

PHASE 2 NEVADA WASTEWATER TREATMENT FACILITY IMPROVEMENTS CITY OF NEVADA NEVADA, IOWA 2020

CERTIFICATION

MICHAEL J. ROTH
18424
LICENSED PROFESSIONAL ENGINEER
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

MICHAEL J. ROTH, P.E. DATE
License Number: 18424
My license renewal date is December 31, 2020.
Pages or sheets covered by this seal:
G SHEETS,

GREGORY P. BAENZIGER
09703
LICENSED PROFESSIONAL ENGINEER
IOWA

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GREGORY P. BAENZIGER, P.E. DATE
License Number: 09703
My license renewal date is December 31, 2020.
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JAMES R. RASMUSSEN
14546
LICENSED PROFESSIONAL ENGINEER
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JAMES R. RASMUSSEN, P.E. DATE
License Number: 14546
My license renewal date is December 31, 2021.
Pages or sheets covered by this seal:

DOUGLAS A. SULLIVAN
15589
LICENSED PROFESSIONAL ENGINEER
IOWA

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DOUGLAS A. SULLIVAN, P.E. DATE
License Number: 15589
My license renewal date is December 31, 2020.
Pages or sheets covered by this seal:

JOSEPH P. FRANKL
23145
LICENSED PROFESSIONAL ENGINEER
IOWA

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JOSEPH P. FRANKL, P.E. DATE
License Number: 23145
My license renewal date is December 31, 2020.
Pages or sheets covered by this seal:

DAVID J. HARRISON
2287
LICENSED ARCHITECT
IOWA

I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly licensed architect under the laws of the State of Iowa.

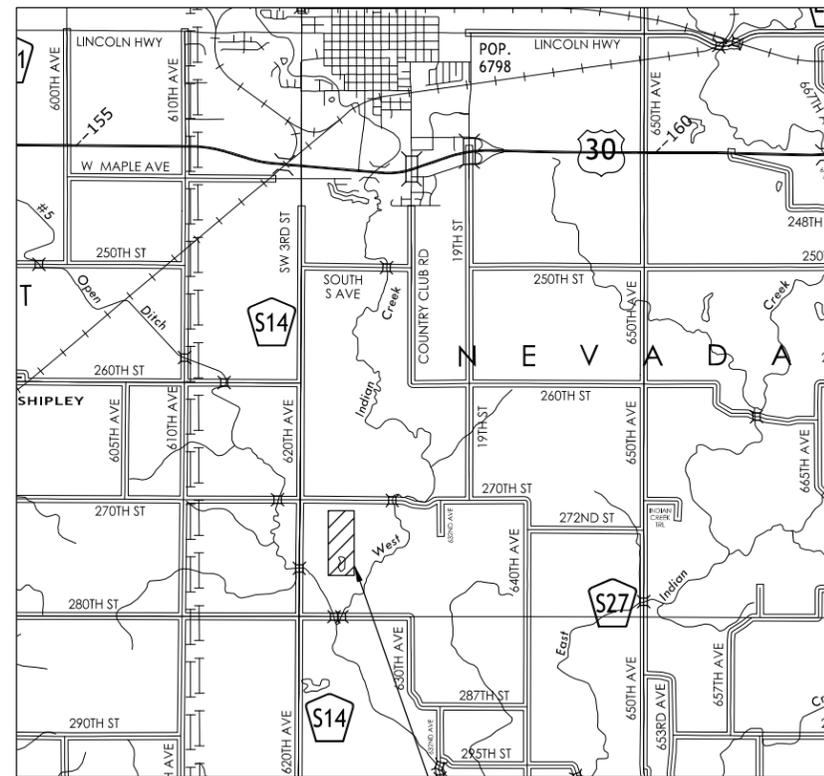
DAVID J. HARRISON, A.I.A. DATE
License Number: 2287
My license renewal date is June 30, 2022.
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ANDREW R. VENZKE
17764
LICENSED PROFESSIONAL ENGINEER
IOWA

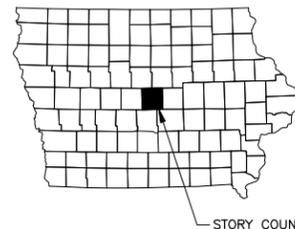
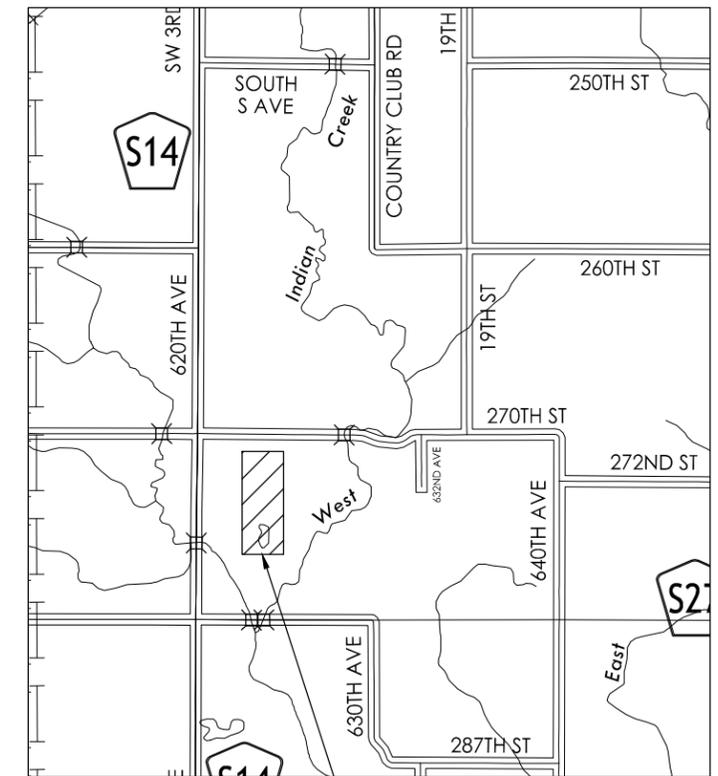
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ANDREW R. VENZKE, P.E. DATE
License Number: 17764
My license renewal date is December 31, 2021.
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VICINITY MAP



LOCATION MAP



STORY COUNTY



5525 MERLE HAY ROAD, SUITE 200 | JOHNSTON, IOWA 50131
Phone: 515.278.2913 | Toll Free: 800.728.7805 | Fax: 515.278.1846 | HRGreen.com

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NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

GENERAL
COVER SHEET

SHEET NO.
G.01

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NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

GENERAL
SHEET INDEX

SHEET NO.
G.02

Xref: xgl-1-dh01

ABBREVIATIONS

<p> A AMPS, AMPERES AAV AUTOMATIC AIR VENT AB ANCHOR BOLT AC ALTERNATING CURRENT ACC ASPHALTIC CEMENT CONCRETE ACT ACOUSTIC CEILING TILE ACU AIR CONDITIONING UNIT AD ACCESS DOOR, AIR DRYER ADP AUTO DIALER PNL ADH ADHESIVE A/E ARCHITECTURAL / ENGINEERING FIRM AF AMPERE FRAME AFD ADJUSTABLE FREQUENCY DRIVE AFI ABOVE FINISHED FLOOR AFUE ANNUAL FUEL UTILIZATION EFFICIENCY AFG ABOVE FINISHED GRADE AH ACCESS HATCH AHU AIR HANDLING UNIT AIC AMPERES INTERRUPTING CAPACITY ALT ALTERNATE ALUM, AL ALUMINUM AMB AMBIENT ANCH ANCHOR ANOD ANODIZED ANSI AMERICAN NATIONAL STANDARDS INSTITUTE ARCH ARCHITECT, ARCHITECTURAL AS AIR SEPARATOR ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS AT AMPERE TRIP ATS AUTOMATIC TRANSFER SWITCH AVG AVERAGE AWG AMERICAN WIRE GAGE B/ BOTTOM OF, BACK OF B/B BACK TO BACK (OF CURBS) BBH BASEBOARD HEATER BC BARE COPPER B/C BACK OF CURB BD BM BOND BEAM BDD BACKDRAFT DAMPER BF BLIND FLANGE BFP BACKFLOW PREVENTOR, BELT FILTER PRESS BFV BUTTERFLY VALVE BHP BRAKE HORSEPOWER BLDG BUILDING BLK BLOCK BOD BOTTOM OF DUCT, BIOLOGICAL OXYGEN DEMAND BOP BOTTOM OF PIPE BM BENCH MARKER BOT BOTTOM BOW BOTTOM OF WALL BRG BEARING BRK BRICK BTU BRITISH THERMAL UNIT BTUH BTU PER HOUR BTWN BETWEEN BV BALL VALVE C CONDUIT, CELSIUS, C STRUCTURAL SHAPE CAP CAPACITY CB CIRCUIT BREAKER CC COILING COIL, CONSTRUCTION CASTING CD CEILING DIFFUSER CFH CUBIC FEET PER HOUR CFM CUBIC FEET PER MINUTE CH CONCRETE HARDENER CI CAST IRON CIP CAST IN PLACE, CLEAN IN PLACE, CAST IRON PIPE CJ CONTROL OR CONSTRUCTION JOINT CKT CIRCUIT CL CENTER LINE CLG CEILING, COOLING CLR CLEAR, CLEARANCE CMPR COMPRESSOR CMU CONCRETE MASONRY UNIT CND CONDENSATE CO CLEAN OUT COL COLUMN COMP COMPRESSION CONC CONCRETE COND CONDENSER, CONDUIT CONT CONTINUE (OUS) CONTR CONTRACTOR COORD COORDINATE COP COEFFICIENT OF PERFORMANCE CORP CORPORATION CP CORNER POINT CPT CONTROL POWER TRANSFORMER, CARPET CPVC CHLORINATED POLYVINYL CHLORIDE CRS COURSES CT CURRENT TRANSFORMER CTRS CENTERS CU CONDENSING UNIT, COPPER CU FT CUBIC FEET CU IN CUBIC INCH CW CHILLED WATER CWP CONDENSER WATER PUMP CY CUBIC YARD </p>	<p> D DECANT DBL DRY BULB TEMPERATURE, DIRECT BURIED DC DOUBLE DC DIRECT CURRENT DEG DEGREE DEMO DEMOLITION DEPT DEPARTMENT DG DOOR GRILLE DGS DIGESTER SLUDGE DI DUCTILE IRON DIA, Ø DIAMETER DIM DIMENSION DIP DUCTILE IRON PIPE DL DEAD LOAD DN DOWN DP DEWPOINT TEMPERATURE DPR DAMPER DRN DRAIN DS DOWN SPOUT DTL DETAIL(S) DWG DRAWING(S) DWL DOWEL DX DIRECT EXPANSION E EQUIPMENT, EASTING EA EACH, EXHAUST AIR EAT ENTERING AIR TEMPERATURE ECC ECCENTRIC ECP ENVIRONMENTAL CONTROL PANEL EDH ELECTRIC DUCT HEATER EER ENERGY EFFICIENCY RATIO EF EXHAUST FAN, EACH FACE EFF EFFICIENCY, EFFLUENT EG EXHAUST GRILLE, EQUIPMENT GENERATOR EJ EXPANSION JOINT EL ELEVATION ELEC ELECTRICAL ELEV ELEVATION EMBED EMBEDMENT ENCL ENCLOSURE ENG ENGINEER EP EXPLOSION PROOF, EPOXY PAINT EQ, EQUIP EQUAL, EQUIPMENT EQMT EQUIPMENT ER EXHAUST REGISTER ESP EXTERNAL STATIC PRESSURE ET EXPANSION TANK ETM ELAPSED TIME METER EUH ELECTRIC UNIT HEATER EVAP EVAPORATOR EW EACH WAY EW ELECTRIC WATER COOLER EWCF EACH WAY EACH FACE EW ENTERING WATER TEMPERATURE EXIST EXISTING EXP EXPANSION EXP MAT EXPANSION MATERIAL EXT EXTERIOR, EXTERNAL F DEGREES FAHRENHEIT, FLUORIDE FA FACE AREA, FREE AREA FAB FABRICATE(D) FAC FLANGED ADAPTOR COUPLING FB FLAT BAR, FLOOR BEAM FC FAN COIL UNIT, FLEXIBLE CONNECTION FCA FLANGE COUPLING ADAPTOR FD FIRE DAMPER, FLOOR DRAIN FDGGF FREE DRAINING GRADED GRANULAR FILL FDN FOUNDATION FE FLANGED END, FIRE EXTINGUISHER FEC FIRE EXTINGUISHER CABINET FF FINISHED FLOOR FG FLOOR GRILLE FH FIRE HYDRANT FL FILTRATE FIN FINISH FIN FLR FINISHED FLOOR FL FLOW LINE, FLUORESCENT FLA FULL LOAD AMPS FLEX FLEXIBLE FLG FLANGE FLR FLOOR FM FORCEMAIN FO FIBER OPTICS FOB FLAT ON BOTTOM FOC FACE OF CONCRETE FOM FACE OF MASONRY FOS FACE OF STEEL FOT FLAT ON TOP FOW FACE OF WALL FPM FEET PER MINUTE FPS FEET PER SECOND FR FLOOR REGISTER FRP FIBERGLASS REINFORCED PLASTIC OR PNL FS FLOOR STAND FT FEET, FLOW TRANSMITTER FTG FOOTING FV FIELD VERIFY </p>	<p> G GATE, GROUND GA GAUGE, GAGE GAL GALLONS GALV GALVANIZED GB GYPSUM BOARD GC GAS CHROMATOGRAPH (FLOW COMPUTER) GEN GENERATOR GFI GROUND FAULT INTERRUPT GFR GROUND FAULT RELAY GFS GROUND FAULT SLAVE (PROTECTED UPSTREAM) GL GLASS GPD GALLONS PER DAY GPH GALLONS PER HOUR GPM GALLONS PER MINUTE GRTG GRATING GV GATE VALVE GWB GYPSUM WALL BOARD GYP GYPSUM HB HOSE BIBB HC HEATING COIL, HANDICAP (PED) HCAP HANDICAP (PED) HD HEAD HDPE HIGH DENSITY POLYETHYLENE HDR HEADER HG MERCURY HH HANDHOLE HI HIGH INTENSITY DISCHARGE HM HOLLOW METAL HMA HOT MIX ASPHALT HOA HAND OFF AUTOMATIC HOR HORIZONTAL HP HORSEPOWER, HIGH POINT HPG HIGH PRESSURE GAS HPS HIGH PRESSURE SODIUM HR HOUR HSGL HEAT STRENGTHENED GLASS HSS HOLLOW STRUCTURAL SHAPE HT HEIGHT HTG HEATING HTR HEATER HU HUMIDIFIER HVAC HEATING, VENTILATING, AIR CONDITIONING HW HOT WATER HWC HOT WATER RECIRCULATED HWP HEATING WATER PUMP HWR HOT WATER RETURN HWS HOT WATER SUPPLY HWUH HOT WATER UNIT HEATER HX HEAT EXCHANGER HZ HERTZ IBC INTERNATIONAL BUILDING CODE IFC INTERNATIONAL FIRE CODE IPC INTERNATIONAL PLUMBING CODE IMC INTERNATIONAL MECHANICAL CODE ID INSIDE DIAMETER IE INVERT ELEVATION I/F, IF INSIDE FACE IN INCHES INC INCANDESCENT INF INFLEUNT INSUL INSULATION INT INTERIOR INVT INVERT JB JUNCTION BOX JS JANITOR SINK JT, JNT JOINT K STRUCTURAL BAR JOIST SHAPE KCMIL THOUSAND CIRCULAR MILS KVA 1,000 VOLT AMPS KW 1,000 WATT KWH KILOWATT - HOUR L LOUVER, ANGLE LA LIGHTNING ARRESTOR LAB LABORATORY LAP LEVEL ALARM PNL LAT LEAVING AIR TEMP, LATENT, LATITUDE LAV LAVATORY LB(S) POUND(S) LD LINEAR DIFFUSER LF LINEAR FEET LFG LANDFILL GAS LFH LANDFILL GAS (HIGH PRESS) LFL LANDFILL GAS (LOW PRESS) LHR LATENT HEAT RATIO LIN LINEAR LL LIVE LOAD LLH LONG LEG HORIZONTAL LLV LONG LEG VERTICAL LONG LONGITUDINAL LOS LOCKOUT STOP PUSH-BUTTON LP LOW POINT LPG LOW PRESSURE GAS LRA LOCKED ROTOR AMPS LS LIMIT SWITCH, LIFT STA. LT LEVEL TRANSDUCER LTG LIGHTING LWT LEAVING WATER TEMPERATURE </p>	<p> M METER MA MILLIAMPERES MAINT MAINTENANCE MAS MASONRY MAU MAKEUP AIR UNIT MAX MAXIMUM MBH ONE THOUSAND BTUH MCA MINIMUM CIRCUIT AMPACITY MCC MOTOR CONTROL CENTER MD MOTORIZED DAMPER MECH MECHANICAL MEZZ MEZZANINE MFR MANUFACTURER MG MILLION GALLON MGD MILLION GALLONS PER DAY MH MANHOLE, METAL HALIDE MIN MINIMUM MIRR MIRRORRED MISC MISCELLANEOUS MJ MECHANICAL JOINT MK MARK MM MAG METER MO MASONRY OPENING MOCP MAXIMUM OVERCURRENT PROTECTION MPH MILES PER HOUR MTD MOUNTED MTL METAL MV MUD VALVE MW MASONRY WALL N NEUTRAL, NOTHING NA, N/A NOT APPLICABLE NC NOISE CRITERIA, NORMALLY CLOSED NEG NATIONAL ELECTRICAL CODE NEG NEGATIVE NFPA NATIONAL FIRE PROTECTION ASSOCIATION NIC NOT IN CONTRACT NL NIGHTLIGHT NO NORMALLY OPEN, NUMBER NOM NOMINAL NPT NATIONAL PIPE THREAD NPS NOMINAL PIPE SIZE NRP NON-REMOVABLE PIN NTS NOT TO SCALE OA OUTSIDE AIR OAT OUTDOOR AIR TEMPERATURE OBD OPPOSED BLADE DAMPER OC ON CENTER OD OUTSIDE DIAMETER, OVERFLOW DRAIN OED OPEN END DUCT O/F, OF OUTSIDE FACE, OPEN FACE, OVERFLOW OH OVERHEAD OHE OVERHEAD ELECTRIC OL MOTOR OVERLOAD CONTACTS OPNG OPENING OPP OPPOSITE OSB ORIENTED STRAND BOARD P POLE, PUMP PART PARTIAL PB PUSHBUTTON, PULL BOX, PANEL BOARD PBD PARALLEL BLADE DAMPER PC PRECAST CONCRETE PCC PORTLAND CEMENT CONCRETE PCF POUNDS PER CUBIC FOOT PCST PRECAST PD PRESSURE DROP PE PLAIN END, POLYETHYLENE PERF PERFORATED PERP PERPENDICULAR PG PROFILE GRADE PH PHASE PJF PREFORMED JOINT FILLER PL PLATE, PURGE LINE PLWD PLYWOOD PNL PANEL POJ PUSH ON JOINT PPM PARTS PER MILLION PR PAIR PROJ PROJECTION PRV PRESSURE REDUCING VALVE PS PRESSURE SWITCH, PUMP STA. PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PSIA PSI, ABSOLUTE PSIG PSI, GAGE PSW PLANT SERVICE WATER PTAC PACKAGED TERMINAL AIR CONDITIONER PT POTENTIAL TRANSFORMER, PAINT, PRESSURE TANK PV PLUG VALVE PVC POLYVINYL CHLORIDE QTY QUANTITY R RISER(S), RADIUS RA RETURN AIR RAD RADIUS RAS RETURN ACTIVATED SLUDGE RB ROOF BEAM, RESILIENT BASE RCP REINFORCED CONCRETE PIPE RCMD RECOMMENDED RD ROOF DRAIN RECIRC RECIRCULATE RED REDUCER REF REFERENCE REINF REINFORCE(ING) REQ(D) REQUIRE(D) REV REVISED RF RETURN FAN, RESILIENT FLOORING RG RETURN GRILLE RH RELIEF HOOD, RELATIVE HUMIDITY RHC REHEAT COIL RJ RESTRAINED JOINT RM ROOM RO ROUGH OPENING, REVERSE OSMOSIS ROW RIGHT OF WAY RPM REVOLUTIONS PER MINUTE RR RETURN REGISTER, RAILROAD RS RAW SEWAGE RTU ROOFTOP UNIT RW RESILIENT WEDGE S&F SECURITY & FIRE PNL SA SUPPLY AIR SAN SANITARY, SANITARY SEWER SAT SATURATION SB SOIL BORING SCFM CFM, AT STANDARD CONDITIONS SCH SCHEDULE SD SMOKE DAMPER SEER SEASONAL ENERGY EFFICIENCY RATIO EFFICIENCY RATIO SEN SENSIBLE SE SUPPLY FAN, SQUARE FOOT SG SUPPLY GRILLE, SLIDE/SLUICE GATE SH SHIELDED, SHOWER, SHEET SIM SIMILAR SJ SOFT JOINT, SAW CUT JOINT SHR SENSIBLE HEAT RATIO SHT SHEET SIM SIMILAR SK SINK SL SNOW LOAD SMACNA SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION SP STATIC PRESSURE, SUMP PUMP, SPACE(S) SPEC SPECIFICATION SQ SQUARE SQ FT SQUARE FEET SR SUPPLY REGISTER SS STAINLESS STEEL SSH SAFETY SHOWER SSL SECONDARY SLUDGE SST SATURATED SUCTION TEMPERATURE STC SOUND TRANSMISSION CLASS STD STANDARD STL STEEL SUCT SUCTION SW SWITCH, SAMPLING T TEMPERATURE, THREAD T&B TOP AND BOTTOM TACH TACHOMETER TB TERMINAL BOARD TBS THICKENED BLENDED SLUDGE TCP TEMP CONTROL PNL TD TEMPERATURE DIFFERENCE TDH TOTAL DYNAMIC HEAD TEL TELEPHONE TEMP TEMPERATURE, TEMPORARY, TEMPERED TFR TRICKLING FILTER RECYCLE TGL TEMPERED GLASS TMV THERMOSTATIC MIXING VALVE T/ TOP OF TOC TOP OF CONCRETE TOD TOP OF DUCT TONS TONS OF REFRIGERATION TOS TOP OF STEEL TOW TOP OF WALL TP TWISTED PAIR TR TREAD(S) TSG TEMPERED SAFETY GLASS TSP TOTAL STATIC PRESSURE, TWISTED SHIELDED PAIR TST TWISTED SHIELDED TRIAD TSTAT THERMOSTAT TWAS THICKENED WASTE ACTIVATED SLUDGE TYP TYPICAL U HEAT TRANSFER COEFFICIENT UBC UNIFORM BUILDING CODE UFC UNIFORM FIRE CODE UG UNDERGROUND UGE UNDERGROUND ELECTRIC UGT UNDERGROUND TELEPHONE UH UNIT HEATER UMC UNIFORM MECHANICAL CODE UNO UNLESS NOTED OTHERWISE UPC UNIFORM PLUMBING CODE UR URINAL V VALVE, VENT, VOLTS VA VOLT - AMPERES VAC VACUUM VAV VARIABLE AIR VOLUME VB VINYL BASE, VALVE BOX, VAPOR BARRIER VC VICTAULIC COUPLING VCP VITRIFIED CLAY PIPE VCT VINYL COMPOSITION TILE VD VOLUME DAMPER VEL VELOCITY VENT VENTILATION VERT VERTICAL VFD VARIABLE FREQUENCY DRIVE VLV VALVE VOL VOLUME VS VARIABLE SPEED VTR VENT THRU ROOF W WATER, WATTS, WIDE FLANGE, WINDOW W/ WITH W/O WITHOUT WAP WALL PIPE WAS WASTE ACTIVATED SLUDGE WB WET BULB WC WATER CLOSET, WATER COLUMN, WATER COOLER WD WOOD, WATER DISTILLED WF WIDE FLANGE WG WATER GAUGE WH WATER HEATER, WALL HYDRANT WNDW WINDOW, WINDOWS WL WIND LOAD WP WORK POINT, WEATHERPROOF, WATER PROOF WS WALL SLEEVE, WATERSTOP, WATER SURFACE WSV WALL SLEEVE WSHP WATER SOURCE HEAT PUMP WT WATER TANK WW WARM WATER, WASTE WATER WWR WELDED WIRE REINFORCING XCDC TRANSDUCER XFMR TRANSFORMER XMTR TRANSMITTER YD YARD YDS YARDS YH YARD HYDRANT ZS POSITION SWITCH </p>	<p> NOTE: 1. THE LIST OF ABBREVIATIONS SHOWN IS A STANDARD LIST. NOT ALL ABBREVIATIONS ARE USED IN THESE DRAWINGS </p>
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NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

GENERAL
ABBREVIATIONS

SHEET NO.
G.03

	INITIAL CONDITIONS	DESIGN CONDITIONS
DESIGN YEAR	2018	2044
POPULATION SERVED	6,798	8,764
100-YR FLOOD ELEVATION		910.00
PROJECTED FLOW		
AVERAGE WET WEATHER, MGD	2.382	3.02
MAXIMUM DAY, MGD	5.219	6.13
PEAK HOUR, MGD	NA	8.23

	INITIAL CONDITIONS		DESIGN CONDITIONS	
	AVERAGE DAY	MAX DAY	AVERAGE DAY	MAX DAY
BOD, LBS/DAY	3,114	5,287	6,692	12,130
TOTAL SUSPENDED SOLIDS, LBS/DAY	2,822	5,976	4,300	7,978
TOTAL KjELDAHL NITROGEN, LBS/DAY	467	762	869	1,491
TOTAL NITROGEN, LBS/DAY	515	719	879	1,501
TOTAL PHOSPHORUS, LBS/DAY	160	205	309	459

FINAL EFFLUENT DISCHARGE PERMIT LIMITS

	AVERAGE MONTH	MAX 7 DAY
CARBONACEOUS BOD, MG/L, LBS/DAY	25	40
TOTAL SUSPENDED SOLIDS, MG/L, LBS/DAY	630	1,007
	30	45
	755	1,133

FINAL EFFLUENT DISCHARGE PERMIT LIMITS

	AVERAGE		MAXIMUM	
AMMONIA-NITROGEN				
JANUARY	3.5	15.2	87.6	382.8
FEBRUARY	4.1	14.2	101.6	357.8
MARCH	3.5	14.7	87.5	370.1
APRIL	1.6	15.7	39.2	395.7
MAY	1.8	15.2	44.7	382.7
JUNE	1.4	12.7	33.7	292.2
JULY	1.0	8.8	25.8	199.0
AUGUST	1.0	8.2	24.5	186.4
SEPTEMBER	1.1	11.3	27.2	256.9
OCTOBER	1.6	15.7	40.0	395.7
NOVEMBER	2.4	14.7	59.7	370.1
DECEMBER	2.6	16.0	63.6	402.2

E. COL, ORG/100ML 211¹

TOTAL NITROGEN (ANNUAL AVG), MG/L 10.0

TOTAL PHOSPHORUS (ANNUAL AVG), MG/L 1.0

DISSOLVED OXYGEN (MIN), MG/L 5.0

pH 6.5-9.0

(1) DETERMINED BY GEOMETRIC MEAN, MARCH 15 - NOVEMBER 15 ONLY.

FLOW MEASUREMENT

INFLUENT	
TYPE	PARSHALL FLUME
NUMBER OF UNITS	1
THROAT WIDTH	3'-0"
DESIGN FLOW RANGE, MGD	1.64 - 8.23 MGD
FLUME RANGE, MGD	0.40 - 32.57 MGD
EFFLUENT	
TYPE	PARSHALL FLUME
NUMBER OF UNITS	1
THROAT WIDTH	1'-6"
DESIGN FLOW RANGE, MGD	1.64 - 8.23 MGD
FLUME RANGE, MGD	0.11 - 15.87 MGD

INFLUENT SCREENING

	MECHANICAL
TYPE	2
NUMBER OF UNITS	4'-0"
WIDTH OF CHANNEL	1/4
CLEAR OPENING SIZE, IN	5.42
DEPTH, BOTTOM OF CHANNEL TO OPERATING FLOOR, FT	1.67
MAXIMUM UPSTREAM WATER DEPTH, FT	6.69
PHWW VELOCITY THROUGH SCREEN, FPS (CLEAN)	

GRIT REMOVAL

GRIT SEPARATION

	VORTEX
TYPE	1
NUMBER OF UNITS	12
CHAMBER DIAMETER, FT	8
CHAMBER DEPTH, FT	5
GRIT HOPPER DIAMETER, FT	6.75
GRIT HOPPER DEPTH, FT	8.23
DESIGN FLOW EACH, MGD	
ANTICIPATED GRIT PRODUCTION, CF/DAY	X
AVERAGE DAY	X
MAXIMUM DAY	X

GRIT REMOVAL

	SELF-PRIMING PUMP
TYPE	1
NUMBER OF UNITS	250
RATED CAPACITY, EA, GPM	
GRIT CONCENTRATOR	
TYPE	COMBINED WASHER/CLASSIFIER
NUMBER OF UNITS	1
RATED CAPACITY, EA, GPM	250
HEAD LOSS, PSI	5.2

GRIT DEWATERING

	INCLINED SCREW
TYPE	1
NUMBER OF UNITS	

OXIDATION DITCH PROCESS

OXIDATION DITCH

	THREE STAGE
TYPE	2
NUMBER OF UNITS	11.25
SIDEWATER DEPTH, FT	1,668,000
AEROBIC VOLUME, EA, GALLONS	94,000
ANAEROBIC VOLUME, EA, GALLONS	132,000

MIN. WASTEWATER TEMPERATURE, C	10.0
MAX. WASTEWATER TEMPERATURE, C	25.0
ELEVATION, FT ABOVE MSL	1,000

HYDRAULIC RETENTION TIME, HRS	
TOTAL, DAILY AVG	30.1
ANAEROBIC, DAILY AVG	1.5

MLSS, MG/L	3,800
ORGANIC LOADING, LBS. BOD 5/1000 CF	15.0
SRT, DAYS	19.8

MIN. RAS RATE, QRAS/QAWW, %	75
MIN. INTERNAL RECYCLE RATE, QIR/QAWW, %	150
NET YIELD, LB TSS/LB BOD5 REMOVED	0.81
SPECIFIC DENITRIFICATION RATE, g NO3-N/g VSS/D	0.0373

AERATION/MIXING EQUIPMENT TYPE	MECHANICAL AERATOR/MIXER, VERTICAL SHAFT
NUMBER OF UNITS	4
SIZE, EA, HP	100
ADDITIONAL MIXING	SUBMERSIBLE MIXERS-ANAEROBIC
ADDITIONAL MIXING	SUBMERSIBLE MIXERS-ANOXIC
LBS. O2/LBS. BOD, APPLIED	1.27
LBS. O2/LBS. TKN, APPLIED	4.60
ALPHA FACTOR	0.93
BETA FACTOR	0.97

SECONDARY CLARIFICATION

CIRCULAR CENTER-FEED, PERIPHERAL DRAW

TYPE	3
NUMBER OF UNITS	70
DIAMETER, FT	1:12
BOTTOM SLOPE, FT/FT	206.3
WEIR LENGTH, EA, FT	14
SIDEWATER DEPTH, FT	53,800
VOLUME, EACH, CU FT	535
SURFACE OVERFLOW RATE, GPD/SF	1.6
DETENTION TIME, HOURS	29.3
SOLIDS LOADING RATE, AVG, LBS/SF/DAY	39.0
SOLIDS LOADING RATE, MAX, LBS/SF/DAY	

RETURN ACTIVATED SLUDGE PUMPS

	DRY PIT SUBMERSIBLE
TYPE	6
NUMBER OF UNITS	833
RATED CAPACITY, EA, GPM	14-33
OPERATING RANGE, FT	33
RATED HEAD, FT	VFD
CONTROL	

WASTE ACTIVATED SLUDGE PUMPS

	DRY PIT SUBMERSIBLE
TYPE	2
NUMBER OF UNITS	200
RATED CAPACITY, EA, GPM	12-18
OPERATING RANGE, FT	18
RATED HEAD, FT	

SCUM PUMPS

	CENTRIFUGAL
TYPE	1
NUMBER OF UNITS	100
RATED CAPACITY, EA, GPM	25
RATED HEAD, FT	

DISINFECTION

UV DISINFECTION

	OPEN CHANNEL/INCLINED
TYPE	1
NUMBER OF CHANNELS	8.23
MAXIMUM HYDRAULIC FLOW RATE, MGD	60
UV TRANSMITTANCE	30
UV RADIATION DOSE, MJ/CM2	
DESIGN	
NUMBER OF BANKS	2
NUMBER OF MODULES/BANK	VARIES PER MFR
NUMBER OF LAMPS/MODULE	VARIES PER MFR
LEVEL CONTROL	FIXED FINGER WEIR

SOLIDS PROCESSING

PROJECTED SLUDGE QUANTITIES

LOADING CONDITION	WASTE ACTIVATED (PPD)	EST. DIGESTED TOTAL (PPD)
ANNUAL AVERAGE	XXXX	XXXX
MAXIMUM MONTH	5,340	3,532
PEAK DAY	XXXX	XXXX
AEROBIC DIGESTION		
NUMBER OF UNITS		2
DIMENSIONS, EA, FT		68 X 34
SIDEWATER DEPTH, FT		24
TOTAL VOLUME, GAL		821,511
MIN. SRT, DAYS		42.1
MIN. VSS DESTRUCTION, %		38
DESIGN AERATION SOLIDS, %		3%
AIR REQUIREMENT, SCFM		STAGE 1 - 1,665; STAGE 2 - 1,630
NUMBER OF BLOWERS		3
BLOWER TYPE		POSITIVE DISPLACEMENT
BLOWER FIRM CAPACITY, SCFM		3,330
AEROBIC DIGESTION MIXING		
DIFFUSERS W/SHEAR TUBES MIXERS, PER UNIT		18
DIGESTER TRANSFER PUMP		
TYPE		AIR LIFT
NUMBER OF UNITS		1 PER STAGE; 2 TOTAL
SIZE, INCHES		STAGE 1 - 6; STAGE 2 - 4
RATED CAPACITY, EA, GPM		STAGE 1 - 226.3; STAGE 2 - 89.3
SLUDGE THICKENING EQUIPMENT		
TYPE		2-STAGE INTEGRAL CERAMIC MEMBRANE MODULES
NUMBER OF UNITS		6 PER STAGE, 12 TOTAL
RATED CAPACITY, TOTAL, GPD		STAGE 1 - 34,024; STAGE 2 - 14,119
RATED CAPACITY, EA, GPD		STAGE 1 - 8,549; STAGE 2 - 3,360
THICKENED CONCENTRATION, MG/L		STAGE 1 - 15,000; STAGE 2 - 30,000
AIR REQUIREMENT, SCFM		STAGE 1 - 300; STAGE 2 - 250
NUMBER OF BLOWERS		3
BLOWER TYPE		POSITIVE DISPLACEMENT
BLOWER FIRM CAPACITY, SCFM		600
PERMEATE/BACKPULSE PUMP		
TYPE		POSITIVE PLACEMENT
NUMBER OF UNITS		2 PER STAGE, 4 TOTAL
RATED CAPACITY, EA, GPM		STAGE 1 - 71; STAGE 2 - 28
RATED HEAD, PSIG		STAGE 1 - 10; STAGE 2 - 10
DIGESTED BIOSOLIDS TRANSFER PUMP		
TYPE		POSITIVE PLACEMENT
NUMBER OF UNITS		2
RATED CAPACITY, EA, GPM		100
RATED HEAD, FT		XX

BIOSOLIDS STORAGE TANK

	ABOVE GRADE OPEN TOP STEEL
TYPE	2
No. OF UNIT	1.4
CAPACITY, MG (EACH)	2.8
CAPACITY, MG (TOTAL)	180
CAPACITY AT DESIGN, DAYS	4
MIXING SYSTEM	PUMPED CIRCULATION
No. OF NOZZLES	4
MIXING PUMP TYPE	CHOPPER
MIXING PUMP SIZE, HP	100
LOADOUT PUMP TYPE	CHOPPER
LOADOUT PUMP SIZE, HP	10

EMERGENCY (STAND-BY) POWER GENERATION

	DIESEL AUTOMATIC
TYPE	1,750
TRANSFER SWITCH TYPE	1
SIZE, KW	
FACILITY RELIABILITY CLASS	

CHEMICAL FEED SYSTEMS

SUPPLEMENTAL CARBON FEED SYSTEM	
STORAGE TANK, GAL	3,000
CONTAINMENT VOLUME, CUBIC FT.	400
FEED POINTS	OXIDATION DITCH FLOW SPLITTER
MAX FEED RATE, GPH	10
FERRIC CHLORIDE FEED SYSTEM	
STORAGE TANK, GAL	6,000
CONTAINMENT VOLUME, CUBIC FT.	975
FEED POINTS	SECONDARY CLARIFIER FLOW SPLITTER
MAX FEED RATE, GPH	20

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NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

GENERAL
DESIGN PARAMETERS

SHEET NO.
G.04

ARCHITECTURAL LEGEND

- ROOM NUMBER
- DOOR NUMBER
- WINDOW NUMBER
- EXISTING DOOR AND OR FRAME TO REMAIN
- NEW DOOR AND OR FRAME
- EXISTING WALL
- NEW CONCRETE WALL
- NEW MASONRY WALL
- ELEVATION MARKER
- ROOF DRAIN (RD)
- STRUCTURAL SLOPE
- TAPERED INSULATION SLOPE
- SCUPPER
- ANTENNA
- ROOF HATCH
- GUYWIRE ANCHOR
- SOIL PIPE (SP)
- TOWER
- HEAT STACK (HS)
- ROOF VENT
- WALKWAY PADS
- MECHANICAL OPENING WITH CURB
- RIGID INSULATION

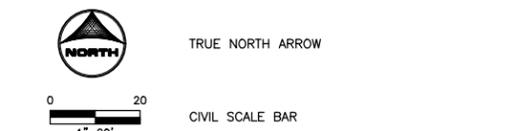
- EQUIPMENT/VALVE TAGS**
- BFV BUTTERFLY VALVE
 - CKV CHECK VALVE
 - DHS DUMPSTER HOOKLOAD SYSTEM
 - FLM FLOW METER
 - HFP HIGH FLOW PUMP
 - KGV KNIFE GATE VALVE
 - MS MECHANICAL SCREEN
 - OCU ODOR CONTROL UNIT
 - OHD OVERHEAD DOOR
 - PV PLUG VALVE
 - SG SLUICE GATE
 - SP SUMP PUMP

PROCESS ONE-LINE SYMBOLS

- PIPING CUT LOOKING AWAY
- PIPING CUT TOWARDS
- BEND
- CAP OR PLUG
- CONCENTRIC REDUCER
- MECHANICAL COUPLING
- CROSS
- ECCENTRIC REDUCER
- SINGLE FLANGE
- DOUBLE FLANGE
- FLEX CONNECTION
- GROOVED JOINT COUPLING
- MECHANICAL JOINT
- TEE
- UNION
- WYE
- AIR VACUUM RELIEF
- BALL VALVE
- BALL CHECK VALVE
- V-BALL VALVE
- BUTTERFLY VALVE
- DIAPHRAGM VALVE
- GATE VALVE
- GLOBE VALVE
- FLAP GATE VALVE
- KNIFE GATE VALVE
- MUD VALVE
- MULTI PORT VALVE
- NEEDLE VALVE
- PINCH VALVE
- PLUG VALVE
- PRESSURE CONTROL VALVE
- SLIDE GATE VALVE
- SLUICE GATE VALVE
- STOP GATE VALVE
- ELECTRIC ACTUATOR
- PNEUMATIC ACTUATOR
- SAMPLER LOCATION

CIVIL LEGEND

- BENCHMARK, CONTROL POINT, ELEVATION INDICATOR
- CONCRETE MONUMENT
- IRON PIN FOUND
- IRON PIN SET
- OPEN PIPE
- ROW RAIL
- SECTION CORNER
- CHISELED X
- AREA INTAKE
- FIRE HYDRANT
- GUY WIRE
- MAILBOX
- POWERPOLE
- CONIFEROUS TREE
- DECIDUOUS TREE
- CORNER MONUMENT
- BEEHIVE INTAKE
- CABLE BOX
- CLEAN OUT
- ELECTRIC METER
- ELECTRIC BOX
- PHONE BOOTH
- GAS METER
- CURB INTAKE
- HANDICAP
- INTAKE
- LIGHT POLE
- SANITARY MANHOLE
- MONITORING WELL
- POST
- RAILROAD SIGN
- SATELLITE DISH
- SIGN
- SIGN
- SOIL BORING
- TREE STUMP
- TELEPHONE BOX
- TELEPHONE PEDESTAL
- TRAFFIC SIGNAL
- TRAFFIC SIGN
- YARD LIGHT
- BURIED VALVE



1 BLDG DETAIL OR SECTION
SCALE: TO SCALE

1 BLDG PLAN/DETAIL/SECTION NOT TO SCALE OR CIVIL
NTS

- PROPOSED PAVEMENT DEMOLITION
- EXISTING GRAVEL
- EXISTING PAVING

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING FENCE
- EXISTING ROW FENCE
- EXISTING GRAVEL SURFACE
- EXISTING SECTION LINE
- EXISTING UNDERGROUND TELEVISION
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- EXISTING FIBEROPTIC
- EXISTING GAS
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING UNDERGROUND TELEPHONE
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING WATER
- EXISTING FLUSHING WATER
- EXISTING RIGHT OF WAY
- EXISTING PROPERTY LINE
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- TREE PROTECTION
- PROPOSED FENCE
- PROPOSED PERMANENT EASEMENT
- PROPOSED SILT FENCE
- PROPOSED TEMPORARY EASEMENT
- PROPOSED CULVERT
- DEMOLITION
- PROPOSED GAS LINE
- PROPOSED PLANT EFFLUENT WATER
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED FIRE PROTECTION WATER
- PROPOSED POTABLE WATER
- PROPOSED POTABLE WATER
- PROPOSED CRUSHED STONE
- PROPOSED CONCRETE PAVING
- PROPOSED HOT-MIX ASPHALT PAVING

Equipment/Valve Tags			
XXX	YY	ZZ	
			Equipment Number (01-99)
			Area Designation (See List)
			Equipment Type (See List)
Equipment Type			Area Designation
AB	Aeration Blower	00	Sitework
AG	Access Gate	10	Electrical Service Building
AH	Access Hatch	12	Admin/Vehicle Storage Building
AU	Air Handling Unit	21	Headworks Building
BFV	Butterfly Valve	23	Grit Building
BP	Biosolids Pump	25	Equalization Tank
CFP	Chemical Feed Pump	27	Peak Flow Treatment
CAV	Combination Air Valve	32	Oxidation Ditches
CKV	Check Valve	35	Secondary Treatment Building
CP	Control Panel	38	Secondary Clarifiers
DR	Drive	42	UV Disinfection Building
EF	Exhaust Fan	52	Aerobic Digesters
EJ	Expansion Joint	55	Solids Processing Building
GEN	Engine Generator	57	Biosolids Storage
FM	Flow Meter		
GD	Grit Dewatering Unit		
GP	Grit Pump		
GU	Grit Unit		
HT	Hydropneumatic Tank		
LT	Level Transmitter		
MA	Mixer/Aerator		
MCC	Motor Control Center		
MS	Mechanical Fine Screen		
MV	Mud Valve		
MX	Mixer		
PEW	Plant Effluent Water		
PF	Parshall Flume		
PFS	Polymer Feed System		
PFT	Peak Flow Treatment Unit		
PRV	Power Roof Ventilator		
PT	Pressure Transmitter		
PV	Plug Valve		
RDT	Rotary Drum Thickener		
RP	Return Pump		
RSP	Return Sludge Pump		
RWP	Raw Wastewater Pump		
SA	Sampler		
SC	Screenings Compactor		
SCP	Scum Pump		
SG	Slide Gate/Sluice Gate		
SUP	Sump Pump System		
TV	Telescoping Valve		
UV	Ultraviolet Disinfection		
VFD	Variable Frequency Drive		
WSP	Waste Sludge Pump		

NOTE:
NOT ALL SYMBOLS SHOWN IN THESE LISTS MAY BE USED IN THIS PROJECT. CONTACT ENGINEER FOR CLARIFICATION OF ANY DISCREPANCIES.

PRELIMINARY
NOT FOR CONSTRUCTION

UTILITY NOTES
WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT (800) 292-8989 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.

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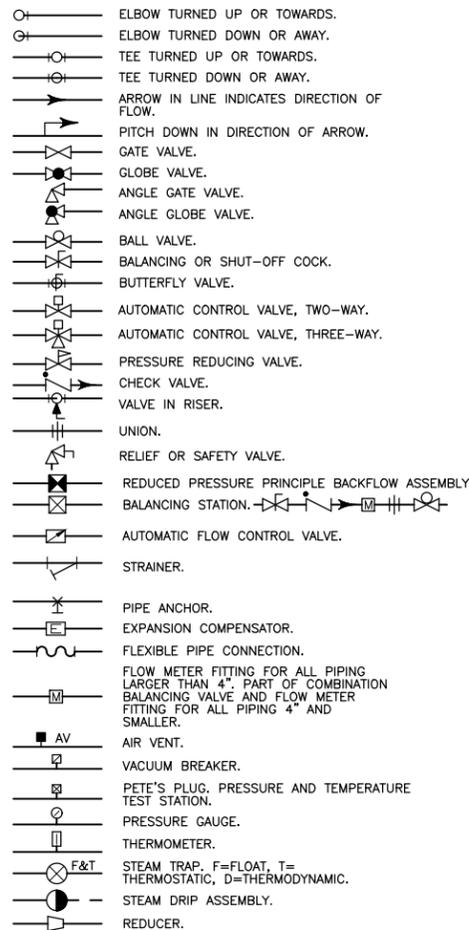
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NEVADA, IOWA

GENERAL
CIVIL, PROCESS AND ARCHITECTURAL LEGENDS

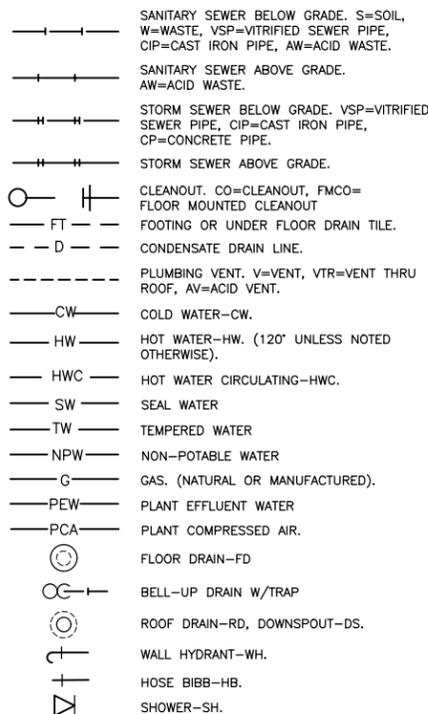
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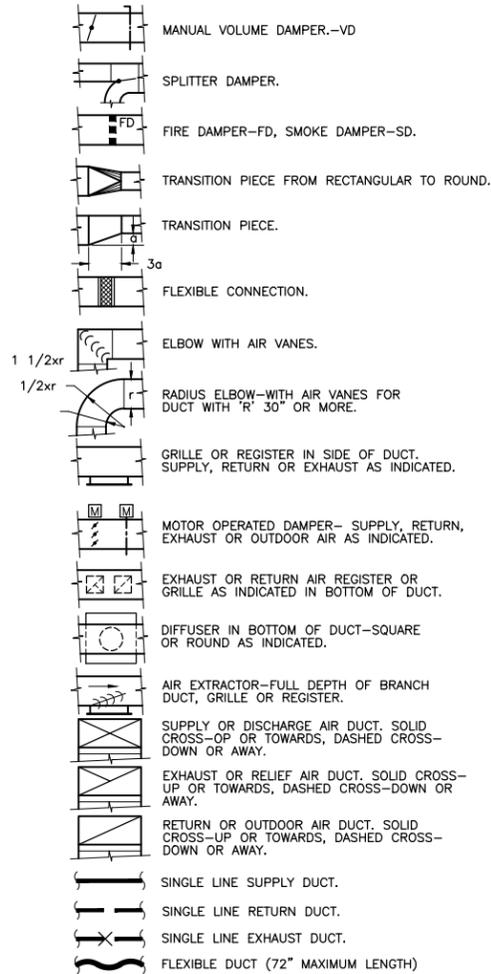
PIPING SYMBOLS



PLUMBING SYMBOLS



SHEETMETAL SYMBOLS



MISCELLANEOUS



PLUMBING ABBREVIATIONS

BFP	BACK FLOW PREVENTOR
DF	DRINKING FOUNTAIN
EW	ELECTRIC WATER COOLER
ESH	EMERGENCY SHOWER/EYE WASH
EW	ELECTRIC WATER HEATER
FD	FLOOR DRAIN
IM	ICE MAKER
JS	JANITOR SINK
LAV	LAVATORY
OD	OVERFLOW ROOF DRAIN
RD	ROOF DRAIN
SH	SHOWER
SK	SINK
SP	SUMP PUMP
SSK	SERVICE SINK
WC	WATER CLOSET
WH	WATER HEATER
WS	WASH STATION
UR	URINAL

HVAC EQUIPMENT IDENTIFICATION

ACC	AIR-COOLED CONDENSER
ACCU	AIR-COOLED CONDENSING UNIT
AC	AIR CONDITIONING UNIT
AHU	AIR HANDLING UNIT
CUH	CABINET UNIT HEATER
CD	CONTROL DAMPER
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EUH	ELECTRIC UNIT HEATER
ET	EXPANSION TANK
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
MAU	MAKE-UP AIR UNIT
MD	MOTORIZED DAMPER
RH	REHEAT COIL
RF	RETURN FAN
SF	SUPPLY FAN
UH	UNIT HEATER

SHEETMETAL ABBREVIATIONS

SA	SUPPLY AIR	SG	SUPPLY GRILLE
RA	RETURN AIR	RG	RETURN GRILLE
EA	EXHAUST AIR	EG	EXHAUST GRILLE
SR	SUPPLY REGISTER	CD	CEILING DIFFUSER
RR	RETURN REGISTER	BDD	BACK DRAFT DAMPER
ER	EXHAUST REGISTER	BOD	BOTTOM OF DUCT

NOTE:

NOT ALL ABBREVIATIONS OR SYMBOLS SHOWN IN THESE LISTS MAY BE USED IN THIS PROJECT. CONTACT ARCHITECT OR ENGINEER FOR CLARIFICATION OF ANY DISCREPANCIES.

GENERAL MECHANICAL NOTES:

1. PROVIDE ALL EQUIPMENT, MATERIALS, AND LABOR AS REQUIRED FOR THE COMPLETE INSTALLATION OF ALL WORK SHOWN AND TO PROVIDE FOR A COMPLETE OPERABLE SYSTEM. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER.
2. THE DRAWINGS ARE DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK AND TO INDICATE THE GENERAL ARRANGEMENT AND APPROXIMATE ROUTING. CERTAIN BASIC ITEMS SUCH AS OFFSETS, FITTINGS, ACCESS PANELS, HANGERS AND SLEEVES MAY NOT BE SHOWN. WHERE SUCH ITEMS ARE REQUIRED FOR PROPER INSTALLATION OF THE WORK, SUCH ITEMS SHALL BE INCLUDED. CONTRACTOR TO VERIFY CONNECTIONS, CLEARANCES AND SERVICE PRIOR TO INSTALLATION.
3. COORDINATE FINAL LOCATIONS OF DUCTWORK, PIPING AND MECHANICAL EQUIPMENT IN NEW ADDITION WITH OTHER TRADES TO AVOID INTERFERENCE'S WITH EQUIPMENT, STRUCTURE, PIPING, LIGHTING, AND CONDUIT. PROVIDE OFFSETS AS REQUIRED TO MEET SPACE REQUIREMENTS AND TO AVOID INTERFERENCES. NO PIPING SHALL RUN OVER THE TOP OF ANY ELECTRICAL PANELS OR ELECTRICAL EQUIPMENT.
4. CONTRACTOR SHALL COORDINATE ALL WALL AND ROOF OPENINGS AS IT RELATES TO HIS WORK. CUTTING OF STRUCTURAL SUPPORT MEMBERS WILL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER. EXTENT OF CUTTING SHALL BE MINIMIZED TO PROVIDE THE NEAT MINIMUM OPENING REQUIRED. PATCHING SHALL MATCH ADJACENT MATERIALS AND SURFACES.
5. EQUIPMENT AND MATERIALS SHALL BE PROTECTED FROM WEATHER, PAINTING, PLASTER, ETC. UNTIL THE PROJECT IS COMPLETE. DAMAGE FROM RUST, PAINT SCRATCHES, ETC. SHALL BE REPAIRED AS REQUIRED TO RESTORE EQUIPMENT TO ORIGINAL CONDITION.
6. TEMPORARY SHUTDOWNS IF REQUIRED SHALL BE COORDINATED WITH THE OWNER TO MINIMIZE THE INTERRUPTIONS TO THE OWNER.
7. THE SITE SHALL BE KEPT ORDERLY AND REASONABLY CLEAN AT ALL TIMES DURING CONSTRUCTION. AT THE CONCLUSION OF THE CONSTRUCTION, THE SITE SHALL BE CLEANED THOROUGHLY OF ALL WASTE, RUBBLE, DEBRIS, AND UNUSED MATERIALS.
8. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE, 2018 INTERNATIONAL MECHANICAL CODE, 2018 UNIFORM PLUMBING CODE, 2018 INTERNATIONAL ENERGY CODE, 2018 INTERNATIONAL FUEL GAS CODE, AND ALL APPLICABLE STATE AND LOCAL CODES, RULES, AND REGULATIONS AND ORDINANCES.

GENERAL PLUMBING NOTES:

1. PIPING IS SHOWN IN SCHEMATIC FORM. ROUTE PIPING AS REQUIRED FOR CLEARANCE WITH STRUCTURAL CONDITIONS. COORDINATE WITH OTHER TRADES AS REQUIRED. PIPING SHALL BE INSTALLED WITH ADEQUATE SLOPE AS REQUIRED FOR EACH PARTICULAR SYSTEM.
2. INSTALL PIPING TO MAINTAIN HEADROOM, CONSERVE SPACE, AND NOT INTERFERE WITH USE OF SPACE. GROUP PIPING WHERE PRACTICAL AT COMMON ELEVATIONS. ROUTE PIPING IN AN ORDERLY MANNER AND MAINTAIN GRADIENT. ROUTE PARALLEL AND PERPENDICULAR TO WALLS.
3. COORDINATE ROUGH-IN AND FINAL LOCATIONS OF NEW AND RELOCATED PIPING WITH EXISTING LIGHTING, STRUCTURE, PIPING, SPRINKLER AND DUCTWORK, ETC. PROVIDE OFFSETS AND/OR EASEMENTS AS REQUIRED TO AVOID CONFLICTS WITH WORK OF ALL OTHER TRADES.
4. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT.
5. PROVIDE CLEARANCE IN HANGERS AND FROM STRUCTURE AND OTHER EQUIPMENT FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS.
6. ROUGH-IN AND CONNECT ALL PLUMBING REQUIRED TO EQUIPMENT FURNISHED AND INSTALLED BY OTHERS.
7. FURNISH AND INSTALL SHUTOFF VALVES IN ALL DOMESTIC WATER BRANCH PIPING OFF OF THE MAINS AND IN ALL OTHER BRANCH PIPING SERVING 4 OR MORE PLUMBING FIXTURES.
8. SANITARY WASTE PIPING SHALL BE SLOPED AT 1/4" PER FT. MINIMUM UNLESS OTHERWISE NOTED.
9. STORM PIPING SHALL BE SLOPED AT 1/8" PER FT. MINIMUM UNLESS OTHERWISE NOTED.
10. INSULATE ALL WATER LINES IN ACCORDANCE WITH THE SPECIFICATIONS.
11. INSULATE ALL STORM DRAIN AND OVERFLOW STORM DRAIN LINES IN ACCORDANCE WITH THE SPECIFICATIONS.
12. ALL WATER LINES SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS.
13. ALL FIXTURES FED BY NON-POTABLE WATER SYSTEM SHALL BE MARKED AND LABELED "NON-POTABLE WATER - DO NOT DRINK."
14. PIPE OPENINGS THROUGH FIRE RATED WALLS SHALL BE CAULKED WITH AN INTUMESCENT MATERIAL.

GENERAL HVAC NOTES:

1. ALL DUCTWORK IS SHOWN IN SCHEMATIC FORM. DUCT RISES AND DROPS ARE NOT SHOWN, PROVIDE OFFSETS AS REQUIRED TO MEET SPACE REQUIREMENTS AND TO AVOID INTERFERENCE WITH OTHER TRADES.
2. COORDINATE FINAL LOCATIONS OF NEW DUCTWORK AND MECHANICAL EQUIPMENT WITH LIGHTING, STRUCTURE, PIPING, SPRINKLER, DUCTWORK, ETC. PROVIDE OFFSETS, EASEMENTS OR RELOCATE DUCT AS REQUIRED TO AVOID CONFLICTS WITH WORK OF ALL TRADES.
3. DIFFUSERS, GRILLES, AND REGISTER LOCATIONS SHALL BE COORDINATED WITH ARCHITECT'S REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING PLANS.
4. ALL AUTOMATIC DAMPERS, FIRE DAMPERS, SMOKE DAMPERS, DAMPER OPERATORS, REHEAT COILS, ETC. SHALL BE LOCATED ABOVE CEILINGS OR OTHER CONCEALED ACCESSIBLE LOCATIONS WHERE DROP CEILINGS ARE PRESENT. LOCATE AND ARRANGE AUTOMATIC DAMPERS, SMOKE DAMPERS, DAMPER OPERATORS, ETC. TO BE ACCESSIBLE THROUGH LAY-IN CEILINGS OR 24"x24" ACCESS DOORS. PROVIDE AN ACCESS PANEL AS SPECIFIED FOR ALL NON-ACCESSIBLE INSTALLATIONS.
5. ELBOWS SHALL BE SQUARE ELBOWS CONSTRUCTED WITH TURNING VANES. RADIUS ELBOWS WITH CENTERLINE RADIUS OF NOT LESS THAN 1.5 TIMES THE DUCT WIDTH, MAY BE USED WHERE SPACE CONDITIONS PERMIT OR WHERE INDICATED ON DRAWINGS.
6. CHANGE DUCT SIZES GRADUALLY. LIMIT SLOPES FOR TRANSITIONS TO A MAXIMUM OF 1 INCH CHANGE IN WIDTH FOR EVERY 3 INCHES OF LENGTH OR APPROXIMATELY 15 DEGREE. A MAXIMUM OF 30 DEGREES IS ACCEPTABLE DIRECTLY ADJACENT TO EQUIPMENT.
7. ALL BRANCH DUCT TAPS SHALL BE CONICAL FITTINGS ON ROUND MAINS AND 45° ENTRY FITTINGS ON RECTANGULAR MAINS.
8. MANUAL VOLUME DAMPERS SHALL BE PROVIDED ON ALL RETURN, SUPPLY, AND EXHAUST BRANCH DUCTS.
9. SUPPORT ALL DUCTWORK, EQUIPMENT, ETC. FROM TOP CHORD OF BAR JOISTS OR STEEL FRAMING BEAMS.
10. NO MECHANICAL SERVICES OR EQUIPMENT SHALL BE LOCATED OVER ELECTRICAL EQUIPMENT, ELEVATOR EQUIPMENT, OR TELEPHONE EQUIPMENT ROOMS.
11. ALL DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. INCREASE SHEET METAL SIZE TO ACCOMMODATE DUCT LINER AS REQUIRED BY THE SPECIFICATIONS.
12. ALL SHEET METAL CONNECTIONS AND JOINTS SHALL BE SEALED TO SMACNA SEAL CLASS A.
13. FLEXIBLE RUNOUTS TO BE FACTORY INSULATED AND DO NOT REQUIRE FIELD INSULATION.
14. FLEXIBLE DUCTWORK SHALL BE A MINIMUM OF 36" TO A MAXIMUM OF 72" IN LENGTH.
15. PROVIDE DRAWBANDS AND DUCT TAPE ON ALL ROUND FLEXIBLE DUCT CONNECTIONS.
16. FABRICATE AND SUPPORT DUCTWORK IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED.
17. FIRE DAMPERS SHALL BE INSTALLED AS REQUIRED IN ALL DUCTS PENETRATING FIRE WALLS. PROVIDE FIRESTOPPING, ETC. AS REQUIRED.
18. DUCT PRESSURE CLASSIFICATIONS
 - A. UNLESS NOTED OTHERWISE, RECTANGULAR AND ROUND SUPPLY DUCTWORK SHALL BE CONSTRUCTED AND REINFORCED TO MAINTAIN STRUCTURAL INTEGRITY AT PRESSURES AS HIGH AS + 2 IN. W.G.
 - B. RECTANGULAR AND ROUND RETURN DUCTWORK AND ALL EXHAUST DUCTWORK SHALL BE CONSTRUCTED AND REINFORCED TO MAINTAIN STRUCTURAL INTEGRITY AT NEGATIVE PRESSURES AS LOW AS - 2 IN. W.G.
19. PROVIDE MANUAL VOLUME DAMPER UPSTREAM OF EACH EXHAUST AND SUPPLY GRILLE FOR BALANCING. DAMPER MATERIAL SHALL MATCH ADJACENT DUCTWORK. DAMPERS SHALL BE PROVIDED AT EACH GRILLE AND REGISTER REGARDLESS OF WHETHER THEY ARE DEPICTED ON THE DRAWINGS OR NOT.

