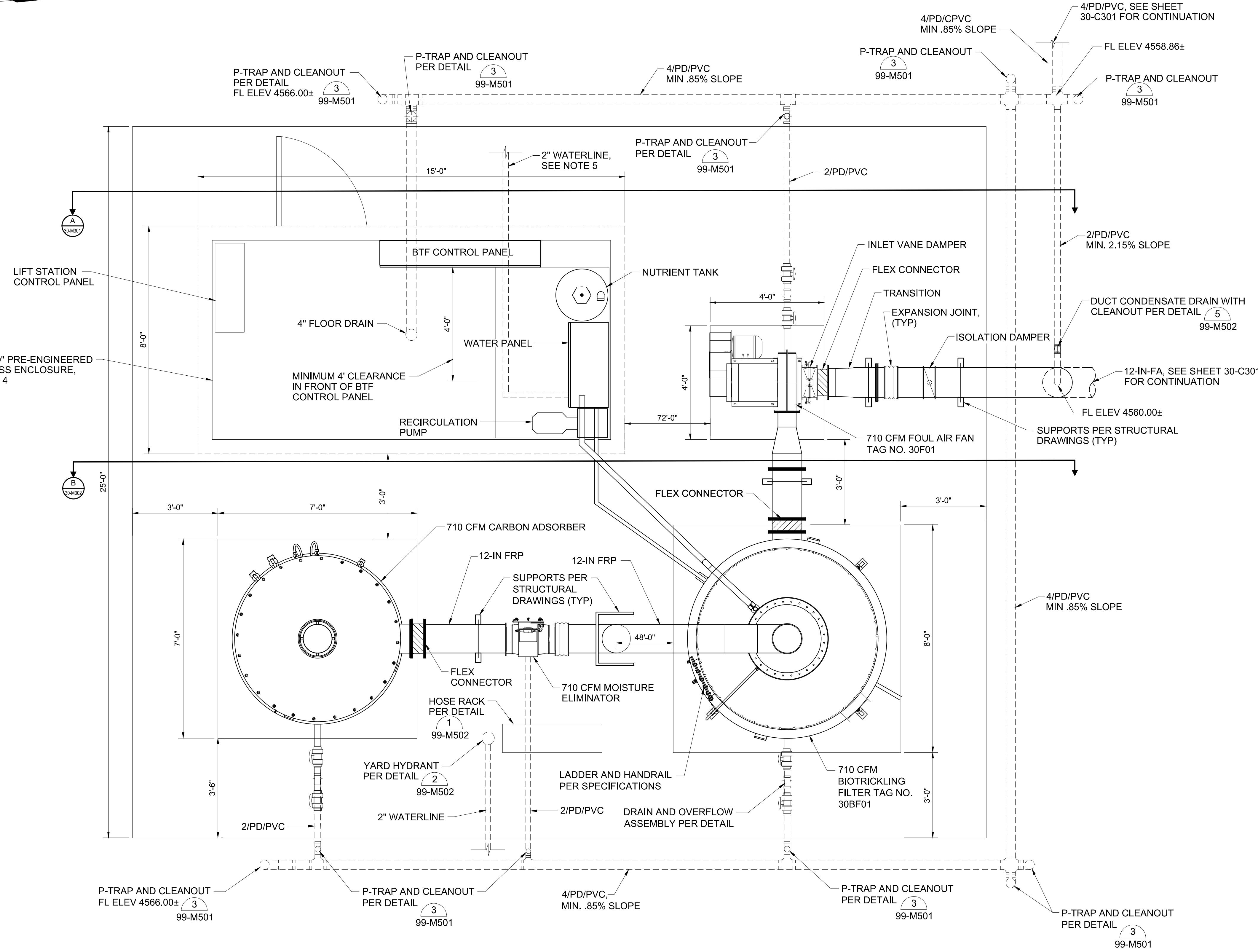
DOS RIOS
FOUL AIR
COLLECTION SYSTEM
SCHEMATIC

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: ABD
DRAWN BY: SRG

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0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER
30-M101
SHEET NUMBER
041





1 TOP PLAN
30-M131 SCALE: 1/2" = 1'-0"

- GENERAL NOTES:
1. WATER PANEL LOCATION AND ASSOCIATED PIPING CONFIGURATIONS VARY BY MANUFACTURER; FIELD ROUTE PROCESS PIPING AND ELECTRICAL CONDUIT PER EQUIPMENT MANUFACTURER'S RECOMMENDATION.
 2. INSULATE, HEAT TRACE, AND ALUMINUM JACKET ALL EXPOSED WATER LINES, ALL EXPOSED DRAIN LINES THAT NORMALLY HAVE STANDING WATER, INCLUDING ALL PRESSURE LINES, 4-INCH IN DIAMETER AND SMALLER, AND NUTRIENT FEED LINES AND ACCESSORIES, INCLUDING ALL VALVES AND APPURTENANCES IN AFFECTED PIPES.
 3. POWER FOR HEAT TRACE SHALL BE SUPPLIED BY THE PANEL PROVIDED BY THE BTf MANUFACTURER SEE SPECIFICATION SECTION 23 05 34.
 4. CONTRACTOR SHALL COORDINATE WITH FRP ENCLOSURE MANUFACTURE AND CONNECT ENCLOSURE TO INCOMING ELECTRICAL POWER AND DISTRIBUTION PANEL.
 5. WATER SERVICE TO BIOTRICKLING FILTER SHALL BE POTABLE CITY WATER. SEE SHEET 30-C301 FOR WATERLINE CONTINUATION.
 6. REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS.



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CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO
Grand Junction
CITY OF GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

DOS RIOS
ODOR CONTROL
BTF EQUIPMENT PLAN

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: ABD
DRAWN BY: SRG

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DRAWING NUMBER
30-M131
SHEET NUMBER
042





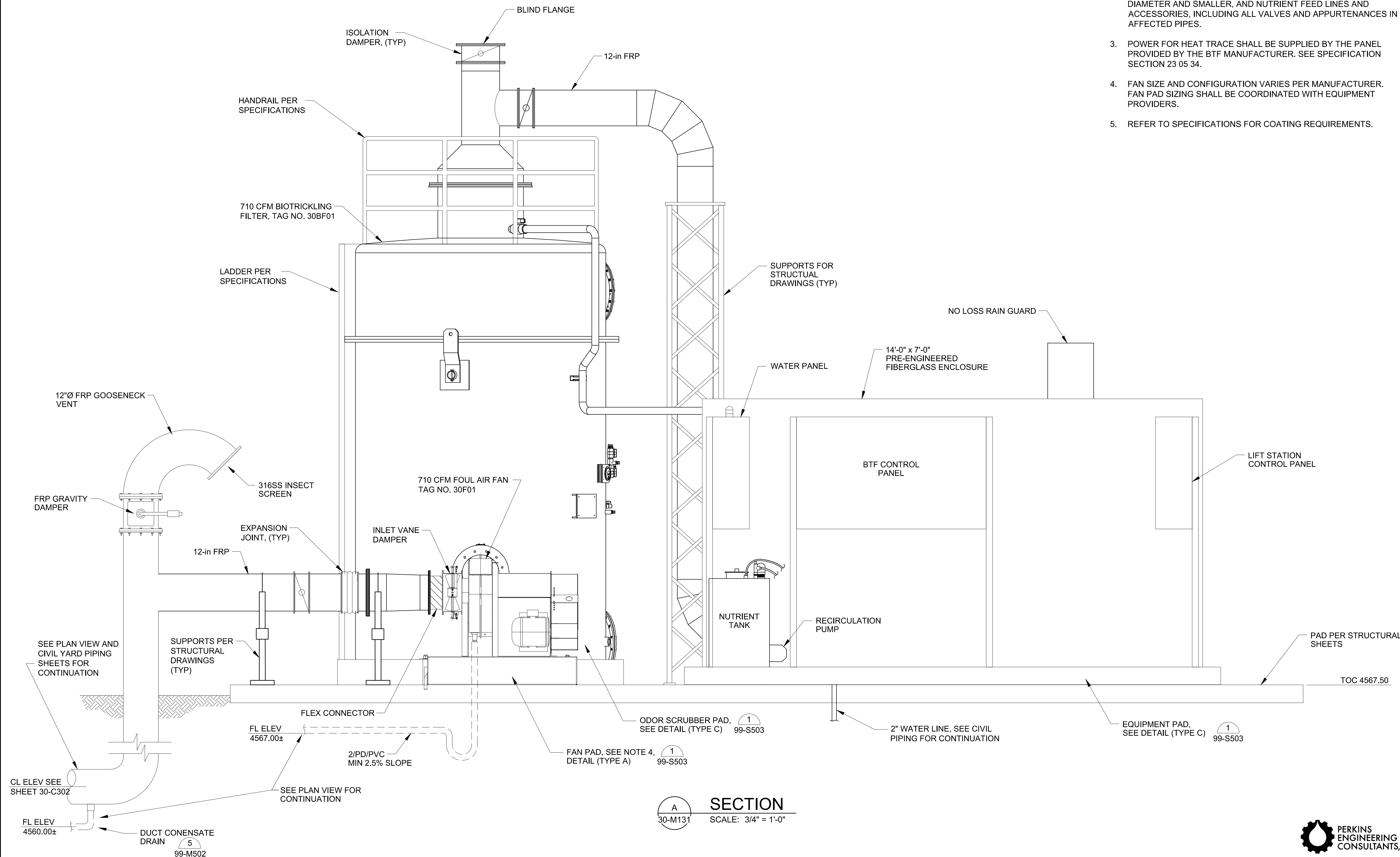
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GENERAL NOTES:

1. WATER PANEL LOCATION AND ASSOCIATED PIPING CONFIGURATIONS VARY BY MANUFACTURER; FIELD ROUTE PROCESS PIPING AND ELECTRICAL CONDUIT PER EQUIPMENT MANUFACTURER'S RECOMMENDATION.
2. INSULATE, HEAT TRACE, AND ALUMINUM JACKET ALL EXPOSED WATER LINES, ALL EXPOSED DRAIN LINES THAT NORMALLY HAVE STANDING WATER, INCLUDING ALL PRESSURE LINES, 4-INCH IN DIAMETER AND SMALLER, AND NUTRIENT FEED LINES AND ACCESSORIES, INCLUDING ALL VALVES AND APPURTENANCES IN AFFECTED PIPES.
3. POWER FOR HEAT TRACE SHALL BE SUPPLIED BY THE PANEL PROVIDED BY THE BTF MANUFACTURER. SEE SPECIFICATION SECTION 23 05 34.
4. FAN SIZE AND CONFIGURATION VARIES PER MANUFACTURER. FAN PAD SIZING SHALL BE COORDINATED WITH EQUIPMENT PROVIDERS.
5. REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS.



SECTION
SCALE: 3/4" = 1'-0"

REV.	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO
Grand Junction
CITY OF GRAND JUNCTION
GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

DOS RIOS
ODOR CONTROL
SYSTEM SECTION
AND ELEVATION I

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: ABD
DRAWN BY: SRG

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30-M301
SHEET NUMBER
043





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GENERAL NOTES:

1. WATER PANEL LOCATION AND ASSOCIATED PIPING CONFIGURATIONS VARY BY MANUFACTURER; FIELD ROUTE PROCESS PIPING AND ELECTRICAL CONDUIT PER EQUIPMENT MANUFACTURER'S RECOMMENDATION.
2. INSULATE, HEAT TRACE, AND ALUMINUM JACKET ALL EXPOSED WATER LINES. ALL EXPOSED DRAIN LINES THAT NORMALLY HAVE STANDING WATER, INCLUDING ALL PRESSURE LINES, 4-INCH IN DIAMETER AND SMALLER, AND NUTRIENT FEED LINES AND ACCESSORIES, INCLUDING ALL VALVES AND APPURTENANCES IN AFFECTED PIPES.
3. POWER FOR HEAT TRACE SHALL BE SUPPLIED BY THE PANEL PROVIDED BY THE BTF MANUFACTURER.
4. REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS.

REV.	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO

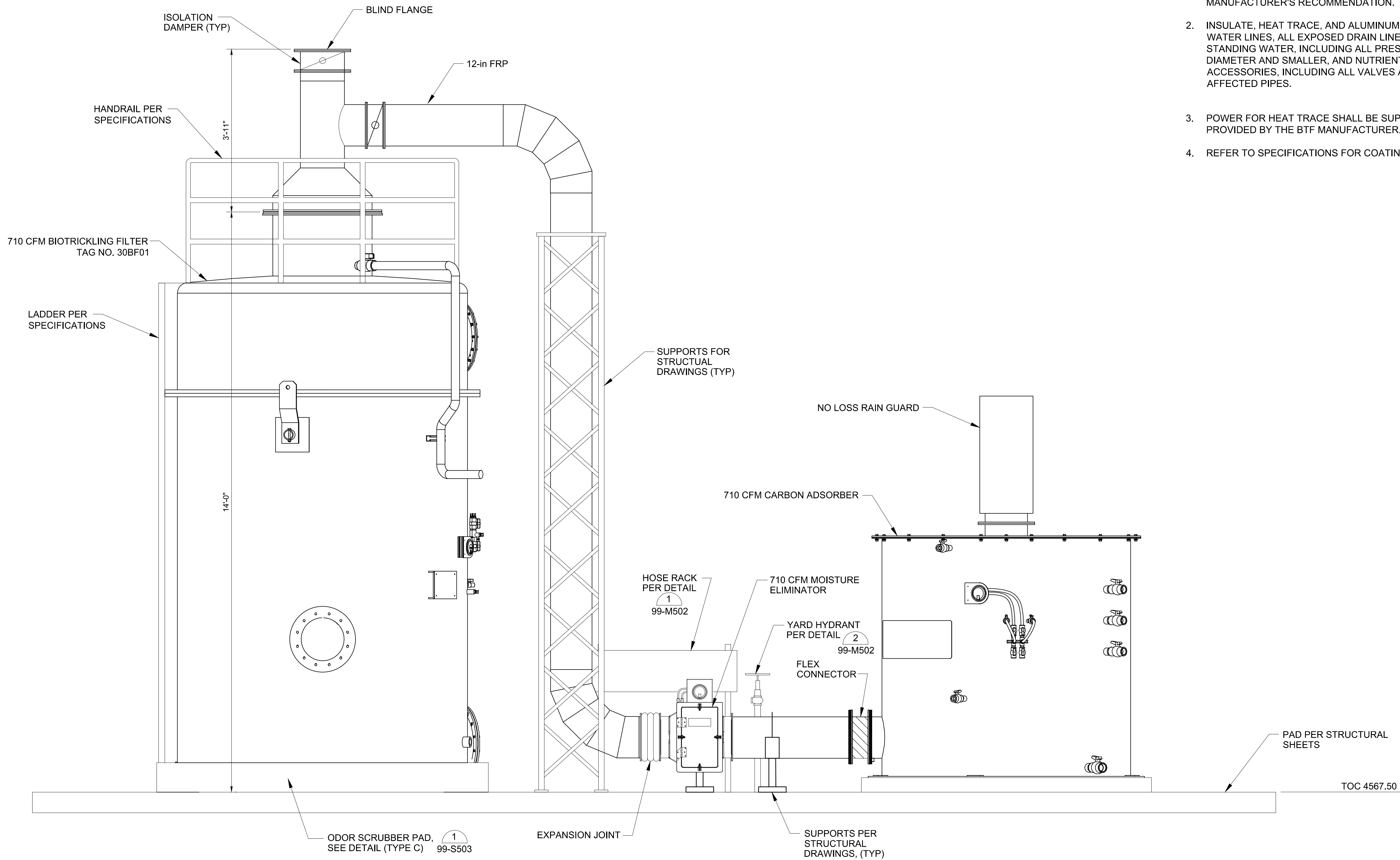
 GRAND JUNCTION
 ODOR CONTROL IMPROVEMENTS

DOS RIOS
 ODOR CONTROL
 SYSTEM SECTION
 AND ELEVATION II

JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: ABD
 DRAWN BY: SRG

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DRAWING NUMBER
30-M302
 SHEET NUMBER
044

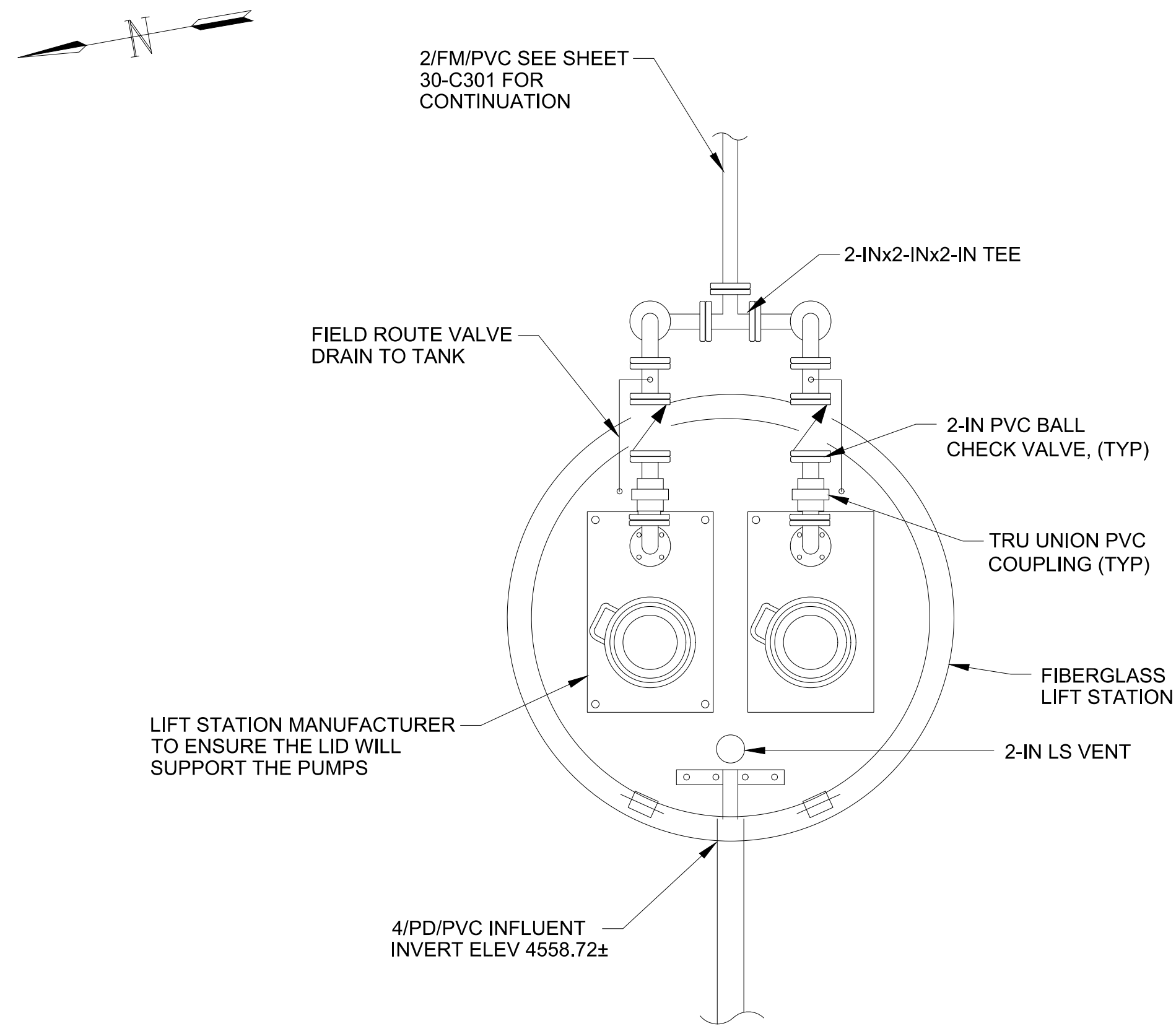


B
 SECTION
 30-M131 SCALE: 3/4" = 1'-0"

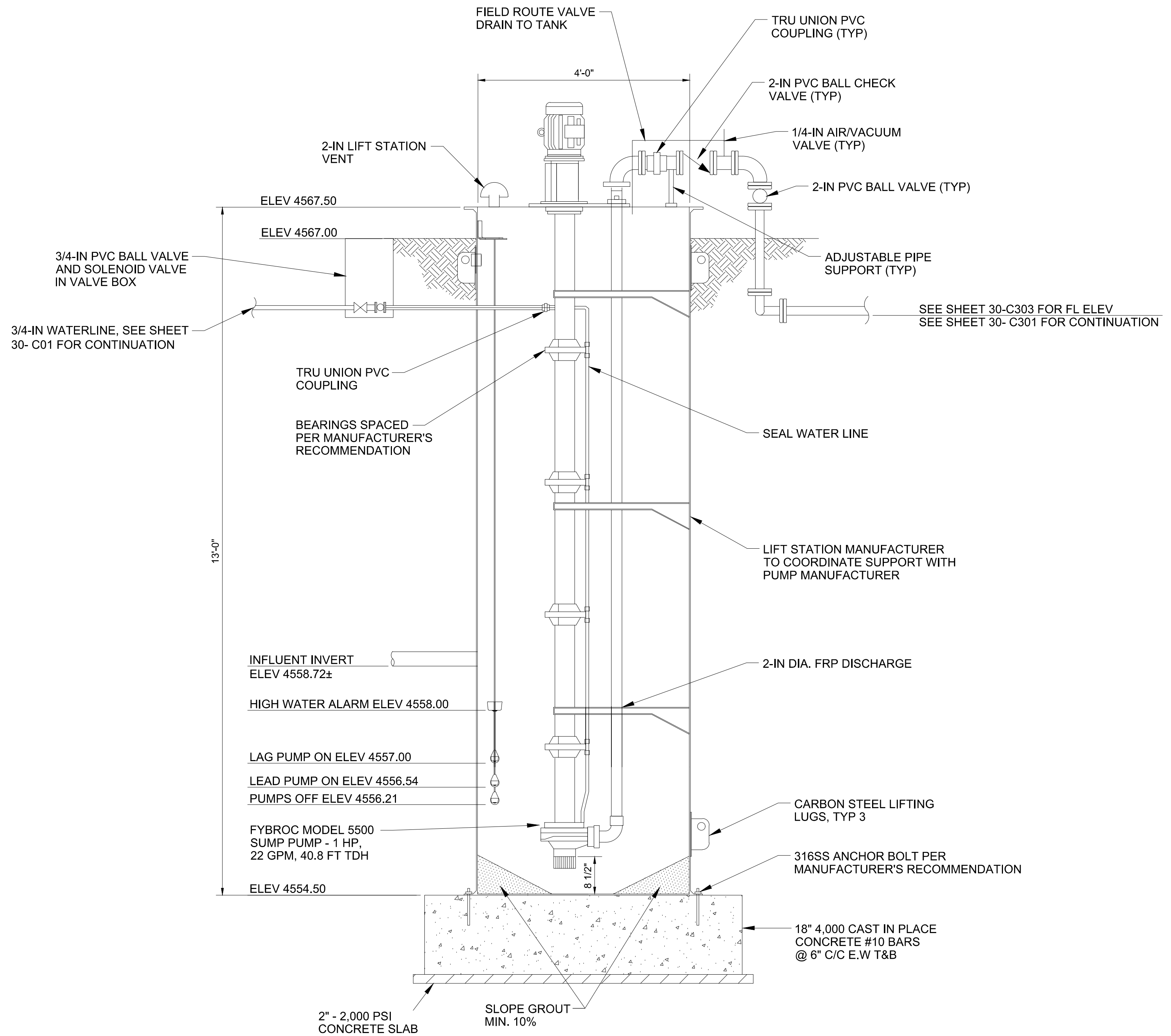


NOTES:

- CONDENSATE LIFT STATION SHALL BE SUPPLIED AS A PACKAGE SYSTEM WITH ALL PIPING, VALVES, WIRING, CONTROLS, INSTRUMENTATION, AND ALL OTHER NECESSARY APPURTENANCES FOR A COMPLETE AND OPERATIONAL CONDESATE AND BTF BLOWDOWN LIFT STATION.
- INSULATE, HEAT TRACE, AND ALUMINUM JACKET ALL EXPOSED WATER LINES, ALL EXPOSED DRAIN LINES THAT NORMALLY HAVE STANDING WATER, INCLUDING ALL PRESSURE LINES, 4-INCH IN DIAMETER AND SMALLER, AND NUTRIENT FEED LINES AND ACCESSORIES, INCLUDING ALL VALVES AND APPURTENANCES IN AFFECTED PIPES.
- POWER FOR HEAT TRACE SHALL BE SUPPLIED BY THE PANEL PROVIDED BY THE LIFT STATION MANUFACTURER SEE SPECIFICATION SECTION 23 05 34.
- PROVIDE FREEZE PROTECTION FOR PUMP PER MANUFACTURER'S RECOMMENDATION.
- REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS.



LIFT STATION PLAN
 30-M303 SCALE: 3/4" = 1'-0"



LIFT STATION SECTION
 30-M303 SCALE: 3/4" = 1'-0"



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 GRAND JUNCTION, COLORADO
 GRAND JUNCTION
 GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

DOS RIOS
 ODOR CONTROL
 SYSTEM SECTION
 AND ELEVATION II

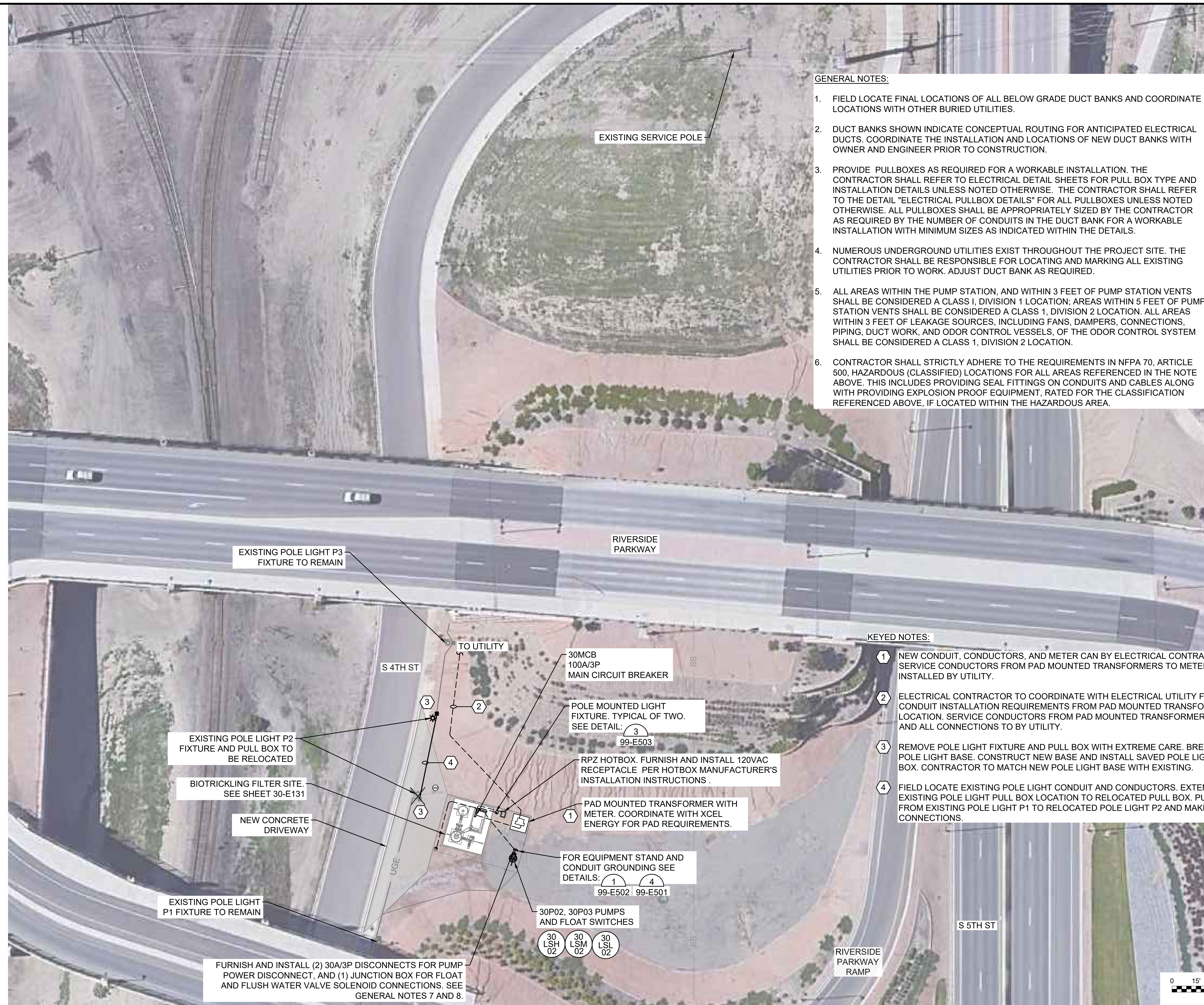
JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: ABD
 DRAWN BY: SRG

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DRAWING NUMBER
30-M303
 SHEET NUMBER
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GENERAL NOTES:

1. FIELD LOCATE FINAL LOCATIONS OF ALL BELOW GRADE DUCT BANKS AND COORDINATE LOCATIONS WITH OTHER BURIED UTILITIES.
2. DUCT BANKS SHOWN INDICATE CONCEPTUAL ROUTING FOR ANTICIPATED ELECTRICAL DUCTS. COORDINATE THE INSTALLATION AND LOCATIONS OF NEW DUCT BANKS WITH OWNER AND ENGINEER PRIOR TO CONSTRUCTION.
3. PROVIDE PULLBOXES AS REQUIRED FOR A WORKABLE INSTALLATION. THE CONTRACTOR SHALL REFER TO ELECTRICAL DETAIL SHEETS FOR PULL BOX TYPE AND INSTALLATION DETAILS UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL REFER TO THE DETAIL "ELECTRICAL PULLBOX DETAILS" FOR ALL PULLBOXES UNLESS NOTED OTHERWISE. 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.
4. NUMEROUS UNDERGROUND UTILITIES EXIST THROUGHOUT THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MARKING ALL EXISTING UTILITIES PRIOR TO WORK. ADJUST DUCT BANK AS REQUIRED.
5. ALL AREAS WITHIN THE PUMP STATION, AND WITHIN 3 FEET OF PUMP STATION VENTS SHALL BE CONSIDERED A CLASS 1, DIVISION 1 LOCATION; AREAS WITHIN 5 FEET OF PUMP STATION VENTS SHALL BE CONSIDERED A CLASS 1, DIVISION 2 LOCATION. ALL AREAS WITHIN 3 FEET OF LEAKAGE SOURCES, INCLUDING FANS, DAMPERS, CONNECTIONS, PIPING, DUCT WORK, AND ODOR CONTROL VESSELS, OF THE ODOR CONTROL SYSTEM SHALL BE CONSIDERED A CLASS 1, DIVISION 2 LOCATION.
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 SEAL FITTINGS ON CONDUITS AND CABLES ALONG WITH PROVIDING EXPLOSION PROOF EQUIPMENT, RATED FOR THE CLASSIFICATION REFERENCED ABOVE, IF LOCATED WITHIN THE HAZARDOUS AREA.

KEYED NOTES:

- 1 NEW CONDUIT, CONDUCTORS, AND METER CAN BY ELECTRICAL CONTRACTOR. METER AND SERVICE CONDUCTORS FROM PAD MOUNTED TRANSFORMERS TO METER CAN FURNISHED AND INSTALLED BY UTILITY.
- 2 ELECTRICAL CONTRACTOR TO COORDINATE WITH ELECTRICAL UTILITY FOR TRENCHING AND CONDUIT INSTALLATION REQUIREMENTS FROM PAD MOUNTED TRANSFORMER TO SERVICE LOCATION. SERVICE CONDUCTORS FROM PAD MOUNTED TRANSFORMER TO SERVICE LOCATION AND ALL CONNECTIONS TO BY UTILITY.
- 3 REMOVE POLE LIGHT FIXTURE AND PULL BOX WITH EXTREME CARE. BREAKOUT AND REMOVE POLE LIGHT BASE. CONSTRUCT NEW BASE AND INSTALL SAVED POLE LIGHT FIXTURE AND PULL BOX. CONTRACTOR TO MATCH NEW POLE LIGHT BASE WITH EXISTING.
- 4 FIELD LOCATE EXISTING POLE LIGHT CONDUIT AND CONDUCTORS. EXTEND NEW CONDUIT FROM EXISTING POLE LIGHT PULL BOX LOCATION TO RELOCATED PULL BOX. PULL NEW CONDUCTORS FROM EXISTING POLE LIGHT P1 TO RELOCATED POLE LIGHT P2 AND MAKE ALL REQUIRED CONNECTIONS.



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 20171218008



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REV.	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
 GRAND JUNCTION
 GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

DOS RIOS ODOR CONTROL ELECTRICAL SITE PLAN

JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: SAH
 DRAWN BY: SAH

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30-E101
 SHEET NUMBER
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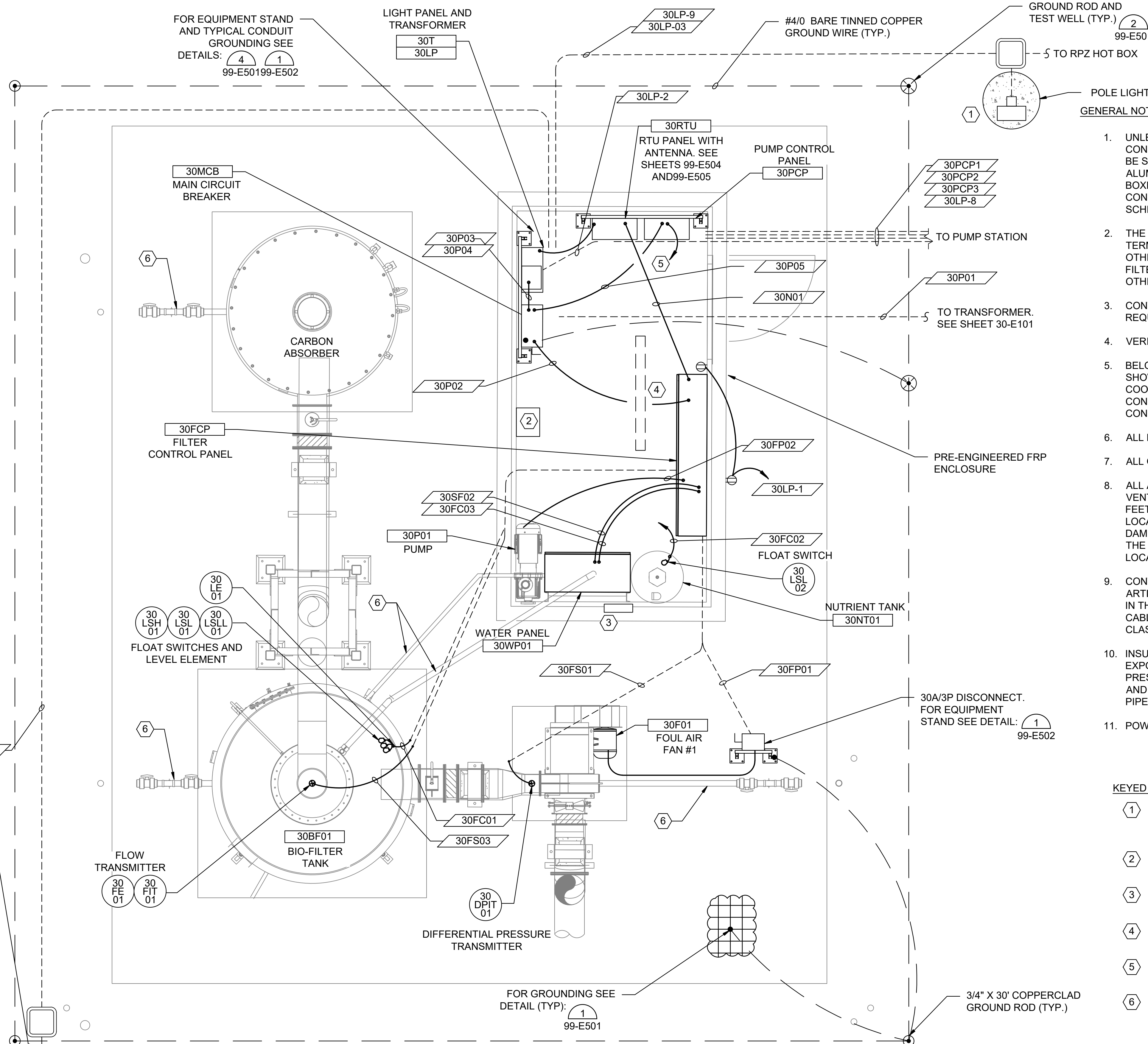
CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
 GRAND JUNCTION
 GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

DOS RIOS ODOR CONTROL ELECTRICAL POWER AND GROUNDING PLAN

JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: SAH
 DRAWN BY: SAH

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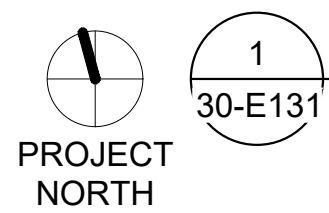
DRAWING NUMBER
30-E131
 SHEET NUMBER
047



- GENERAL NOTES:
- UNLESS OTHERWISE NOTED ALL CONDUIT TO BE ROUTED EXPOSED. ALL EXTERIOR CONDUIT AND PORTIONS OF THE CONDUIT SYSTEM FOR THIS STRUCTURE SHALL BE SURFACE MOUNTED AND THE CONDUIT SYSTEM SHALL BE PVC COATED RIGID ALUMINUM. ALL CONDUIT INSIDE THE BUILDING SHALL BE RIGID ALUMINUM. ALL BOXES, SUPPORTS, HANGERS, UNISTRUT AND ALL OTHER PORTIONS OF THE CONDUIT SYSTEM SHALL BE ALUMINUM. ALL BELOW GRADE CONDUIT SHALL BE SCHEDULE 40 PVC WITH GALVANIZED ELBOWS IN CONCRETE DUCT BANK.
 - THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, WIRING, TERMINATIONS, DISCONNECTS, CONTROL RELAYS, CONTROL ENCLOSURES AND OTHER ITEMS AS NECESSARY FOR COMPLETE AND FUNCTIONAL ODOR CONTROL FILTER SYSTEM. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS AND OTHER SECTIONS OF THE PLANS FOR ITEMS AS MAY BE REQUIRED.
 - CONTRACTOR SHALL COORDINATE CONDUIT, WIRE AND INTERCONNECTIONS AS REQUIRED BY EQUIPMENT SUPPLIER. NOT ALL CONNECTIONS SHOWN.
 - VERIFY LOCATION OF ALL EQUIPMENT PRIOR TO INSTALLATION.
 - BELOW GRADE CONDUIT ROUTING AS SHOWN IS DIAGRAMMATIC IN NATURE AND SHOWN FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING NUMBER OF REQUIRED CONDUITS AND PLACEMENT OF THESE CONDUITS. THE CONTRACTOR SHALL DEVELOP AND SUBMIT A BELOW GRADE CONDUIT ROUTING PLAN FOR REVIEW PRIOR TO INSTALLATION.
 - ALL POWER CIRCUITRY SHALL BE A MINIMUM 2-#12, #12 GND.
 - ALL OUTDOOR RECEPTACLES TO BE GFCI WITH IN-USE WEATHERPROOF COVERS.
 - ALL AREAS WITHIN THE PUMP STATION, AND WITHIN 3 FEET OF PUMP STATION VENTS SHALL BE CONSIDERED A CLASS 1, DIVISION 1 LOCATION; AREAS WITHIN 5 FEET OF PUMP STATION VENTS SHALL BE CONSIDERED A CLASS 1, DIVISION 2 LOCATION. ALL AREAS WITHIN 3 FEET OF LEAKAGE SOURCES, INCLUDING FANS, DAMPERS, CONNECTIONS, PIPING, DUCT WORK, AND ODOR CONTROL VESSELS, OF THE ODOR CONTROL SYSTEM SHALL BE CONSIDERED A CLASS 1, DIVISION 2 LOCATION.
 - 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 SEAL FITTINGS ON CONDUITS AND CABLES ALONG WITH PROVIDING EXPLOSION PROOF EQUIPMENT, RATED FOR THE CLASSIFICATION REFERENCED ABOVE, IF LOCATED WITHIN THE HAZARDOUS AREA.
 - INSULATE, HEAT TRACE, AND ALUMINUM JACKET ALL EXPOSED WATER LINES, ALL EXPOSED DRAIN LINES THAT NORMALLY HAVE STANDING WATER, INCLUDING ALL PRESSURE LINES, 4-INCH IN DIAMETER AND SMALLER, AND NUTRIENT FEED LINES AND ACCESSORIES, INCLUDING ALL VALVES AND APPURTENANCES IN AFFECTED PIPES.
 - POWER FOR HEAT TRACE SHALL BE SUPPLIED FROM LIGHT PANEL 30LP.

- KEYED NOTES:
- LITHONIA POLE MOUNTED LIGHT FIXTURE DSX0-LED-P6-4000K-T3M-MVOLT-SPA-PER-FAO-EGS AND PHOTOCCELL DLL127F-1.5-JU OR EQUAL ON 20' POLE.
 - MAKE REQUIRED POWER CONNECTIONS FROM LIGHT PANEL 30LP TO SUPPLIED FRP ENCLOSURE 1500W HEATER (30LP-4).
 - MAKE REQUIRED POWER CONNECTIONS FROM LIGHT PANEL 30LP TO SUPPLIED FRP ENCLOSURE EXHAUST FAN (30LP-5).
 - MAKE REQUIRED POWER CONNECTIONS FROM LIGHT PANEL 30LP TO SUPPLIED FRP ENCLOSURE LIGHTING (30LP-6).
 - (2-#14, #14 GND, 4-#14 SPARE) 3/4" CONDUIT. HIGH LEVEL FLOAT SIGNAL FROM PUMP CONTROL PANEL TO RTU PANEL.
 - SEE GENERAL NOTE 11 AND 12.

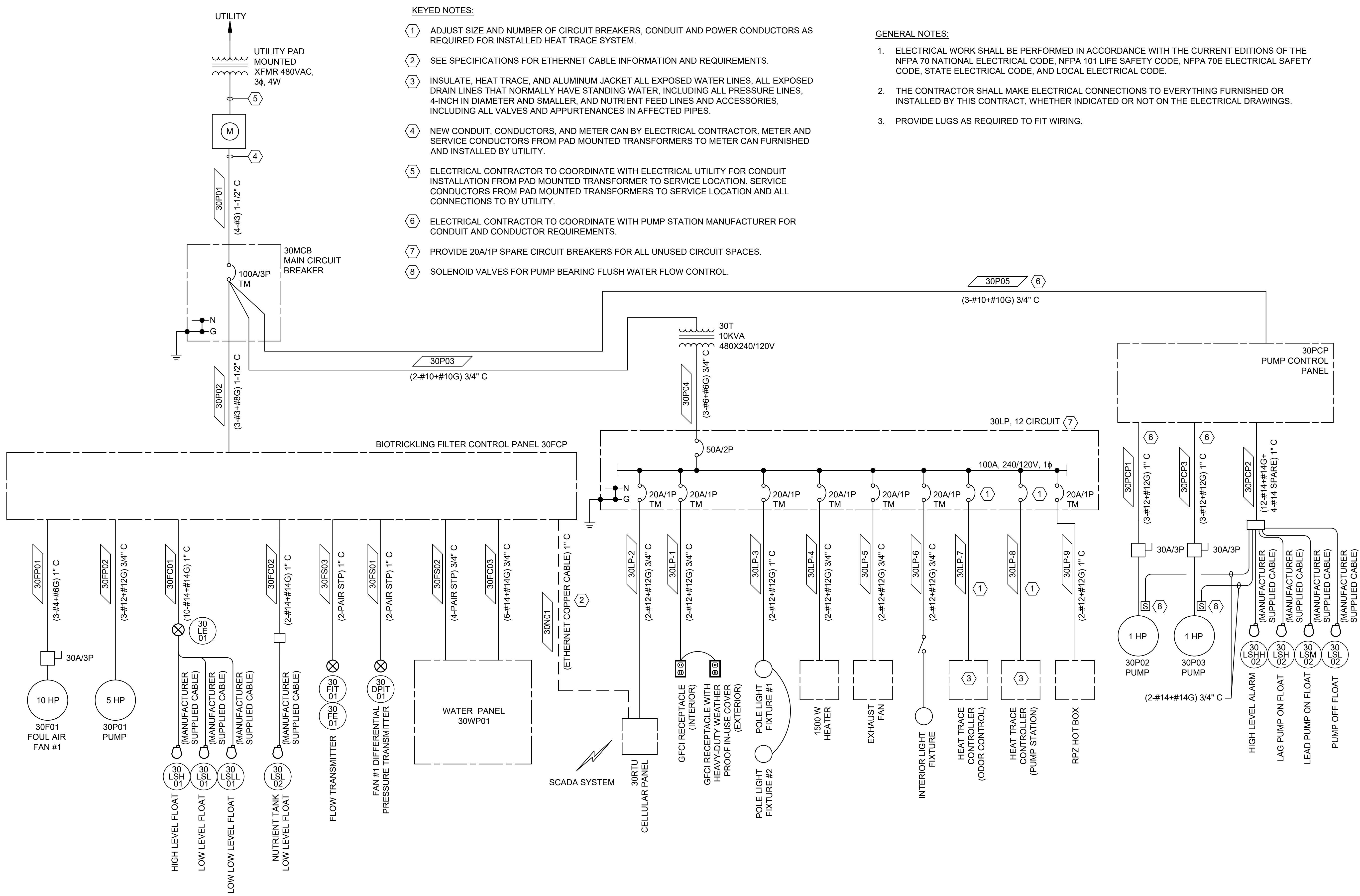
ODOR CONTROL ELECTRICAL POWER AND GROUNDING PLAN



SCALE: 1/2" = 1'-0"

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 Last plotted by: Halsey, Scott A. Plot Style: AECmono.ctb Plot Scale: 1:0.4255 Plot Date: 8/20/2021 11:53 AM Plotter used: DWG To PDF.pc3

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 Last plotted by: Halsey, Scott A., Plot Style: AECmono.ctb, Plot Date: 8/20/2021 11:46 AM, Plotter used: DWG To PDF.pc3



- KEYED NOTES:**
- ADJUST SIZE AND NUMBER OF CIRCUIT BREAKERS, CONDUIT AND POWER CONDUCTORS AS REQUIRED FOR INSTALLED HEAT TRACE SYSTEM.
 - SEE SPECIFICATIONS FOR ETHERNET CABLE INFORMATION AND REQUIREMENTS.
 - INSULATE, HEAT TRACE, AND ALUMINUM JACKET ALL EXPOSED WATER LINES, ALL EXPOSED DRAIN LINES THAT NORMALLY HAVE STANDING WATER, INCLUDING ALL PRESSURE LINES, 4-INCH IN DIAMETER AND SMALLER, AND NUTRIENT FEED LINES AND ACCESSORIES, INCLUDING ALL VALVES AND APPURTENANCES IN AFFECTED PIPES.
 - NEW CONDUIT, CONDUCTORS, AND METER CAN BY ELECTRICAL CONTRACTOR. METER AND SERVICE CONDUCTORS FROM PAD MOUNTED TRANSFORMERS TO METER CAN FURNISHED AND INSTALLED BY UTILITY.
 - ELECTRICAL CONTRACTOR TO COORDINATE WITH ELECTRICAL UTILITY FOR CONDUIT INSTALLATION FROM PAD MOUNTED TRANSFORMER TO SERVICE LOCATION. SERVICE CONDUCTORS FROM PAD MOUNTED TRANSFORMERS TO SERVICE LOCATION AND ALL CONNECTIONS TO BY UTILITY.
 - ELECTRICAL CONTRACTOR TO COORDINATE WITH PUMP STATION MANUFACTURER FOR CONDUIT AND CONDUCTOR REQUIREMENTS.
 - PROVIDE 20A/1P SPARE CIRCUIT BREAKERS FOR ALL UNUSED CIRCUIT SPACES.
 - SOLENOID VALVES FOR PUMP BEARING FLUSH WATER FLOW CONTROL.