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GENERAL
MECHANICAL LEGEND AND NOTES

SHEET NO.
G.06

STRUCTURAL NOTES

CODE CRITERIA

- 1.INTERNATIONAL BUILDING CODE: IBC 2018
2.AMERICAN SOCIETY OF CIVIL ENGINEERS MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES: ASCE 7-16
3.AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE: ACI 318-14
4.ACI CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES: ACI 350-06
5.AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) CONSTRUCTION MANUAL 15TH EDITION
6.AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE - STEEL: AWS D1.1
7.AWS STRUCTURAL WELDING CODE - ALUMINUM: AWS D1.2
8.BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES: TMS 402/602-16
9.ALUMINUM ASSOCIATION 2015 ALUMINUM DESIGN MANUAL

DESIGN CRITERIA

ASCE RISK CATEGORY III
SNOW LOAD GROUND: 30 PSF
SNOW IMPORTANCE FACTOR: 1.1
ICE IMPORTANCE FACTOR: 1.15
ROOF DEAD LOAD: SELF-WEIGHT
ROOF LIVE LOAD: 20 PSF UNLESS NOTED OTHERWISE
FLOOR LIVE LOAD: 100 PSF UNLESS NOTED OTHERWISE
ADMINISTRATION BUILDING MEZZANINE LIVE LOAD: 125 PSF
ALUMINUM STAIR AND PLATFORM LIVE LOAD: 100 PSF
BASE MAT FOUNDATION LIVE LOAD: 250 PSF
SPECIAL FLOOR LIVE LOADS: SEE INDIVIDUAL STRUCTURES
VEHICLE LOAD CATEGORY 1:
(ONE) LIGHT TRUCK VEHICLE, 4-WHEEL GATOR, OR BOBCAT: 8,000 LB. MAXIMUM GROSS VEHICLE WEIGHT
VEHICLE LOAD CATEGORY 2:
(ONE) UTILITY TRUCK VEHICLE OR FORKLIFT: 14,000 LB. MAXIMUM AXLE LOAD AND 20,000 LB. MAXIMUM GROSS VEHICLE WEIGHT
VEHICLE LOAD CATEGORY 3:
(ONE) VACTOR TRUCK OR HEAVY DUAL WHEEL AND TANDEM AXLE TRUCKS: HS20 LOADING 32,000 LB. AXLE LOAD OR GREATER MAXIMUM LOAD
NOTE: CATEGORY 3 VEHICLES AND HEAVY CONSTRUCTION EQUIPMENT SHALL NOT BE ALLOWED WITHIN 8 FEET OF TANK WALLS OR OPEN TOPPED DEEP FOUNDATIONS. PROVIDE AN 18"X24" SIGN WITH LARGE BLOCK LETTERING STATING "MAXIMUM VEHICLE AXLE LOAD SHALL NOT EXCEED 14,000 LBS AND GVW SHALL NOT EXCEED 20,000 LBS WITHIN 8 FEET OF STRUCTURE" AT EQUALIZATION TANK DRIVEWAY AND OTHER SIMILAR LOCATIONS WHERE THIS OCCURS
BASIC WIND SPEED: 115 MPH
WIND EXPOSURE: C
WIND IMPORTANCE FACTOR: 1
SEISMIC SITE CLASS: D
SEISMIC Ss VALUE: 0.067
SEISMIC S1 VALUE: 0.048
SEISMIC DESIGN CATEGORY: B
SEISMIC IMPORTANCE FACTOR: 1.25

GEOTECHNICAL NOTES

- 1.GEOTECHNICAL ENGINEERING REPORT: TERRACON, PROJECT NO. 08195055-01, MAY 17, 2019
2.FROST DEPTH: 3'-6"
3.EXCAVATION FOR BUILDINGS AND STRUCTURES SHALL EXTEND TO A MINIMUM DEPTH OF 8 INCHES BELOW FOUNDATION BEARING AND TO A MINIMUM OF 1'-0" BEYOND FOUNDATION EDGE. SUBBASE SHALL CONSIST OF A MINIMUM OF 8" OF FREE DRAINING GRADED GRANULAR FILL (FDGGF) MATERIAL CONSISTING OF POROUS MATERIAL CORRESPONDING TO IOWA DOT 4131 GRADATION 29.
4.WHERE LOWER STRENGTH SOILS ARE ENCOUNTERED AT OR WITHIN 2 FEET BELOW THE FOUNDATION BEARING ELEVATION WHEN EXPOSED BY EXCAVATION OR BASED ON THE GEOTECHNICAL REPORT BORINGS, THEN OVER EXCAVATION SHALL EXTEND TO REMOVE THE LOWER STRENGTH SOILS AND REPLACE THEM WITH COMPACTED IMPERVIOUS FILL CAPABLE OF PROVIDING THE REQUIRED SUBGRADE BEARING CAPACITY. A MINIMUM OF 8" OF FDGGF SHALL BE PLACED ON TOP OF THE COMPACTED FILL OR UNDISTURBED SUBGRADE AND EXTEND BEYOND THE FOUNDATION A MINIMUM OF 1'-0".
5.WHERE INDICATED AS APPROPRIATE IN THE GEOTECHNICAL REPORT AND WHERE CALLED FOR ON THE DRAWINGS, RAMMED AGGREGATE PIERS SHALL BE USED TO IMPROVE SUBGRADE BEARING CAPACITY. WHERE NOT OTHERWISE SPECIFIED, NOTED, OR INDICATED ON THE DRAWINGS THE MINIMUM BEARING CAPACITY SHALL BE 2,500 PSF. FOR EQUALIZATION, AEROBIC DIGESTION, AND BIOSOLIDS STORAGE TANKS THE MINIMUM BEARING CAPACITY SHALL BE 3,000 PSF.
6.UNLESS NOTED OTHERWISE GRADE SHALL BE LOCATED AT AN ELEVATION 6" BELOW BUILDING OPERATING FLOOR LEVEL OR EXPOSED FOUNDATION AND SHALL SLOPE AWAY TO CIVIL DRAWING CONTOUR LEVELS.
7.ALL BUILDING AND TANK STRUCTURES SHALL HAVE A 2'-0" THICK IMPERVIOUS CLAY LAYER SLOPING AWAY FROM THE STRUCTURE AT 1% MINIMUM SLOPE, IMMEDIATELY BELOW THE SURFACE TOPSOIL OR OTHER GRADE SURFACE FEATURE, AS A BARRIER TO PREVENT SURFACE WATER FROM FLOWING DOWN ALONG THE FOUNDATIONS. THE IMPERVIOUS CLAY LAYER SHALL EXTEND A MINIMUM OF 10' AND TO A POINT WHERE SURFACE DRAINAGE IS CONTROLLED BY SITE DRAINAGE.
8.SUB-DRAINS SHALL CONSIST OF 6" MINIMUM DIAMETER PERFORATED PIPES AROUND BUILDINGS AND STRUCTURES, AS INDICATED ON SHEET C.08, AND SHALL BE LOCATED IN AND AT THE BASE OF FDGGF A MINIMUM OF 1'-0" BEYOND THE FOUNDATION EDGE. INVERT ELEVATIONS SHALL BE COORDINATED WITH ELEVATIONS ON SHEET C.08 TO PROVIDE DRAINAGE AWAY FROM THE STRUCTURES. WRAP PERFORATED SUB-DRAINS AND FDGGF MATERIAL AROUND FOUNDATIONS IN FILTER FABRIC COMPLYING WITH IOWA DOT TABLE 4196.01-2. FILTER FABRIC ENCLOSED FDGGF SHALL EXTEND UPWARD TO AND BENEATH THE 2-FOOT THICK IMPERVIOUS CLAY LAYER OF SOIL.
9. "STRUCTURAL FILL" IS A SELECT FILL CONSISTING OF MEDIUM DENSE COHESIONLESS SOILS OR STIFF COHESIVE SOILS OF GW, GP, SW, SP, GW-GM, GP-GC, GP-GM, GP-GC, SW-SM, SW-SC, SP-SM, SP-SC, OR CL WITH LL <= 45, PL <= 23, AND BEARING CAPACITY OF AT LEAST 2,500 PSF

COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.

- 10. "GRANULAR FILL" IS A WELL-GRADED FILL CONSISTING OF MEDIUM DENSE COHESIONLESS SOILS OF GW, SW, OR GW-SW WITH BEARING CAPACITY OF AT LEAST 2,500 PSF COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
11. FILL BENEATH FOUNDATIONS SHALL BE "STRUCTURAL FILL" OR "GRANULAR FILL" WITH BEARING CAPACITY INDICATED, UNLESS OTHERWISE SPECIFIED BY GEOTECHNICAL ENGINEER.
12. FOUNDATION SOILS SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER REGISTERED IN THE STATE OF IOWA. UPON EXCAVATION, WHERE UNSUITABLE SOILS ARE FOUND, REMOVE TO DEPTH REQUIRED BY GEOTECHNICAL ENGINEER AND REPLACE WITH SUITABLE COMPACTED "STRUCTURAL FILL" OR "GRANULAR FILL" TO ACHIEVE THE REQUIRED BEARING CAPACITY.
13. FOR STRUCTURES WHERE SUB-DRAINS ARE NOT REQUIRED, PROVIDE MINIMUM OF 6-INCH COMPACTED CRUSHED ROCK SUBBASE WITH LESS THAN 4% PASSING #200 SIEVE BENEATH FOUNDATIONS WITH SUBBASE EXTENDING A MINIMUM OF ONE-FOOT BEYOND STRUCTURE IN EACH DIRECTION AND PROVIDE GRANULAR FILL BACKFILL BELOW 2'-0" THICK IMPERVIOUS CLAY LAYER.
14. DO NOT BRING HEAVY COMPACTION OR PAVING EQUIPMENT WITHIN 3' OF FOUNDATIONS OR WALLS. USE MANUALLY OPERATED COMPACTION EQUIPMENT ADJACENT TO STRUCTURES. SEE DRAWINGS FOR ADDITIONAL RESTRICTIONS ON HEAVY VEHICLES AND EQUIPMENT.
15. GRADE AT BUILDINGS AND STRUCTURES SHALL BE 6" BELOW FLOOR LEVELS AND SHALL SLOPE AWAY FROM BUILDINGS AT A MINIMUM OF 1% SLOPE UNTIL GRADE INTERSECTS WITH AREA CONTOURS.
16. FROST FREE FOOTINGS SHALL BE BASED ON "GRANULAR FILL" BASE WITH LESS THAN 4% PASSING #200 SIEVE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY AND EXTENDING HORIZONTALLY ONE FOOT BEYOND FOUNDATION AND TO FROST DEPTH, AND ENCLOSED BY FILTER FABRIC ON ALL SURFACES EXPOSED TO SOIL.
17. BACKFILL AND COMPACT UNIFORMLY AROUND STRUCTURES PREVENTING UNBALANCED LATERAL FORCES ON FOUNDATIONS. DO NOT ALLOW BACKFILL ELEVATIONS ON OPPOSITE SIDES OF FOUNDATIONS TO DIFFER MORE THAN 2 FEET.

CONCRETE NOTES

- 1.CONCRETE STRUCTURES SHALL USE MIX 1: 4,500 PSI COMPRESSIVE STRENGTH CONCRETE MIX UNLESS OTHERWISE NOTED. SEE CONCRETE MATERIAL SCHEDULE DETAIL S.600.
2.CONCRETE DEFORMED BAR REINFORCEMENT SHALL BE GRADE 60.
3.COVER (CVR) IS THE LEAST DISTANCE BETWEEN THE SURFACE OF THE EMBEDDED REINFORCEMENT AND THE SURFACE OF THE CONCRETE. COVER IS A MINIMUM CLEAR DISTANCE BUT IS ALSO A MAXIMUM DISTANCE, SPECIFYING THE LOCATION OF THE REINFORCEMENT. THROUGH ACI 117-10 SPECIFICATIONS FOR TOLERANCES FOR CONCRETE, THE MAXIMUM DISTANCE BETWEEN THE SURFACE OF THE CONCRETE AND THE SURFACE OF THE REINFORCEMENT IS THE CVR DISTANCE PLUS THE REINFORCEMENT PLACEMENT TOLERANCE. BASED ON ACI 117, FOR CONCRETE MEMBERS 12 INCHES THICK OR LESS, THE TOLERANCE IS 3/8 INCH, AND FOR CONCRETE MEMBERS GREATER THAN 12 INCHES THICK, THE TOLERANCE IS 1/2 INCH. SEE CONCRETE PROTECTION TABLE DETAIL 5 SHEET S.600 FOR COVER REQUIREMENTS.
4.FOR REBAR DEVELOPMENT, SPLICES AND HOOKS SEE TABLE DETAIL 6 SHEET S.600. ALL BARS ARE CONSIDERED TOP BARS UNLESS NOTED OTHERWISE.
5.IN ADDITION TO MAIN BAR REINFORCEMENT SIZE AND SPACING INDICATED ON DRAWING, OPENINGS 16 INCHES OR LARGER SHALL HAVE 2 ADDITIONAL #5 BAR DIAGONALS BY 4-FOOT LONG CENTERED AT EACH CORNER. OPENINGS 30 INCHES OR LARGER SHALL HAVE A MINIMUM OF 2 ADDITIONAL HORIZONTAL AND VERTICAL EDGE REINFORCEMENT BARS CENTERED AT EACH EDGE OF THE OPENING MATCHING MAIN BAR SIZES AND EXTENDING THE BAR DEVELOPMENT LENGTH BEYOND THE FIRST BAR BEYOND THE OPENING. ROUND OPENINGS 30 INCHES OR LARGER SHALL ALSO HAVE 2 #5 HOOP BARS AROUND OPENING. FOR ADDITIONAL REQUIREMENTS SEE OPENING REINFORCEMENT DETAIL 2 SHEET S.601.
6.REINFORCEMENT ACROSS CONSTRUCTION JOINTS SHALL DEVELOP 125% OF BAR CAPACITY AND TERMINATE IN STANDARD HOOKS WHERE CONCRETE DIMENSIONS DO NOT ALLOW FULL DEVELOPMENT OF REINFORCEMENT.
7.CONSTRUCTION JOINTS AND/OR SAW CUT JOINTS SHALL BE AT SPACING LESS THAN 40 TIMES SLAB THICKNESS IN EACH DIRECTION IN SLABS ON GRADE UNLESS OTHERWISE NOTED AND ARE NOT ALLOWED IN MAT FOUNDATIONS WITH THICKNESS 1-FOOT OR GREATER.
8.SLOPE CONCRETE BASE TO DRAIN OR SUMP AT 1/8" PER FOOT MINIMUM UNLESS NOTED OTHERWISE.
9.SEE DETAIL 1 SHEET S.601 FOR ADDITIONAL REINFORCEMENT IN CORNERS OF ELEVATED SLABS.
10. FOR SUMPS SEE DETAIL 9 SHEET S.601 FOR REINFORCMENT DETAILS. PROVIDE #5 @ 8" OC HOOP BARS DOWN SIDE OF SUMP WITH A MINIMUM OF (3) EQUALLY SPACED.
11. CONTRACTOR SHALL VERIFY AND ALL ANCHOR BOLTS AND RELATED FORMING INFORMATION WITH THE APPLICABLE EQUIPMENT SUPPLIERS AND SUB-CONTRACTORS PRIOR TO CONCRETE PLACEMENT.
12. ALL LOCATIONS AND SIZES OF OPENINGS IN CONCRETE WALLS, FLOORS, AND ROOFS SHALL BE VERIFIED WITH APPLICABLE EQUIPMENT SUPPLIERS AND SUB-CONTRACTORS PRIOR TO CONCRETE PLACEMENT.
13. DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE ENGINEER OF RECORD.
14. PROVIDE VAPOR BARRIER UNDER FOUNDATION BASE SLAB. PROVIDE BENTONITE WATER PROOFING BEGINNING UNDER THE EDGE OF THE FOUNDATION, LAPPING WITH THE VAPOR BARRIER, WRAPPING UP AROUND THE BASE SLAB, AND UP THE EXTERIOR WALL TO A POINT 6 INCHES BELOW GRADE. PROVIDE TOP SEAL AND ANCHOR. BENTONITE WATERPROOFING IS IN ADDITION TO ELASTOMERIC WATER PROOFING ON TOP OF THE STRUCTURE.
15. BENTONITE WATER PROOFING SHALL BE USED ON THE FOLLOWING STRUCTURES: GRIT BUILDING (NORTH, WEST AND SOUTH FACES OF THE FOUNDATION AND EXTENDING 2 FEET EAST OF GRID LINE B); EQ PUMP STATION (WEST, SOUTH, AND EAST WALLS EXTENDING 1 FOOT ALONG TANK WALL WHERE IT INTERSECTS); SECONDARY TREATMENT BUILDING; SOLIDS PROCESSING BUILDING (WEST AND SOUTH WALLS); UV VALVE VAULT; AND BIO-SOLIDS MIXING PUMP STATION (EXTEND 1 FOOT ALONG STAIR WALLS).
16. APPLY TROWELLED FINISH AND CHEMICAL HARDENER/SEALER TO ALL INTERIOR HORIZONTAL SURFACES.

- 17. WATERTIGHTNESS TESTING SHALL BE REQUIRED IN THE FOLLOWING STRUCTURES WITH WATER LEVEL TO THE ELEVATION NOTED:
HEADWORKS EL 809.0
GRIT CHAMBER EL 843.5
EQUALIZATION TANK (CONCRETE BASE) EL 824.5
OXIDATION DITCH FLOW SPLITTER EL 840.0
OXIDATION DITCH EL 838.25
CLARIFIER FLOW SPLITTER EL 834.5
CLARIFIER EL 831
AEROBIC DIGESTER EL 832.0
18. DO NOT BACKFILL STRUCTURES REQUIRING WATERTIGHTNESS TESTING UNTIL TESTING IS COMPLETE AND STRUCTURE HAS PASSED THE TEST.

MASONRY WALL CONSTRUCTION NOTES:

- 1. TERMINATE ALL MASONRY WALLS WITH BOND BEAMS AS SCHEDULED AT OPENINGS, BEARING LOCATIONS, OR TOP OF WALL.
2. TERMINATE ALL MASONRY VERTICAL REINFORCEMENT IN TOP BOND BEAMS WITH 90 DEGREE STANDARD HOOK DOWELS. HOOK DOWELS HAVE SAME SIZE AS VERTICAL BAR. HOOK INTO BOND BEAM ABOVE HORIZONTAL REINFORCEMENT AND LAP VERTICAL STEEL ACCORDING TO REBAR LAP AND SPLICE TABLE 6 SHEET S.600.
3. TERMINATE MASONRY REINFORCEMENT IN BOND BEAMS WITH 180 DEGREE STANDARD HOOKS.
4. MASONRY WALLS SHALL BE CONTINUOUSLY REINFORCED FROM FOUNDATIONS UP THROUGH SLABS, CMUS, PLANKS, AND PARRAPET TO TOP BOND BEAM. EACH TRANSITION SHALL BE WITH FULL BAR LAP SPLICE OR BY COMBINATIONS OF HOOKS AND LAP SPLICES IN EACH CASE DEVELOPING THE FULL CAPACITY OF THE REINFORCEMENT.
5. REINFORCE MASONRY EACH SIDE OF WINDOW, DOOR, OR OTHER OPENING 16 INCHES WIDE OR GREATER WITH JAMB AS SCHEDULED ASSURING THE REINFORCED CELL COUNT FOR EACH JAMB IS GREATER THAN OR EQUAL TO THE NUMBER OF REINFORCED CELLS IN THAT WALL WITHOUT OPENINGS. MINIMUM NUMBER OF REINFORCED JAMB CELLS AS SCHEDULED. SEE MASONRY WALL SCHEDULE 5 SHEET S.603.
6. LARGE OR MULTIPLE OPENINGS IN MASONRY WITH AN OVERALL WIDTH GREATER THAN 16 INCHES OR THE TYPICAL REINFORCEMENT SPACING WHICHEVER IS SMALLER REQUIRE BOND BEAMS AT HEAD AND SILL OF THE OPENINGS. BOND BEAMS EXTEND THE NUMBER OF JAMB CELLS COMPUTED ACCORDING TO NOTE 5 BEYOND THE OPENING, UNLESS NOTED OTHERWISE.
7. CONCRETE MASONRY UNITS WITH 2 VERTICAL REINFORCING BARS SHALL HAVE BARS INSTALLED WITH VERTICAL BARS INSIDE BOND BEAM BARS 2-1/2 INCHES FROM EACH EXTERIOR BLOCK FACE UNLESS NOTED OTHERWISE.
8. MASONRY VERTICAL REINFORCING BARS SHALL BE DOWELED INTO FOUNDATION TO PROVIDE FULL DEVELOPMENT LENGTH PER REBAR LAP AND SPLICE TABLE 6 SHEET S.600.
9. PROVIDE HOT DIPPED GALVANIZED LADDER STYLE JOINT REINFORCEMENT IN MASONRY AS SCHEDULED IN MASONRY WALL SCHEDULE 5 SHEET S.603.
10. SEE SECTION 04 2000 MASONRY SPECIFICATIONS AND PLANS FOR MASONRY GENERAL REQUIREMENTS AND ADDITIONAL INFORMATION.

ALUMINUM NOTES

- 1. ALUMINUM MATERIALS SHALL BE ASTM B221 EXTRUDED ALUMINUM 6061-T6 OR 6063-T6.
2.ALUMINUM SHAPES ARE BASED ON ALUMINUM ASSOCIATION STANDARD CHANNELS AND SHAPES.
3. HARDWARE FOR FABRICATION OF ALUMINUM ASSEMBLIES SHALL BE 304 STAINLESS STEEL

PRELIMINARY
NOT FOR CONSTRUCTION

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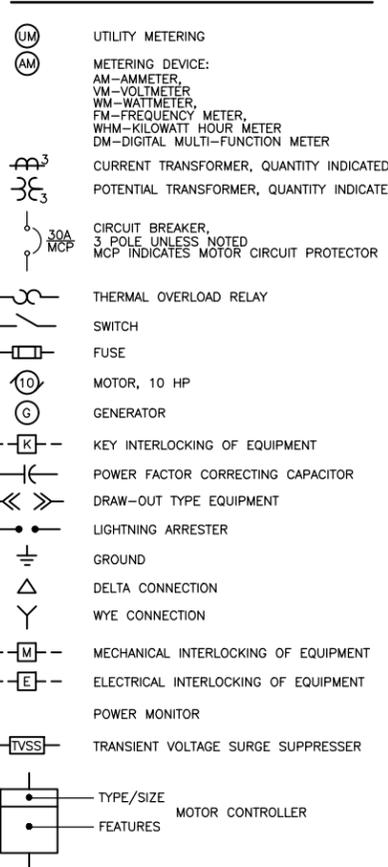
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GENERAL STRUCTURAL
STRUCTURAL NOTES

SHEET NO.
G.07

ABBREVIATIONS ELECTRICAL SYMBOLS ONE-LINES ELECTRICAL SYMBOLS SCHEMATICS ELECTRICAL SYMBOLS PLANS

A	AMPERES
AC	ALTERNATING CURRENT
AF	AMPERE FRAME
AFB	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AICS	AMPERES INTERRUPTING CAPACITY, SYMMETRICAL
ASD	ADJUSTABLE SPEED DRIVE
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
C	CONDUIT
CB	CIRCUIT BREAKER
CO	CONDUIT ONLY
CKT	CIRCUIT
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
DB	DIRECT BURIED
DC	DIRECT CURRENT
DWG	DRAWING
DM	DIGITAL METER
ELEV	ELEVATION
ENCL	ENCLOSURE
EP	EXPLOSION PROOF
ETM	ELAPSED TIME METER
EXIST	EXISTING
FLEX	FLEXIBLE
GFI	GROUND FAULT INTERRUPTER
GFR	GROUND FAULT RELAY
GND	GROUND
HH	HANDHOLE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HZ	HERTZ
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LA	LIGHTNING ARRESTOR
LOS	LOCKOUT STOP PUSH-BUTTON
LS	LIMIT SWITCH
LTG	LIGHTING
MA	MILLIAMPERE
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MGB	MAIN GROUND BAR
MIN	MINIMUM
MT	EMPTY
MTD	MOUNTED
N	NEUTRAL
NC	NORMALLY CLOSED
NL	NIGHTLIGHT
NO	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE
OL'S	MOTOR OVERLOAD CONTACTS
P	POLE
PB	PUSHBUTTON, PULLBOX
PFR	PHASE FAILURE RELAY
PH	PHASE
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
REF	REFERENCE
REQ'D	REQUIRED
SH	SHIELDED
SHT	SHEET
SPD	SURGE PROTECTIVE DEVICE
STD	STANDARD
SW	SWITCH
TB	TERMINAL BOARD
TEL	TELEPHONE
TEMP	TEMPERATURE
TP	TWISTED PAIR
XFMR	TRANSFORMER
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TSTAT	THERMOSTAT
TP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLT
VFD	VARIABLE SPEED DRIVE
VS	VARIABLE SPEED
W	WATTS, WIRE
WP	WEATHERPROOF
ZS	POSITION SWITCH



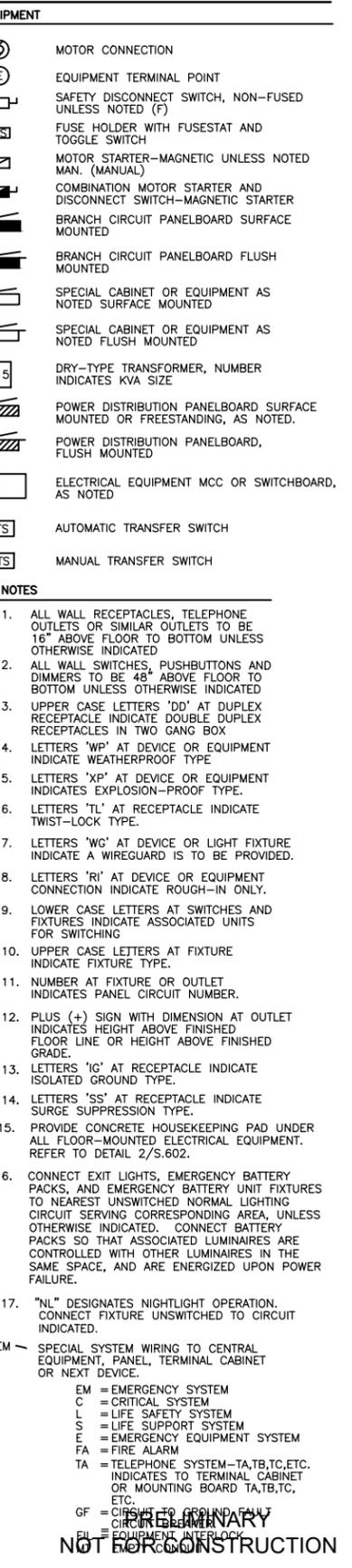
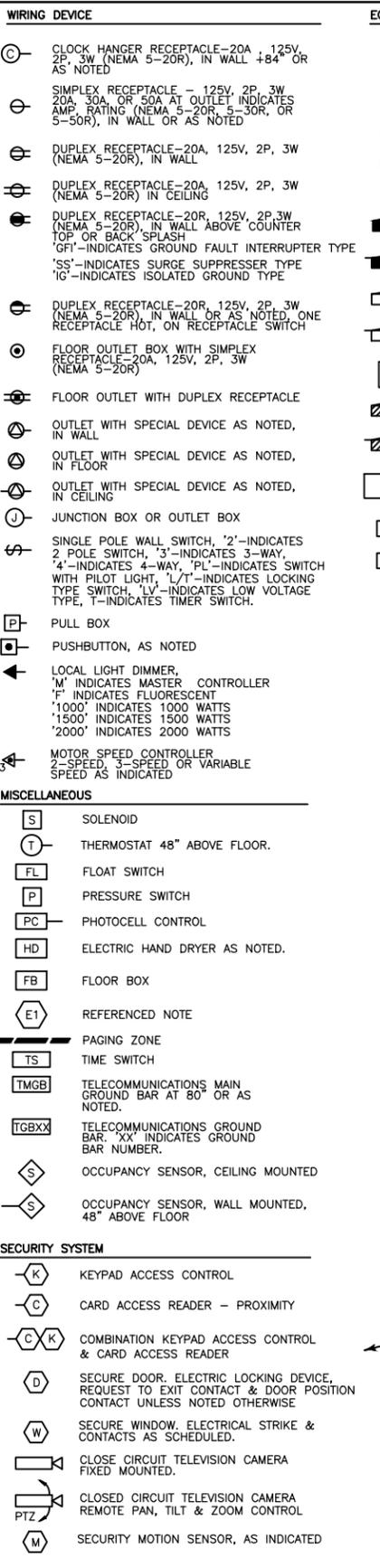
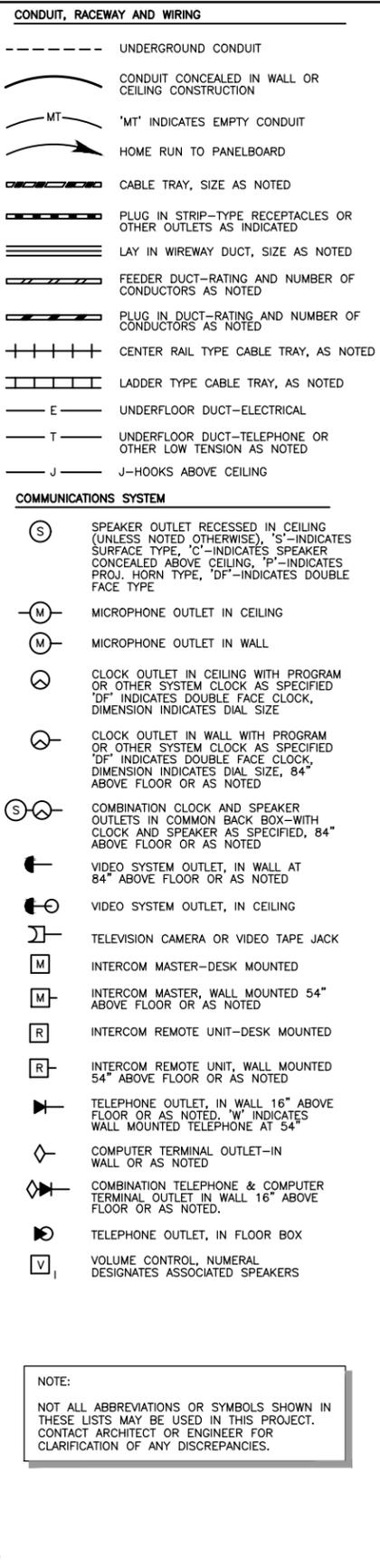
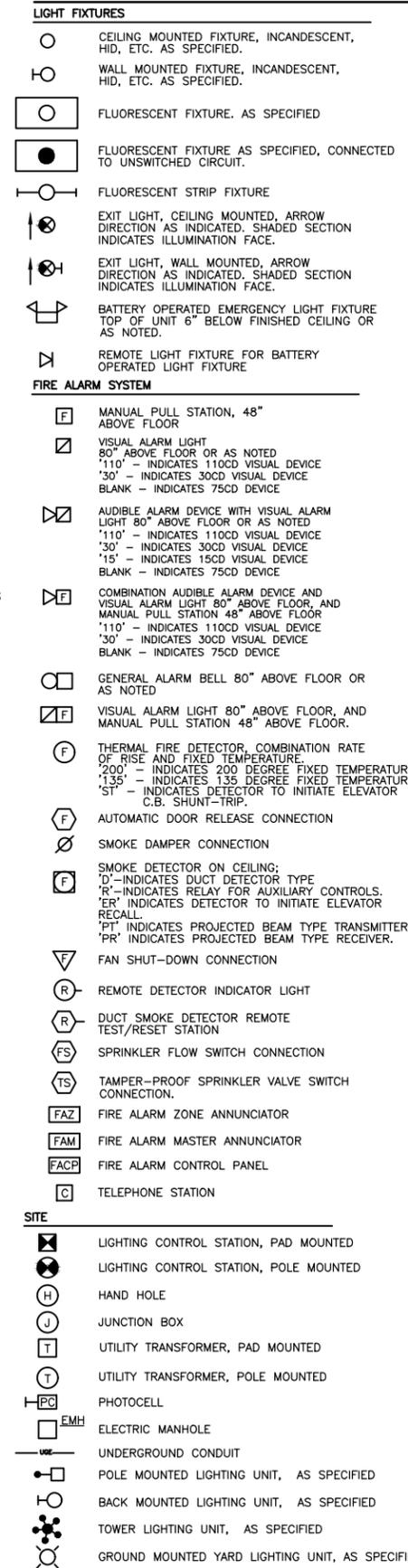
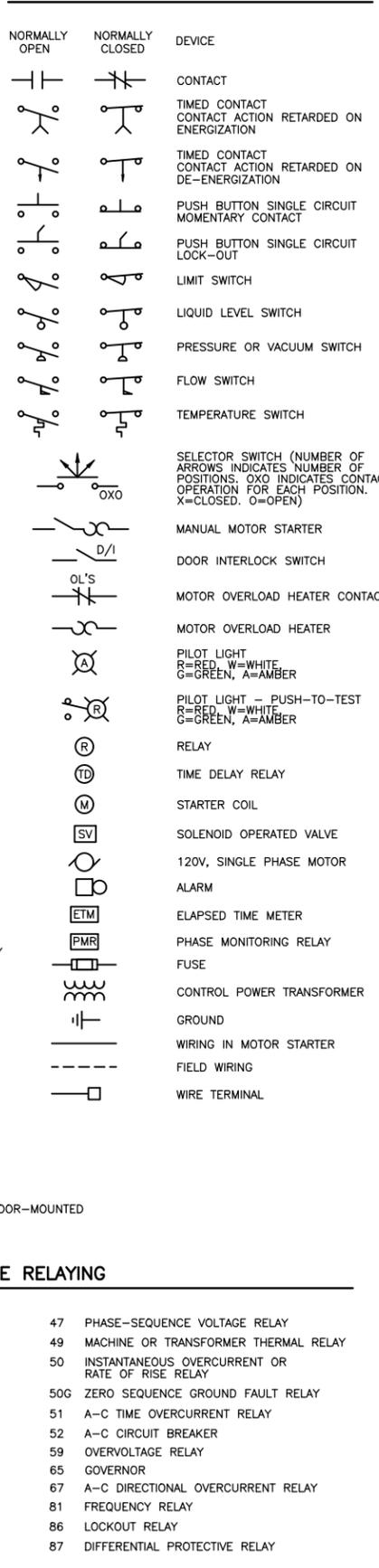
TYPE/SIZE
 SUCCEEDING NUMBER INDICATES NEMA STARTER SIZE
 FVR = FULL VOLTAGE REVERSING
 FVNR = FULL VOLTAGE NON-REVERSING
 RVSS = REDUCED VOLTAGE SOFT STARTER
 VFD = VARIABLE FREQUENCY DRIVE
 2S2W = TWO-SPEED TWO-WINDING
 2S1W = TWO-SPEED ONE-WINDING

FEATURES
 1 - CONTROL POWER TRANSFORMER, 120V SECONDARY
 2R - 2: DENOTES INDICATING LIGHT
 MODIFIER: R - RED
 G - GREEN
 A - AMBER
 W - WHITE
 3A - 3: DENOTES CONTROL SWITCH
 MODIFIER: A - HAND-OFF-AUTO
 B - HAND-OFF-REMOTE
 C - ON-OFF
 D - FORWARD-OFF-REVERSE
 4 - START-STOP PUSHBUTTONS, MOMENTARY
 5 - ELAPSED TIME METER
 6 - KEYPAD/DISPLAY ON DOOR
 7 - OUTPUT dv/dt FILTER
 8 - DISCONNECT SWITCH

EQUIPMENT FLOOR MOUNTING NOTE:
 PROVIDE CONCRETE HOUSEKEEPING PAD UNDER ALL FLOOR-MOUNTED ELECTRICAL EQUIPMENT. REFER TO DETAIL 2/S.602.

SWITCHGEAR PROTECTIVE RELAYING

25	SWITCHGEAR DEVICE:	47	PHASE-SEQUENCE VOLTAGE RELAY
13	SYNCHRONOUS-SPEED DEVICE	49	MACHINE OR TRANSFORMER THERMAL RELAY
25	SYNCHRONIZING OR SYNCHRONISM CHECK DEVICE	50	INSTANTANEOUS OVERCURRENT OR RATE OF RISE RELAY
27	UNDERVOLTAGE RELAY	50G	ZERO SEQUENCE GROUND FAULT RELAY
32	DIRECTIONAL POWER RELAY	51	A-C TIME OVERCURRENT RELAY
37	UNDERCURRENT OR UNDERPOWER RELAY	52	A-C CIRCUIT BREAKER
40	FIELD RELAY	59	OVERVOLTAGE RELAY
41	FIELD CIRCUIT BREAKERS	65	GOVERNOR
43	MANUAL TRANSFER OR SELECTOR DEVICE	67	A-C DIRECTIONAL OVERCURRENT RELAY
46	REVERSE-PHASE OR PHASE-BALANCE CURRENT RELAY	81	FREQUENCY RELAY
		86	LOCKOUT RELAY
		87	DIFFERENTIAL PROTECTIVE RELAY



NOTE:
 NOT ALL ABBREVIATIONS OR SYMBOLS SHOWN IN THESE LISTS MAY BE USED IN THIS PROJECT. CONTACT ARCHITECT OR ENGINEER FOR CLARIFICATION OF ANY DISCREPANCIES.

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 CAD FILE: J:\2016\160473\CAD\Drawings\G\G.08 ELECTRICAL LEGEND.dwg

NO.	DATE	BY	REVISION DESCRIPTION



NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

GENERAL
ELECTRICAL LEGEND

SHEET NO.
G.08

xref: xgl-1-dm01

Xrefs: xgl-1-dh01; XCS=BASE; XCS=DSGN; XCS=PARCELS; XCS=ROW; XX=IMAGE; XCS=BLDG=INDEX; XCU=STRM; XVS=GIS-100'R-FLOOD; XE=WETL-GIS; XCP=PAIT



SITWORK OVERALL SITE PLAN
 SCALE: 1"=150'

STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIOSOLIDS PUMPING
580	BIOSOLIDS STORAGE



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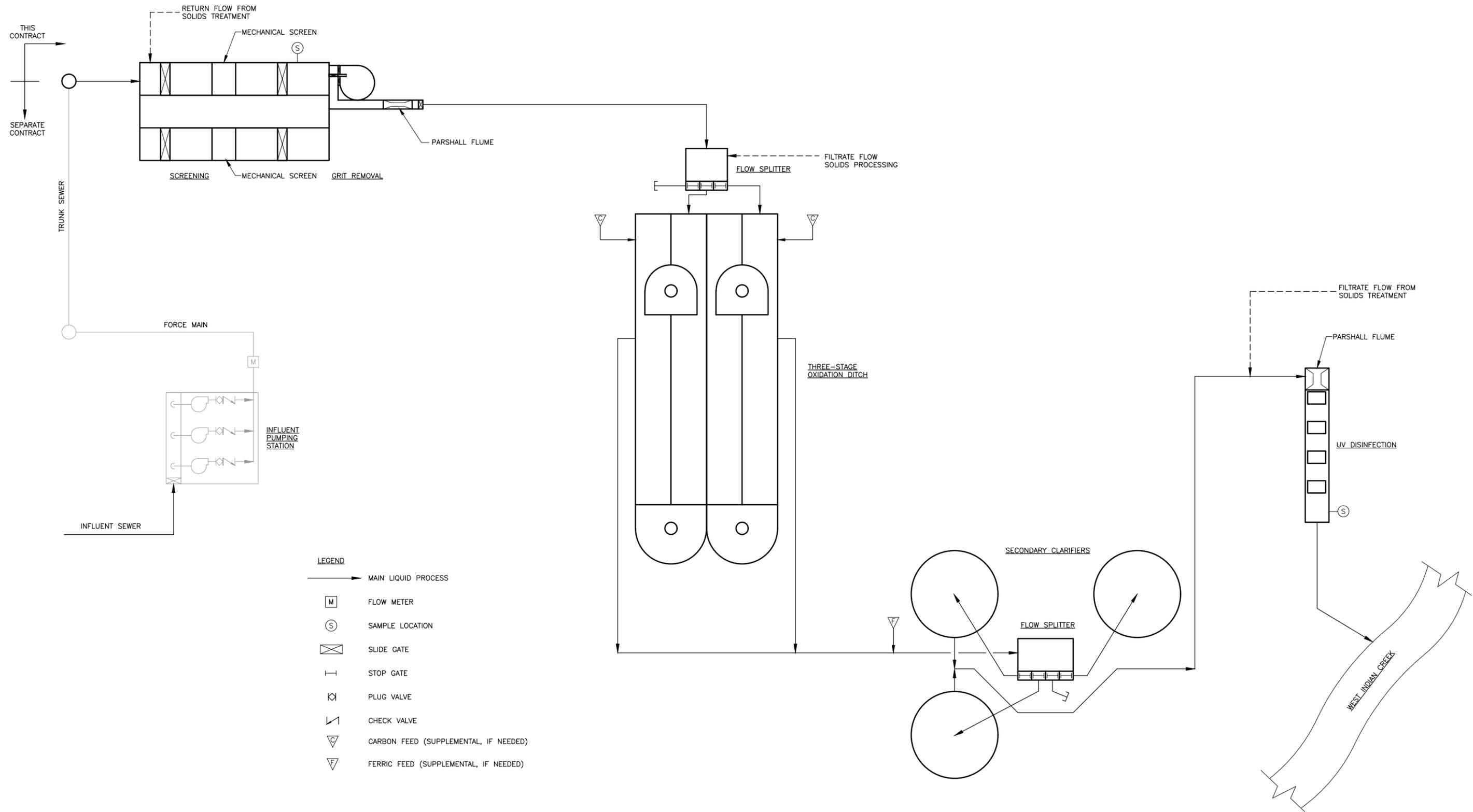
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NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

GENERAL
OVERALL SITE PLAN

SHEET NO.
G.09



- LEGEND**
- MAIN LIQUID PROCESS
 - [M] FLOW METER
 - [S] SAMPLE LOCATION
 - [X] SLIDE GATE
 - [|] STOP GATE
 - [K] PLUG VALVE
 - [>] CHECK VALVE
 - [▽] CARBON FEED (SUPPLEMENTAL, IF NEEDED)
 - [▽] FERRIC FEED (SUPPLEMENTAL, IF NEEDED)

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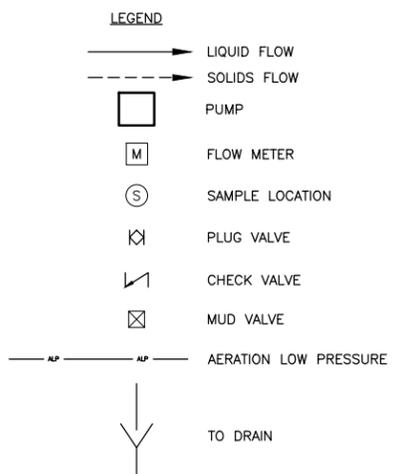
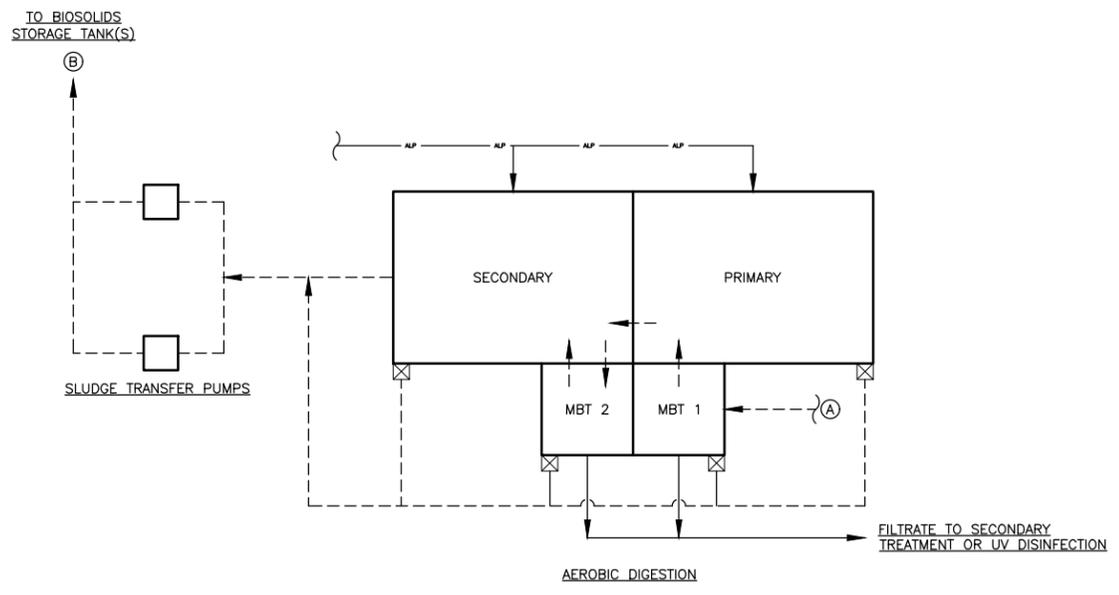
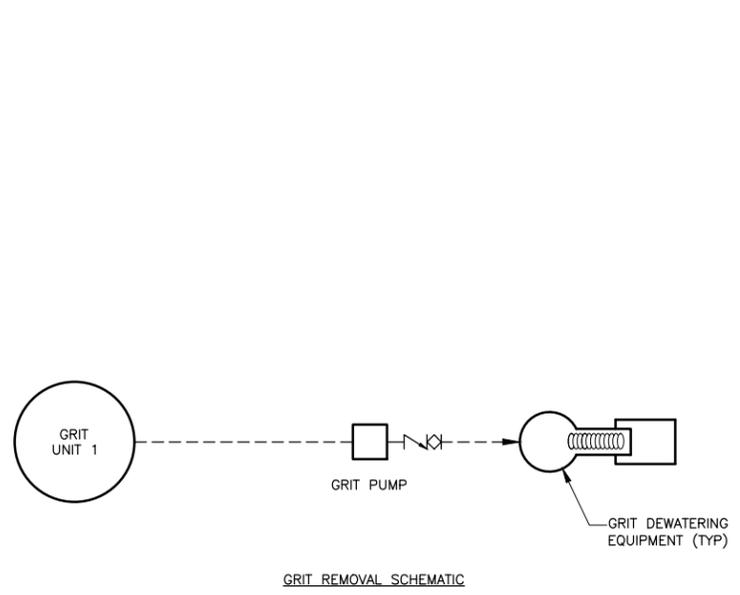
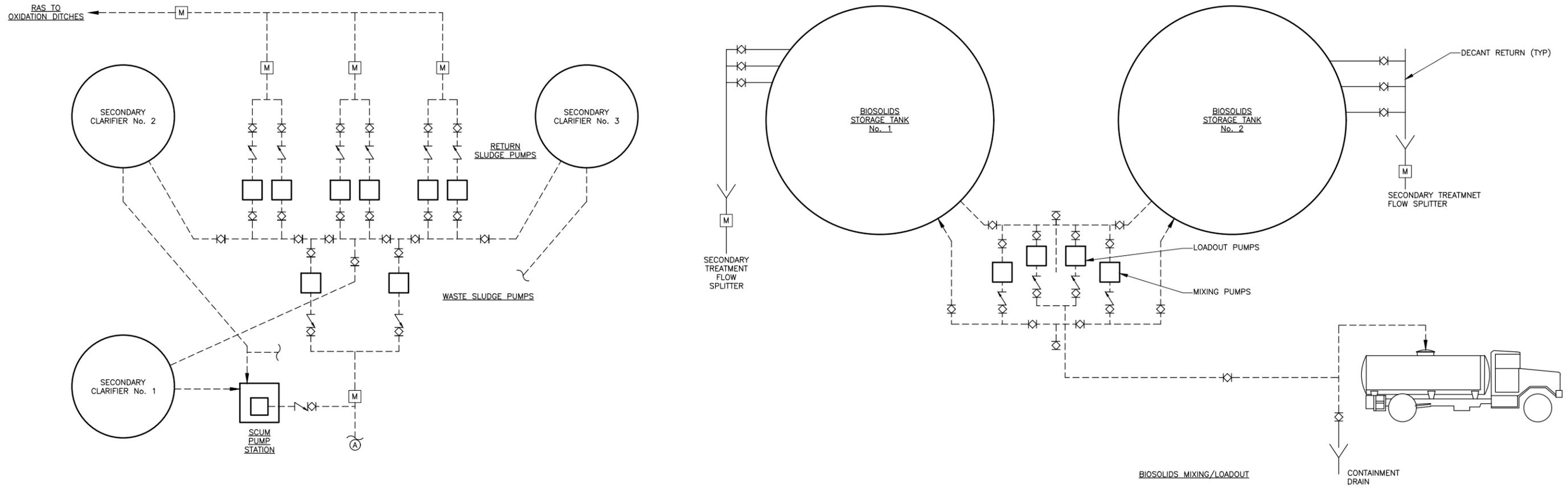


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

GENERAL
LIQUID PROCESS SCHEMATIC

SHEET NO.
G.10

Xref: xgl-1-dh01: XP-00-SCHEMATICS



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 APPROVED: MJR JOB NUMBER: 160473
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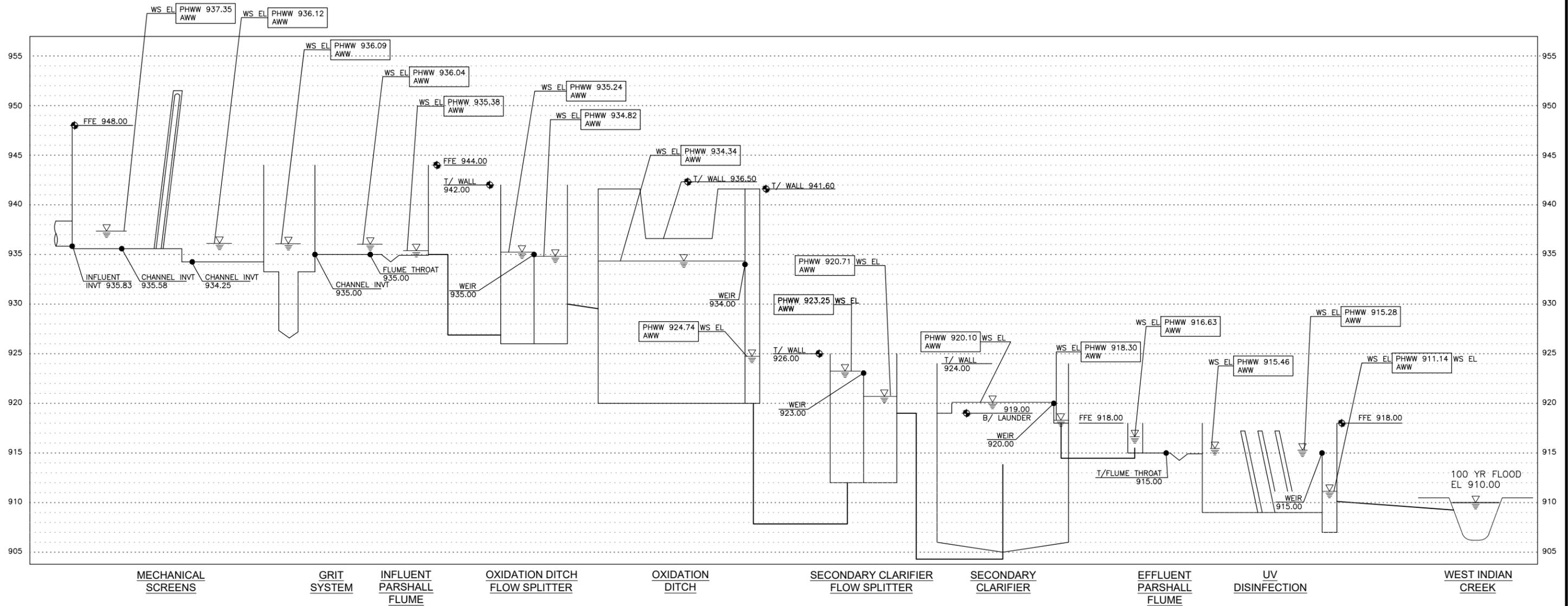


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

GENERAL
SOLIDS PROCESS SCHEMATIC

SHEET NO.
G.11

Xref: xgl-1-dh01: XP-00-SCHEMATICS



AWW = AVERAGE WET WEATHER = 3.02 MGD
 PHWW = PEAK HOURLY WET WEATHER = 8.23 MGD

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JOB DATE: 2020
 JOB NUMBER: 160473

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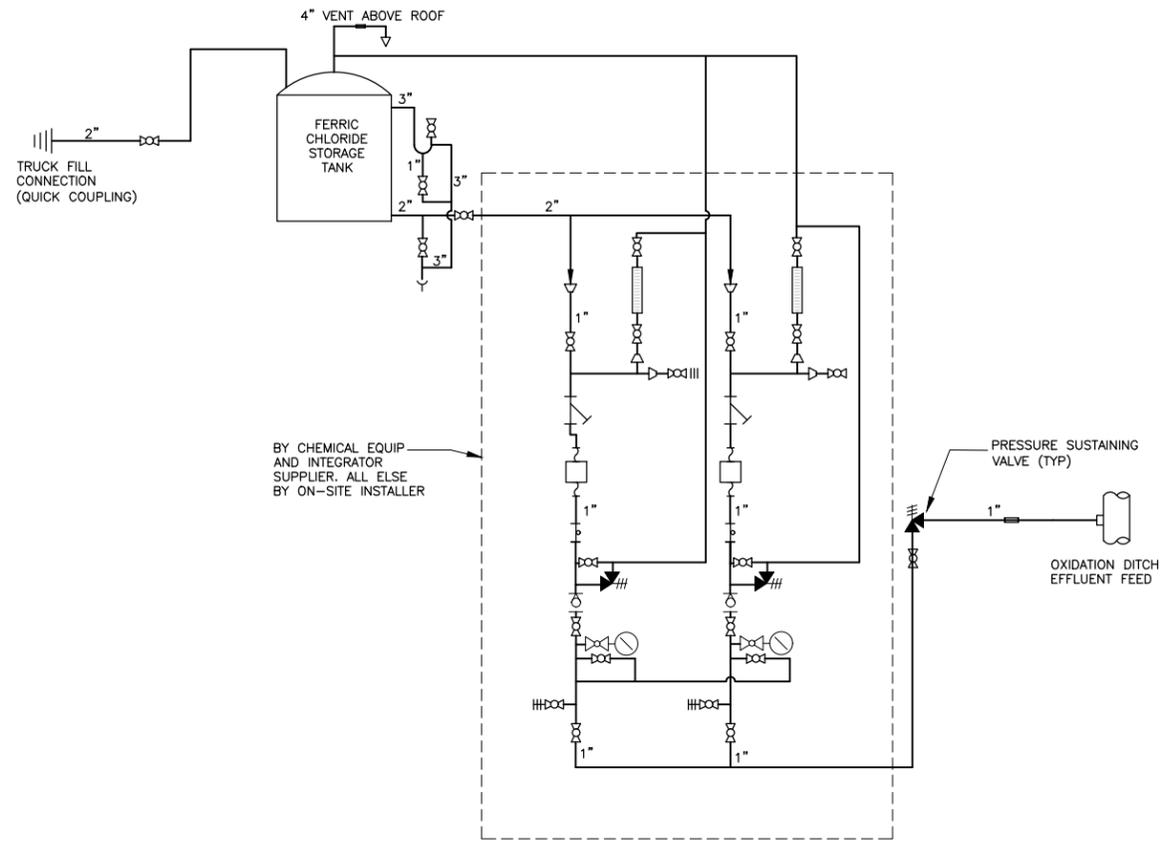


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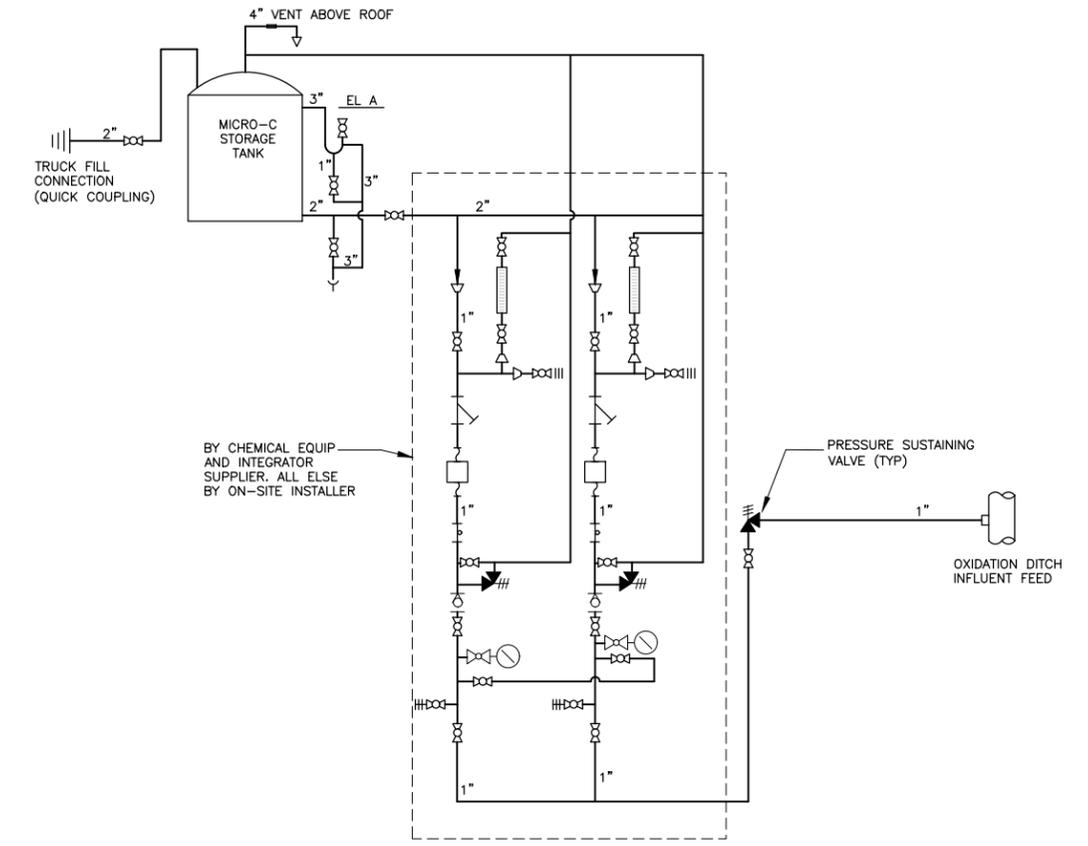
GENERAL
 HYDRAULIC PROFILE