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

1 DOS RIOS ODOR CONTROL ONELINE DIAGRAM
 30-E501 SCALE: NONE



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 GRAND JUNCTION, COLORADO
Grand Junction
 GRAND JUNCTION
 ODOR CONTROL IMPROVEMENTS

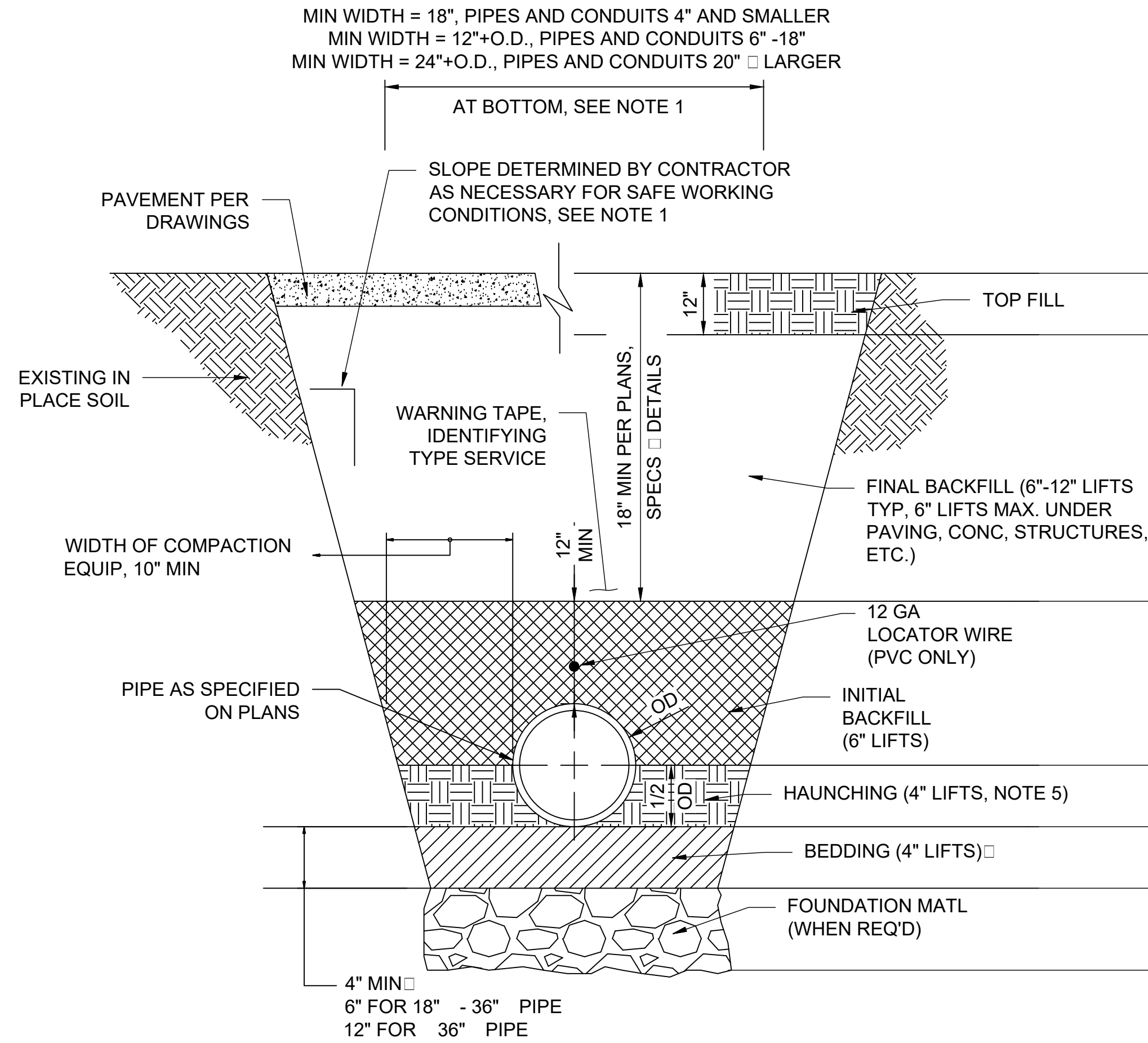
DOS RIOS ODOR CONTROL ONELINE DIAGRAM

JOB NO.: 20W23045
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 DRAWN BY: SAH

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30-E501
 SHEET NUMBER
048

NOTES:

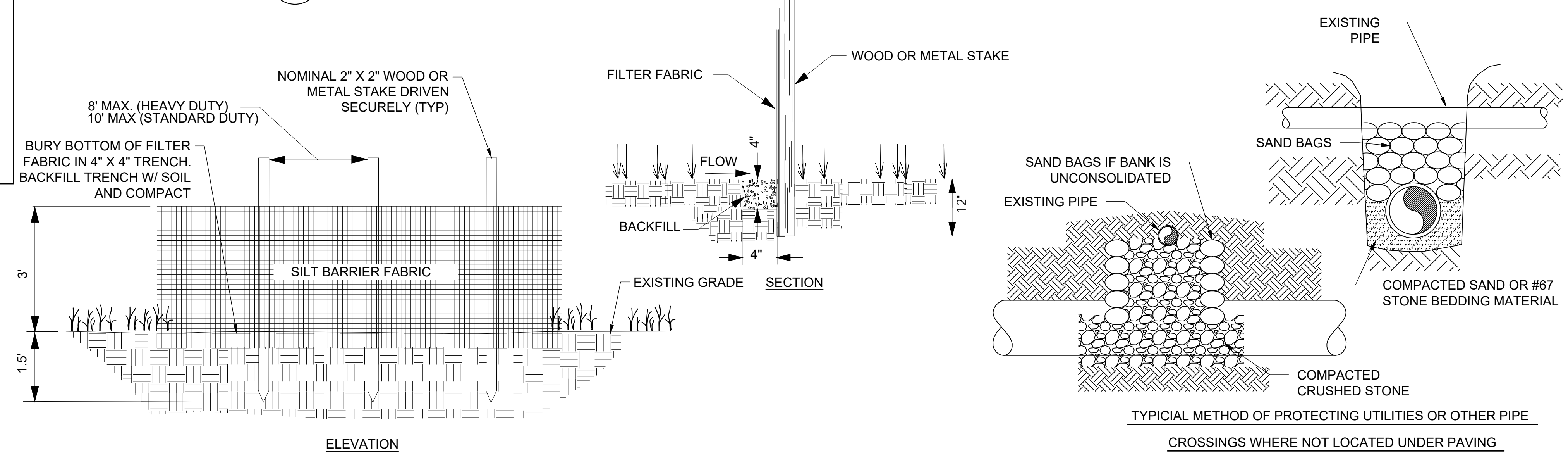
1. SLOPE, BENCHING, SHORING, ETC. AS DETERMINED AND DESIGNED BY THE CONTRACTOR. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE OSHA REGULATIONS FOR "OPEN TRENCH EXCAVATIONS".
2. BEDDING REQ'D FOR ALL GRAVITY LINES, ALL PVC LINES AND ALL CONCRETE LINES. BEDDING REQUIRED IN ALL AREAS OF ROCK EXCAVATION OR UNSUITABLE SOILS. BELL HOLES REQ'D FOR PIPES 4" DIA. FOR DUCTILE IRON PRESSURE MAINS, SELECT EARTH MAY BE USED FOR BEDDING IN AREAS OF ROCK EXCAVATION.
3. ALL MATERIALS SHALL BE COMPACTED TO MINIMUM 95% MODIFIED PROCTOR DENSITY AT 2% OPTIMUM MOISTURE CONTENT. MATERIALS UNDER PAVING, CONCRETE, STRUCTURES, ETC. SHALL BE COMPACTED TO TO MIN 98% -100% MODIFIED PROCTOR. MECHANICAL COMPACTION SHALL BE BY VIBRATORY SHEEPSFOOT OR OTHER EQUIP. SPECIFICALLY DESIGNED FOR THE COMPACTION OF EARTH. COMPACTION EQUIP. SHALL BE ON-SITE PRIOR TO BEGINNING OF WORK. MECHANICAL COMPACTION SHALL BE COMPLETED IN LOOSE LIFTS AS SHOWN ON THE DETAIL.
4. TEMPORARY COMPACTED PUG-MIX BACKFILL REQ'D UNTIL PAVEMENT PLACEMENT IS COMPLETE. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN THIS PUGMIX TO KEEP IT FLUSH WITH THE ADJACENT PAVING, ETC. UNTIL THE FINAL PAVING IS PLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ASPHALT OR CONCRETE PATCHES WHEN NEEDED FOR PUBLIC SAFETY AND/OR CONVENIENCE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND UTILIZE APPROPRIATE MEANS AND METHODS OF CONSTRUCTION TO ENSURE THAT THE ENTIRE AREAS UNDER THE HAUNCHES OF THE PIPE ARE FILLED WITH THE REQUIRED MATERIALS AND COMPACTED APPROPRIATELY.
6. ADDITIONAL AND/OR SPECIAL REQUIREMENTS MAY BE REQ'D BY THE PLANS, SPECIFICATIONS AND/OR CONTRACT DOCUMENTS.
7. TO THE EXTENT POSSIBLE, AS DETERMINED BY THE CONTRACTOR, TRENCH WALL SHORING METHODS SHALL BE USED IN PAVED AREAS TO MINIMIZE PAVING REPAIR REQUIREMENTS.



BEDDING/BACKFILL REQUIREMENTS & MAT'L DESIGNATIONS (SEE MATERIAL DESIGNATION/DESCRIPTOINS TABLE)								
PRESSURE MAINS			GRAVITY LINES			PAVED AREAS		
DI	CONC	HDPE, PVC, FRP	DI	CONC	HDPE, PVC, FRP	DI	CONC	HDPE, PVC, FRP
5	5	5	5	5	5	6	6	6
4	4	4	4	4	4	7	7	7
3	3	1/2	3	3	1/2	1	3	1/2
2	3	1/2	2	3	1/2	2	3	1/2
2	1	2	2	1	2	2	1	2
RIP-RAP OR CRUSHED STONE CLASS 1B (USCS IN ASTM D2487)								

MATERIAL DESIGNATION/DESCRIPTOINS TABLE	
DESIGNATION/ MATERIALS	DESCRIPTION
1	CRUSHED STONE, ASTM-D448 NO. 57 GRADATION
2	CRUSHED STONE, ASTM-D448 NO. 67 GRADATION.
3	SELECT EXCAVATED MAT'L REASONABLY DRY (WITHIN LIMITS REQ'D FOR COMPACTION) NO STONES 1" DIA.
4	EXCAVATED MAT'L REASONABLY DRY (WITHIN LIMITS REQ'D FOR COMPACTION) NO STONES 12" DIA.
5	SELECT TOPSOIL MAT'L TO SUPPORT VEGETATION, NO STONES OR ROCK ALLOWED
6	PAVEMENT MATCHING EXISTING PAVEMENT OR AS SPECIFIED ON THE PLANS
7	CDOT CLASS 4 AGGREGATE BASE COARSE

1 BEDDING AND BACKFILL FOR TRENCHES
99-C501 SCALE: NONE



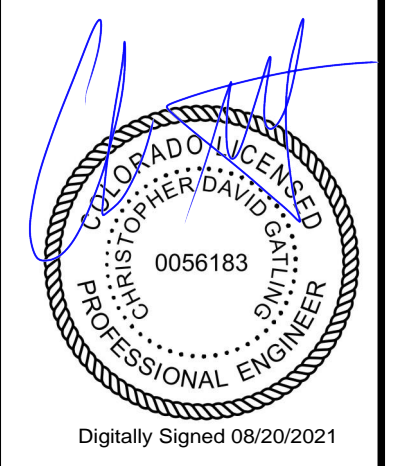
2 TYPICAL SILT FENCE
99-C-501 SCALE: NONE

3 EXISTING UTILITY PROTECTION
99-C-501 SCALE: NONE



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Grand Junction
C O L O R A D O
GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

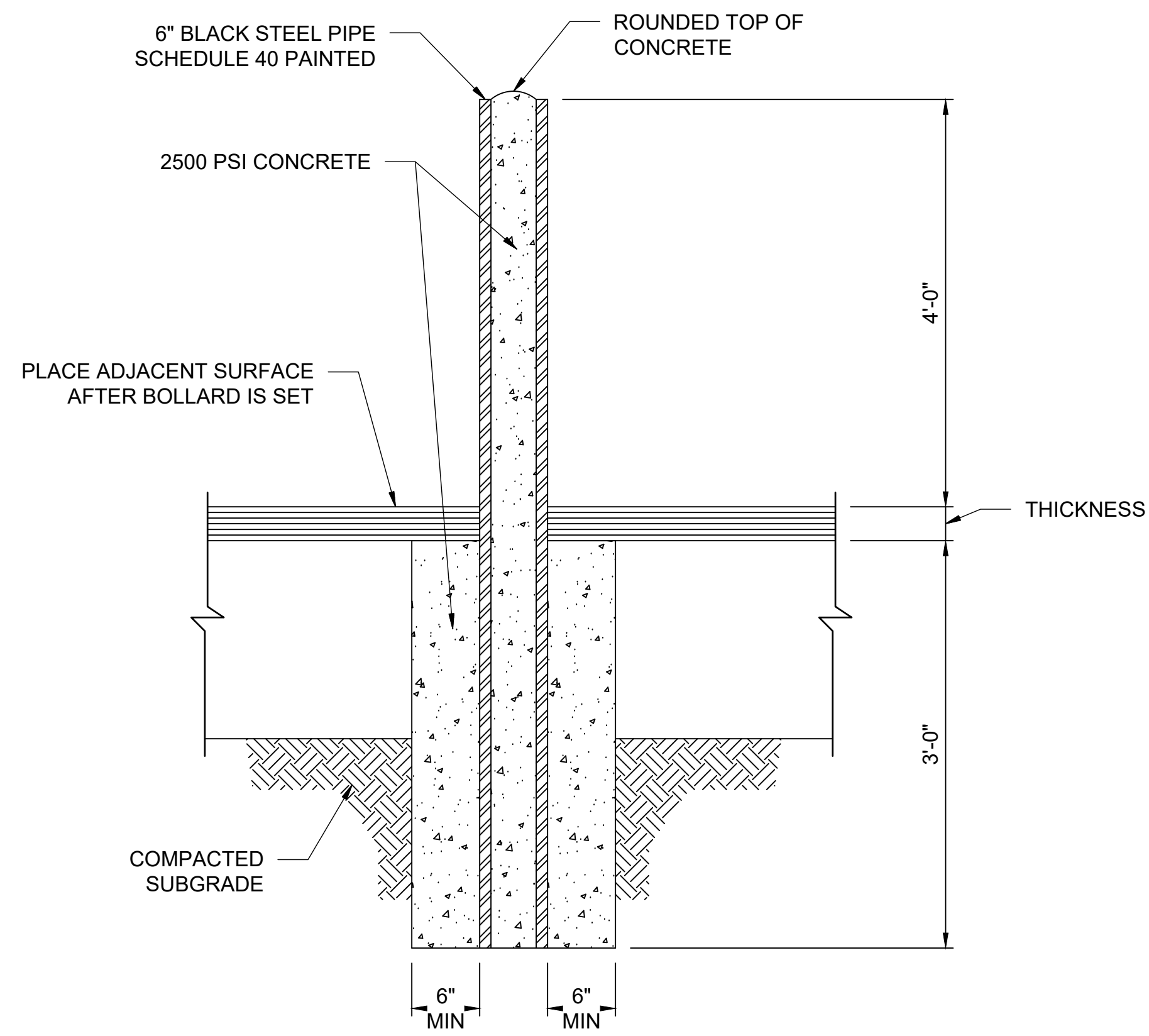
SITE CIVIL DETAILS I

JOB NO.: 20W23045
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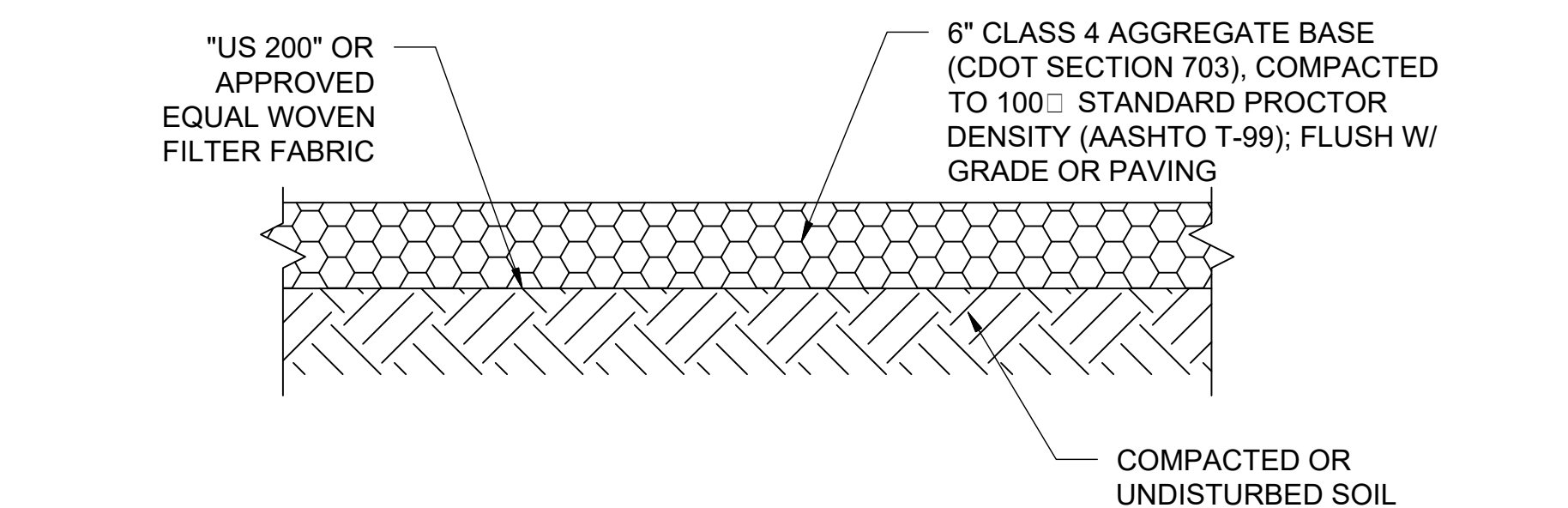
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SHEET NUMBER
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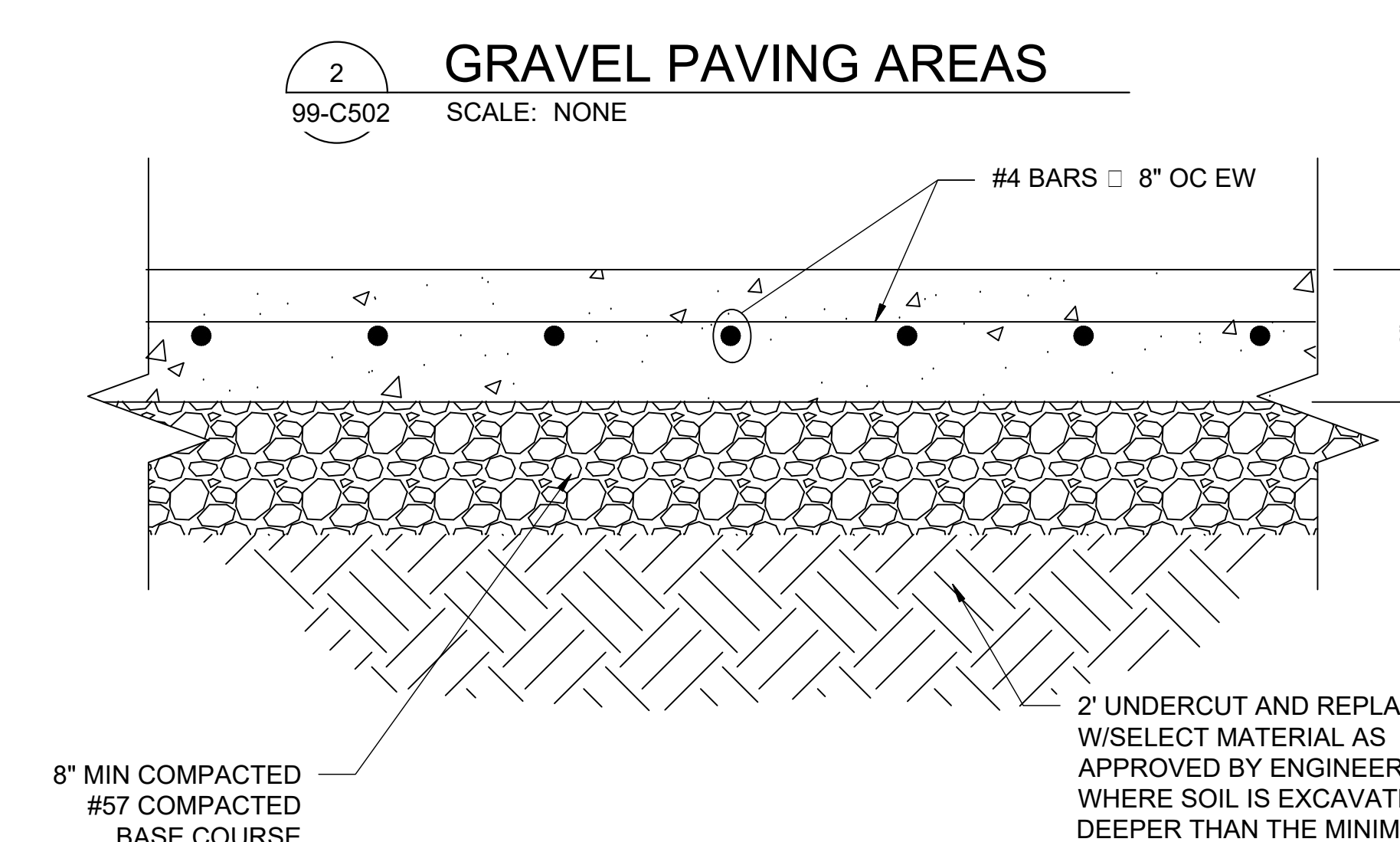
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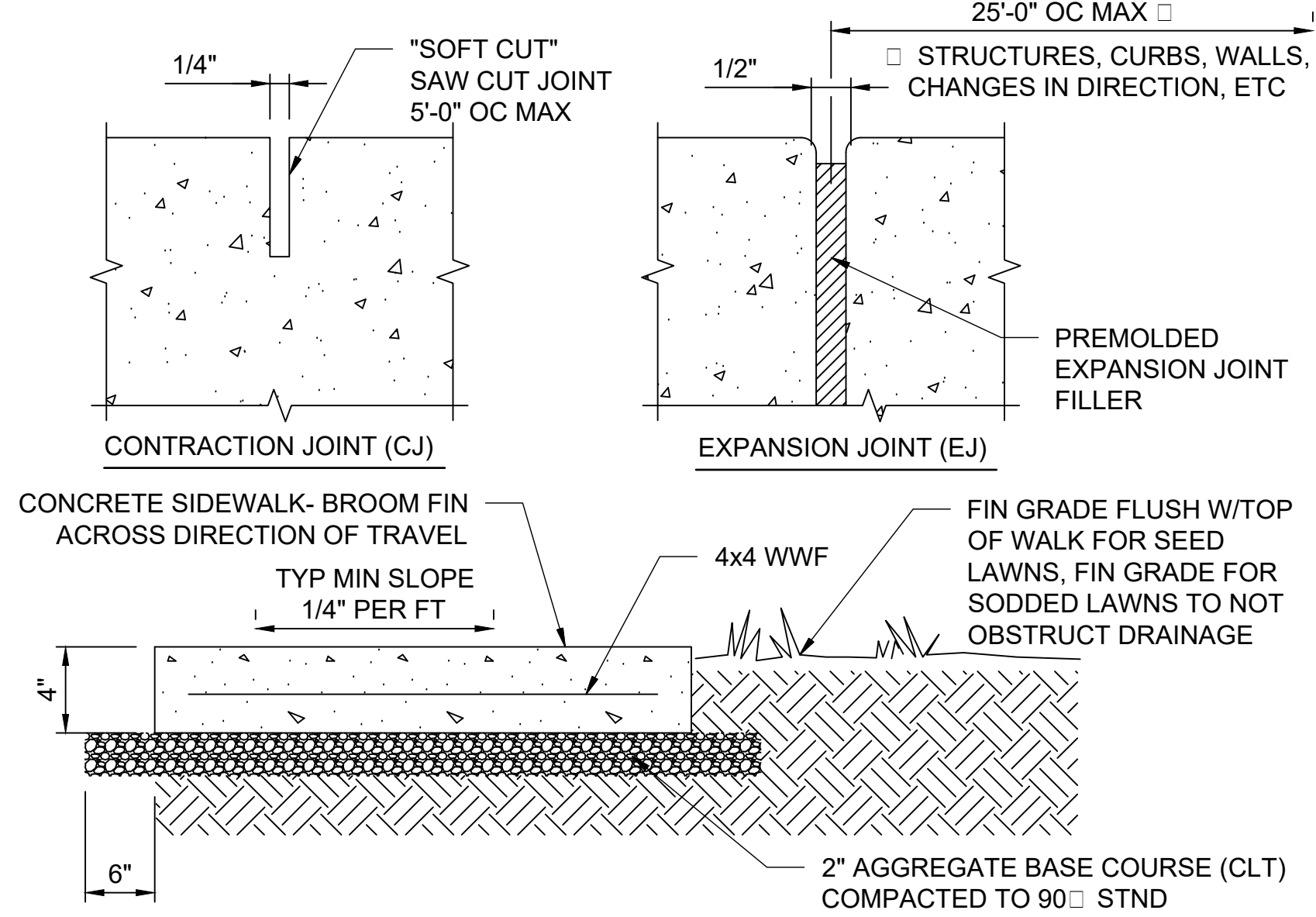
1 TYPICAL BOLLARD
99-C502 SCALE: NONE



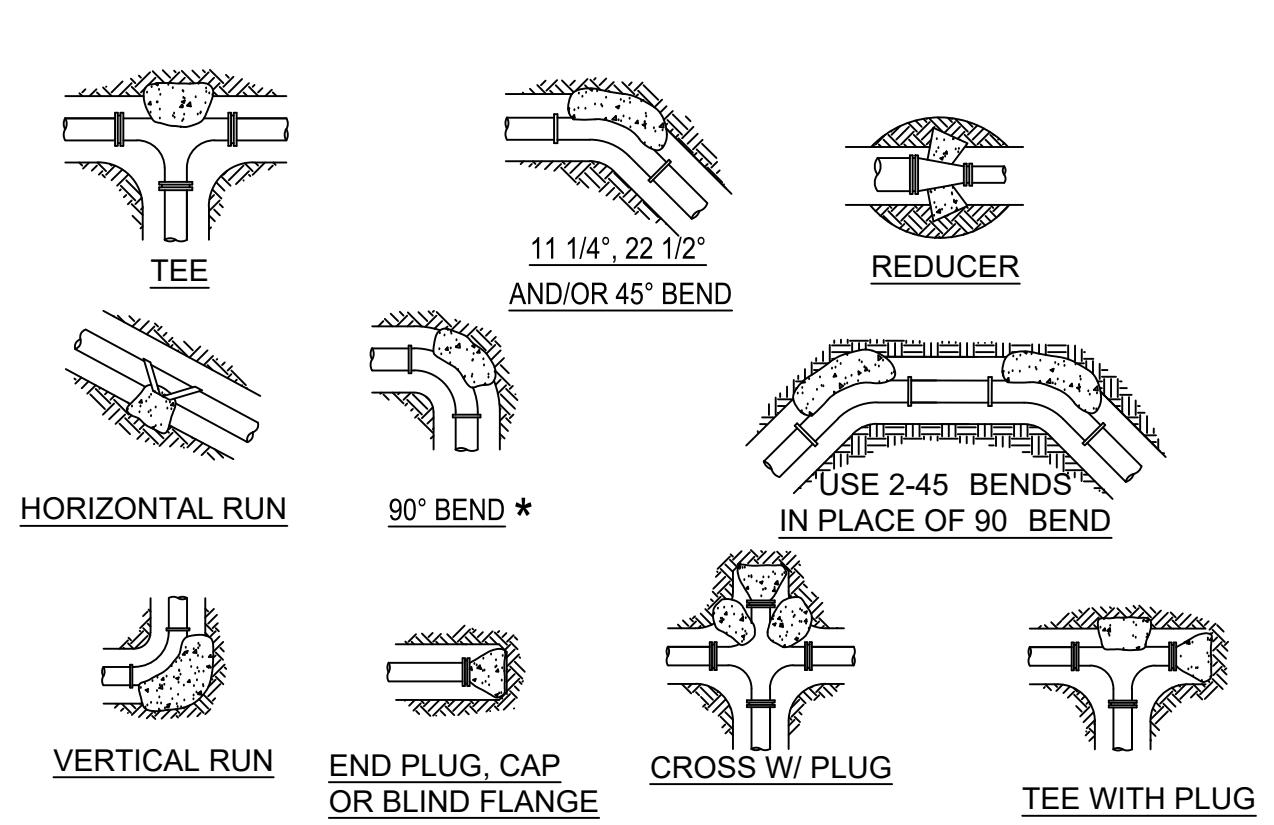
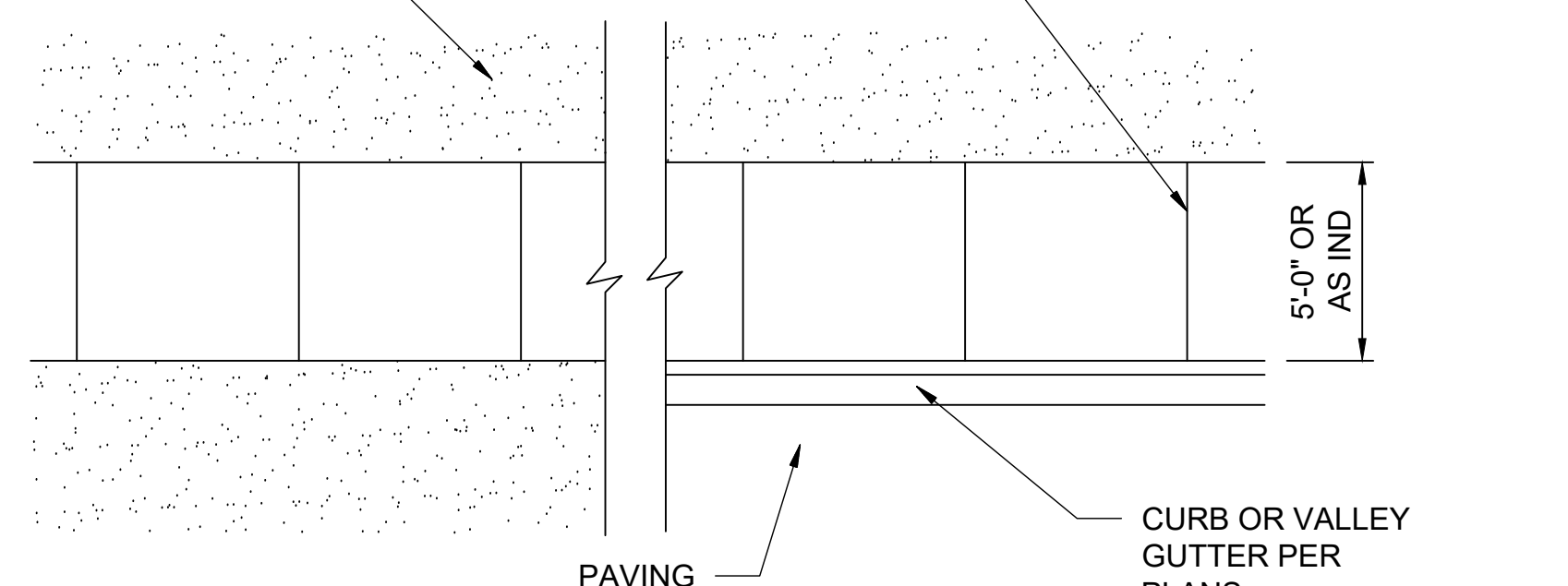
2 GRAVEL PAVING AREAS
99-C502 SCALE: NONE



3 CONCRETE PAVEMENT
99-C502 SCALE: NONE



4 TYPICAL SIDEWALK
99-C502 SCALE: NONE



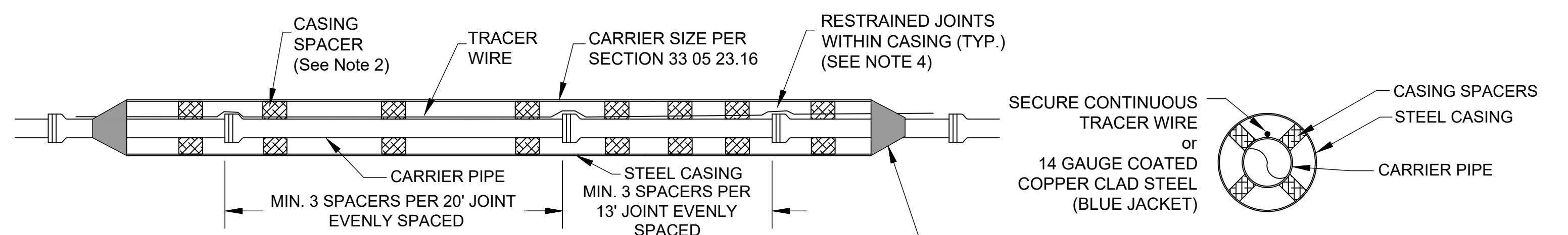
THRUST BLOCK SCHEDULE
(2000 PSF SOIL, 200 PSI WATER PRESSURE, 100 PSI WATER HAMMER)

FITTING SIZE	PLUG TEE OR CAP	BEARING AREA OF THRUST BLOCKS IN SQ. FT. (HORIZONTAL BENDS)				FITTING SIZE	VOLUME OF THRUST BLOCK IN CU. FEET (VERTICAL BENDS)				ROD DIAM.	EMBEDMENT
		90°	45°	22 1/2°	11 1/4°		90°	45°	22 1/2°	11 1/4°		
2, 3, 4	1.9	2.7	1.4	0.7	0.4	2, 3, 4	35.5	19.2	9.8	4.9	50"	30"
6	5.6	7.9	4.3	2.2	1.1	6	105.8	57.2	29.2	14.7	75"	30"
8	9.6	13.6	7.4	3.8	1.9	8	181.9	98.5	50.2	25.2	75"	30"
12	20.5	29.0	15.7	8.0	4.0	12	387.1	209.5	106.8	53.7	1.0"	36"
16	35.7	50.4	27.3	13.9	7.0	16	672.6	364.0	185.6	93.2	1.0"	36"
18	44.8	63.4	34.3	17.5	8.8	18	844.7	457.2	233.7	117.7	1.0"	36"
24	78.4	110.9	60.0	30.6	15.4	24	1478.7	800.3	408.0	205.0	1.5"	36"

THRUST BLOCK NOTES:

- CONCRETE FOR THRUST BLOCKS - CLASS 1 CONCRETE SHALL DEVELOP NOT LESS THAN 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS AND BE PLACED AGAINST UNDISTURBED SOIL.
- ALL BENDS, BOTH HORIZONTAL AND VERTICAL, SHALL BE BACKED WITH CONCRETE. VERTICAL BENDS SHALL BE PLACED ON CONCRETE PADS WHERE BENDS TURN UP, OR LOADED WHERE BENDS TURN DOWN.
- DOUBLE WRAP PIPE JOINTS IN 8 MIL "POLYETHYLENE" BEFORE PLACING CONCRETE.
- BEARING AREA SHOWN IN TABLE, IS BASED UPON A 2000 LB/SF. SOIL BEARING, AND UPON A PIPELINE PRESSURE OF 200 PSI. PLUS 100 PSI. WATER HAMMER. AREAS SHOWN SHALL BE ADJUSTED, SHOULD FIELD CONDITIONS VARY.
- MJ RESTRAINTS ARE REQUIRED FOR ALL FITTINGS.
- USE LONG-RADIUS FITTINGS WHEREVER POSSIBLE.
- ALL BOLTS FOR FITTINGS SHALL BE 316 STAINLESS STEEL.
- ALL DUCTILE IRON FITTINGS SHALL BE FUSION-BONDED EPOXY COATED INSIDE AND OUTSIDE IN ACCORDANCE WITH ANSII/AWWA C116/A21.16.
- 90 DEGREE BENDS SHALL ONLY BE USED ON A BY-EXCEPTION BASIS, AND MUST EACH BE SPECIFICALLY APPROVED BY CITY.

5 TYP. THRUST BLOCKING
99-C502 SCALE: NONE



NOTES:

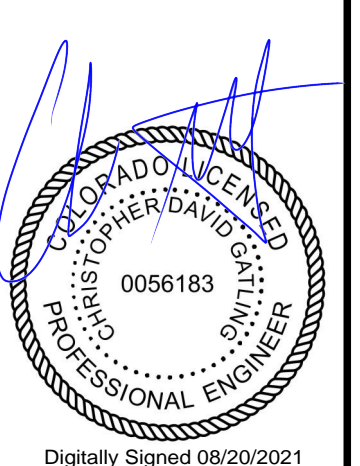
- STEEL CASING SHALL BE CONSTRUCTED OF SPIRAL OR STRAIGHT WELDED STEEL WITH A MINIMUM DIAMETER AND THICKNESS AS SHOWN IN TABLE BELOW.
- PROVIDE CASING SPACERS CONSTRUCTED OF STAINLESS STEEL WITH CLAMP PORTION OF POLYMER PLASTIC RUNNERS.
- PROVIDE SYNTHETIC RUBBER END SEALS.
- WHERE ENCASMENTS ARE GREATER THAN 25 FEET IN LENGTH, SELF-RESTRAINING GASKETS OR BELL RESTRAINTS SHALL BE USED FOR ALL JOINTS INSIDE THE ENCASMENT PIPE AND FOR THE FIRST JOINT IN EACH DIRECTION OUTSIDE THE ENCASMENT PIPE.
- BELL RESTRAINTS FOR SHALL BE SERIES 1700 RESTRAINT HARNESS BY EBAA IRON INC., OR APPROVED EQUAL.
- DIRECT BURY STEEL ENCASMENT SHALL BE DOUBLE POLY WRAPPED.
- JACK AND BORE STEEL ENCASMENT SHALL HAVE 17# HP MAGNESIUM ANODES CAD WELDED TO THE END OF THE ENCASMENT PIPE.
- EXCAVATION OF APPROACH PITS AND TRENCHES WITHIN RIGHT OF WAY OF STREET, ROAD OR HIGHWAY SHALL BE OF SUFFICIENT DISTANCE FROM PAVING TO PERMIT TRAFFIC TO PASS WITHOUT INTERFERENCE. TAMP BACKFILL FOR APPROACH PITS AND TRENCHES WITHIN RIGHT OF WAY IN LAYERS NOT GREATER THAN 6" THICK FOR ENTIRE LENGTH AND DEPTH OF TRENCH OR PIT. COMPACT BACKFILL TO 95% OF MAXIMUM DENSITY OBTAINED AT OPTIMUM MOISTURE AS DETERMINED BY AASHTO T 180-57, METHOD A. MECHANICAL TAMPERS MAY BE USED AFTER COVER OF 12-18" HAS BEEN OBTAINED OF TOP OF BARREL OF PIPE.

6 PIPE ENCASMENT
99-C502 SCALE: NONE



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GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

SITE CIVIL DETAILS II

JOB NO.: 20W23045
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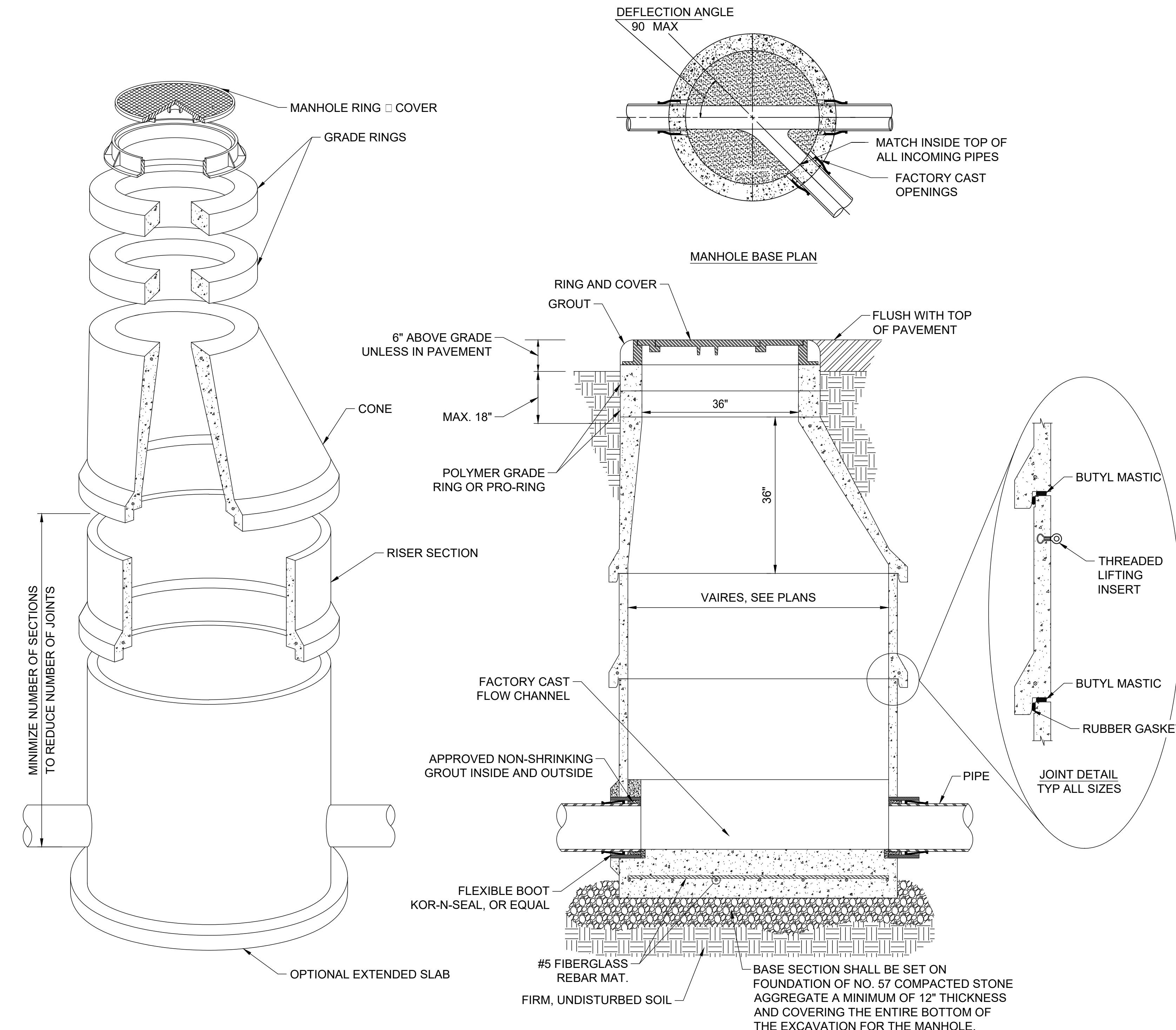
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SHEET NUMBER
050