SHEET NO.
 G.12

Xrefs: xgl-1-dh01: XP-0-HYD



1 FERRIC CHLORIDE FEED SYSTEM SCHEMATIC
NTS



2 MICRO-C FEED SYSTEM SCHEMATIC
NTS

PRELIMINARY
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 APPROVED: MJR JOB NUMBER: 160473
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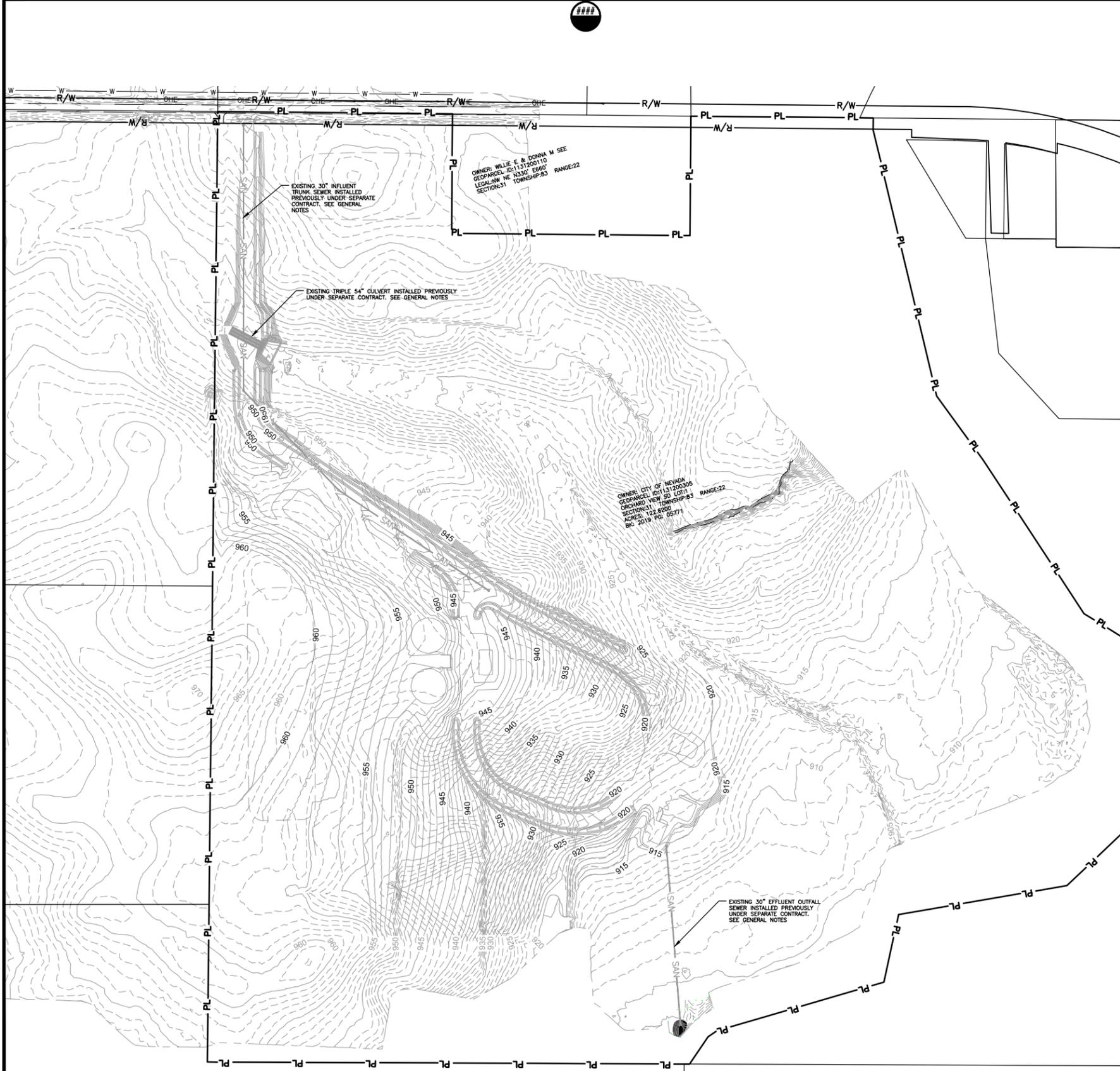


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

GENERAL
 CHEMICAL FEED SCHEMATICS

SHEET NO.
G.13

Xref: xgl-1-dh01: XP-00- CHEMICAL FEED SCHEMATICS



Xrefs: xgl-1-dh01; XCS=BASE; XCS=PARCELS; XCS=ROW; XCG=CONT-FG; XCP=PAIT; XCU=SANH; XCU=STRM; XUG=CONT-EG; XLS=DSGN; XLS=PAIT

1 SITEWORK
EXISTING CONDITIONS
SCALE: 100



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CAD FILE: J:\2016\160473\CAD\Dwgs\C.C.01 EXISTING CONDITIONS.dwg

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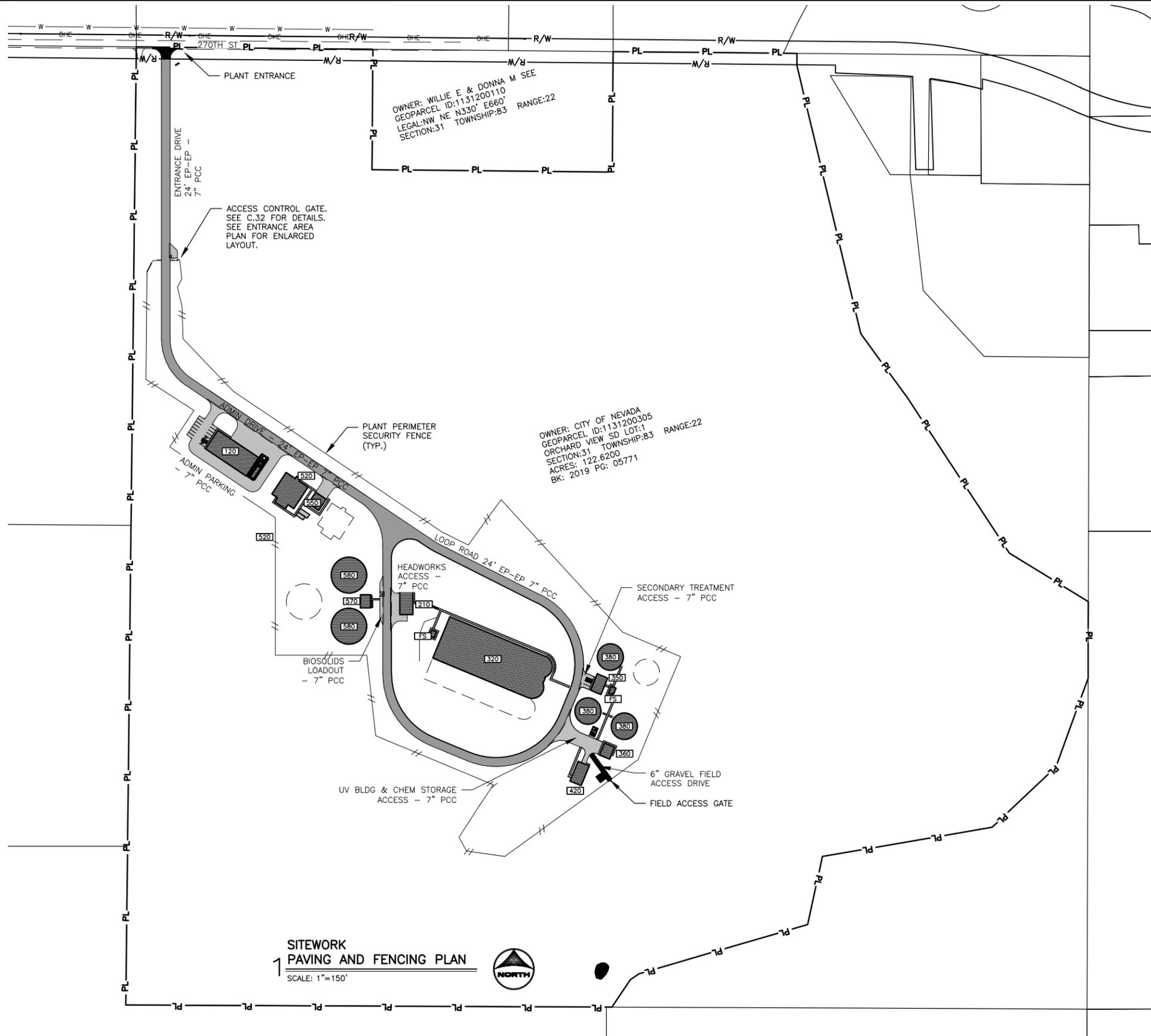
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NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SITE WORK
EXISTING CONDITIONS

SHEET NO.
C.01



SITWORK PAVING AND FENCING PLAN
 SCALE: 1"=150'

STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIOSOLIDS PUMPAGE
580	BIOSOLIDS STORAGE

**PRELIMINARY
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 APPROVED: MAR JOB NUMBER: 160473
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 CAD FILE: J:\2016\160473\CAD\Dwgs\C\C.02 PAVING AND FENCING PLAN.dwg

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 0" = 1"
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NO.	DATE	BY	REVISION DESCRIPTION



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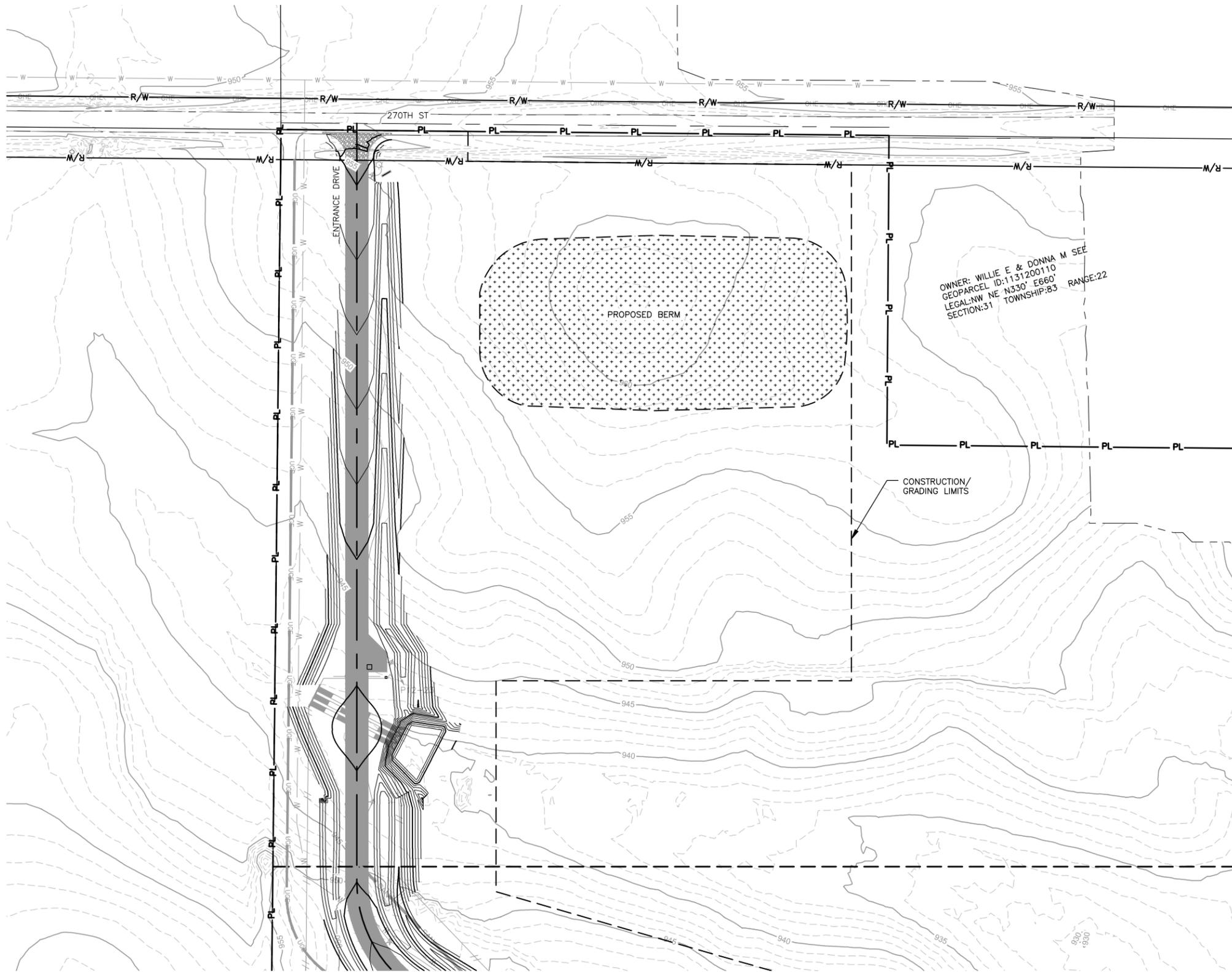
SITE WORK
PAVING AND FENCING PLAN

SHEET NO.
C.02

Xref: xgl-1-dh01; XCS=BASE; XCS=DSON; XCS=PARCELS; XCS=ROW; XCS=BLDG-INDEX; XCP=PAIT

GENERAL NOTES:

1. REFER TO C.04 PLANT GRADING PLAN FOR GENERAL NOTES REGARDING SITE GRADING REQUIREMENTS.



1 SITEWORK
ENTRANCE GRADING PLAN
SCALE: 1"=60'



PRELIMINARY
NOT FOR CONSTRUCTION

Xrefs: xgl-1-dh01: XCS-BASE; XCS-DSON; XCS-PARCELS; XCS-ROW; XCS-VIEWFRAME; XCU-ELEC; XCP-PATT; XCU-WATR; XCU-SANI; XCU-STRM; XCT-ALIGNMENT; XYG-CONT-EG; XCG-CONSTRUCTION-LIMITS; XLS-PATT; XLS-DSGN; XCG-CONT-FG

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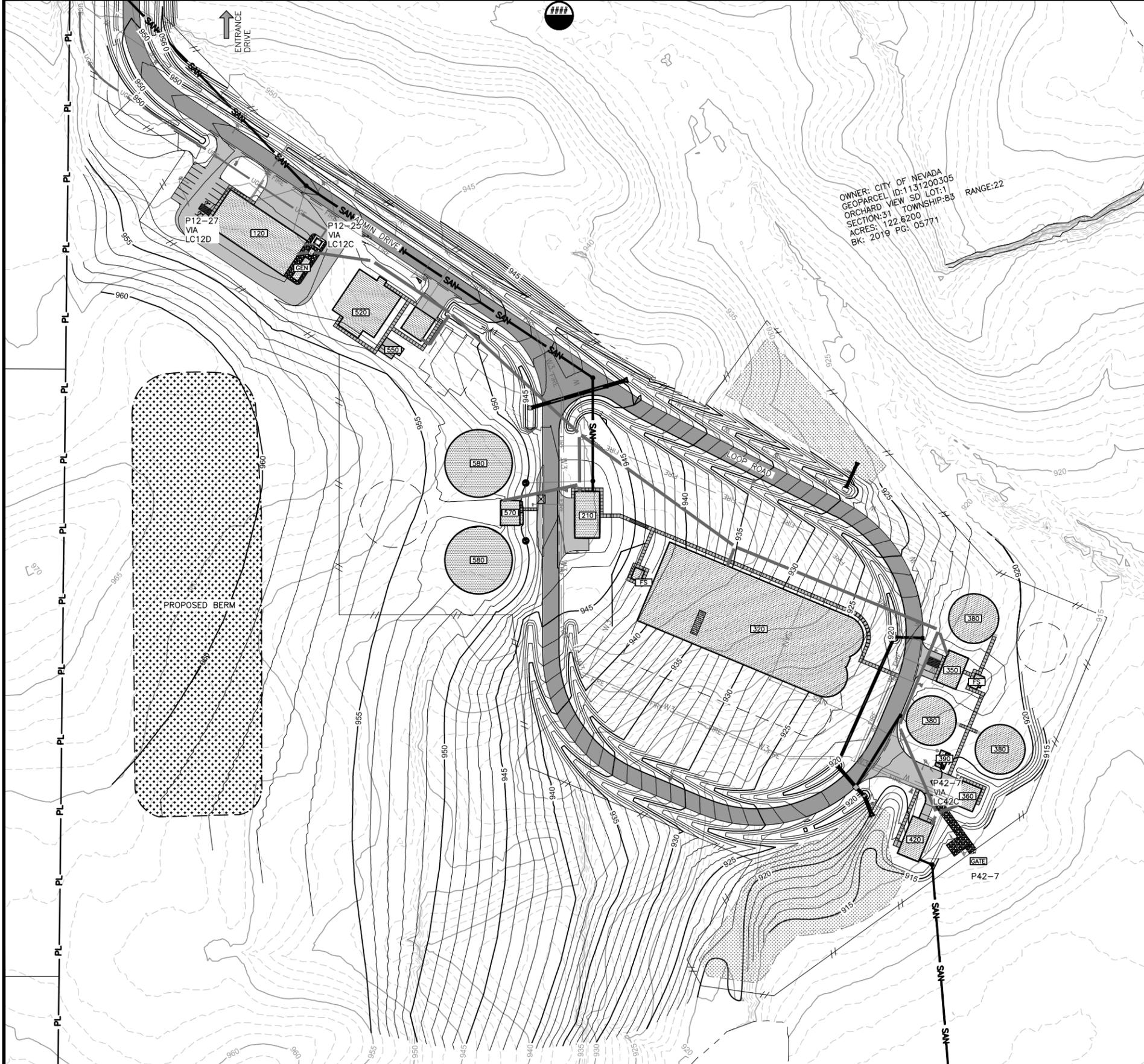
NO.	DATE	BY	REVISION DESCRIPTION



NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SITE WORK
ENTRANCE GRADING PLAN

SHEET NO.
C.03



OWNER: CITY OF NEVADA
 GEOPARCEL ID: 1131200305
 ORCHARD VIEW SD LOT: 1
 SECTION: 31 TOWNSHIP: 8S
 ACRES: 122.6200
 BK: 2019 PG: 05771
 RANGE: 22

GENERAL NOTES:

- SEE SHEET X.XX FOR GEOTECHNICAL REQUIREMENTS AROUND BUILDINGS AND TANKS.
- CONTRACTOR SHALL COMPLY WITH SPECIFICATION SECTION XX XXXX FOR SUPPORTS AND PROTECTION.
- CONTRACTOR SHALL COMPLY WITH ALL SPECIFICATIONS FOR DEWATERING, GRADING, EXCAVATION, FILL AND BACKFILL, AND TRENCHING. SEE GEOTECHNICAL INVESTIGATION REPORT FOR EARTHWORK RECOMMENDATIONS. INSTALL EARTHWORK ACCORDING TO SPECIFICATION AND RECOMMENDATIONS OF GEOTECHNICAL INVESTIGATION REPORT.
- WATER LEVELS WERE OBSERVED WITHIN THE DEPTHS OF PLANNED EXCAVATION FOR THE PROPOSED STRUCTURES. DEWATERING WILL BE REQUIRED WHERE SEEPAGE IS ENCOUNTERED. GROUNDWATER LEVELS SHOULD BE MAINTAINED AT LEAST TWO FEET BELOW BOTTOM OF EXCAVATION UNTIL FOUNDATION SLABS ARE COMPLETED. THE CONTRACTOR IS RESPONSIBLE FOR EMPLOYING APPROPRIATE DEWATERING METHODS TO CONTROL SEEPAGE INTO THE EXCAVATION. SEE GEOTECHNICAL REPORT FOR MORE INFORMATION ON DEWATERING.
- IN AREAS TO ACCEPT FILL, THE TOP 12 INCHES OF THE GROUND SURFACE SHALL BE SCARIFIED AND COMPACTED TO ELIMINATE A PLANE OF WEAKNESS ALONG THE CONTACT SURFACE. EACH LIFT PLACED ABOVE THE FOUNDATION LEVEL SHOULD BE COMPACT TO AT LEAST 95 PERCENT OF THE SOIL'S STANDARD PROCTOR DRY DENSITY (ASTM D698). THE MOISTURE CONTENT OF THE COHESIVE SOILS SHOULD BE MAINTAINED WITHIN A RANGE OF 0 PERCENT BELOW TO 4 PERCENT ABOVE THE MATERIAL'S STANDARD PROCTOR OPTIMUM MOISTURE CONTENT. GENERAL FILL MATERIAL TO COMPLY WITH SPECIFICATIONS AND SHALL BE FREE OF FOREIGN SUBSTANCE, DEBRIS, LARGE STONES, ROCKS, ROOTS, ORGANIC OR FROZEN MATERIAL, EXPANSIVE MATERIAL AND OTHER DELETERIOUS MATERIALS. UNSUITABLE SHALL BE DISPOSED OF BY THE CONTRACTOR.
- FILL SHOULD NOT BE FROZEN AND SHOULD NOT BE PLACED ON A FROZEN SURFACE. ALL COHESIVE SOILS USED AS FILL AT THIS SITE SHOULD HAVE A MAXIMUM LIQUID LIMIT OF 45 AND A MAXIMUM PLASTICITY INDEX OF 20.
- ENSURE THAT PREVIOUSLY COMPACTED LIFTS ARE SCARIFIED 2 INCHES DEEP PRIOR TO COMPACTING THE NEXT LIFT.
- USE EXISTING TOPSOIL STOCKPILE PLACED UNDER PRIOR CONTRACT TO PLACE 8" TOPSOIL TO MATCH FINAL GRADE ELEVATIONS AS SHOWN ON PLANS, EXCEPT IN AREAS TO BE SURFACED WITH GRAVEL, PAVEMENT, RIPRAP, OR OTHER DESIGNATED MATERIALS. REMOVE, STOCKPILE, AND REPLACE NATIVE MATERIAL 8 INCHES (TOPSOIL) BELOW EXISTING SURFACE FOR ALL AREAS DISTURBED (NOT SURFACED WITH GRAVEL, RIPRAP, OR OTHER DESIGNATED MATERIALS) WITHIN THE LIMITS OF CONSTRUCTION. NO ADDITIONAL PAYMENT WILL BE MADE FOR TOPSOIL OR MATERIAL THAT THE CONTRACTOR NEEDS TO IMPORT FROM OFFSITE.
- SITE GRADING SHALL PROVIDE FOR POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES AND FOUNDATIONS UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL CLEAR AND GRUB AREAS OF THE SITE AS NECESSARY TO PERFORM WORK. CLEARING AND GRUBBING SHALL BE PER SPECIFICATIONS.

STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIOSOLIDS PUMPING
580	BIOSOLIDS STORAGE

**SITWORK
 PLANT GRADING PLAN**
 SCALE: 1" = 80'



**PRELIMINARY
 NOT FOR CONSTRUCTION**

DRAWN BY: CMB, JST
 APPROVED: MAR
 CAD DATE: 8/1/2020 2:42:24 PM
 CAD FILE: J:\2016\160473\CAD\Dwgs\C\C.04 PLANT GRADING PLAN.dwg

JOB DATE: 2020
 JOB NUMBER: 160473

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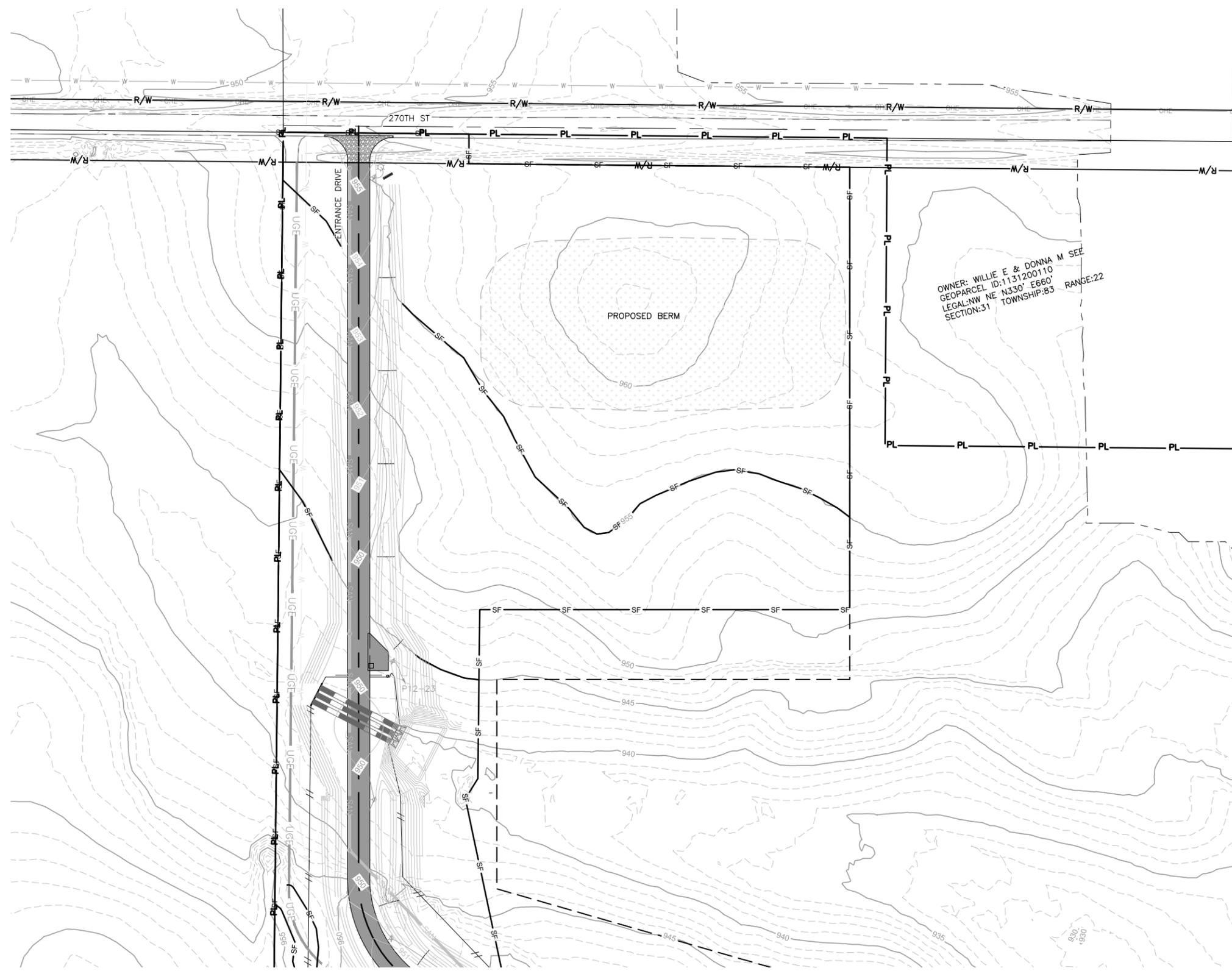
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 CITY OF NEVADA
 NEVADA, IOWA

**SITE WORK
 PLANT GRADING PLAN**

SHEET NO.
C.04

Xrefs: xgl-1-dh01; XCS-BASE; XCS-DBSON; XCS-PARCELS; XCS-RDW; XCS-BLDG-INDEX; XCS-CONT-FG; XCP-FATT; XCU-ELEC; XCU-SANI; XCU-STRM; XCU-WATR; XWG-CONT-EG; XLS-DSGN; XLS-S-FATT

Xrefs: xgl-1-dh01: XCS-BASE; XCS-DSON; XCS-PARCELS; XCS-ROW; XCS-VIEWFRAME; XCS-CONT-FG; XCU-ELEC; XCP-PATT; XCU-WATR; XCU-SANI; XCT-ALIGNMENT; XVG-COINT-EG; XCS-CONSTRUCTION-LIMITS; XLS-PATT; XLS-DSON; XCU-STRM; XCU-EROS-PHASED2



1 **SITWORK**
ENTRANCE EROSION CONTROL PLAN
 SCALE: 1"=60'



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SITE WORK
 ENTRANCE EROSION CONTROL PLAN

SHEET NO.
C.05

Xrefs: xgl-1-dh01; XCS-BASE; XCS-BSON; XCS-PARCELS; XCS-ROW; XCS-VIEWFRAME; XCS-BLDG-INDEX; XCS-CONT-FG; XCP-PATT; XCU-ELEC; XCU-SANI; XCU-STRM; XCU-WATR; XVG-CONT-EG; XCG-EROS-PHASE02



1 SITEWORK PLANT EROSION CONTROL PLAN
 SCALE: 1"=100'



NOTES:

1. REFERENCE SWPPP FOR MORE INFORMATION REGARDING EROSION AND SEDIMENT CONTROL.
2. HIGH-FLOW TYPE INLET PROTECTION TO BE PROVIDED FOR ALL EXISTING AND PROPOSED INTAKES. EXISTING INTAKES ARE TO BE PROTECTED UNTIL REMOVAL OR FINAL STABILIZATION. PROPOSED INTAKES ARE TO BE PROTECTED IMMEDIATELY FOLLOWING INSTALLATION UNTIL FINAL STABILIZATION. REPLACE ANY DAMAGED OR NON-FUNCTIONING INLET PROTECTION IMMEDIATELY.
3. ALL FOREIGN MATERIAL MUST BE PREVENTED FROM ENTERING EXISTING AND PROPOSED STORM SEWER INTAKES OR DRAINAGE WAYS.
4. THE SPREAD OF TRACK OUT IS TO BE MITIGATED DAILY. EXISTING PAVEMENT ADJACENT ENTRANCE/EXIT TO MUST BE SWEEPED DAILY AND CLEARED OF DIRT AND OTHER DEBRIS.
5. TRASH MUST BE PICKED UP DAILY.

EROSION AND SEDIMENT CONTROL GOOD HOUSEKEEPING PRACTICES:

DEMOLITION AND GRADING PHASE

1. PERIMETER EROSION CONTROLS MUST BE IN PLACE AND FUNCTIONING PRIOR TO LAND-DISTURBING ACTIVITIES.
2. STOCKPILES SHOULD BE SURROUNDED WITH SILT FENCE WHERE POSSIBLE. WHERE NOT FEASIBLE (I.E. ON PAVEMENT) USE EROSION SOCK. COVER STOCKPILES OVER NIGHT AND OVER WEEKENDS WHEN RAIN IS POSSIBLE

FINISHED PAVEMENT AND STRUCTURES PHASE

1. HIGH FLOW INLET PROTECTION MUST REMAIN IN PLACE UNTIL ENTIRE UPHILL AREA IS FINAL STABILIZED.
2. INSTALL AND MAINTAIN 12 INCH DIAMETER FILTER SOCKS AT THE TOE OF FRESH SLOPES AND BACK-OF-CURB ADJACENT TO DISTURBED SOILS.

DO NOT ALLOW ANYTHING OTHER THAN CLEAN, CLEAR WATER INTO THE EXISTING CULVERTS, STORM INTAKES NEWLY INSTALLED ON THE PROJECT SITE, OR THE DRAINAGE WAYS. ANYTHING ELSE MAY RESULT IN AN ILLICIT DISCHARGE CITATION.

PRELIMINARY
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 NEVADA, IOWA

SITE WORK
 PLANT EROSION CONTROL PLAN

SHEET NO.
C.06

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APPROVED: MAR JOB NUMBER: 160473
CAD DATE: 7/31/2020 8:40:54 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\C\C.07 EROSION CONTROL NOTES.dwg

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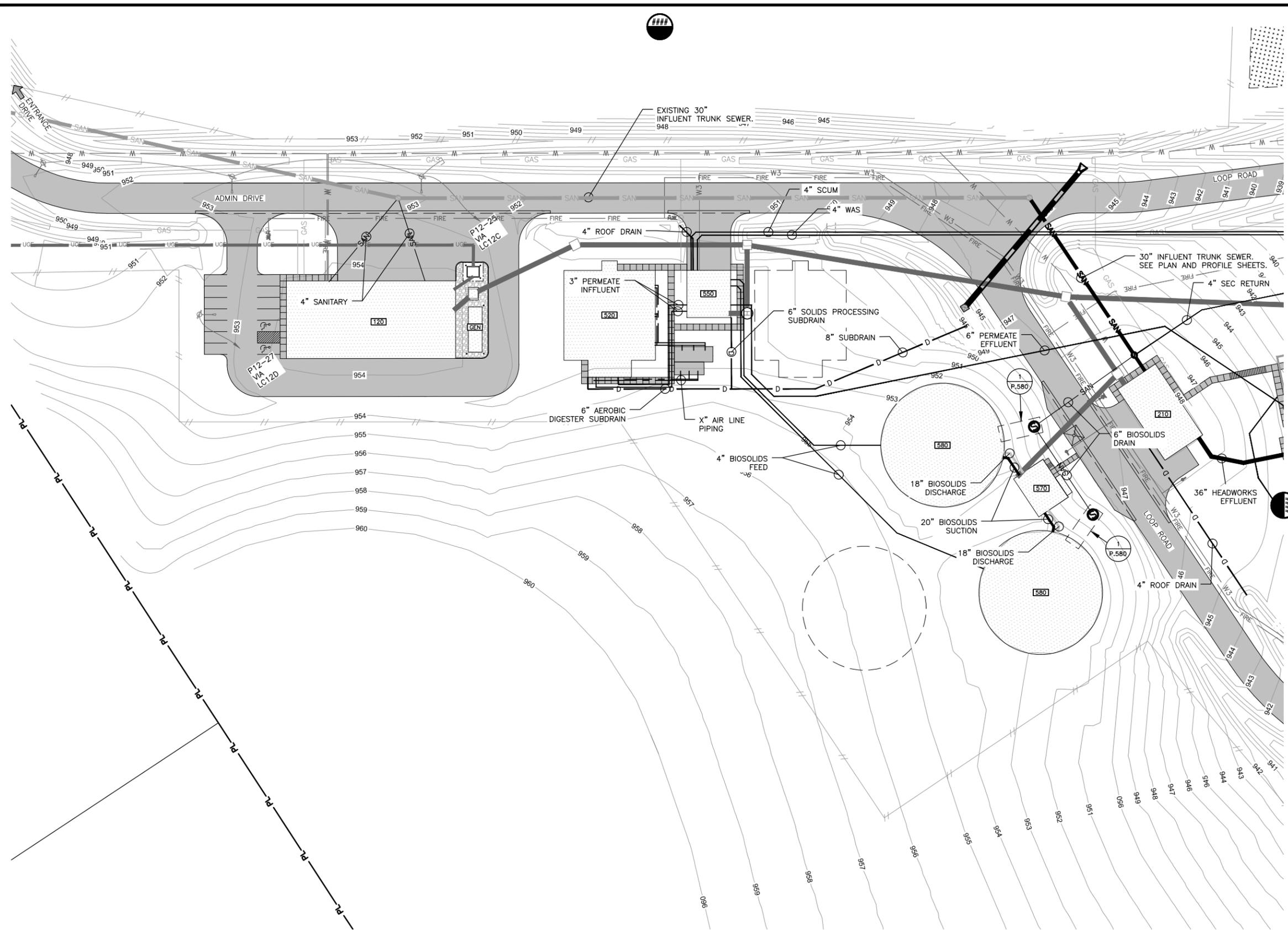
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SITE WORK
EROSION CONTROL NOTES

SHEET NO.
C.07

Xref: xgl-1-dh01

XREFS: xgl-1-dh01: XCS-BASE; XCS-BSON; XCS-PARCELS; XCS-ROW; XCS-BLDG-INDEX; XCT-ALIGNMENT; XCG-COINT-FG; XCP-PATT; XCU-ELEC; XCU-WATR; XVG-CONT-EG; XCU-PRCC; XCS-380-P01; XP-380-CLARIFIER-COMPLEX; XCU-SUBDRAIN; XCU-GAS; XCU-STRM; XCU-SANI



- GENERAL NOTES:**
1. THIS SHEET ONLY CONTAINS INFORMATION FOR YARD PROCESS, SANITARY, AND STORM PIPING.
 2. REFER TO AREA PLANS FOR PROCESS PIPE FITTING AND STRUCTURE LOCATIONS AND INVERT ELEVATIONS.
 3. REFER TO AREA PLANS FOR SANITARY SEWER FITTING AND STRUCTURE LOCATIONS AND INVERT ELEVATIONS.
 4. REFER TO C.19 FOR INFLUENT TRUNK SEWER PLAN AND PROFILE
 5. REFER TO C.23 FOR STORM PIPING AND STRUCTURE SCHEDULES.
 6. REFER TO SPECIFICATION SECTION 016300 FOR PIPELINE SCHEDULE AND MATERIAL SPECIFICATIONS.
 7. REFER TO C.10 FOR UTILITY PIPING PLAN CONTAINING GAS, POTABLE WATER, PLANT EFFLUENT WATER, AND FIRE WATER PIPING.
 8. LOADING CONDITIONS ON THE PIPES ARE CRITICAL. THE CONTRACTOR SHALL LIMIT THE EXCAVATION OF THE PIPE ENVELOPE PER SPECIFICATIONS. IF THE CONTRACTOR'S METHODS OF EXCAVATION AND/OR PIPE INSTALLATION RESULTS IN A PIPE ENVELOPE WIDER THAN THE MAXIMUM SPECIFIED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONCRETE BEDDING AND/OR CONCRETE ENCASEMENT OR OTHER MEANS NECESSARY TO PROVIDE FOR STRUCTURAL INTEGRITY OF THE PIPE CONSISTENT WITH THE DESIGN LOADING.
 9. PROCESS PIPING TO MAINTAIN STEADY SLOPE BETWEEN FITTINGS AND/OR CONNECTIONS. IF NO ELEVATION IS PROVIDED FOR A SPECIFIED FITTING, CONTRACTOR TO MAINTAIN CONSTANT SLOPE TO NEAREST ELEVATION PROVIDED.
 10. CONTRACTORS TO DEFLECT PIPING AT JOINTS AS NECESSARY IN ORDER TO CONNECT SPECIFIED FITTINGS. MAXIMUM DEFLECTION OF 1 DEGREE EACH JOINT FOR PROCESS PIPING OR AS RECOMMENDED BY MANUFACTURER, WHICHEVER IS LESS.
 11. FITTING BENDS MAY BE ROTATED ABOUT THE PIPE AXIS TO PRODUCE A SIMULTANEOUS HORIZONTAL/VERTICAL ALIGNMENT CHANGE.

STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIOSOLIDS PUMPING
580	BIOSOLIDS STORAGE

1 SITEWORK WEST YARD PIPING PLAN
 SCALE: 1" = 40'

PRELIMINARY NOT FOR CONSTRUCTION

DRAWN BY: CMB, JST	JOB DATE: 2020	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
APPROVED: MAR	JOB NUMBER: 160473	0" = 1"
CAD DATE: 8/3/2020 7:04:09 PM		IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
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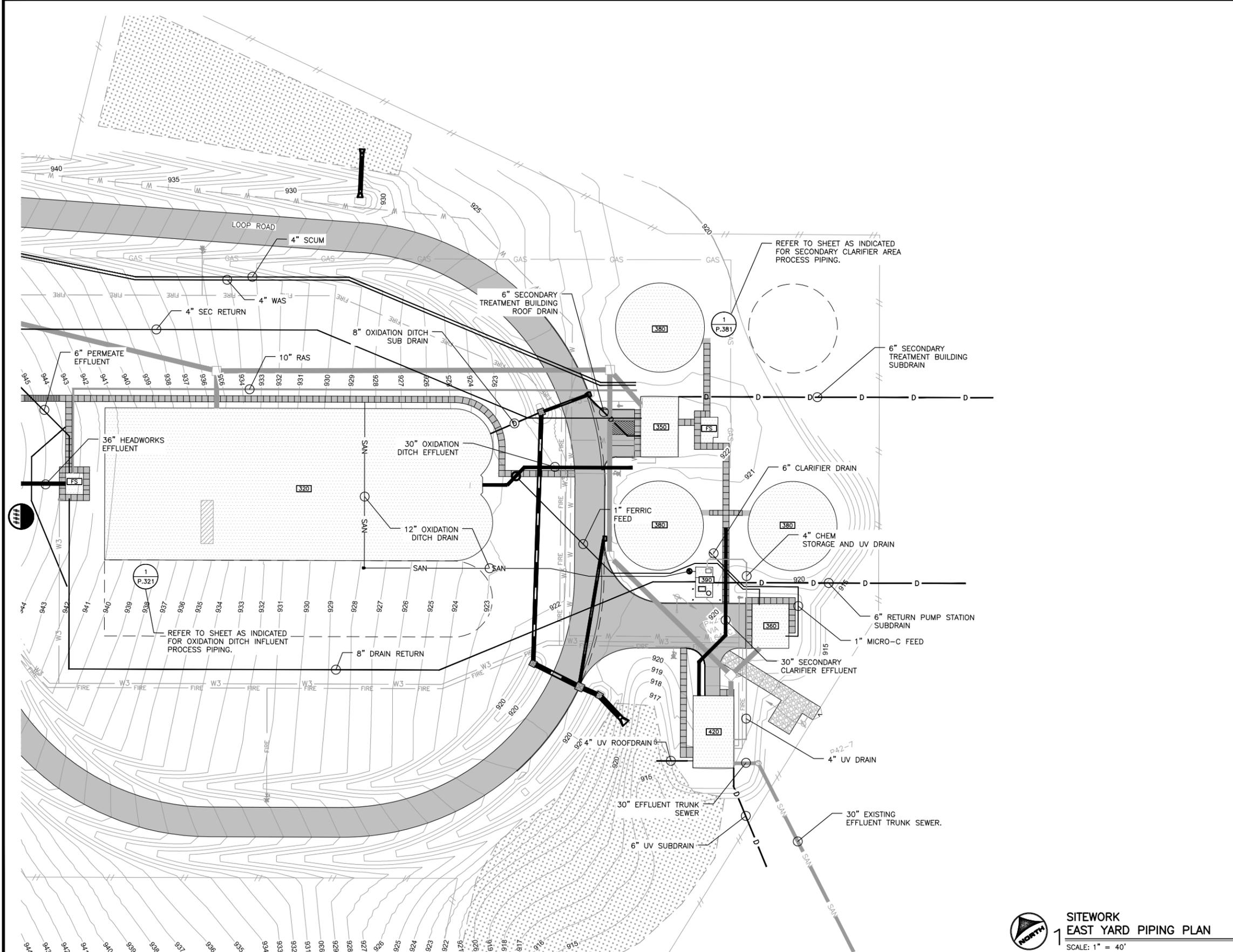
NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

SITE WORK
WEST YARD PIPING PLAN

SHEET NO.
C.08

GENERAL NOTES:

1. THIS SHEET ONLY CONTAINS INFORMATION FOR YARD PROCESS, SANITARY, AND STORM PIPING.
2. ALL GENERAL NOTES FROM C.07 WEST YARD PIPING PLAN APPLY TO THIS SHEET.



STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIOSOLIDS PUMPING
580	BIOSOLIDS STORAGE

SITWORK
EAST YARD PIPING PLAN
 SCALE: 1" = 40'

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB, JST JOB DATE: 2020
 APPROVED: MAR JOB NUMBER: 160473
 CAD DATE: 8/3/2020 7:08:21 PM
 CAD FILE: J:\2016\160473\CAD\Dwgs\C\C.09 EAST YARD PIPING PLAN.dwg

NO.	DATE	BY	REVISION DESCRIPTION



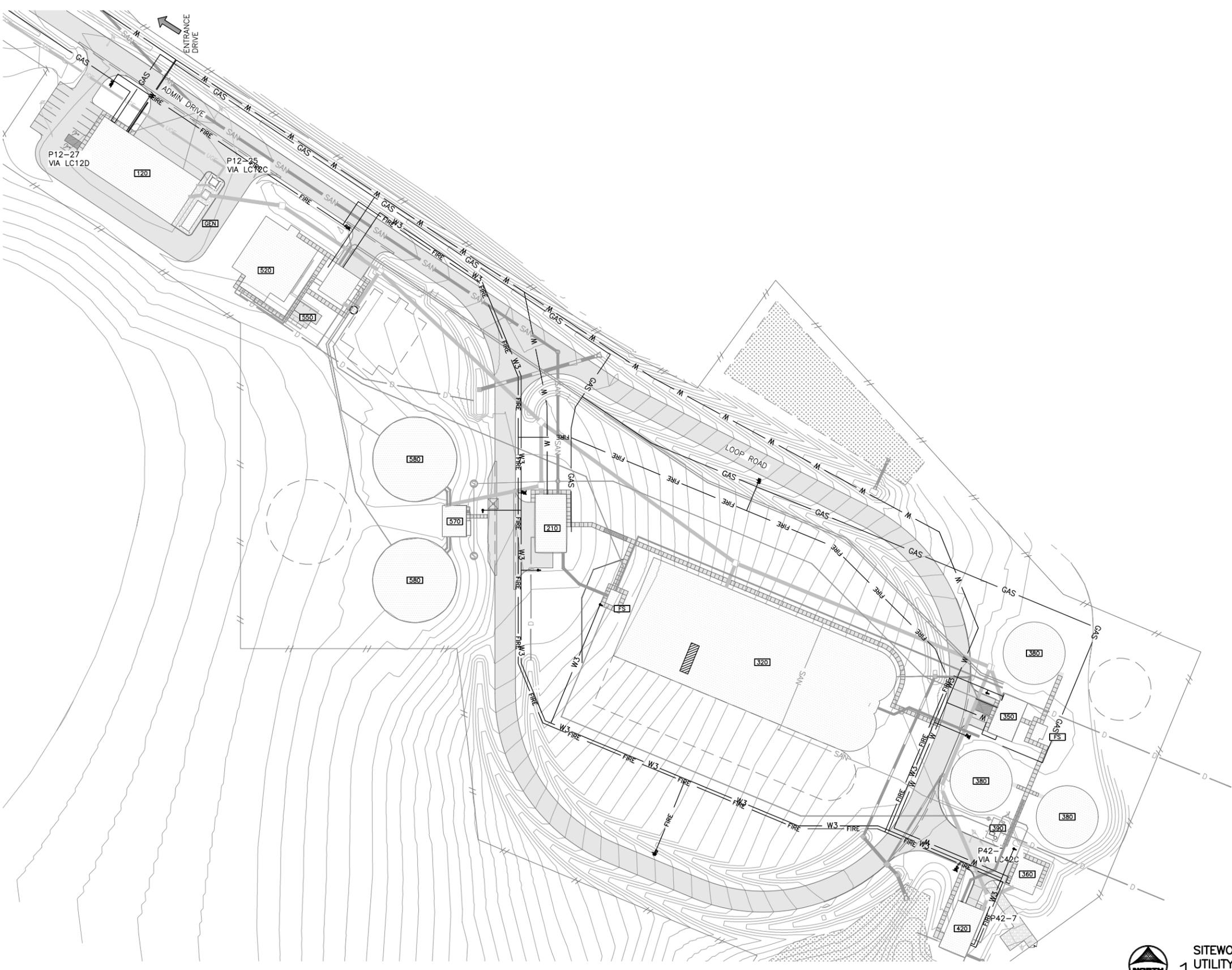
NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

SITE WORK
EAST YARD PIPING PLAN

SHEET NO.
C.09

Xref: xgl-1-dh01; XCS-BASE; XCS-BSON; XCS-BUDG-INDX; XCS-CONT-FG; XCP-PATT; XCU-ELEC; XCU-STRM; XCU-WATR; XCU-PROC; XCU-SANI; XCS-320-P01; XS-320-GRID; XP-320-P01; XCS-VIEWFRAME; XCG-CONT-EG; XCU-OAS; XCU-SUBDRIN

Xref: xgl-1-dh01: XCS-DSON: XCS-RDW: XCS-BLDG-INDEX: XCP-PATT: XCU-ELEC: XCU-SANI: XCU-STRM: XCU-WATR: XCU-PROC: XCU-OAS: XCG-CONT-FG: XCU-SUBRAIN



- GENERAL NOTES:**
1. THIS SHEET ONLY CONTAINS INFORMATION FOR UTILITY PIPING CONSISTING OF GAS, PLANT EFFLUENT WATER, FIRE WATER, AND POTABLE WATER PIPING.
 2. REFER TO C.11 ENTRANCE AREA PLAN FOR UTILITY PIPING LOCATIONS ALONG ENTRANCE DRIVE. ALL GENERAL NOTES FROM THIS PAGE APPLY TO UTILITY PIPING SHOWN ON SHEET C.11.
 3. REFER TO C.08 AND C.09 FOR YARD PIPING PLANS PROVIDING INFORMATION FOR ALL PROCESS, SANITARY, AND STORM PIPING.
 4. REFER TO SPECIFICATION SECTION XXXXXX FOR POTABLE WATER, FIRE WATER, AND PLANT EFFLUENT WATER MATERIAL SPECIFICATIONS.
 5. REFER TO SPECIFICATION SECTION XXXXXX FOR GAS PIPING MATERIAL SPECIFICATIONS.
 6. LOADING CONDITIONS ON THE PIPES ARE CRITICAL. THE CONTRACTOR SHALL LIMIT THE EXCAVATION OF THE PIPE ENVELOPE PER DETAIL XXXX/C.XX. IF THE CONTRACTOR'S METHODS OF EXCAVATION AND/OR PIPE INSTALLATION RESULTS IN A PIPE ENVELOPE WIDER THAN THE MAXIMUM SPECIFIED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONCRETE BEDDING AND/OR CONCRETE ENCASEMENT OR OTHER MEANS NECESSARY TO PROVIDE FOR STRUCTURAL INTEGRITY OF THE PIPE CONSISTENT WITH THE DESIGN LOADING.
 7. THE PLANT EFFLUENT WATER, FIRE WATER, POTABLE WATER, AND GAS MAINS SHALL BE INSTALLED TO A MINIMUM COVER OF FIVE (5) FEET, UNLESS OTHERWISE NOTED. POTABLE, FIRE, AND PLANT EFFLUENT WATER PIPING MAY REQUIRE DEEPER BURY IN LOCATIONS NECESSARY TO CROSS UNDER OTHER UTILITY LINES OR STRUCTURES. SUCH CROSSINGS SHALL BE MADE USING NORMAL PIPE DEFLECTION WITHOUT USING FITTINGS IF POSSIBLE. THE INSTALLED VERTICAL PROFILE OF THE POTABLE, FIRE, OR EFFLUENT WATER MAINS SHALL NOT RESULT IN ANY ADDITIONAL HIGH POINTS OTHER THAN THOSE INDICATED IN AREA PLANS BY HYDRANTS OR AIR RELEASE STATIONS. CONTRACTOR SHALL PERIODICALLY CHECK VERTICAL AND HORIZONTAL ALIGNMENT.
 8. ONLY KEY LOCATIONS AND DIMENSIONS ARE PROVIDED IN THE UTILITY PIPING PLAN. CONTRACTOR SHALL FOLLOW GENERAL LAYOUT AS SHOWN IN THE UTILITY PIPING PLAN IN ORDER TO CONNECT TO BUILDINGS, STRUCTURES, AND EQUIPMENT AS SHOWN IN THE MECHANICAL SHEETS.
 9. CONTRACTORS TO DEFLECT PIPING AT JOINTS AS NECESSARY TO CONNECT SPECIFIED FITTINGS. MAXIMUM DEFLECTION OF UP TO 1 DEGREE LESS THAN WHAT IS RECOMMENDED BY THE MANUFACTURER.
 10. CONTRACTOR TO ASSUME PRESSURE PIPE TRENCH EXCAVATION AND BEDDING FOR ALL UTILITY PIPING. SEE TRENCH EXCAVATION AND BEDDING DETAILS ON SHEET C.XX.
 11. CONTRACTOR IS RESPONSIBLE TO ENSURE POTABLE WATER AND FIRE WATER PIPING FOLLOWS ALL IOWA DNR REGULATIONS IN RELATION TO POTABLE WATER INSTALLATION.

STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL HEADWORKS
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIOSOLIDS PUMPING
580	BIOSOLIDS STORAGE



**SITWORK
UTILITY YARD PIPING PLAN**
SCALE: 1"=60'

**PRELIMINARY
NOT FOR CONSTRUCTION**

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 APPROVED: MAR JOB NUMBER: 160473
 CAD DATE: 8/3/2020 9:17:48 PM
 CAD FILE: J:\2016\160473\CAD\Dwg\VC\C.10 UTILITY YARD PIPING PLAN.dwg

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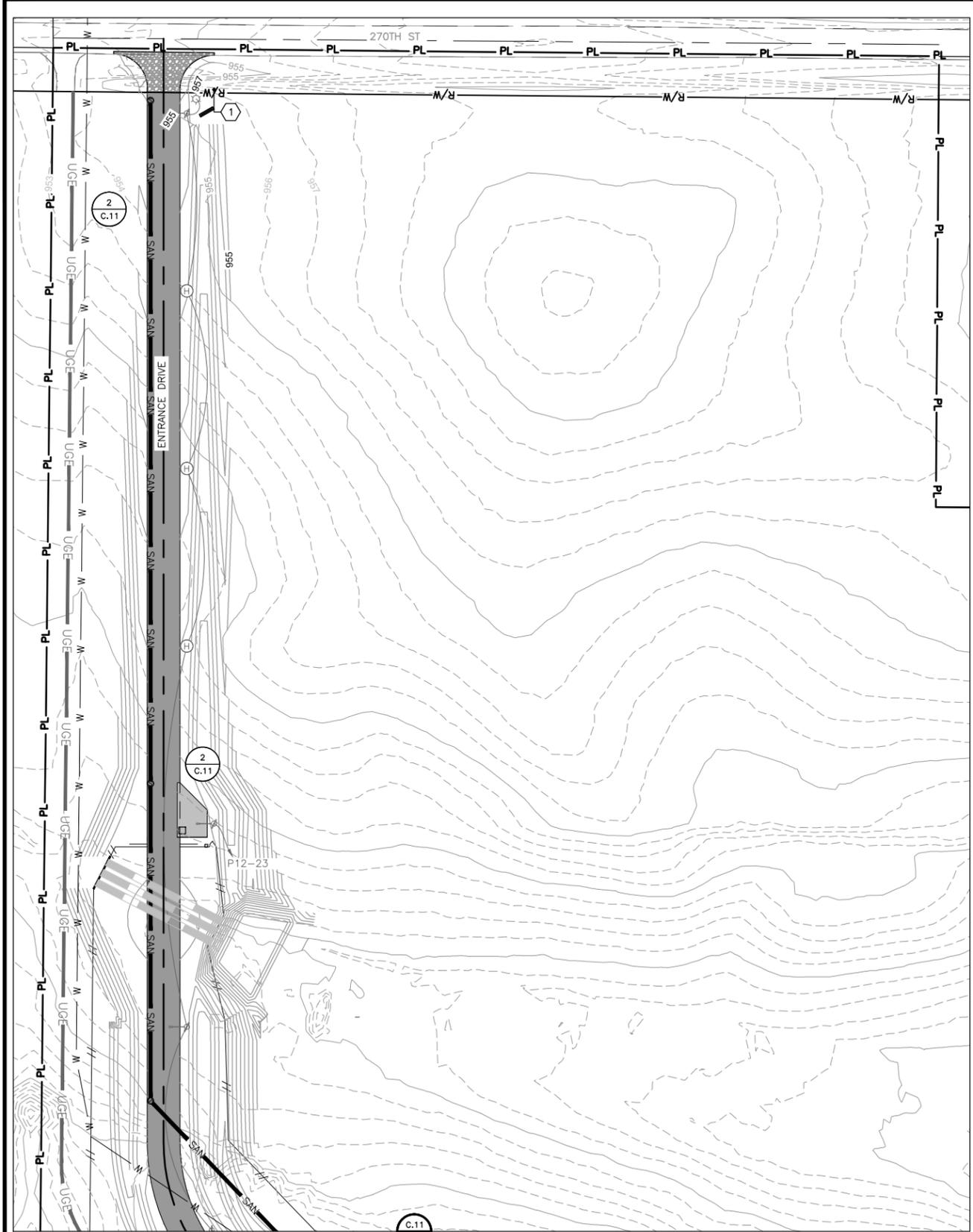


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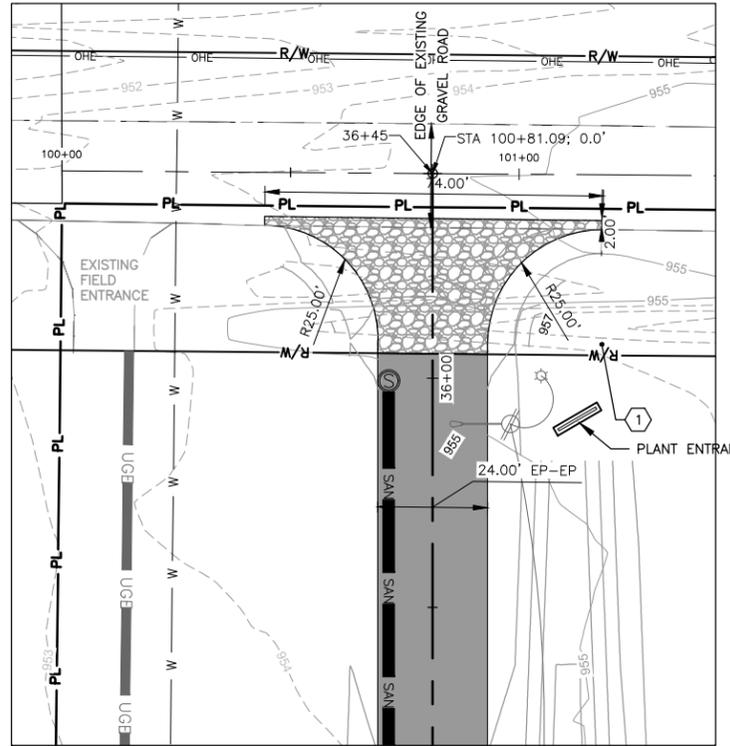
SITE WORK
 UTILITY YARD PIPING PLAN

SHEET NO.
C.10

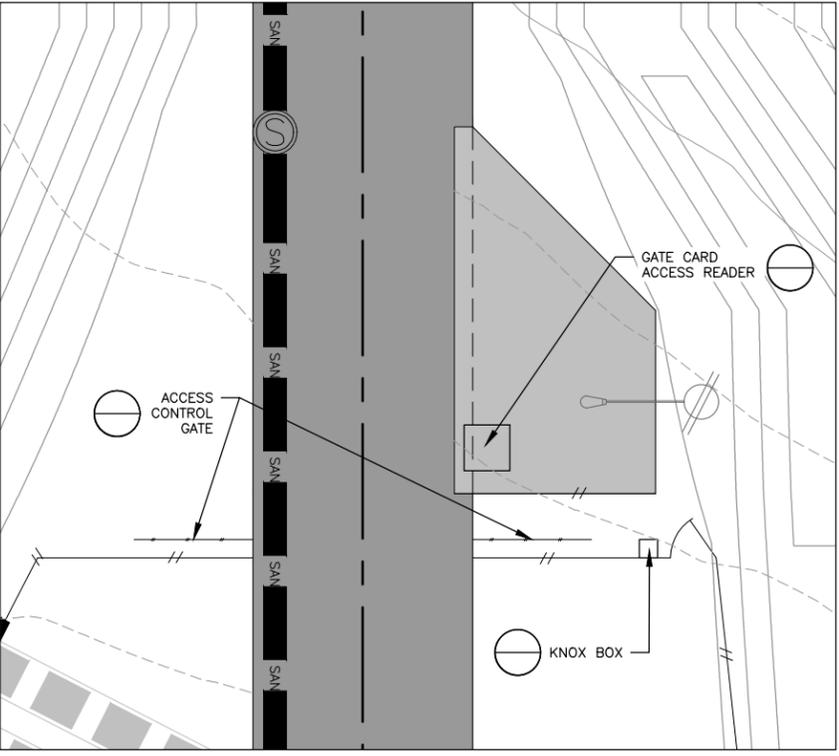
Xref: xgl-1-dh01: XCS=BASE; XCS=DSON; XCS=ROW; XCS=PARCELS; XCS=BLDG-AREA-NOTES; XCS=CONT-FG; XCU=ELEC; XCP=PATT; XCU=WATR; XCU=SAN; XCU=STRM; XVG=CONT-EG



1 SITEWORK ENTRANCE AREA PLAN
SCALE: 1"=50'



2 SITEWORK ENLARGED ENTRANCE DRIVE
SCALE: 1"=20'



3 SITEWORK ENLARGED ENTRANCE GATE
SCALE: 1"=20'

GENERAL NOTES:

1. ENTRANCE AREA PLAN IS INTENDED TO SHOW LOCATIONS AND ELEVATIONS FOR SITE ELEMENTS INCLUDING: STRUCTURES, SIDEWALKS, MISCELLANEOUS PAVEMENT, MISCELLANEOUS SITE ELEMENTS, KEY GRADE LOCATES, UTILITY PIPING, ENTRANCE GATE, AND PROCESS AND SANITARY SEWER FITTINGS.
2. ENTRANCE AREA PLAN DOES NOT PROVIDE INFORMATION REGARDING SITE ELECTRIC, FENCING, ENTRANCE AND LOOP ROAD PAVEMENT, AND STORM PIPING. SITE ELEMENTS WITH NO INFORMATION PROVIDED OR SHOWN IN OTHER PLANS ARE SHOWN AS "SCREENED" (LIGHT) DELINEATION ON AREA PLAN. REFER TO RESPECTIVE CIVIL AND ELECTRICAL DRAWINGS FOR INFORMATION.
3. REFER TO YARD PIPING PLANS (C.08-C.09) FOR ADDITIONAL GENERAL NOTES REGARDING CONSTRUCTION OF SITE PROCESS, SANITARY, AND STORM PIPING.
4. REFER TO C.10 UTILITY PIPING PLAN FOR ADDITIONAL GENERAL NOTES REGARDING CONSTRUCTION OF SITE UTILITY PIPING AS SHOWN ON THE ENTRANCE AREA PLAN.
9. SEE C.02 FOR PAVING AND FENCING PLAN.
10. SEE C.03-C.04 FOR COMPLETE SITE GRADING PLAN.
11. SEE C.05-C.07 FOR EROSION CONTROL. EROSION CONTROL ELEMENTS NOT SHOWN ON AREA PLAN.
12. SEE C.23 FOR STORM SEWER SCHEDULE.
13. SEE C.23-C.34 FOR CIVIL DETAILS.
14. SEE E.01-E.06 FOR ELECTRICAL SITE PLANS.

KEY NOTES:

KEY NOTE TABLE				
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	KEY LOCATION	3450181.91	4933810.70	0.00

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DRAWN BY: CMB, JST JOB DATE: 2020
 APPROVED: MAR JOB NUMBER: 160473
 CAD DATE: 8/3/2020 7:03:12 PM
 CAD FILE: J:\2016\160473\CAD\Dwgs\C\C.11 ENTRANCE AREA PLAN.dwg

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NO.	DATE	BY	REVISION DESCRIPTION

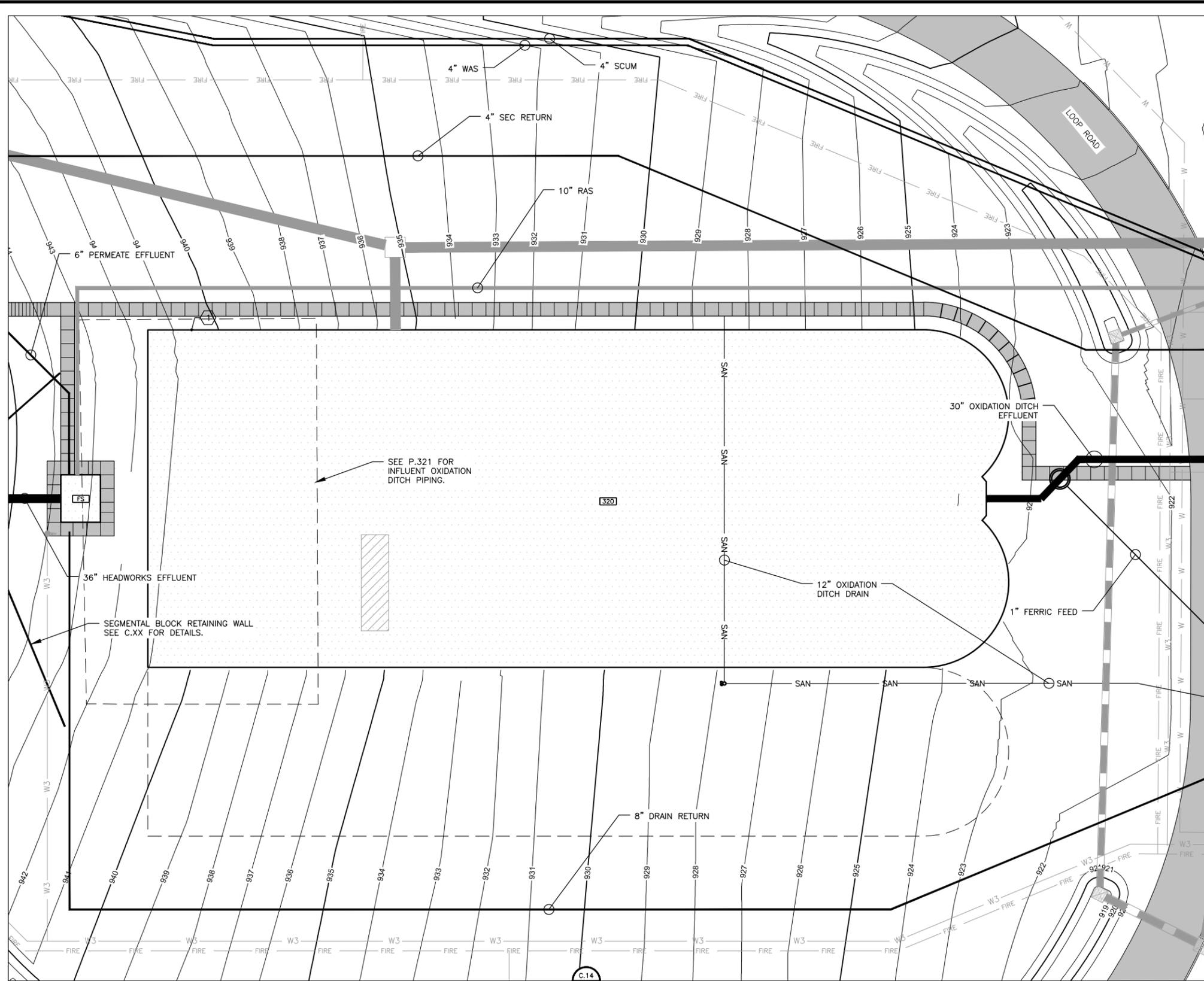


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SITE WORK
 ENTRANCE AREA PLAN

SHEET NO.
C.11

X:\gis\1-dh01: XCS-BASE; XCS-BSON; XCS-PARCELS; XCS-ROW; XCS-BLDG-AREA-NOTES; XA-120-P01; XCG-CONT-FG; XVG-CONT-FG; XCP-PATT; XCU-WATR; XCU-ELEC; XCU-SANI; XCU-STRM; XCS-320-P01; XS-320-GRID; XP-320-P01; XCU-PROC; XCU-SUBDRAIN; XCU-OAS



1 SITWORK OXIDATION DITCHES AREA PLAN
 SCALE: 1"=20'

BUILDING KEY

- | | |
|--------------------------------------|----------------------------|
| 120 - ADMINISTRATION VEHICLE STORAGE | 420 - UV TREATMENT |
| 210 - HEADWORKS | 520 - AEROBIC DIGESTION |
| 230 - GRIT REMOVAL | 550 - BIOSOLIDS PROCESSING |
| 320 - OXIDATION DITCHES | 570 - BIOSOLIDS PUMPING |
| 350 - SECONDARY TREATMENT | 580 - BIOSOLIDS STORAGE |
| 380 - CLARIFIERS | |

GENERAL NOTES:

- AREA PLAN IS INTENDED TO SHOW LOCATIONS AND ELEVATIONS FOR SITE ELEMENTS INCLUDING: STRUCTURES, SIDEWALKS, MISCELLANEOUS PAVEMENT, MISCELLANEOUS SITE ELEMENTS, KEY GRADE LOCATES, AND PROCESS AND SANITARY SEWER FITTINGS.
- AREA PLAN DOES NOT PROVIDE INFORMATION REGARDING SITE ELECTRIC, FENCING, ENTRANCE AND LOOP ROAD PAVEMENT, UTILITY PIPING, AND STORM PIPING. SITE ELEMENTS WITH NO INFORMATION PROVIDED OR SHOWN IN OTHER PLANS ARE SHOWN AS "SCREENED" (LIGHT) DELINEATION ON AREA PLAN. REFER TO RESPECTIVE CIVIL AND ELECTRIC DRAWINGS FOR INFORMATION.
- REFER TO YARD PIPING PLANS (C.08-C.09) FOR ADDITIONAL GENERAL NOTES REGARDING CONSTRUCTION OF SITE PROCESS, SANITARY, AND STORM PIPING.
- SEE C.02 FOR PAVING AND FENCING PLAN.
- SEE C.03-C.04 FOR COMPLETE SITE GRADING PLAN.
- SEE C.05-C.07 FOR EROSION CONTROL. EROSION CONTROL ELEMENTS NOT SHOWN ON AREA PLAN.
- SEE C.10 FOR UTILITY PIPING PLAN.
- SEE C.23 FOR STORM SEWER SCHEDULE.
- SEE C.23-C.34 FOR CIVIL DETAILS.
- SEE E.01-E.06 FOR ELECTRICAL SITE PLANS.

KEY NOTES:

KEY NOTE TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	KEY LOCATION	3448645.90	4934568.94	0.00

PRELIMINARY
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 APPROVED: MAR JOB NUMBER: 160473
 CAD DATE: 8/3/2020 6:30:25 PM
 CAD FILE: J:\2016\160473\CAD\Dwgs\C\C.14 OXIDATION DITCHES AREA PLAN.dwg

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 0" = 1"
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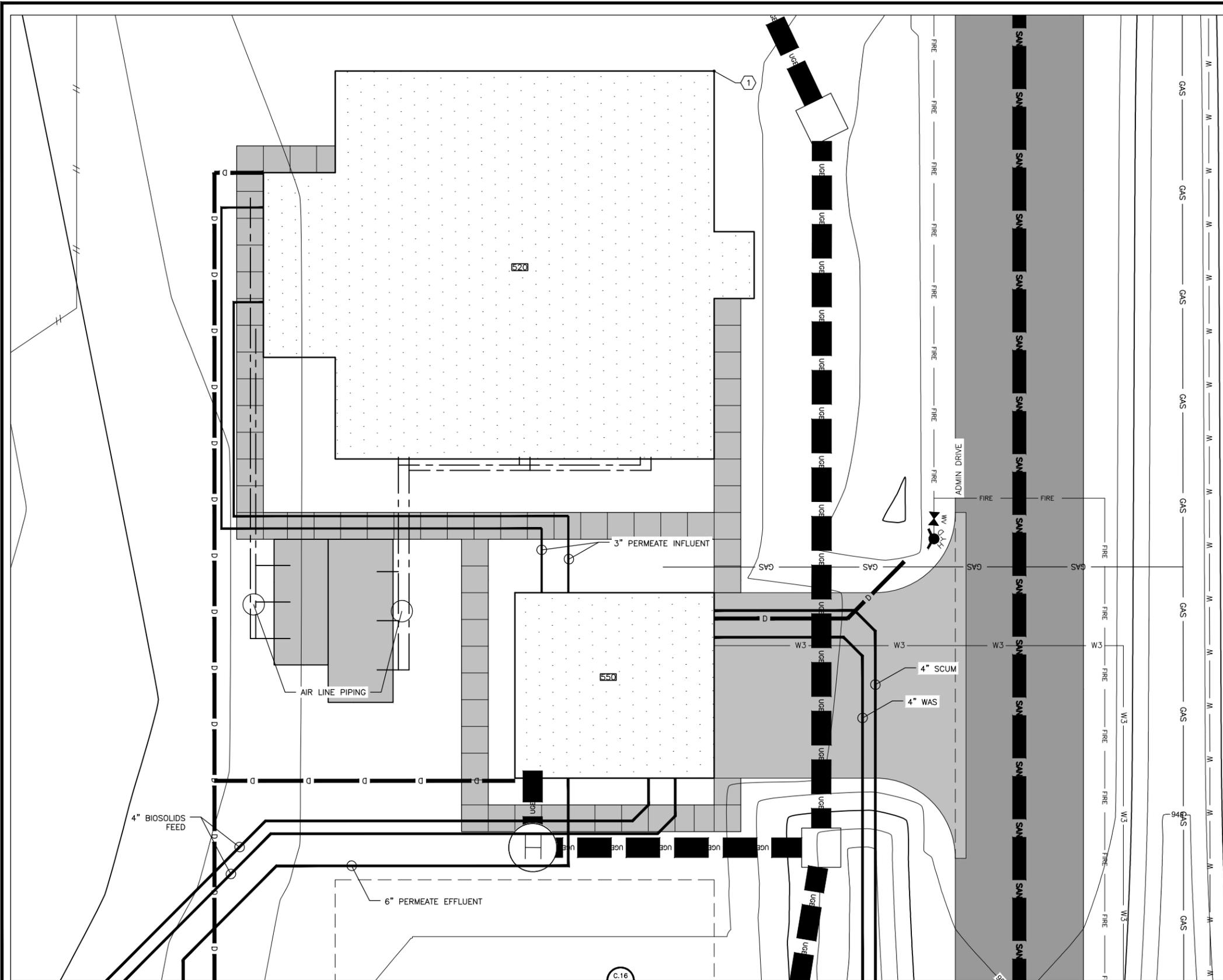


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SITE WORK
 OXIDATION DITCHES AREA PLAN

SHEET NO.
C.14

Xrefs: xgl-1-dh01; XCS-BASE; XCS-DSON; XCS-PARCELS; XCS-RDW; XCS-BLDG-AREA-NOTES; XIG-CONT-EG; XCG-CONT-FG; XCP-CONT-FG; XCU-ELEC; XCU-SANI; XCU-STRM; XCU-WATR; XCU-PROC; XCU-SUBRAIN; XCU-GAS



BUILDING KEY

- 120 - ADMINISTRATION VEHICLE STORAGE
- 210 - HEADWORKS
- 230 - GRIT REMOVAL
- 320 - OXIDATION DITCHES
- 350 - SECONDARY TREATMENT
- 380 - CLARIFIERS
- 420 - UV TREATMENT
- 520 - AEROBIC DIGESTION
- 550 - BIOSOLIDS PROCESSING
- 570 - BIOSOLIDS PUMPING
- 580 - BIOSOLIDS STORAGE

GENERAL NOTES:

1. AREA PLAN IS INTENDED TO SHOW LOCATIONS AND ELEVATIONS FOR SITE ELEMENTS INCLUDING: STRUCTURES, SIDEWALKS, MISCELLANEOUS PAVEMENT, MISCELLANEOUS SITE ELEMENTS, KEY GRADE LOCATES, AND PROCESS AND SANITARY SEWER FITTINGS.
2. AREA PLAN DOES NOT PROVIDE INFORMATION REGARDING SITE ELECTRIC, FENCING, ENTRANCE AND LOOP ROAD PAVEMENT, UTILITY PIPING, AND STORM PIPING. SITE ELEMENTS WITH NO INFORMATION PROVIDED OR SHOWN IN OTHER PLANS ARE SHOWN AS "SCREENED" (LIGHT) DELINEATION ON AREA PLAN. REFER TO RESPECTIVE CIVIL AND ELECTRIC DRAWINGS FOR INFORMATION.
3. REFER TO YARD PIPING PLANS (C.08-C.09) FOR ADDITIONAL GENERAL NOTES REGARDING CONSTRUCTION OF SITE PROCESS, SANITARY, AND STORM PIPING.
9. SEE C.02 FOR PAVING AND FENCING PLAN.
10. SEE C.03-C.04 FOR COMPLETE SITE GRADING PLAN.
11. SEE C.05-C.07 FOR EROSION CONTROL. EROSION CONTROL ELEMENTS NOT SHOWN ON AREA PLAN.
6. SEE C.10 FOR UTILITY PIPING PLAN.
7. SEE C.23 FOR STORM SEWER SCHEDULE.
8. SEE C.23-C.34 FOR CIVIL DETAILS.
9. SEE E.01-E.06 FOR ELECTRICAL SITE PLANS.

KEY NOTES:

KEY NOTE TABLE

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	KEY LOCATION	3449046.94	4934104.46	0.00

SITWORK
1 AEROBIC DIGESTERS AREA PLAN
 SCALE: 1"=10'

PRELIMINARY
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 APPROVED: MAR JOB NUMBER: 160473
 CAD DATE: 8/3/2020 6:00:39 PM
 CAD FILE: J:\2016\160473\CAD\Drawings\C.16 AEROBIC DIGESTERS AREA PLAN.dwg

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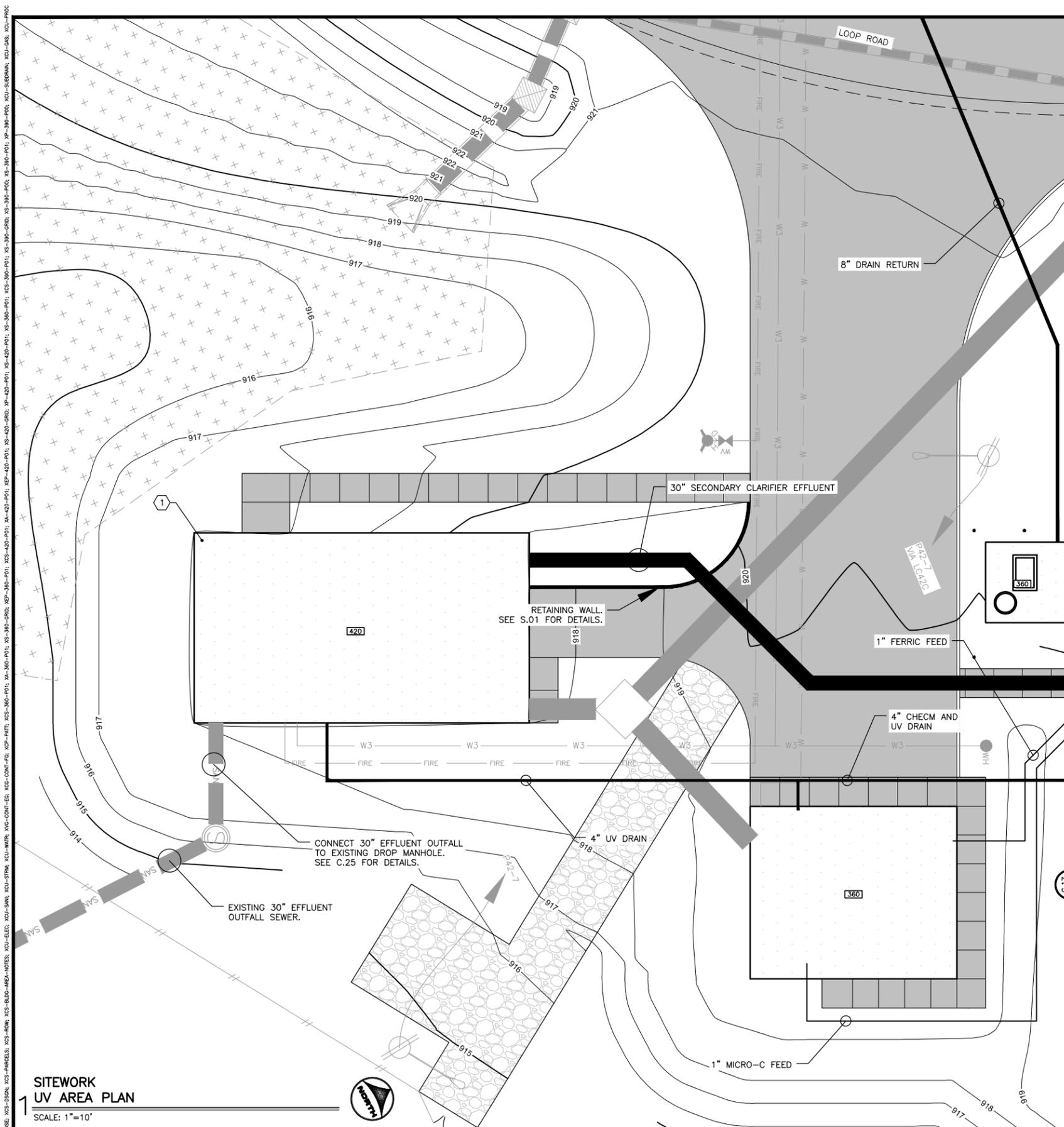
NO.	DATE	BY	REVISION DESCRIPTION



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SITE WORK
AEROBIC DIGESTERS AREA PLAN

SHEET NO.
C.16



BUILDING KEY

120 - ADMINISTRATION VEHICLE STORAGE	420 - UV TREATMENT
210 - HEADWORKS	520 - AEROBIC DIGESTION
230 - GRIT REMOVAL	550 - BIOSOLIDS PROCESSING
320 - OXIDATION DITCHES	570 - BIOSOLIDS PUMPING
350 - SECONDARY TREATMENT	580 - BIOSOLIDS STORAGE
380 - CLARIFIERS	

- GENERAL NOTES:**
1. AREA PLAN IS INTENDED TO SHOW LOCATIONS AND ELEVATIONS FOR SITE ELEMENTS INCLUDING: STRUCTURES, SIDEWALKS, MISCELLANEOUS PAVEMENT, MISCELLANEOUS SITE ELEMENTS, KEY GRADE LOCATES, AND PROCESS AND SANITARY SEWER FITTINGS.
 2. AREA PLAN DOES NOT PROVIDE INFORMATION REGARDING SITE ELECTRIC, FENCING, ENTRANCE AND LOOP ROAD PAVEMENT, UTILITY PIPING, AND STORM PIPING. SITE ELEMENTS WITH NO INFORMATION PROVIDED OR SHOWN IN OTHER PLANS ARE SHOWN AS "SCREENED" (LIGHT) DELINEATION ON AREA PLAN. REFER TO RESPECTIVE CIVIL AND ELECTRIC DRAWINGS FOR INFORMATION.
 3. REFER TO YARD PIPING PLANS (C.08-C.09) FOR ADDITIONAL GENERAL NOTES REGARDING CONSTRUCTION OF SITE PROCESS, SANITARY, AND STORM PIPING.
 9. SEE C.02 FOR PAVING AND FENCING PLAN.
 10. SEE C.03-C.04 FOR COMPLETE SITE GRADING PLAN.
 11. SEE C.05-C.07 FOR EROSION CONTROL. EROSION CONTROL ELEMENTS NOT SHOWN ON AREA PLAN.
 6. SEE C.10 FOR UTILITY PIPING PLAN.
 7. SEE C.23 FOR STORM SEWER SCHEDULE.
 8. SEE C.23-C.34 FOR CIVIL DETAILS.
 9. SEE E.01-E.06 FOR ELECTRICAL SITE PLANS.

KEY NOTES: ○

KEY NOTE TABLE				
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	KEY LOCATION	3448202.29	4934886.25	0.00

**SITWORK
UV AREA PLAN**
SCALE: 1"=10'

**PRELIMINARY
NOT FOR CONSTRUCTION**

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APPROVED: MAR JOB NUMBER: 160473 IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
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NO.	DATE	BY	REVISION DESCRIPTION

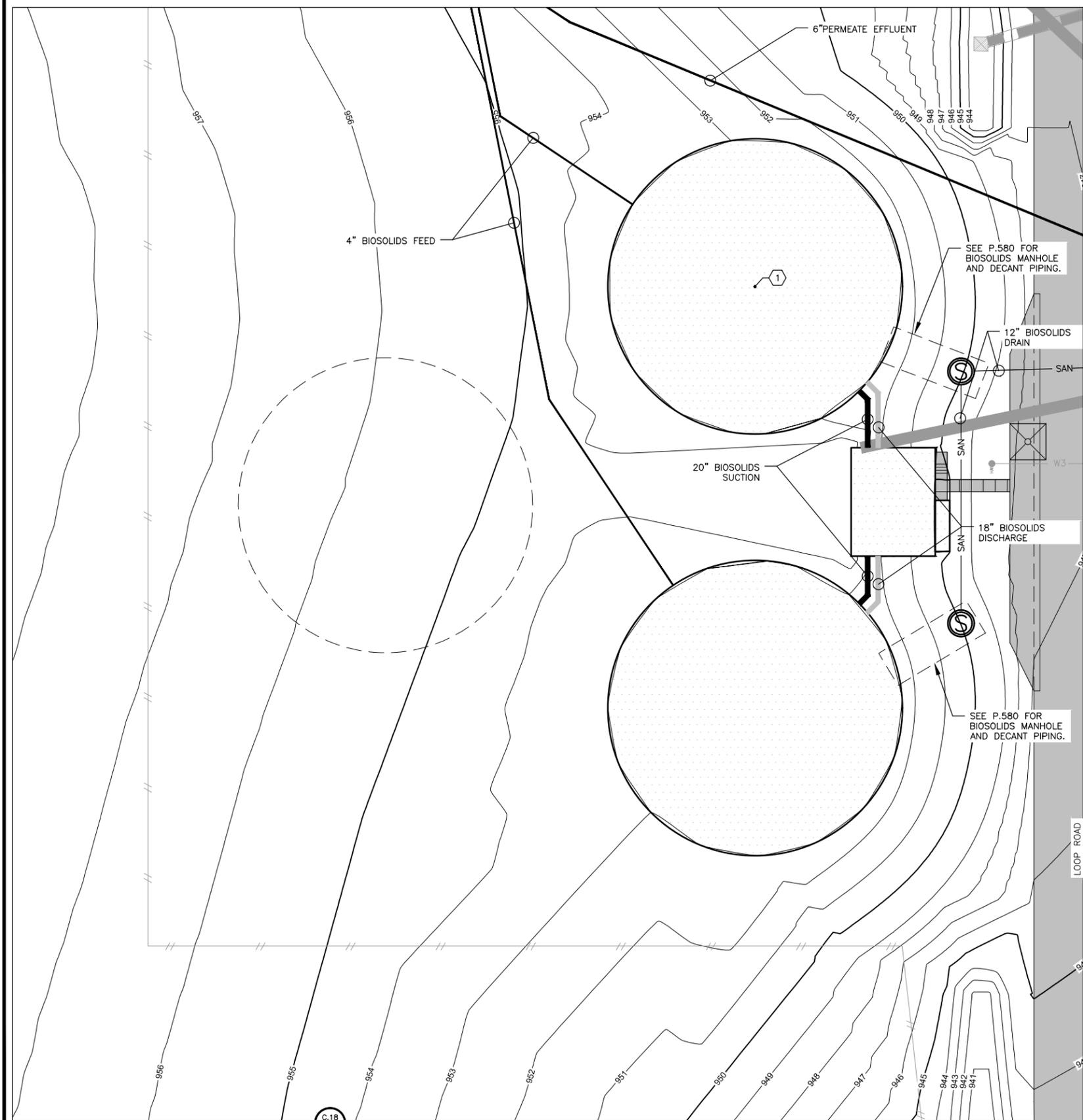


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NEVADA, IOWA

SITE WORK
UV AREA PLAN

SHEET NO.
C.17

Xref: xgl-1-r001; XCS-BASE; XCS-DSGN; XCS-PARCELS; XCS-ROW; XCS-BLDG-AREA-NOTES; XWG-CONT-EG; XCD-CONT-FG; XCP-PAT; XCU-ELEC; XCU-SNM; XCU-STRM; XCU-WATR; XCS-580-PD1; XP-580-PD0; XS-580-PD0; XCU-PROC; XCU-SUBBRNWK; XCU-GAS



BUILDING KEY

120 - ADMINISTRATION VEHICLE STORAGE	420 - UV TREATMENT
210 - HEADWORKS	520 - AEROBIC DIGESTION
230 - GRIT REMOVAL	550 - BIOSOLIDS PROCESSING
320 - OXIDATION DITCHES	570 - BIOSOLIDS PUMPING
350 - SECONDARY TREATMENT	580 - BIOSOLIDS STORAGE
380 - CLARIFIERS	

- GENERAL NOTES:**
1. AREA PLAN IS INTENDED TO SHOW LOCATIONS AND ELEVATIONS FOR SITE ELEMENTS INCLUDING: STRUCTURES, SIDEWALKS, MISCELLANEOUS PAVEMENT, MISCELLANEOUS SITE ELEMENTS, KEY GRADE LOCATES, AND PROCESS AND SANITARY SEWER FITTINGS.
 2. AREA PLAN DOES NOT PROVIDE INFORMATION REGARDING SITE ELECTRIC, FENCING, ENTRANCE AND LOOP ROAD PAVEMENT, UTILITY PIPING, AND STORM PIPING. SITE ELEMENTS WITH NO INFORMATION PROVIDED OR SHOWN IN OTHER PLANS ARE SHOWN AS "SCREENED" (LIGHT) DELINEATION ON AREA PLAN. REFER TO RESPECTIVE CIVIL AND ELECTRIC DRAWINGS FOR INFORMATION.
 3. REFER TO YARD PIPING PLANS (C.08-C.09) FOR ADDITIONAL GENERAL NOTES REGARDING CONSTRUCTION OF SITE PROCESS, SANITARY, AND STORM PIPING.
 9. SEE C.02 FOR PAVING AND FENCING PLAN.
 10. SEE C.03-C.04 FOR COMPLETE SITE GRADING PLAN.
 11. SEE C.05-C.07 FOR EROSION CONTROL. EROSION CONTROL ELEMENTS NOT SHOWN ON AREA PLAN.
 6. SEE C.10 FOR UTILITY PIPING PLAN.
 7. SEE C.23 FOR STORM SEWER SCHEDULE.
 8. SEE C.23-C.34 FOR CIVIL DETAILS.
 9. SEE E.01-E.06 FOR ELECTRICAL SITE PLANS.

KEY NOTES:

KEY NOTE TABLE				
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	KEY LOCATION	3448765.46	4934276.93	0.00

1 SITEWORK
 BIOSOLIDS TANK AREA PLAN
 SCALE: 1"=20'



PRELIMINARY
 NOT FOR CONSTRUCTION

DRAWN BY: CMB, JST JOB DATE: 2020
 APPROVED: MAR JOB NUMBER: 160473
 CAD DATE: 8/3/2020 6:05:57 PM
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 ADJUST SCALE ACCORDINGLY.

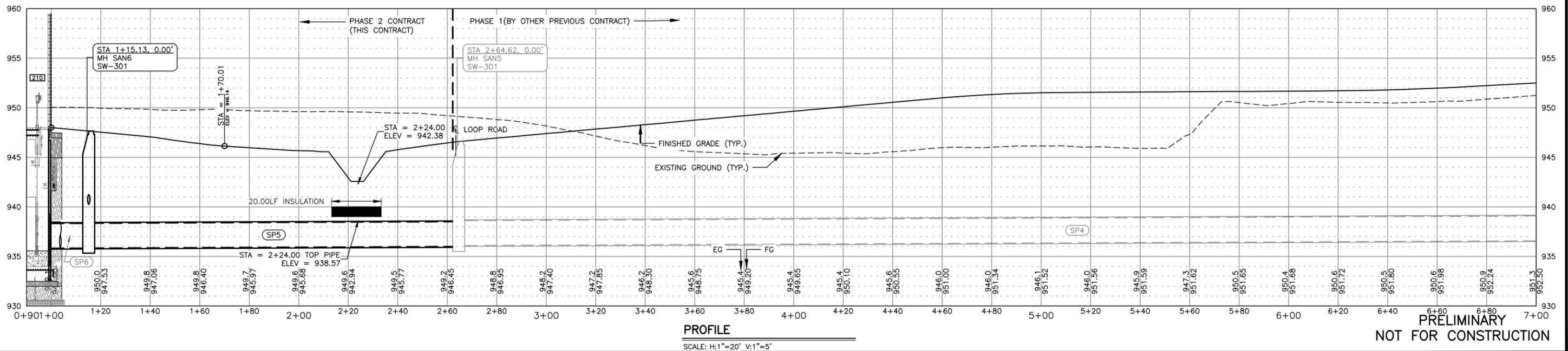
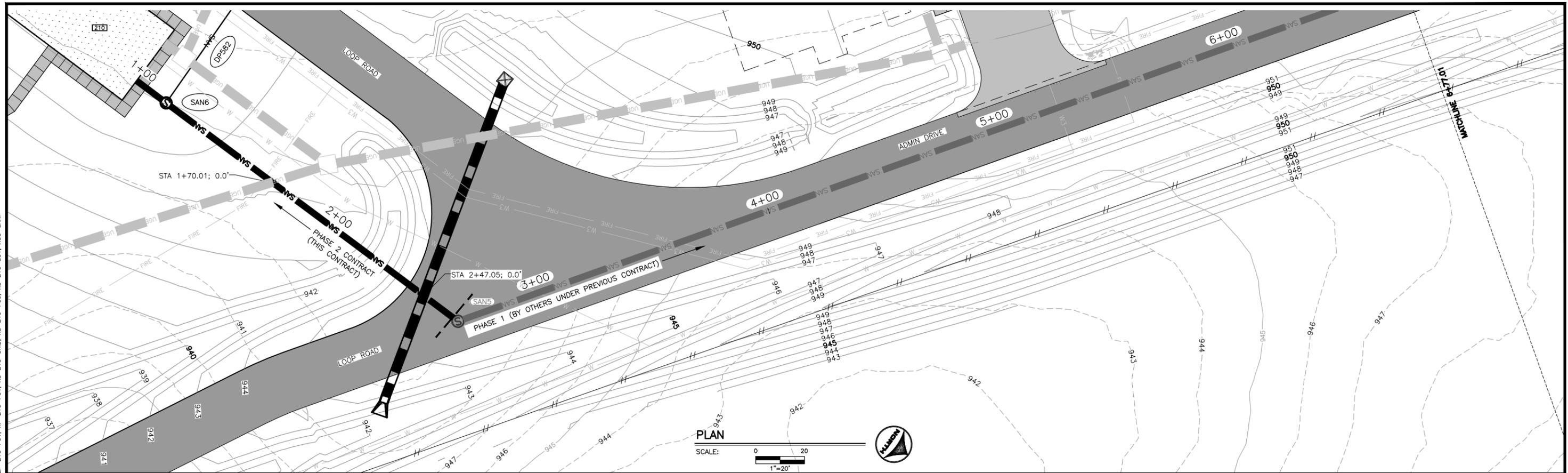
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SITE WORK
 BIOSOLIDS TANK AREA PLAN

SHEET NO.
C.18



**PRELIMINARY
NOT FOR CONSTRUCTION**

DRAWN BY: CMB, JST
APPROVED: MAR
JOB DATE: 2020
JOB NUMBER: 160473
CAD DATE: 8/3/2020 7:21:16 PM
CAD FILE: J:\2016\160473\CAD\Drawings\C.19 INFLUENT TRUNK SEWER PLAN AND PROFILE.dwg

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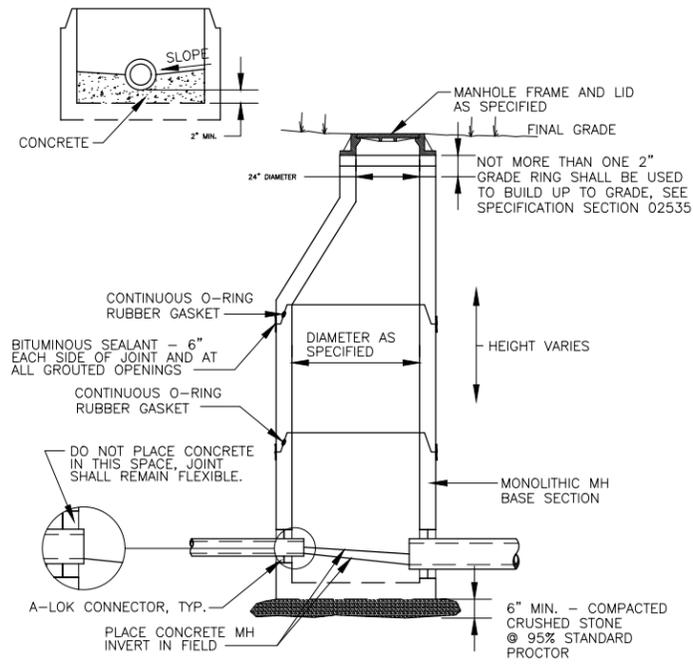
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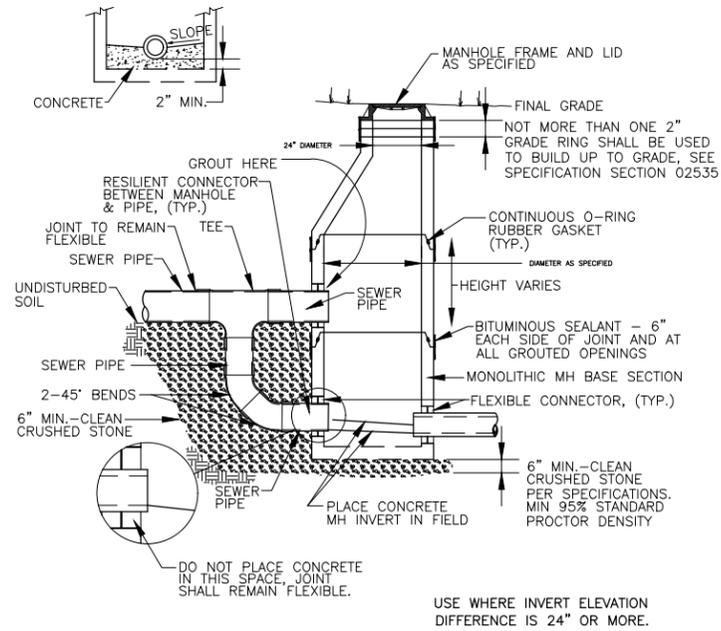
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NEVADA, IOWA

SITE WORK
INFLUENT TRUNK SEWER PLAN AND PROFILE

SHEET NO.
C.19



1 TYPICAL MANHOLE DETAIL
NTS



2 TYPICAL DROP MANHOLE DETAIL
NTS

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB, JST JOB DATE: 2020
 APPROVED: MAR JOB NUMBER: 160473
 CAD DATE: 8/1/2020 6:57:25 PM
 CAD FILE: J:\2016\160473\CAD\Dwgs\C\C.25 SANITARY STRUCTURE DETAILS.dwg

BAR IS ONE INCH ON
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0 1"

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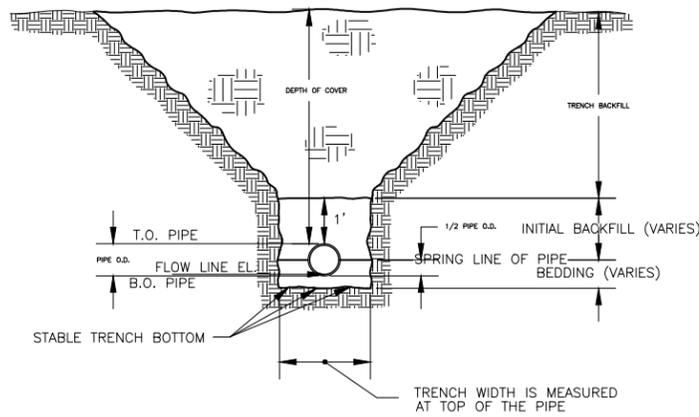


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

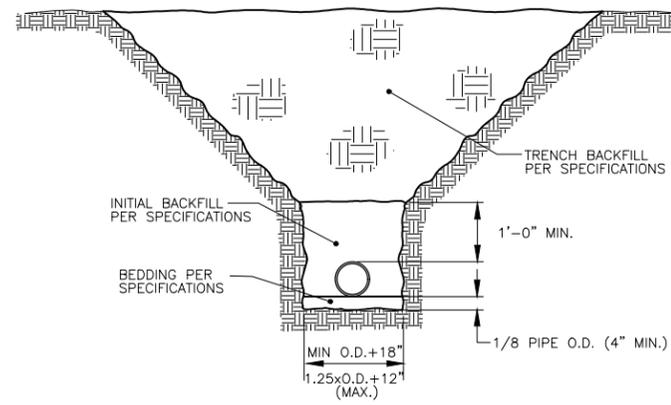
SITE WORK
SANITARY STRUCTURE DETAILS

SHEET NO.
C.25

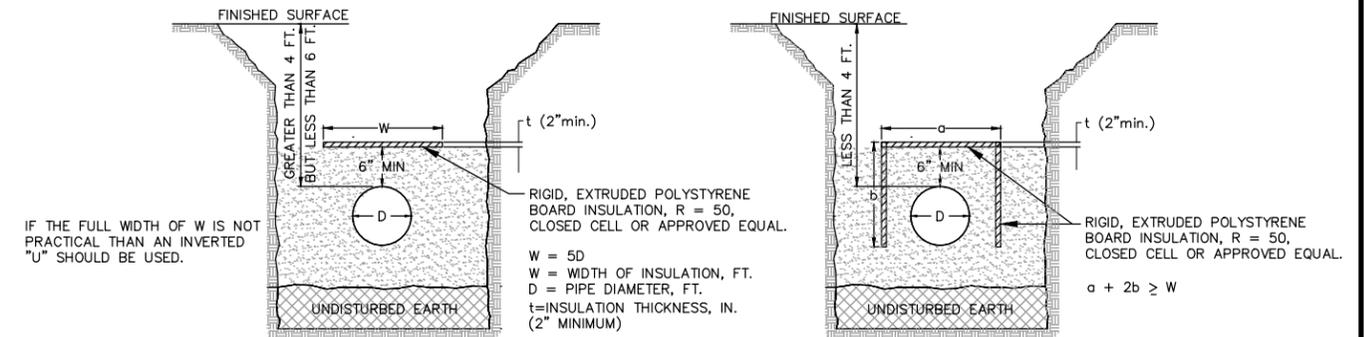
Xrefis: xgf-1-dh01: XC-0-003



1 TYPICAL DETAIL
TRENCH TERMINOLOGY
NTS



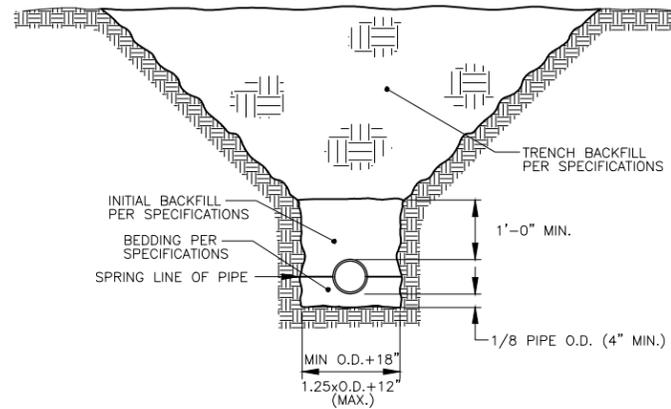
4 TYPICAL DETAIL
PRESSURE LINES (EARTH EXCAVATION)
NTS



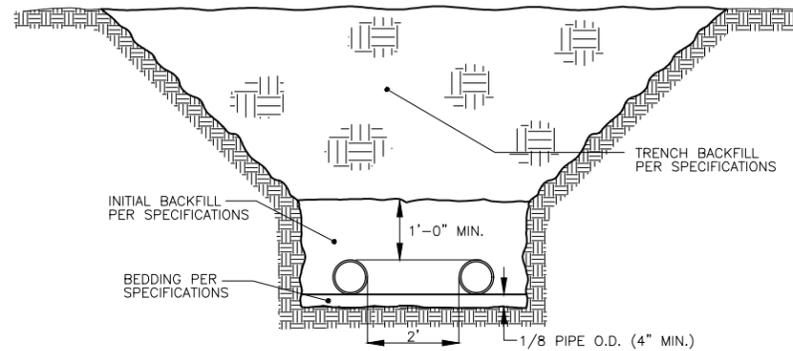
HORIZONTAL INSULATION

INVERTED "U" INSULATION

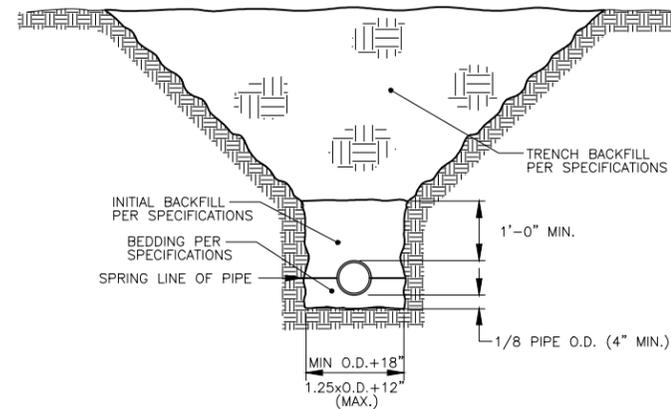
6 TYPICAL DETAIL
PIPE INSULATION



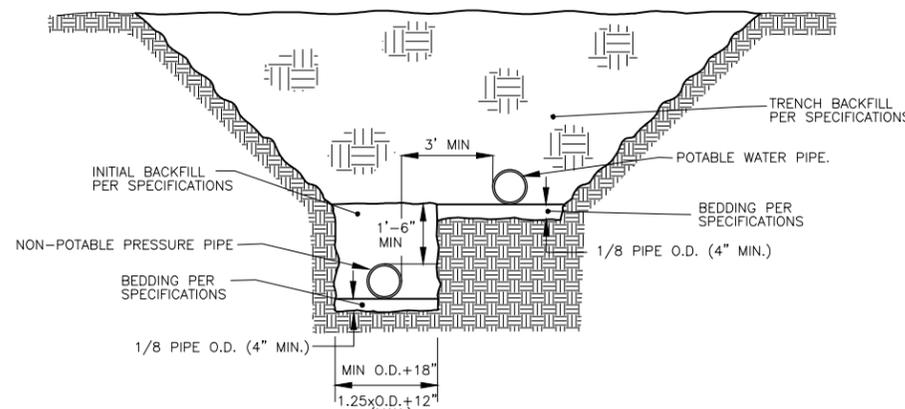
2 TYPICAL DETAIL
RIGID GRAVITY LINES (EARTH EXCAVATION)
NTS



5 TYPICAL DETAIL
PARALLEL PIPING TRENCH LAYOUT (EARTH EXCAVATION)
NTS



3 TYPICAL DETAIL
FLEXIBLE GRAVITY LINES (EARTH EXCAVATION)
NTS



6 TYPICAL DETAIL
POTABLE WATER PARALLEL PIPING TRENCH LAYOUT (EARTH EXCAVATION)
NTS

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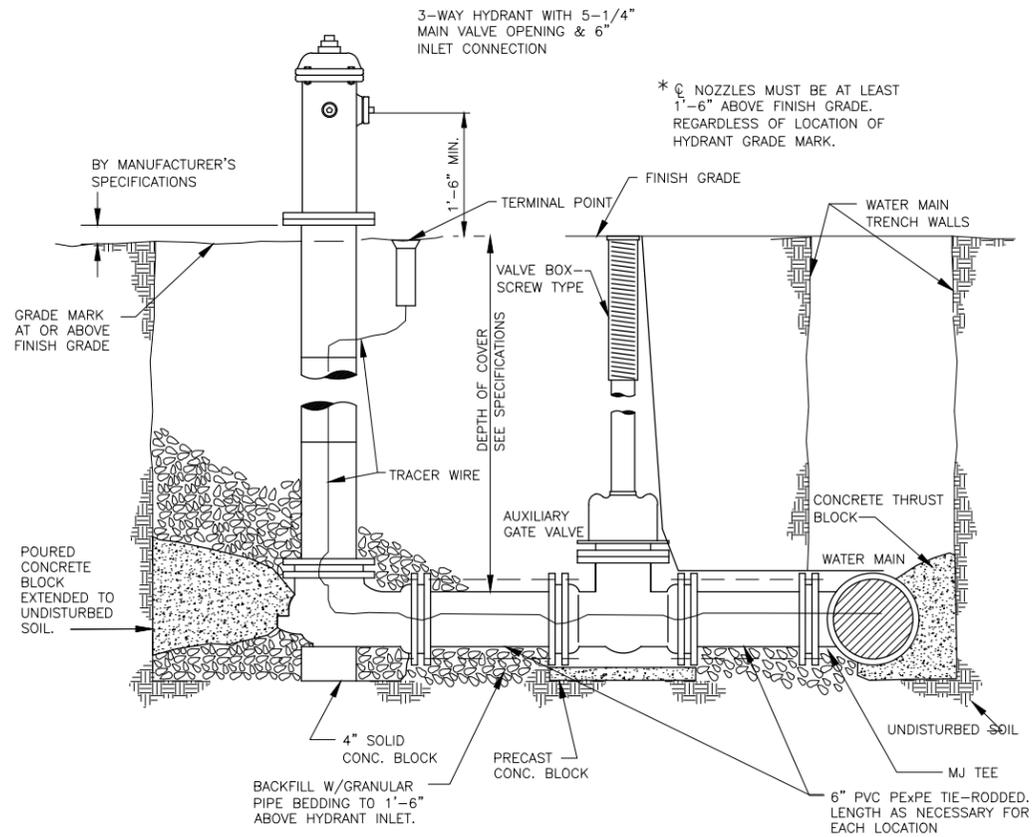
NO.	DATE	BY	REVISION DESCRIPTION



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SITE WORK
DETAILS

SHEET NO.
C.26

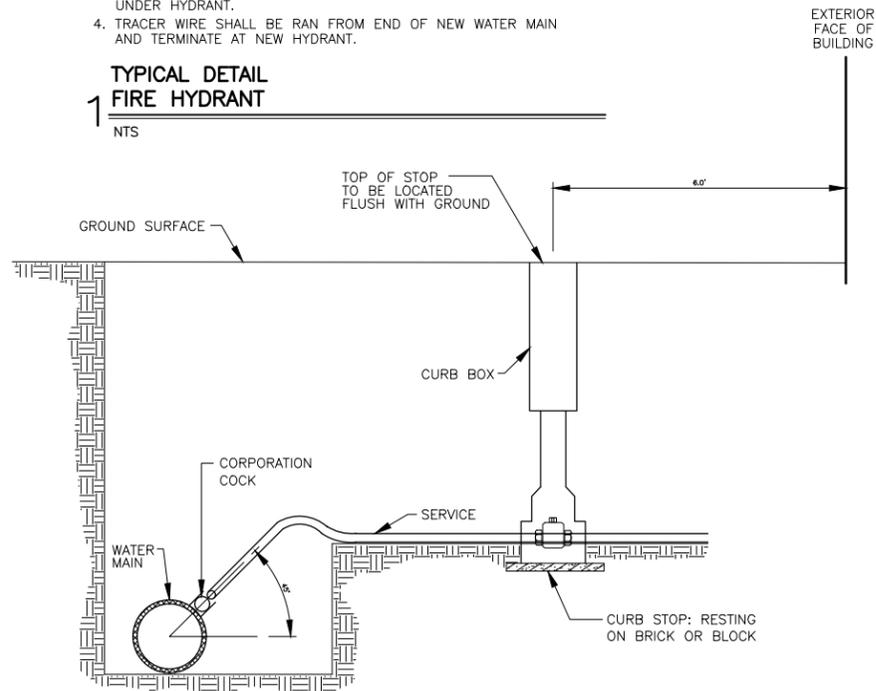


NOTES:

1. 3 MIL POLYETHYLENE SHEET OVER GRANULAR MATERIAL. DO NOT ALLOW SHEET UNDER GRANULAR MATERIAL.
2. USE RESTRAINT RODS BETWEEN HYDRANTS, SHUTOFF VALVES, AND WATER MAIN.
3. MINIMUM OF 1/3 CUBIC YARD CLEAN GRANULAR BEDDING UNDER HYDRANT.
4. TRACER WIRE SHALL BE RAN FROM END OF NEW WATER MAIN AND TERMINATE AT NEW HYDRANT.

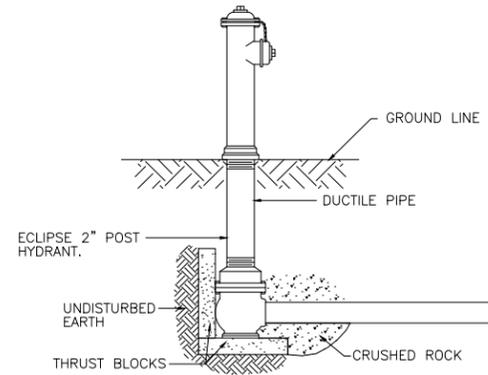
**TYPICAL DETAIL
1 FIRE HYDRANT**

NTS



**TYPICAL DETAIL
2 WATER SERVICE CONNECTION**

NTS



HYDRANTS SHALL BE SELF-DRAINING, NONFREEZING, COMPRESSION TYPE WITH 2-3/16" MAIN VALVE OPENING. INLET CONNECTION SHALL BE 2" IP. OUTLET SHALL BE 2-1/2" NST.

HYDRANTS SHALL HAVE A 3" DUCTILE IRON PIPE RISER WITH A CAST IRON STOCK TOP, AND NON-TURNING OPERATING ROD. PRINCIPAL INTERIOR OPERATING PARTS SHALL BE BRASS AND REMOVABLE FROM THE HYDRANT FOR SERVICING WITHOUT EXCAVATING THE HYDRANT. HYDRANTS SHALL BE SET IN 4 CUBIC FEET OF CRUSHED STONE TO ALLOW FOR PROPER DRAINAGE OF THE HYDRANT. RECOMMENDATIONS OF THE AWWA SHOULD BE FOLLOWED WHEN INSTALLING THE HYDRANTS.

POST HYDRANTS SHALL BE ECLIPSE NO. 2 POST HYDRANTS AS MANUFACTURED BY JOHN C. KUPFERLE FOUNDRY COMPANY, ST. LOUIS MO.

**TYPICAL DETAIL
2 2" YARD HYDRANT**

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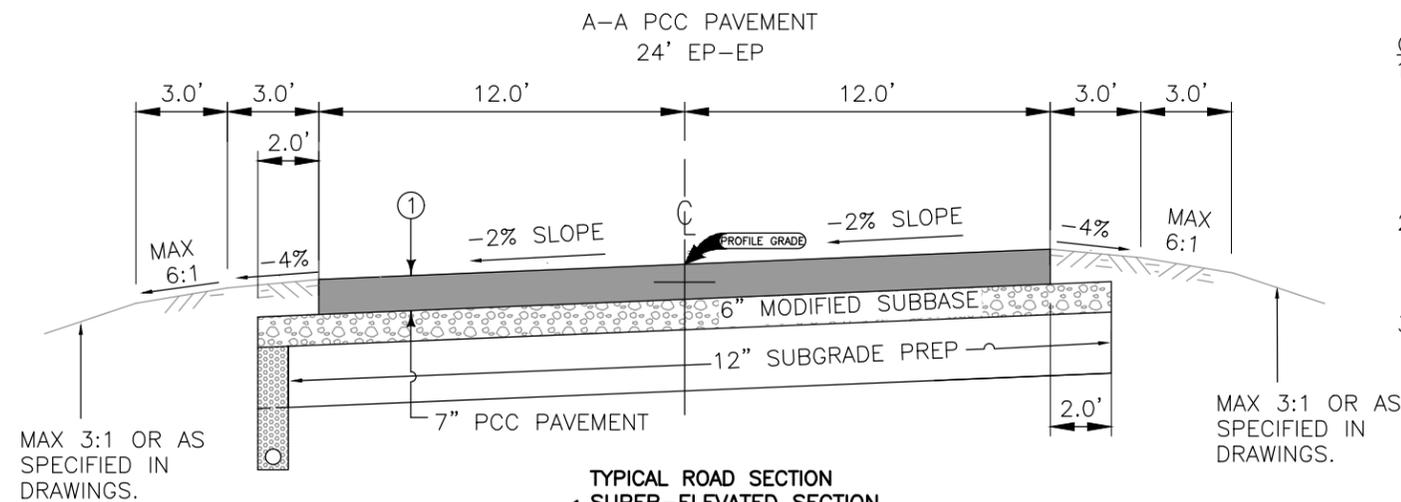
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CITY OF NEVADA
NEVADA, IOWA

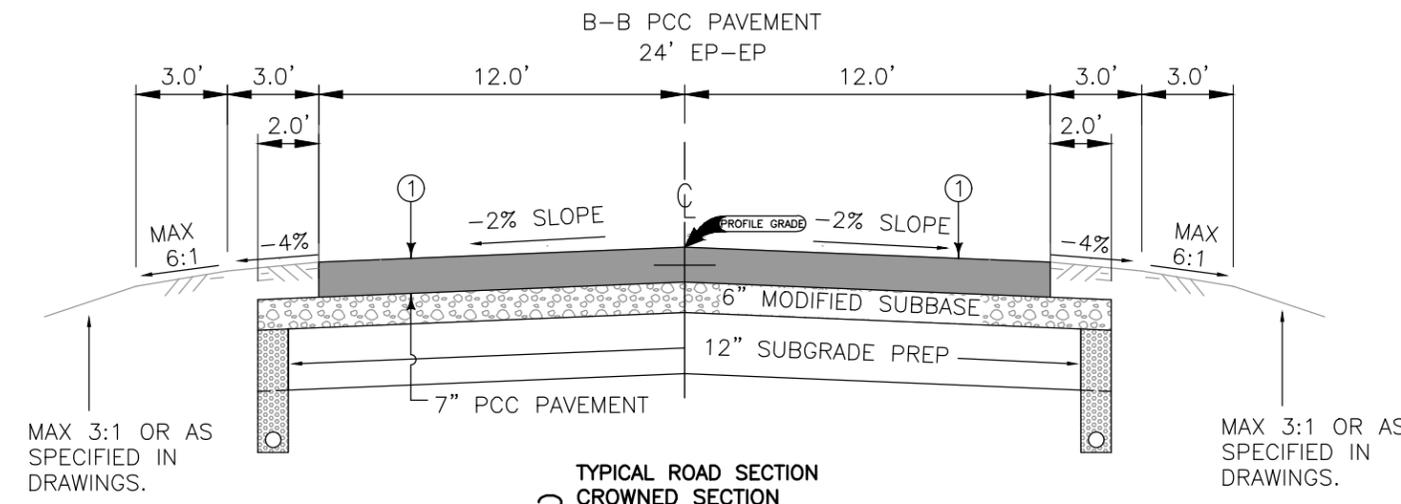
SITE WORK
DETAILS

SHEET NO.
C.27

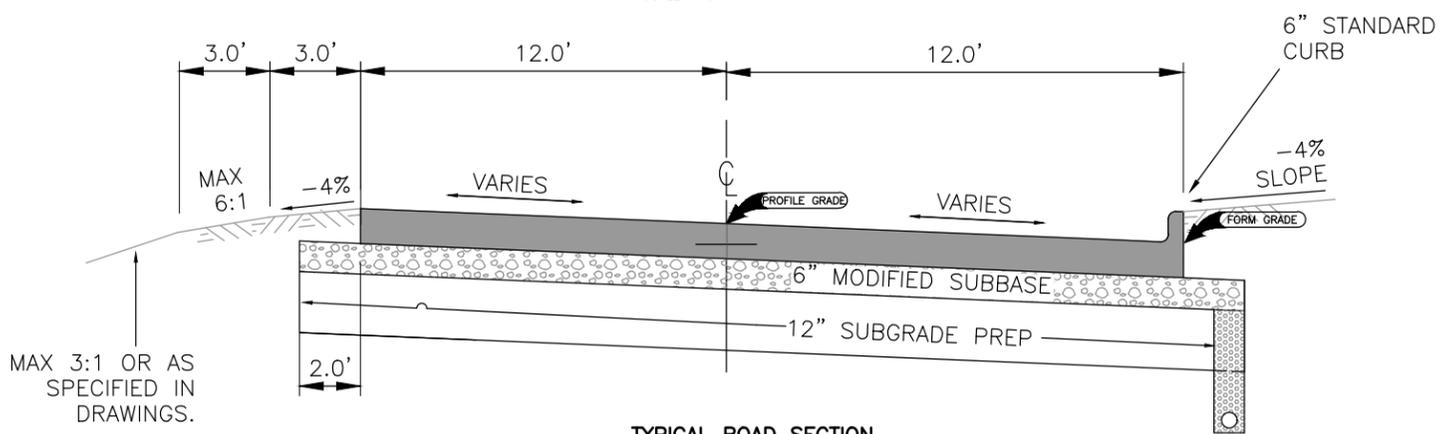


1
TYPICAL ROAD SECTION
SUPER-ELEVATED SECTION
SCALE: NTS

- GENERAL NOTE:**
1. 7" PCC PAVEMENT W/ 6" MODIFIED SUBBASE & 12" SUBGRADE PREP AS SHOWN IN DETAILS SHALL APPLY TO ALL DRIVES & PARKING LOTS. GRADE AS SHOWN IN DRAWINGS IF NOT TYPICAL SECTION
 2. CONTRACTOR SHALL TRANSITION BETWEEN CROWNED AND SUPER-ELEVATED SECTIONS AS SHOWN IN DRAWINGS.
 3. CONTRACTOR SHALL INSTALL CURB AND GUTTER AS SHOWN IN DETAIL 3 WHERE SPECIFIED IN DRAWINGS.