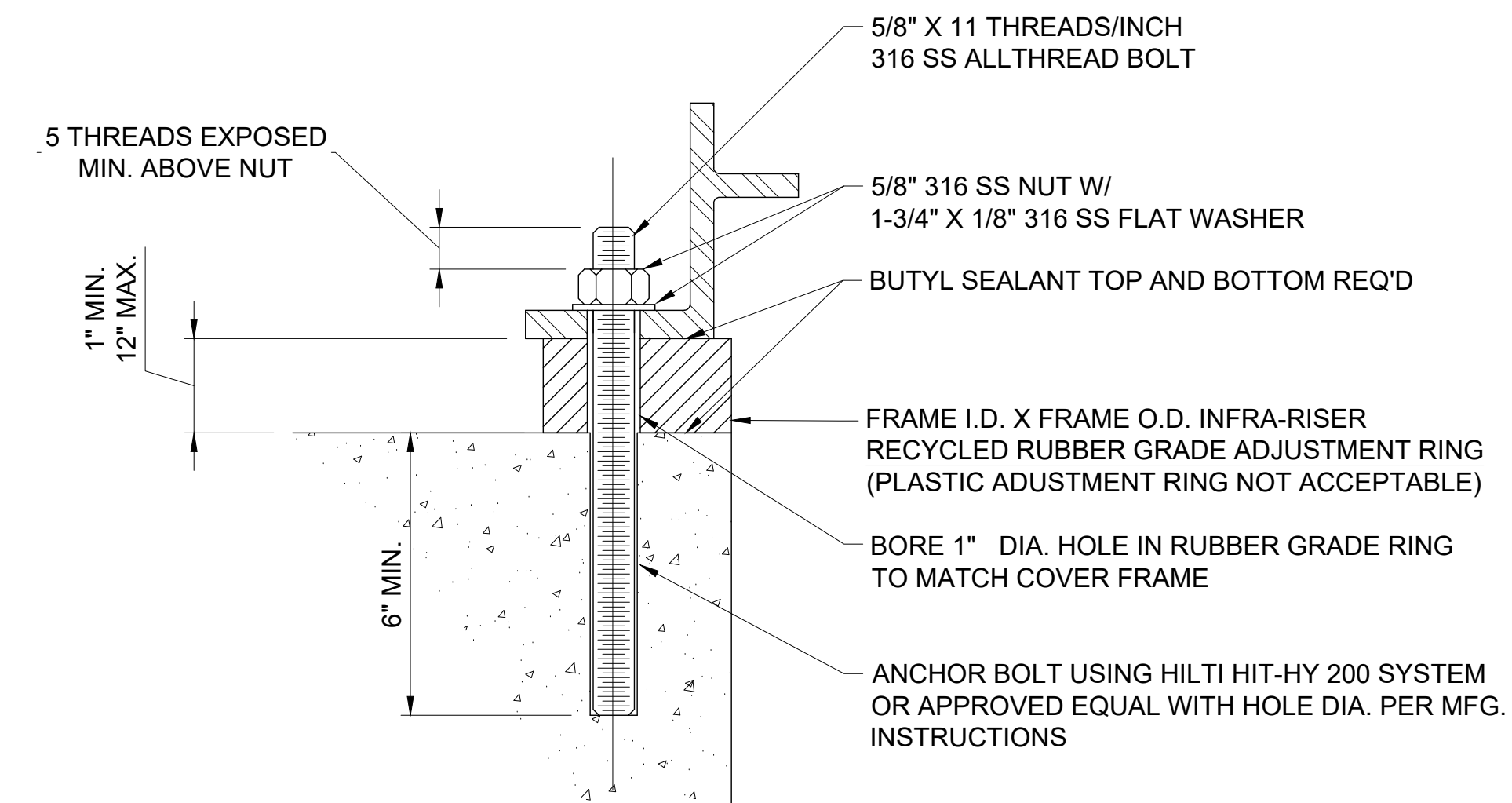
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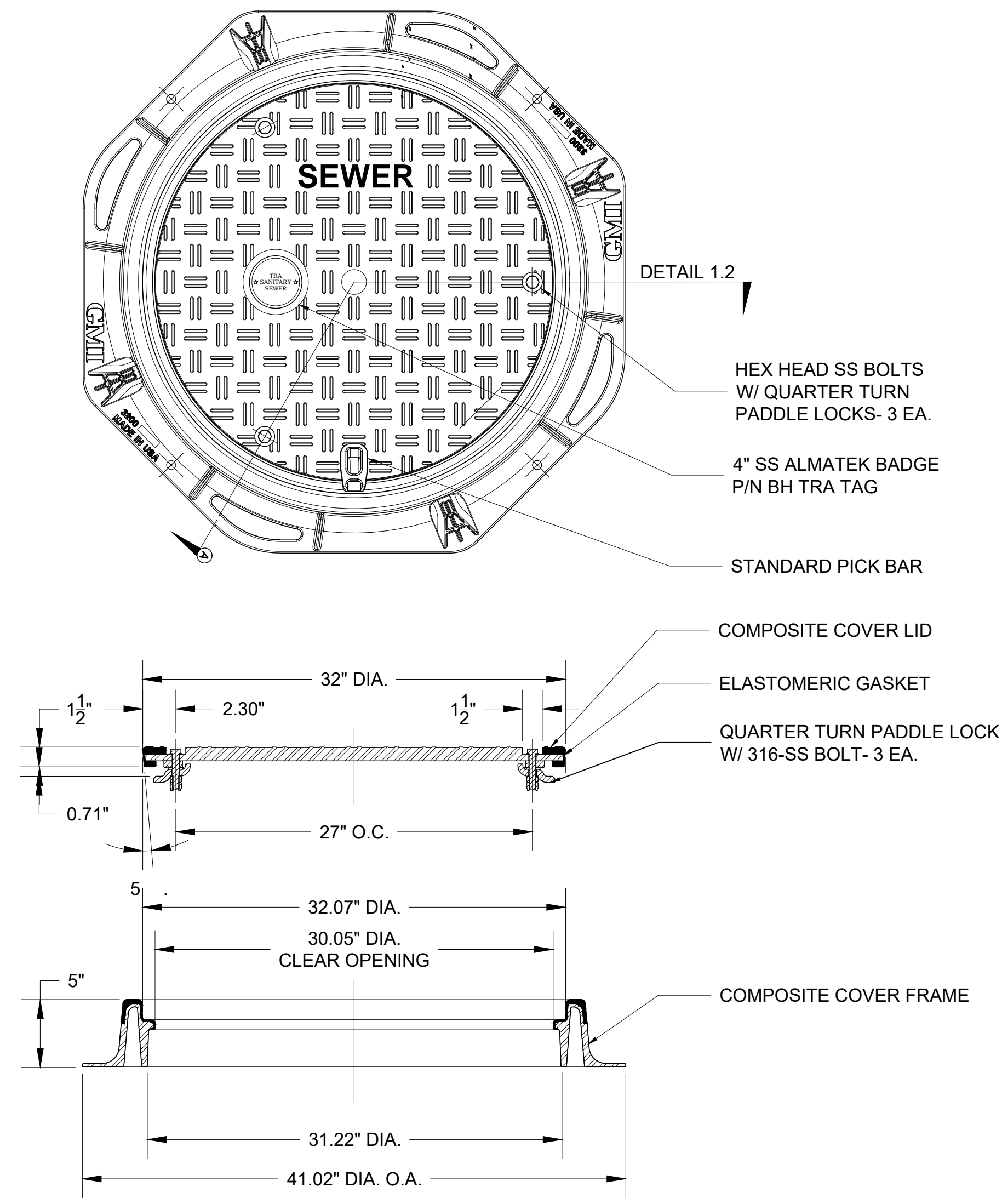
1. ALL MANHOLES WITH PIPE ENTERING WITH DIAMETER OF 24" D.I.P OR LESS SHALL BE SUPPLIED WITH KOR-N-SEAL FLEXIBLE BOOTS OR APPROVED EQUAL. LINES 24" SHALL HAVE A-LOK (OR EQ) FLEX BOOTS CAST INTO MH WALLS, GROUT CONN (2" MIN CL OPNG) ONLY WHEN CALLED FOR IN PLANS
2. PRECAST SECTIONS SHALL BE REINFORCED PER ASTM C-478
3. SEE DRAWINGS FOR MANHOLE INNER DIAMETER, 48 INCHES IF NOT OTHERWISE SPECIFIED
4. MANHOLES SHALL BE POLYMER CONCRETE AS SPECIFIED
5. MANHOLE GROUT MATERIALS SHALL BE AS SPECIFIED OR APPROVED BY POLYMER CONCRETE MANHOLE MANUFACTURER/ SUPPLIER



1 TYPICAL POLYMER CONCRETE DOGHOUSE MANHOLE
99-C503 SCALE: NONE



2 BOLT FRAME TO CONCRETE MANHOLE
99-C503 SCALE: NONE

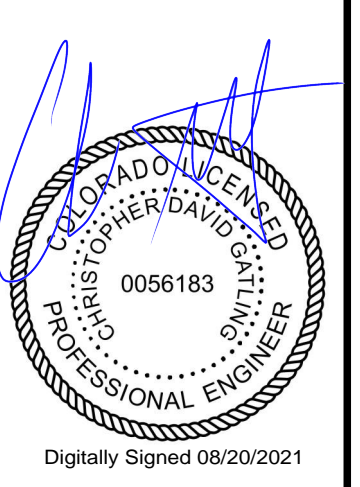


3 MANHOLE RING AND COVER DETAIL
99-C503 SCALE: NONE



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REGISTRATION NO. 20171218008



REV.	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO
Grand Junction
C O L O R A D O
GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

SITE CIVIL DETAILS III

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: BSC
DRAWN BY: CM

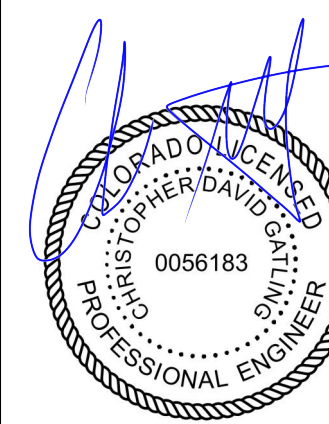
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
DRAWING NUMBER
99-C503
SHEET NUMBER
051

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REGISTRATION NO.
20171218008



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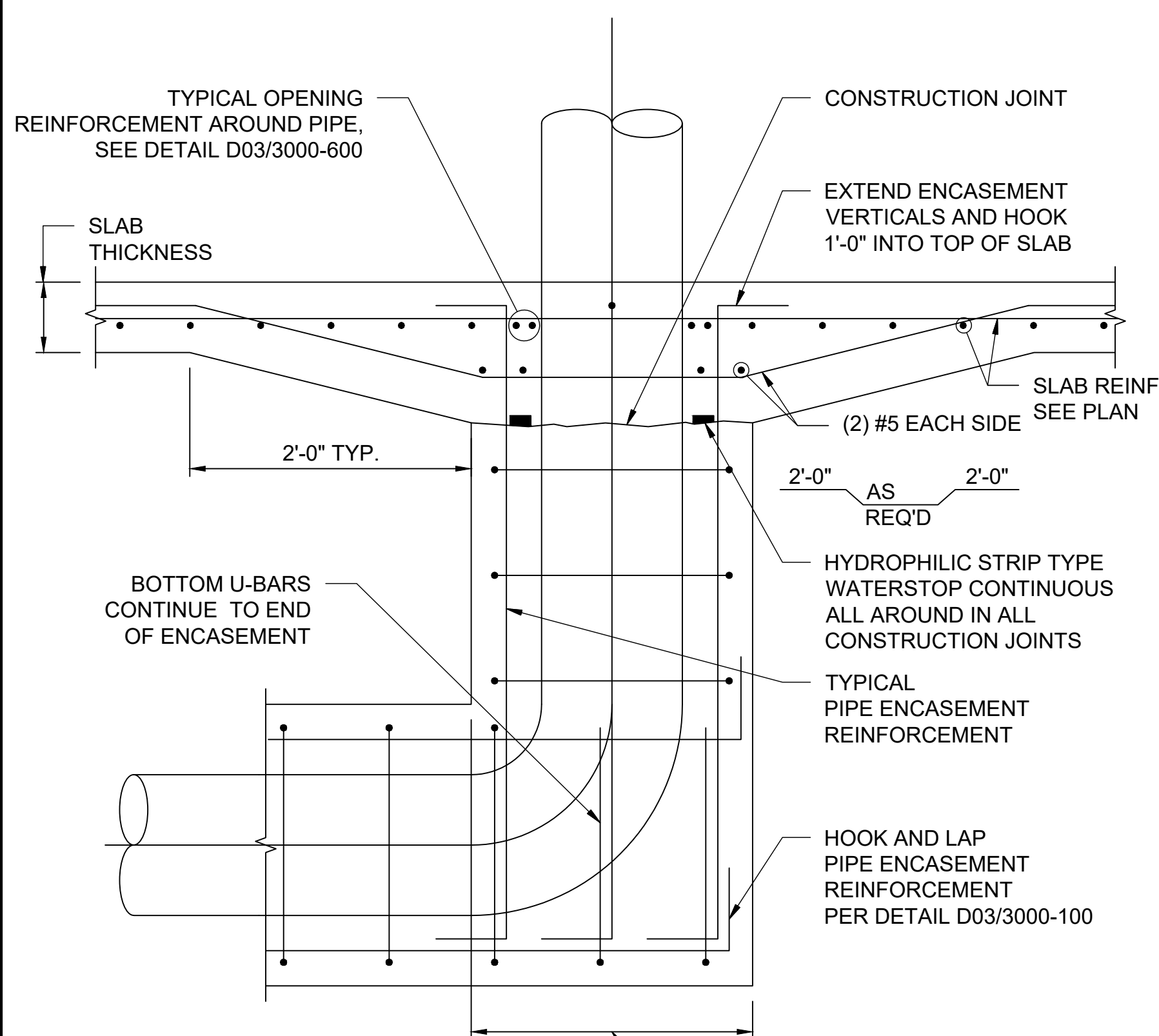
REV.	DATE	DESCRIPTION

CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
 GRAND JUNCTION
 GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

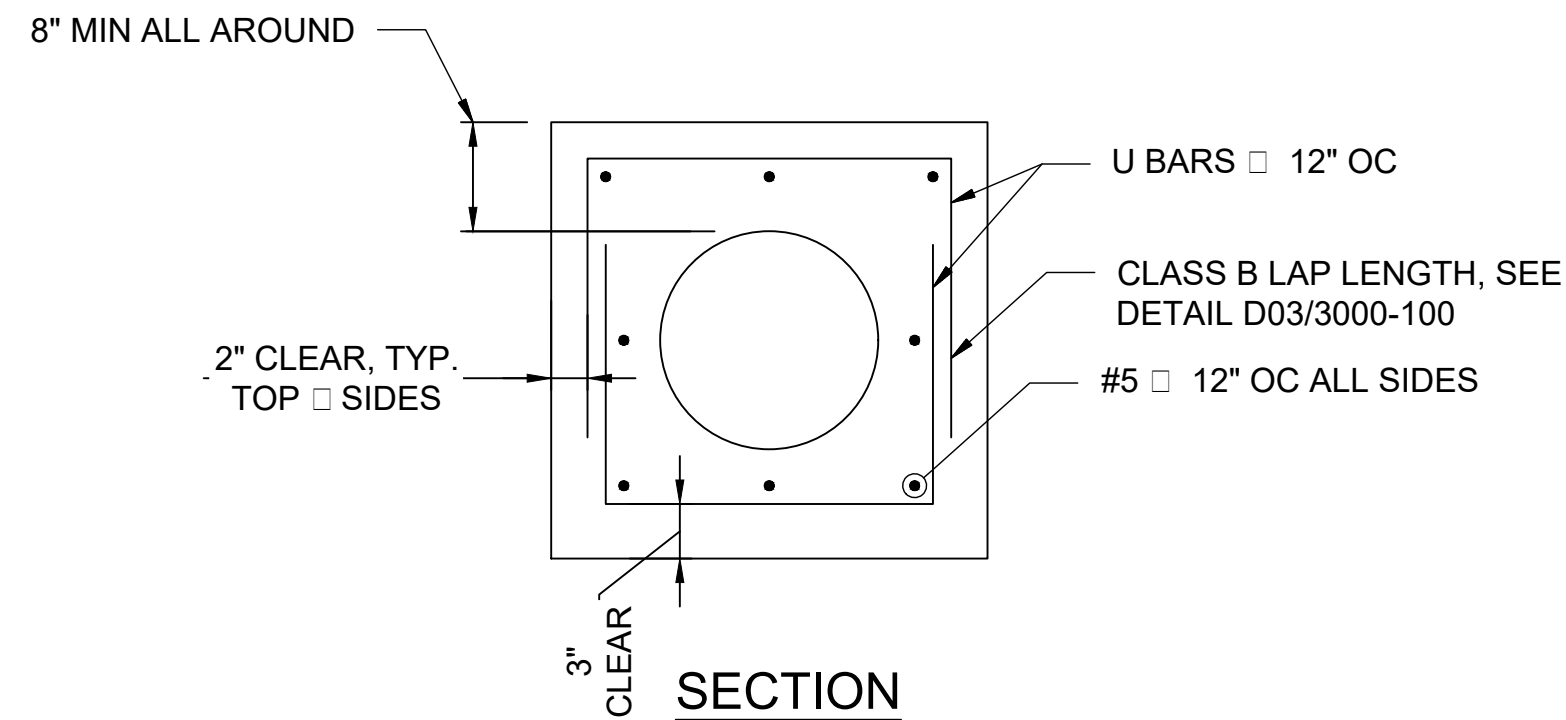
SITE CIVIL DETAILS IV

JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: TNP
 DRAWN BY: TNP

BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
 DRAWING NUMBER
99-C504
 SHEET NUMBER
052



ENCASEMENT RISER

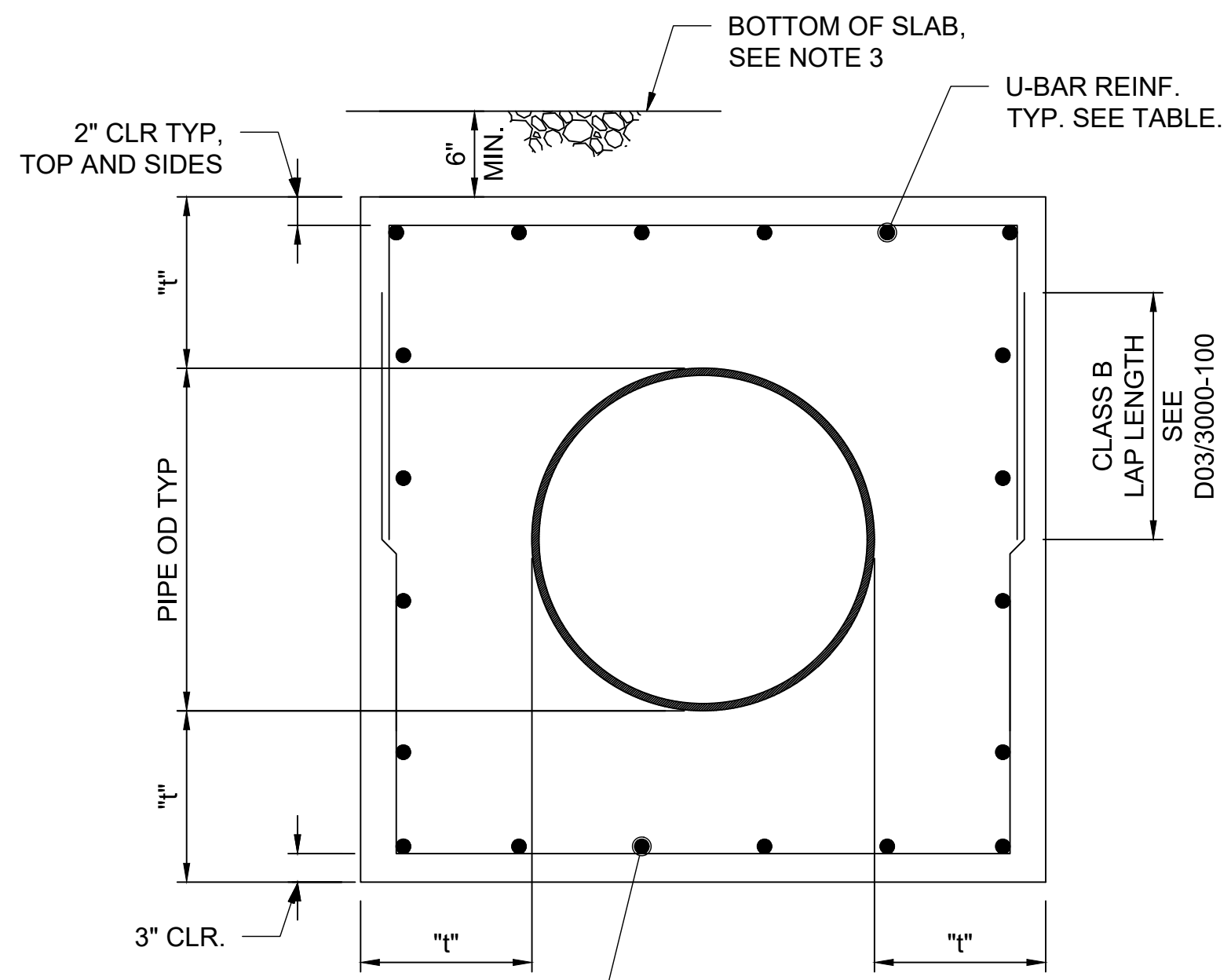


NOTES:

- SECTION APPLIES TO PIPE WITH DIAMETERS 18" AND SMALLER. FOR PIPES 20" AND LARGER, SEE DETAIL
- WHEN PIPE ENCASEMENT IS CLOSER THAN 6" TO THE ABOVE SLAB, SEE DETAIL

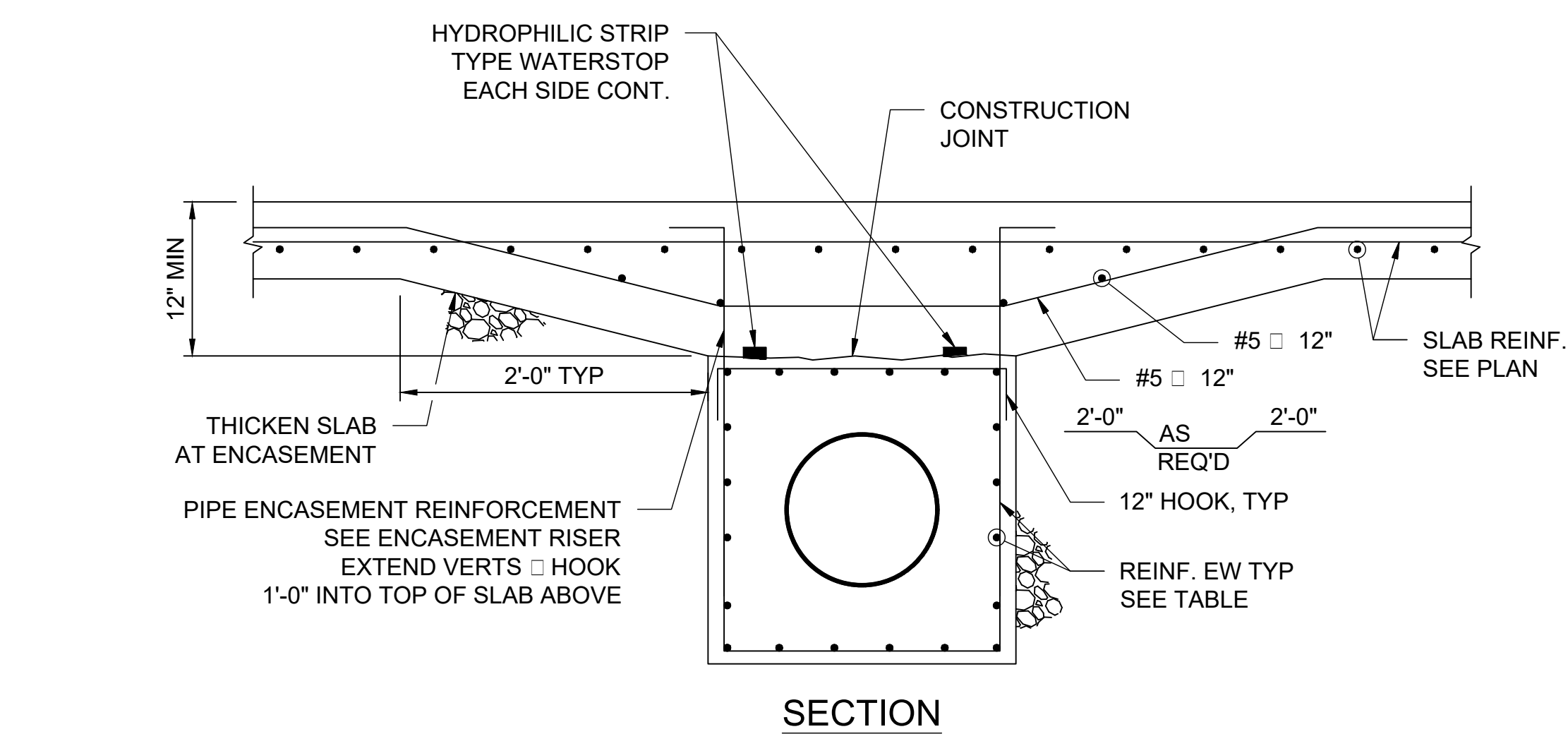


PIPE DIA (IN)	"I" (IN)	REINF	U-BARS
20-36	8	#5 @ 12"	#5 @ 12"
36-48	10	#6 @ 12"	#6 @ 12"
48	12	#6 @ 12"	#6 @ 12"

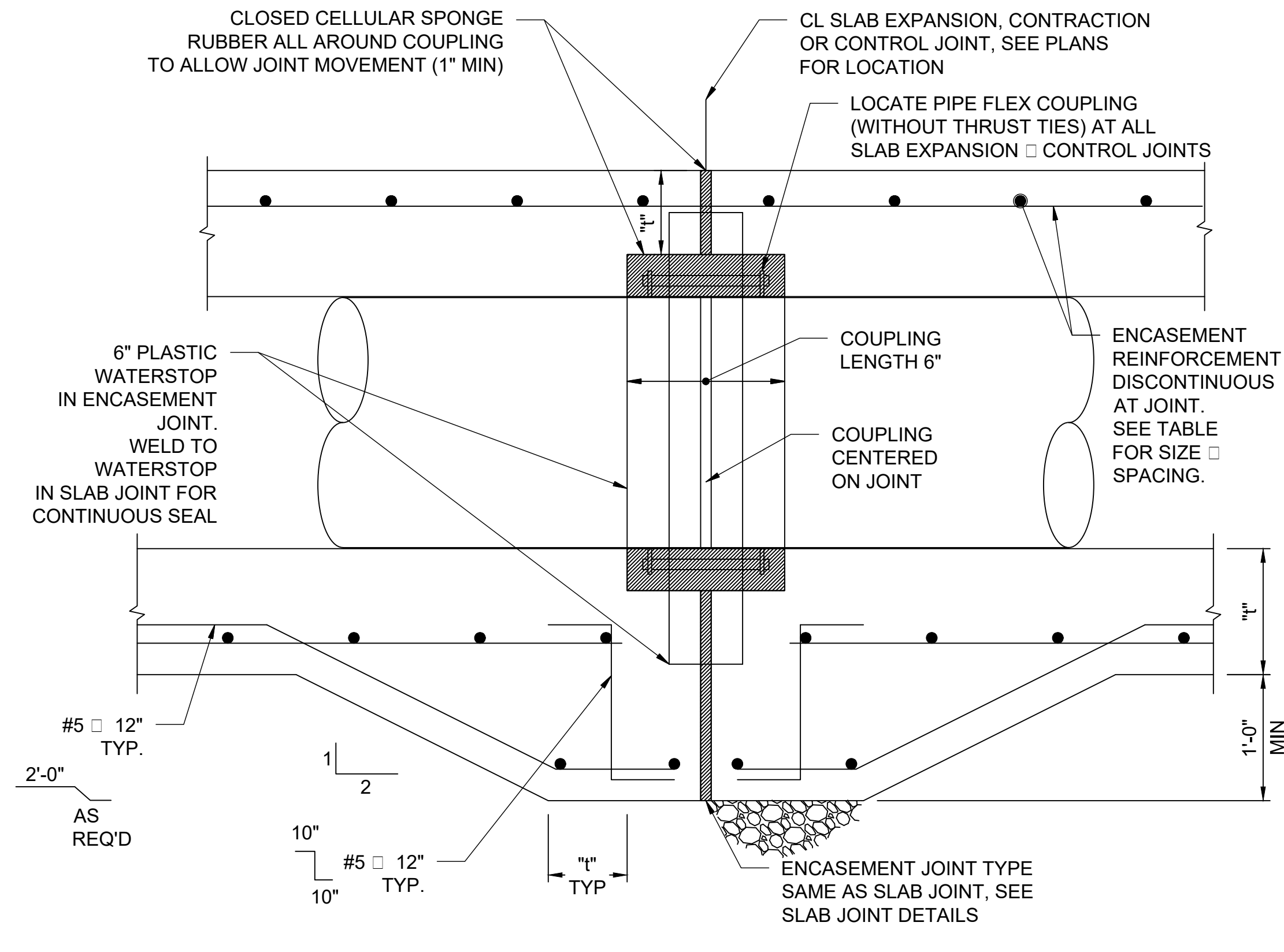


NOTES:

- SECTION APPLIES TO PIPE WITH DIAMETERS 20" AND LARGER.
- FOR ENCASEMENT AT PIPE RISER, SEE
- WHEN PIPE ENCASEMENT IS CLOSER THAN 6" TO SLAB ABOVE, TIE SLAB AND ENCASEMENT TOGETHER. SEE



SECTION



JOINT DETAIL

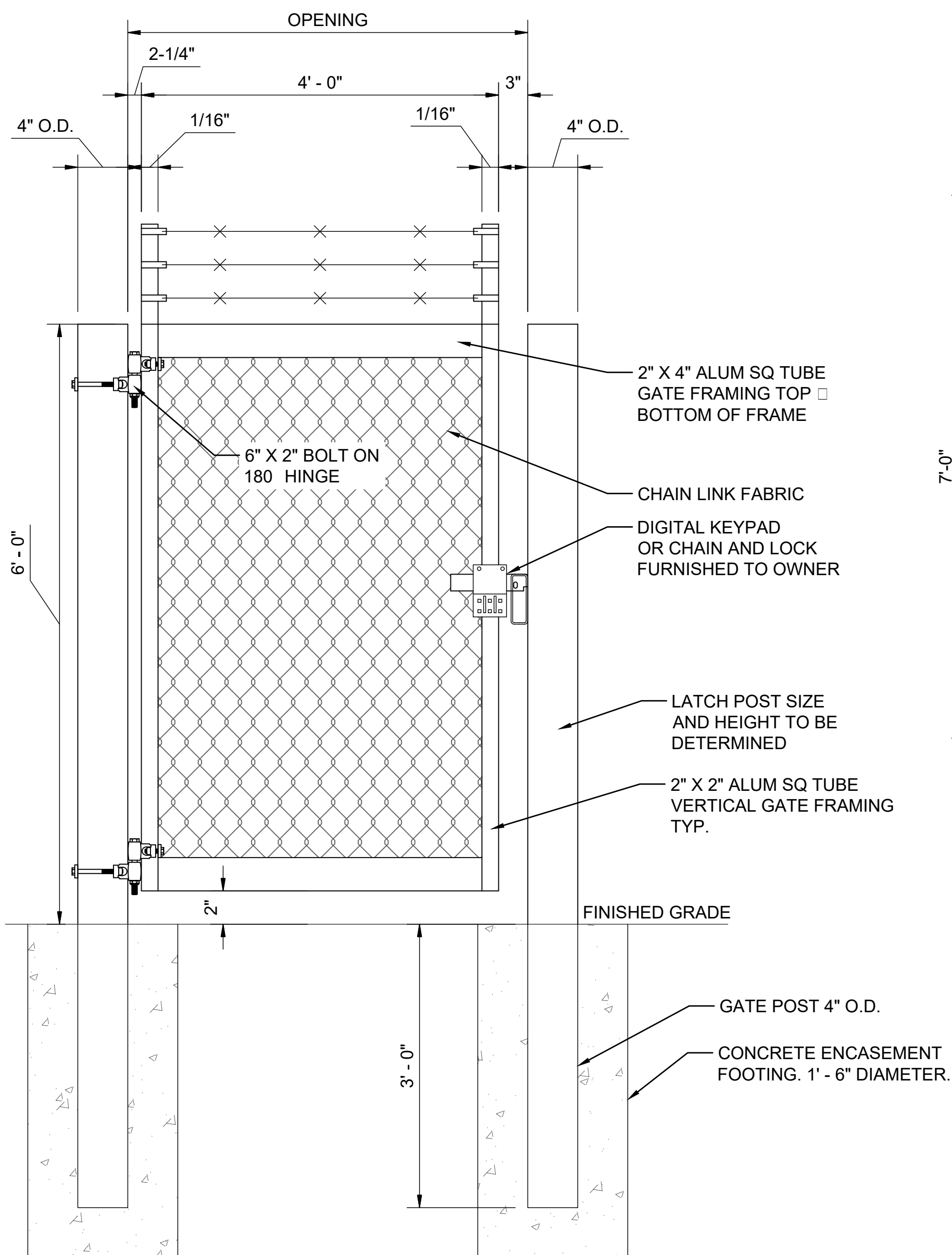
NOTES:

- TIE PIPE ENCASEMENT TO SLAB AS SHOWN WHEN DISTANCE BETWEEN PIPE ENCASEMENT AND BOTTOM OF SLAB IS LESS THAN 6".
- 6" PLASTIC WS IN ENCASEMENT JOINTS. WELD TO WS IN SLAB JOINTS.



File: L:\2020\20W23045 - Grand Junction Persigo Biotrickling Des\Drawings\GJPBD-99-C504-DS.dwg, Last Save: 8/20/2021 2:51 PM, Last saved by: TNP, Plot Date: 8/20/2021 3:00 PM, Plot Scale: 1:1, Plot Style: Grand Junction.ctb, Plot Size: 11x17, Plot Date: 8/20/2021 3:00 PM, Plotter Used: -----

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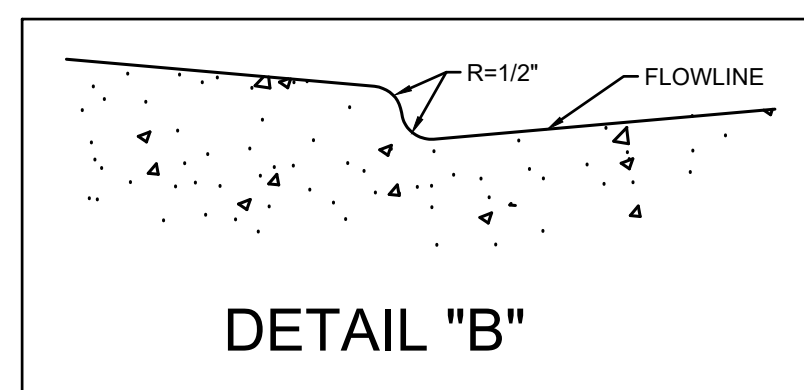


ELEVATION VIEW ALUMINUM SWING GATE

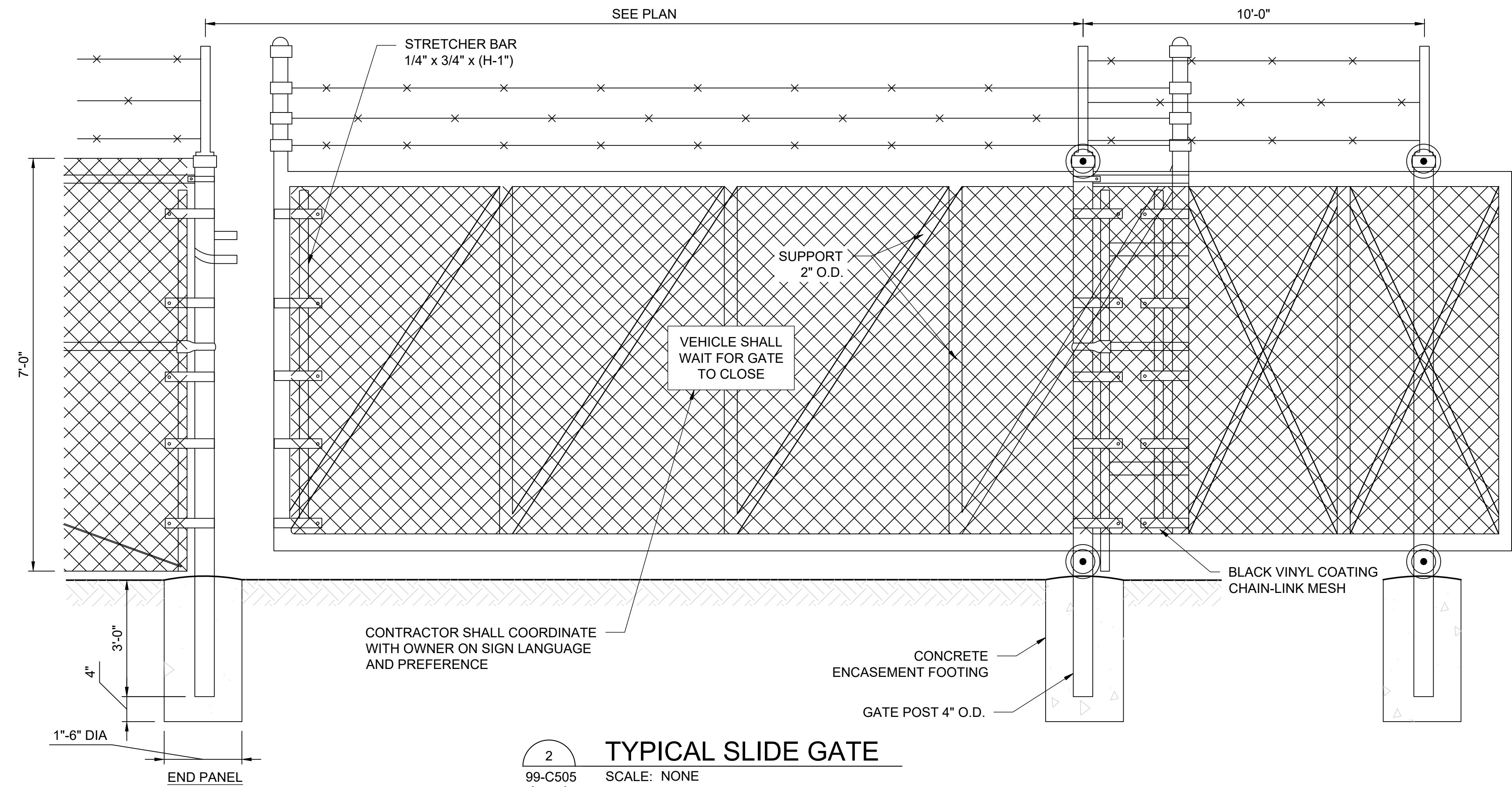
- NOTES:
1. ALL GALVANIZED FITTINGS TO CONFORM TO ASTM A-153.
 2. KEYPAD MAY BE MODIFIED TO GATE LATCH AT THE WRITTEN APPROVAL OF OWNER. APPROVAL MUST BE FORWARDED TO ENGINEER.
 3. POST AND FRAME SIZES MAY REQUIRE MODIFICATION TO MEET SPECIFIC PROJECT REQUIREMENTS.

1 TYPICAL MAN GATE
99-C505 SCALE: NONE

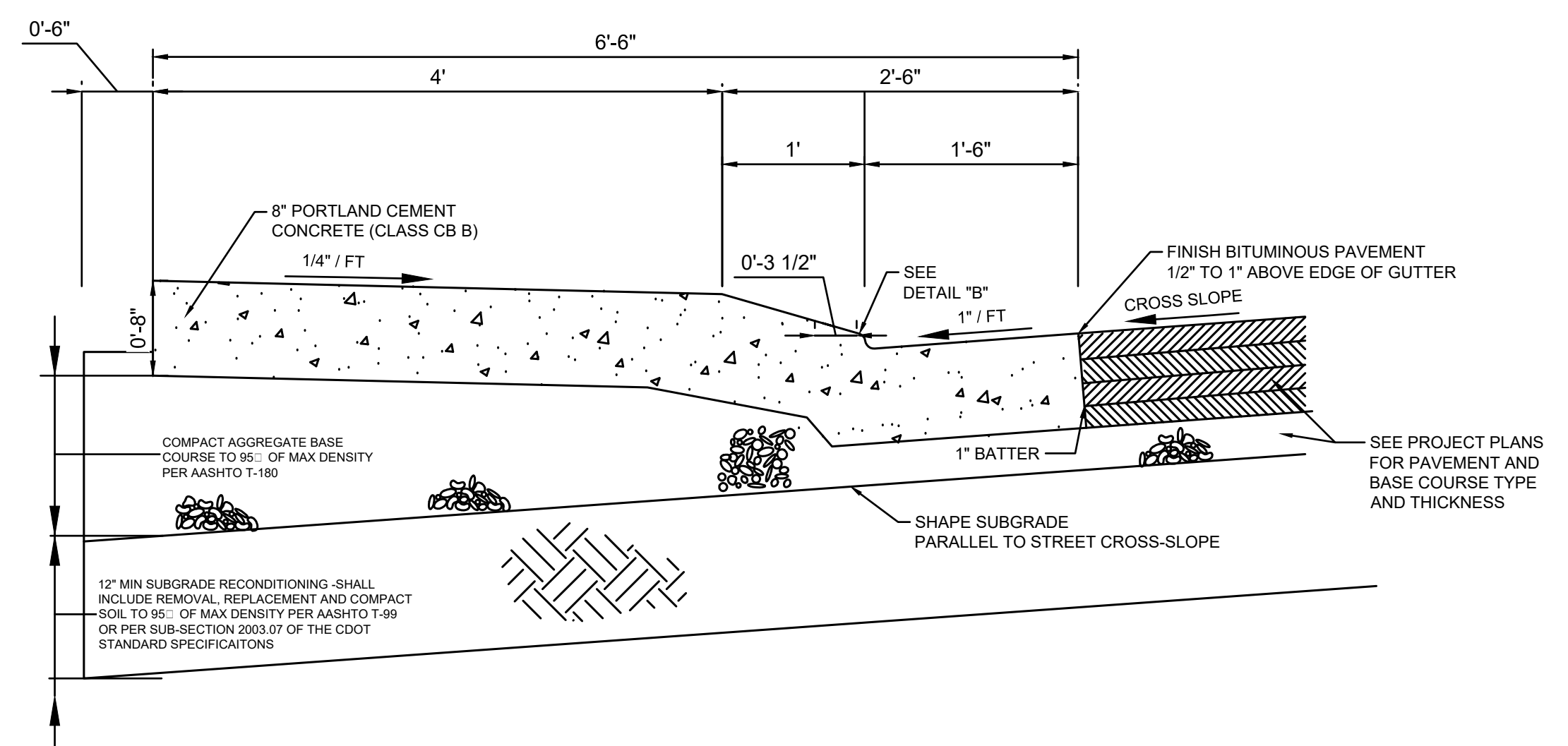
- NOTES:
1. GATE FRAME TO BE SIZED TO NOT RUB OR HIT FOUL AIR PIPE OR CONCRETE PIPE SUPPORTS.
 2. DROP ROD TO BE LOCKABLE TO PREVENT THE ROD FROM BEING REMOVED AND THE GATE OPENED WITHOUT FIRST REMOVING THE LOCK. ROD TO EMBED IN ABUTMENT WALL A MINIMUM OF 6".



DETAIL "B"



2 TYPICAL SLIDE GATE
99-C505 SCALE: NONE

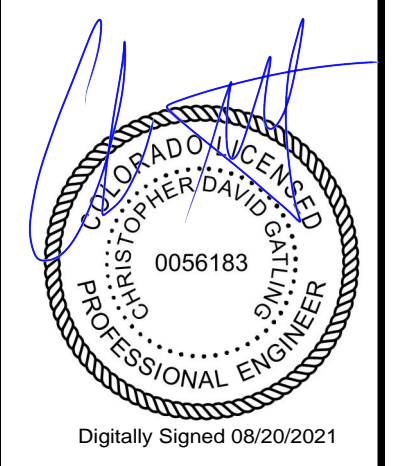


3 DRIVE OVER CURB AND GUTTER
99-C505 SCALE: NONE



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20171218008



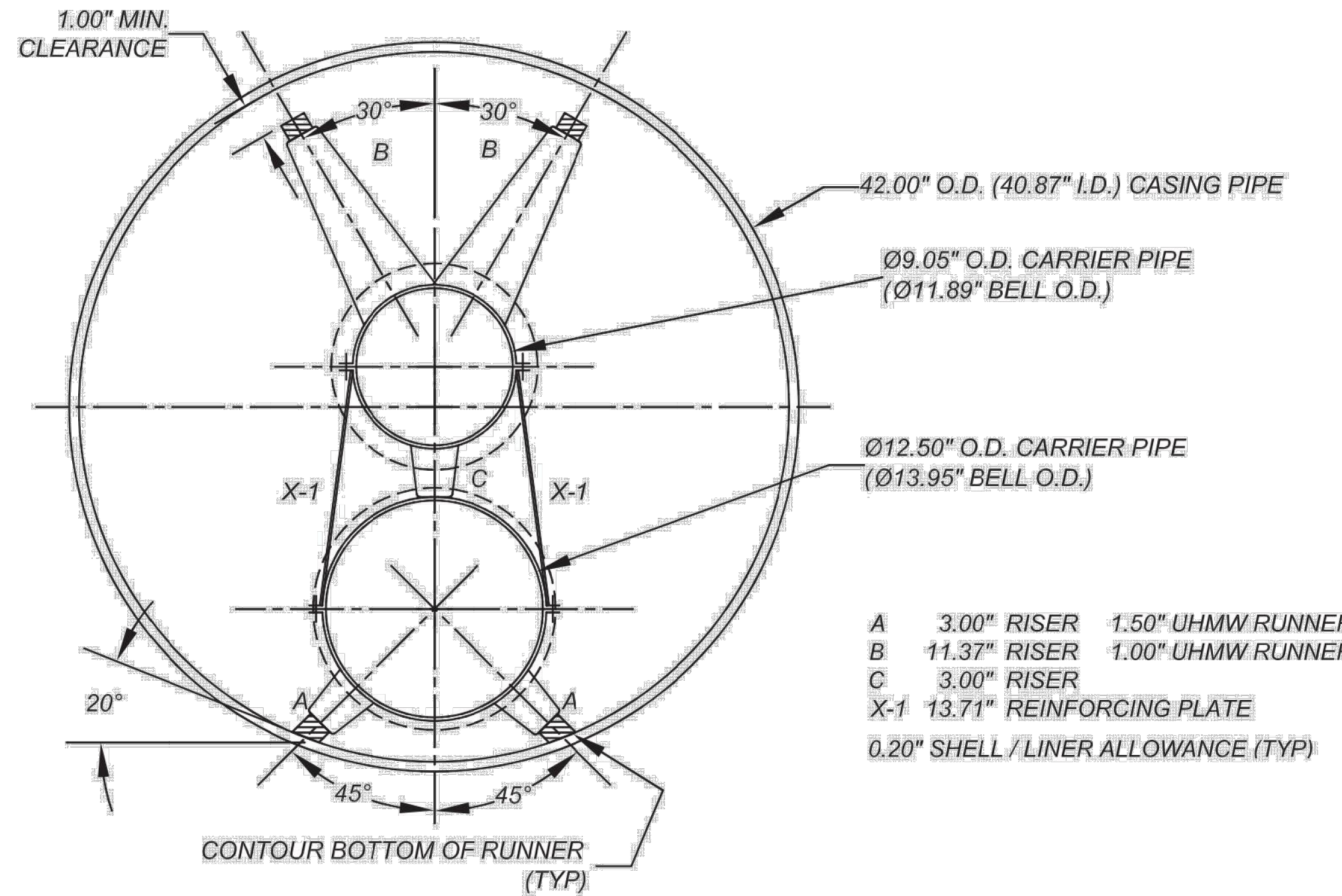
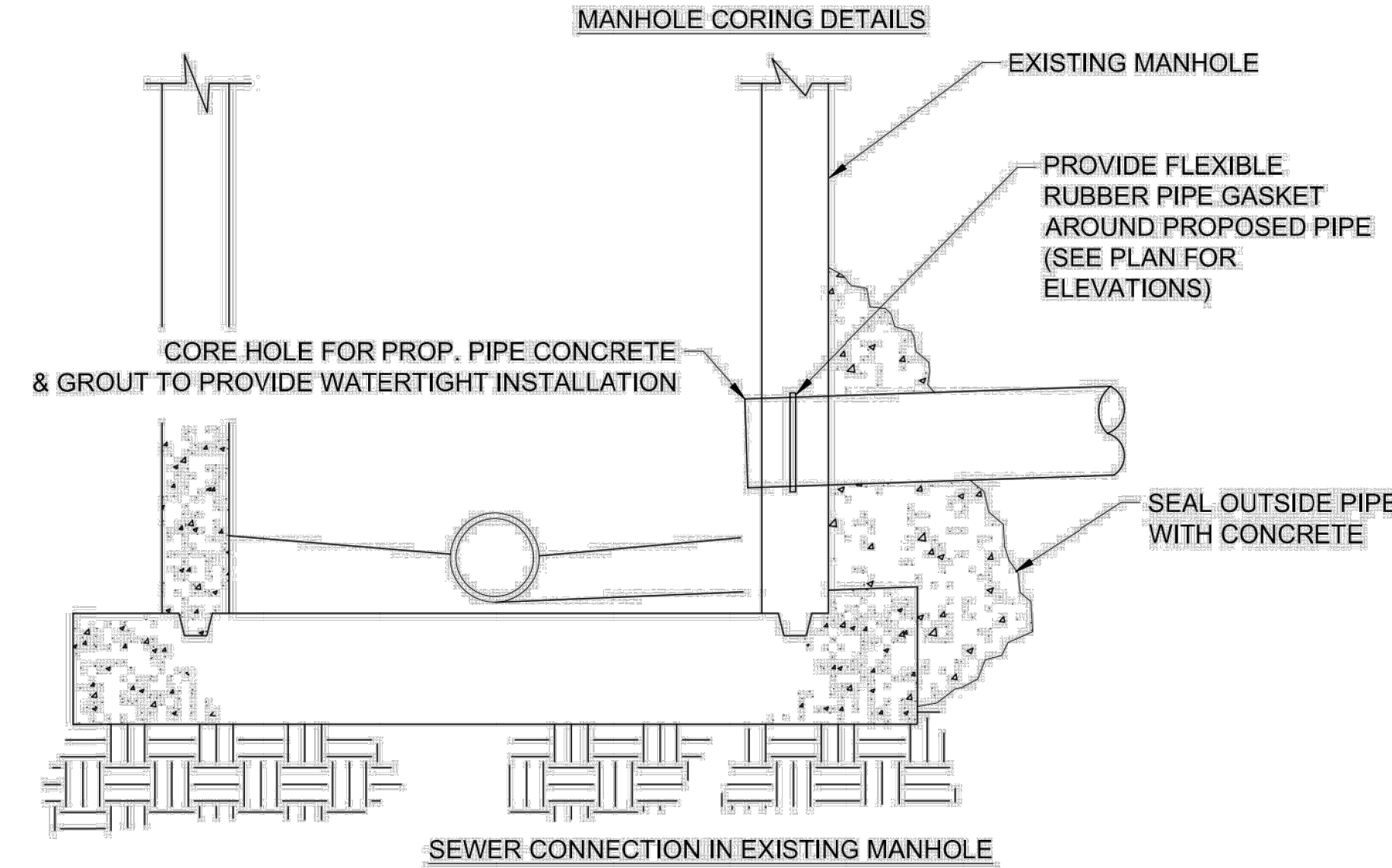
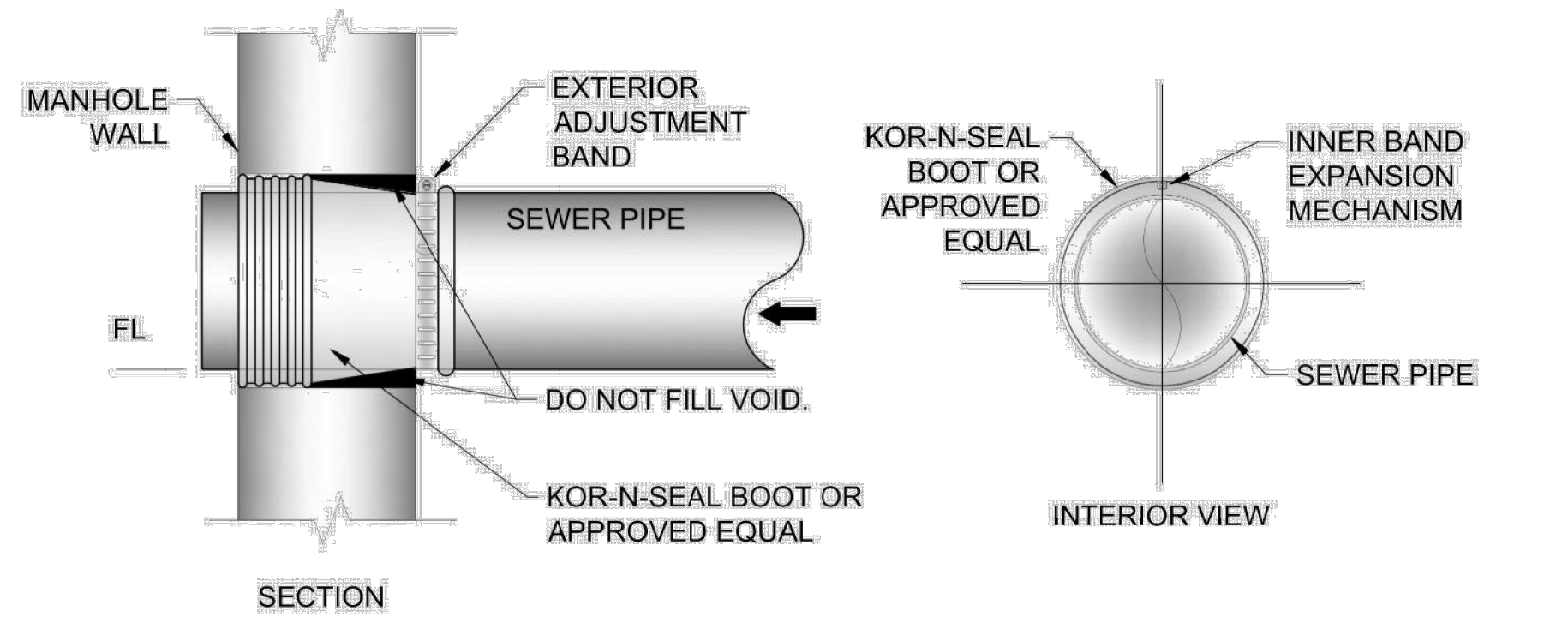
REV.	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
Grand Junction
 COLLECTIVE
 GRAND JUNCTION
 ODOR CONTROL IMPROVEMENTS