2
TYPICAL ROAD SECTION
CROWNED SECTION
SCALE: NTS



3
TYPICAL ROAD SECTION
CURB AND GUTTER
SCALE: NTS

PRELIMINARY
NOT FOR CONSTRUCTION

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JOB DATE: 2020
JOB NUMBER: 160473
CAD DATE: 8/2/2020 2:22:48 PM
CAD FILE: J:\2016\160473\CAD\Dwgs\C\28 DETAILS TYPICAL ROAD SECTIONS.dwg

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NO.	DATE	BY	REVISION DESCRIPTION

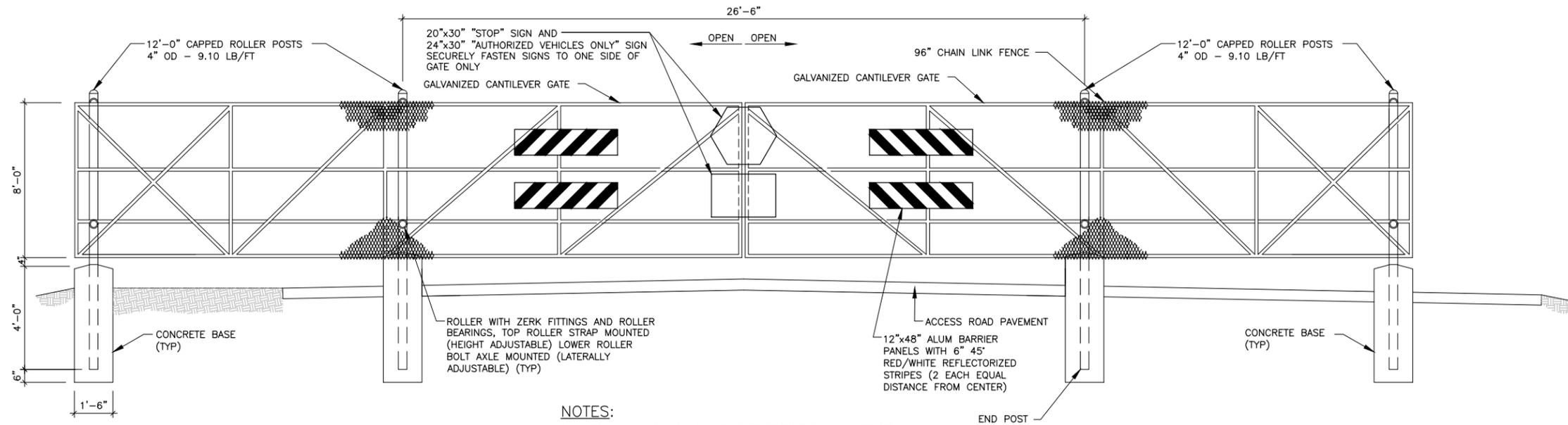


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SITE WORK
DETAILS TYPICAL ROAD SECTIONS

SHEET NO.
C.28

Xref: xgl-1-dh01: XC-0-S01

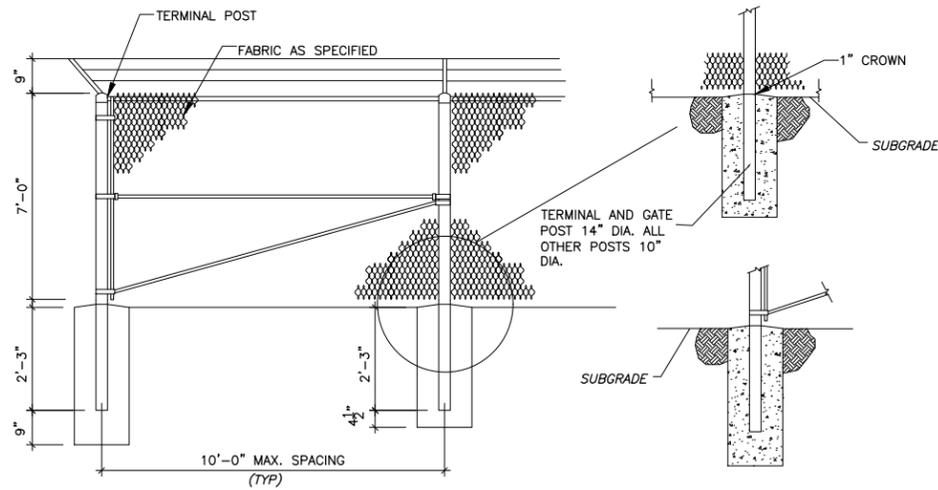


NOTES:

1. VERIFY ALL DIMENSIONS WITH GATE OPERATOR MANUFACTURER. REFERENCE SPECIFICATIONS FOR GATE CONTROL.

1 AUTOMATIC GATE DETAIL

SCALE: 3/8"=1'-0"



2 FENCE DETAIL

SCALE: NTS

PRELIMINARY
NOT FOR CONSTRUCTION

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 APPROVED: MAR JOB NUMBER: 160473
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 CAD FILE: J:\2016\160473\CAD\Dwg\C\C.32 DETAILS - GATE AND FENCING.dwg

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0 1"
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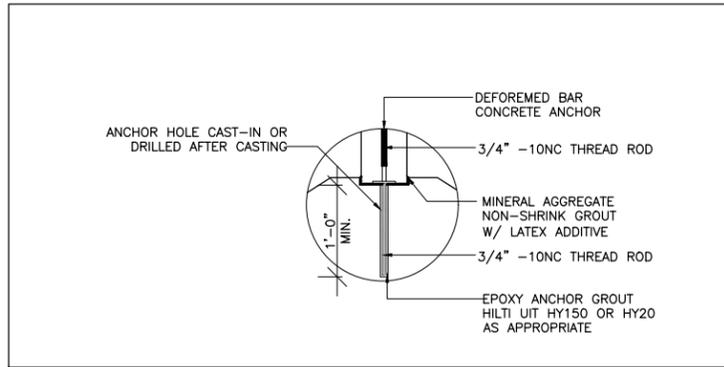
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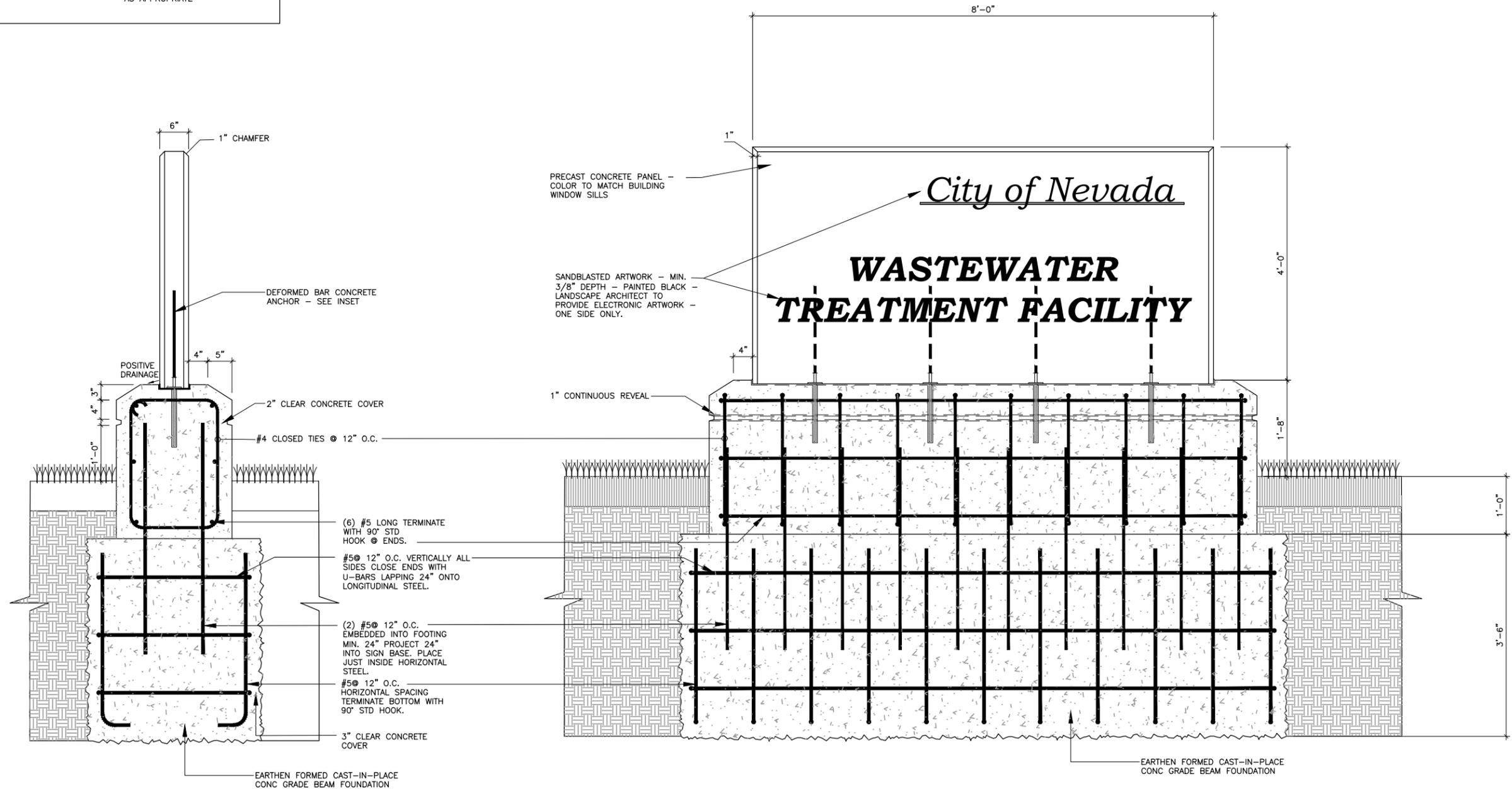
NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SITE WORK
DETAILS - GATE AND FENCING

SHEET NO.
C.32



- NOTES:
- 1) PRECAST CONCRETE MANUFACTURER TO PROVIDE SHOP DRAWINGS SIGNED BY A REGISTERED ENGINEER DETAILING REINFORCEMENT.
 - 2) PROVIDE MIN. 6" X 6" PRECAST CONCRETE SAMPLE SHOWING COLOR AND FINISH FOR APPROVAL PRIOR TO CONSTRUCTION.
 - 3) ALL ABOVE GRADE FORM WORK SHALL BE SMOOTH AND DEVOID OF JOINTS AND IMPERFECTIONS.
 - 4) SEE ENTRANCE AREA PLAN FOR LOCATION.
 - 5) SOD AROUND SIGN, 10' IN FRONT AND BACK OF SIGN AND 6' FROM THE OUTER EDGE OF THE SIGN.



PRELIMINARY
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 CAD FILE: J:\2016\160473\CAD\Dwgs\C\C.33 PLANT ENTRANCE SIGN.dwg

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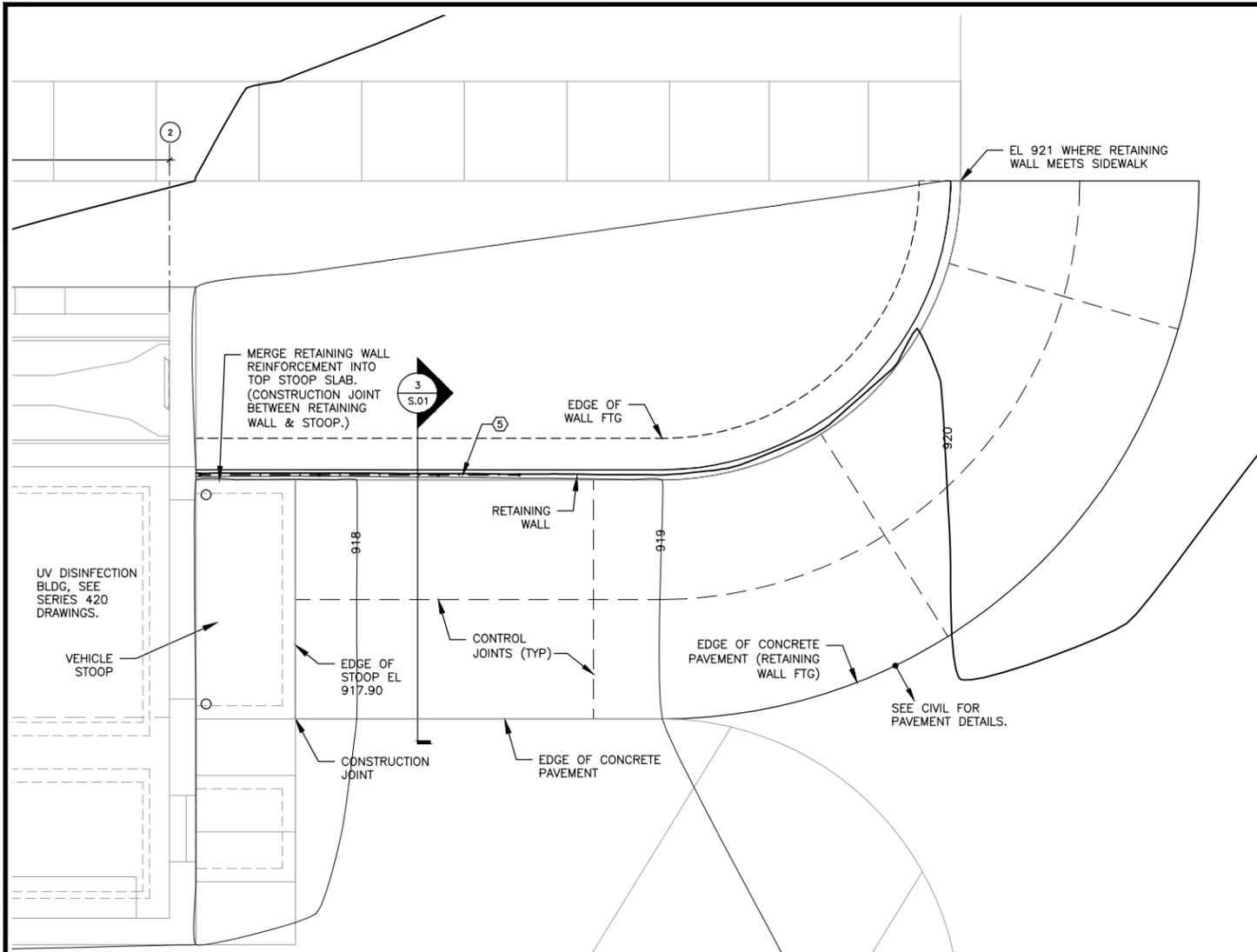
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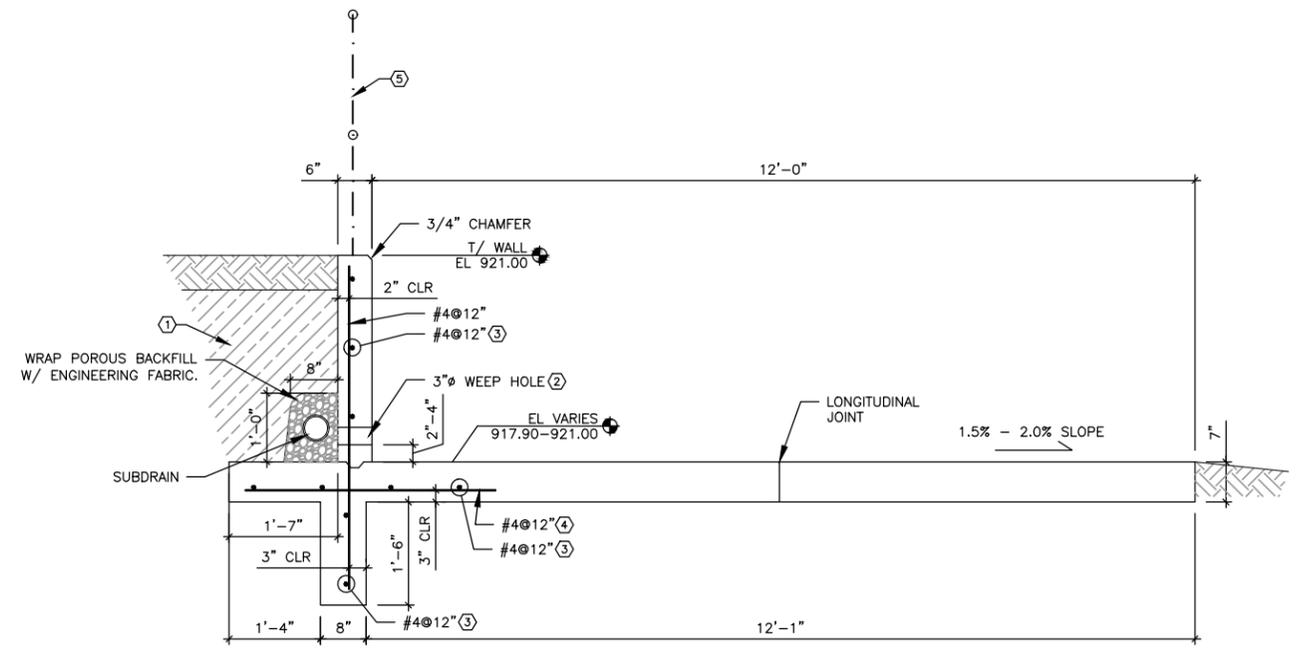
NEVADA WWTF IMPROVEMENTS
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SITE WORK
 PLANT ENTRANCE SIGN

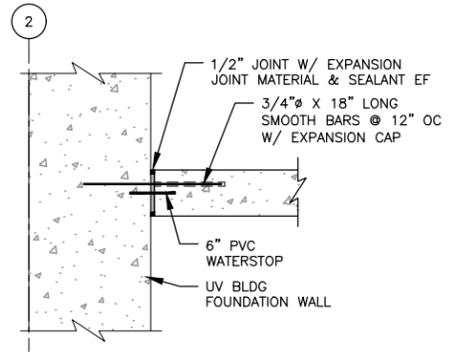
SHEET NO.
C.33



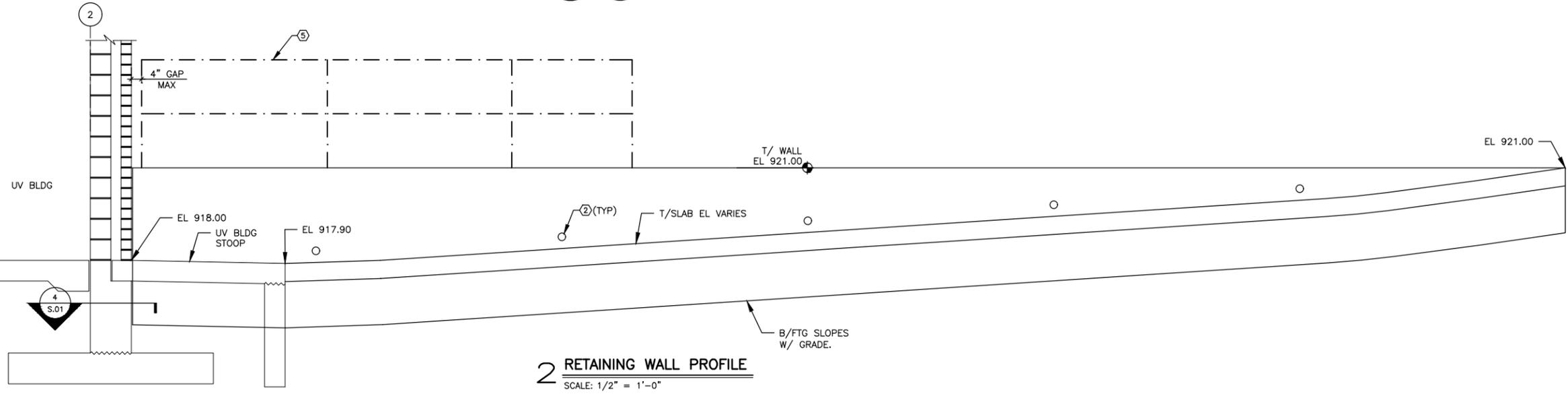
1 RETAINING WALL PLAN
SCALE: 1/4" = 1'-0"



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



4 RETAINING WALL CONNECTION TO UV BLDG FOUNDATION WALL
SCALE: 1" = 1'-0"



2 RETAINING WALL PROFILE
SCALE: 1/2" = 1'-0"

- GENERAL NOTES:**
- SEE AREA SITE PLAN C.21 AND SERIES 420 UV BLDG DRAWINGS.
 - PROVIDE A MINIMUM CONCRETE COVER TO NEAR REINFORCEMENT AS NOTED. PROVIDE 3" MINIMUM COVER AT ENDS OF BARS.
- KEYNOTES:**
- EXCAVATE & PLACE POROUS FREE DRAINING GRADED GRANULAR BACKFILL MATERIAL AS NECESSARY.
 - PROVIDE 3" WEEP HOLES AT 8' INTERVALS. INSTALL RODENT GUARDS IN WEEP HOLES.
 - CONTINUOUS, WITH 24" LAP.
 - BAR LENGTH = LARGER OF 48" & WALL HEIGHT + 18"
 - PROVIDE GUARDRAIL WHERE HEIGHT OF WALL IS 2'-6" OR GREATER ABOVE PAVEMENT. SEE 12/S.604 & 4/S.605.

**PRELIMINARY
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JOB DATE: 2020
JOB NUMBER: 160473
CAD DATE: 7/23/2020 2:29:18 PM
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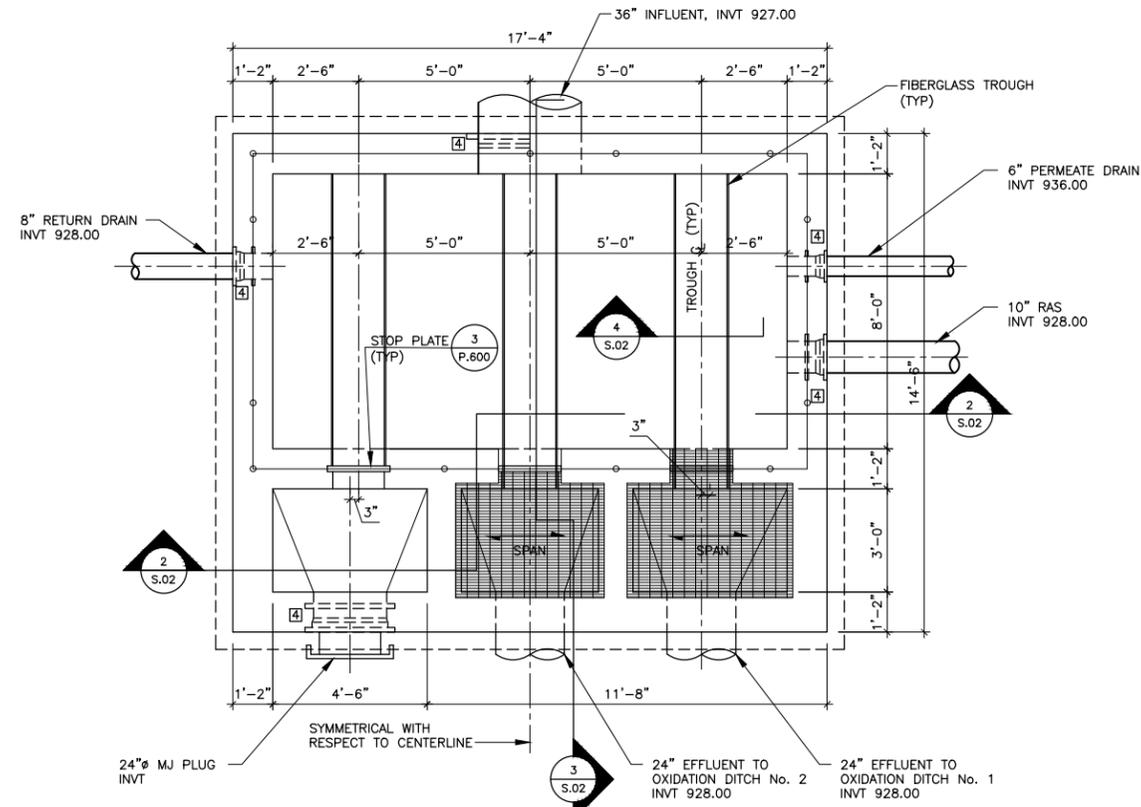
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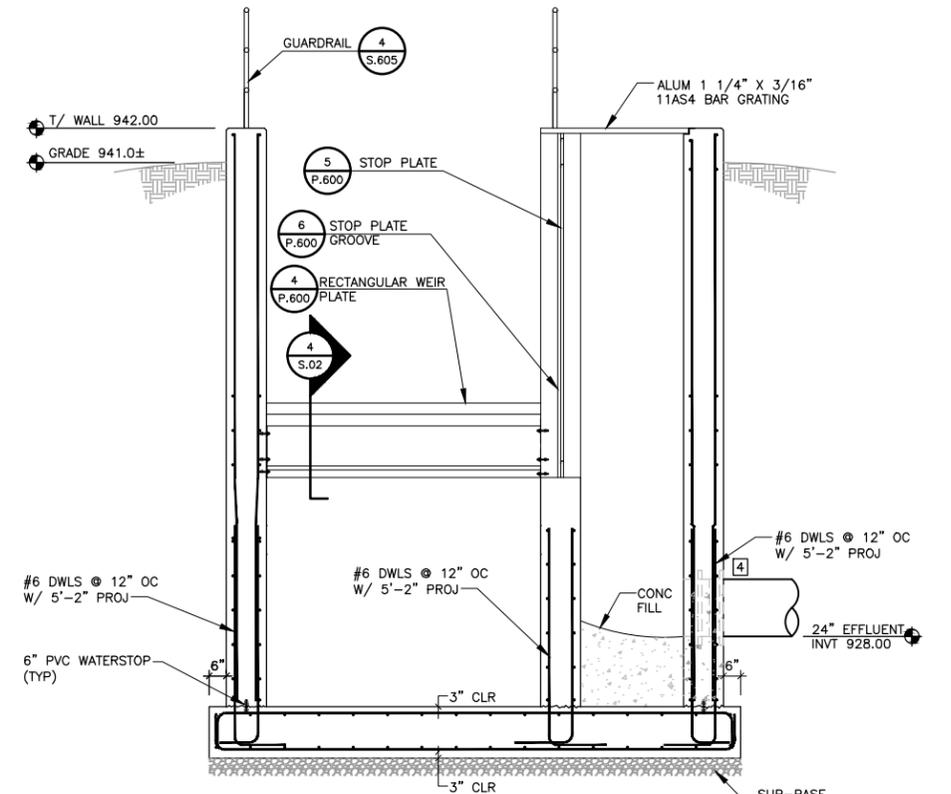
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CITY OF NEVADA
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SITE WORK
RETAINING WALL DETAILS

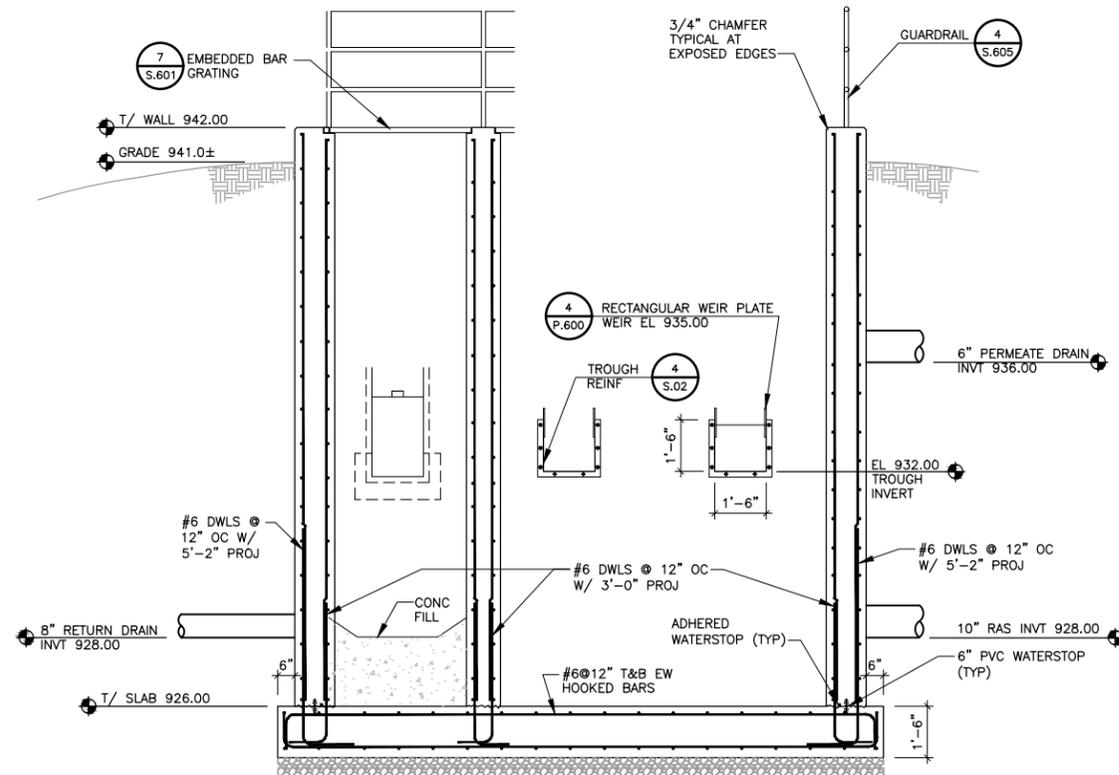
SHEET NO.
S.01



1 FLOW SPLITTER PLAN
SCALE: 3/8"=1'-0"



3 FLOW SPLITTER PLAN
SCALE: 3/8"=1'-0"



2 FLOW SPLITTER PLAN
SCALE: 3/8"=1'-0"

PRELIMINARY
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CAD DATE: 7/31/2020 7:19:43 AM
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JOB DATE: 2020
JOB NUMBER: 160473

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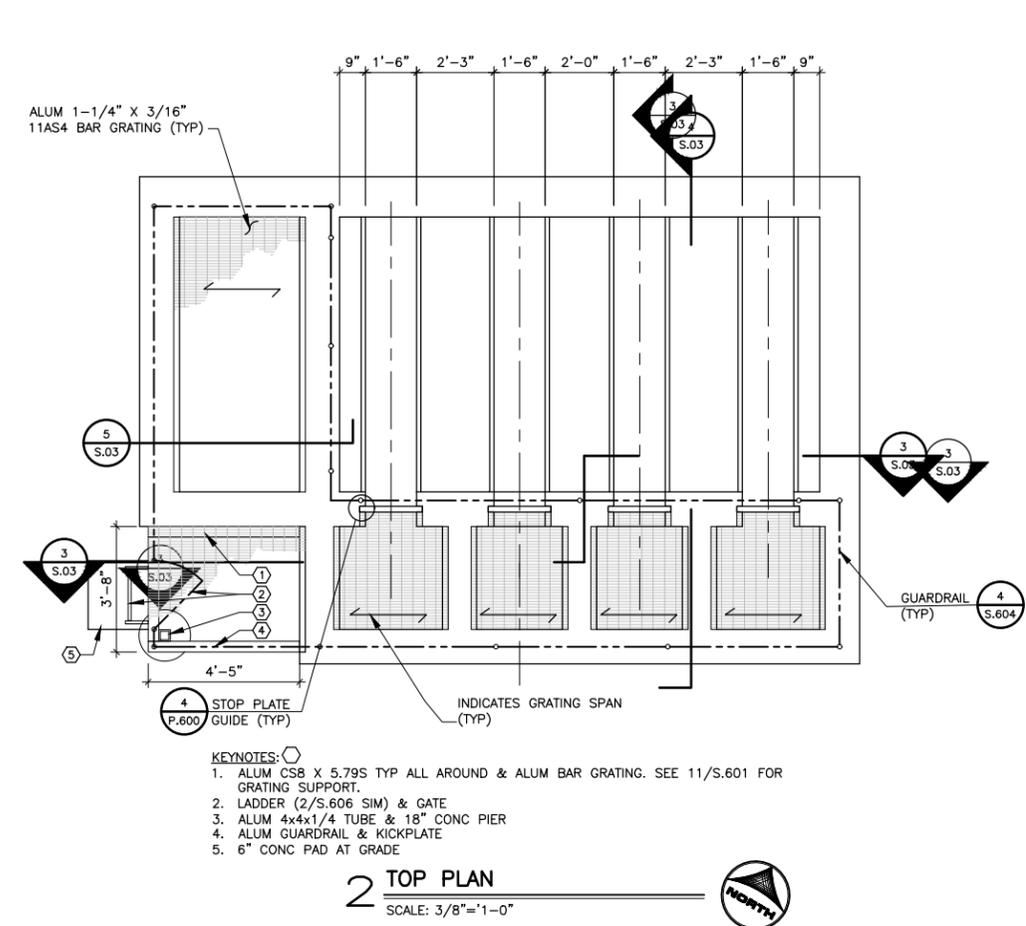
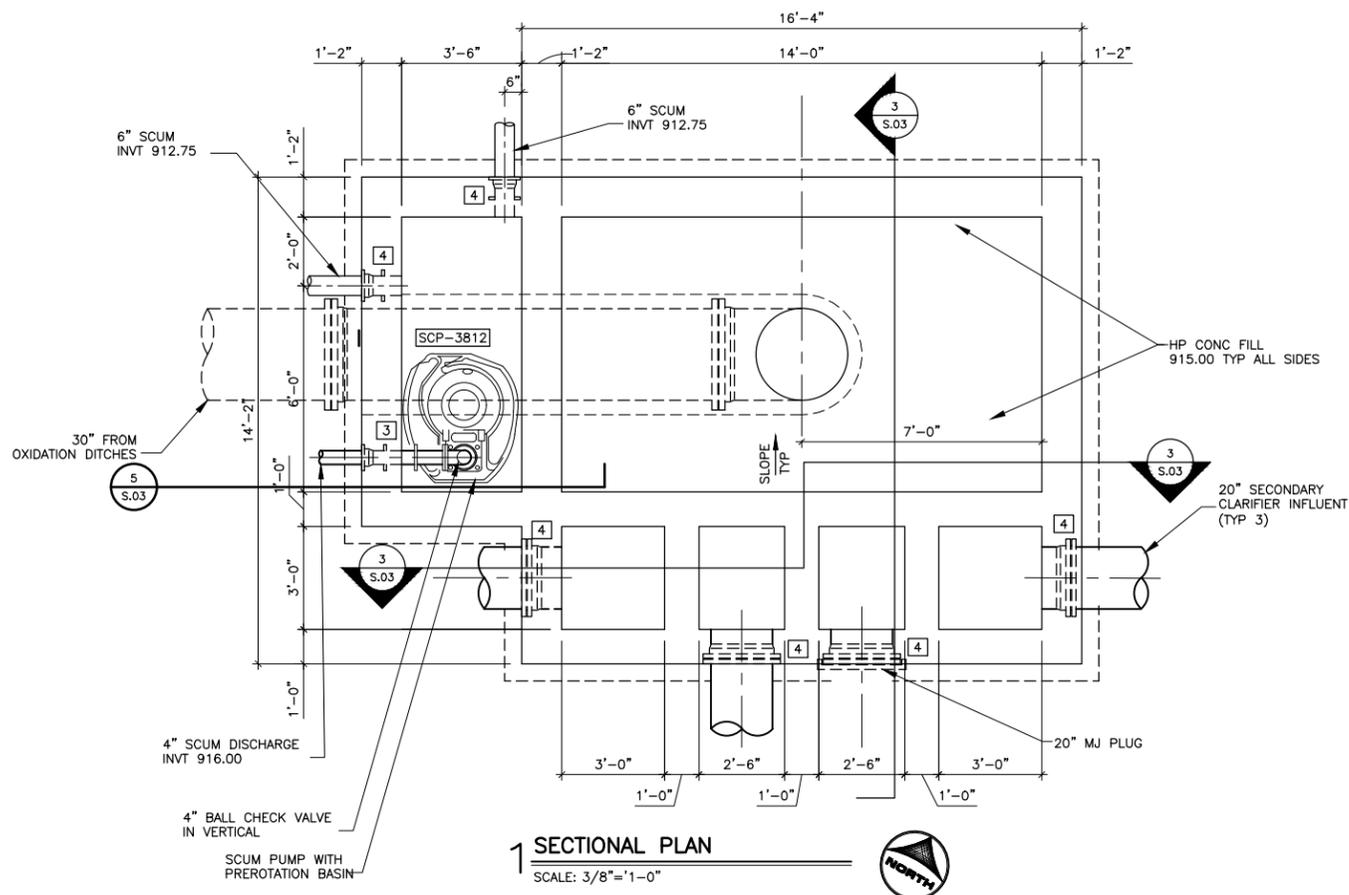


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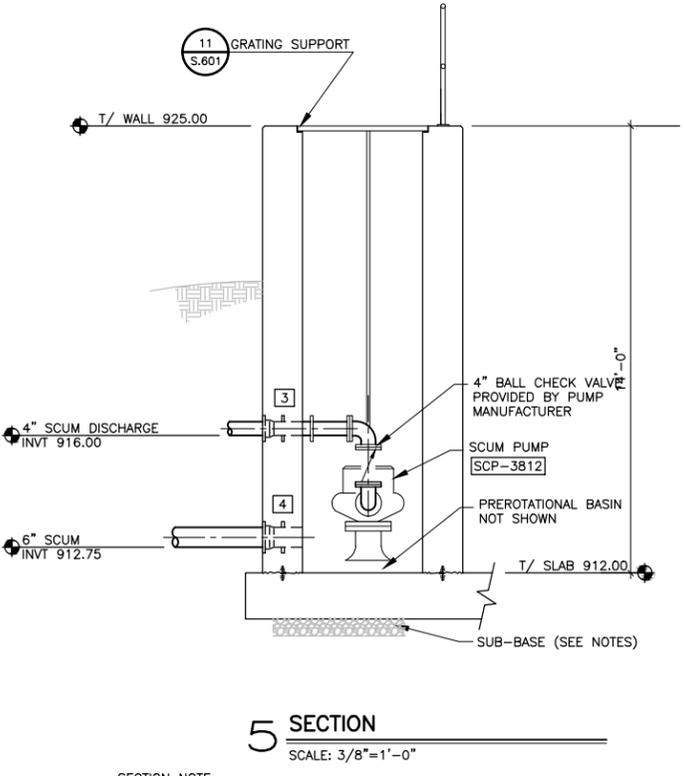
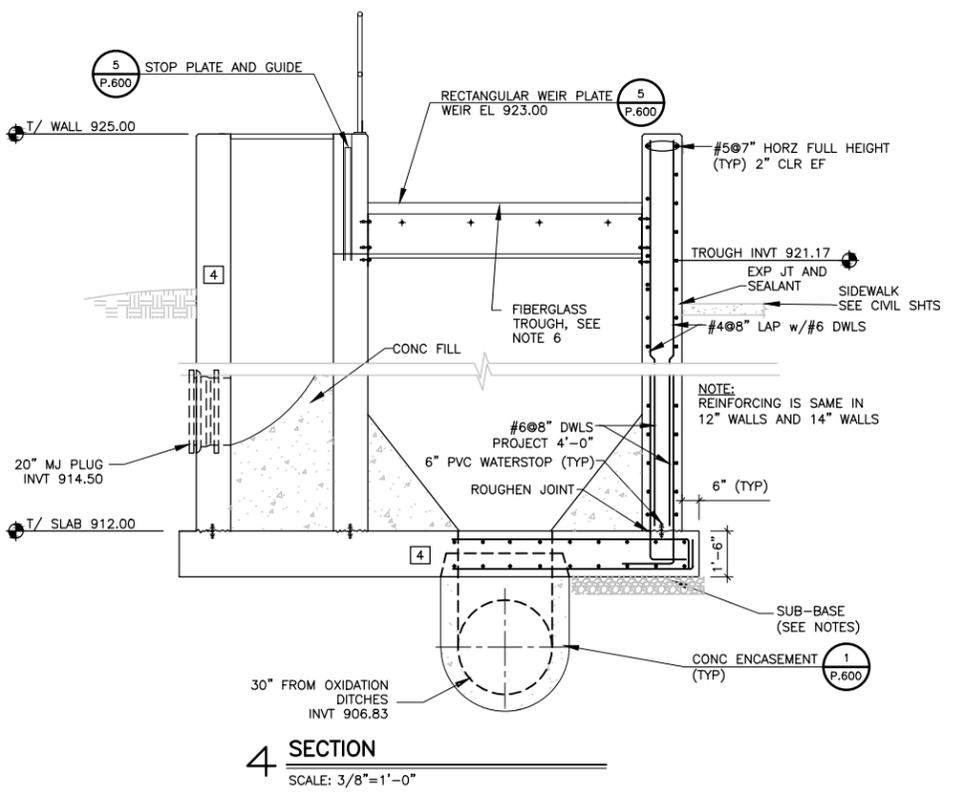
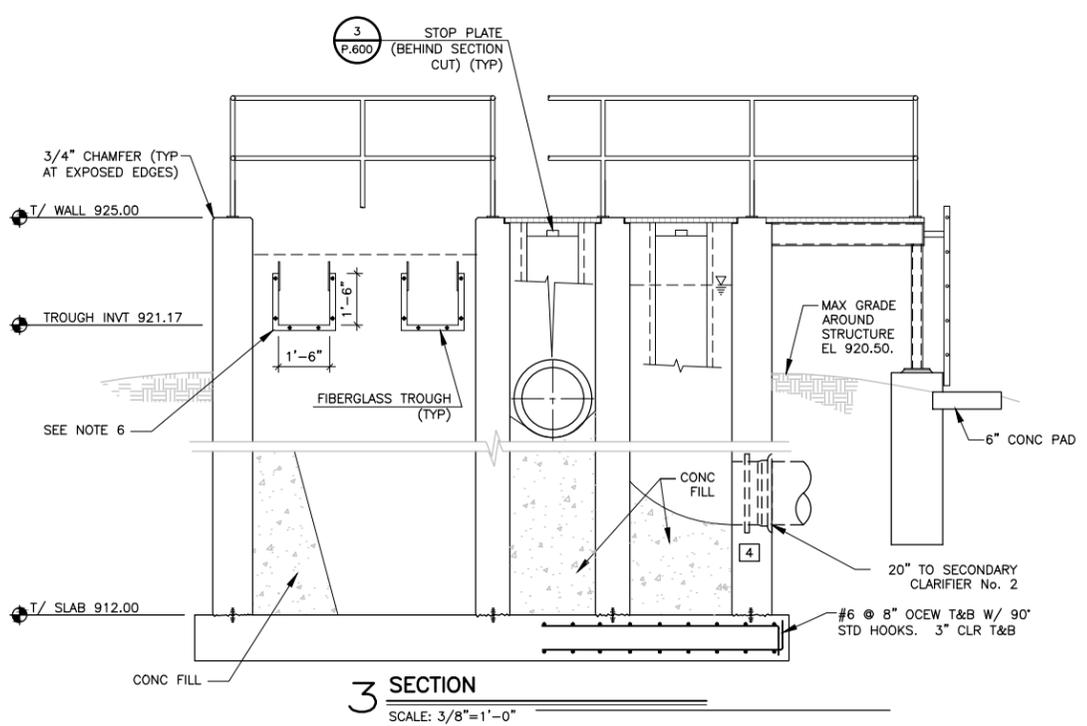
SITE WORK
OXIDATION DITCH FLOW SPLITTER
STRUCTURAL

SHEET NO.
S.02

Xref: xgl-1-dh01; XS-1,2-S01; XS-1,2-P02; XS-1,2-P01



- GENERAL NOTES:**
- SEE SHEET S.01 FOR GENERAL NOTES.
 - STRUCTURE DESIGNED FOR GRADE ELEVATION NO GREATER THAN EL 921.50.
 - SUB-DRAINS ARE NOT REQUIRED.
 - CONCRETE SHALL BE MIX-1 FOR STRUCTURE AND MIX-2 FOR CONCRETE FILL. NOT ALL CONCRETE FILL SHOWN.
 - ALUMINUM BAR GRATING SHALL BE 1-1/4"x3/16" 11AS4. PLATFORM AND GRATING LIVE LOAD 100 PSF.



SECTION NOTE:
GROUT FILL SCUM BOX TO SLOPE ALL AREAS TO PREROTATION BASIN.

Xref: xgl-1-dh01: XS-1.4-P01: XS-1.4-S01: XS-1.4-P02

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CAD DATE: 7/28/2020 2:01:55 PM
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JOB DATE: 2020
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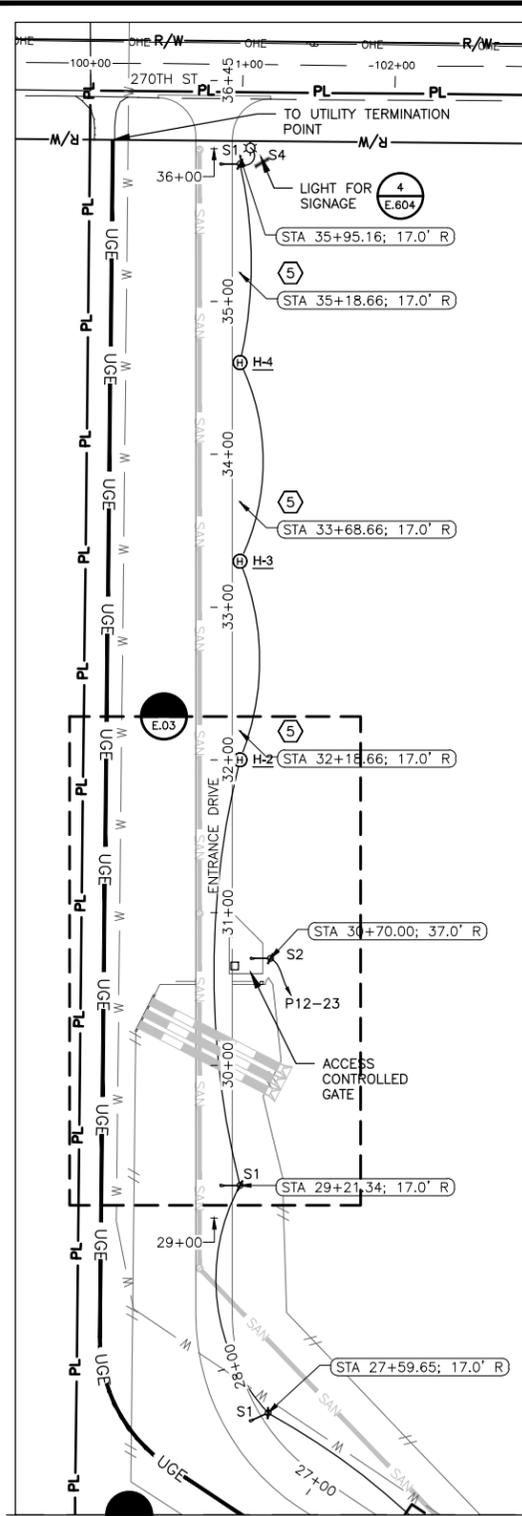
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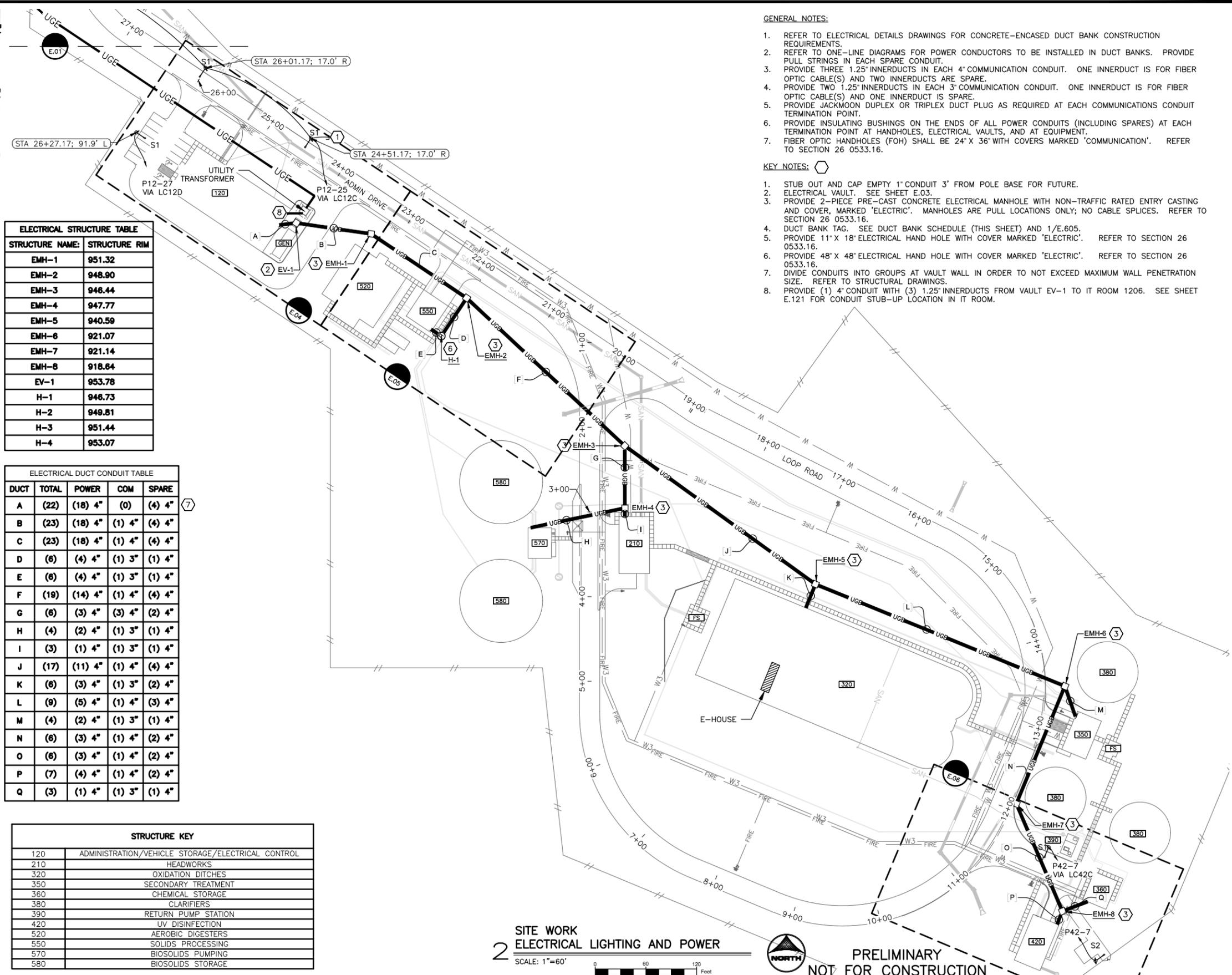
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SITE WORK
SECONDARY CLARIFIER FLOW SPLITTER
STRUCTURAL

SHEET NO.
S.03



SITE WORK
ELECTRICAL LIGHTING AND POWER (ENTRANCE DR)
 SCALE: 1"=60'



ELECTRICAL STRUCTURE TABLE	
STRUCTURE NAME	STRUCTURE RIM
EMH-1	951.32
EMH-2	948.90
EMH-3	946.44
EMH-4	947.77
EMH-5	940.59
EMH-6	921.07
EMH-7	921.14
EMH-8	918.64
EV-1	953.78
H-1	946.73
H-2	949.81
H-3	951.44
H-4	953.07

ELECTRICAL DUCT CONDUIT TABLE				
DUCT	TOTAL	POWER	COM	SPARE
A	(22)	(18) 4"	(0)	(4) 4"
B	(23)	(18) 4"	(1) 4"	(4) 4"
C	(23)	(18) 4"	(1) 4"	(4) 4"
D	(6)	(4) 4"	(1) 3"	(1) 4"
E	(6)	(4) 4"	(1) 3"	(1) 4"
F	(19)	(14) 4"	(1) 4"	(4) 4"
G	(6)	(3) 4"	(3) 4"	(2) 4"
H	(4)	(2) 4"	(1) 3"	(1) 4"
I	(3)	(1) 4"	(1) 3"	(1) 4"
J	(17)	(11) 4"	(1) 4"	(4) 4"
K	(6)	(3) 4"	(1) 3"	(2) 4"
L	(9)	(5) 4"	(1) 4"	(3) 4"
M	(4)	(2) 4"	(1) 3"	(1) 4"
N	(6)	(3) 4"	(1) 4"	(2) 4"
O	(6)	(3) 4"	(1) 4"	(2) 4"
P	(7)	(4) 4"	(1) 4"	(2) 4"
Q	(3)	(1) 4"	(1) 3"	(1) 4"

STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIOSOLIDS PUMPING
580	BIOSOLIDS STORAGE

GENERAL NOTES:

- REFER TO ELECTRICAL DETAILS DRAWINGS FOR CONCRETE-ENCASED DUCT BANK CONSTRUCTION REQUIREMENTS.
- REFER TO ONE-LINE DIAGRAMS FOR POWER CONDUCTORS TO BE INSTALLED IN DUCT BANKS. PROVIDE PULL STRINGS IN EACH SPARE CONDUIT.
- PROVIDE THREE 1.25" INNERDUCTS IN EACH 4" COMMUNICATION CONDUIT. ONE INNERDUCT IS FOR FIBER OPTIC CABLE(S) AND TWO INNERDUCTS ARE SPARE.
- PROVIDE TWO 1.25" INNERDUCTS IN EACH 3" COMMUNICATION CONDUIT. ONE INNERDUCT IS FOR FIBER OPTIC CABLE(S) AND ONE INNERDUCT IS SPARE.
- PROVIDE JACKMOON DUPLEX OR TRIPLEX DUCT PLUG AS REQUIRED AT EACH COMMUNICATIONS CONDUIT TERMINATION POINT.
- PROVIDE INSULATING BUSHINGS ON THE ENDS OF ALL POWER CONDUITS (INCLUDING SPARES) AT EACH TERMINATION POINT AT HANDHOLES, ELECTRICAL VAULTS, AND AT EQUIPMENT.
- FIBER OPTIC HANDHOLES (FOH) SHALL BE 24" X 36" WITH COVERS MARKED 'COMMUNICATION'. REFER TO SECTION 26 0533.16.

KEY NOTES:

- STUB OUT AND CAP EMPTY 1" CONDUIT 3' FROM POLE BASE FOR FUTURE.
- ELECTRICAL VAULT. SEE SHEET E.03.
- PROVIDE 2-PIECE PRE-CAST CONCRETE ELECTRICAL MANHOLE WITH NON-TRAFFIC RATED ENTRY CASTING AND COVER, MARKED 'ELECTRIC'. MANHOLES ARE PULL LOCATIONS ONLY; NO CABLE SPLICES. REFER TO SECTION 26 0533.16.
- DUCT BANK TAG. SEE DUCT BANK SCHEDULE (THIS SHEET) AND 1/E.605.
- PROVIDE 11" X 18" ELECTRICAL HAND HOLE WITH COVER MARKED 'ELECTRIC'. REFER TO SECTION 26 0533.16.
- PROVIDE 48" X 48" ELECTRICAL HAND HOLE WITH COVER MARKED 'ELECTRIC'. REFER TO SECTION 26 0533.16.
- DIVIDE CONDUITS INTO GROUPS AT VAULT WALL IN ORDER TO NOT EXCEED MAXIMUM WALL PENETRATION SIZE. REFER TO STRUCTURAL DRAWINGS.
- PROVIDE (1) 4" CONDUIT WITH (3) 1.25" INNERDUCTS FROM VAULT EV-1 TO IT ROOM 1206. SEE SHEET E.121 FOR CONDUIT STUB-UP LOCATION IN IT ROOM.

SITE WORK
ELECTRICAL LIGHTING AND POWER
 SCALE: 1"=60'



PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB, JST JOB DATE: 2020
 APPROVED: ARV JOB NUMBER: 160473
 CAD DATE: 8/3/2020 12:09:56 PM
 CAD FILE: J:\2016\160473\CAD\Drawings\E.E.01 ELECTRICAL LIGHTING AND POWER.dwg

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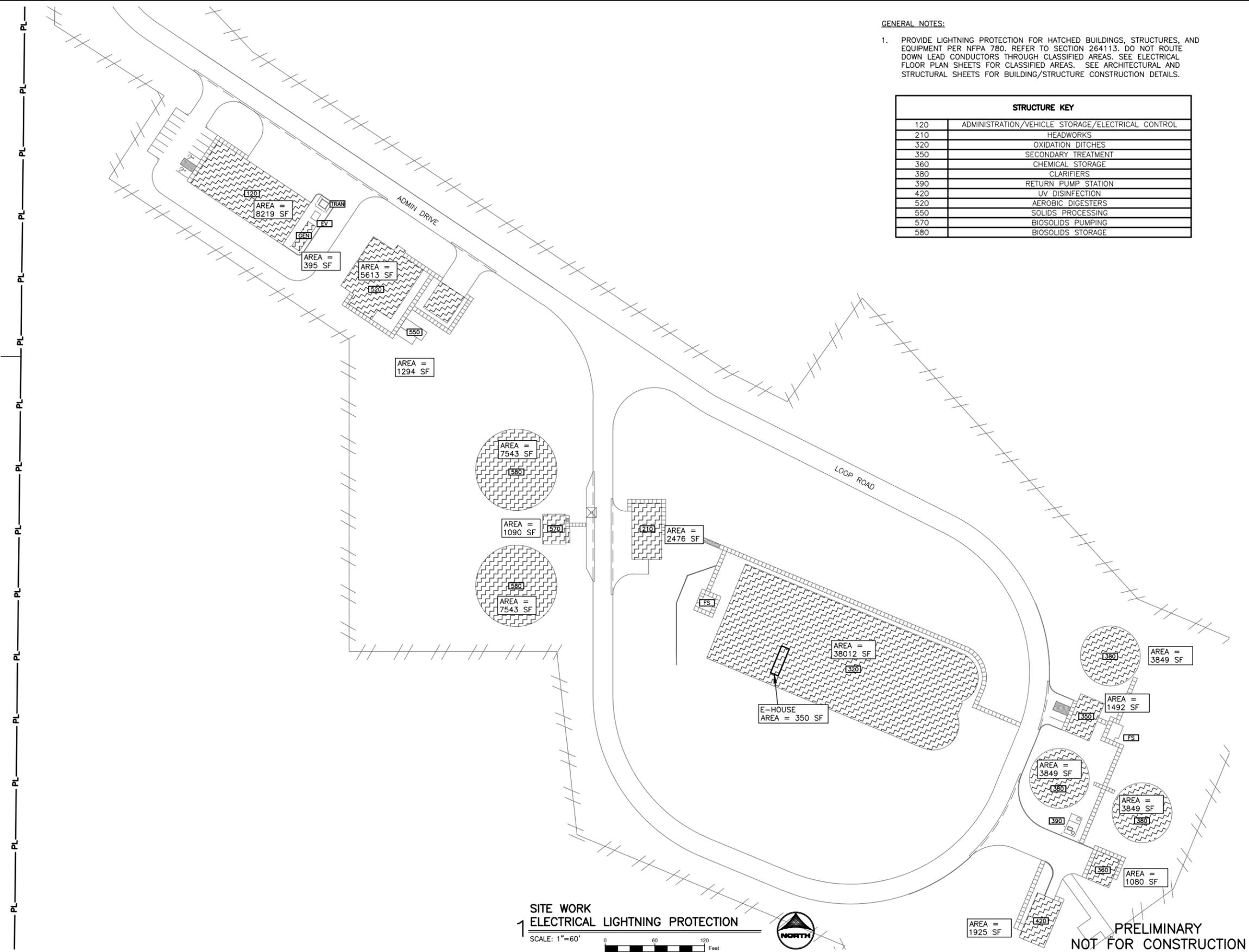
SITE WORK
 ELECTRICAL LIGHTING AND POWER

SHEET NO.
E.01

GENERAL NOTES:

1. PROVIDE LIGHTNING PROTECTION FOR HATCHED BUILDINGS, STRUCTURES, AND EQUIPMENT PER NFPA 780. REFER TO SECTION 264113. DO NOT ROUTE DOWN LEAD CONDUCTORS THROUGH CLASSIFIED AREAS. SEE ELECTRICAL FLOOR PLAN SHEETS FOR CLASSIFIED AREAS. SEE ARCHITECTURAL AND STRUCTURAL SHEETS FOR BUILDING/STRUCTURE CONSTRUCTION DETAILS.

STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIOSOLIDS PUMPING
580	BIOSOLIDS STORAGE



PRELIMINARY
NOT FOR CONSTRUCTION

SITE WORK
ELECTRICAL LIGHTNING PROTECTION
SCALE: 1"=60'

Xref: xgl-1-dh01; XCS-DGN; XCS-BASE; XCS-RW; XCS-PARCELS; XCS-BLDG-INDEX; XCU-PATT

DRAWN BY: CMB, JST JOB DATE: 2020
 APPROVED: MAR, ARV JOB NUMBER: 160473
 CAD DATE: 8/3/2020 12:12:00 PM
 CAD FILE: J:\2016\160473\CAD\Dwgs\E\E.02 ELECTRICAL LIGHTNING PROTECTION.dwg

BAR IS ONE INCH ON
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0" = 120'
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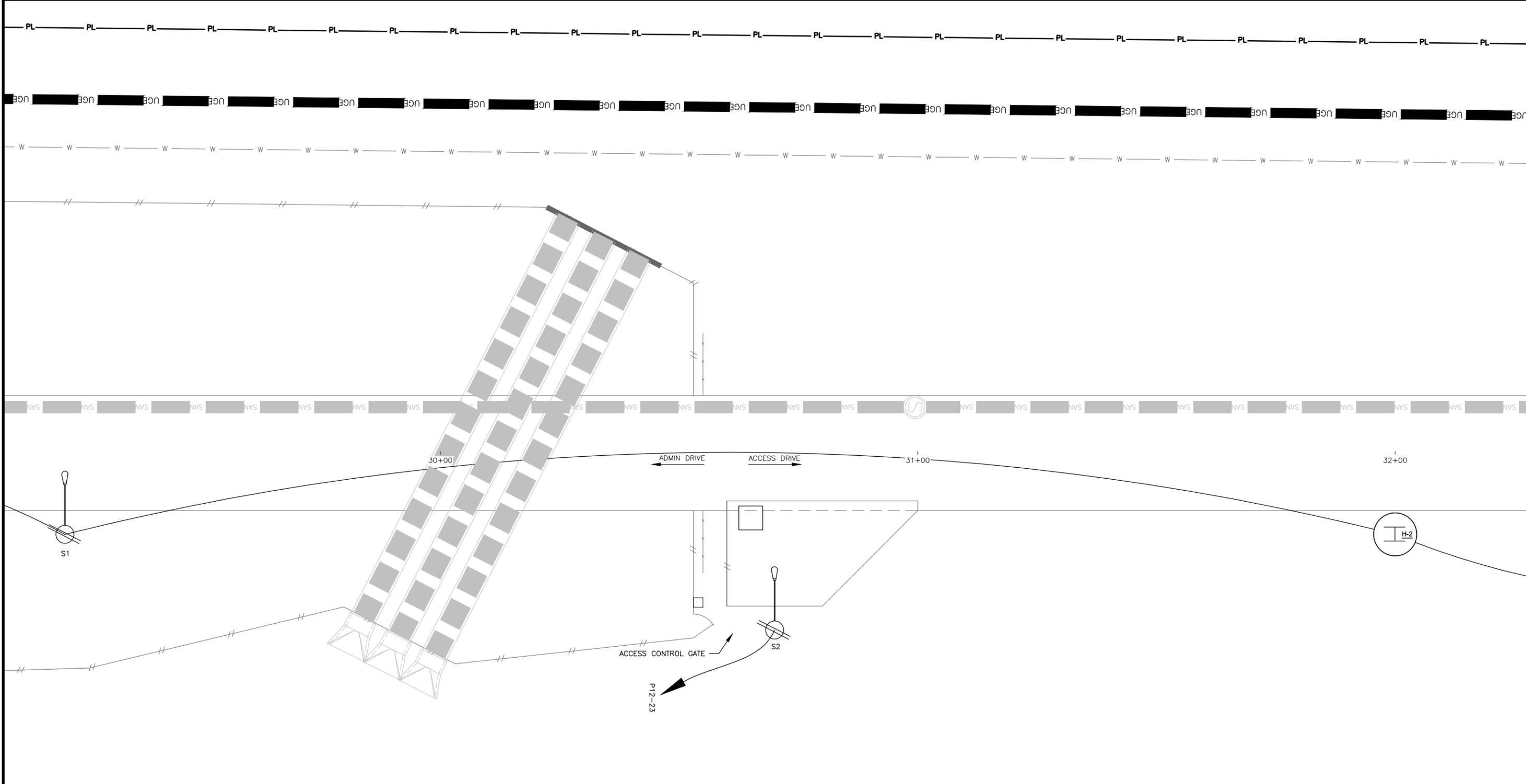
NO.	DATE	BY	REVISION DESCRIPTION



NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SITE WORK
ELECTRICAL LIGHTNING PROTECTION

SHEET NO.
E.02



- KEY NOTES:**
1. PROVIDE ONE UNDERGROUND DEVICES, INC. MODEL CR48-B STANCHION WITH FOUR MODEL RA20 RACK ARMS FOR SUPPORTING POWER CABLES. PROVIDE ONE MODEL CR8-B STANCHION WITH ONE MODEL 3HDS RACK ARM DIRECTLY ABOVE THE POWER STANCHION FOR SUPPORTING FIBER OPTIC CABLES. PROVIDE STAINLESS STEEL HARDWARE AND DROP-IN ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DETAIL 4/S.600 FOR ANCHOR EMBEDMENT REQUIREMENTS. PROVIDE HEAVY DUTY (EXTRA WIDE) NYLON TIE WRAPS FOR SECURING CABLES, AS REQUIRED.
 2. OVERHEAD CABLE BUS FOR GENERATOR OUTPUT CONNECTION TO TRANSFER SWITCH. SEE SECTION 26 0536 AND ONE-LINE DIAGRAM. COORDINATE EXACT ROUTING WITH EQUIPMENT PROVIDED.



SITE WORK
ELECTRICAL SITE PLAN - ACCESS CONTROL GATE AREA

SCALE: 1"=10'

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB, JST
 APPROVED: MAR, ARV
 CAD DATE: 8/3/2020 12:17:41 PM
 CAD FILE: J:\2016\160473\CAD\Dwg\E\E.03 ELECTRICAL SITE PLAN - ACCESS CONTROL GATE AREA.dwg

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
 0 [] 1"
 IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

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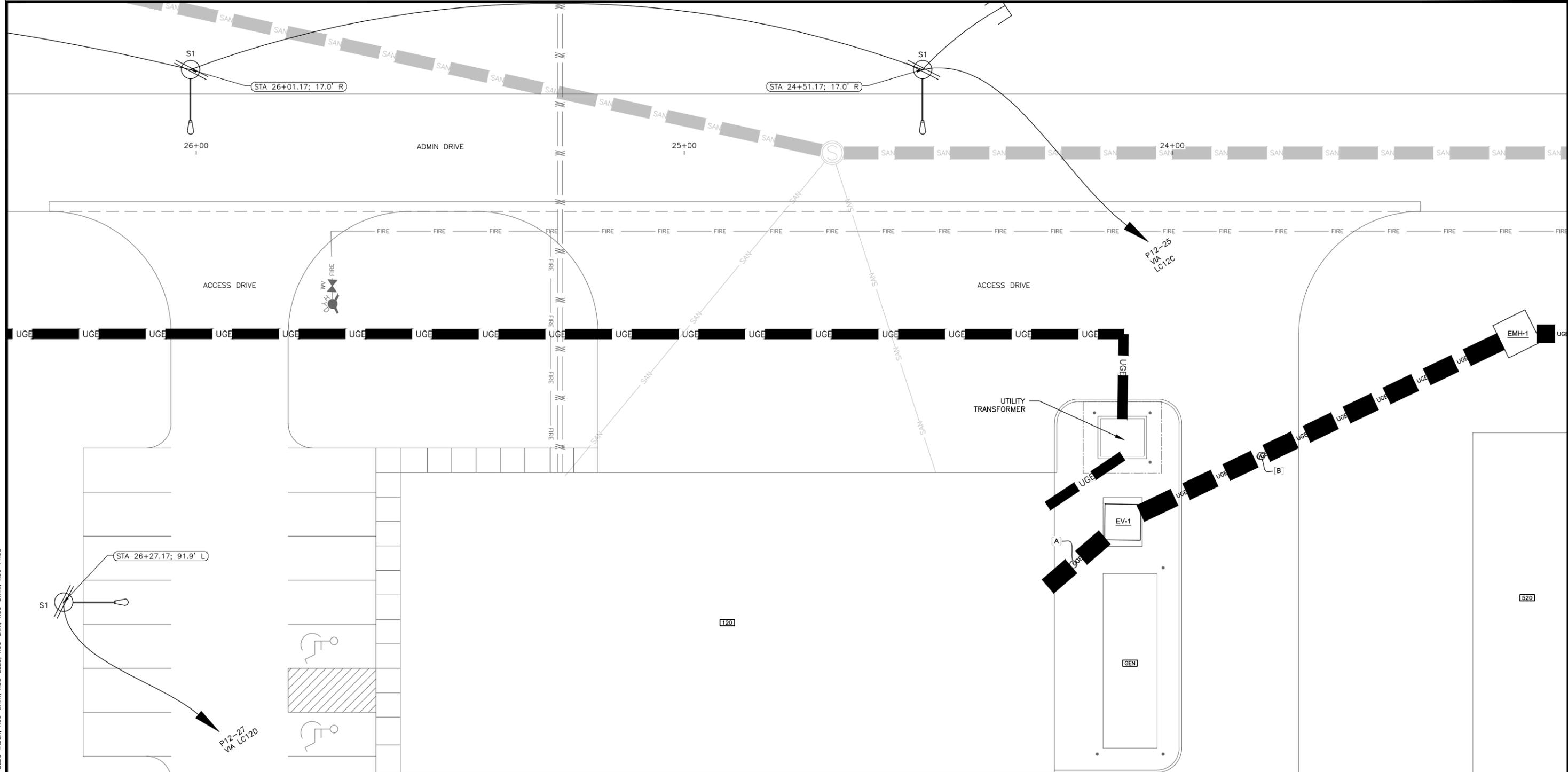


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

SITE WORK
 ELECTRICAL SITE PLAN - ACCESS CONTROL
 GATE AREA

SHEET NO.
E.03

Xref: xgl-1-dh01; XCS-DSON; XCS-BASE; XCS-RW; XCS-PARCELS; XCU-WATR; XCU-ELEC; XCU-SANI; XCU-STRM; XCU-PROC



STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIO-SOLIDS PUMPING
580	BIO-SOLIDS STORAGE

KEY NOTES:

- PROVIDE ONE UNDERGROUND DEVICES, INC. MODEL CR48-B STANCHION WITH FOUR MODEL RA20 RACK ARMS FOR SUPPORTING POWER CABLES. PROVIDE ONE MODEL CR8-B STANCHION WITH ONE MODEL 3HDS RACK ARM DIRECTLY ABOVE THE POWER STANCHION FOR SUPPORTING FIBER OPTIC CABLES. PROVIDE STAINLESS STEEL HARDWARE AND DROP-IN ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DETAIL 4/S.600 FOR ANCHOR EMBEDMENT REQUIREMENTS. PROVIDE HEAVY DUTY (EXTRA WIDE) NYLON TIE WRAPS FOR SECURING CABLES, AS REQUIRED.
- OVERHEAD CABLE BUS FOR GENERATOR OUTPUT CONNECTION TO TRANSFER SWITCH. SEE SECTION 26 0536 AND ONE-LINE DIAGRAM. COORDINATE EXACT ROUTING WITH EQUIPMENT PROVIDED.

**SITE WORK
ELECTRICAL SITE PLAN - ADMIN**

SCALE: 1"=10'



**PRELIMINARY
NOT FOR CONSTRUCTION**

DRAWN BY: CMB, JST JOB DATE: 2020
 APPROVED: MAR, ARV JOB NUMBER: 160473
 CAD DATE: 8/3/2020 12:27:18 PM
 CAD FILE: J:\2016\160473\CAD\Dwgs\E\E.04 ELECTRICAL SITE PLAN - ADMIN.dwg

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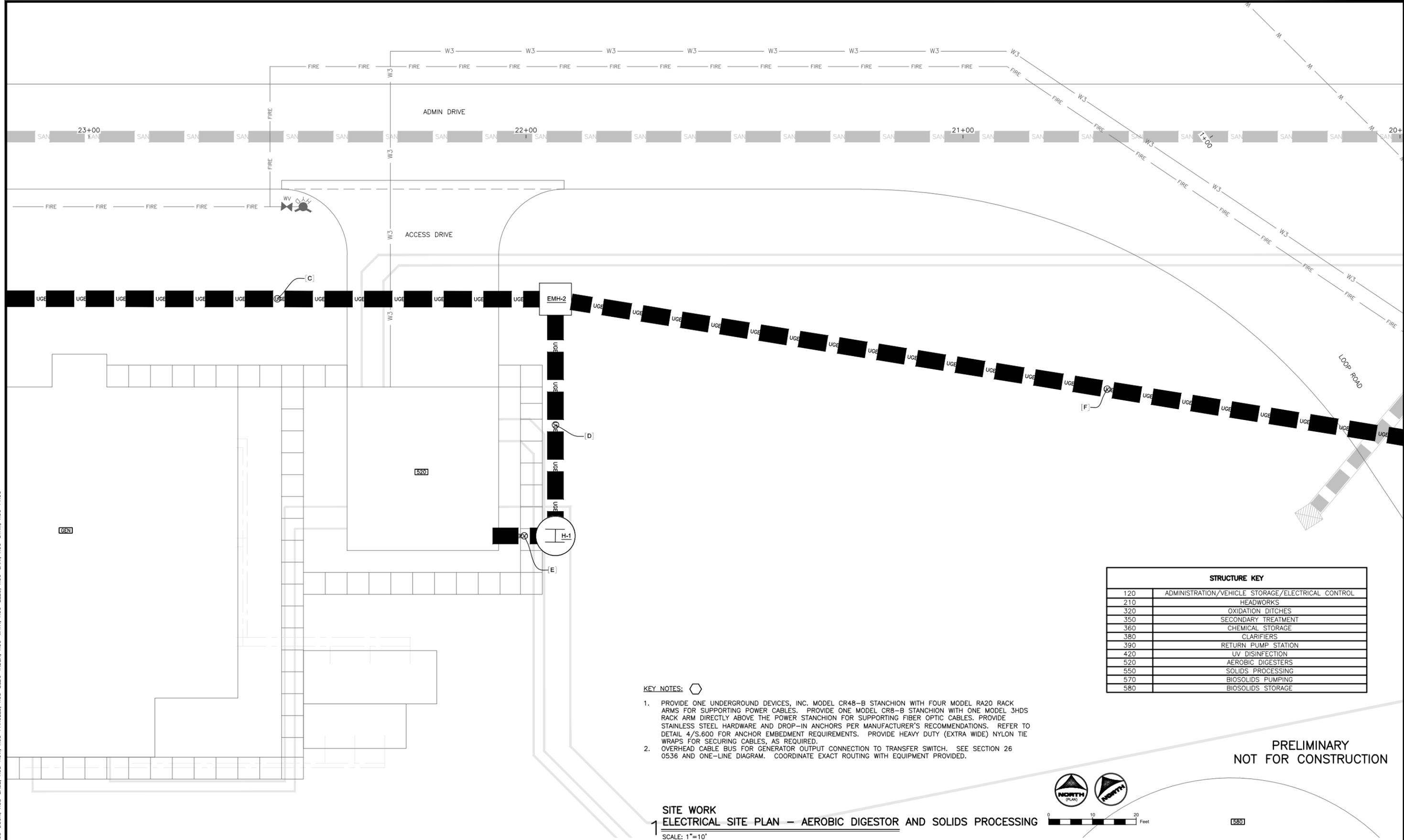


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

SITE WORK
 ELECTRICAL SITE PLAN - ADMIN

SHEET NO.
E.04

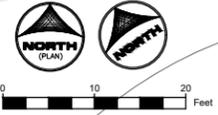
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STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIOSOLIDS PUMPING
580	BIOSOLIDS STORAGE

- KEY NOTES:**
- PROVIDE ONE UNDERGROUND DEVICES, INC. MODEL CR48-B STANCHION WITH FOUR MODEL RA20 RACK ARMS FOR SUPPORTING POWER CABLES. PROVIDE ONE MODEL CR8-B STANCHION WITH ONE MODEL 3HDS RACK ARM DIRECTLY ABOVE THE POWER STANCHION FOR SUPPORTING FIBER OPTIC CABLES. PROVIDE STAINLESS STEEL HARDWARE AND DROP-IN ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DETAIL 4/S.600 FOR ANCHOR EMBEDMENT REQUIREMENTS. PROVIDE HEAVY DUTY (EXTRA WIDE) NYLON TIE WRAPS FOR SECURING CABLES, AS REQUIRED.
 - OVERHEAD CABLE BUS FOR GENERATOR OUTPUT CONNECTION TO TRANSFER SWITCH. SEE SECTION 26 0536 AND ONE-LINE DIAGRAM. COORDINATE EXACT ROUTING WITH EQUIPMENT PROVIDED.

SITE WORK
1 ELECTRICAL SITE PLAN – AEROBIC DIGESTOR AND SOLIDS PROCESSING
 SCALE: 1"=10'



**PRELIMINARY
 NOT FOR CONSTRUCTION**

DRAWN BY: CMB, JST JOB DATE: 2020
 APPROVED: MAR, ARV JOB NUMBER: 160473
 CAD DATE: 8/3/2020 12:31:20 PM
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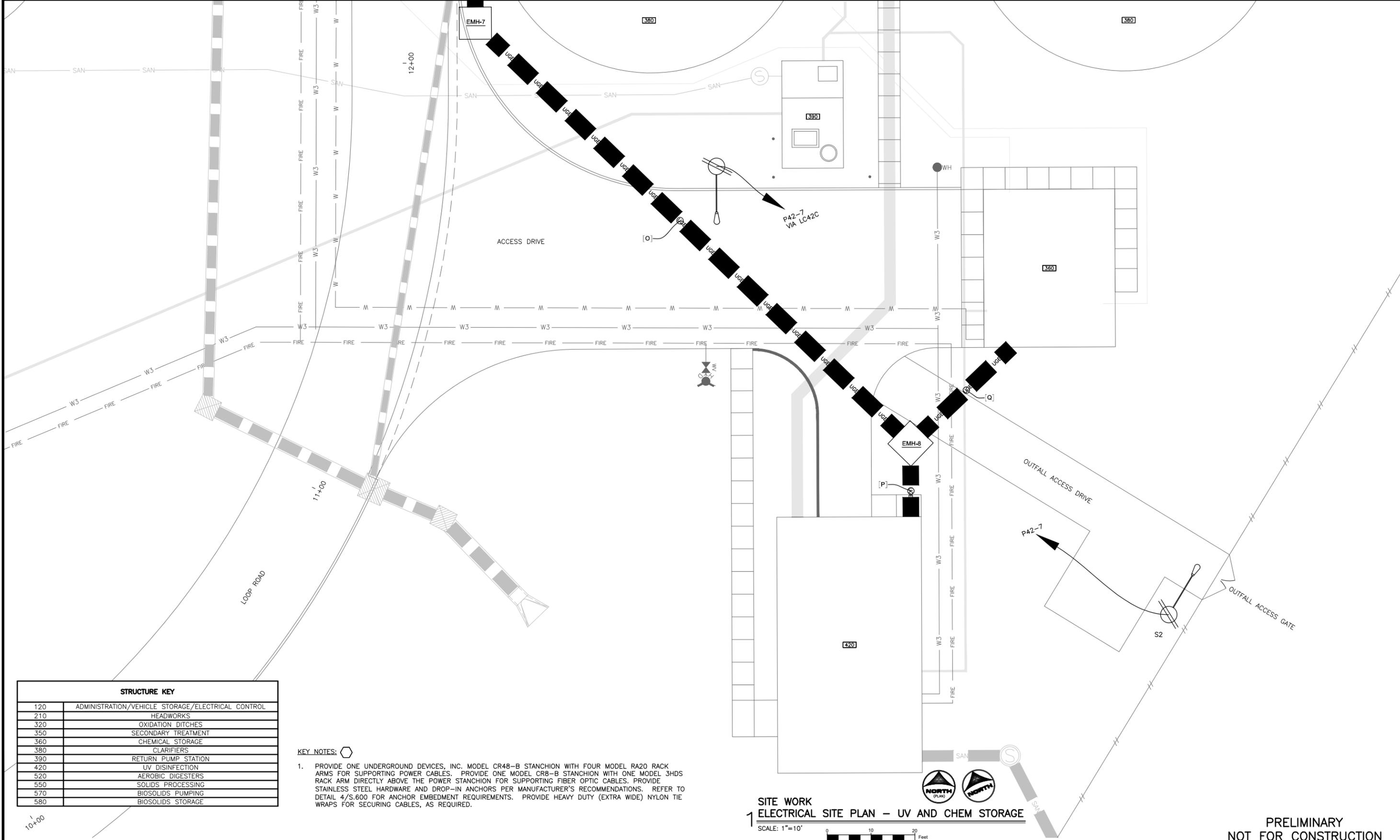


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

SITE WORK
**ELECTRICAL SITE PLAN – AEROBIC DIGESTOR
 AND SOLIDS PROCESSING**

SHEET NO.
E.05

Xref: xgl-1-dh01; XCS-DSON; XCS-BASE; XCS-ROW; XCS-PARCELS; XCS-BLDG-INDEX; XCU-WATR; XCU-ELEC; XCU-SANI; XCU-STRM; XCU-PROG



STRUCTURE KEY	
120	ADMINISTRATION/VEHICLE STORAGE/ELECTRICAL CONTROL
210	HEADWORKS
320	OXIDATION DITCHES
350	SECONDARY TREATMENT
360	CHEMICAL STORAGE
380	CLARIFIERS
390	RETURN PUMP STATION
420	UV DISINFECTION
520	AEROBIC DIGESTERS
550	SOLIDS PROCESSING
570	BIO-SOLIDS PUMPING
580	BIO-SOLIDS STORAGE

KEY NOTES:

1. PROVIDE ONE UNDERGROUND DEVICES, INC. MODEL CR48-B STANCHION WITH FOUR MODEL RA20 RACK ARMS FOR SUPPORTING POWER CABLES. PROVIDE ONE MODEL CR8-B STANCHION WITH ONE MODEL 3HDS RACK ARM DIRECTLY ABOVE THE POWER STANCHION FOR SUPPORTING FIBER OPTIC CABLES. PROVIDE STAINLESS STEEL HARDWARE AND DROP-IN ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DETAIL 4/S.600 FOR ANCHOR EMBEDMENT REQUIREMENTS. PROVIDE HEAVY DUTY (EXTRA WIDE) NYLON TIE WRAPS FOR SECURING CABLES, AS REQUIRED.

**SITE WORK
ELECTRICAL SITE PLAN - UV AND CHEM STORAGE**

SCALE: 1"=10'
0 10 20 Feet

**PRELIMINARY
NOT FOR CONSTRUCTION**

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 APPROVED: MAR, ARV JOB NUMBER: 160473
 CAD DATE: 8/3/2020 12:34:12 PM
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NO.	DATE	BY	REVISION DESCRIPTION

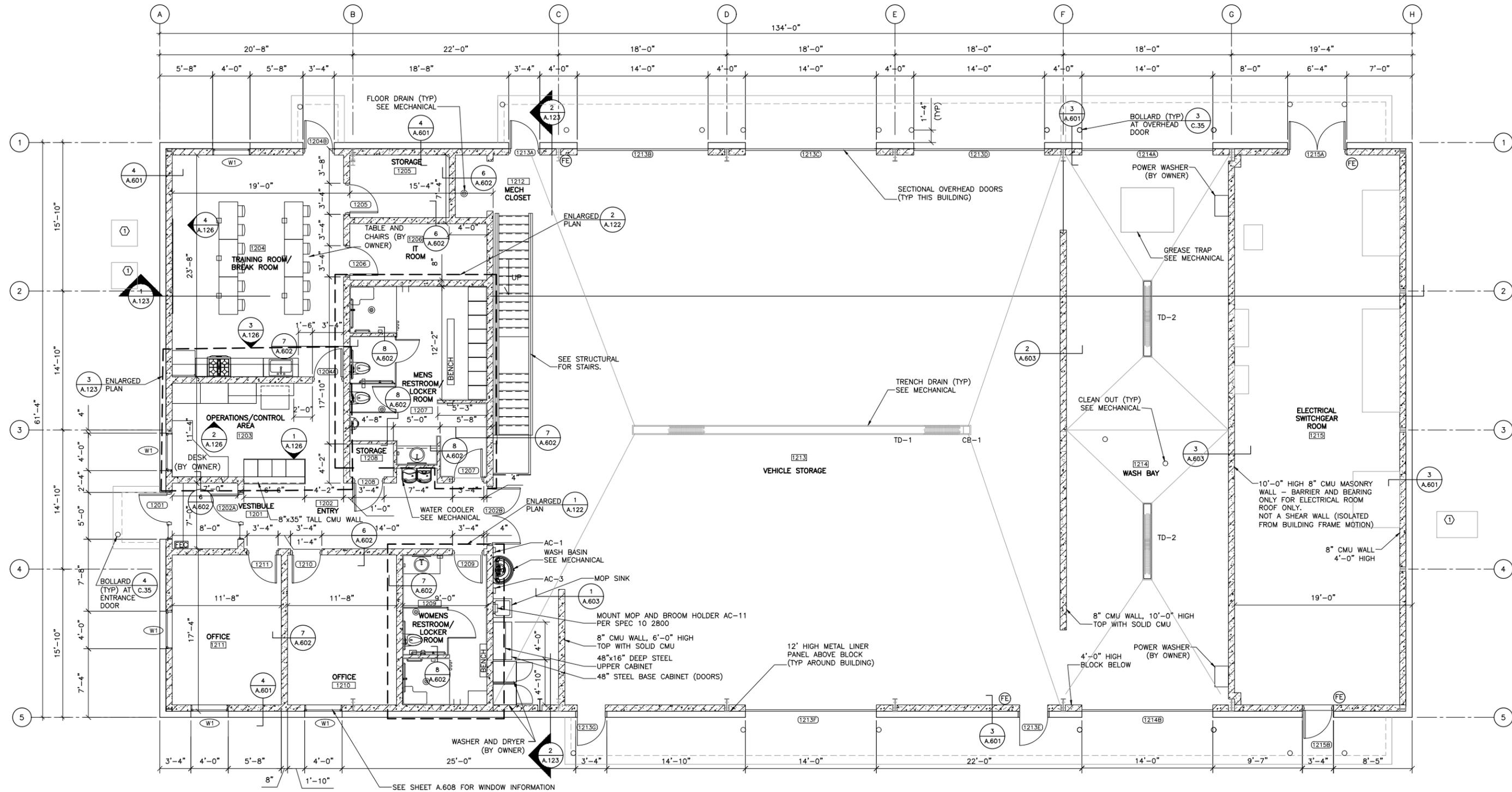


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

SITE WORK
ELECTRICAL SITE PLAN - UV AND CHEM STORAGE

SHEET NO.
E.06

Xref: xgl-1-dm1; XCS-DGN; XCS-BASE; XCS-RW; XCS-PARCELS; XCS-BLDG-INDEX; XCU-WATR; XCU-ELEC; XCU-SANI; XCU-STRM; XCU-PROC



1 OPERATING LEVEL PLAN
SCALE: 3/16"=1'-0"



- NOTES:**
- SEE A.600 SERIES SHEETS FOR ARCHITECTURAL DETAILS AND SCHEDULES.
 - SEE A.602 THRU A.604 FOR WALL DETAILS AND SCHEDULES.
 - REFER TO SPECIFICATION SECTION 10 2800 FOR SINK ACCESSORIES, SEE ACCESSORIES IN MAINTENANCE AREA ON A.122

- KEYNOTES:**
- EQUIPMENT PAD; SEE STRUCTURAL AND MECHANICAL.

**PRELIMINARY
NOT FOR CONSTRUCTION**

Xref: xgl-1-dh01; XA-120-PD1; XS-120-GRID; XS-120-PD0

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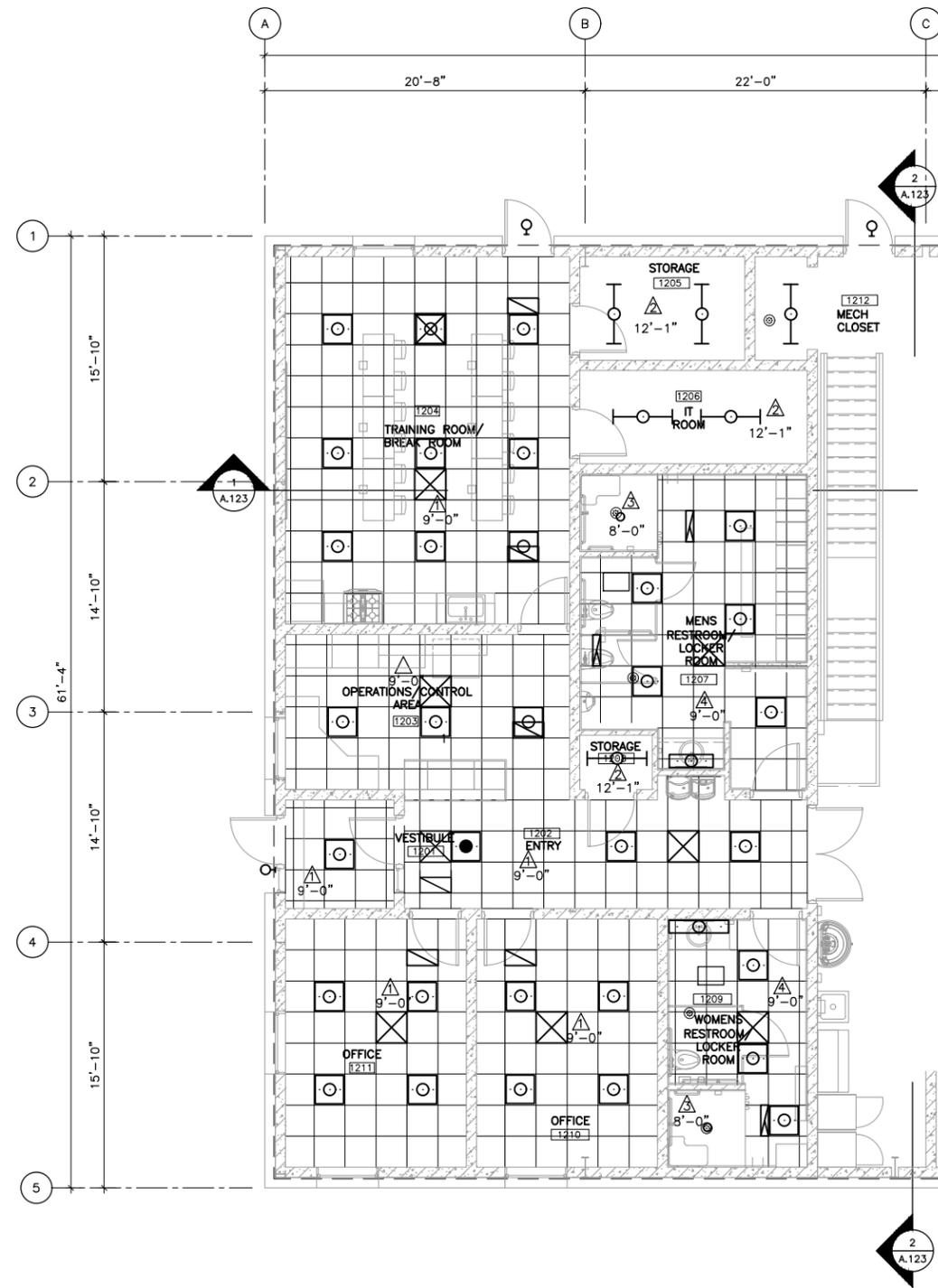
NO.	DATE	BY	REVISION DESCRIPTION



NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

ADMINISTRATION - MAINTENANCE BUILDING - 120
ARCHITECTURAL
OPERATING LEVEL PLAN

SHEET NO.
A.120

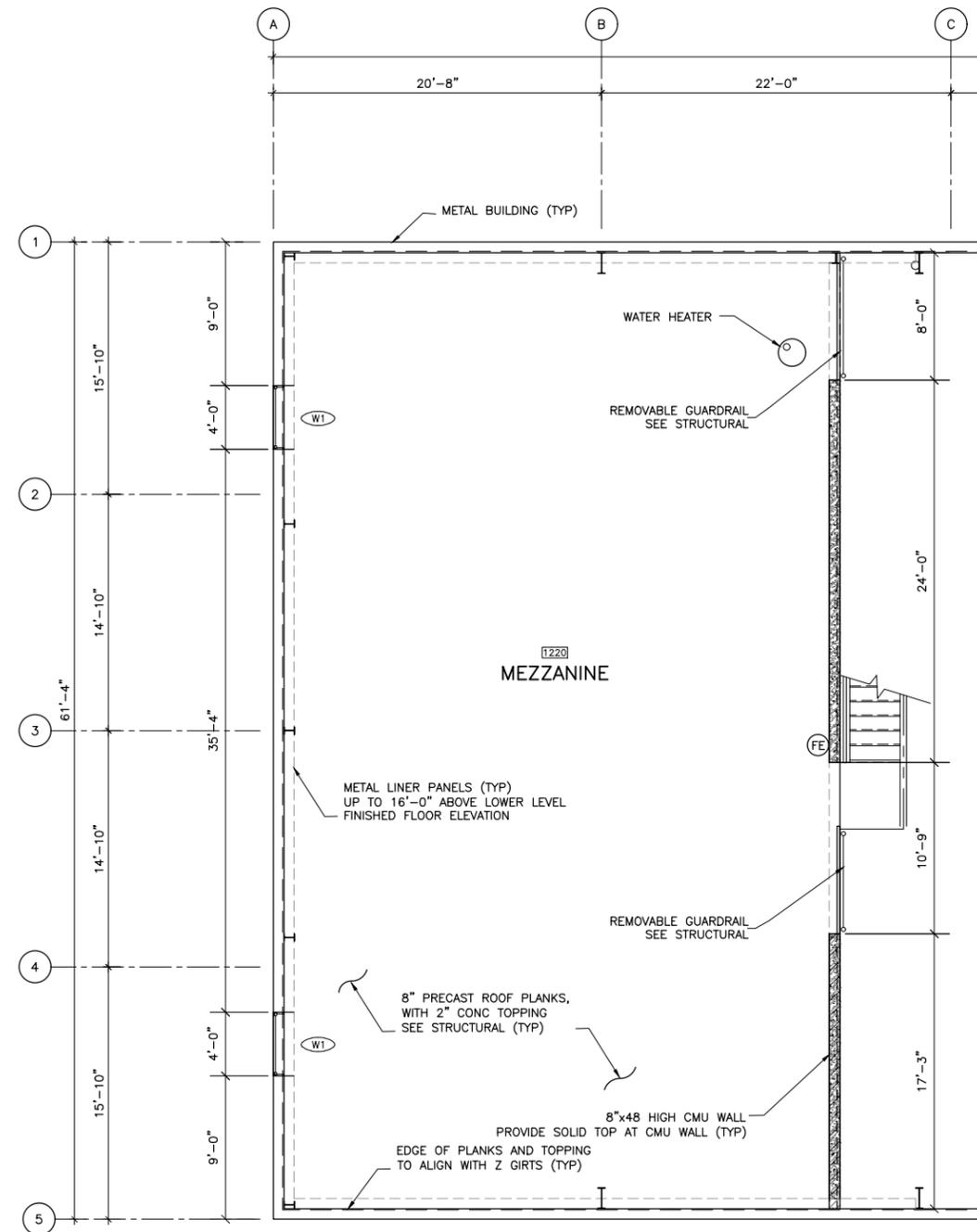


LEGEND:

- ACT-1 AS SPECIFIED
- EXPOSED STRUCTURE
- MOISTURE RESISTANT GYPSUM BOARD
PROVIDE BULKHEAD AT JUNCTION
WITH ACT
- ACT-2 AS SPECIFIED

1 REFLECTED CEILING PLAN

SCALE: 3/16"=1'-0"



2 MEZZANINE LEVEL PLAN

SCALE: 3/16"=1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

Xref: xgl-1-dh01: XS-120-GRD; XA-120-MEZ; XA-120-P02; XA-120-P01; XS-120-P02; XEL-120-P02; XMH-120-P02; XEL-120-P01; XMH-120-P01

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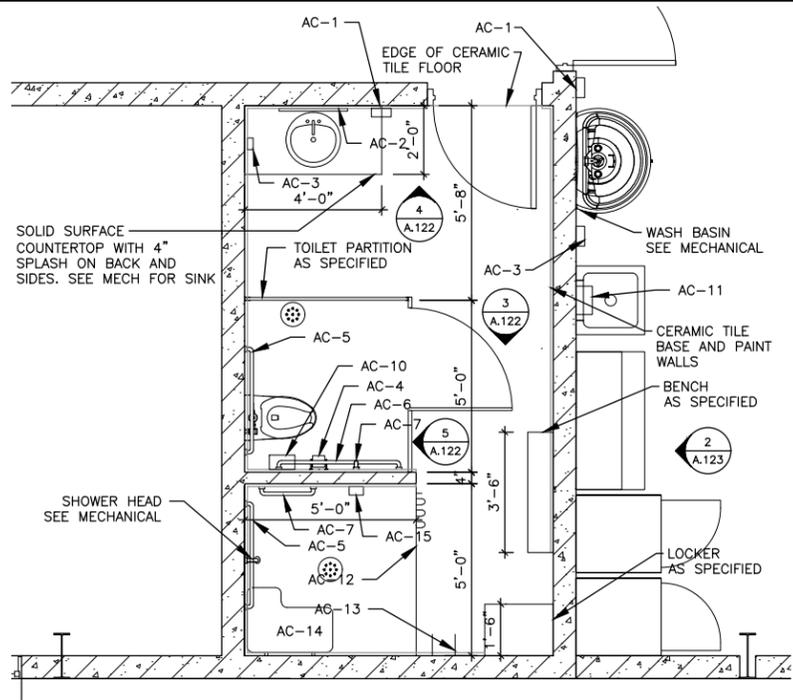
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NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

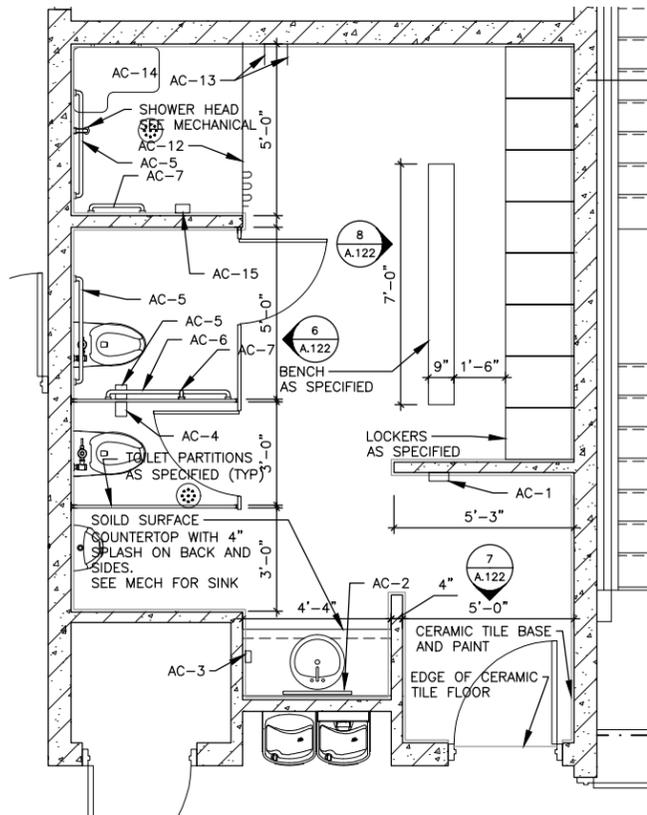
ADMINISTRATION - MAINTENANCE BUILDING - 120
ARCHITECTURAL
MEZZANINE AND REFLECTED CEILING PLAN

SHEET NO.
A.121



1 ENLARGED PLAN WOMENS RESTROOM

SCALE: 3/8"=1'-0"

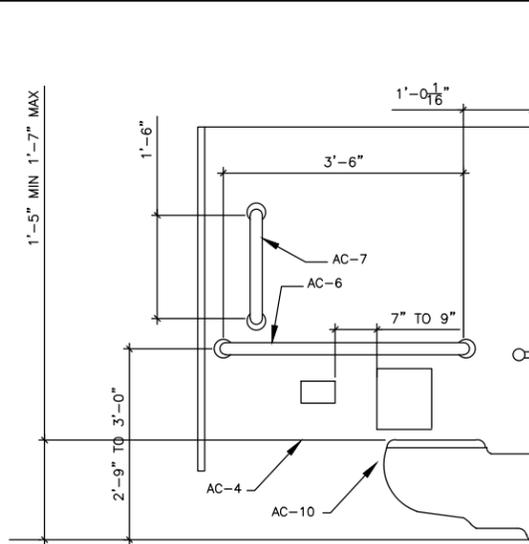


2 ENLARGED PLAN MENS RESTROOM AND LOCKER ROOM

SCALE: 3/8"=1'-0"

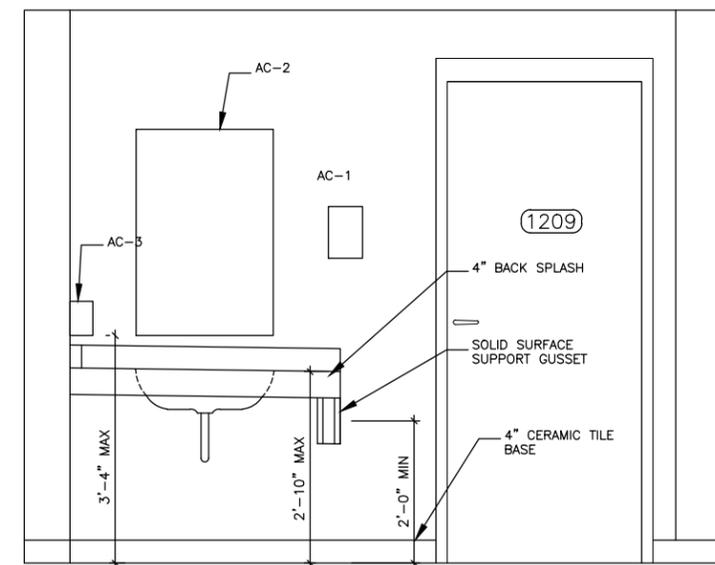


1'-5" MIN 1'-7" MAX



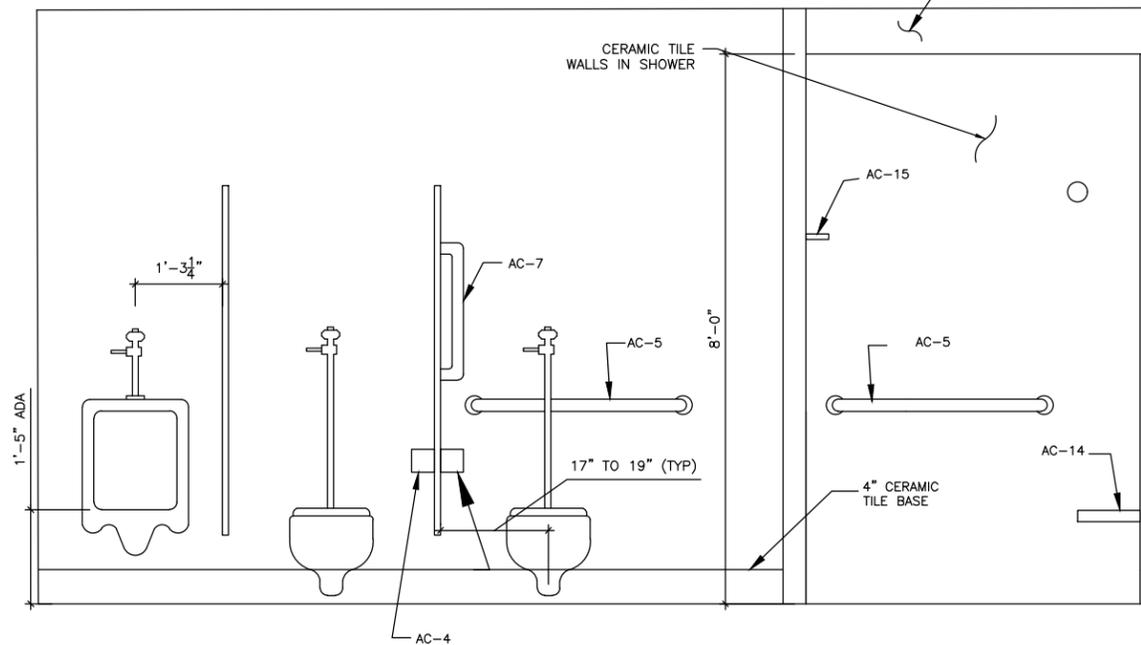
3 WOMENS RESTROOM SECTION

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



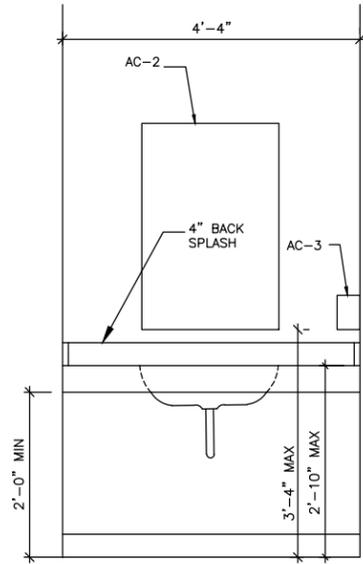
4 WOMENS RESTROOM SECTION

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



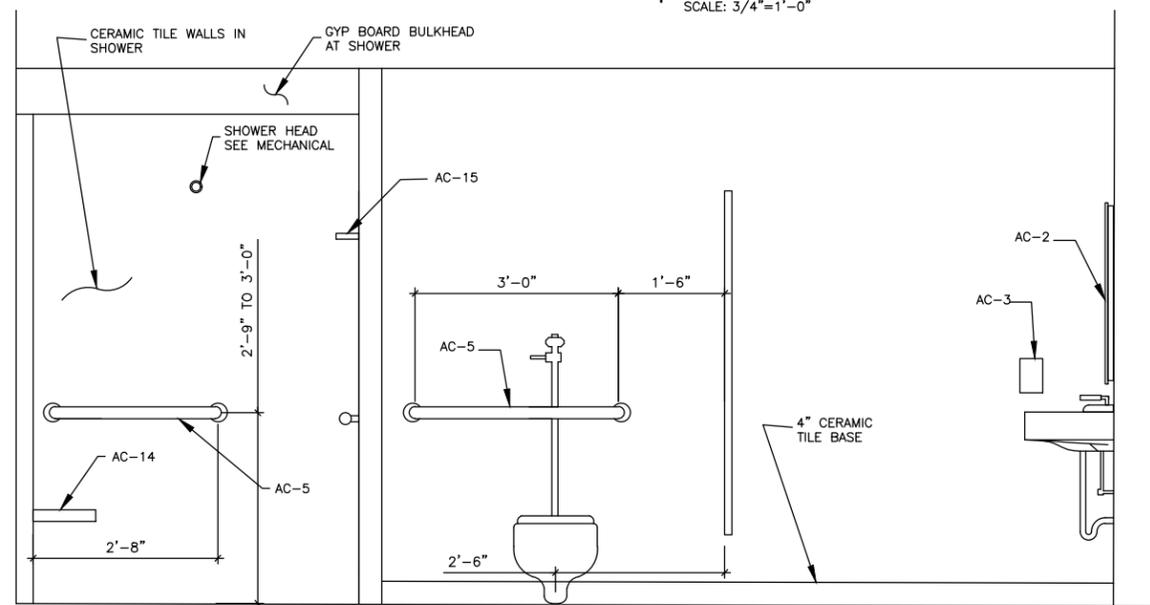
6 MENS RESTROOM SECTION

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



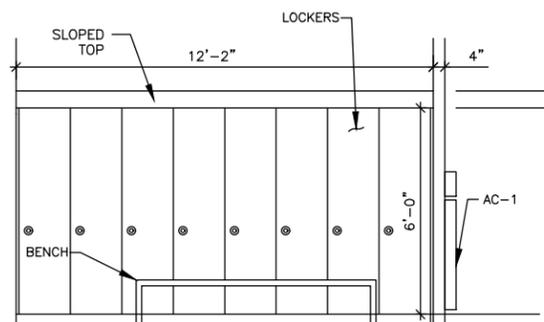
7 MENS RESTROOM SECTION

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



5 WOMENS RESTROOM SECTION

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



8 MENS RESTROOM SECTION

SCALE: 3/8"=1'-0"

- NOTES:
1. REFER TO SPECIFICATION SECTION 10 2113.19 FOR PLASTIC TOILET PARTITIONS.
 2. REFER TO SPECIFICATION SECTION 10 5113 FOR LOCKERS AND BENCHES.
 3. REFER TO SPECIFICATION SECTION 12 3600 FOR COUNTER TOPS.
 4. REFER TO SPECIFICATION SECTION 10 2800 FOR TOILET ACCESSORIES.
 5. REFER TO SPECIFICATION SECTION 12 3600 FOR COUNTERTOPS.

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB JOB DATE: 2020
 APPROVED: DJH JOB NUMBER: 160473
 CAD DATE: 7/30/2020 2:12:03 PM
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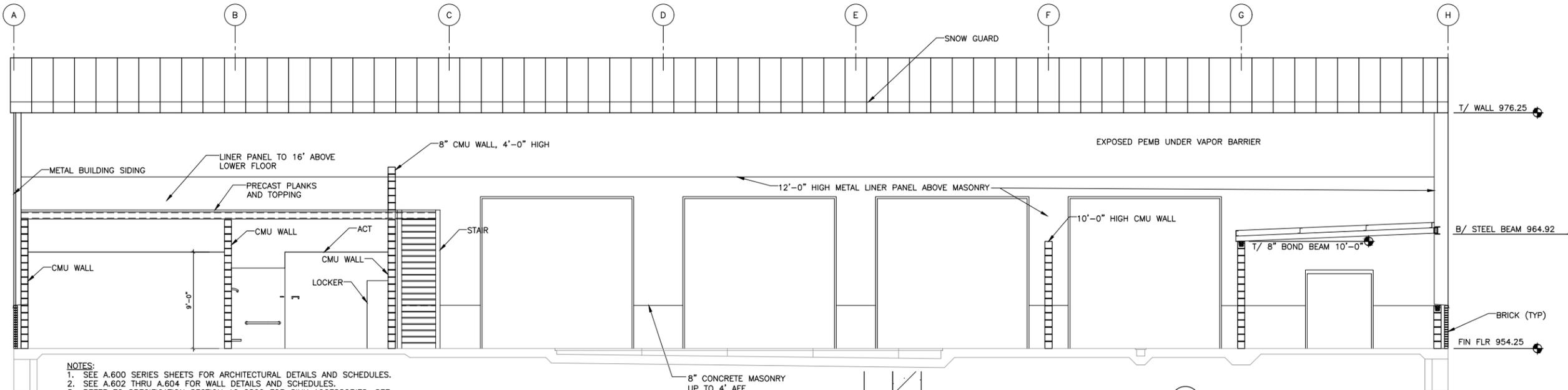
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NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

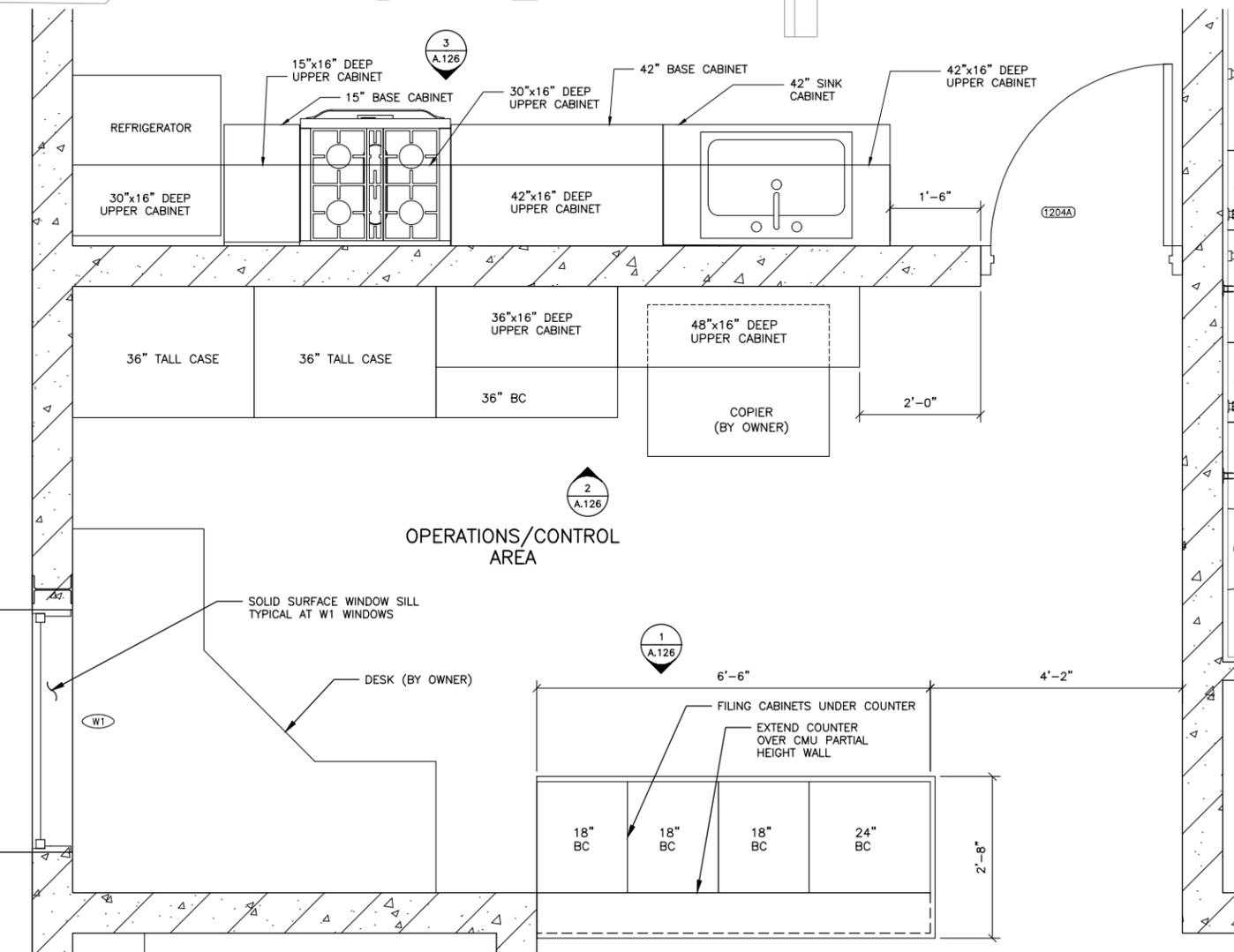
ADMINISTRATION - MAINTENANCE BUILDING - 120
 ARCHITECTURAL
 ENLARGED PLANS

SHEET NO.
A.122



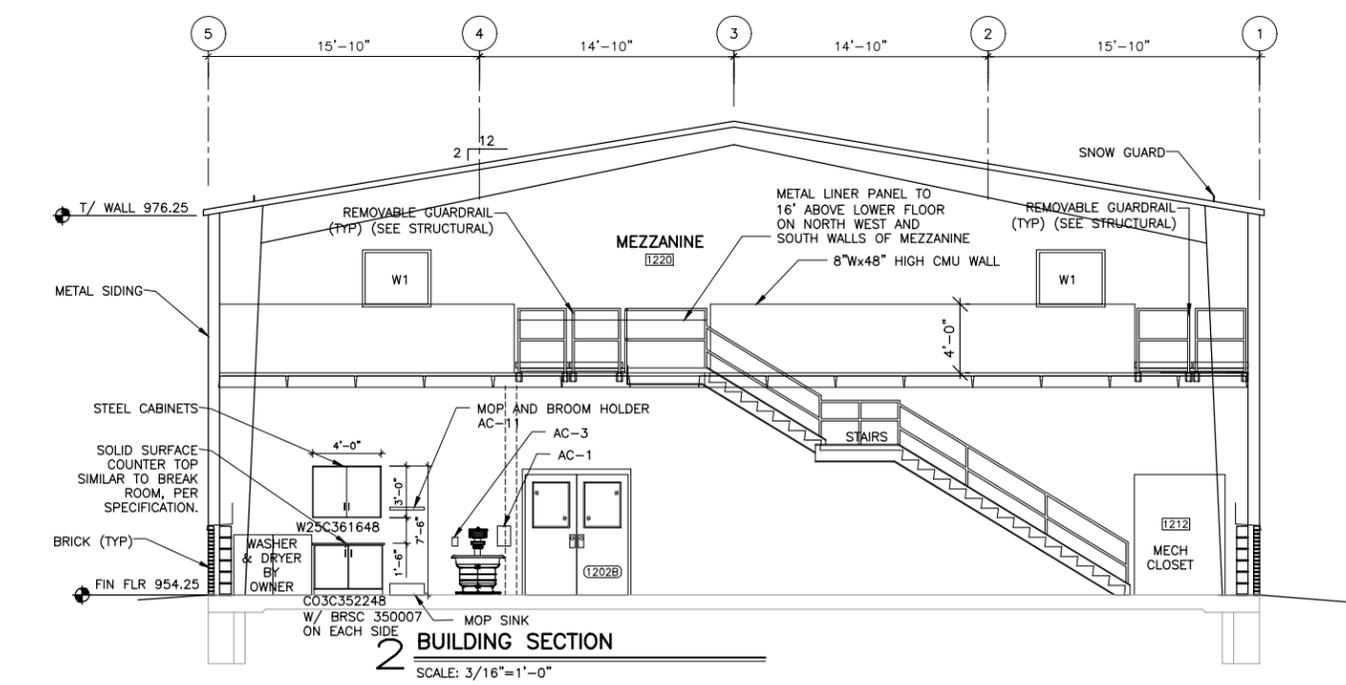
- NOTES:**
1. SEE A.600 SERIES SHEETS FOR ARCHITECTURAL DETAILS AND SCHEDULES.
 2. SEE A.602 THRU A.604 FOR WALL DETAILS AND SCHEDULES.
 3. REFER TO SPECIFICATION SECTION 10 2800 FOR SINK ACCESSORIES, SEE ACCESSORIES IN MAINTENANCE AREA ON A.122.
 4. SEE SPECIFICATION SECTION 12 3600 FOR COUNTERTOPS.
 5. REFER TO SPECIFICATION SECTION 11 5353 FOR CABINETS IN ADMINISTRATION-MAINTENANCE.
 6. COORDINATE WITH CABINET MANUFACTURER TO INCLUDE CABINETS IN SECONDARY TREATMENT BUILDING (LABORATORY).
 7. CABINET PREFERENCES ON ELEVATIONS ARE BASED ON KEWAUNEE SCIENTIFIC CORPORATION. CONTRACTOR TO PROVIDE KEWAUNEE OR EQUAL PER SPECIFICATIONS.
 8. CABINETS IN ADMINISTRATION BUILDING SHALL BE WOOD. CABINETS IN MAINTENANCE AREA SHALL BE STEEL.