SITE CIVIL DETAILS V

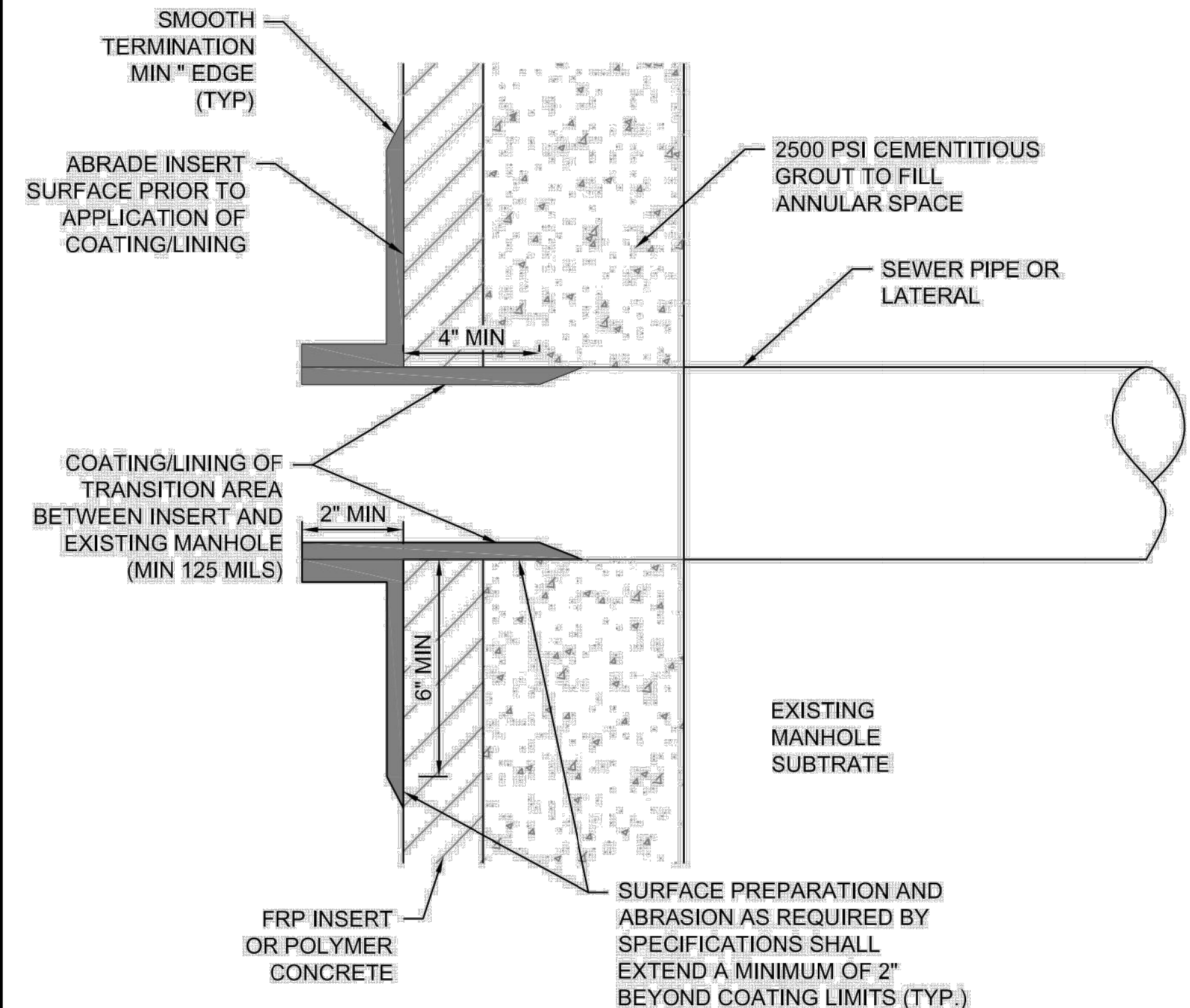
JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: TNP
 DRAWN BY: TNP

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 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
 DRAWING NUMBER
99-C505
 SHEET NUMBER
053

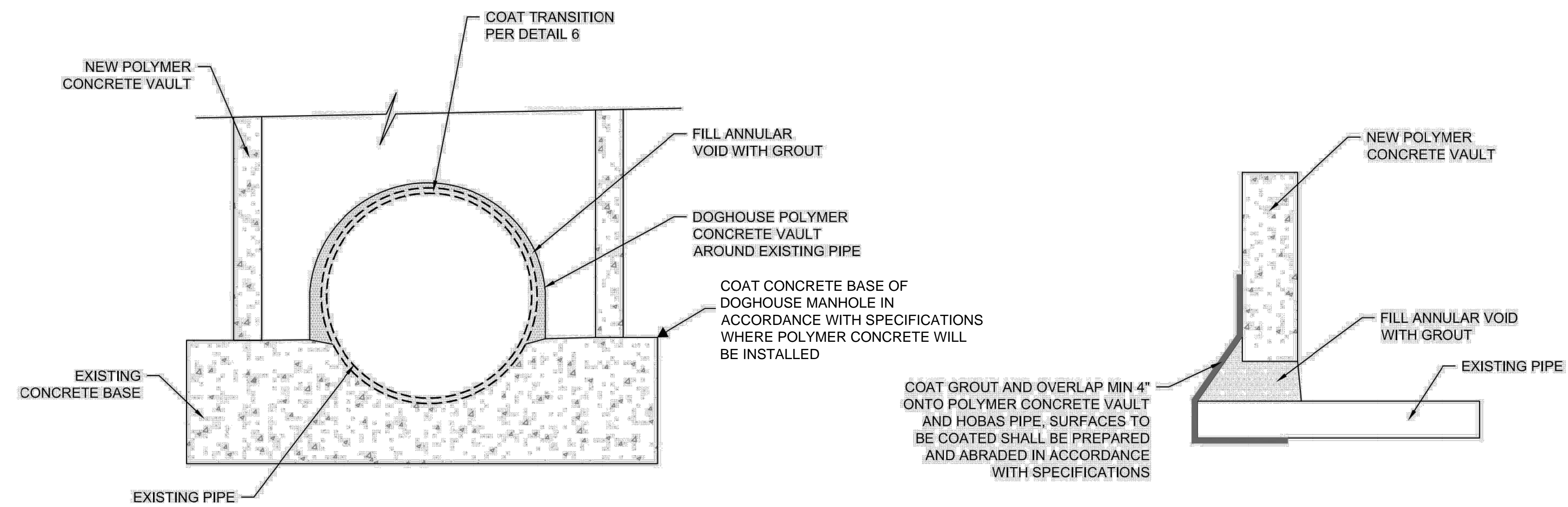


5 DUAL CARRIER PIPE - ALTERNATE
99-C506 SCALE: NONE

1 MANHOLE CORING DETAILS
99-C506 SCALE: NONE



2 MANHOLE ANNULAR TRANSITION
99-C506 SCALE: NONE



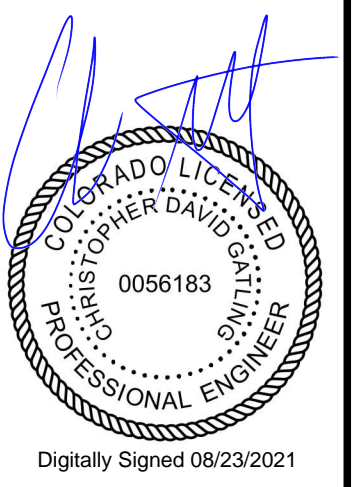
3 DOGHOUSE AROUND PIPE DETAIL
99-C506 SCALE: NONE

4 DOGHOUSE COATING SECTION
99-C506 SCALE: NONE



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ODOR CONTROL IMPROVEMENTS

SITE CIVIL DETAILS VI

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: TNP
DRAWN BY: TNP

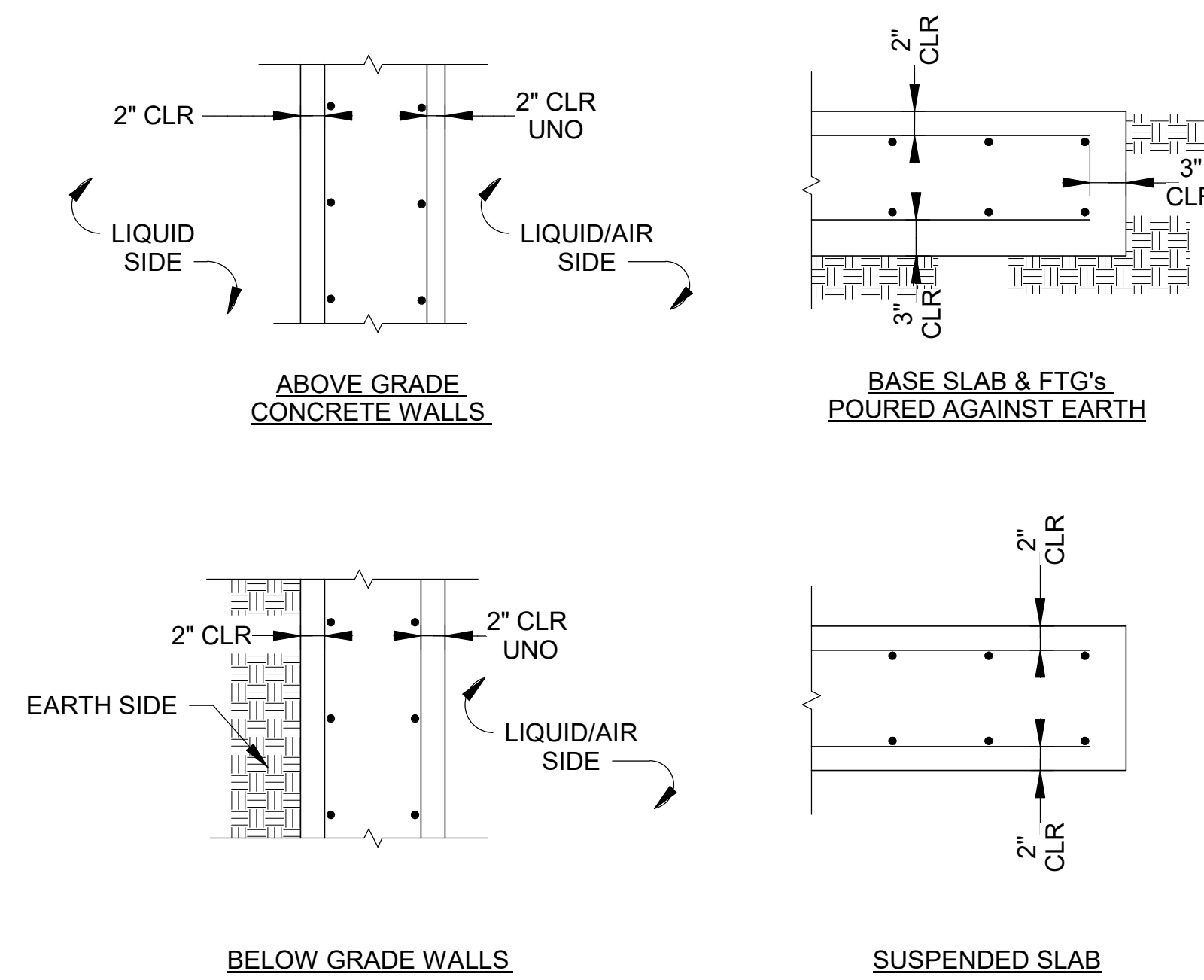
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DRAWING NUMBER
99-C506
SHEET NUMBER
054

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FOR CLEARCOVER OF 2", F'c=4,000PSI, & GRADE 60 STEEL

BAR SIZE	DIAMETER (db) (INCHES)	DEVELOPMENT LENGTH (ld) (INCHES)		CLASS A LAP SPLICE (INCHES)		CLASS B LAP SPLICE (INCHES)		90° STD HOOK "X" (INCHES)		180° STD HOOK "Y" (INCHES)
		"TOP" BARS	OTHER	"TOP" BARS	OTHER	"TOP" BARS	OTHER	HOOK	ldh	
REINFORCING BARS IN TENSION										
#3	0.375	12	9	12	9	15	12	6	7	6
#4	0.5	15	12	15	12	20	15	8	10	6
#5	0.625	19	15	19	15	24	19	10	12	6
#6	0.75	23	17	23	17	30	23	12	14	6
#7	0.875	33	25	33	25	42	33	14	17	7
#8	1.0	37	29	37	29	48	37	16	19	8
#9	1.128	46	36	46	36	60	46	20	22	11
#10	1.27	57	44	57	44	74	57	22	24	12
#11	1.41	68	53	68	53	90	68	24	27	13
REINFORCING BARS IN COMPRESSION										
#3	0.375	8		12						
#4	0.5	10		15						
#5	0.625	12		19						
#6	0.75	14		23						
#7	0.875	17		26						
#8	1.0	19		30						
#9	1.125	22		34						
#10	1.25	24		38						
#11	1.375	27		42						

HOOKED BARS SHALL NOT BE USED IN COMPRESSION



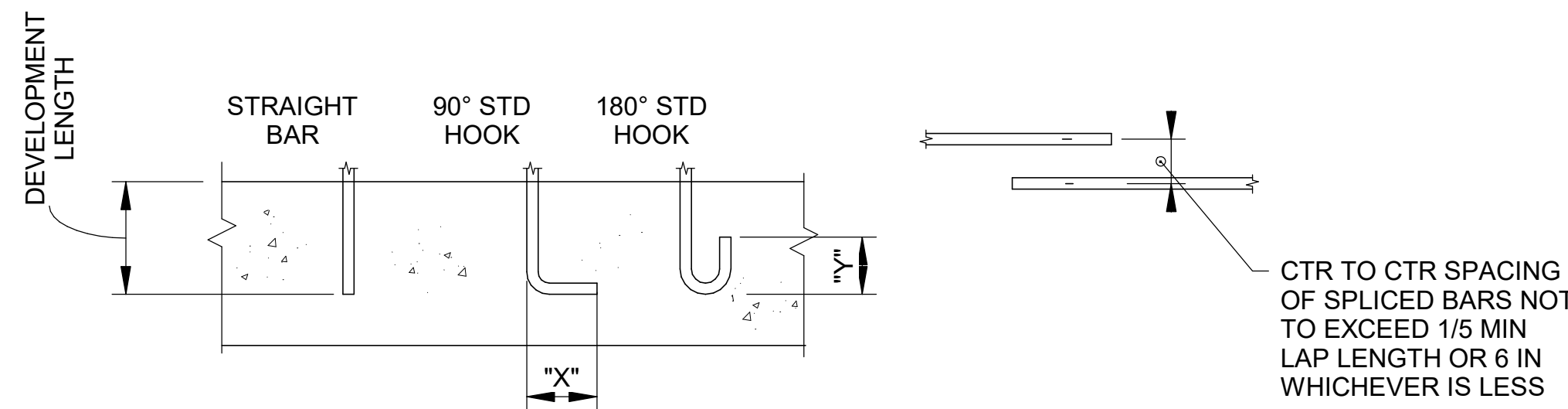
COLUMN, PIER, & BEAM

NOTES:

- SEE PLANS FOR PROPER REBAR ORIENTATION.

STANDARD COVER FOR REINFORCING STEEL

99-S501 SCALE: NOT TO SCALE



NOTES:

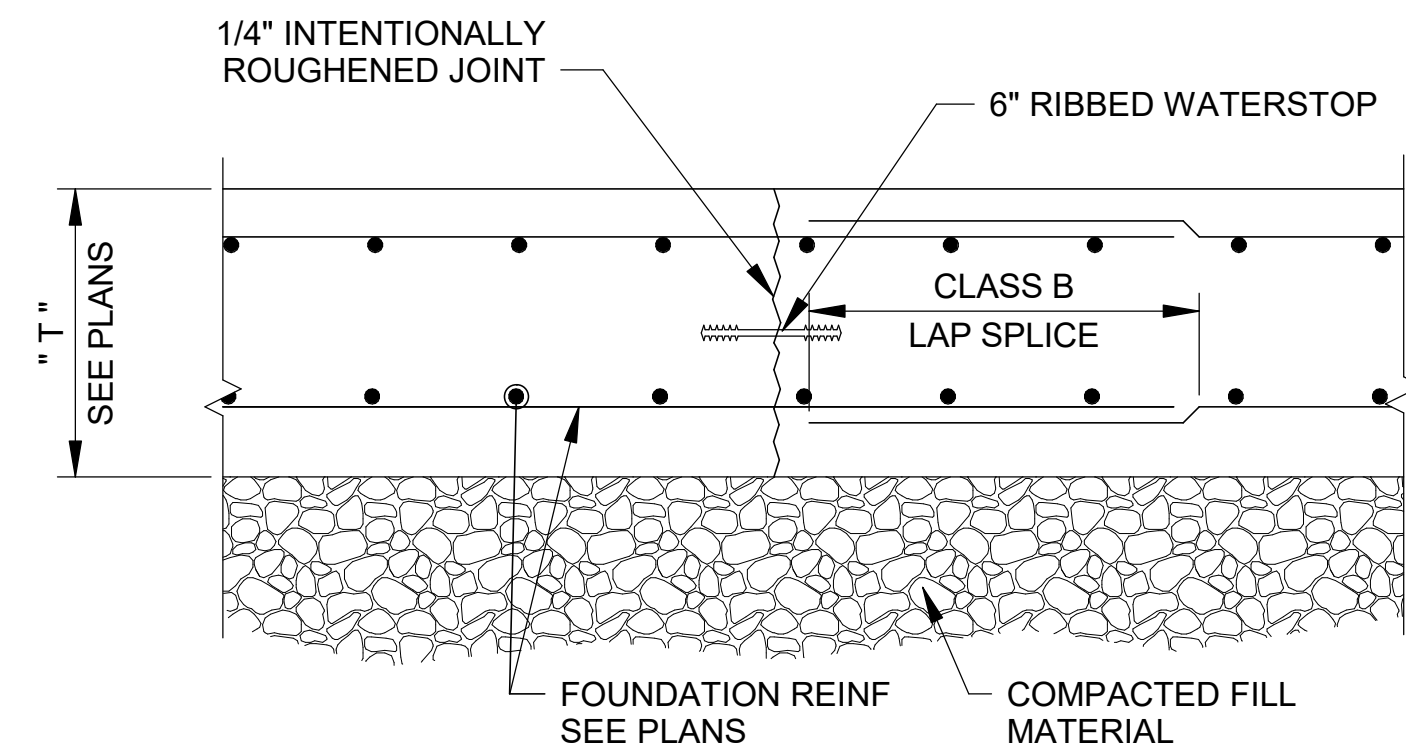
- "TOP" BARS SHALL BE HORIZONTAL REINFORCEMENT PLACED SO THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.
- CLEAR SPACING OR BARS BEING DEVELOPED OR SPLICED SHALL:
 - NOT BE LESS THAN l_d , HAVE CLEAR COVER NOT LESS THAN d_b , AND STIRRUPS OR TIES THROUGHOUT l_d NOT LESS THAN THE CODE MINIMUM OR;
 - CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN $2d_b$ AND CLEAR COVER NOT LESS THAN d_b WHERE d_b = DIAMETER OF REINFORCING BAR AND l_d = DEVELOPMENT LENGTH.
- ALL LAP SPLICES SHALL BE CLASS B UNO.

STANDARD HOOK AND REINFORCING LAP SPLICE

99-S501 SCALE: NOT TO SCALE

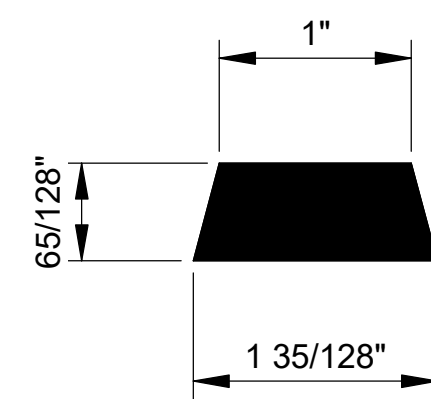
FLAT RIBBED WATERSTOP DETAIL

99-S501 SCALE: NOT TO SCALE



TYPICAL FOUNDATION CONSTRUCTION JOINT

99-S501 SCALE: NOT TO SCALE



TYPE A: NON-HYDROPHILIC WATERSTOP
 1. SIZE: 3/4" X 1" X CONT.
 2. REQUIRED HYDROSTATIC PRESSURE RESISTANCE: 20 PSI
 3. SUPPLY TYPE A, AS NOTED.

TYPE B: HYDROPHILIC WATERSTOP
 1. SIZE: 3/4" X 1" X CONT.
 2. REQUIRED HYDROSTATIC PRESSURE RESISTANCE: 100 PSI
 3. SUPPLY TYPE B, UNO

STRIP TYPE WATERSTOP DETAIL

99-S501 SCALE: NOT TO SCALE

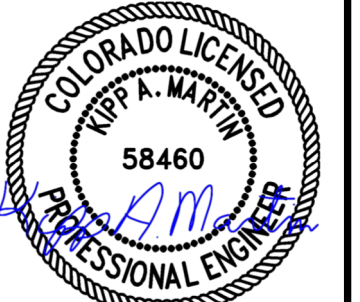
NOTE:

- FLAT RIBBED PVC WATERSTOP TO BE USED IN NEW CONSTRUCTION OF NEW CONCRETE TO NEW CONCRETE.
- WATERSTOPS SHALL BE GREENSTREAK OR APPROVED EQUAL



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CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
 GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

STRUCTURAL DETAILS I

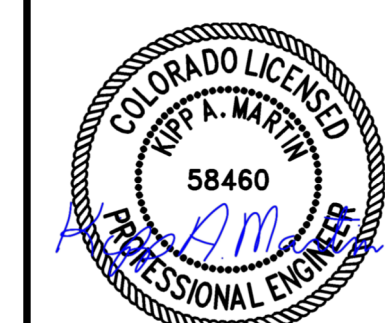
JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: KAM
 DRAWN BY: EGB

BAR IS ONE INCH ON ORIGINAL DRAWING 1"
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 DRAWING NUMBER
99-S501
 SHEET NUMBER **055**



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CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO
Grand Junction
COLORADO
GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

STRUCTURAL
DETAILS II

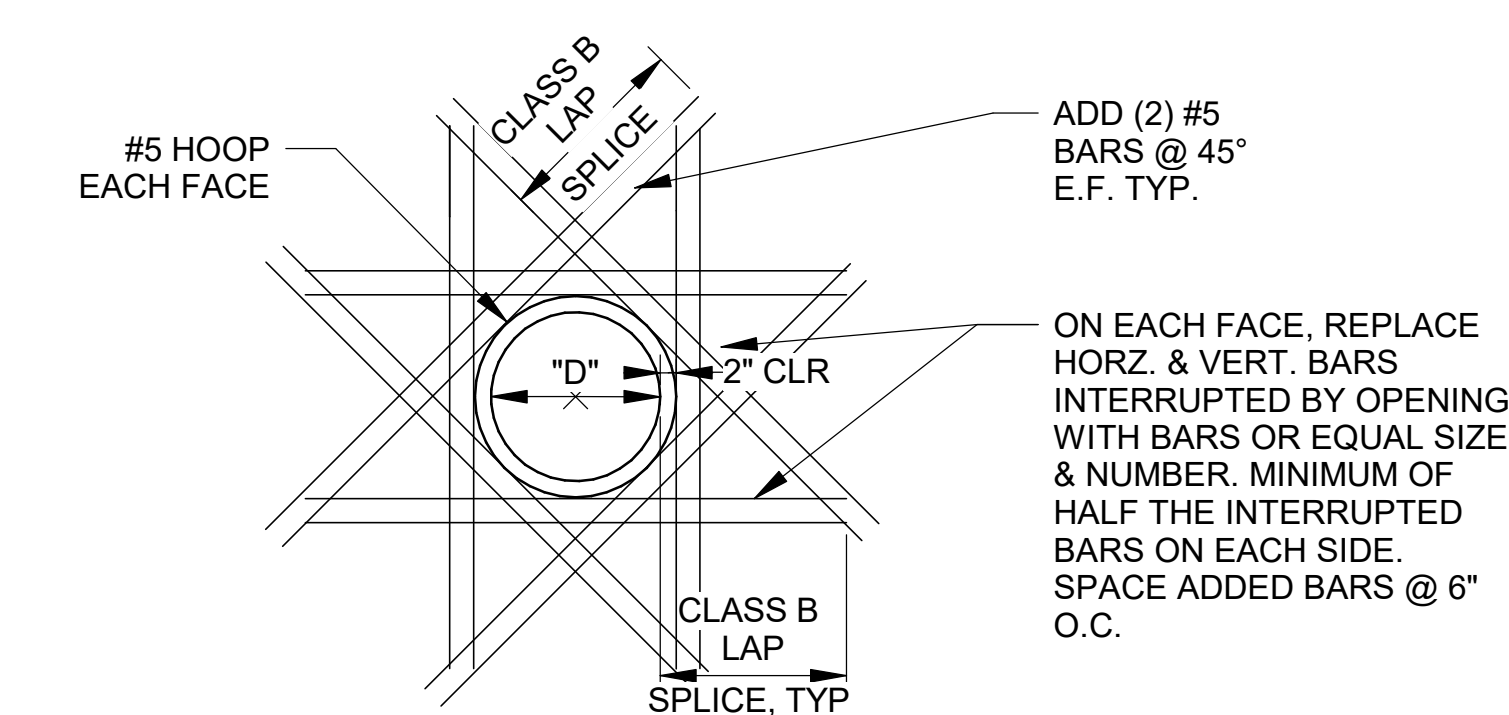
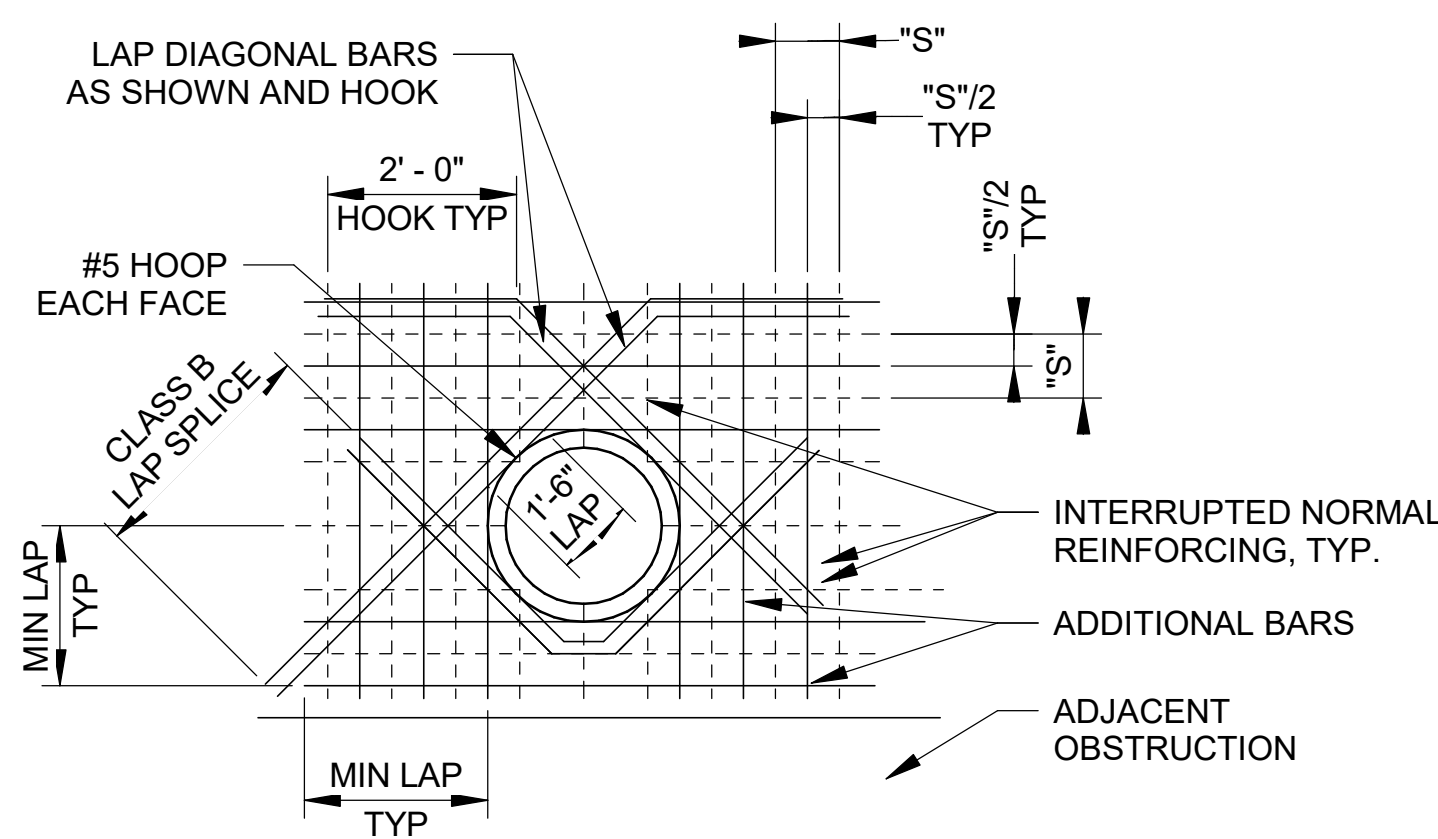
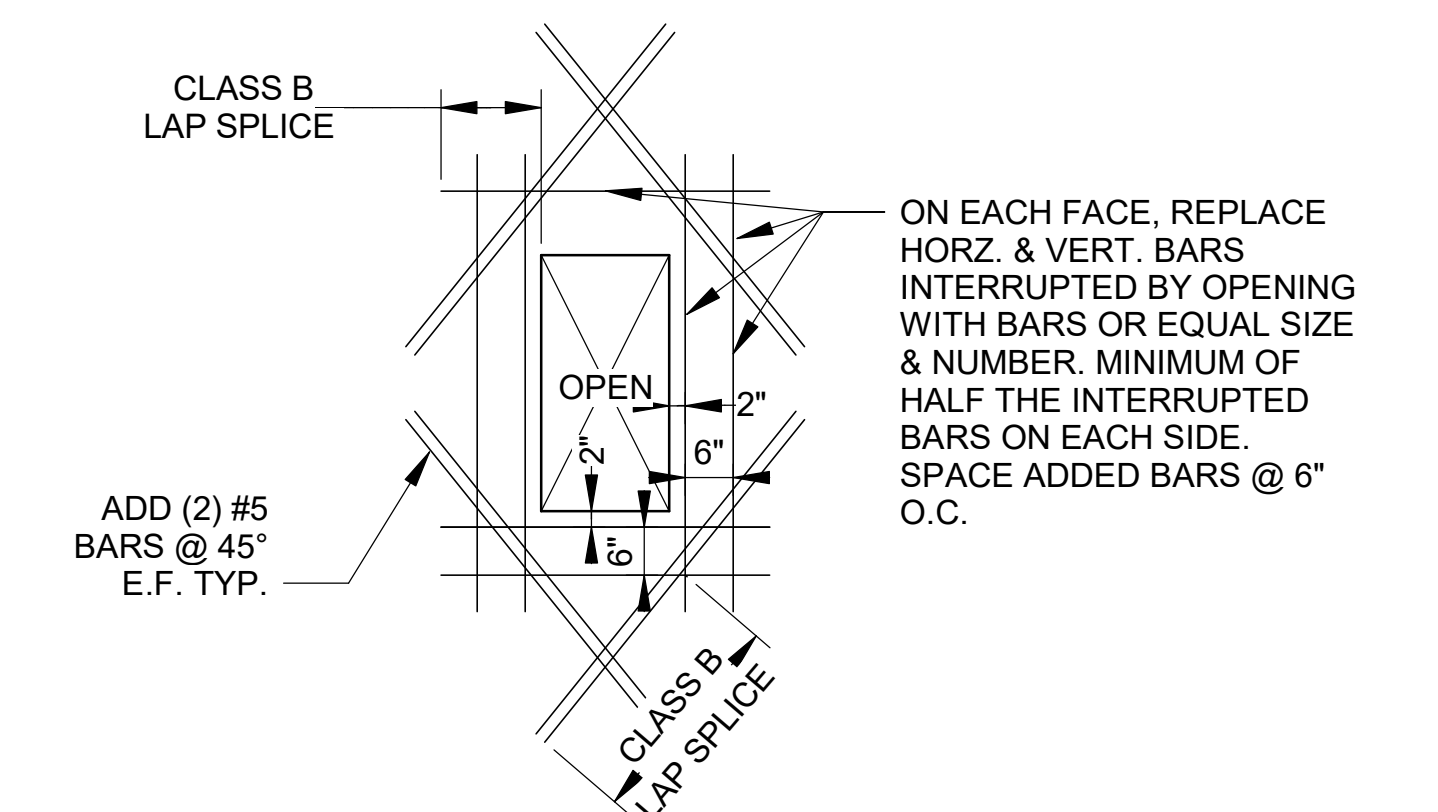
JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: KAM
DRAWN BY: EGB

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

DRAWING NUMBER

99-S502

SHEET NUMBER **056**



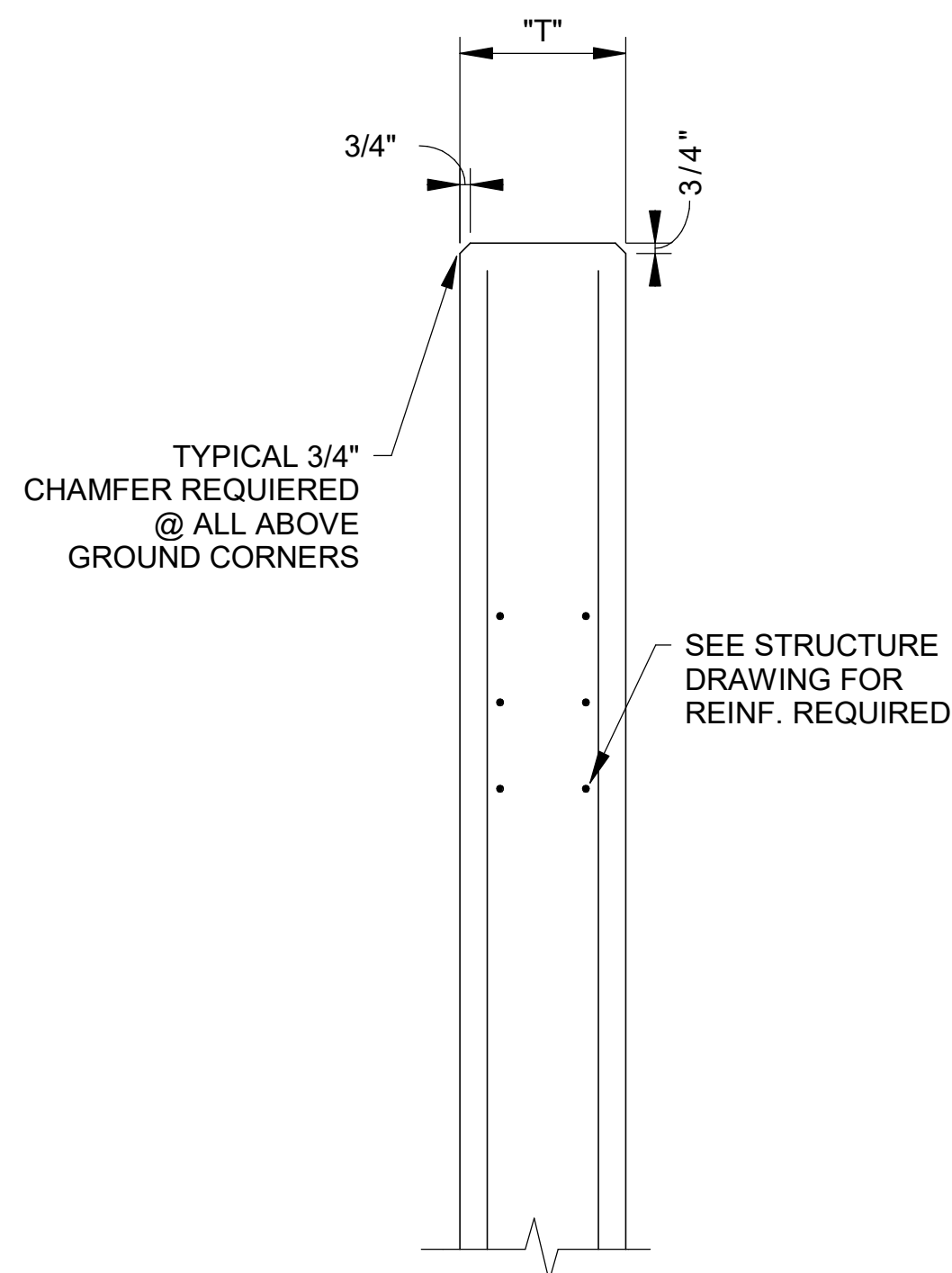
NOTES:

- NUMBER OF ADDITIONAL REINFORCING BARS AT EACH SIDE OF OPENING SHALL EQUAL HALF THE NUMBER OF INTERRUPTED BARS IN EACH LAYER OF REINFORCING.
- SIZE OF ADDITIONAL REINFORCING BARS TO EQUAL SIZE OF INTERRUPTED REINFORCING BARS.
- PROVIDE STD HOOKS FOR BARS IF LAP LENGTH EXTENSION CANNOT BE OBTAINED AT JOINTS OR OTHER OBSTRUCTIONS. PLACE ADDITIONAL BARS IN SAME PLANES AS INTERRUPTED REINFORCING.
- UNLESS NOTED OTHERWISE, SIZE OF DIAGONAL BARS SHALL BE THE SAME SIZE AS THE INTERRUPTED NORMAL REINFORCING LOCATE DIAGONALS IN EACH LAYER OF REINFORCING.
- PLACE DIAGONAL BARS INSIDE NORMAL REINFORCING.
- PROVIDE 2 DIAGONAL BARS EACH LAYER OR FACE, EACH WAY AS SHOWN. ALL REINFORCING TO CLEAR OPENING OR FLANGE COLLARS BY 2".

ADDITIONAL REINF. AT WALL OPENINGS

SCALE: NOT TO SCALE

1
99-S502



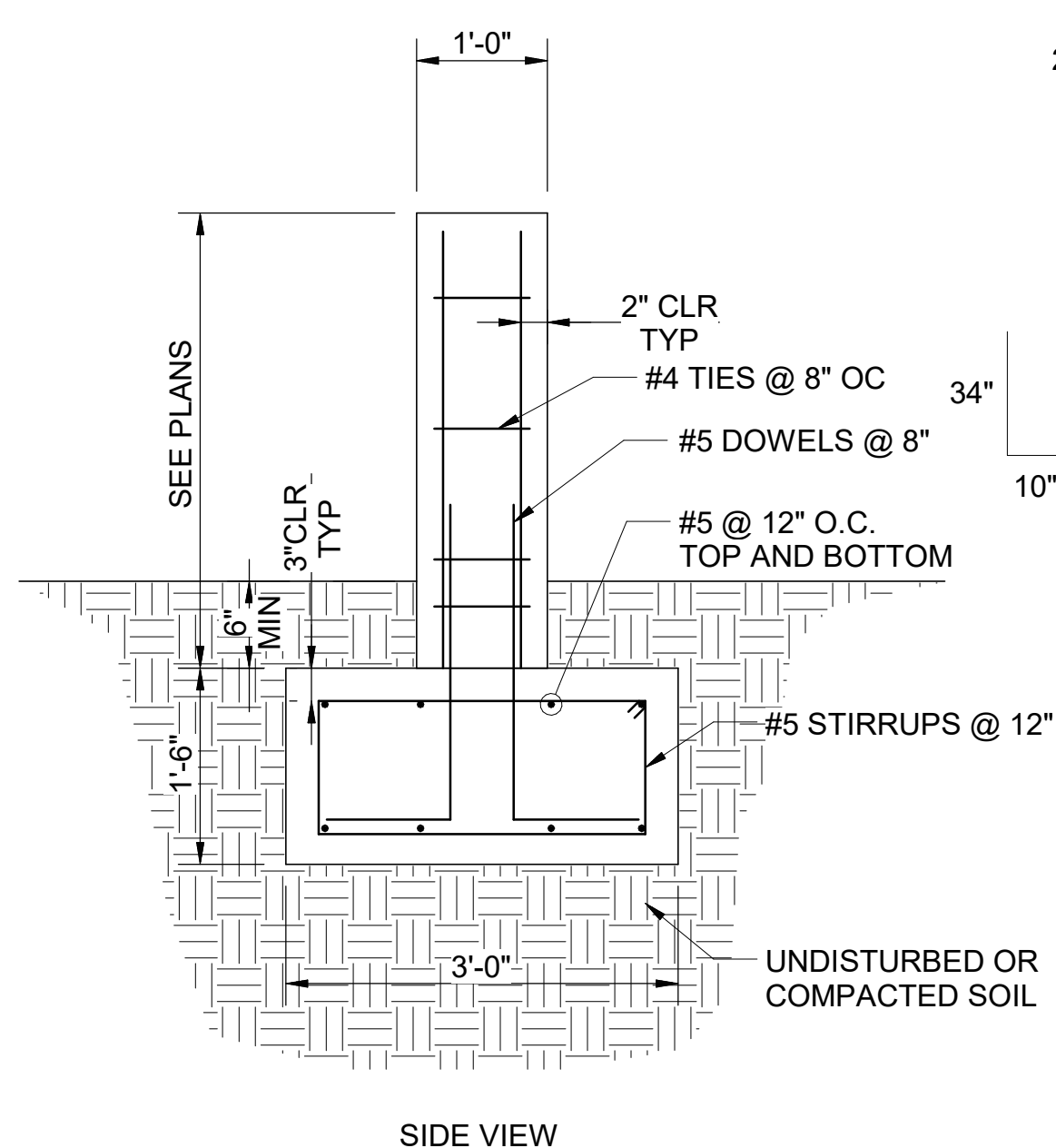
2 STANDARD CHAMFER AT CONCRETE

SCALE: NOT TO SCALE

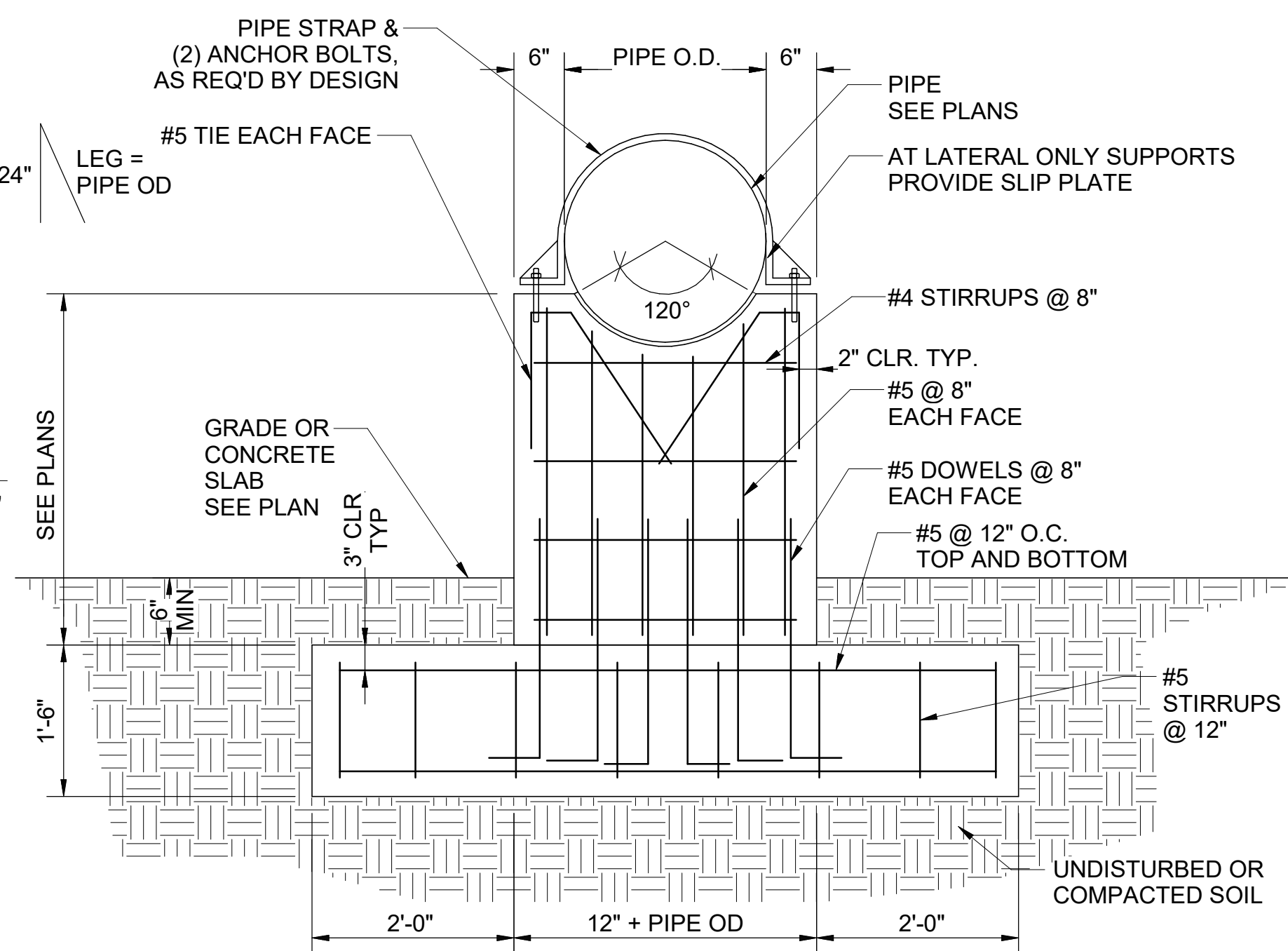
2
99-S502

NOTE:

PIPE SUPPORTS ARE NOTED ON PLANS AS EITHER FIXED OR LATERAL SUPPORT. AT LATER SUPPORTS PROVIDE SLIP PLATE AND TIGHTEN SUPPORT STRAP SNUG TO ALLOW AXIAL MOVEMENT. AT FIXED SUPPORTS FULLY TIGHTEN STRAP TO RESTRAIN AXIAL MOVEMENT.



SIDE VIEW

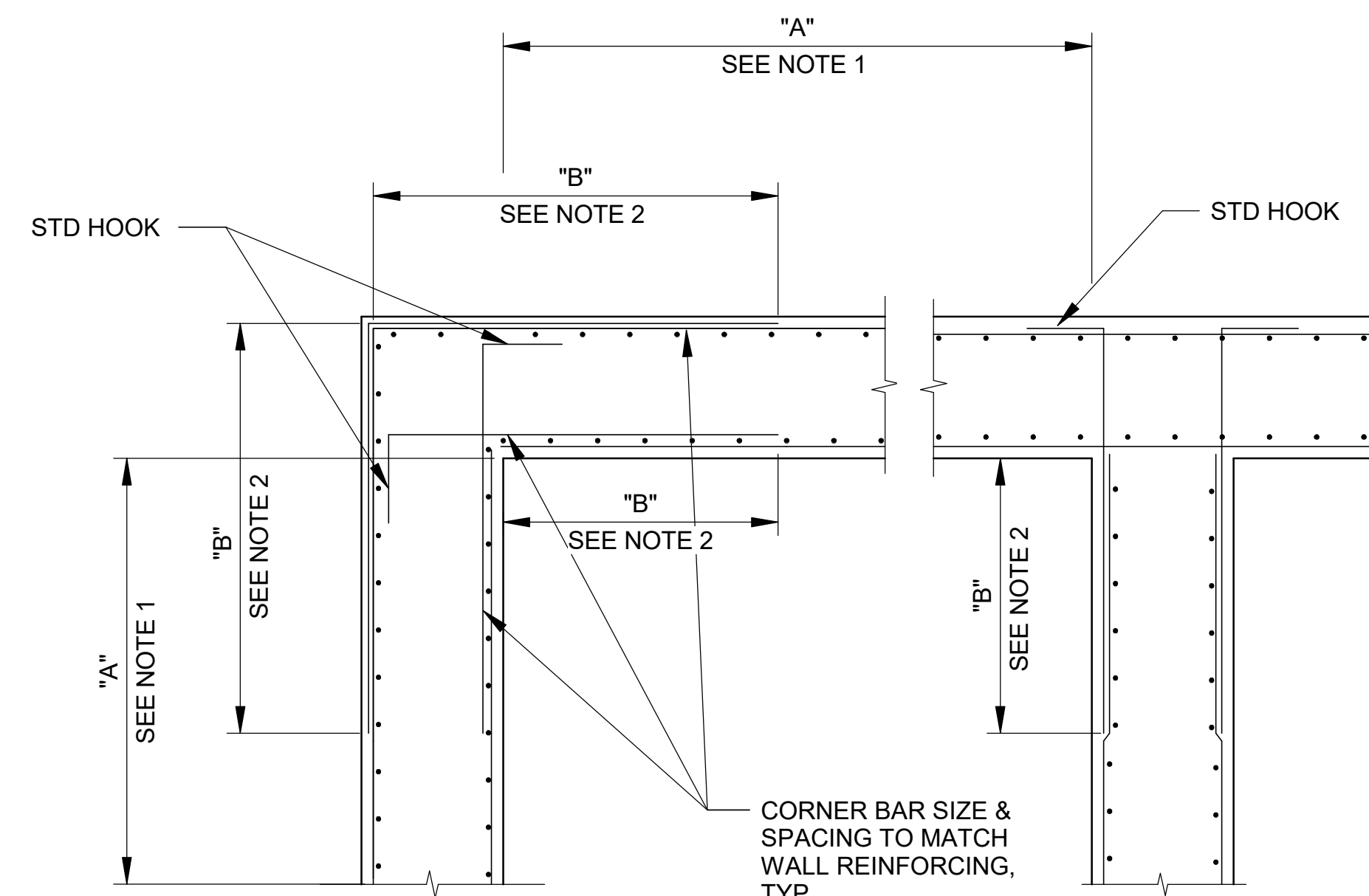


FRONT VIEW

4 PIPE SUPPORT PEDESTAL

SCALE: NOT TO SCALE

4
99-S502



NOTES:

- DIMENSION "A" = LENGTH OF WALL PARALLEL TO THE BAR LENGTH IN QUESTION.
- UNLESS OTHERWISE NOTED ON THE DRAWINGS, DIMENSION "B" SHALL BE THE MINIMUM CLASS B LAP SPLICE LENGTH AS REQUIRED. IF BAR SIZES DIFFER, USE THE MINIMUM LAP LENGTH AS REQUIRED FOR THE SMALLER OF THE TWO BARS BEING SPLICED.
- ALL GRADE BEAMS AND FOUNDATIONS SHALL ALSO HAVE CORNER BARS.

3 TYPICAL INTERSECTION REINF.

SCALE: NOT TO SCALE

3
99-S502

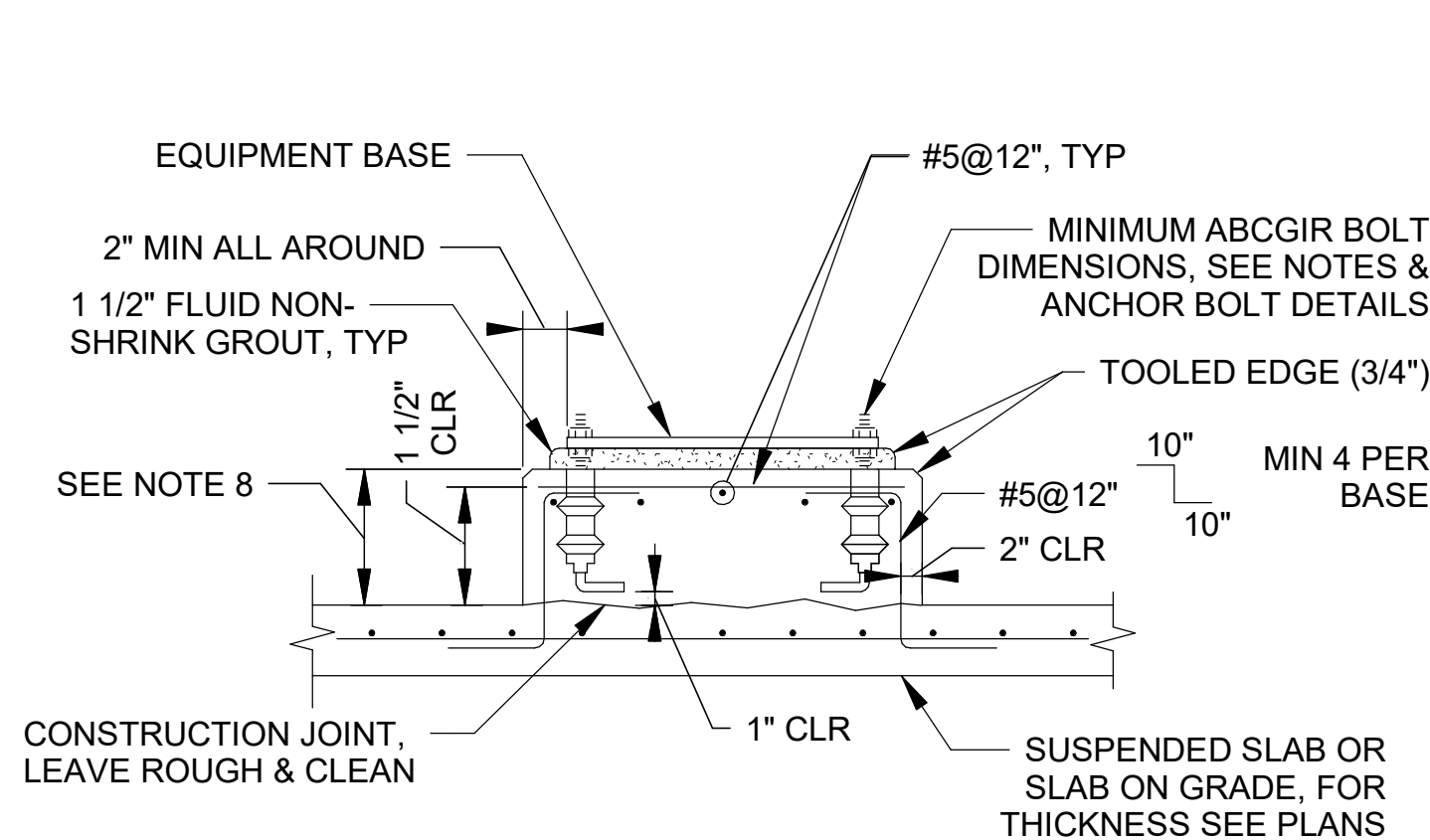


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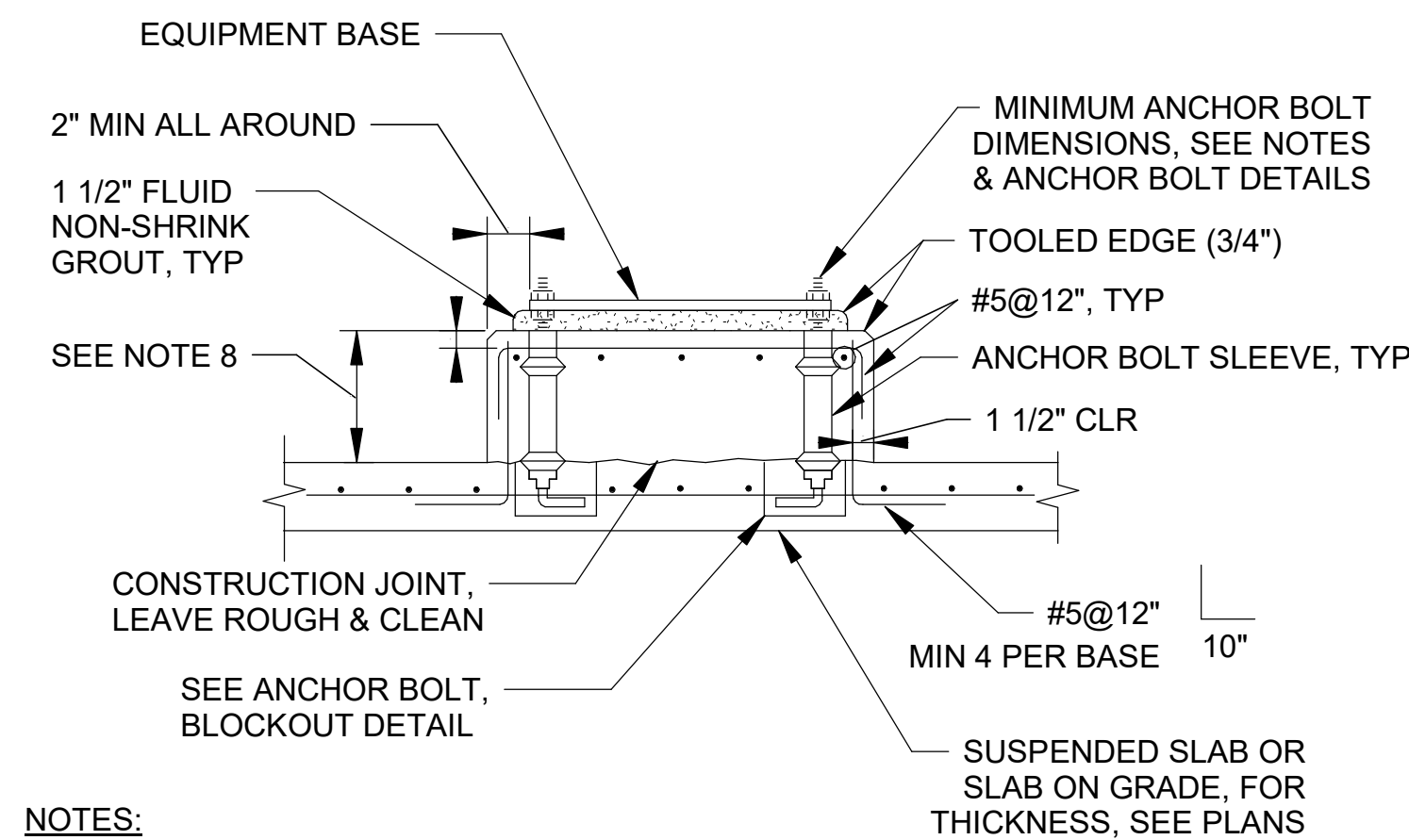
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NOTES:

1. SEE EQUIPMENT BASE NOTES.
2. SEE TYPE B NOTES.

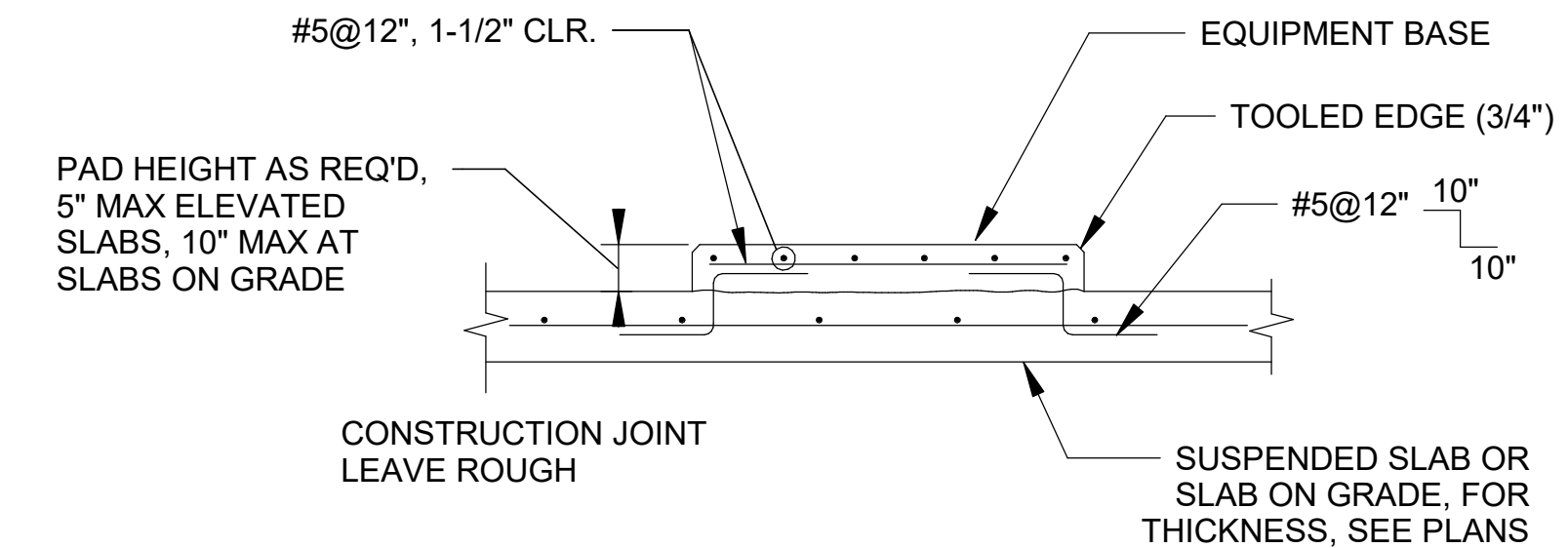
TYPE A



NOTES:

1. SEE EQUIPMENT BASE NOTES.
2. USE TYPE B BASE IN PLACE OF TYPE A WHERE REQUIRED BY EQUIPMENT OR STRUCTURE GEOMETRY. SEE NOTE 8.

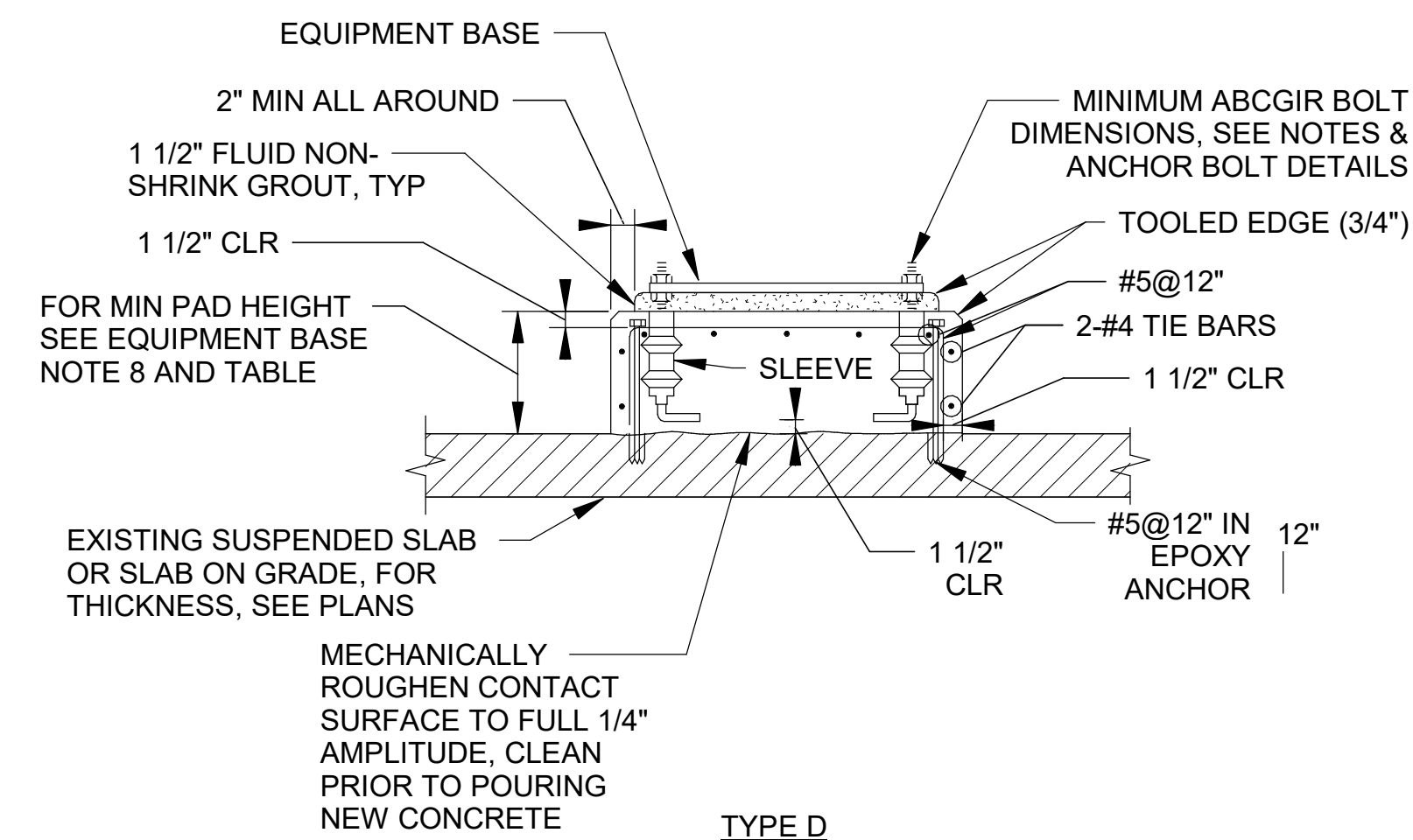
TYPE B



NOTES:

1. SEE EQUIPMENT BASE NOTES.
2. ANCHOR EQUIPMENT TO CONCRETE USING SST CONCRETE ANCHORS OR ANCHOR BOLTS SPECIFIED
3. PAD SHALL BE 6" LARGER THAN EQUIPMENT ON ALL SIDES UNO OR AS REQUIRED BY EQUIP. MFG.

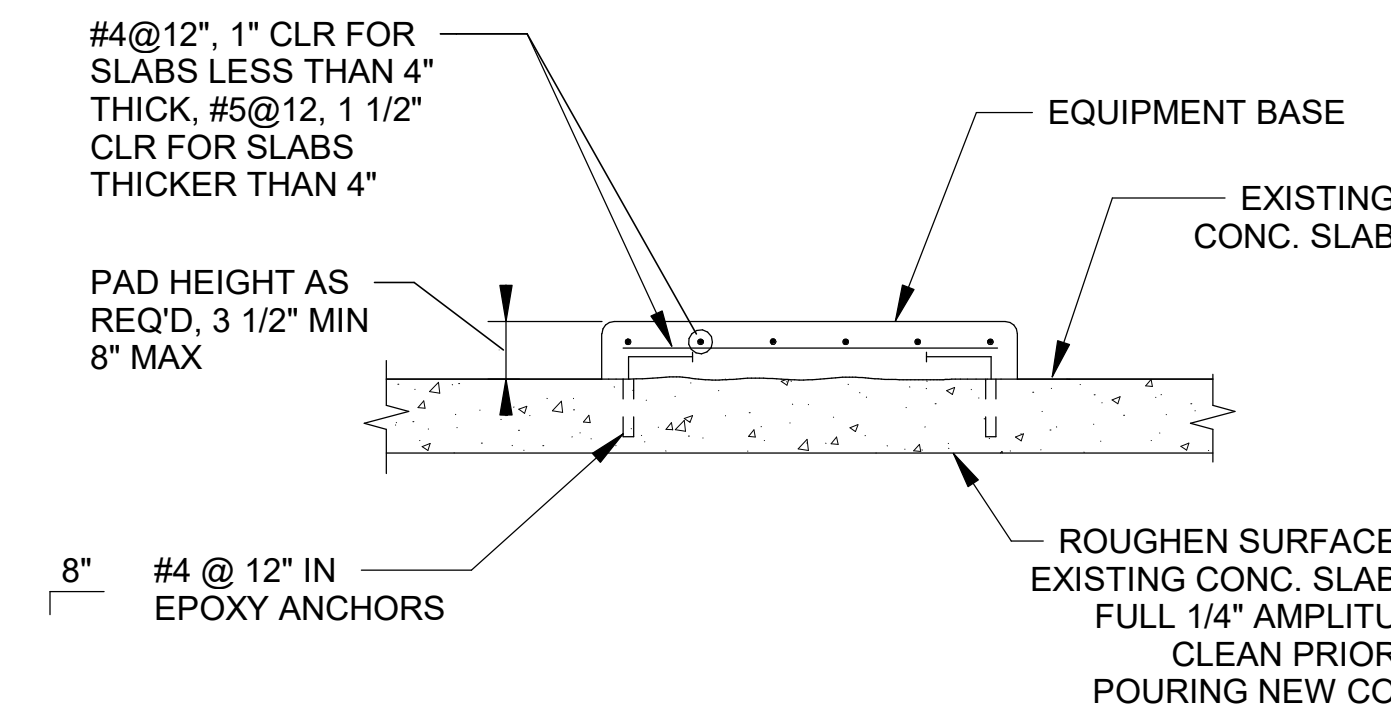
TYPE C



NOTES:

SEE EQUIPMENT BASE NOTES.

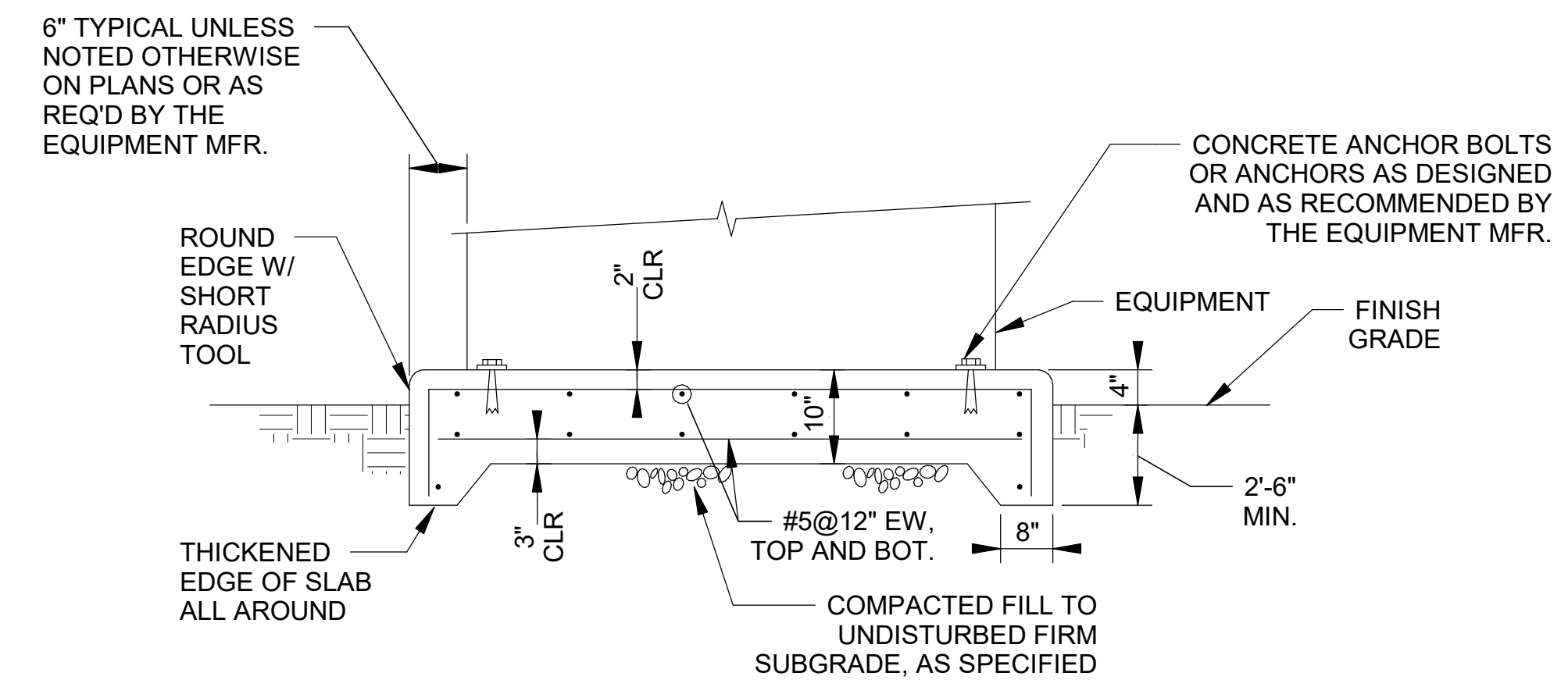
TYPE D



NOTES:

ANCHOR EQUIPMENT TO CONCRETE USING SST CONCRETE ANCHORS SPECIFIED

TYPE E



NOTES:

VERIFY PAD SIZE WITH EQUIPMENT MANUFACTURER PRIOR TO CONSTRUCTION.

TYPE F

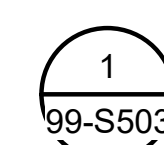
EQUIPMENT BASE NOTES:

1. PAD SIZE SHALL BE MINIMUM INDICATED OR AS SHOWN ON THE PLANS. VERIFY ALL PAD SIZE REQUIREMENTS WITH SHOP DRAWINGS OF ACTUAL EQUIPMENT FURNISHED AND OBTAIN ENGINEER'S APPROVAL OF FINAL DIMENSIONS.
2. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER, AND SHALL BE AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A ONE PIECE TEMPLATE, MATCHING THE BASE PLATE, WHILE PAD IS BEING POURED.
3. ANCHOR BOLT A MINIMUM MOVEMENT OF 1/2" IN ALL DIRECTIONS. THE MINIMUM SLEEVE LENGTH SHALL BE 8 TIMES THE BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT.
4. ANCHOR BOLT SLEEVES SHALL HAVE A MINIMUM INTERNAL DIAMETER 1" GREATER THAN BOLT DIAMETER AND A MAXIMUM INTERNAL DIAMETER 3" GREATER THAN ANCHOR BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT.

5. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE.
6. WEDGES OR SHIMS SHALL BE USED TO SUPPORT THE BASE WHILE THE NON-SHRINK GROUT IS PLACED. TEMPORARY LEVELING NUTS SHALL BE BACKED OFF. IF LEFT IN THE WEDGES OR SHIMS SHALL NOT BE EXPOSED TO VIEW.
7. HEIGHT OF PADS SHALL BE MINIMUM REQUIRED FOR ANCHOR BOLT CLEARANCE TO KEEP ANCHOR BOLT OUT OF SLAB (SEE TABLE BELOW). WHERE EQUIPMENT OR PIPING ELEVATION REQUIRE A PAD HEIGHT LESS THAN THE MINIMUM SHOW, USE TYPE B WITH BLOCKOUT.

AB DIA (IN.)	1/2	5/8	3/4	7/8	1	1 1/4	1 3/8	1 1/2	1 3/4	2
MIN PAD HT (IN.)	7	8 1/2	10	11	12 1/2	15	16 1/2	18	21	24

8. TYPE "D" PADS MAY BE SUBSTITUTED FOR TYPE "A" PADS FOR LOCATIONS APPROVED IN WRITING BY THE ENGINEER.
9. SEE ANCHOR BOLT AND BLOCKOUT DETAILS.



EQUIPMENT BASE DETAIL

SCALE: NOT TO SCALE

Revit File: BIM_360/20W/23045 - Grand Junction Pessigo Biorackling Des/Gr/BDD - WWTP AND WASH.rvt
 Plot Date: 8/20/2021 11:06:29 AM

REV	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
 GRAND JUNCTION
 ODOR CONTROL IMPROVEMENTS

STRUCTURAL
DETAILS III

JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: KAM
 DRAWN BY: EGB

BAR IS ONE INCH ON ORIGINAL DRAWING 1"
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 DRAWING NUMBER
99-S503
 SHEET NUMBER
057



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REGISTRATION NO.
20171218008



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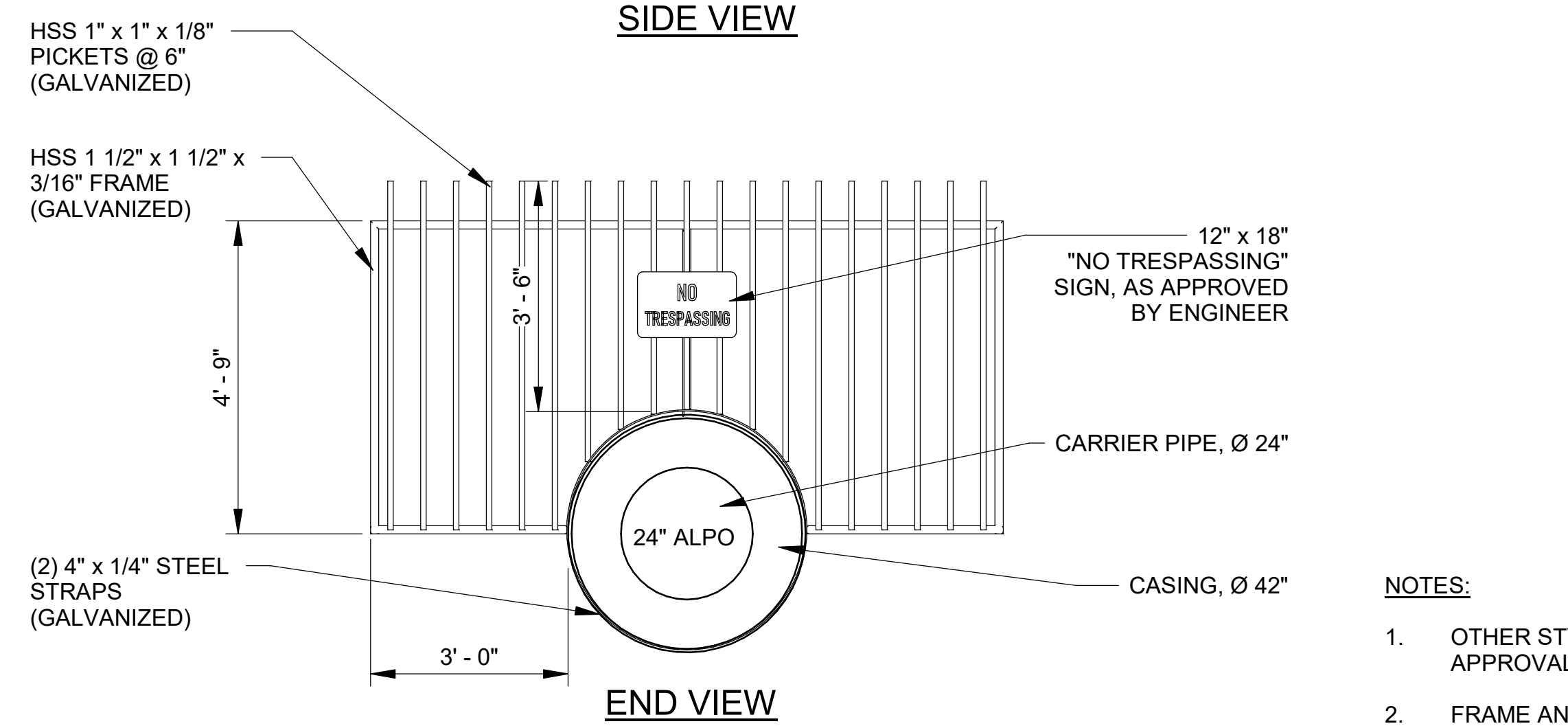
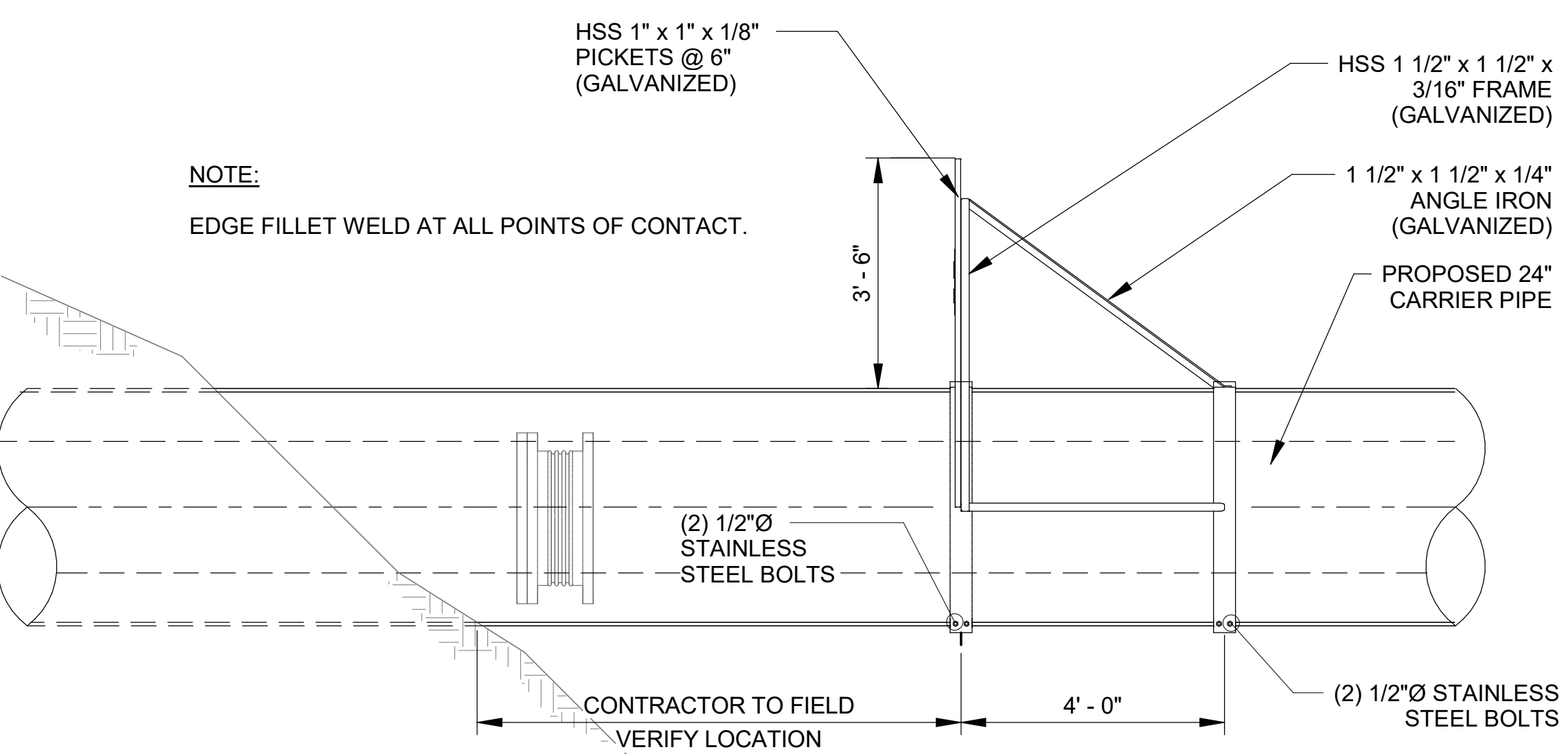
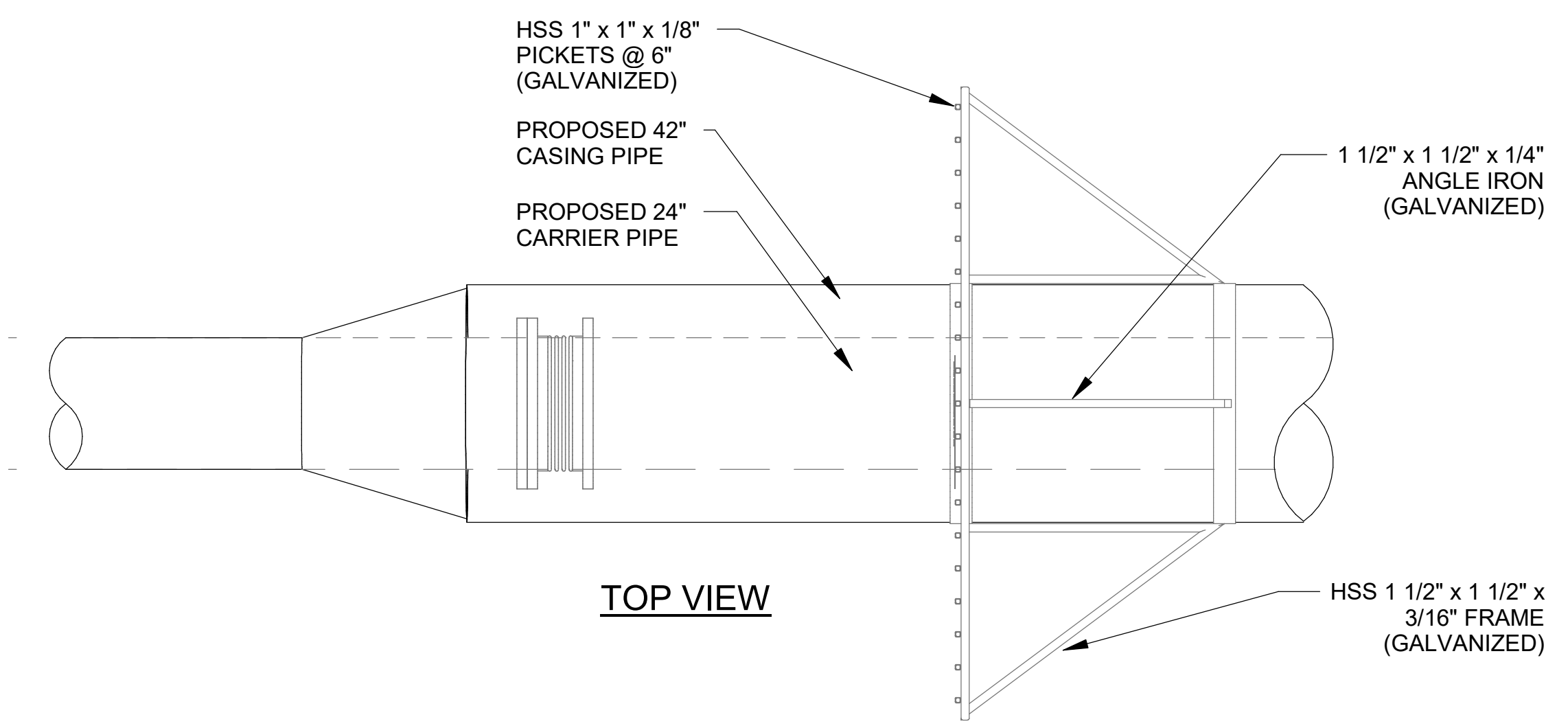
REV	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
 GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

STRUCTURAL DETAILS IV

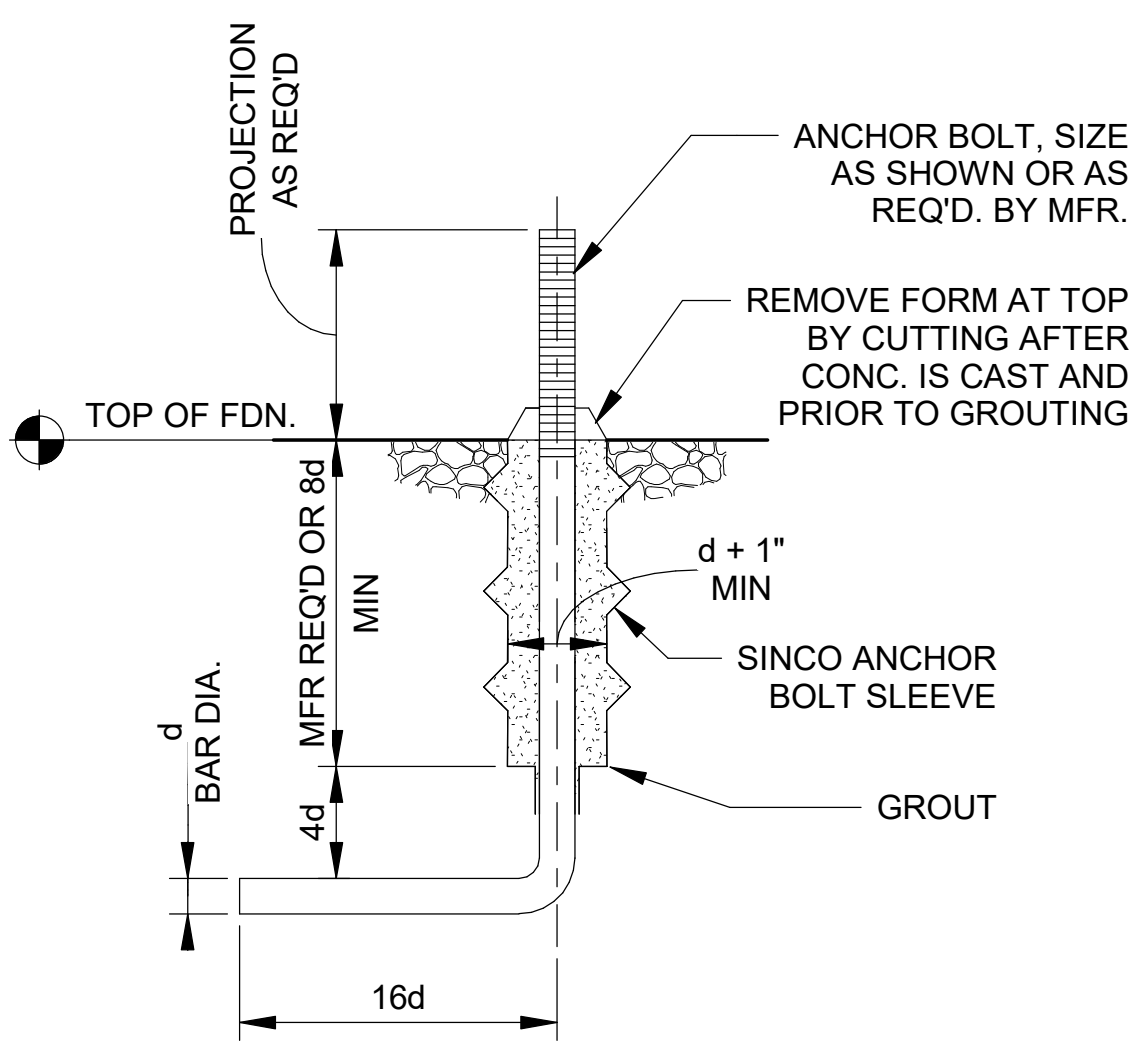
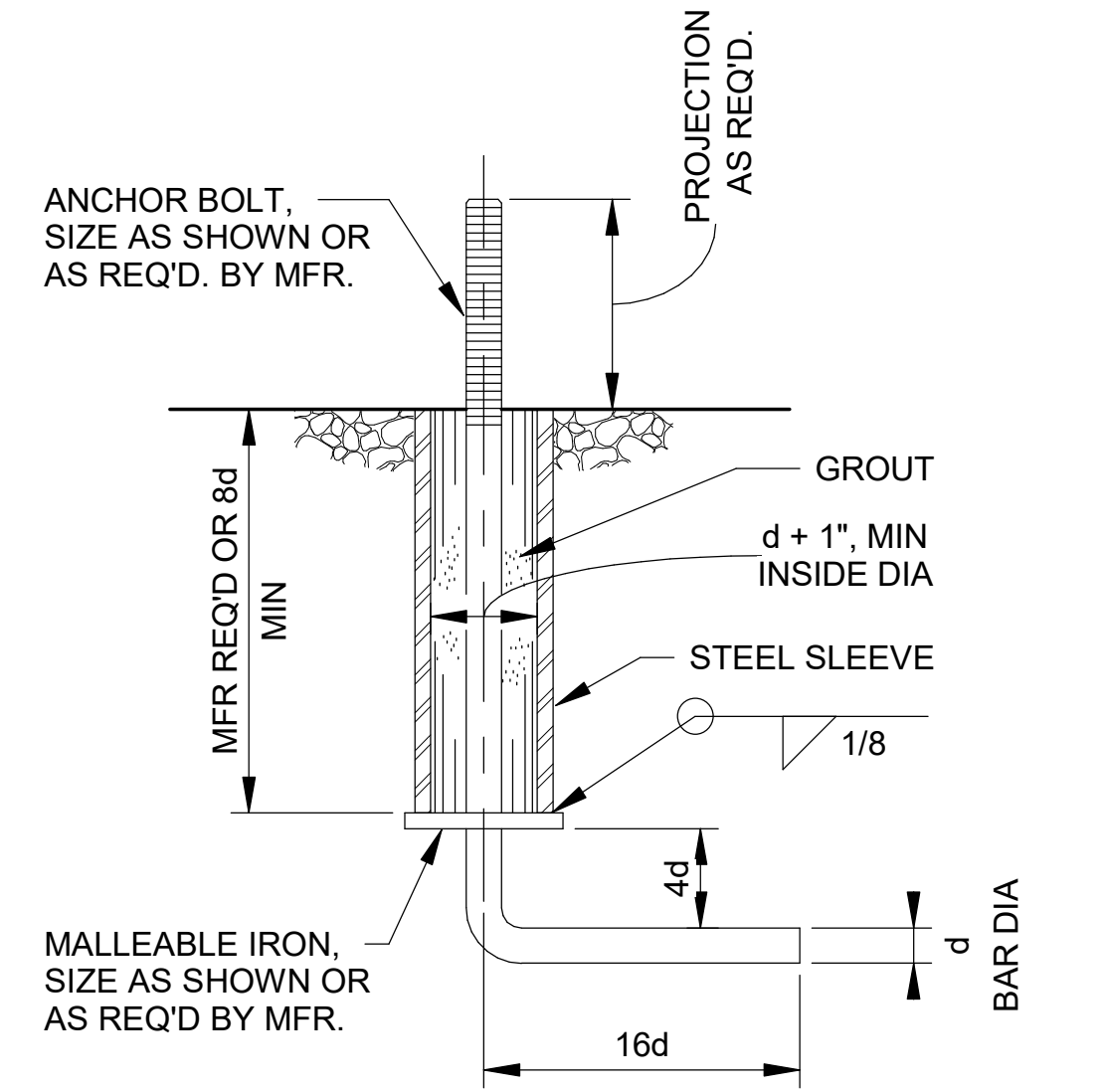
JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: KAM
 DRAWN BY: EGB

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 DRAWING NUMBER
99-S504
 SHEET NUMBER
058

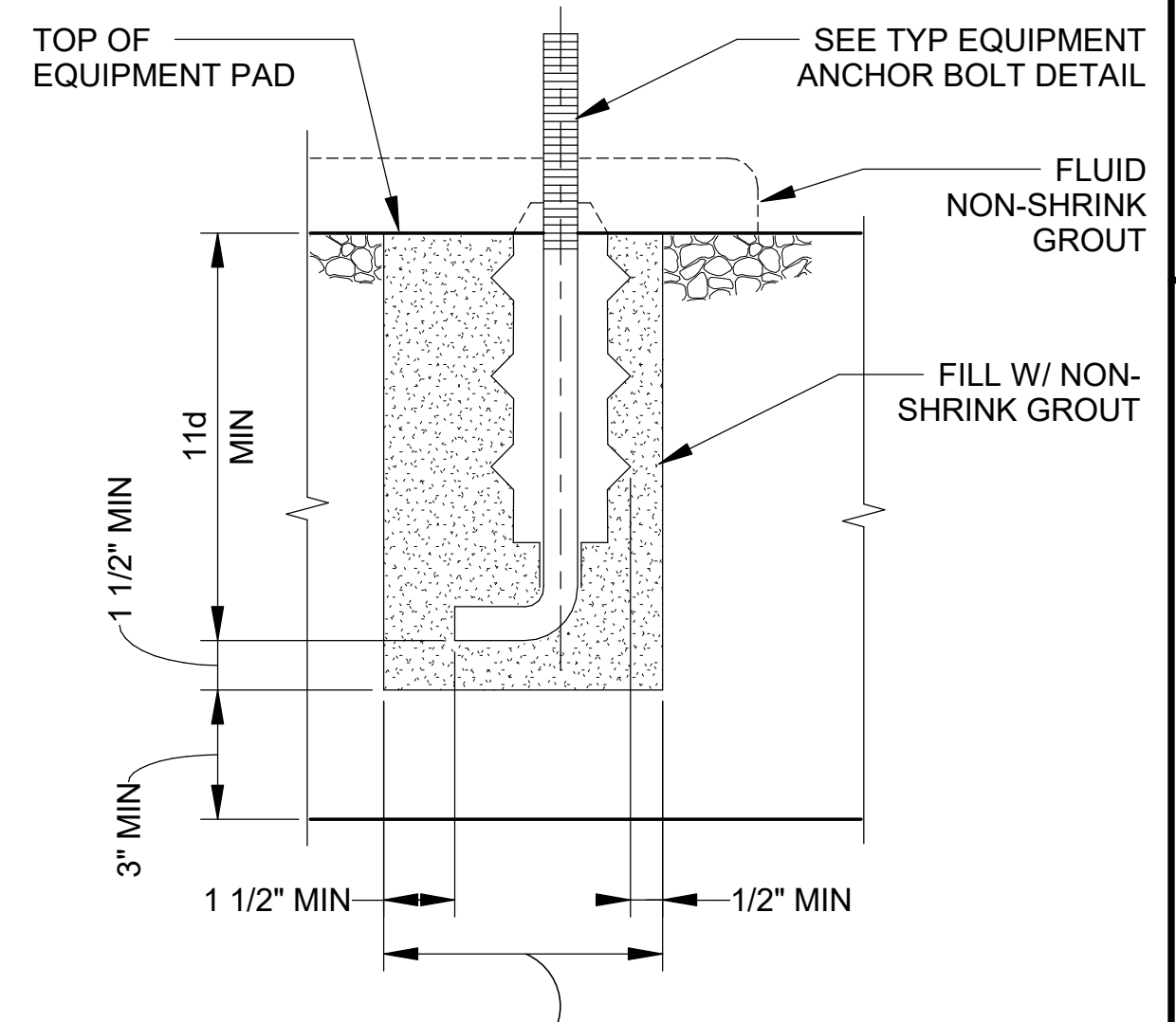


PERMANENT PIPE BARRICADE DETAIL
 SCALE: NOT TO SCALE

- NOTES:**
- OTHER STYLE OF BARRICADES MAY BE USED WITH APPROVAL OF THE ENGINEER.
 - FRAME AND PICKETS ARE TO BE WELDED PRIOR TO GALVANIZING. USE 1/8" FILLET WELDS.
 - REPAIR GALVANIZED COATING DAMAGED BY WELDING USING SYSTEM COLD GALVANIZED COMPOUND, ZRC BY ZRC WORLDWIDE OR APPROVED EQUAL.