1 BUILDING SECTION
SCALE: 3/16"=1'-0"



3 ENLARGED PLAN
SCALE: 3/4"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION



2 BUILDING SECTION
SCALE: 3/16"=1'-0"

DRAWN BY: CMB JOB DATE: 2020
 APPROVED: DJH JOB NUMBER: 160473
 CAD DATE: 7/29/2020 4:19:48 PM
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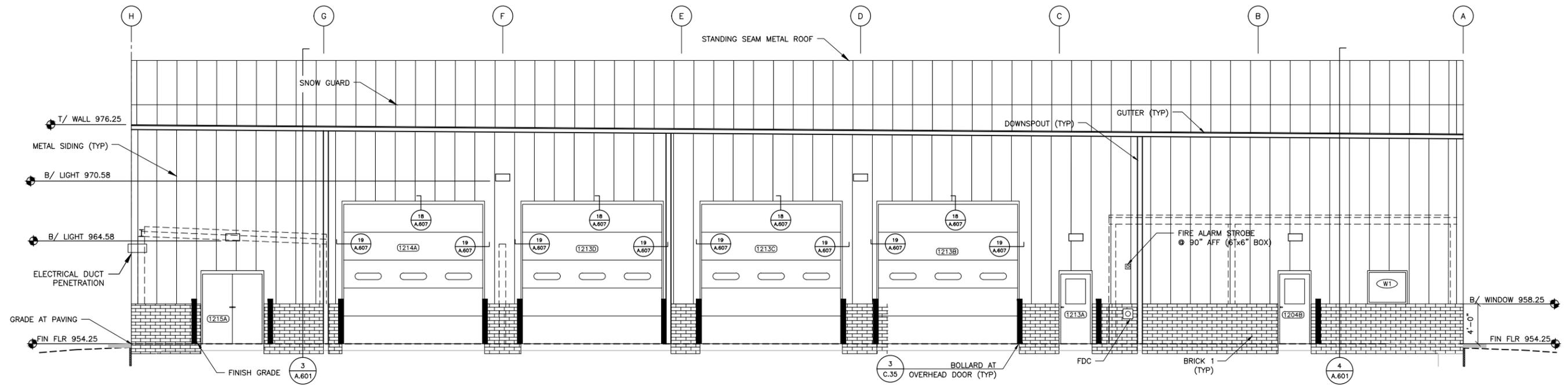
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NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

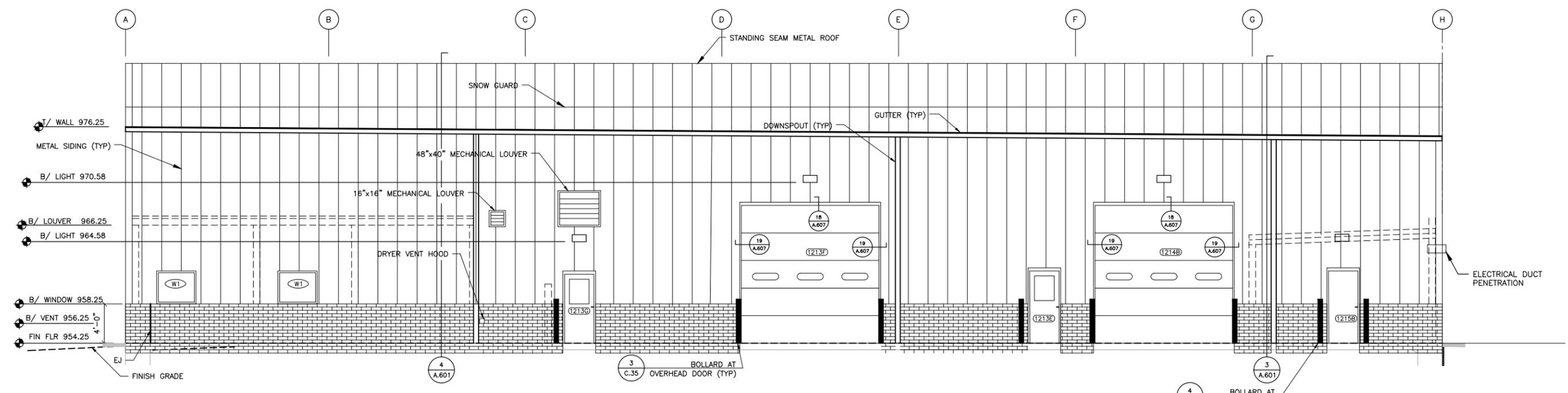
ADMINISTRATION - MAINTENANCE BUILDING - 120
 ARCHITECTURAL
 BUILDING SECTIONS

SHEET NO.
A.123



1 NORTH ELEVATION
SCALE: 3/16"=1'-0"

- NOTES:**
1. SEE A.600 SERIES SHEETS FOR DOOR AND WINDOW TYPES AND DETAILS.
 2. COORDINATE LOCATIONS OF HEAT TAPE ELECTRICAL WITH DOWNSPOUT LOCATIONS (TYP)



2 SOUTH ELEVATION
SCALE: 3/16"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

Xref: xgl-1-dh01: XA-120-ED1

DRAWN BY: CMB	JOB DATE: 2020	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
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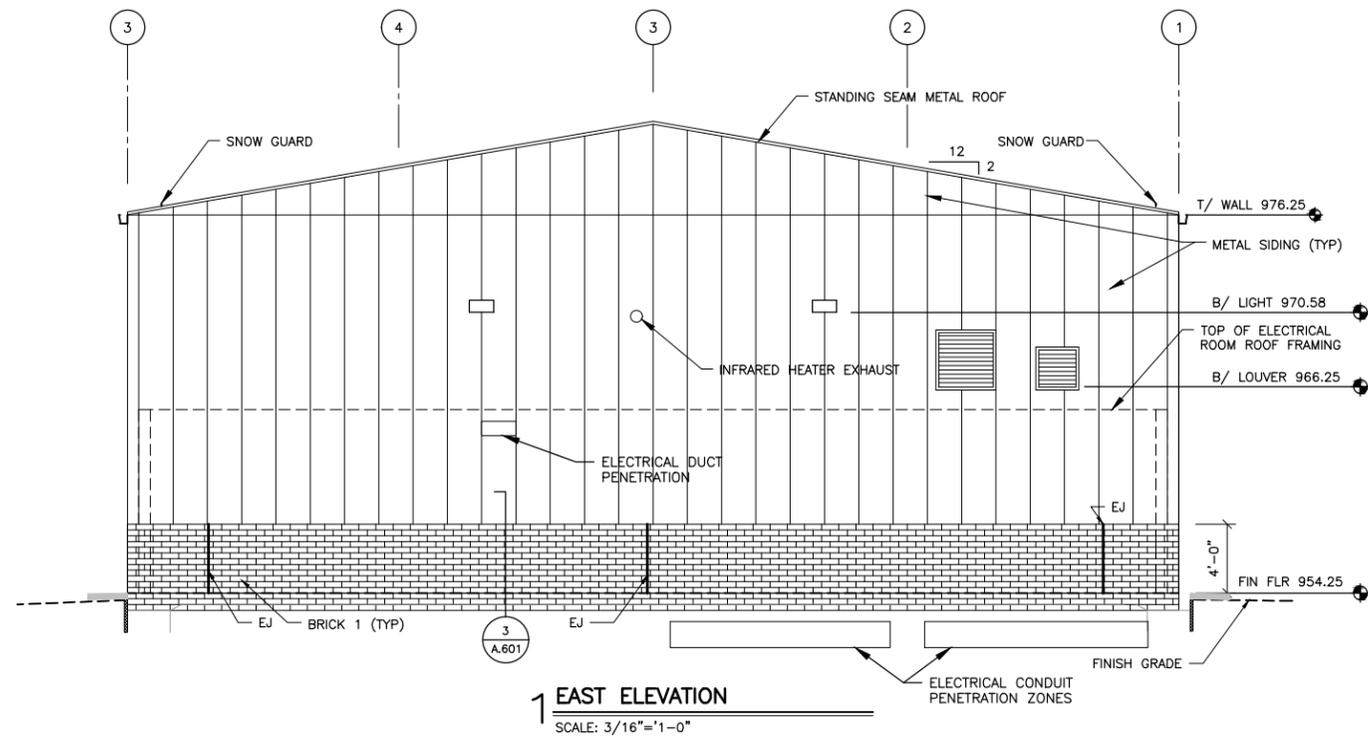
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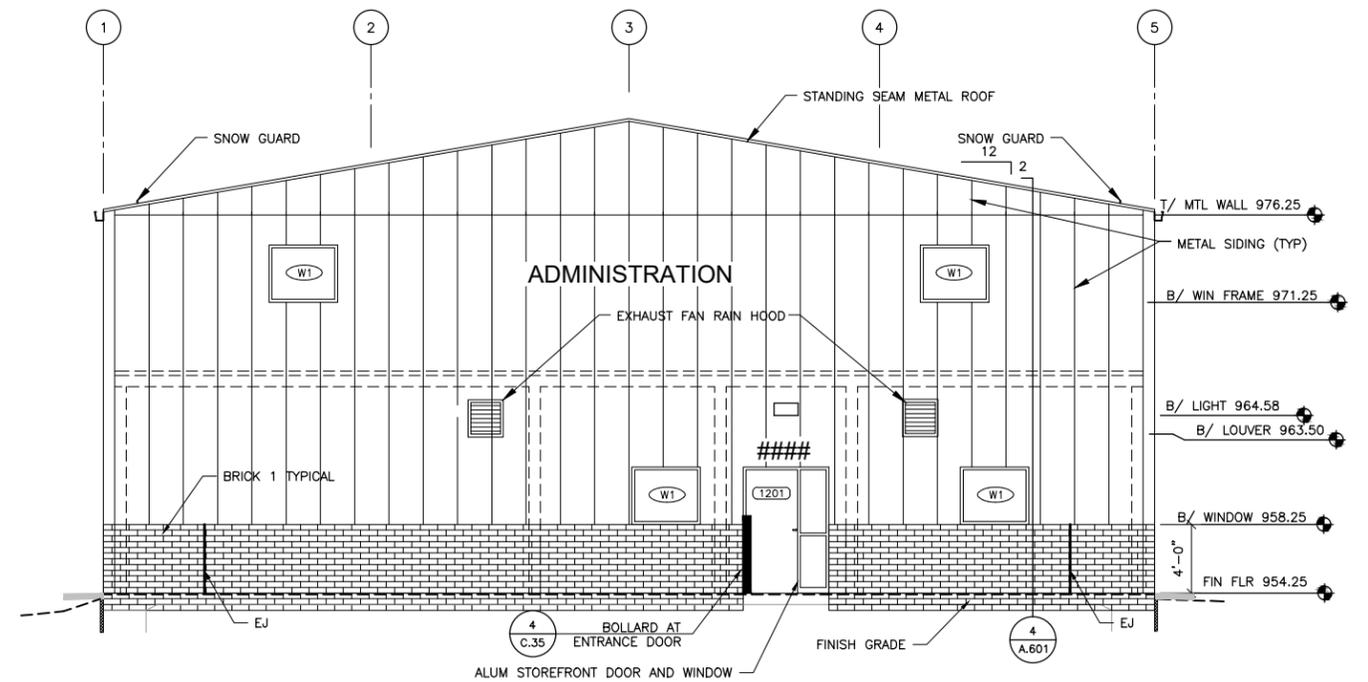
NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

ADMINISTRATION - MAINTENANCE BUILDING - 120
ARCHITECTURAL
EXTERIOR ELEVATIONS

SHEET NO.
A.124



1 EAST ELEVATION
SCALE: 3/16"=1'-0"



2 WEST ELEVATION
SCALE: 3/16"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB
APPROVED: DJH
CAD DATE: 7/14/2020 10:40:35 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.125 EXTERIOR ELEVATIONS.dwg

JOB DATE: 2020
JOB NUMBER: 160473

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
0 1"

IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

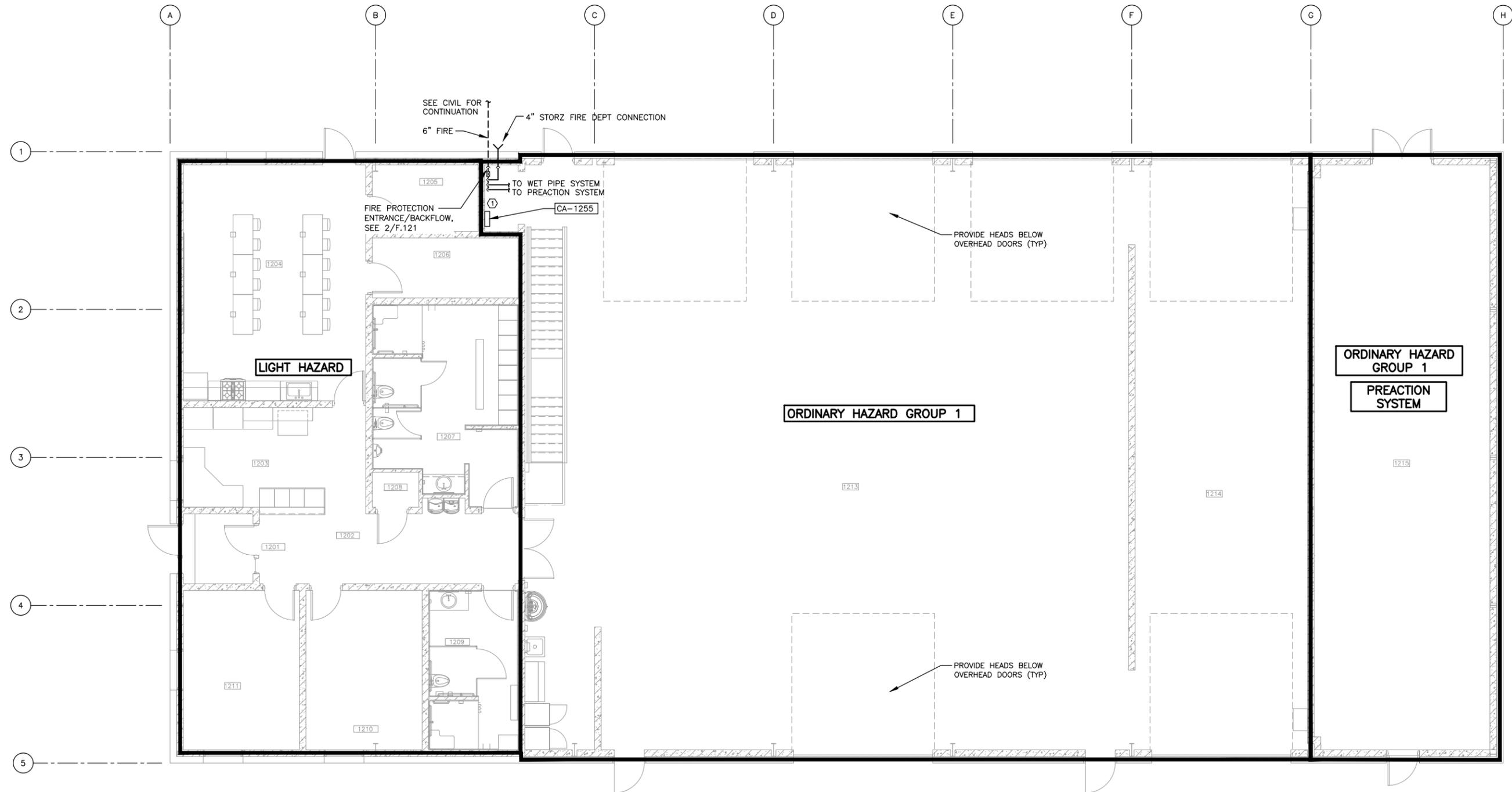
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NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

ADMINISTRATION - MAINTENANCE BUILDING - 120
ARCHITECTURAL
EXTERIOR ELEVATIONS

SHEET NO.
A.125



1 OPERATING LEVEL PLAN
SCALE: 3/16"=1'-0"



KEYNOTES: (X)
1. PROVIDE CONTROL PANEL FOR SINGLE INTERLOCK PREACTION SYSTEM. PANEL SHALL SERVE PREACTION ZONE IN THE ELECTRICAL SWITCHGEAR ROOM. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER AND WIRING.

**PRELIMINARY
NOT FOR CONSTRUCTION**

DRAWN BY: CMB	JOB DATE: 2020	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0" = 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
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NO.	DATE	BY	REVISION DESCRIPTION

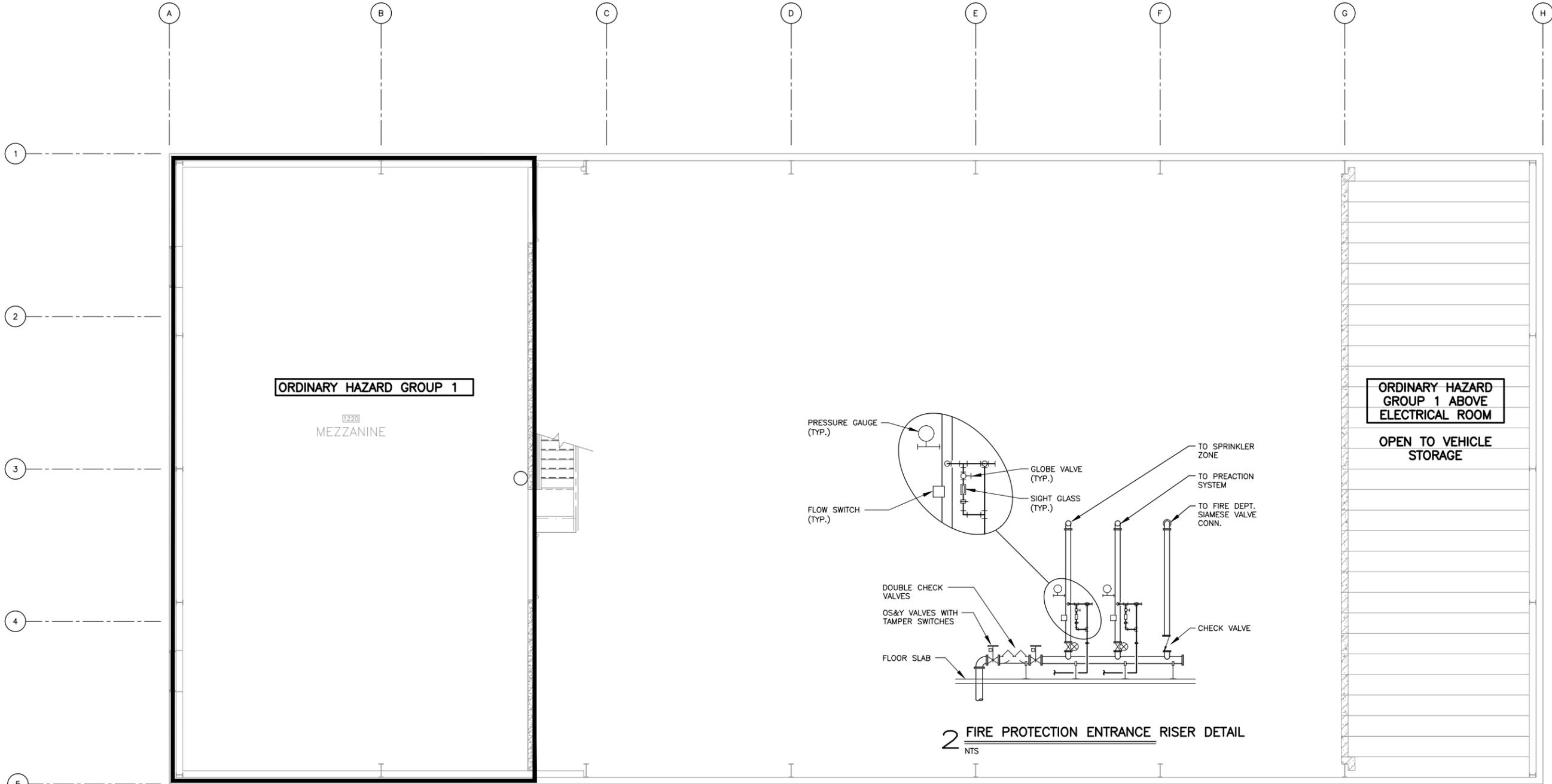


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

ADMINISTRATION - MAINTENANCE BUILDING - 120
FIRE PROTECTION
OPERATING LEVEL FIRE PROTECTION PLAN

SHEET NO.
F.120

Xref: xgl-1-dh01; XA-120-P01; XS-120-GRID; XWF-120-P01



1 MEZZANINE LEVEL PLAN
SCALE: 3/16"=1'-0"



2 FIRE PROTECTION ENTRANCE RISER DETAIL
NTS

PRELIMINARY
NOT FOR CONSTRUCTION

Xref: xgl-1-dh01; XA-120-P01; XS-120-GRID; XA-120-MEZZ; XMF-120-P02

DRAWN BY: CMB	JOB DATE: 2020	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0" = 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
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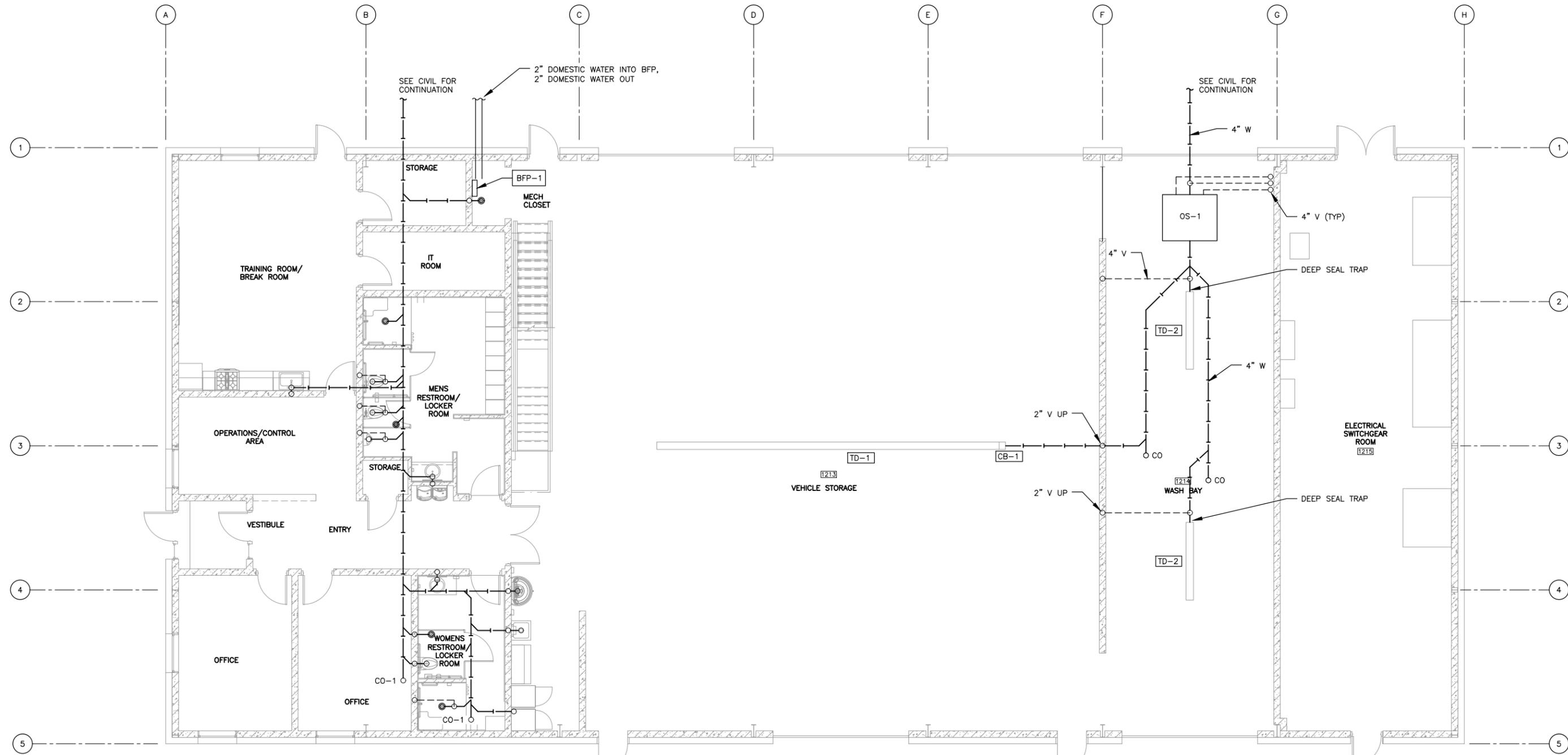
NO.	DATE	BY	REVISION DESCRIPTION

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NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

ADMINISTRATION - MAINTENANCE BUILDING - 120
FIRE PROTECTION
MEZZANINE LEVEL FIRE PROTECTION PLAN

SHEET NO.
F.121



1 UNDER FLOOR PIPING PLAN
 SCALE: 3/16"=1'-0"
 

PRELIMINARY
 NOT FOR CONSTRUCTION

Xref: xgl-1-dh01; XA-120-P01; XS-120-GRID; XA-120-MEZZ; XS-120-P00; XMP-120-P00

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APPROVED: DAS	JOB NUMBER: 160473	0
CAD DATE: 7/31/2020 10:47:47 AM		IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
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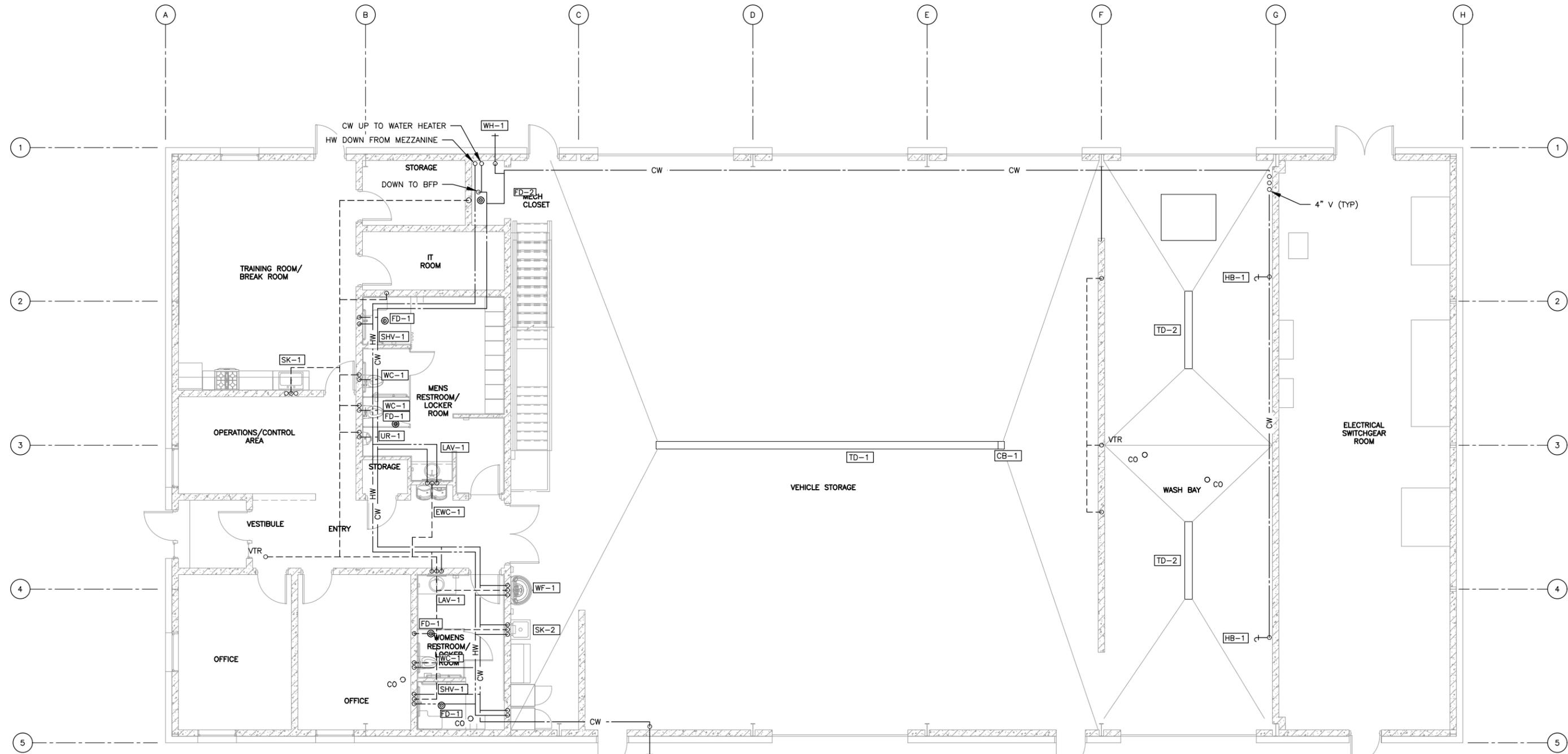


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NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

ADMINISTRATION - MAINTENANCE BUILDING - 120
 MECHANICAL
 UNDERFLOOR PLUMBING PLAN

SHEET NO.
M.120



1 PLUMBING PLAN
SCALE: 3/16"=1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

Xref: xgl-1-dh01; XA-120-P01; XS-120-GRID; XS-120-P00; XMP-120-P01

DRAWN BY: CMB	JOB DATE: 2020	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
APPROVED: DAS	JOB NUMBER: 160473	0
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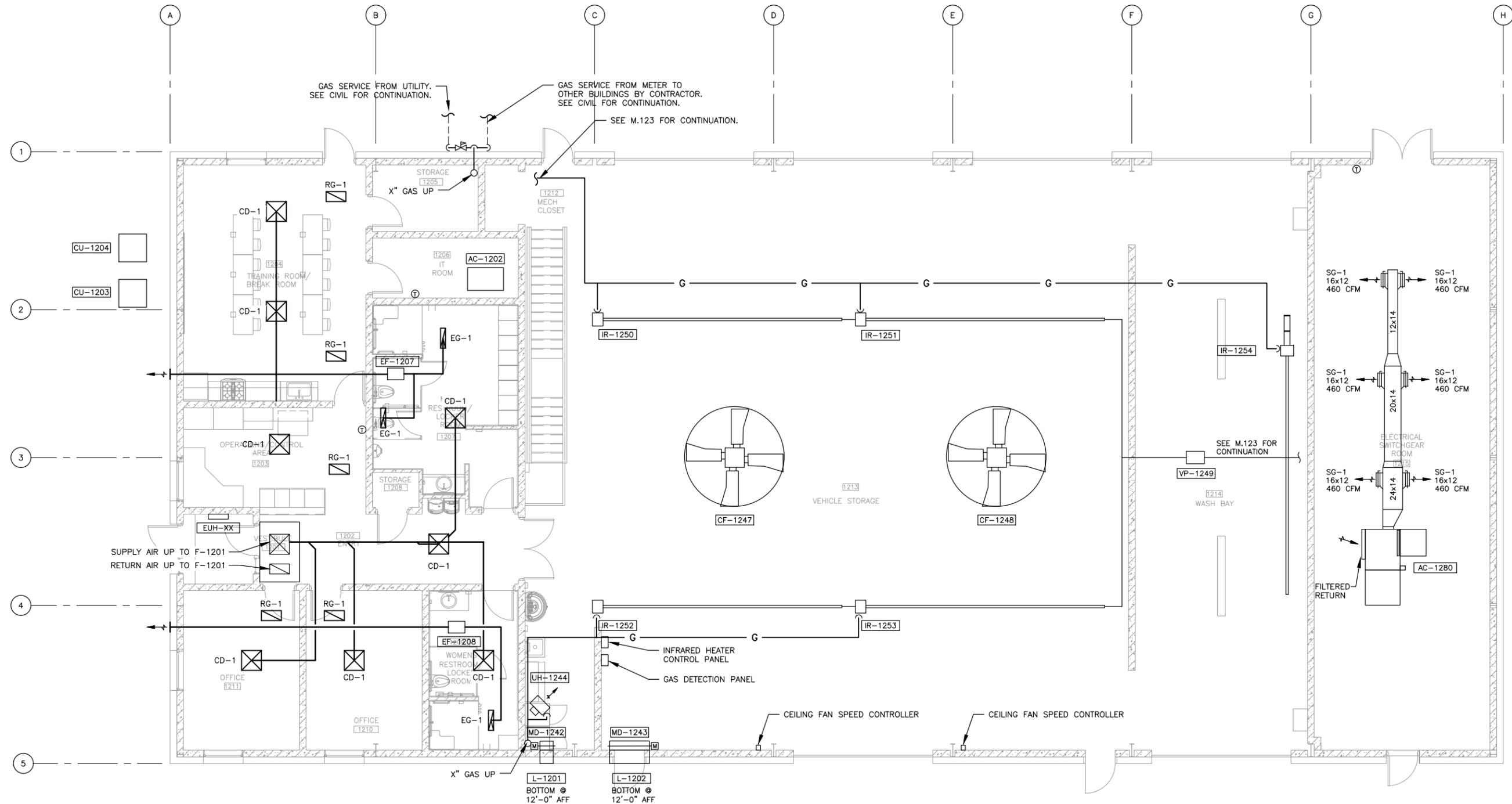
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NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

ADMINISTRATION - MAINTENANCE BUILDING - 120
MECHANICAL
OPERATING LEVEL PLUMBING PLAN

SHEET NO.
M.121



1 HVAC FLOOR PLAN
 SCALE: 3/16"=1'-0"



PRELIMINARY
 NOT FOR CONSTRUCTION

Xref: xgl-1-dh01: XS-120-GRD; XA-120-P01; XMH-120-P01

DRAWN BY: CMB JOB DATE: 2020
 APPROVED: DAS JOB NUMBER: 160473
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 CAD FILE: J:\2016\160473\CAD\Dwgs\M.M.122 OPERATING LEVEL HVAC PLAN.dwg

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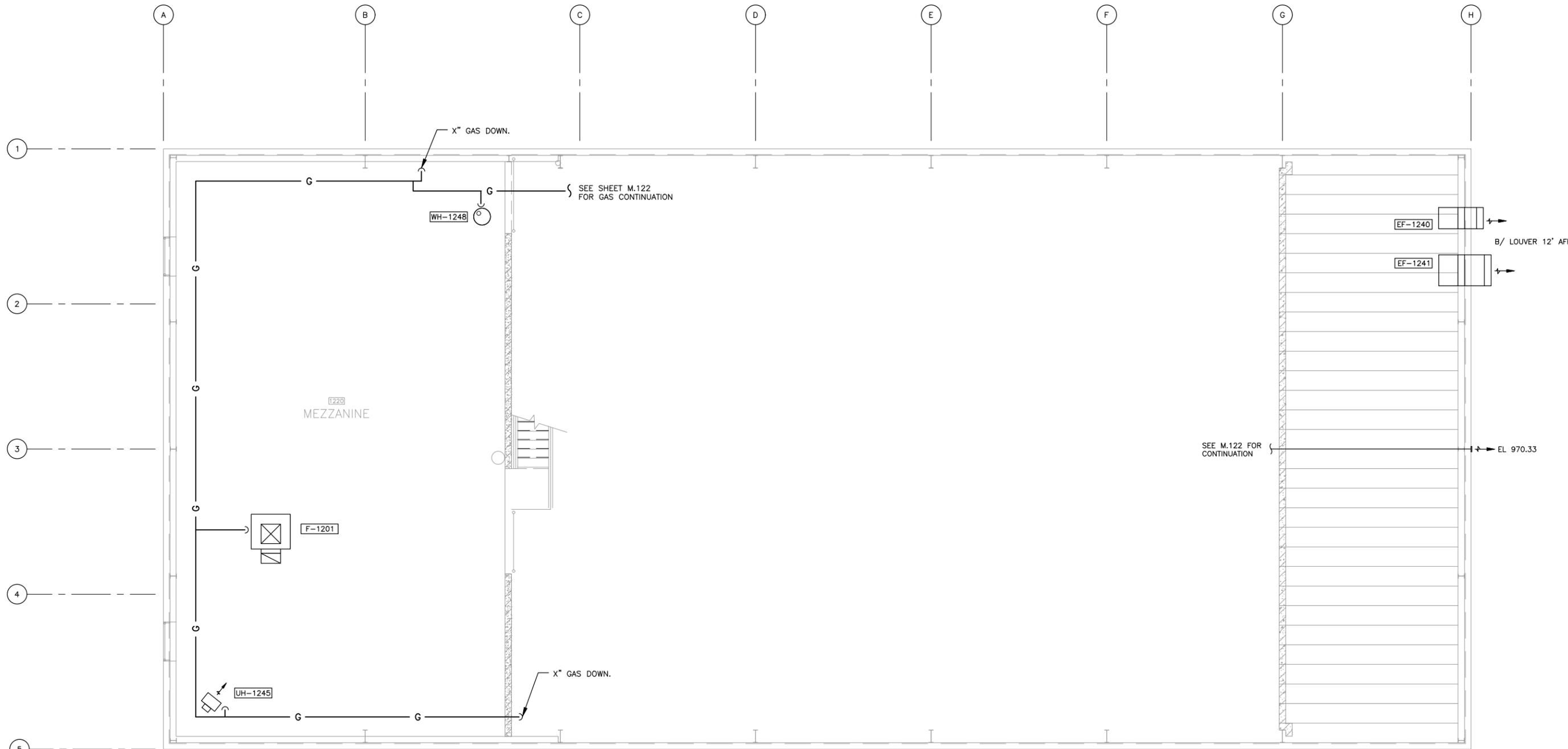
NO.	DATE	BY	REVISION DESCRIPTION



NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

ADMINISTRATION - MAINTENANCE BUILDING - 120
 MECHANICAL
 OPERATING LEVEL HVAC PLAN

SHEET NO.
 M.122



1 MEZZANINE HVAC FLOOR PLAN
 SCALE: 3/16"=1'-0"
 

PRELIMINARY
 NOT FOR CONSTRUCTION

Xref: xgl-1-dh01; XS-120-GRID; XA-120-MEZZ; XMH-120-POZ

DRAWN BY: CMB JOB DATE: 2020
 APPROVED: DAS JOB NUMBER: 160473
 CAD DATE: 7/30/2020 8:58:03 AM
 CAD FILE: J:\2016\160473\CAD\Dwgs\M.M.123 UPPER LEVEL HVAC PLAN.dwg

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 IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

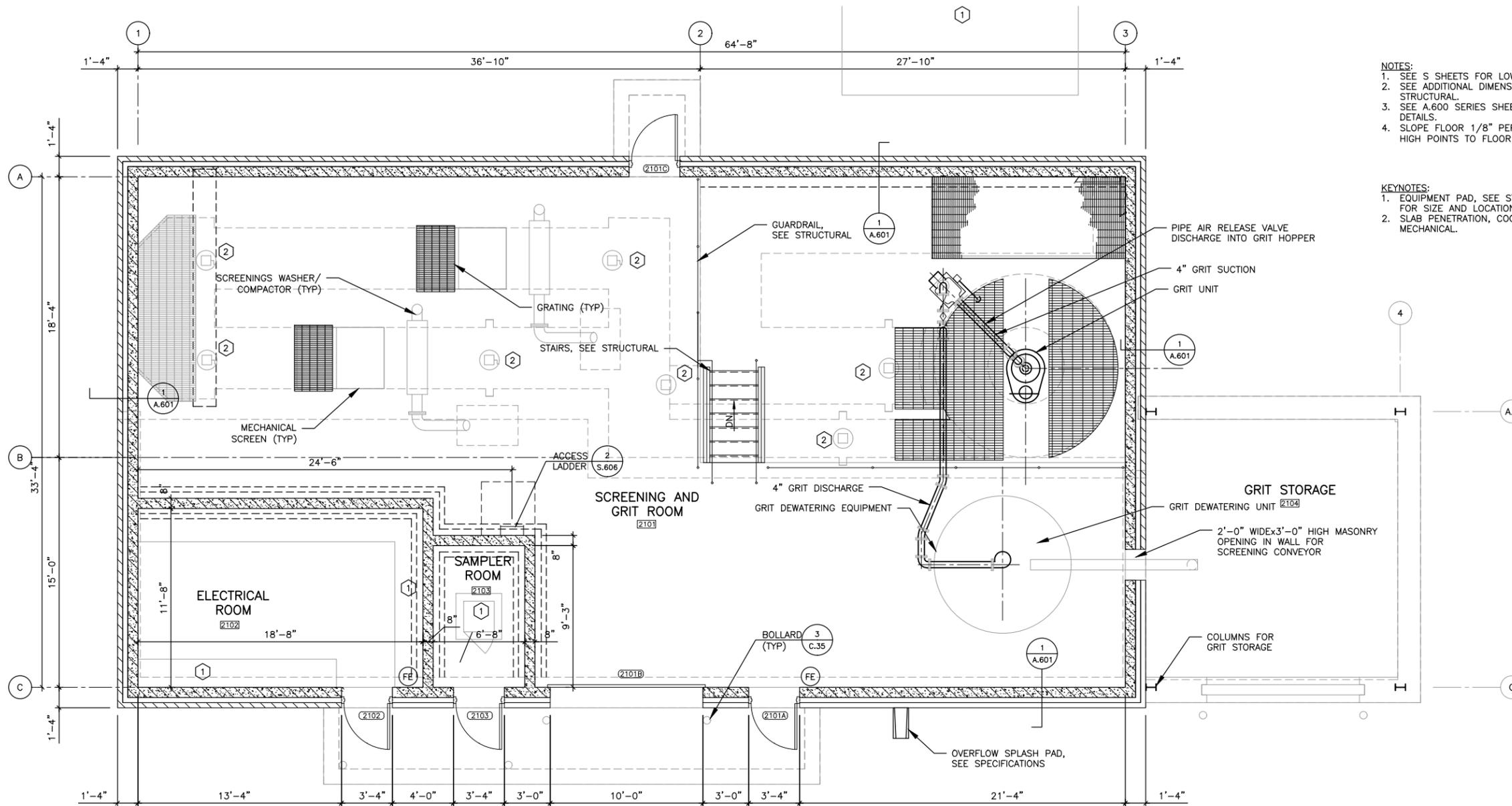
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NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

ADMINISTRATION - MAINTENANCE BUILDING - 120
 MECHANICAL
 UPPER LEVEL HVAC PLAN

SHEET NO.
M.123



- NOTES:**
1. SEE S SHEETS FOR LOWER LEVEL.
 2. SEE ADDITIONAL DIMENSIONS ON PROCESS AND STRUCTURAL.
 3. SEE A.600 SERIES SHEETS FOR SCHEDULES AND DETAILS.
 4. SLOPE FLOOR 1/8" PER FOOT FROM PERIMETERS AND HIGH POINTS TO FLOOR OPENINGS AND GRATING.

- KEYNOTES:**
1. EQUIPMENT PAD, SEE STRUCTURAL AND MECHANICAL FOR SIZE AND LOCATION.
 2. SLAB PENETRATION, COORDINATE WITH PROCESS AND MECHANICAL.

1 OPERATING LEVEL PLAN
 SCALE: 1/4"=1'-0"

PRELIMINARY
 NOT FOR CONSTRUCTION

DRAWN BY: CMB
 APPROVED: DJH
 CAD DATE: 7/31/2020 8:13:03 AM
 CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.210 OPERATING LEVEL PLAN.dwg

JOB DATE: 2020
 JOB NUMBER: 160473

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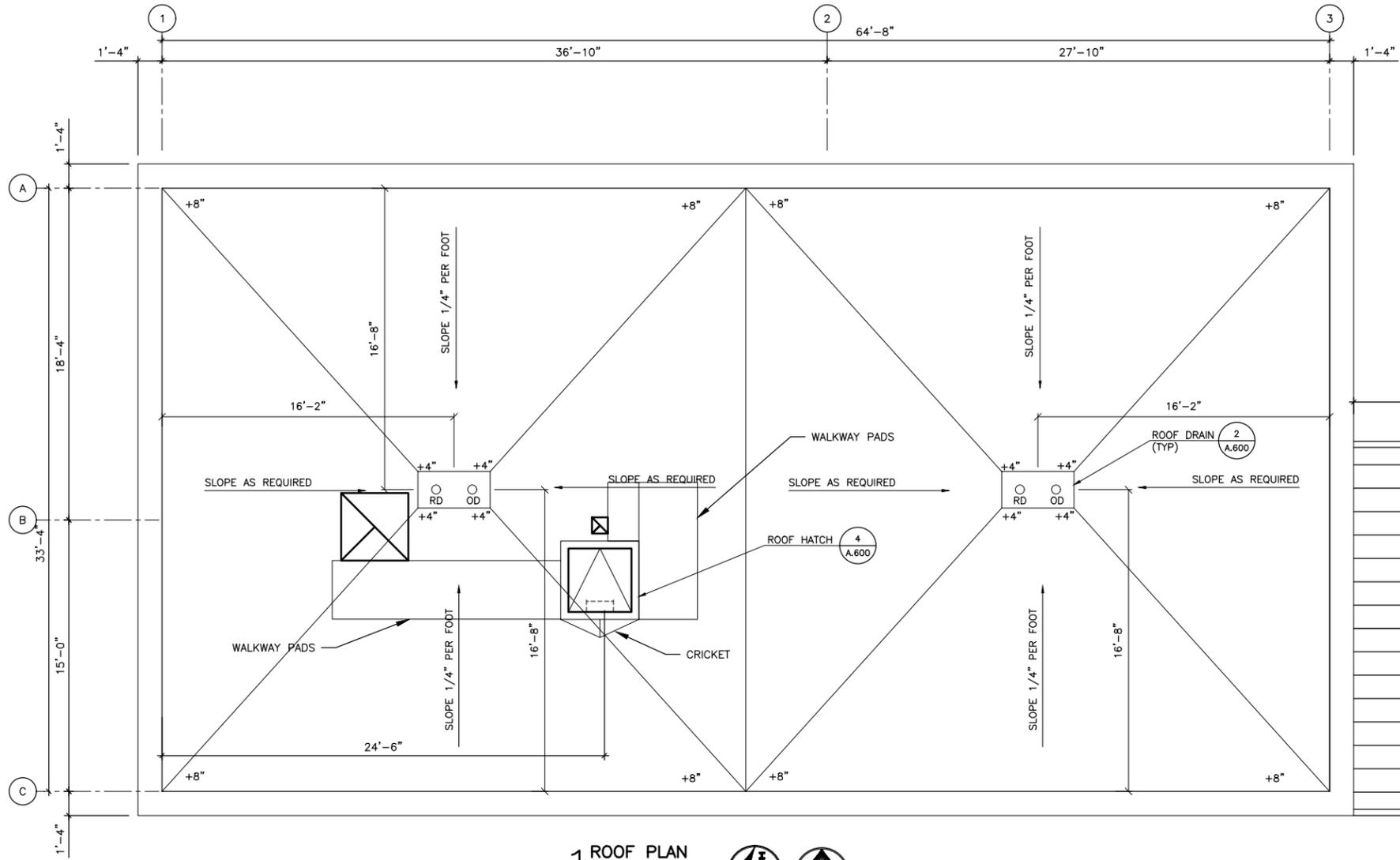


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

HEADWORKS BUILDING - 210
 ARCHITECTURAL
 OPERATING LEVEL PLAN

SHEET NO.
A.210

Xref: xgl-1-dh01; XS-210-GRD; XA-210-PD1; XS-210-PD0; XS-210-PD1; XP-210-PD1



- ROOF PLAN NOTES:**
1. VERIFY ALL LOCATIONS OF CURBS, OPENINGS, PENETRATIONS, AND ROOF MOUNTED EQUIPMENT WITH EQUIPMENT FURNISHED PRIOR TO BEGINNING THE WORK.
 2. MAINTAIN MINIMUM 1/4" PER FOOT SLOPE TO ROOF DRAINS.
 3. CONSTRUCT ROOF CRICKETS ON THE BACKSIDE OF ROOF MOUNTED EQUIPMENT AND HATCH ASSEMBLIES TO ACHIEVE POSITIVE DRAINAGE AND ELIMINATE PONDING.
 4. CONTRACTOR SHALL COORDINATE LOCATIONS OF ROOF DRAINS WITH STRUCTURE BELOW AND ADJUST TAPERED ROOF INSULATION THICKNESSES AND SLOPES AS REQUIRED TO PROVIDE MINIMUM 1/4" PER FOOT SLOPE AND 4" MINIMUM THICKNESS.

1 ROOF PLAN
SCALE: 1/4"=1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB
APPROVED: DJH
CAD DATE: 7/31/2020 6:44:25 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.211 ROOF PLAN.dwg

JOB DATE: 2020
JOB NUMBER: 160473

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IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

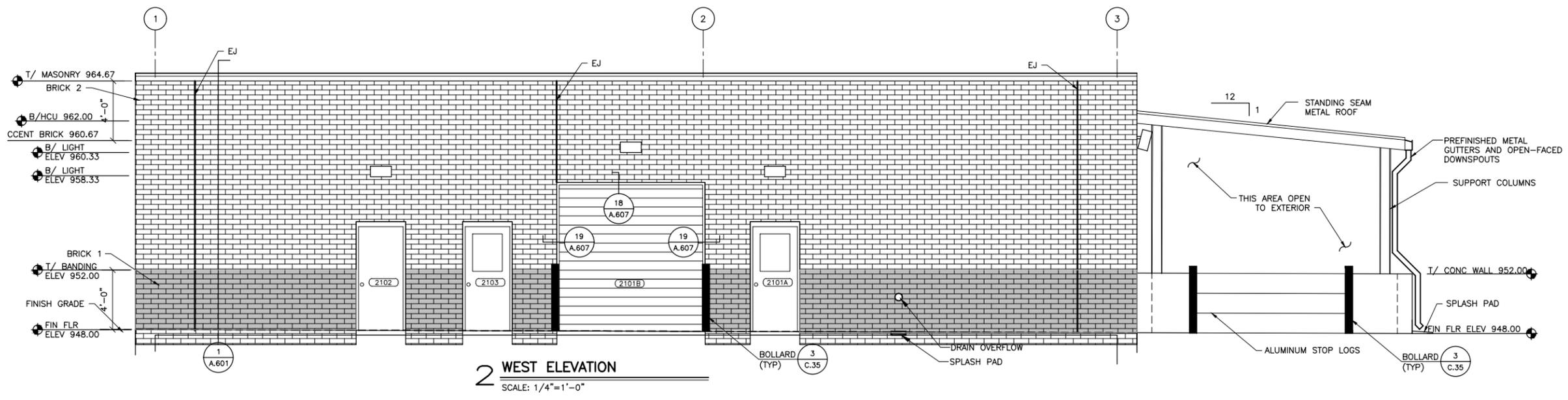
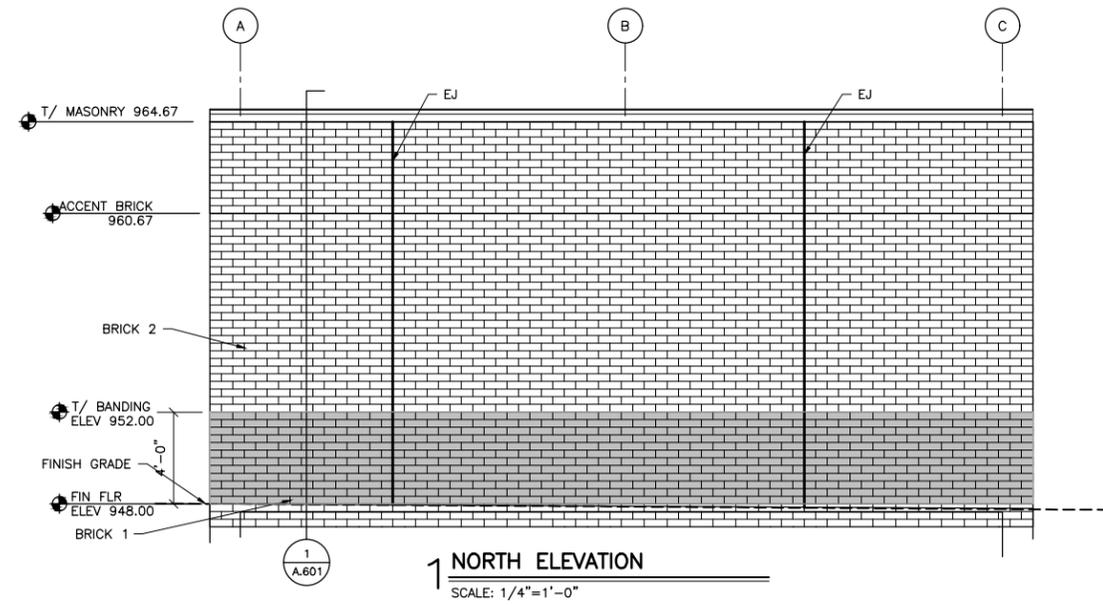


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

HEADWORKS BUILDING – 210
ARCHITECTURAL
ROOF PLAN

SHEET NO.
A.211

Xref: xgl-1-dh01: XS-210-GRID: XA-210-P02: ROOF PLAN



PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB
APPROVED: DJH
CAD DATE: 7/29/2020 10:40:16 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.212 EXTERIOR ELEVATIONS.dwg

JOB DATE: 2020
JOB NUMBER: 160473

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

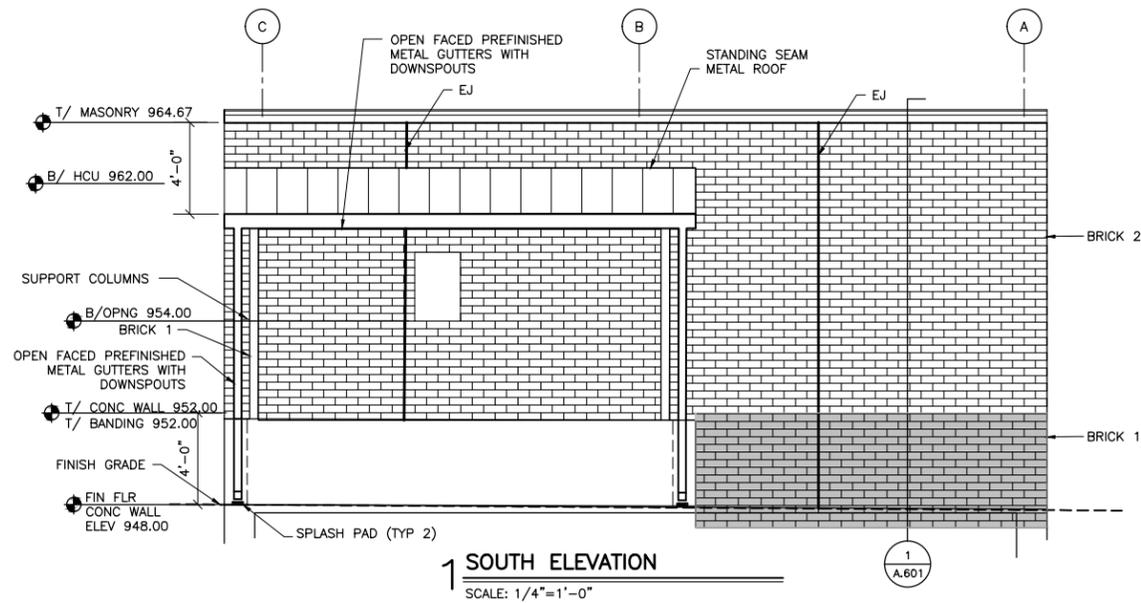


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

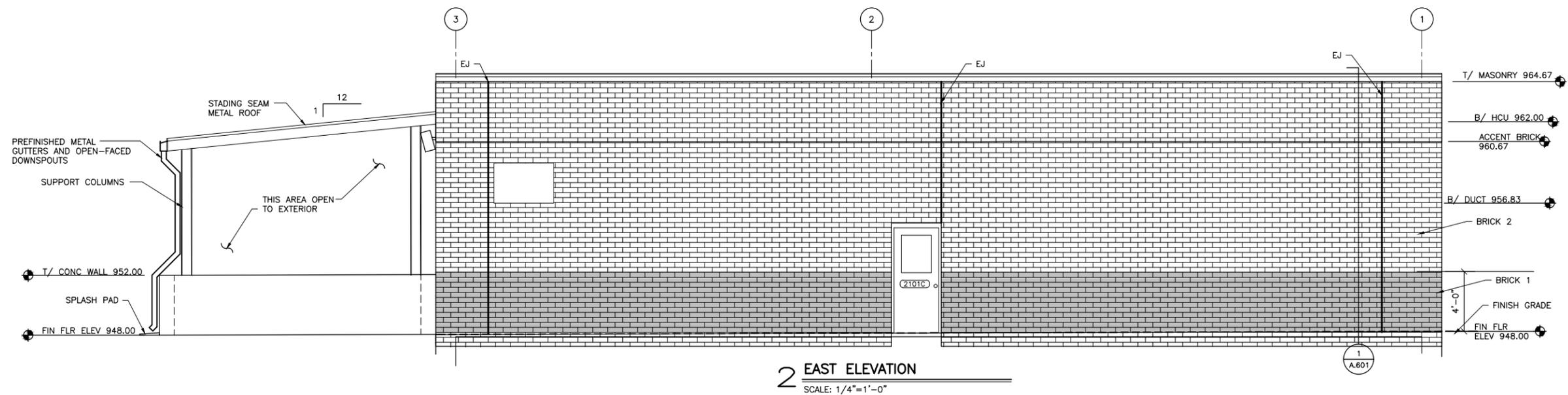
HEADWORKS BUILDING - 210
ARCHITECTURAL
EXTERIOR ELEVATIONS

SHEET NO.
A.212

Xrefs: xref=1-dh01: XA-210-ED1



1 SOUTH ELEVATION
SCALE: 1/4"=1'-0"



2 EAST ELEVATION
SCALE: 1/4"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB JOB DATE: 2020
APPROVED: DJH JOB NUMBER: 160473
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IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

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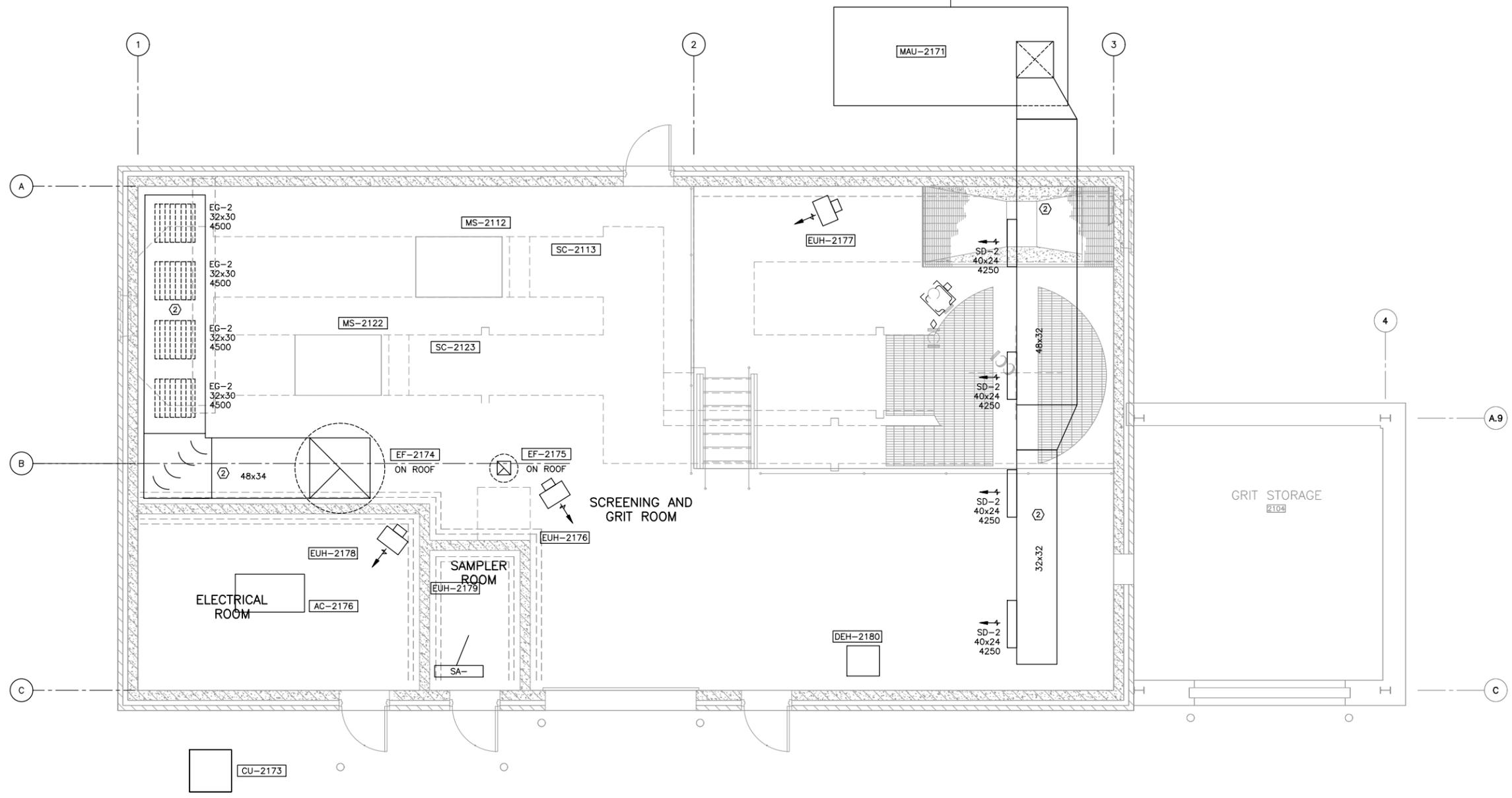


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

HEADWORKS BUILDING - 210
ARCHITECTURAL
EXTERIOR ELEVATIONS

SHEET NO.
A.213

UNDERGROUND GAS.
SEE CIVIL FOR CONTINUATION.