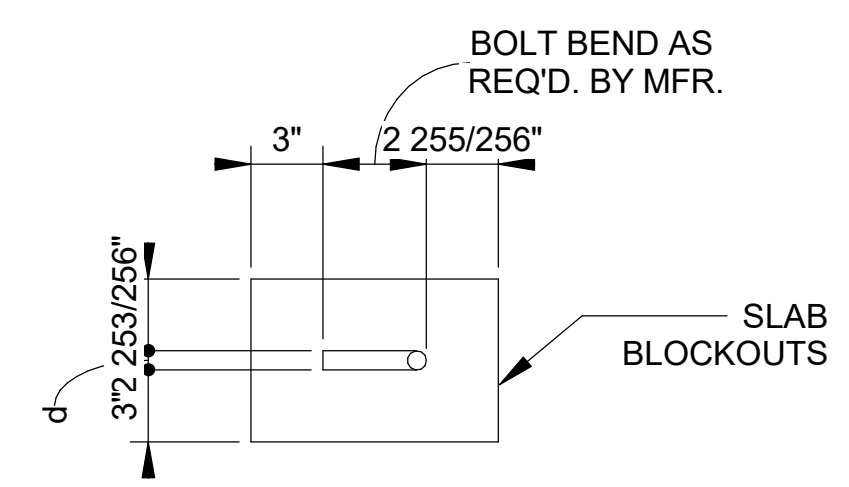


- NOTES:**
- SINCO PRODUCTS INC. EAST HAMPTON, CT 1-800-243-6753.
 - REFER TO EQUIPMENT BASE NOTES.
 - 3d WHERE MANUFACTURER VERIFIES NO BOLT PULLOUT RESISTANCE REQUIRED.

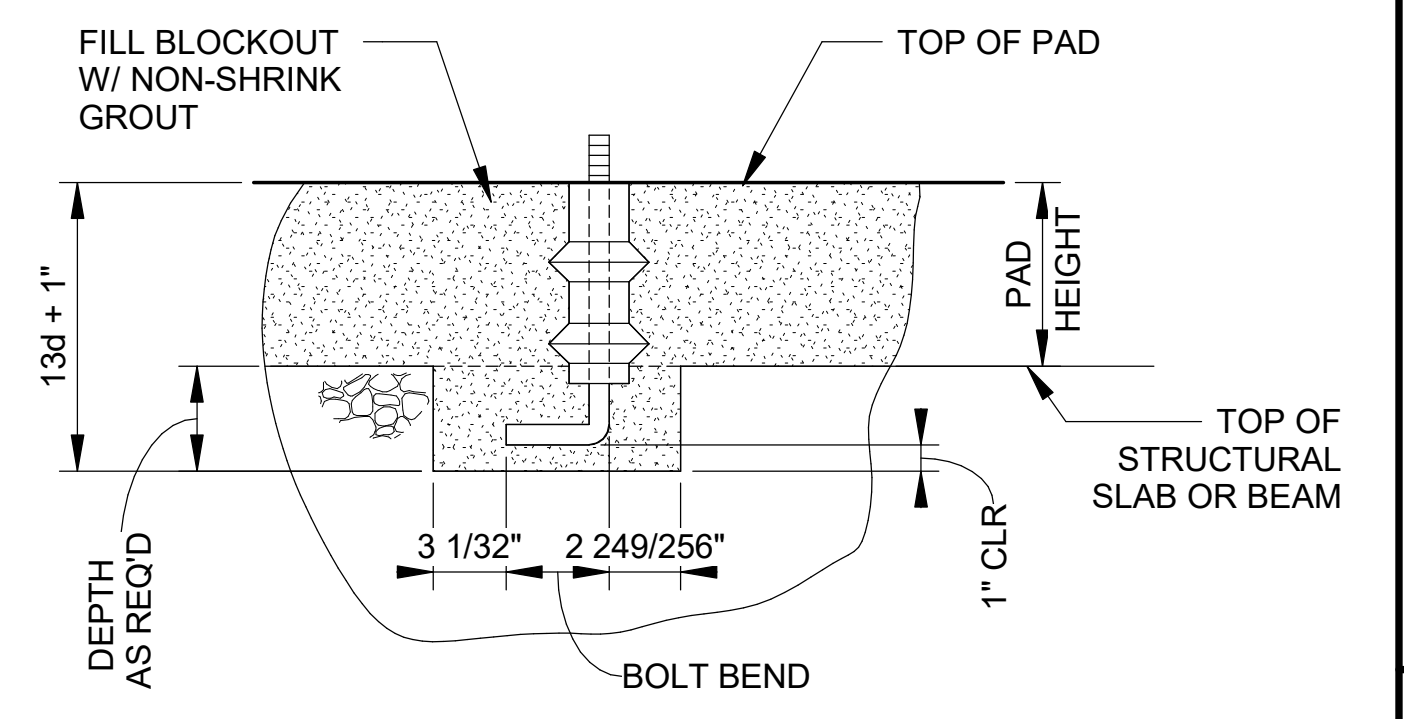


BLOCKOUT IN NEW CONC. OR CORED HOLE IN EXST. CONC. W/ DIA. REQ'D. FOR A MIN CLR. OF 1/2" ALL AROUND

ANCHOR BOLT BLOCKOUT



PLAN



ELEVATION

ANCHOR BOLT BLOCKOUT

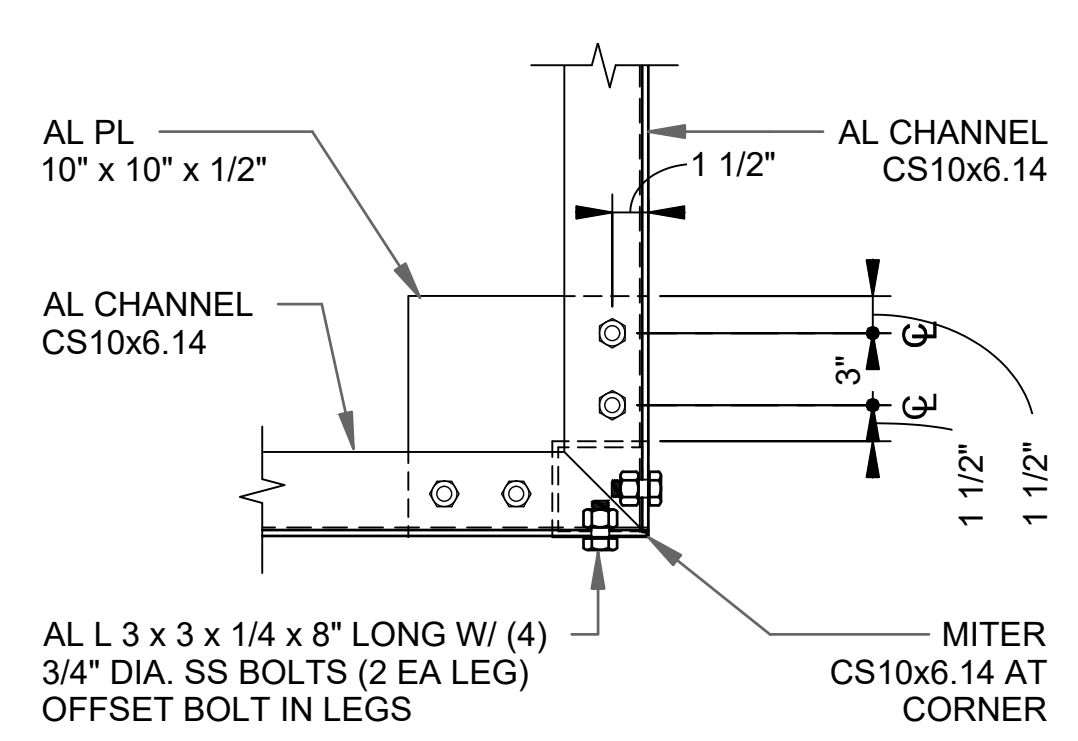
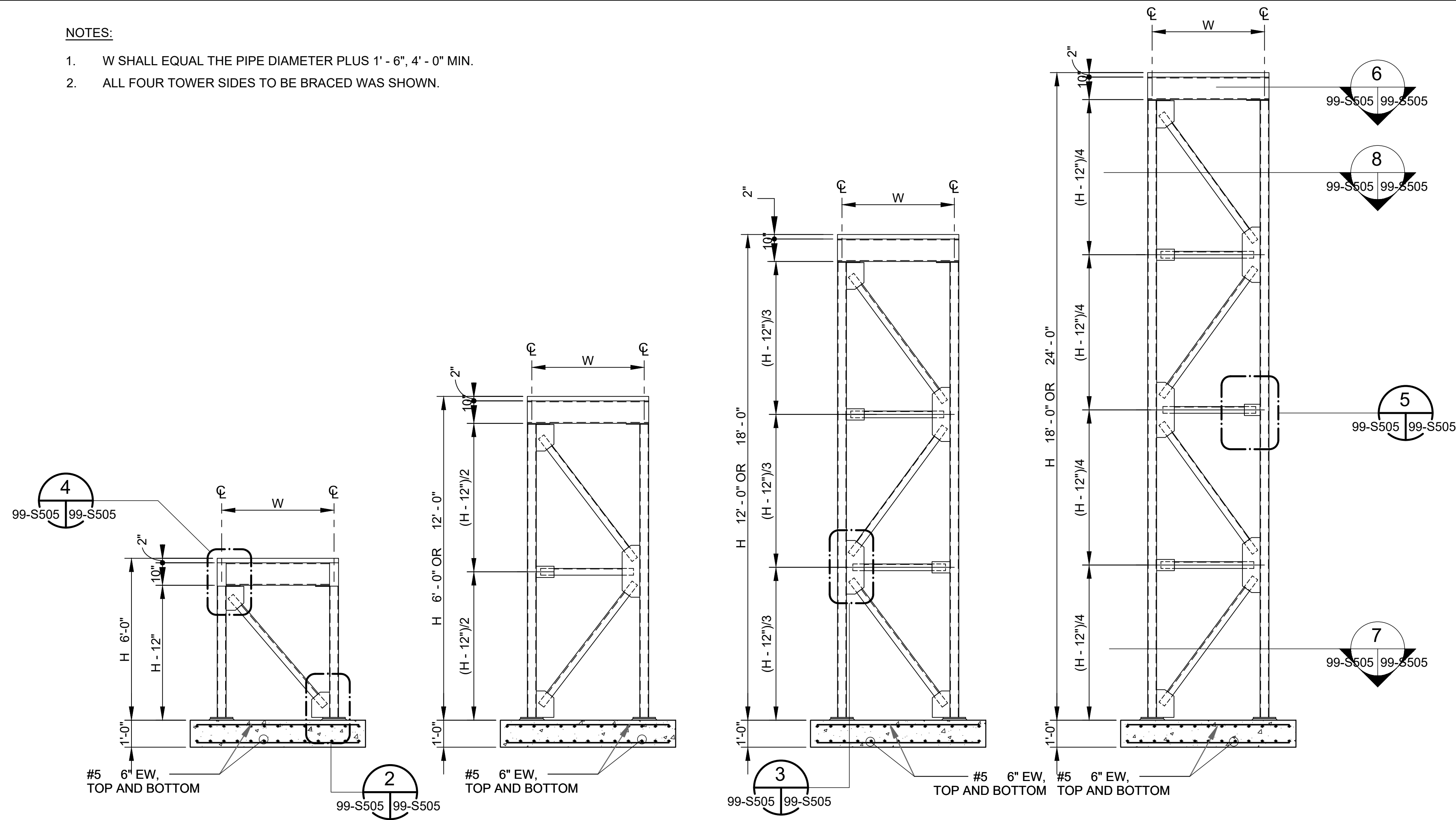
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99-S504

ANCHOR BOLT DETAIL
 SCALE: NOT TO SCALE

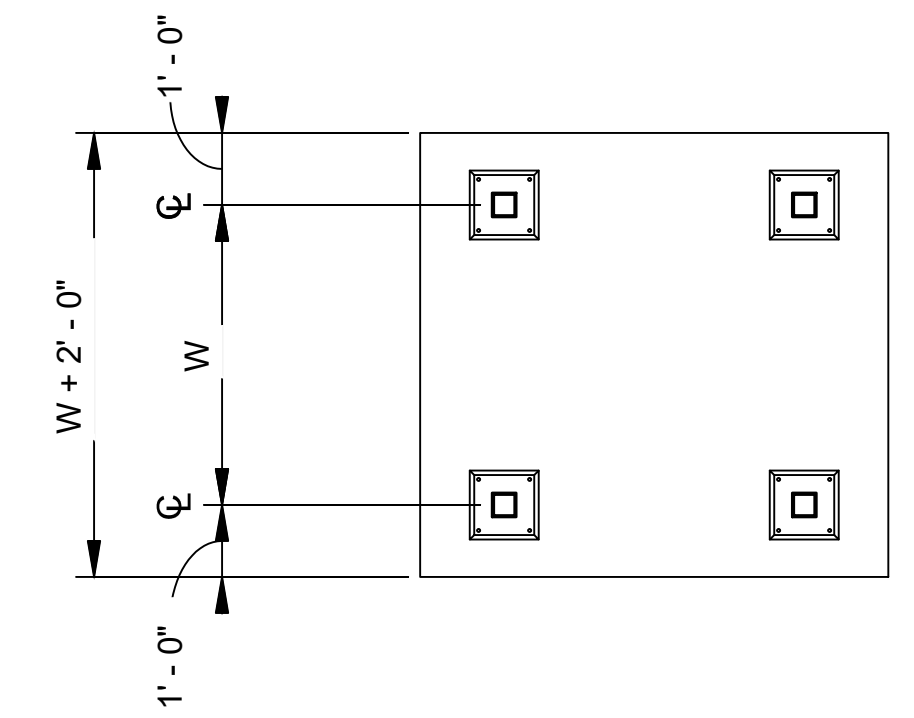
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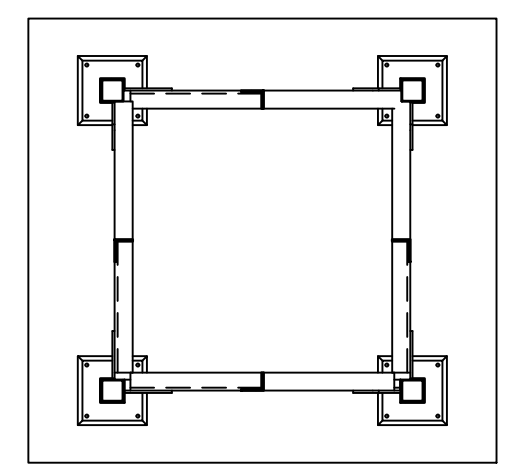
1. W SHALL EQUAL THE PIPE DIAMETER PLUS 1' - 6", 4' - 0" MIN.
2. ALL FOUR TOWER SIDES TO BE BRACED WAS SHOWN.



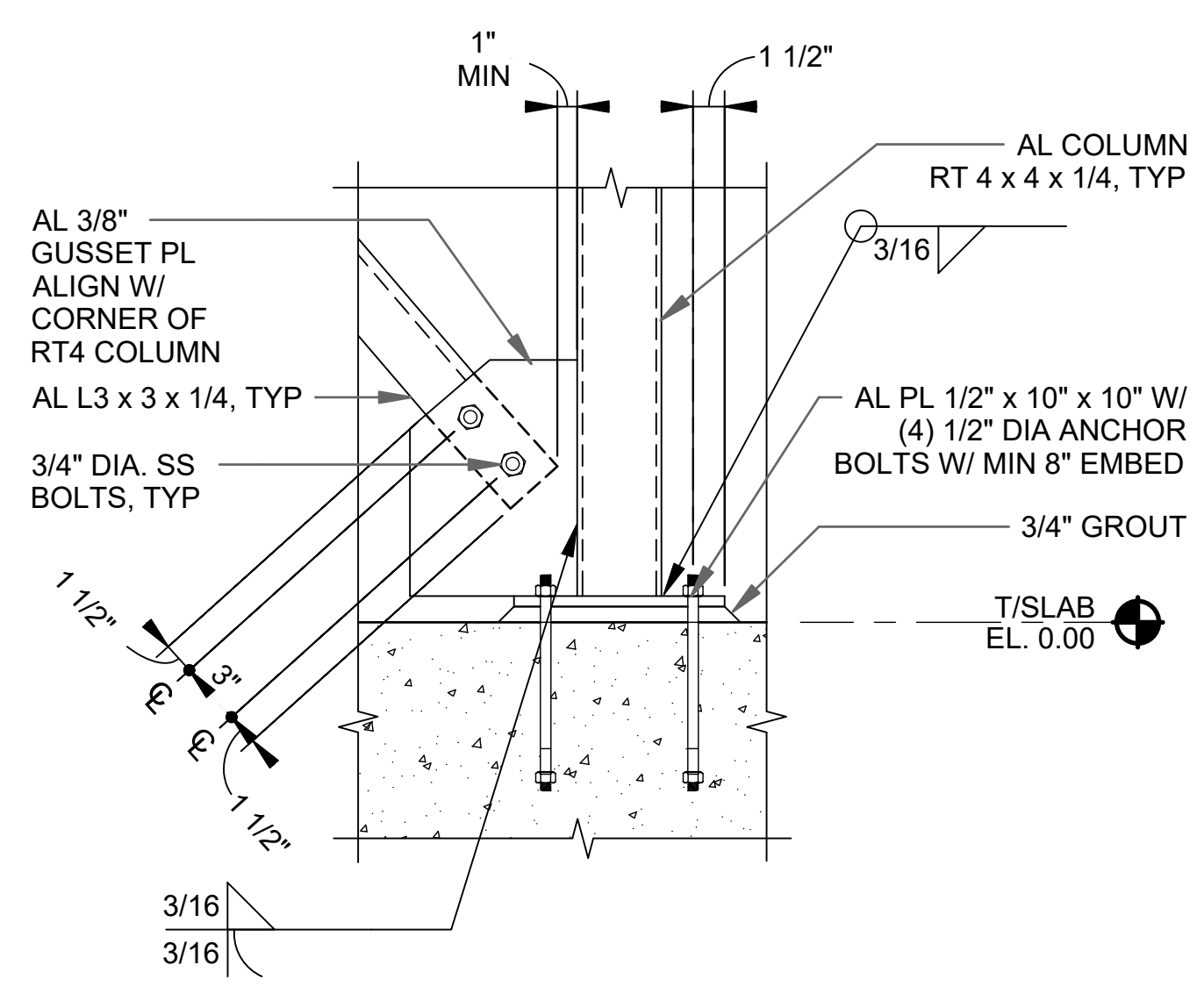
DETAIL 6
SCALE: NTS



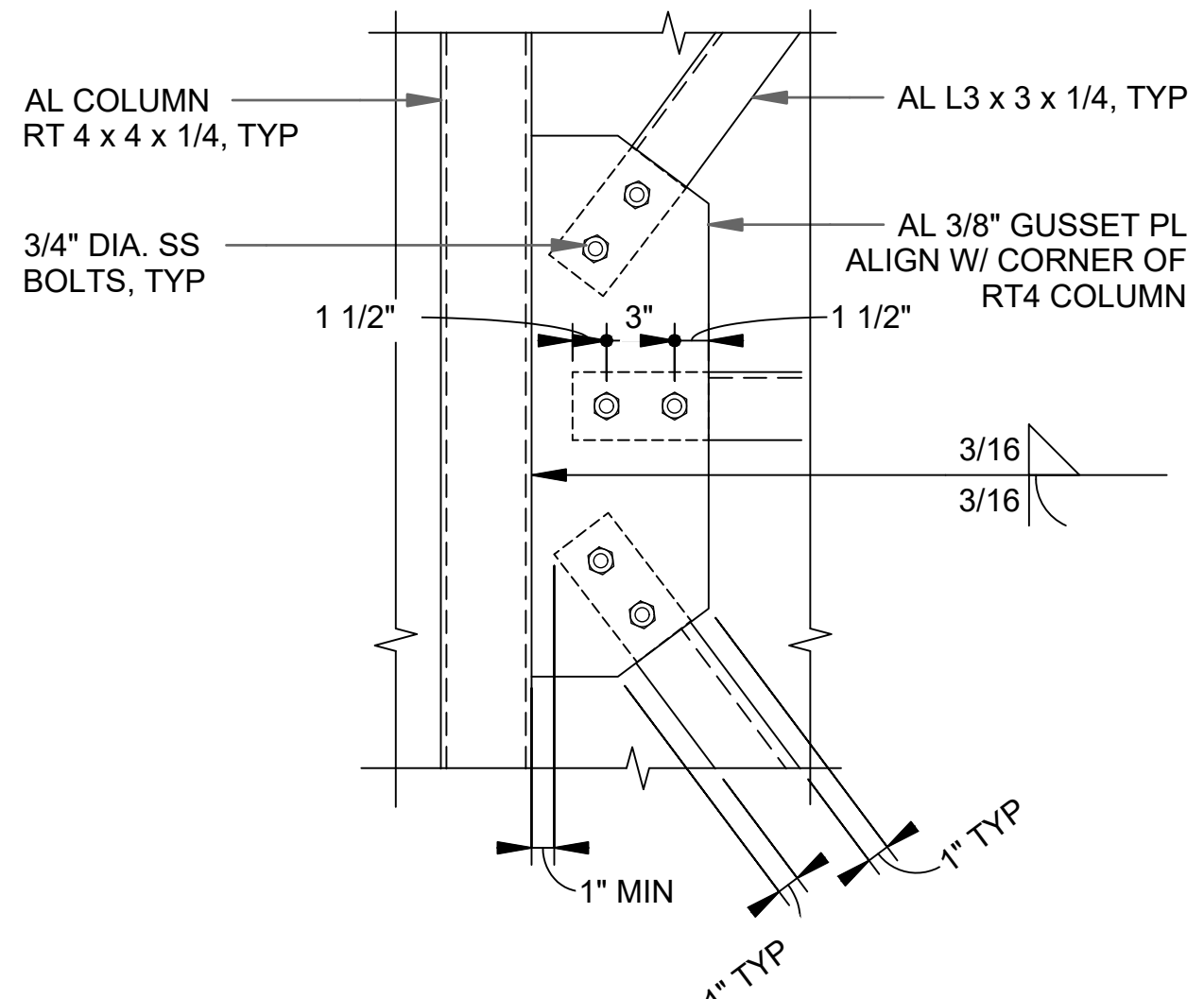
DETAIL 7
SCALE: NTS



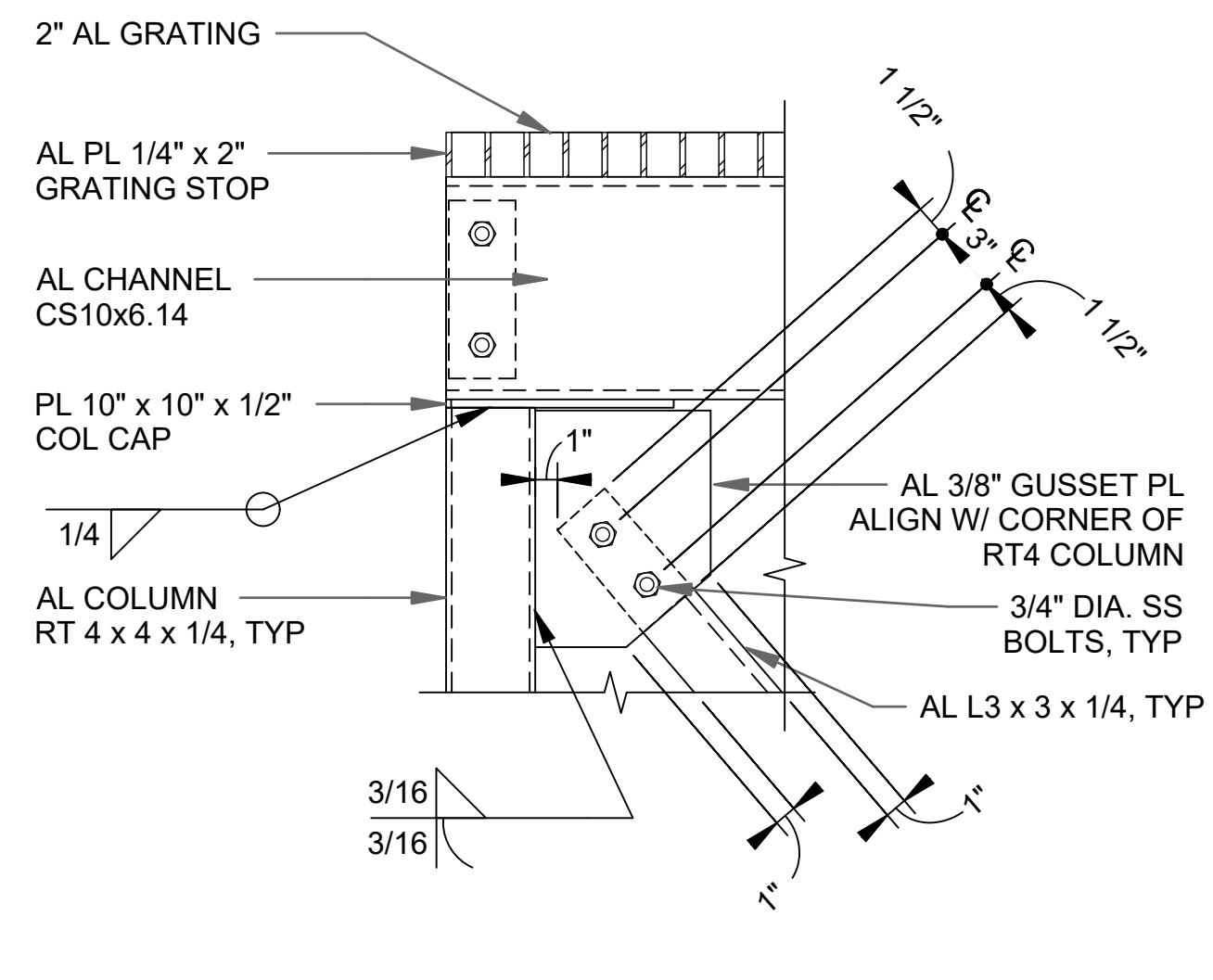
DETAIL 8
SCALE: NTS



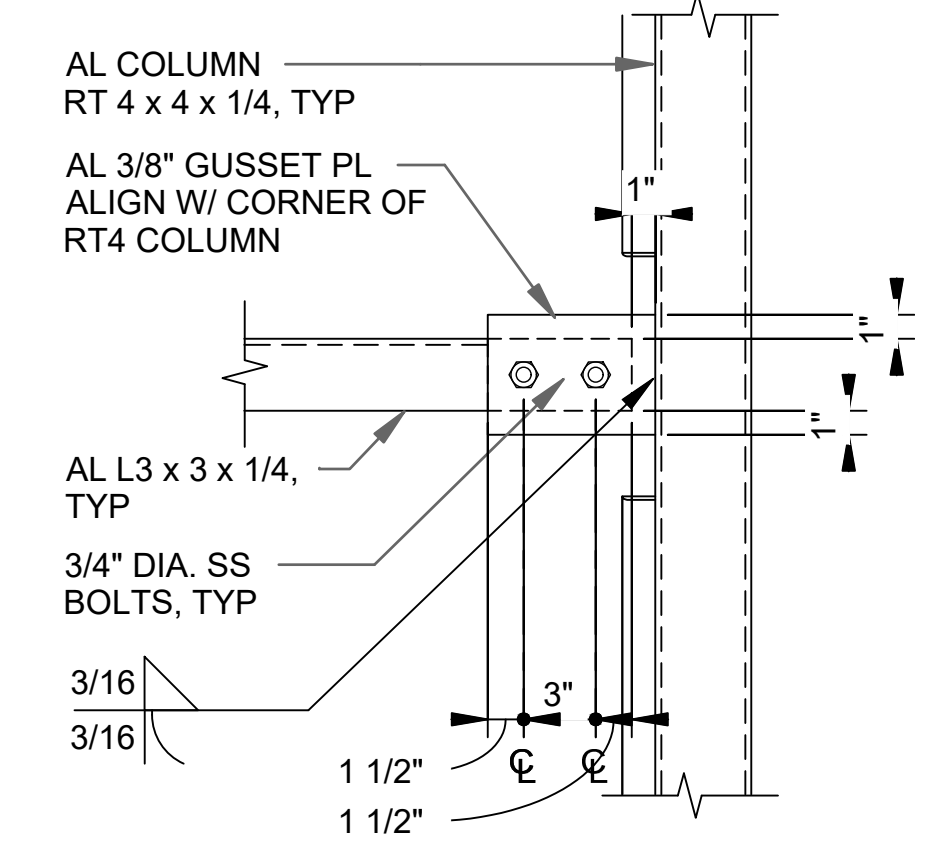
DETAIL 2
SCALE: NTS



DETAIL 3
SCALE: NTS



DETAIL 4
SCALE: NTS



DETAIL 5
SCALE: NTS

DUCT SUPPORT TOWER DETAIL
SCALE: NOT TO SCALE



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REGISTRATION NO. 20171218008



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REV.	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO
Grand Junction
C O L O R A D O
GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

STRUCTURAL
DETAIL V

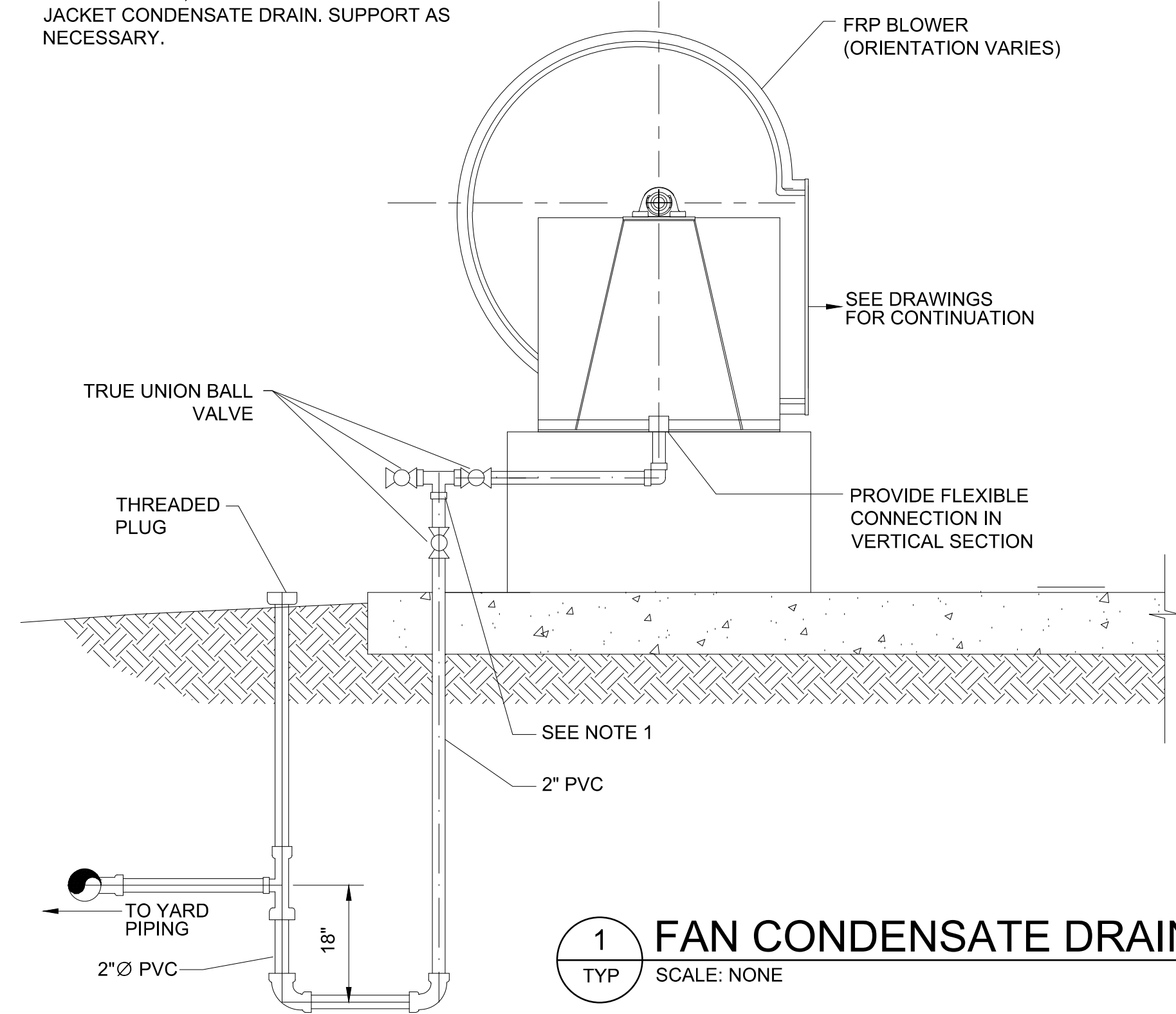
JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: KAM
DRAWN BY: EGB

BAR IS ONE INCH ON ORIGINAL DRAWING
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99-S505
SHEET NUMBER
059

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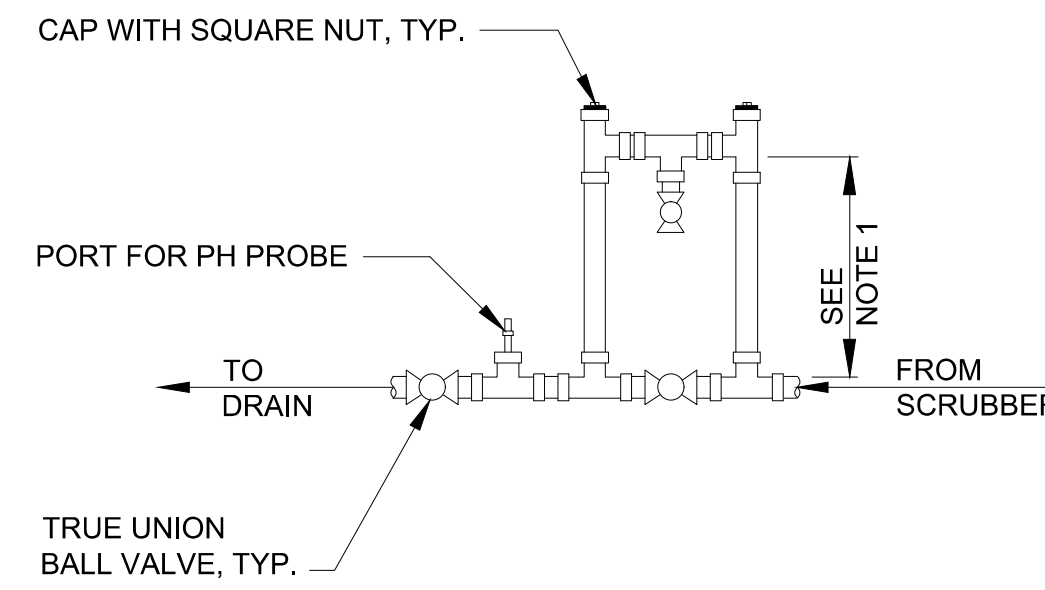
1. HEAT TRACE, INSULATE AND ALUMINUM JACKET CONDENSATE DRAIN. SUPPORT AS NECESSARY.



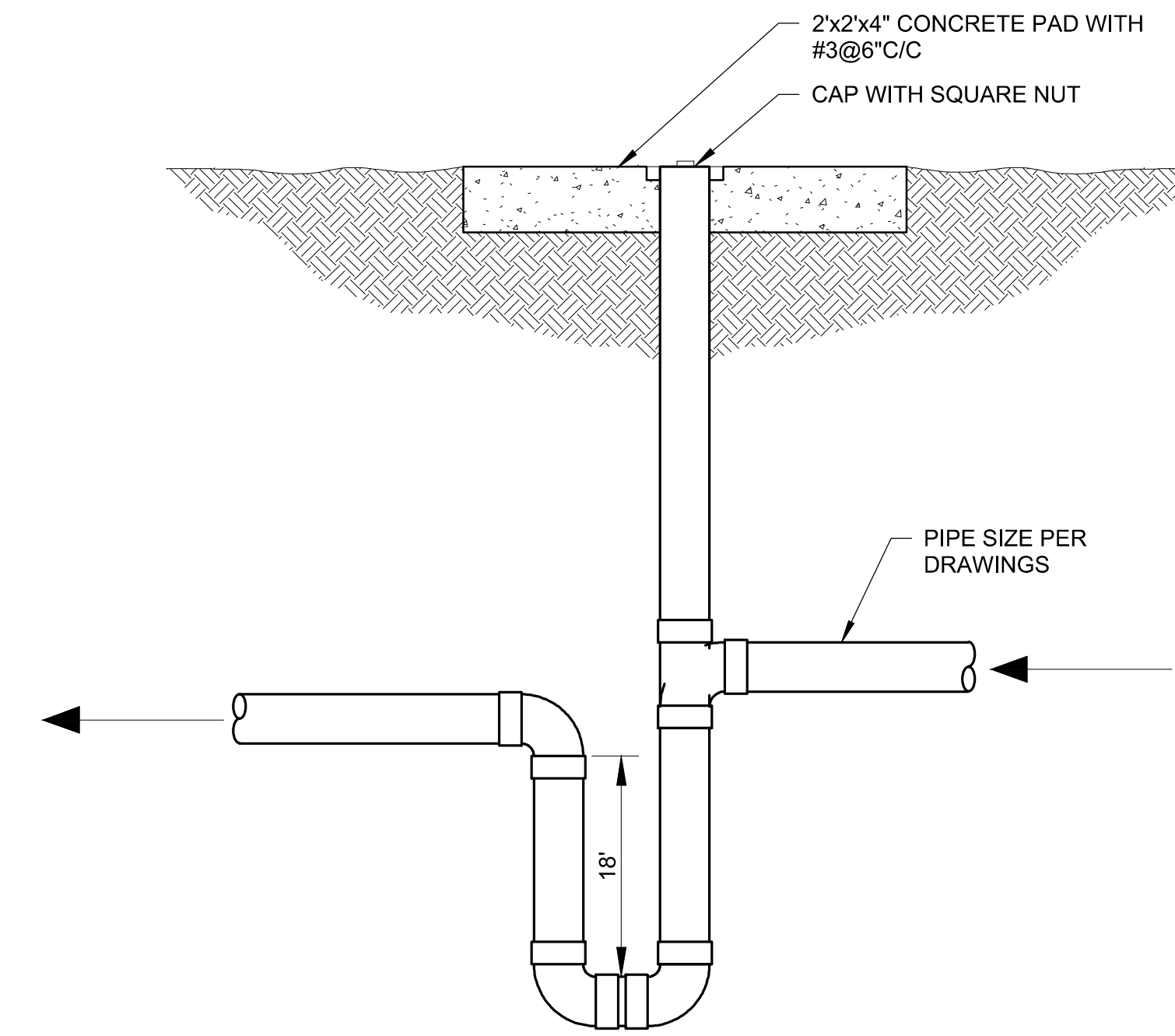
1 FAN CONDENSATE DRAIN
TYP SCALE: NONE

NOTES:

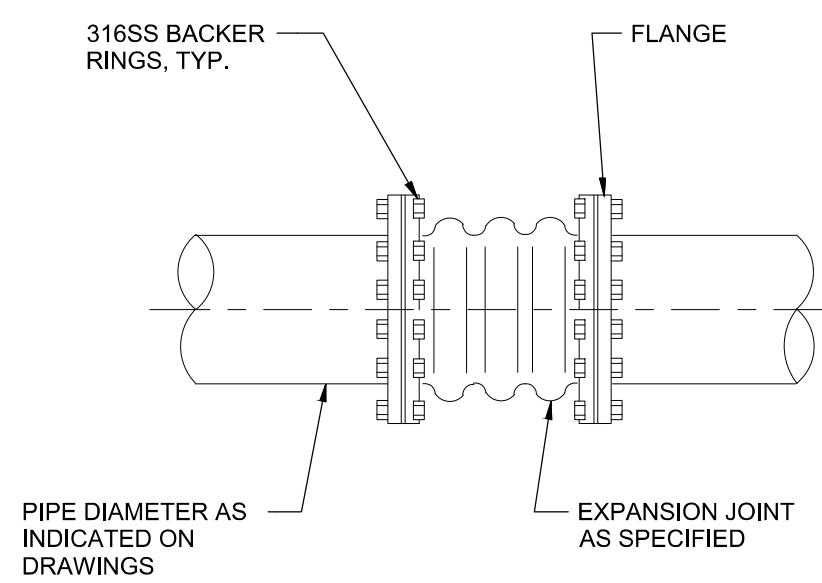
1. HEIGHT OF OVERFLOW ASSEMBLY SHOULD BE EQUAL TO THE TOP OF WATER SURFACE ELEVATION IN THE SCRUBBER SUMP. SEE MANUFACTURER SHOP DRAWINGS FOR DETAILS.



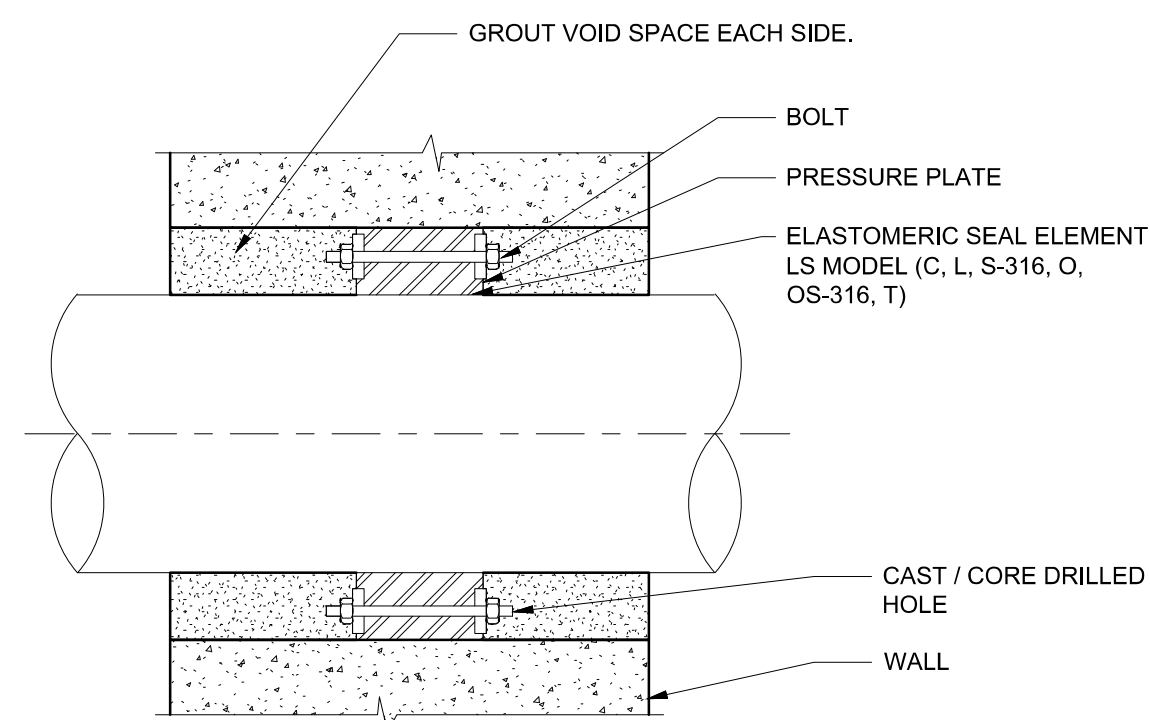
2 DRAIN AND OVERFLOW ASSEMBLY
TYP SCALE: NONE



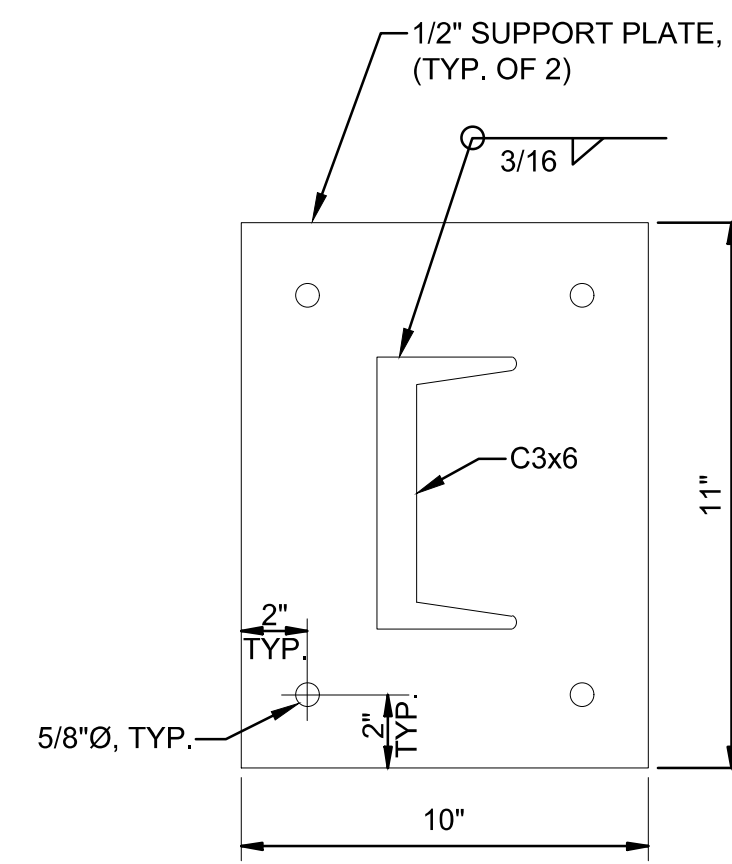
3 P-TRAP WITH CLEANOUT
TYP SCALE: NONE



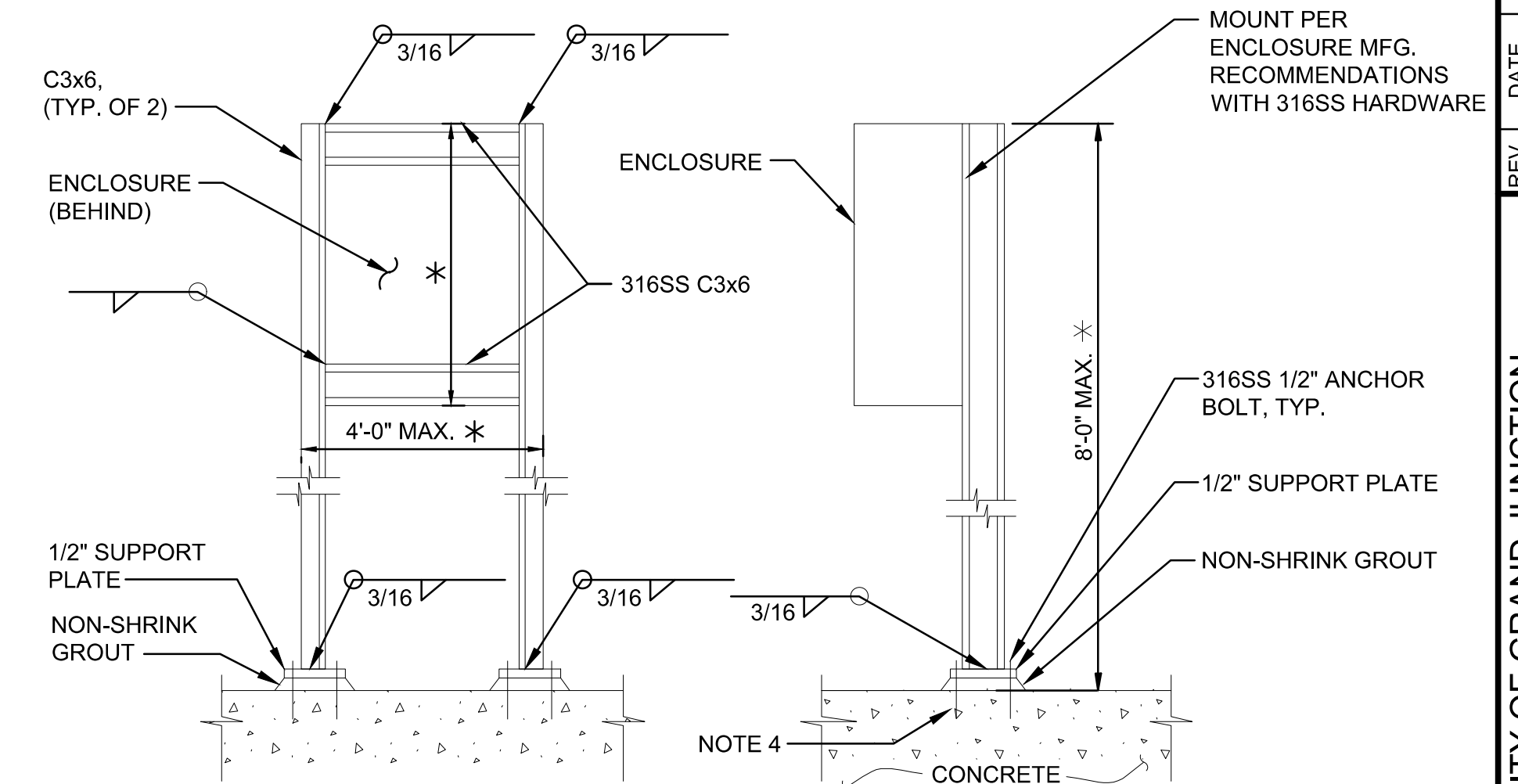
4 CIRCULAR EXPANSION JOINT
TYP SCALE: NONE



5 LINK SEAL WALL PENETRATION
10-M133 SCALE: NONE



BASE PLAN



SECTION 1

SECTION 2

NOTE:

1. ALL HARDWARE SHALL BE 316SS USING EPOXY ANCHOR BOLTS.
 2. USE WASHERS AND SPLIT-LOCK WASHERS UNDER ALL BOLTS AND NUTS.
 3. COAT AS SPECIFIED.
 4. ANCHOR BOLT DEPTHS AS REQUIRED FOR SIZE AND WEIGHT OF ENCLOSURE.
 5. ALL PLATES AND STRUCTURAL SECTIONS SHALL BE 316 STAINLESS STEEL.
- * COORDINATE FINAL DIMENSIONS WITH EQUIPMENT.

6 WATER PANEL ENCLOSURE MOUNTING
TYP SCALE: NONE



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REGISTRATION NO. 20171218008



REV.	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO
Grand Junction
CITY OF GRAND JUNCTION
GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

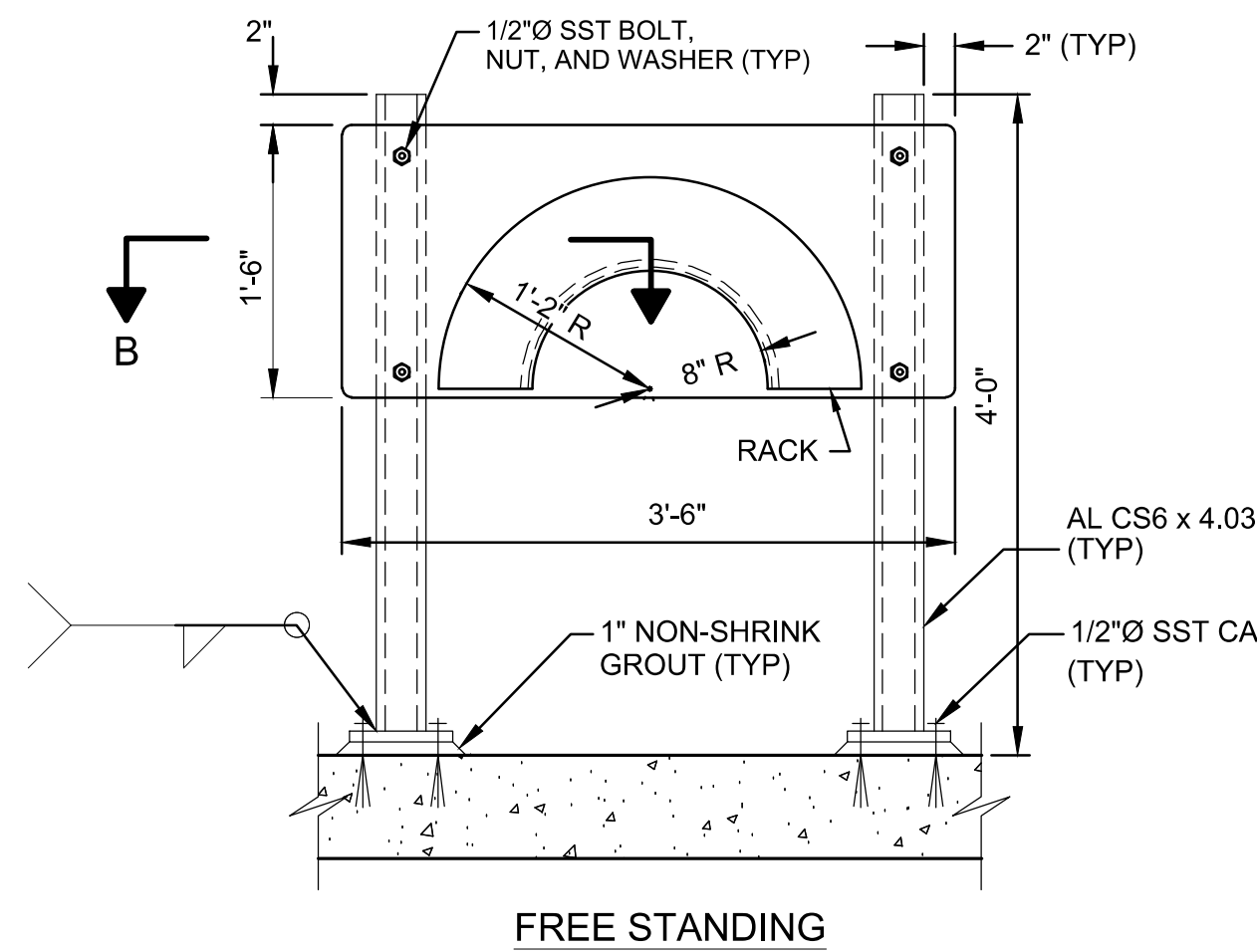
MECHANICAL DETAILS I

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: ABD
DRAWN BY: SRG

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DRAWING NUMBER
99-M501
SHEET NUMBER
060

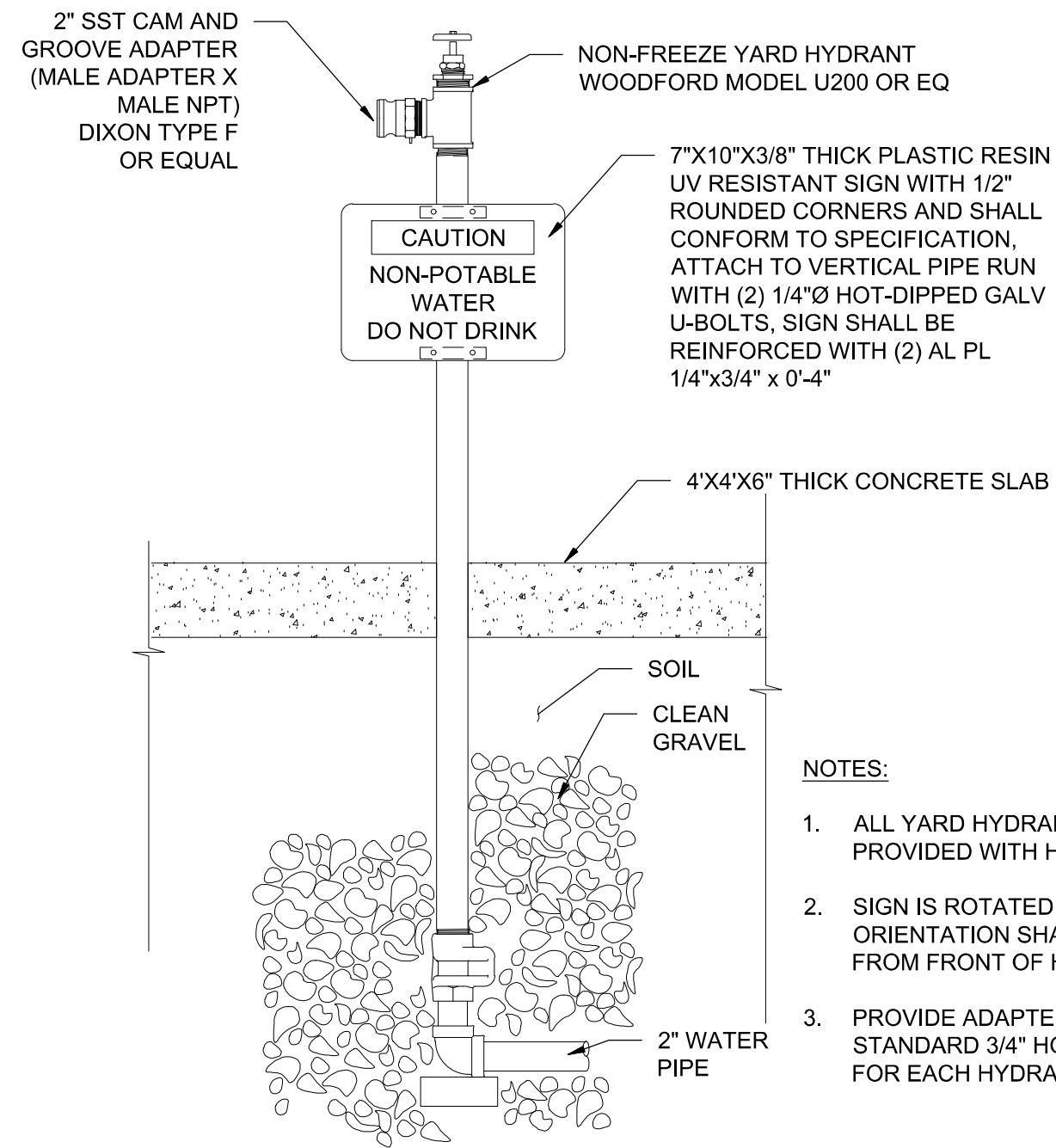




NOTES:

- HOSE RACK SHALL BE FABRICATED FROM 3/16" ALUMINUM PLATE. ROUND ALL EDGES SMOOTH.
- HOSE RACKS INSTALLED IN YARD LOCATIONS SHALL BE FREESTANDING EMBED IN A 4'-6" LONG x 2'-0" WIDE x 8" DEEP CONCRETE PAD WITH #5@12" EW CENTERED.
- WALL MOUNTED HOSE RACKS ON MASONRY WALL SHALL BE FASTEN TO GROUTED CELLS.

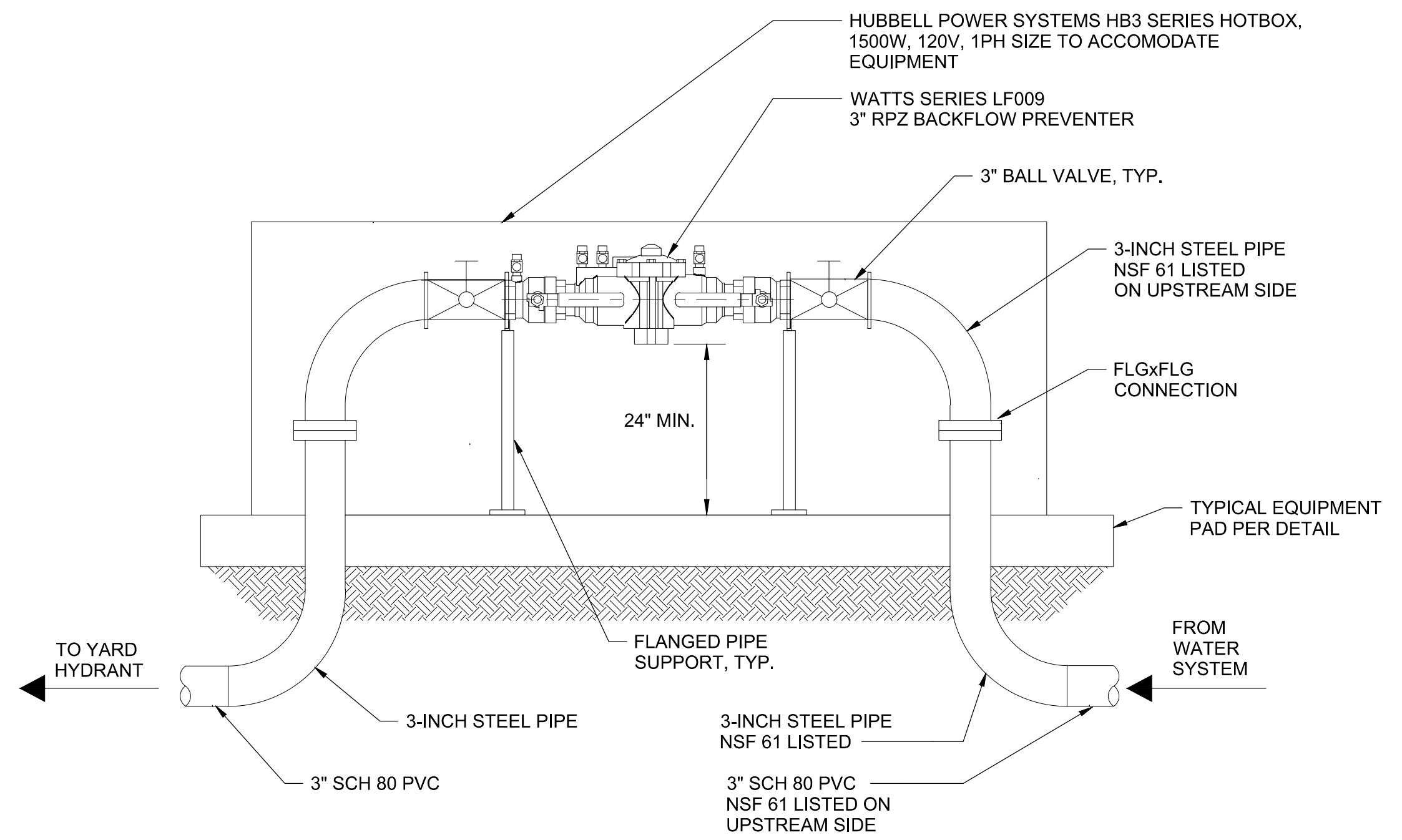
1 HOSE RACK
TYP SCALE: NONE



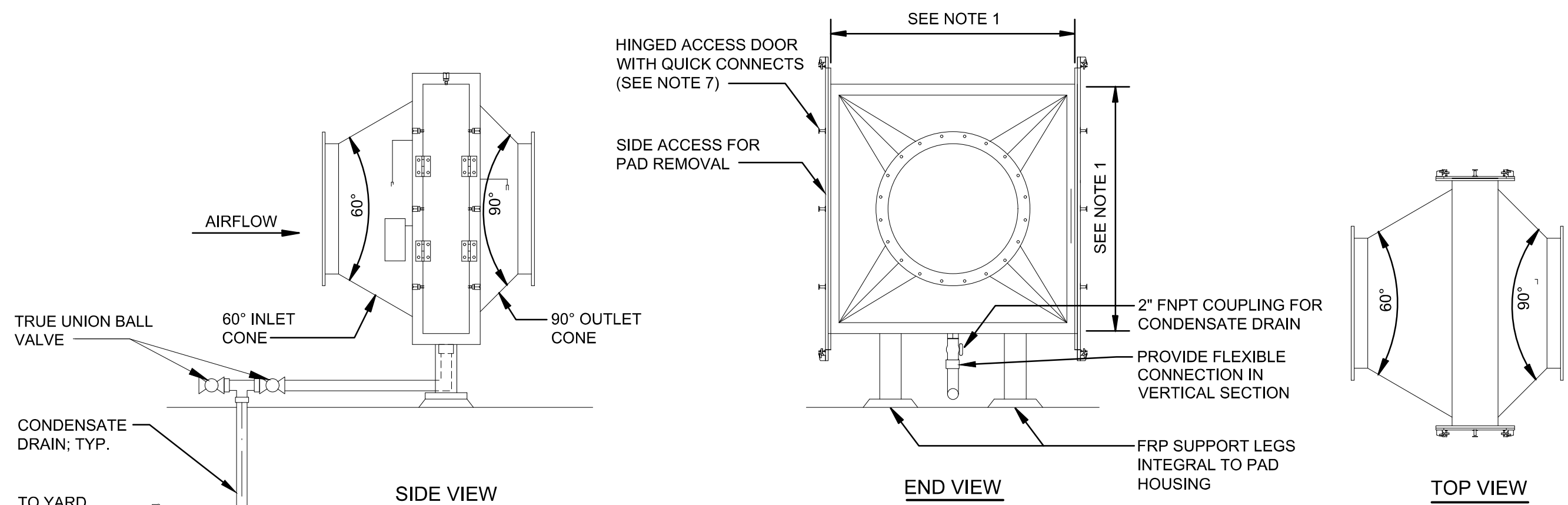
NOTES:

- ALL YARD HYDRANTS SHALL BE PROVIDED WITH HOSE RACK. SEE
- SIGN IS ROTATED FOR CLARITY. ORIENTATION SHALL BE VISIBLE FROM FRONT OF HYDRANT.
- PROVIDE ADAPTER FITTING FOR STANDARD 3/4" HOSE CONNECTION FOR EACH HYDRANT.

2 YARD HYDRANT
TYP SCALE: NONE



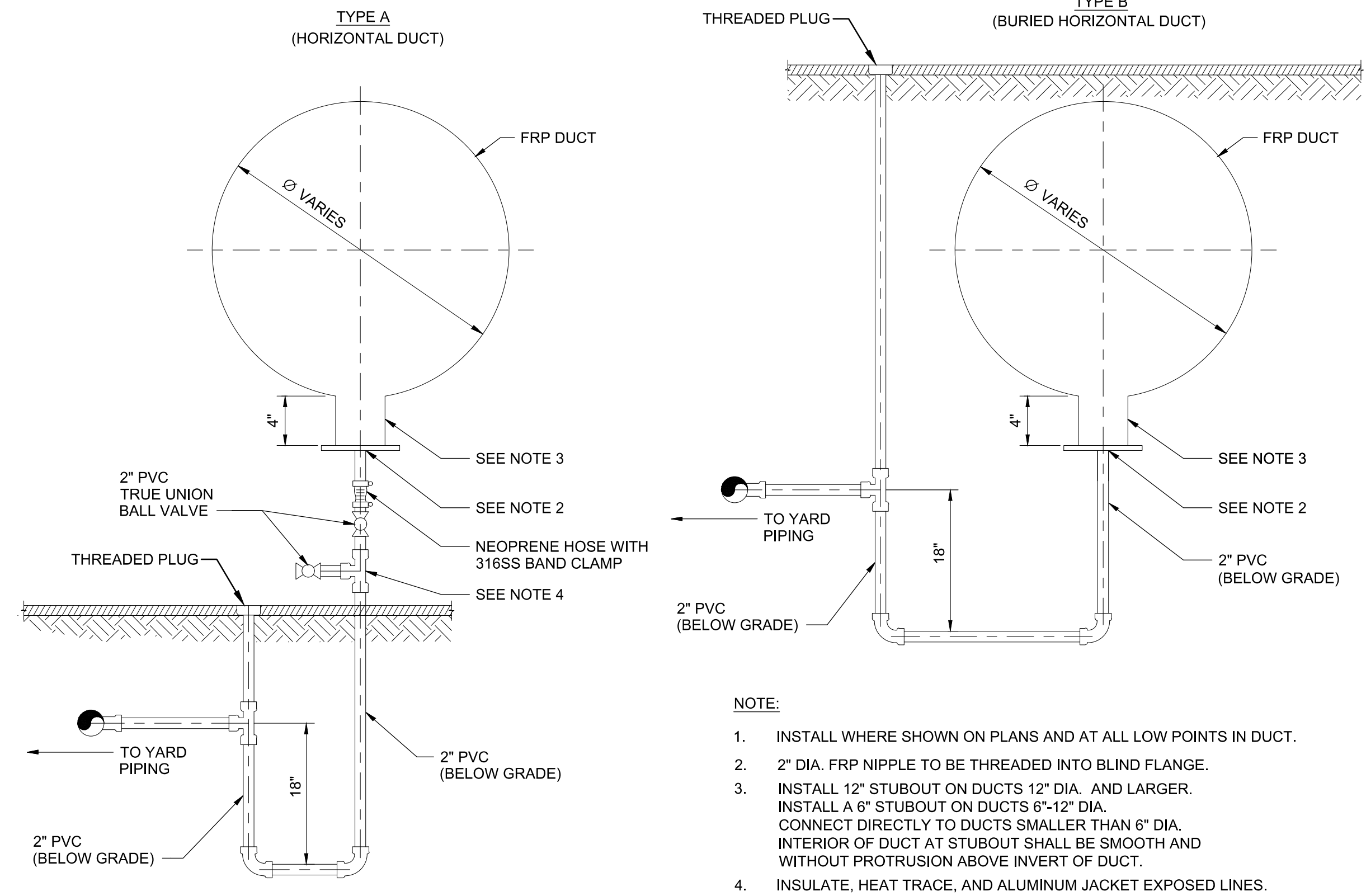
3 BACKFLOW PREVENTER ASSEMBLY
TYP SCALE: NONE



NOTES:

- HOUSING**
 - HOUSING SHALL BE SIZED TO PROVIDE A MAXIMUM VELOCITY OF 400 FEET PER MINUTE ACROSS THE MIST AND GREASE ELIMINATOR PADS.
 - HOUSING SHALL BE FRP WITH A MINIMUM 3/8" THICKNESS. PROVIDE A 100-MIL INTERNAL CORROSION BARRIER AND EXTERIOR GEL COAT WITH UV INHIBITOR.
 - HOUSING SHALL PROVIDE ACCESS TO THE MIST AND GREASE ELIMINATOR PADS VIA A GASKETED HINGED ACCESS DOOR AND USING QUICK CONNECTS (CLAMPS) TO SECURE THE DOOR IN PLACE. IF A HINGE IS NOT USED ALL FASTENERS SHALL BE QUICK DISCONNECT. BOLTED OR SCREWED DOOR ASSEMBLIES ARE NOT PERMITTED.
 - PROVIDE 316SS HARDWARE AND NEOPRENE GASKETS
- MIST/ GREASE ELIMINATOR PADS**
 - MIST/ GREASE PADS SHALL BE SECTIONED FOR EASE OF REMOVAL.
 - SYSTEM SHALL INCLUDE A 2" THICK 316SS MESH PAD FOLLOWED BY A 4" THICK POLYPROPYLENE MESH PAD WITH 1" 316SS ANGLES CONNECTED TO THE MESH PADS FOR SLIDING THE PADS INTO OUT OF THE HOUSING.
 - MIST/GREASE PADS SHALL BE REMOVABLE FROM ONE SIDE OF THE FILTER.
- TRANSITION CONES**
 - TRANSITION CONES SHALL BE FRP IN ACCORDANCE WITH ITEM 2.01.C OF THIS SECTION.
 - INLET TRANSITION CONE SHALL PROVIDE A MAXIMUM 60° TRANSITION FROM THE CONNECTED FRP DUCT TO THE HOUSING.
 - OUTLET TRANSITION CONE SHALL PROVIDE A MAXIMUM 90° TRANSITION FROM THE CONNECTED FRP DUCT TO THE HOUSING.
- SUPPORTS**
 - FRP SUPPORT LEGS INTEGRAL TO THE HOUSING SHALL BE PROVIDED TO ALLOW ACCESS AND REMOVAL OF THE MIST AND GREASE ELIMINATOR PADS AT FINISH FLOOR LEVEL.
- ACCESSORIES**
 - AN INTEGRAL SUMP BELOW THE AIR STREAM WITH A FNPT COUPLING SHALL BE PROVIDED AT THE LOWEST POINT OF THE SUMP FOR CONNECTION TO A CONDENSATE DRAIN.
 - ALL BOLTING SHALL INCLUDE 316SS HARDWARE AND A NEOPRENE GASKET AT THE FLANGES AND DOOR SEAL.
- INSULATE, HEAT TRACE AND ALUMINUM JACKET ALL EXPOSED PIPE.**

4 PRE-FILTER DETAIL
TYP SCALE: NONE



NOTE:

- INSTALL WHERE SHOWN ON PLANS AND AT ALL LOW POINTS IN DUCT.
- 2" DIA. FRP NIPPLE TO BE THREADED INTO BLIND FLANGE.
- INSTALL 12" STUBOUT ON DUCTS 12" DIA. AND LARGER. INSTALL A 6" STUBOUT ON DUCTS 6"-12" DIA. CONNECT DIRECTLY TO DUCTS SMALLER THAN 6" DIA. INTERIOR OF DUCT AT STUBOUT SHALL BE SMOOTH AND WITHOUT PROTRUSION ABOVE INVERT OF DUCT.
- INSULATE, HEAT TRACE, AND ALUMINUM JACKET EXPOSED LINES.

5 DUCT CONDENSATE DRAIN
TYP SCALE: NONE



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REGISTRATION NO.
20171218008



REV.	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
GRAND JUNCTION, COLORADO
Grand Junction
CITY OF GRAND JUNCTION
GRAND JUNCTION
ODOR CONTROL IMPROVEMENTS

MECHANICAL
DETAILS II

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: ABD
DRAWN BY: SRG

BAR IS ONE INCH ON ORIGINAL DRAWING
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DRAWING NUMBER
99-M502

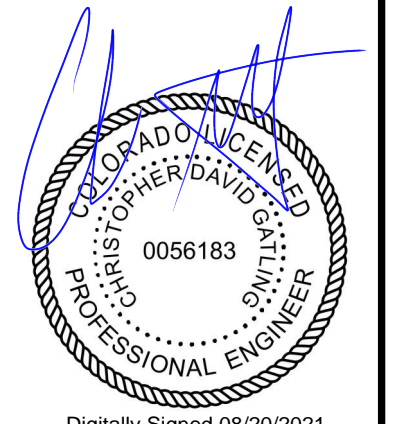
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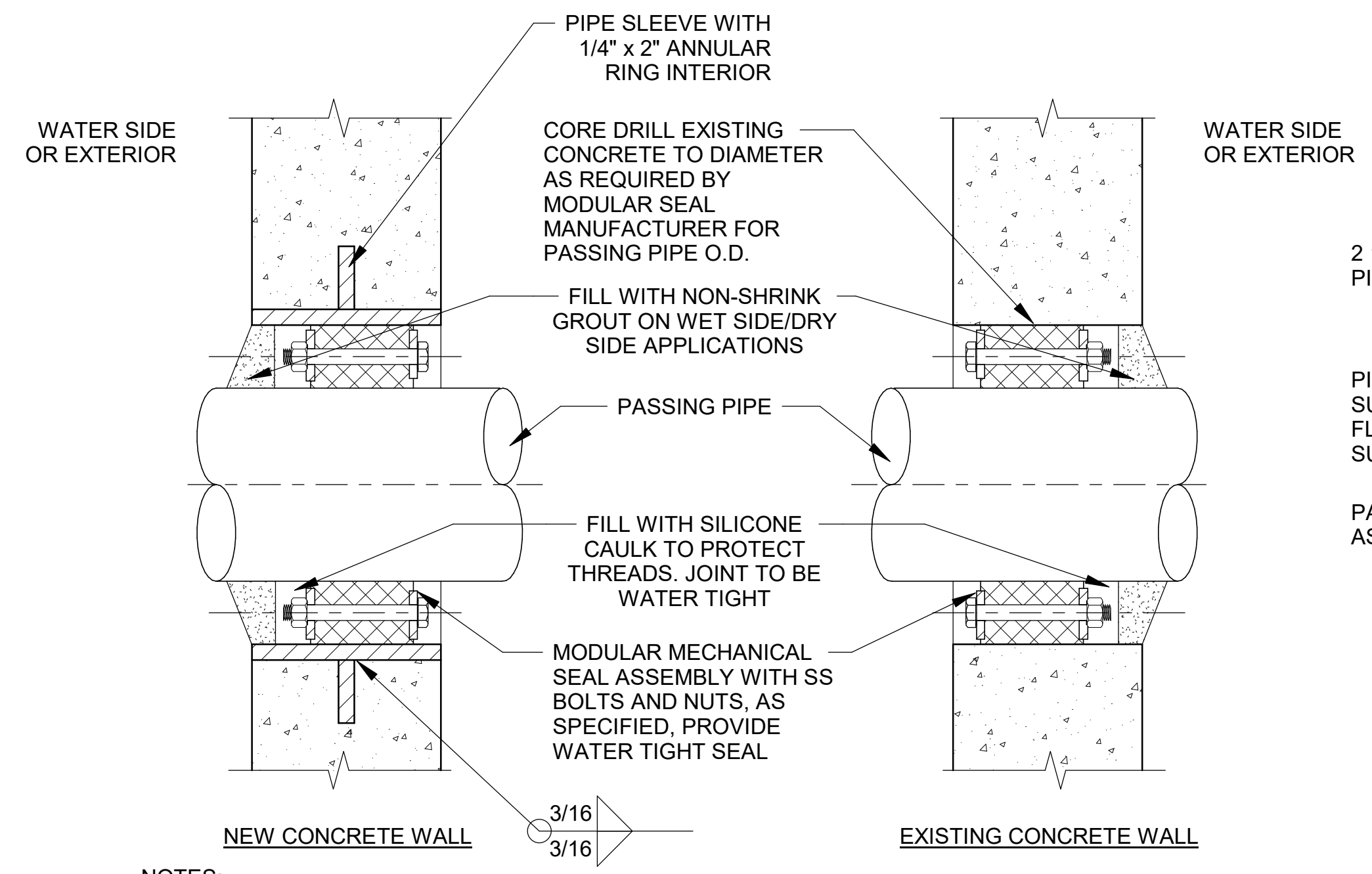


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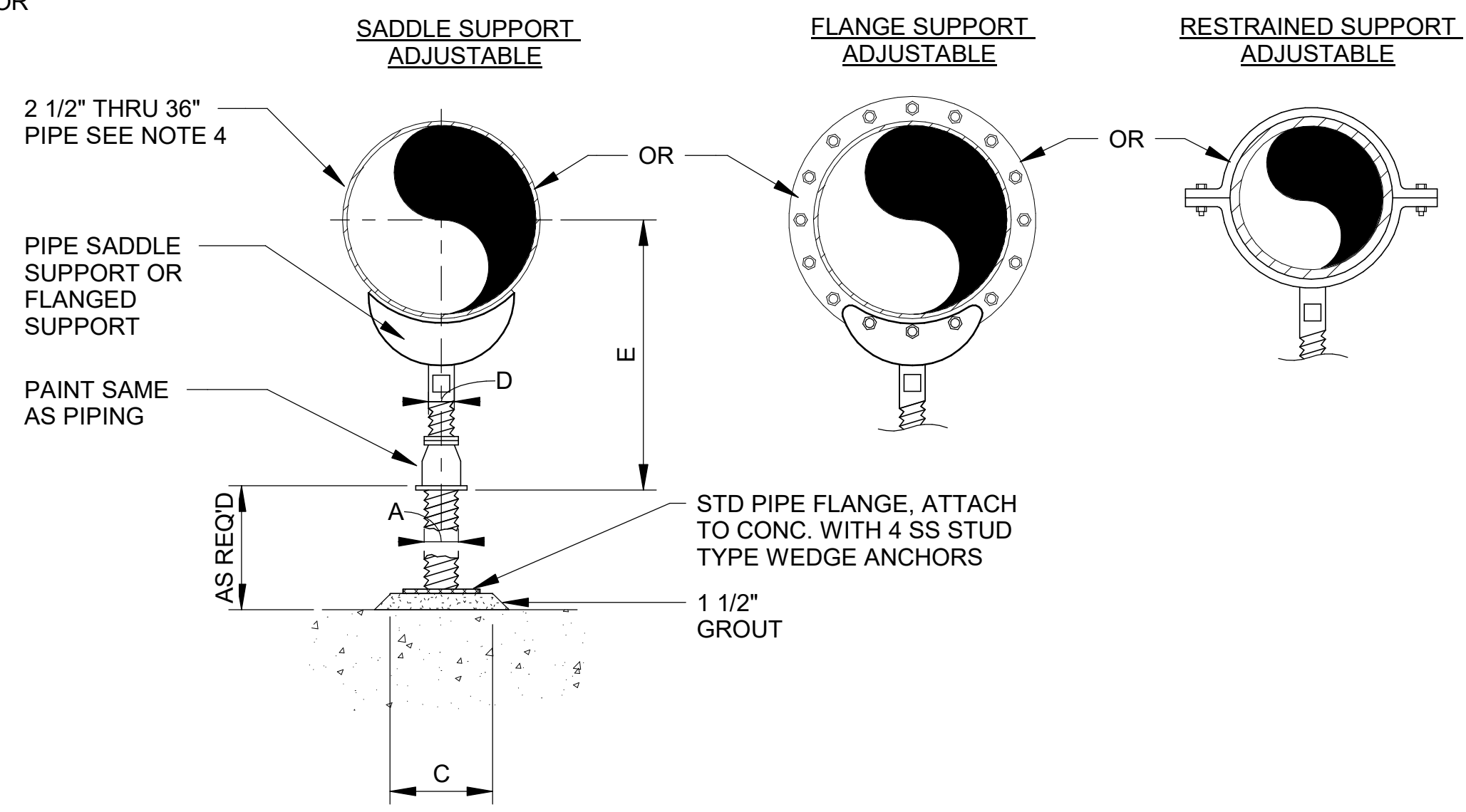
Digitally Signed 08/20/2021



NOTES:

- WHERE EXISTING CONCRETE STRUCTURE IS TO BE CORE DRILLED, THE CONTRACTOR SHALL ULTRASONIC TEST OR X-RAY THE AREA FOR EMBEDDED ITEMS BEFORE CORE DRILLING CAN PROCEED. IF EMBEDDED ITEMS ARE FOUND, NOTIFY THE ENGINEER IMMEDIATELY.
- FOR NEW CONSTRUCTION, SLEEVES SHALL BE CAST INTO WALL. BLOCKOUTS AND SUBSEQUENT GROUTED IN SLEEVES WILL NOT BE PERMITTED UNLESS A KEYED WATERSTOP JOINT IS PROVIDED.
- 6" DIAMETER SLEEVES AND SMALLER SHALL BE SCHEDULE 40 STEEL PIPE.
- SLEEVES LARGER THAN 6" DIAMETER SHALL BE 1/4" THICK STEEL PIPE.
- IN WALLS THICKER THAN 12", LINK SEAL SHALL BE INSTALLED AT BOTH ENDS OF THE WALL SLEEVE. SLEEVE DIAMETER SHALL BE PER LINK SEAL MANUFACTURER'S RECOMMENDATION.
- SLEEVE SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.

1 WALL PENETRATION SEAL
 99-M503 SCALE: NOT TO SCALE



DIMENSION TABLE

PIPE SIZE	A	B	C	D	E	
					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.

2 ADJUSTABLE FLOOR MOUNTED PIPE SUPPORT
 99-M503 SCALE: NOT TO SCALE

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 Plot Date: 8/20/2021 11:06:27 AM

REV	DATE	DESCRIPTION	BY

CITY OF GRAND JUNCTION
 GRAND JUNCTION, COLORADO
Grand Junction
 CITY OF GRAND JUNCTION
 GRAND JUNCTION
 ODOR CONTROL IMPROVEMENTS

MECHANICAL
 DETAILS III

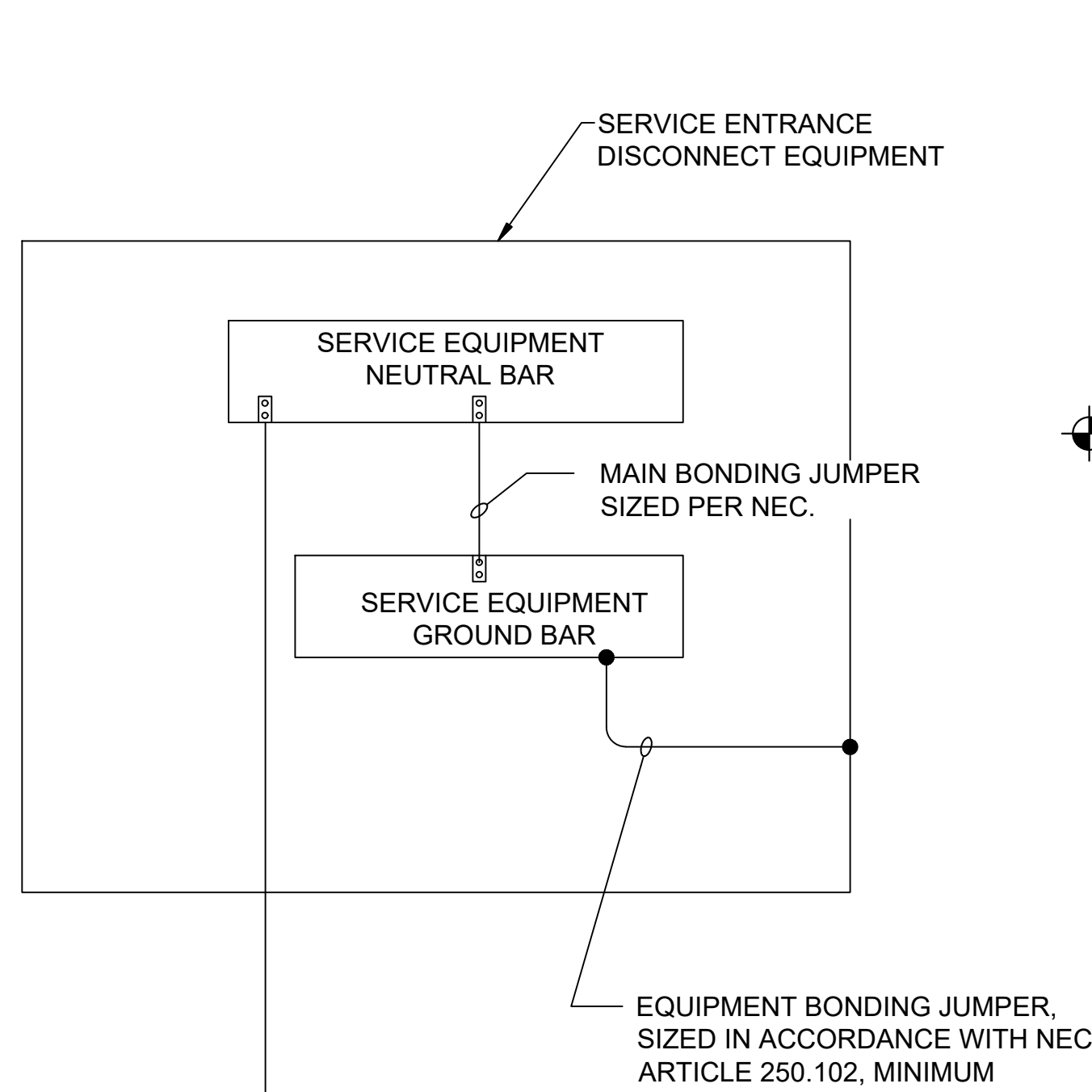
JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: KEC
 DRAWN BY: EGB

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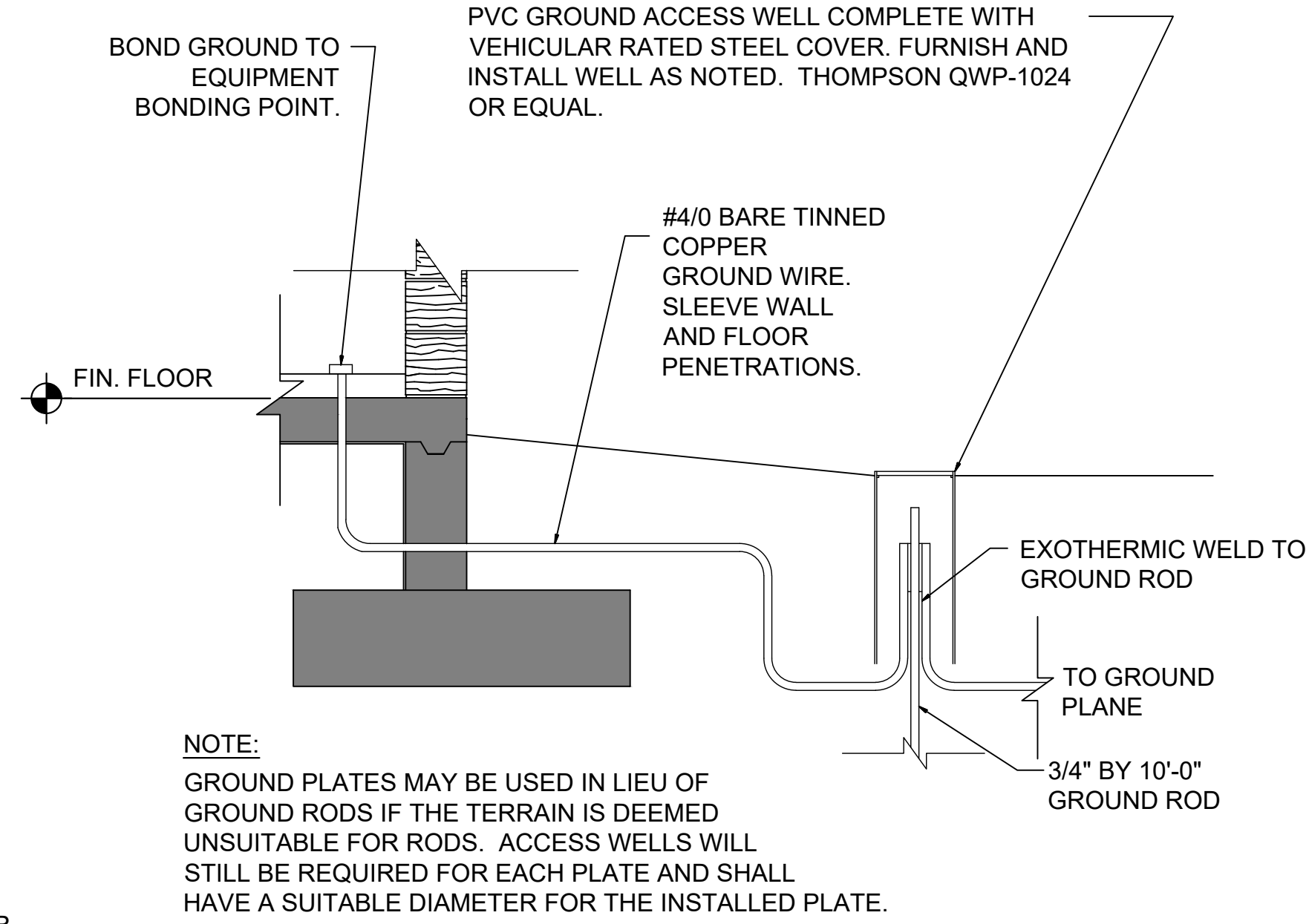
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 SHEET NUMBER **062**

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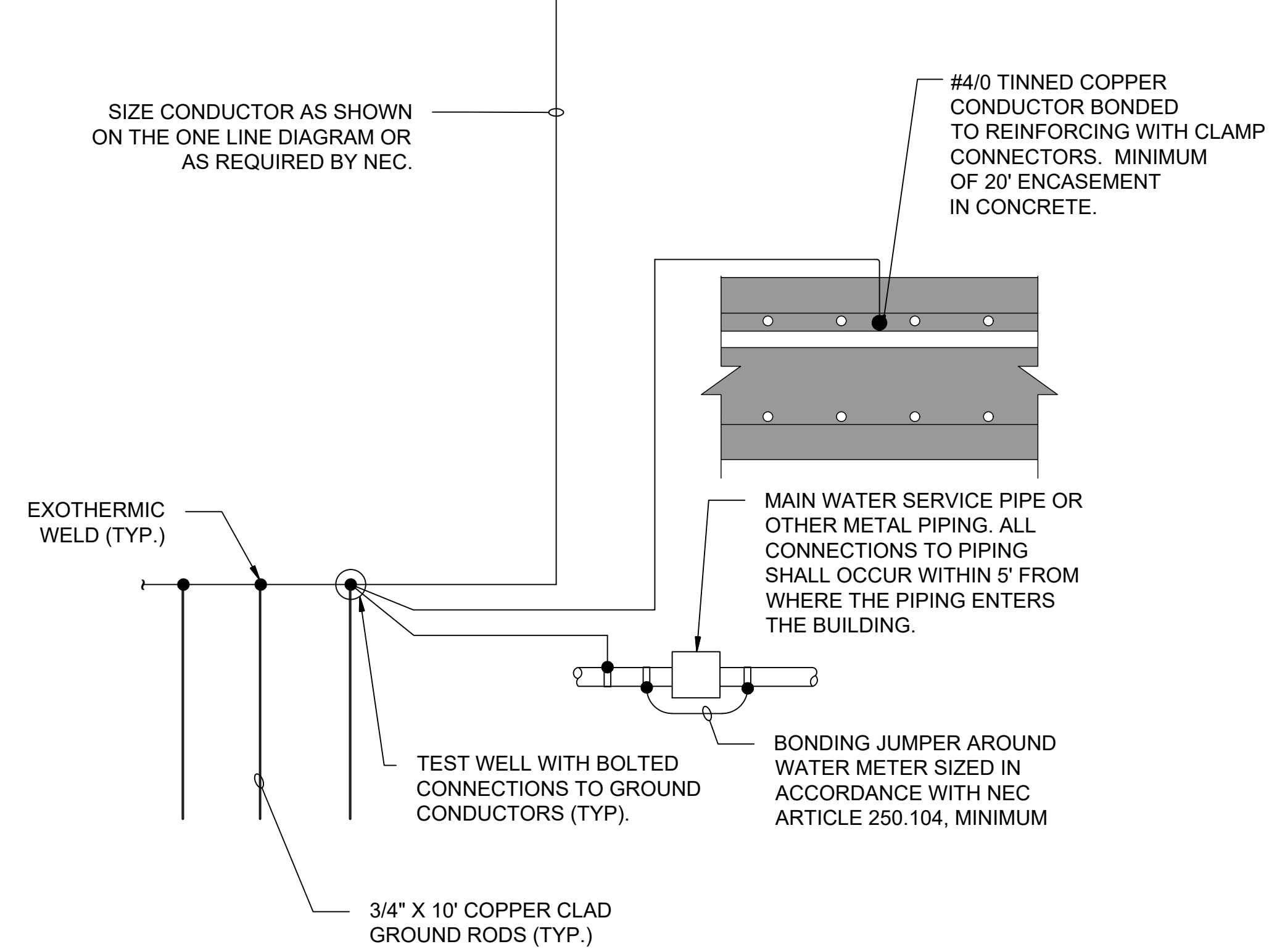
1. ALL GROUNDING WORK SHALL BE PERFORMED IN ACCORDANCE WITH NEC ARTICLE 250 - GROUNDING.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL GROUNDING INFORMATION AND REQUIREMENTS.



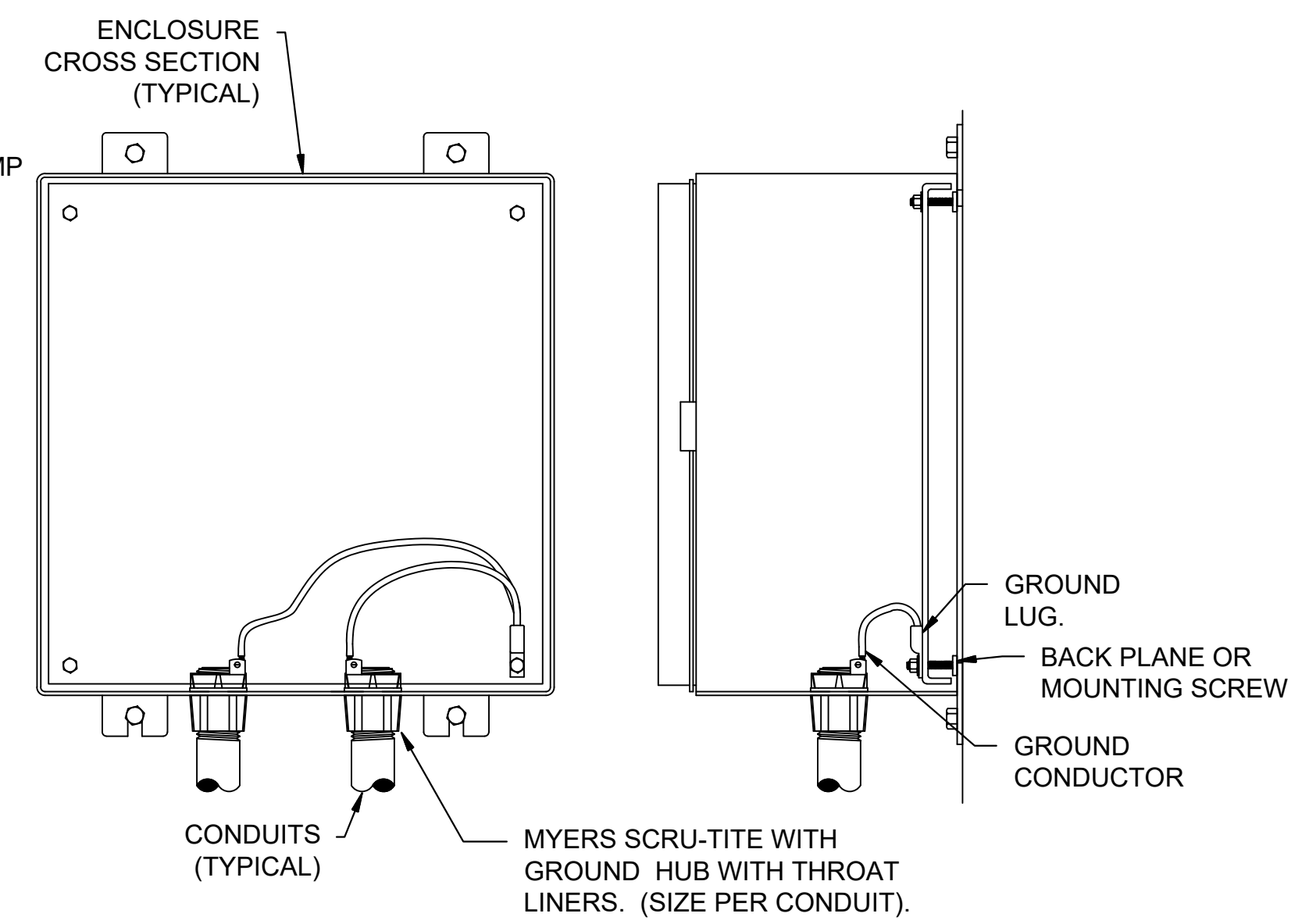
1
99-E501
GROUND BAR CONNECTION DETAIL
SCALE: NOT TO SCALE



2
99-E501
GROUND ROD CONNECTION DETAIL
SCALE: NOT TO SCALE



1
99-E501
GROUND BAR CONNECTION DETAIL
SCALE: NOT TO SCALE



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

4
99-E501
CONDUIT GROUNDING DETAIL
SCALE: NOT TO SCALE



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Grand Junction
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ODOR CONTROL IMPROVEMENTS

ELECTRICAL
DETAILS I

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: SAH
DRAWN BY: SAH

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99-E501
SHEET NUMBER
063

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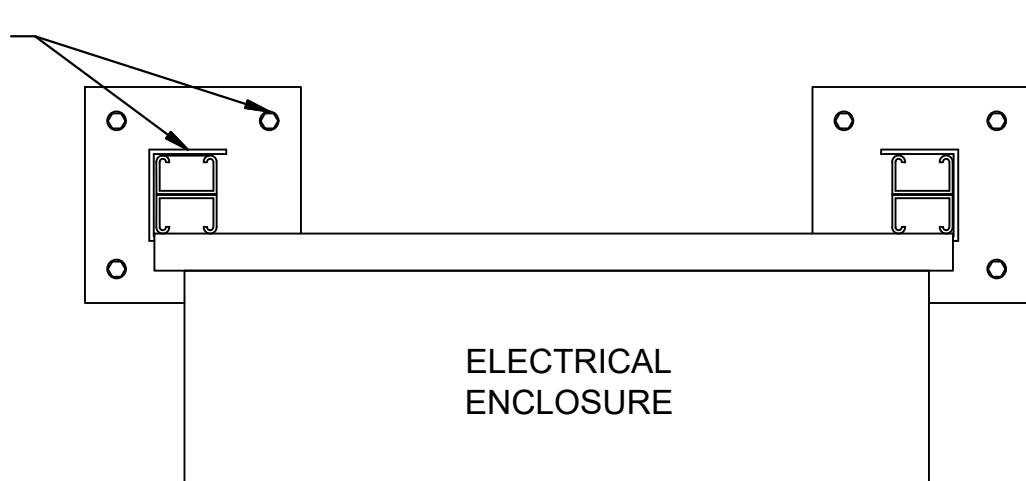
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STAINLESS STEEL MOUNTING BRACKET, FOUR HOLE, DOUBLE POST, SECURE TO FRAME WITH STAINLESS STEEL BOLTS, LOCK WASHERS, WASHERS AND LOCKNUTS, SECURE TO CONCRETE PAD WITH 4" MIN. STAINLESS STEEL WEDGE ANCHOR BOLTS (TYPICAL).

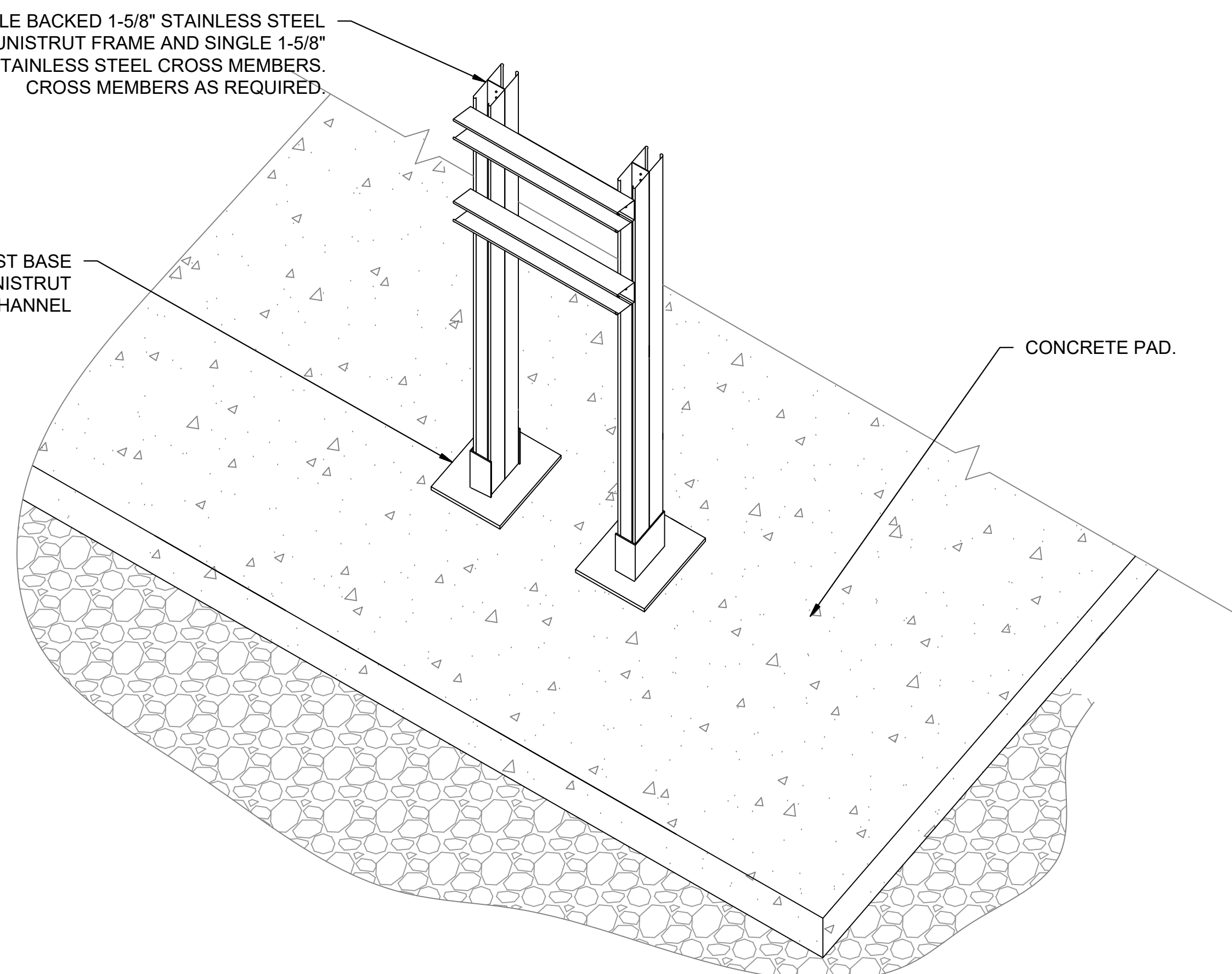


ELECTRICAL ENCLOSURE

1 TYP. UNISTRUT STAND DETAIL (TOP VIEW)
99-E502 SCALE: NOT TO SCALE

DOUBLE BACKED 1-5/8" STAINLESS STEEL UNISTRUT FRAME AND SINGLE 1-5/8" STAINLESS STEEL CROSS MEMBERS. CROSS MEMBERS AS REQUIRED.

SQUARED POST BASE FOR UNISTRUT DOUBLE CHANNEL



CONCRETE PAD.

1. ALL BOLTS, NUTS, WASHERS, ANCHORS, PLATES, AND OTHER MOUNTING STEMS SHALL BE CORROSION RESISTANT, STAINLESS STEEL.
2. UTILIZE 5/16" STAINLESS STEEL WEDGE ANCHORS AS REQUIRED.
3. OMIT PAD WHERE NOT SHOWN.

1 UNISTRUT STAND DETAIL (TYP.)
99-E502 SCALE: NOT TO SCALE

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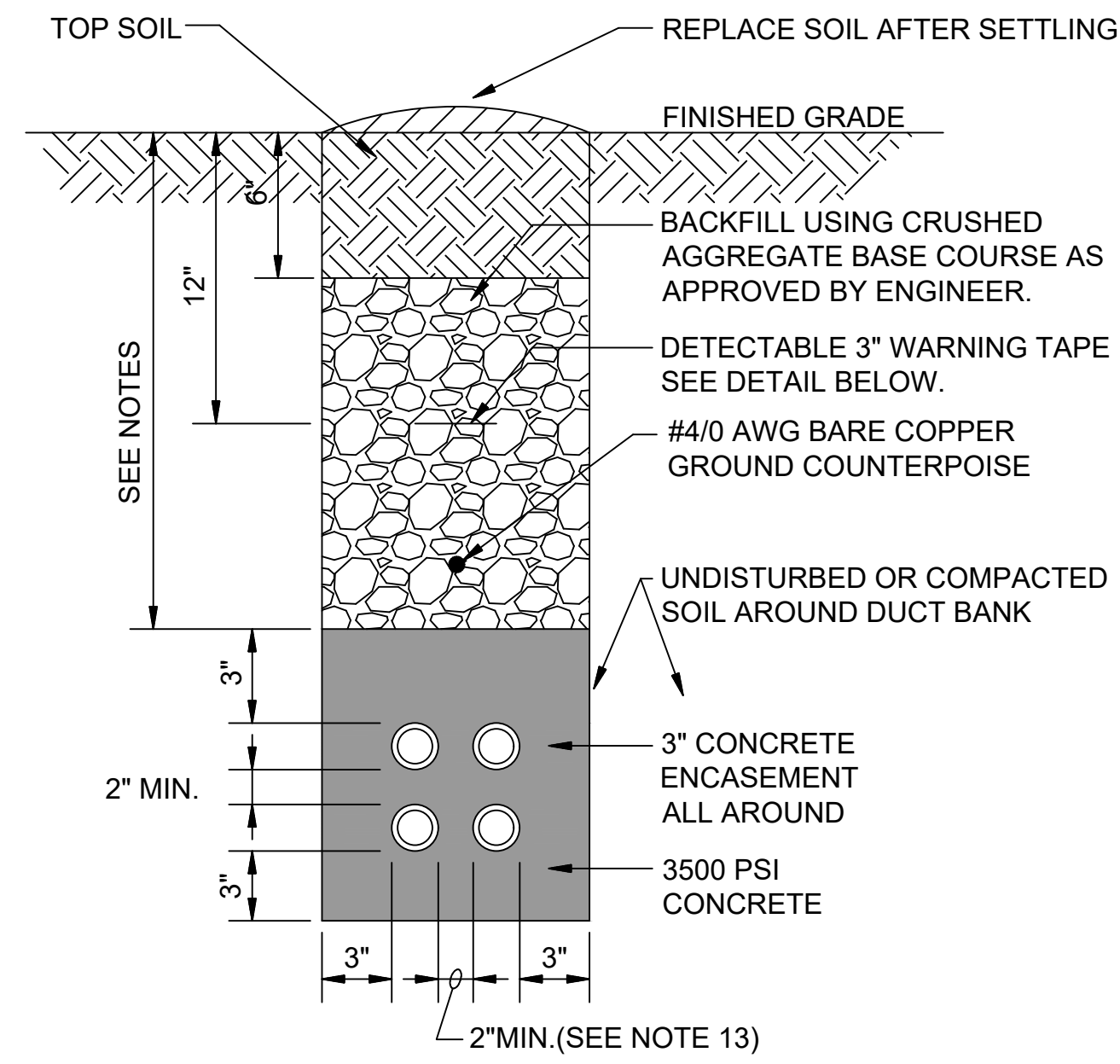
 GRAND JUNCTION ODOR CONTROL IMPROVEMENTS

ELECTRICAL
DETAILS II

JOB NO.: 20W23045
 DATE: AUGUST 2021
 DESIGNED BY: SAH
 DRAWN BY: SAH

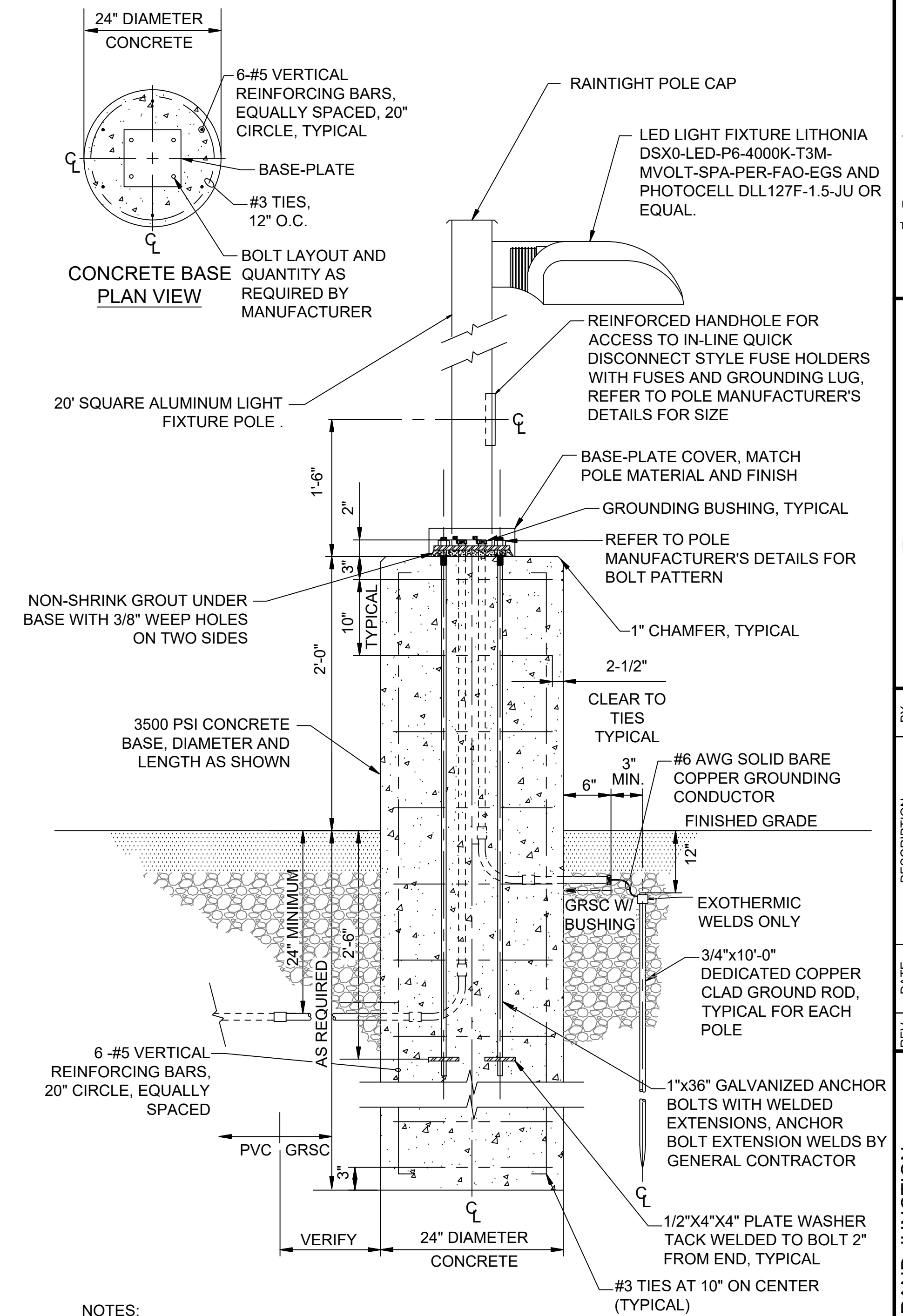
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99-E502
 SHEET NUMBER **064**



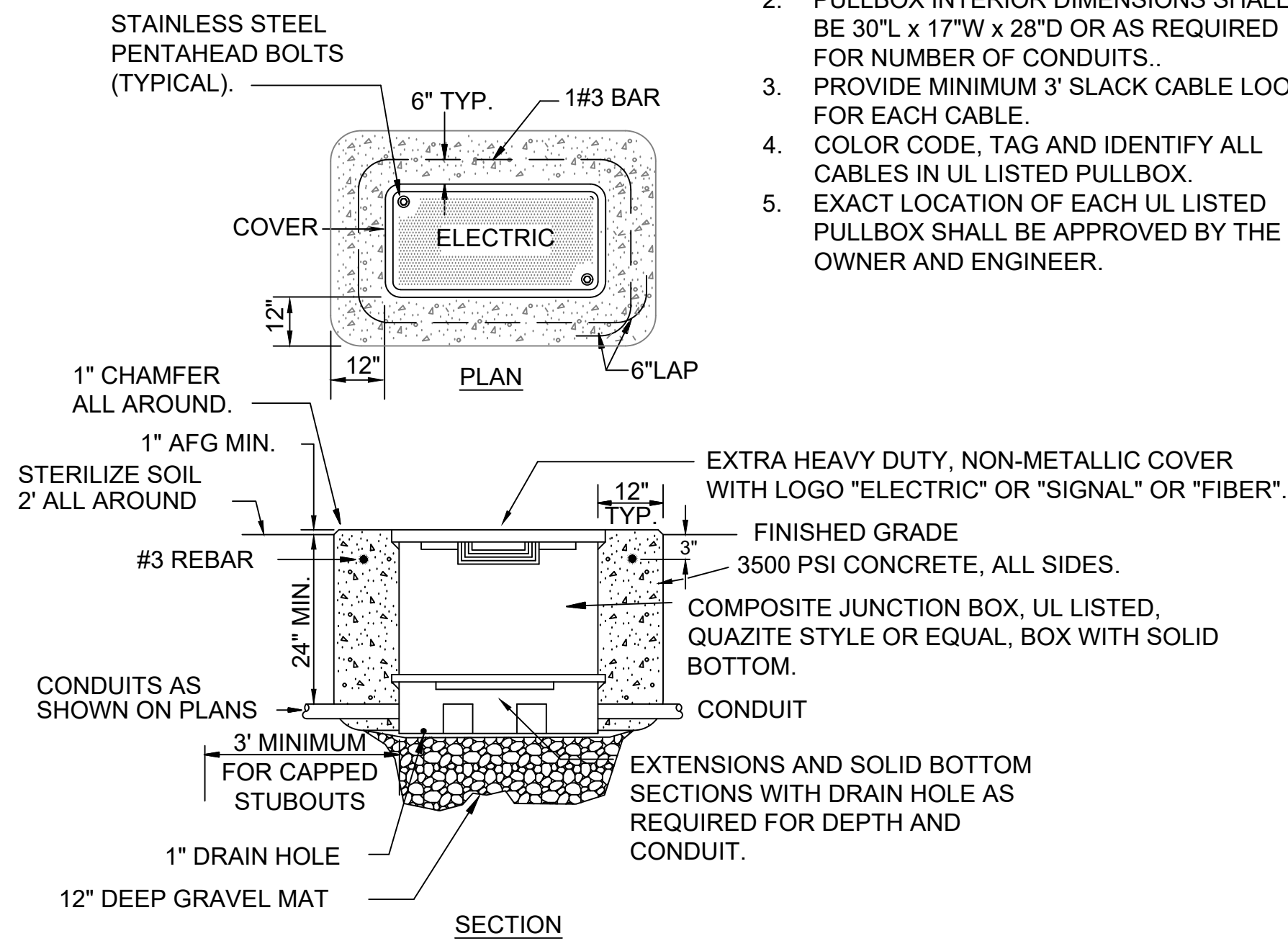
1 CONCRETE ENCASED ELECTRICAL DUCT DETAIL
99-E503 SCALE: NOT TO SCALE

- NOTES:**
1. CONTRACTOR SHALL STAKE THE DUCT INSTALLATION IN PLAN AND ELEVATION FOR NEW ELECTRICAL DUCTS TO AVOID EXISTING UTILITIES. STAKING PLAN SHALL BE APPROVED BY OWNER AND ENGINEER PRIOR TO WORK.
 2. CONTRACTOR SHALL ADJUST THE DEPTH OF THE ELECTRICAL DUCTS AS REQUIRED TO MAINTAIN THE MINIMUM COVER REQUIREMENT INDICATED AND AVOID EXISTING UTILITIES.
 3. SIMILAR CONSTRUCTION FOR OTHER DUCT SIZES. SEE ELECTRICAL PLAN SHEETS FOR QUANTITY AND SIZES.
 4. INSTALL DUCT CONDUIT SUPPORTS AT 5'-0" O.C. MAXIMUM SPACING. UTILIZE LOCKING COLLARS OR HOLD DOWN BARS WITH ANCHORS TO PREVENT DUCT FLOTATION. (TYPICAL ALL DUCTS).
 5. OFFSETS AND BENDS OVER 10 DEGREES AND ELBOWS IN PVC CONDUIT RUNS SHALL BE GRSC.
 6. NO PVC SHALL EMERGE FROM THE GROUND OR CONCRETE SLAB OR ENCASEMENT, PVC SHALL CONVERT TO GALVANIZED RIGID STEEL CONDUIT PRIOR TO ITS EMERGENCE UNLESS NOTED OTHERWISE.
 7. SPARE GALVANIZED RIGID STEEL CONDUITS SHALL STUB UP 6" ABOVE FINISHED GRADE OR CONCRETE PAD SURFACE AND BE CAPPED WATERTIGHT.
 8. INSTALL GROUND RODS AT ENDS OF ELECTRICAL DUCT AND CONNECT TO GROUND RING.
 9. INSTALL CONDUCTORS AND CABLES AS NOTED ON DRAWINGS. INSTALL PULL ROPE IN ALL SPARE DUCTS.
 10. MINIMUM COVER REQUIREMENT FOR DUCT BANKS UNDER ROADS, DRIVEWAYS AND PARKING LOTS SHALL BE 24".
 11. MINIMUM COVER REQUIREMENTS FOR ELECTRICAL SECONDARY SERVICE DUCT BANKS SHALL BE 30".
 12. MINIMUM COVER REQUIREMENTS FOR ELECTRICAL PRIMARY SERVICE DUCT BANKS SHALL BE 36".
 13. VERTICAL AND HORIZONTAL DISTANCES BETWEEN CONDUITS SHALL BE 3" MINIMUM FOR DUCTS CONTAINING CIRCUITS OVER 600 VOLTS.
 14. DUCT BANKS TO EXTEND BELOW FLOOR SLABS.



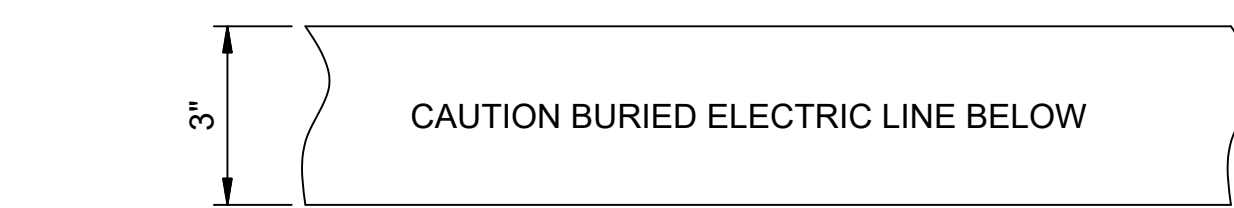
- NOTES:**
1. ALL HARDWARE SHALL BE STAINLESS STEEL.
 2. CONSTRUCT FOUNDATION IN ACCORDANCE WITH POLE MANUFACTURERS GUIDELINES, INSTALLING BOLT TEMPLATE LEVELING UNIT, ANCHOR BOLTS, FULL BASE-PLATE BOLT COVER, AND ACCESSORIES FOR A COMPLETE INSTALLATION.
 3. TIE ALL CONDUITS, POLE, EQUIPMENT GROUND AND ALL OTHER METAL EQUIPMENT AND GROUNDING LUGS TOGETHER USING #6 AWG SOLID BARE COPPER AND APPROVED GROUNDING CLAMPS AND CONNECT TO GROUND ROD SYSTEM.

3 TYPICAL ELEVATED CONCRETE BASE DETAIL
99-E503 SCALE: NOT TO SCALE



2 ELECTRICAL PULLBOX DETAIL
99-E503 SCALE: NOT TO SCALE

- NOTES:**
1. UL LISTED PULLBOX AND EXTRA HEAVY-DUTY COVER SHALL BE DESIGNED FOR A TEST LOAD OF 33,750 LBS AND A DESIGN LOAD OF 22,500 LBS.
 2. PULLBOX INTERIOR DIMENSIONS SHALL BE 30" L x 17" W x 28" D OR AS REQUIRED FOR NUMBER OF CONDUITS.
 3. PROVIDE MINIMUM 3" SLACK CABLE LOOP FOR EACH CABLE.
 4. COLOR CODE, TAG AND IDENTIFY ALL CABLES IN UL LISTED PULLBOX.
 5. EXACT LOCATION OF EACH UL LISTED PULLBOX SHALL BE APPROVED BY THE OWNER AND ENGINEER.



- NOTES:**
1. POWER MARKING TAPES SHALL BE DETECTABLE TYPE CONSTRUCTION WITH RED BACKGROUND AND BLACK LETTERING.
 2. COMMUNICATION MARKING TAPES SHALL BE DETECTABLE TYPE CONSTRUCTION WITH ORANGE BACKGROUND AND BLACK LETTERING, "TELEPHONE LINE" OR "FIBER OPTIC LINE" RESPECTIVELY.
 3. TAPE SHALL BE DETECTABLE, DURABLE, HIGHLY VISIBLE, RESISTANT TO ELEMENTS, MEETING AND/OR EXCEEDING ALL INDUSTRY STANDARDS.

4 UNDERGROUND DETECTABLE WARNING TAPE DETAIL
99-E503 SCALE: NOT TO SCALE



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CITY OF GRAND JUNCTION
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ODOR CONTROL IMPROVEMENTS

ELECTRICAL
DETAILS III

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: SAH
DRAWN BY: SAH

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065

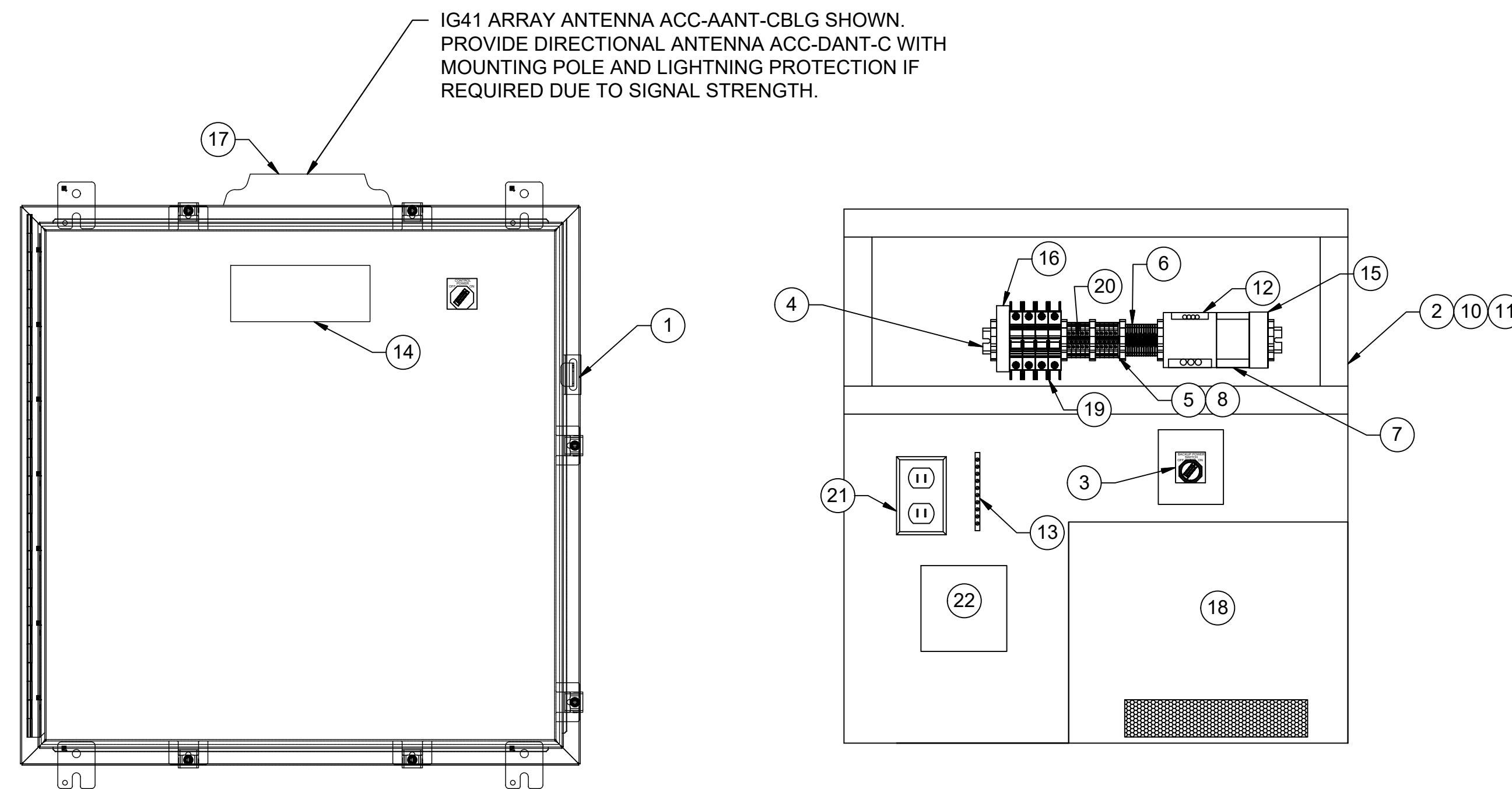
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BILL OF MATERIALS			
ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.
①	30"H X 30"W X 10"D NEMA 4 ENCLOSURE SHOWN (SIZE AS REQUIRED)	HOFFMAN	A48H30CLP
②	BACK PANEL FOR ENCLOSURE	HOFFMAN	A48P30
③	SELECTOR SWITCH, 2 POS., MAINTAINED, METAL, 30MM, JUMBO LEGEND	ALLEN BRADLEY	800T SERIES
④	MOUNTING RAIL, DIN 35MM X 7.5MM	PHOENIX	NS35/7,5 PERFORATED
⑤	TERMINAL BLOCK END ANCHOR	PHOENIX CONTACT	E/UK
⑥	TERMINAL BLOCK, GROUNDING, GN/YL	PHOENIX CONTACT	0441504
⑦	CONTROL RELAY, 120 VAC COIL, 6-POLE, N.O./N.C. CONTACTS AS REQUIRED	ALLEN BRADLEY	700-CF
⑧	TERMINAL BLOCK, UNIVERSAL, GRAY, UT4	PHOENIX CONTACT	3044102
⑨	END COVER UT4	PHOENIX CONTACT	3047028
⑩	WIRING DUCT, 1.5" X 2"	PANDUIT	F1.5X2LG6
⑪	WIRING DUCT COVER, 1.5"	PANDUIT	C1.5LG6

BILL OF MATERIALS			
ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.
⑫	POWER SUPPLY 24V	SOLA	AS REQUIRED
⑬	GROUND BAR KIT	SIEMENS	GB10
⑭	LEGEND PLATES	-	-
⑮	TIMING RELAY	ALLEN BRADLEY	700-FS
⑯	SURGE PROTECTOR	PHOENIX CONTACT	2856812
⑰	ANTENNA	SAMSARA	AS REQUIRED
⑱	UPS-1500VA MIN	SEE SPECS	SEE SPECS
⑲	CIRCUIT BREAKER	ALLEN BRADLEY	AS REQ'D
⑳	PLUG-IN BRIDGE	PHOENIX CONTACT	FBS 5-6
㉑	CONVENIENCE OUTLET (SPEC GRADE)	HUBBELL	120V 20A
㉒	SAMSARA IG41 W/ACC-IG-CDIO	SAMSARA	IG41/ACC-IG-CDIO

BILL OF MATERIAL NOTES:

1. THE FINISHED PANEL ASSEMBLY SHALL MEET UL-508 REQUIREMENTS.
2. GENERAL PANEL LAYOUT SHOWN. CONTRACTOR TO FURNISH AND INSTALL TERMINALS AND NECESSARY PARTS NOT LISTED AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
3. THE BILL OF MATERIALS INCLUDES MANUFACTURER AND MODEL NUMBERS FOR INDICATION OF STANDARD QUALITIES OF EQUIPMENT ONLY. CONTRACTOR SHALL SUBMIT CUT SHEETS OF EQUIPMENT FOR ENGINEERS REVIEW PRIOR TO PURCHASE.
4. THE PANEL LAYOUT SHOWN PROVIDES THE CONTRACTOR WITH A GENERAL GUIDELINE WHEN BUILDING THE CONTROL PANELS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ENCLOSURE SIZE AND LAYOUT AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
5. PROVIDE FUSED 120V POWER DISTRIBUTION BLOCK
6. PROVIDE FUSED 24VDC+ AND 24VDC- POWER DISTRIBUTION BLOCK.
7. MAKE ALL FINAL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.



①
99-E504 **DOS RIOS RTU PANEL LAYOUT**
SCALE: NONE



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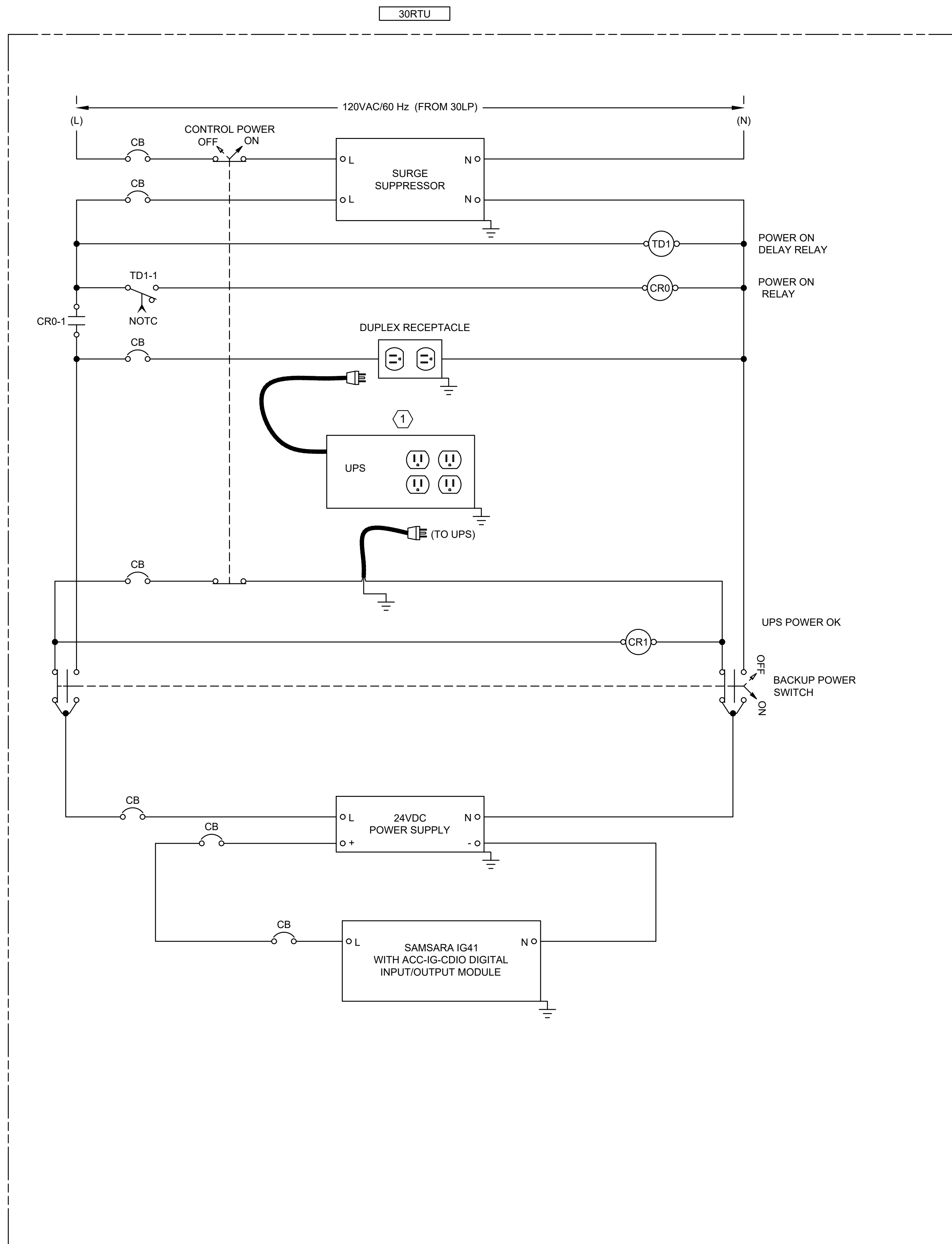
DOR RIOS RTU PANEL LAYOUT

JOB NO.: 20W23045
DATE: AUGUST 2021
DESIGNED BY: SAH
DRAWN BY: SAH

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SHEET NUMBER **066**

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1
 99-E505 DOS RIOS RTU PANEL SCHEMATIC
 SCALE: NONE

GENERAL NOTES:

1. MAKE ALL FINAL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.
2. NOT ALL DEVICES ARE SHOWN AND INCLUDED. PROVIDE ALL ITEMS AS REQUIRED FOR A COMPLETE INSTALLATION. SEE STRUCTURE ELECTRICAL SHEETS AND SPECIFICATIONS.

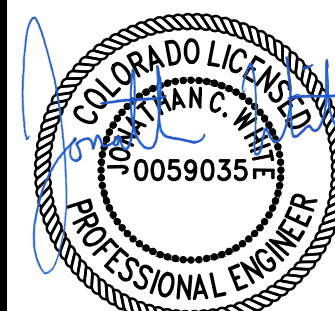
KEYED NOTES:

- ① COORDINATE WITH UPS MANUFACTURER REQUIREMENTS TO PROVIDE REQUIRED LINE AND LOAD POWER CONNECTIONS.



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DOS RIOS RTU PANEL SCHEMATIC

JOB NO.: 20W23045
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