- GENERAL NOTES:**
- MECHANICAL EQUIPMENT ON ROOF SHALL BE INSTALLED NOT LESS THAN 10'-0" FROM ROOF EDGE.
 - CONTRACTOR SHALL VERIFY ALL DUCTWORK ROUTING PRIOR TO FABRICATION. FINAL LOCATION OF DUCTWORK SHALL BE COORDINATED WITH NEW STRUCTURE, PIPING, ELECTRICAL, LIGHTING, ETC.
 - PROVIDE BALANCING DAMPERS ON ALL DUCT TAKE-OFF TO DIFFUSERS, GRILLES, AND REGISTERS

- KEY NOTES:** ○
- SUPPLY AND EXHAUST DUCTWORK SHALL BE ALUMINUM CONSTRUCTION. DAMPERS SHALL BE ALUMINUM CONSTRUCTION. DUCTWORK HANGERS, HANGER RODS, ETC. SHALL BE STAINLESS STEEL.
 - SUPPLY AND EXHAUST DUCTWORK SHALL BE STAINLESS STEEL.
 - SUPPLY AND EXHAUST DUCTWORK SHALL BE GALVANIZED STEEL.

1 HVAC PLAN
SCALE: 1/4"=1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

Xref: xgl-1-dh01; XS-210-P01; XA-210-P01; XP-210-P01; XS-210-P00; XS-210-GRID; XMH-210-P01

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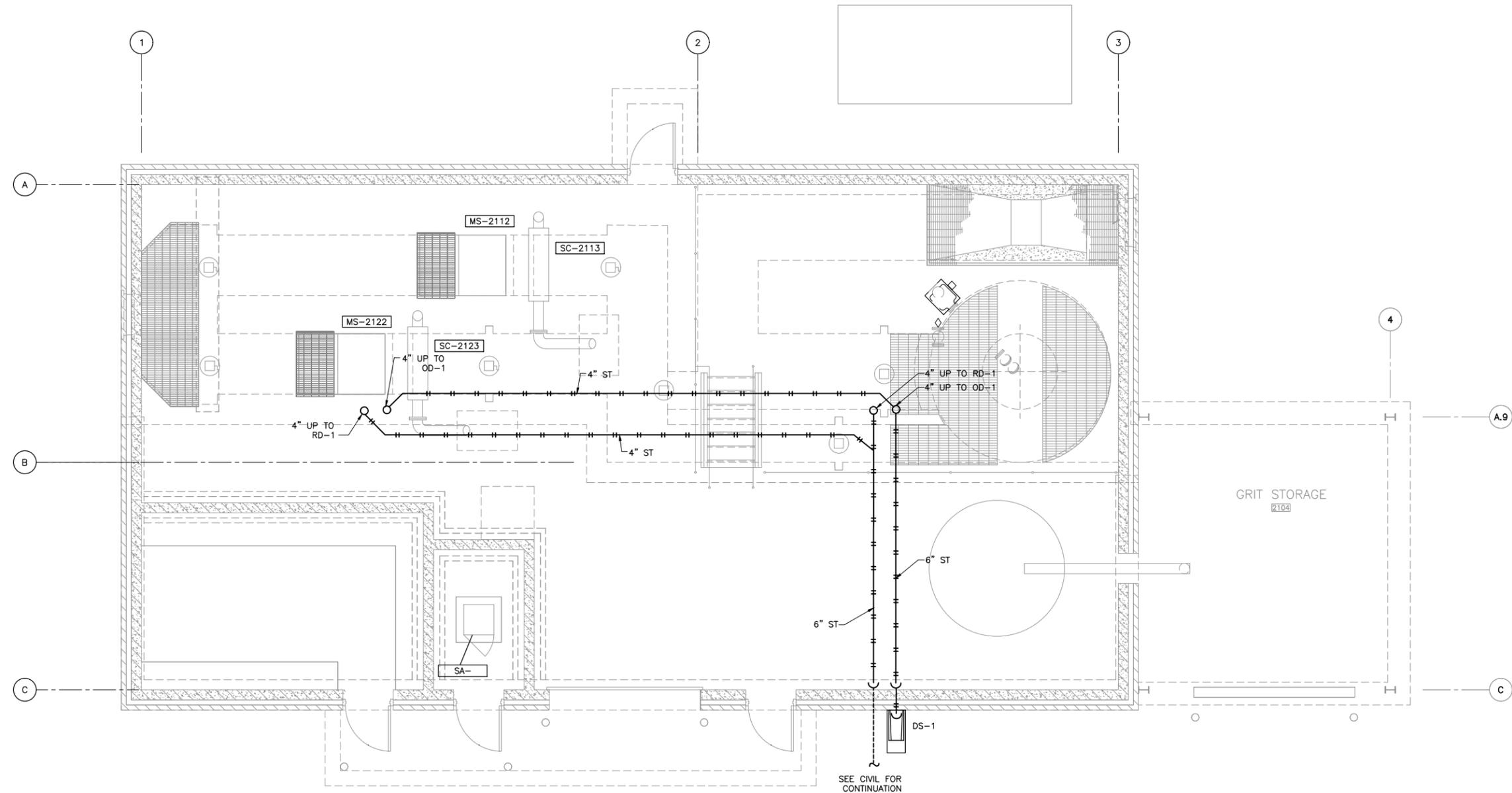
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NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

HEADWORKS BUILDING - 210
MECHANICAL
HVAC PLAN

SHEET NO.
M.210



1 OPERATING LEVEL PLUMBING PLAN
 SCALE: 1/4"=1'-0"



PRELIMINARY
 NOT FOR CONSTRUCTION

DRAWN BY: JV JOB DATE: 2020
 APPROVED: DAS JOB NUMBER: 160473
 CAD DATE: 8/1/2020 1:53:42 PM
 CAD FILE: J:\2016\160473\CAD\Dwgs\M\M.211 OPERATING LEVEL PLUMBING PLAN.dwg

BAR IS ONE INCH ON
 OFFICIAL DRAWINGS.
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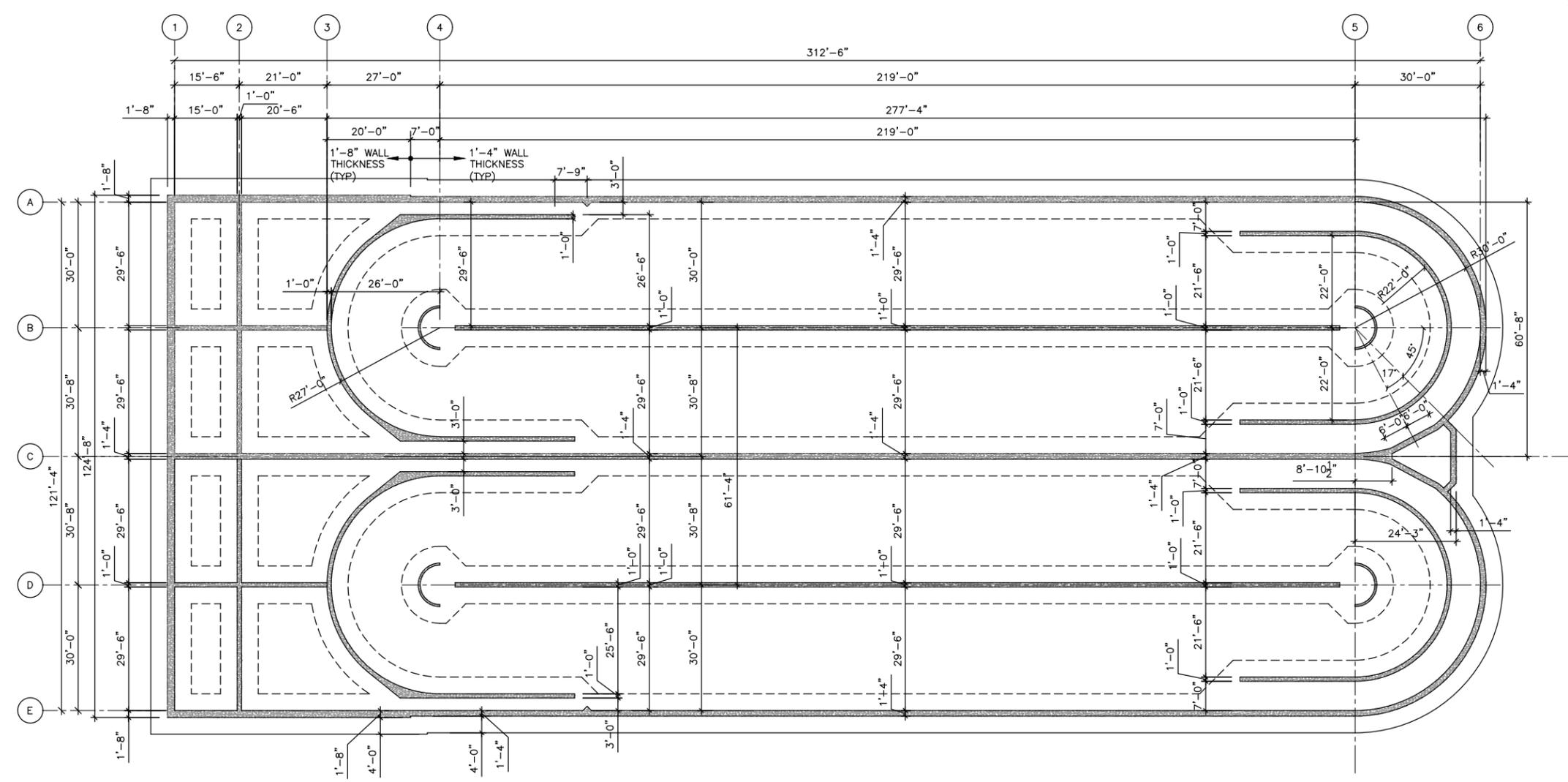
HEADWORKS BUILDING - 210
 MECHANICAL
 OPERATING LEVEL PLUMBING PLAN

SHEET NO.
M.211

Xrefs: xgl-1-dh01; XS-210-P01; XA-210-P01; XP-210-P01; XS-210-P00; XS-210-GRID; XMH-210-P00

- GENERAL NOTES:
- SEE SHEET G.07 FOR GENERAL NOTES.
 - SUB-DRAINS ARE REQUIRED UNDER AND AROUND FOUNDATIONS. DUE TO POTENTIAL FOR FREEZING TO OCCUR WITH OXIDATION DITCH EMPTY, SUBDRAINS SHALL BE AT FROST DEPTH BELOW TANK SLAB. MINIMUM OF 8" FDGCF BELOW FOUNDATION WITH 2'-8" FDGCF AT SUB-DRAINS. SEE SUB-DRAINS SHEET C.14.

- KEYNOTES: 
- INDICATES THICKENED BASE SLAB (TYP). SEE SECTIONS.
 - WALL & BASE BARS CIRCUMFERENTIAL & RADIAL LAPPED WITH SLAB BARS IN GRID.



1 FOUNDATION PLAN
SCALE: 1/16"=1'-0"


PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CRR
APPROVED: GPB
CAD DATE: 8/2/2020 7:56:41 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\S\S.320 FOUNDATION PLAN.dwg

JOB DATE: 2020
JOB NUMBER: 160473

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NO.	DATE	BY	REVISION DESCRIPTION

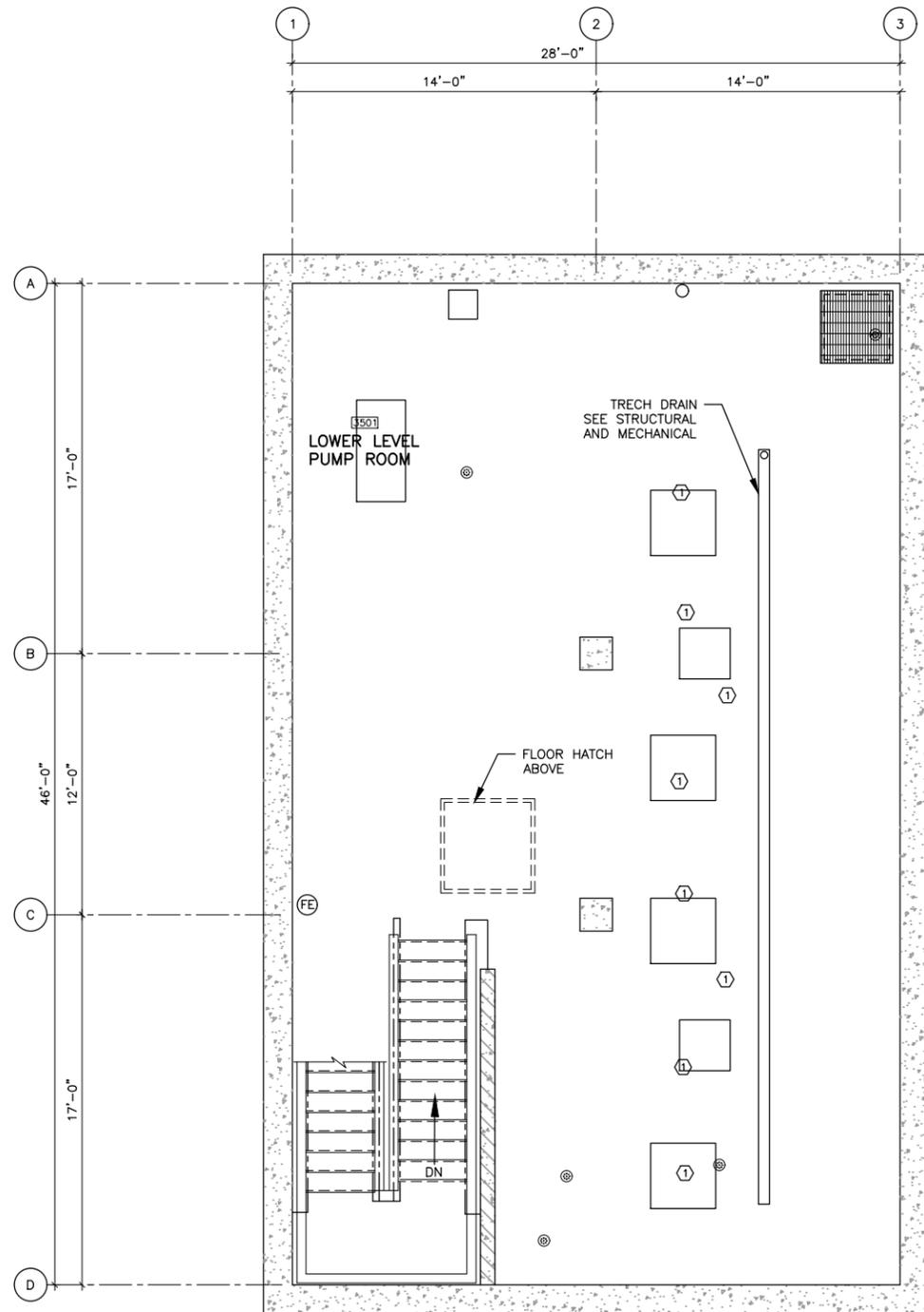


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

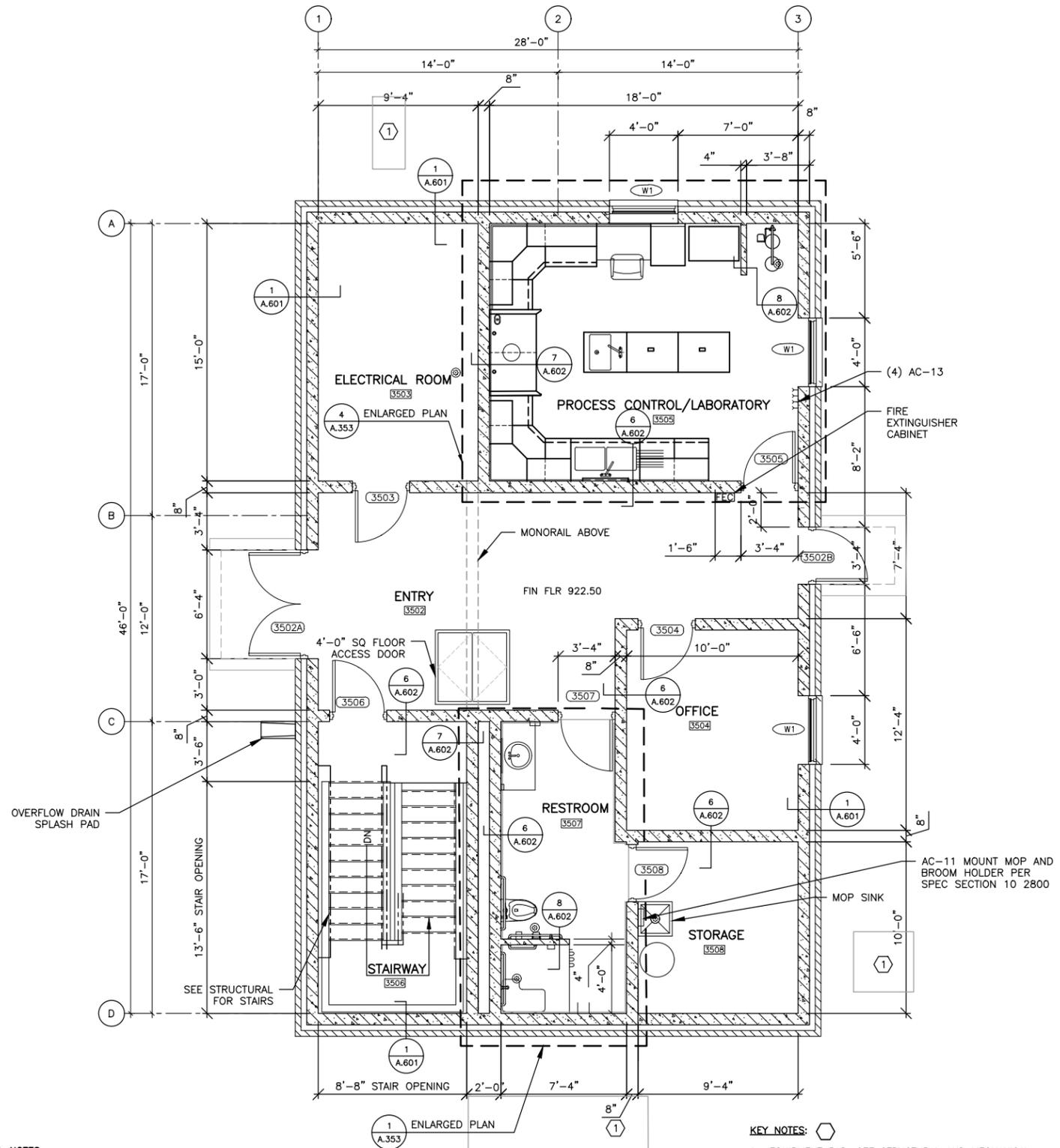
OXIDATION DITCHES - 320
STRUCTURAL
FOUNDATION PLAN

SHEET NO.
S.320

Xref: xref-1-dim01: XS-320-P00; xs-320-grid



1 LOWER LEVEL PLAN
SCALE: 1/4"=1'-0"



2 OPERATING LEVEL PLAN
SCALE: 1/4"=1'-0"



- GENERAL NOTES:**
1. PAINT WALLS PER SPECIFICATION 09 9000 AND SCHEDULE IN A 600 SERIES SHEETS.
 2. SEE SHEETS A.602 AND A.604 FOR WALL DETAILS AND SCHEDULE.
 3. SEE A.600 SERIES SHEETS FOR ARCHITECTURAL SCHEDULES AND DETAILS.
 4. PROVIDE RESILIENT BASE PER SPEC & ROOM FINISH SCHEDULE.

KEY NOTES:

1. EQUIPMENT PAD, SEE STRUCTURAL AND MECHANICAL.

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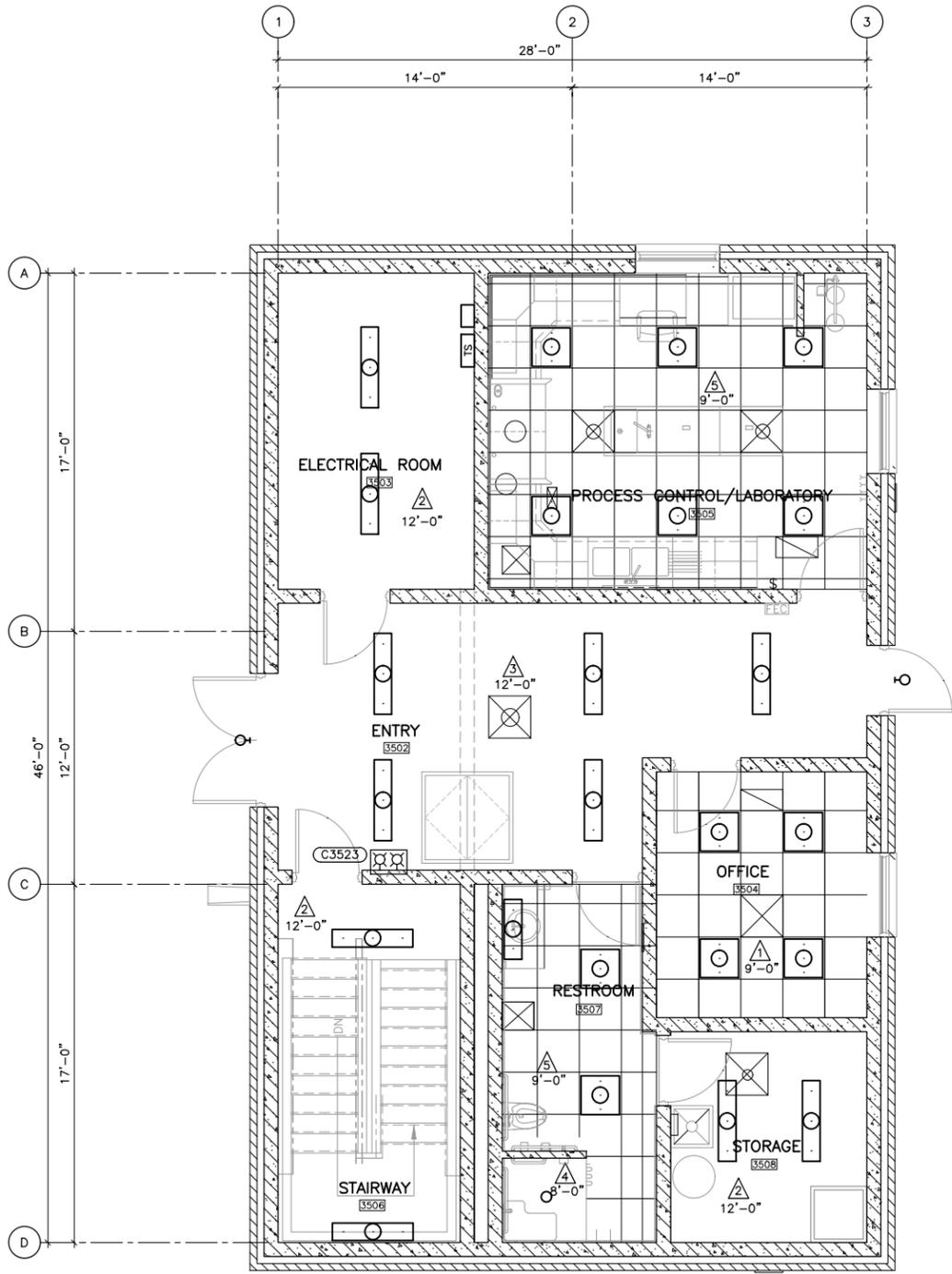


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SECONDARY TREATMENT BUILDING - 350
ARCHITECTURAL
OPERATING LEVEL PLAN

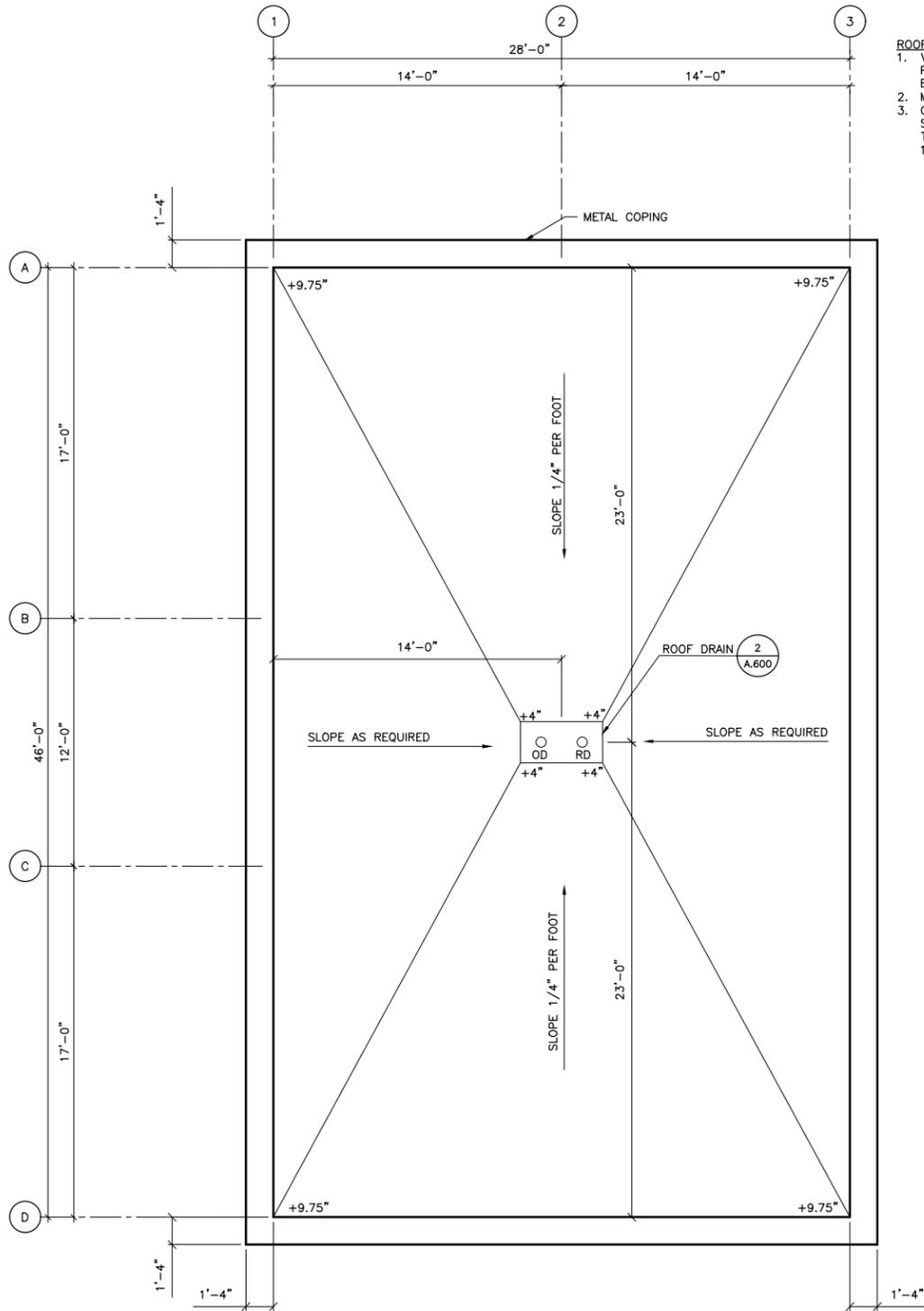
SHEET NO.
A.350

Xref: xgl-1-dh01; XA-350-PD1; XS-350-GRID; XS-350-PD0; XS-350-PD1



- LEGEND:**
- ▲ ACT-1 AS SPECIFIED
 - ▲ EXPOSED STRUCTURE
 - ▲ IN 3502 PAINT EXPOSED STRUCTURAL MEMBERS, CONDUITS AND CONC ABOVE.
 - ▲ MOISTURE RESISTANT GYPSUM BOARD PROVIDE BULKHEAD AT JUNCTION WITH ACT
 - ▲ ACT-2 AS SPECIFIED

1 REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"



- ROOF PLAN NOTES:**
1. VERIFY ALL LOCATIONS OF CURBS, OPENINGS, PENETRATIONS, AND ROOF MOUNTED EQUIPMENT WITH EQUIPMENT FURNISHED PRIOR TO BEGINNING THE WORK.
 2. MAINTAIN MINIMUM 1/4" PER FOOT SLOPE TO ROOF DRAINS.
 3. CONTRACTOR SHALL COORDINATE LOCATIONS OF ROOF DRAINS WITH STRUCTURE BELOW AND ADJUST TAPERED ROOF INSULATION THICKNESSES AND SLOPES AS REQUIRED TO PROVIDE MINIMUM 1/4" PER FOOT SLOPE AND 4" MINIMUM THICKNESS.

2 ROOF PLAN
SCALE: 1/4"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

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APPROVED: DJH JOB NUMBER: 160473 0
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CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.351 REFLECTED CEILING AND ROOF PLAN.dwg

NO.	DATE	BY	REVISION DESCRIPTION

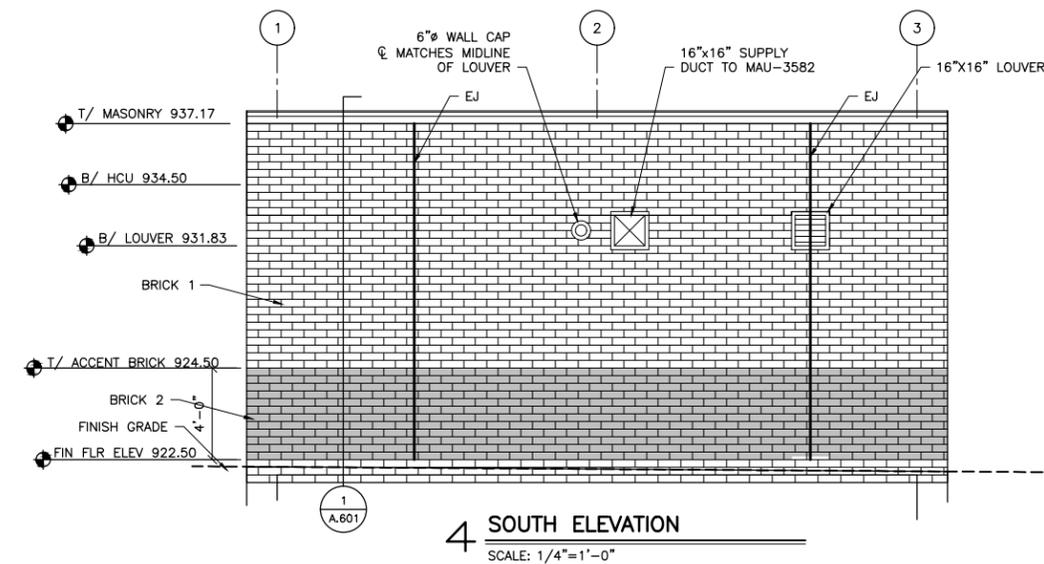
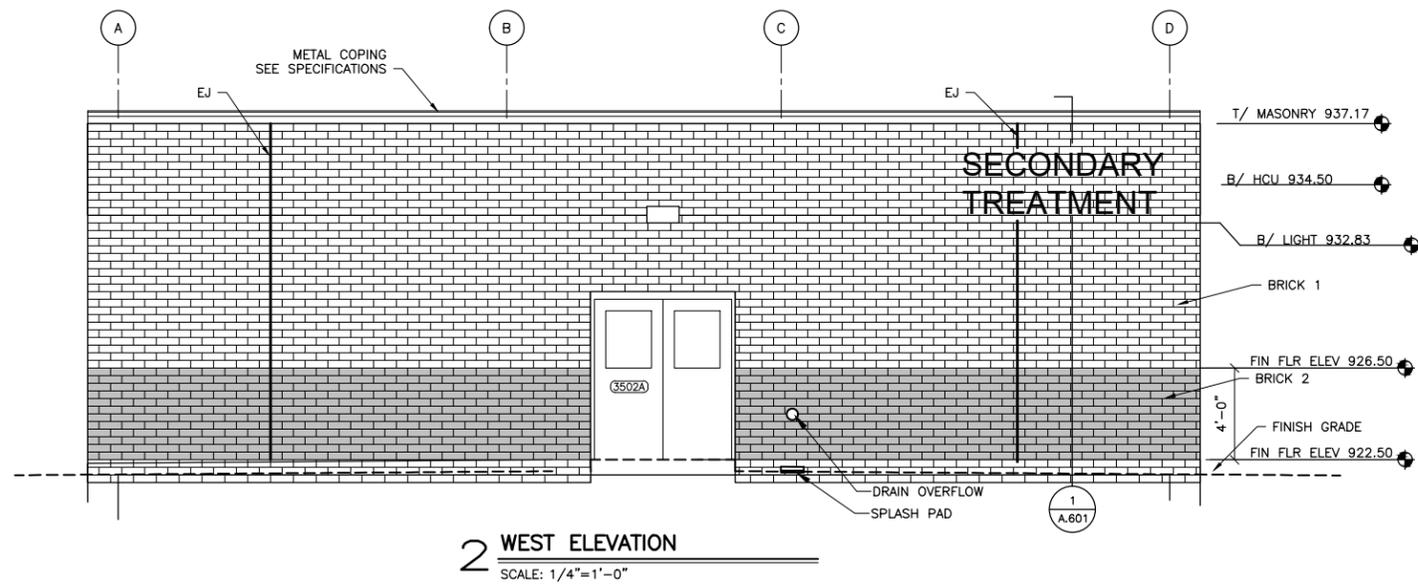
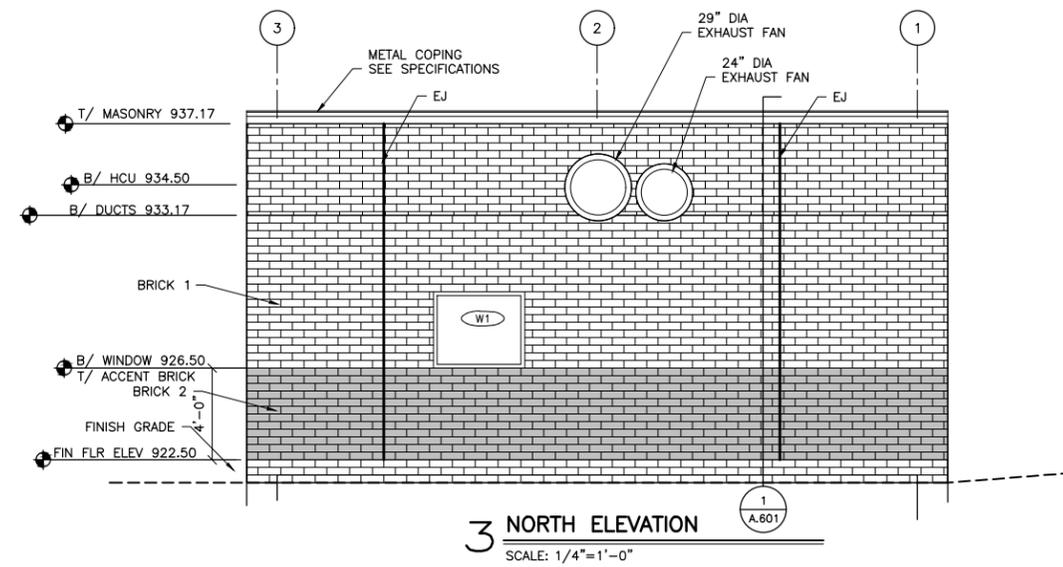
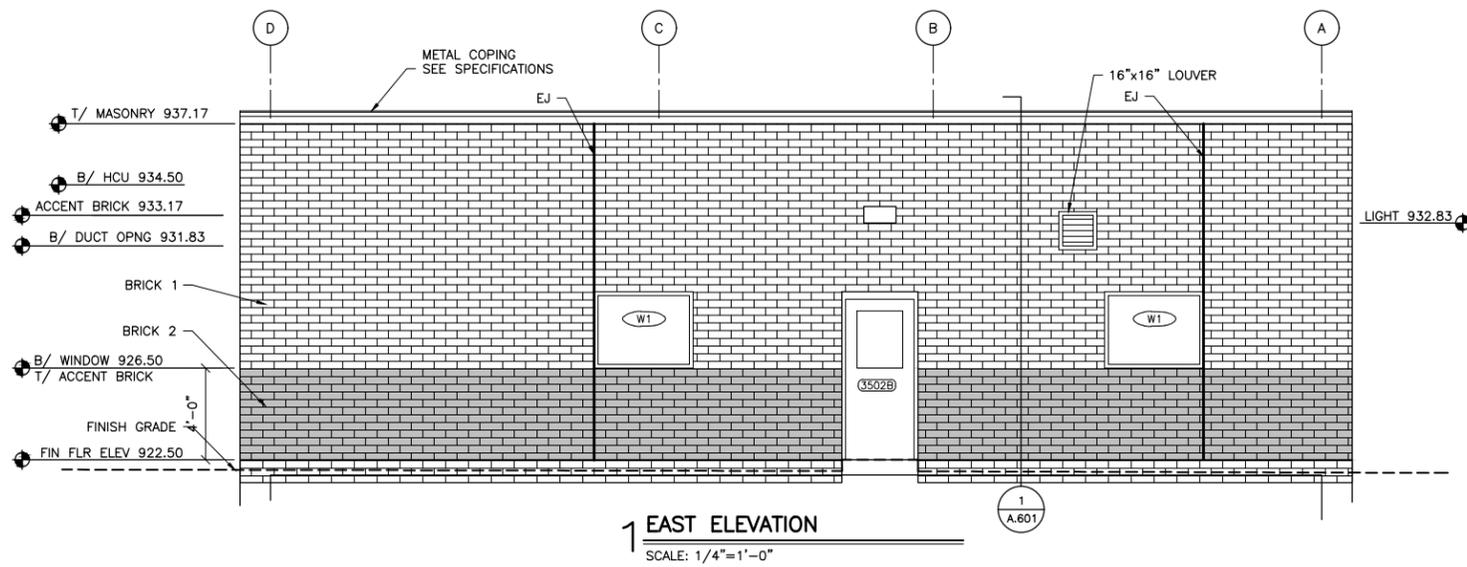


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SECONDARY TREATMENT BUILDING - 350
ARCHITECTURAL
REFLECTED CEILING AND ROOF PLAN

SHEET NO.
A.351

Xref: xgl-1-dh01: XA-350-PD3-REF-CLG; XA-350-PD2: XMH-350-PD1; XEL-350-PD1



PRELIMINARY
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 APPROVED: DJH JOB NUMBER: 160473
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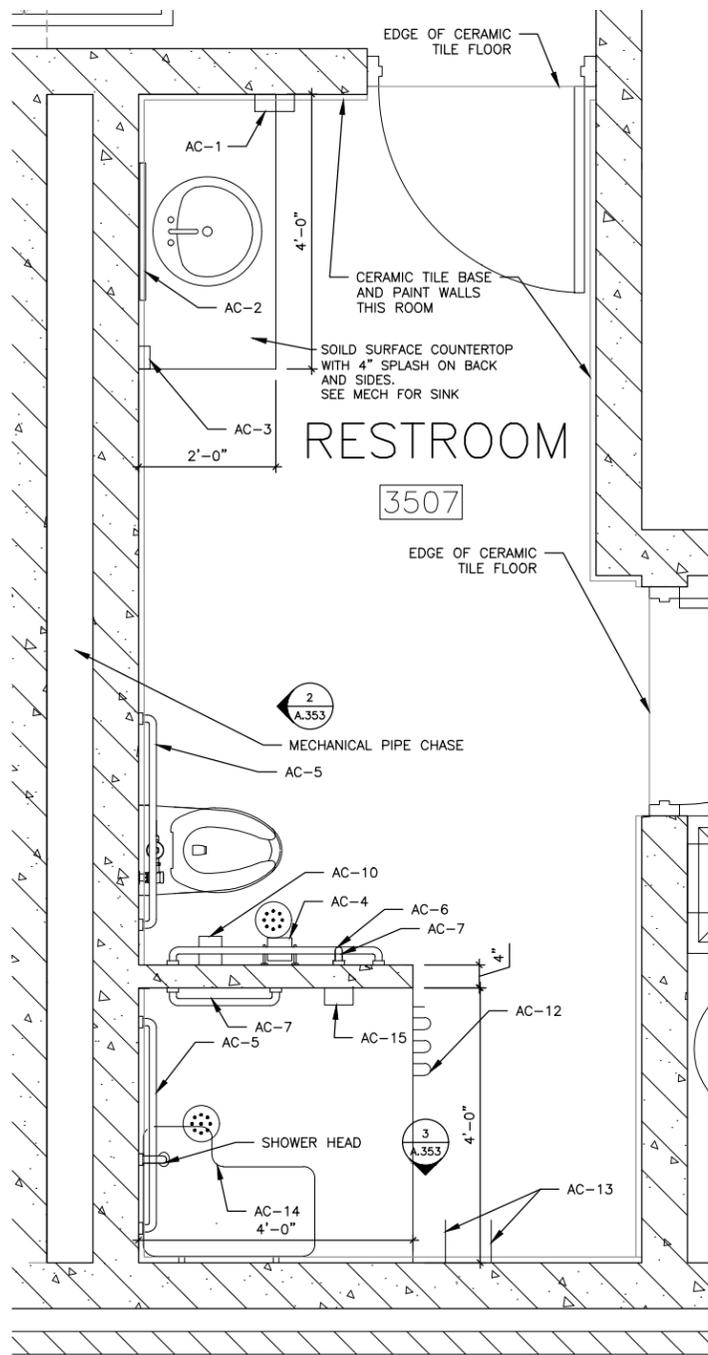
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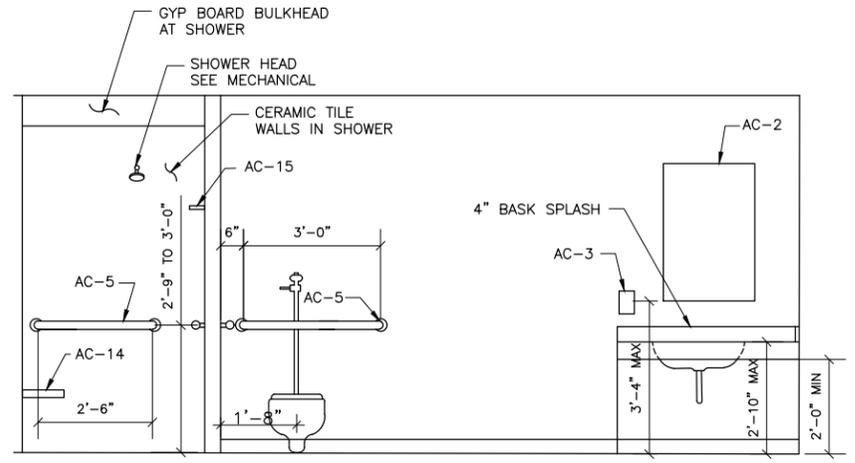
NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

SECONDARY TREATMENT BUILDING - 350
 ARCHITECTURAL
 EXTERIOR ELEVATIONS

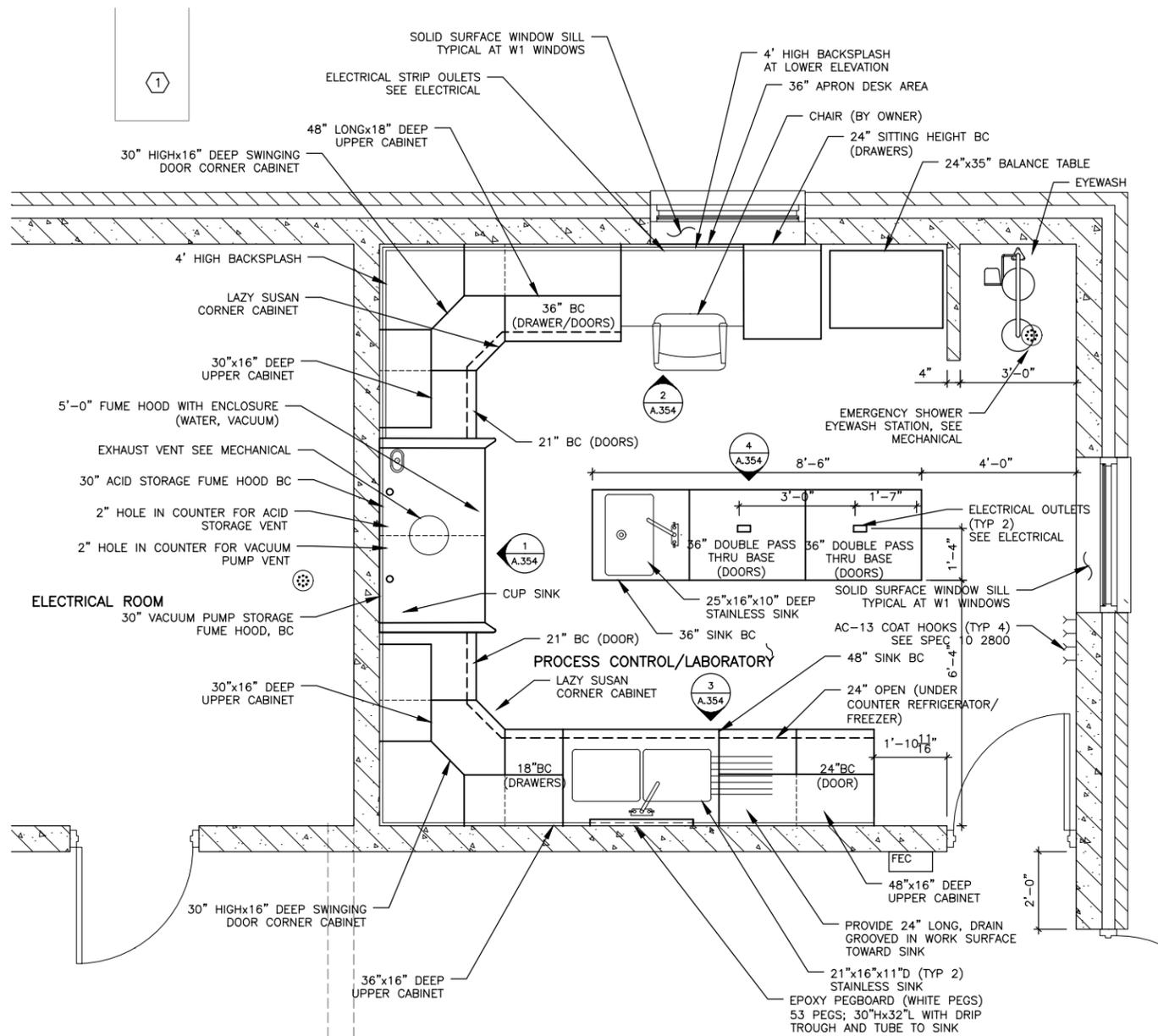
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A.352



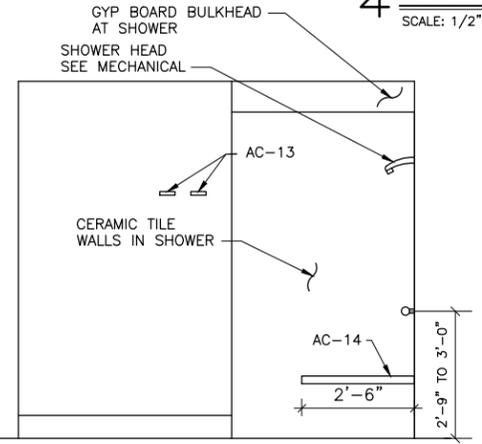
1 RESTROOM ENLARGED PLAN
SCALE: 3/4"=1'-0"
NORTH PLAN NORTH



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



4 ENLARGED LABORATORY PLAN
SCALE: 1/2"=1'-0"
NORTH PLAN NORTH



3 INTERIOR ELEVATION
SCALE: 1/2"=1'-0"

- GENERAL NOTES:**
- REFER TO SPECIFICATION SECTION 11 5353 FOR LABORATORY FURNITURE AND EQUIPMENT.
 - CABINET REFERENCES ON ELEVATIONS ARE BASED ON KEWAUNEE SCIENTIFIC CORPORATION. CONTRACTOR TO PROVIDE KEWAUNEE OR EQUAL PER SPECIFICATIONS.
 - COAT FLOOR PER SPECIFICATION 09 9500. FLOORING COATING TO BE AN EPOXY, DECORATIVE QUARTZ FLOORING, TREMEC COLOR Q205 OR EQUAL. STAGE FLOOR COATING PRIOR TO NEW CABINET INSTALLATION.
 - PAINT WALLS PER SPECIFICATION 09 9000 AND SCHEDULE IN A SHEETS.
 - SINKS SHALL BE STAINLESS STEEL PER SPEC 22 4000.
 - COUNTER TOPS SHALL BE 1" THICK EPOXY PER SPECIFICATIONS. COUNTERTOPS SHALL HAVE MATINE EDGE EXCEPT AT SITTING HEIGHT DESK AREA.
 - CABINETS SHALL BE STEEL.
 - SAFETY SHOWER AND EYEWASH. REFER TO SPECIFICATION SECTION 22 4000.
 - SEE SHEET E.351 TO COORDINATE ELECTRICAL.
 - PROVIDE RESILIENT BASE PER SPEC & ROOM FINISH SCHEDULE.
 - COORDINATE WITH CABINET MANUFACTURER TO INCLUDE CABINETS IN ADMINISTRATION BUILDING (LAUNDRY AREA, OPERATIONS/CONTROL AREA, BREAK ROOM).
- KEY NOTES:**
- EQUIPMENT PAD, SEE STRUCTURAL AND MECHANICAL.

**PRELIMINARY
NOT FOR CONSTRUCTION**

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APPROVED: DJH JOB NUMBER: 160473
CAD DATE: 7/30/2020 2:25:42 PM
CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.353 RESTROOM AND LABORATORY ENLARGED

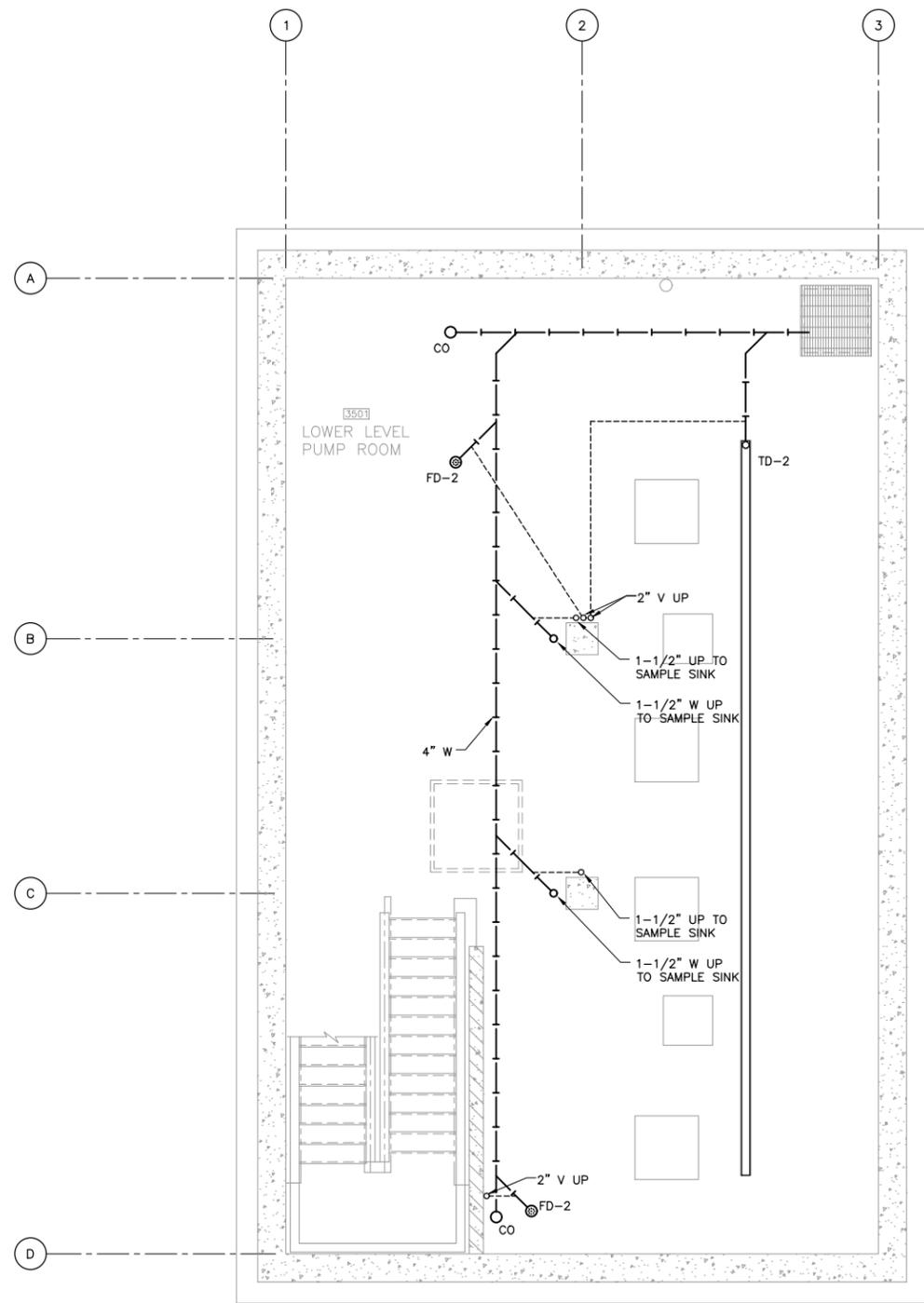
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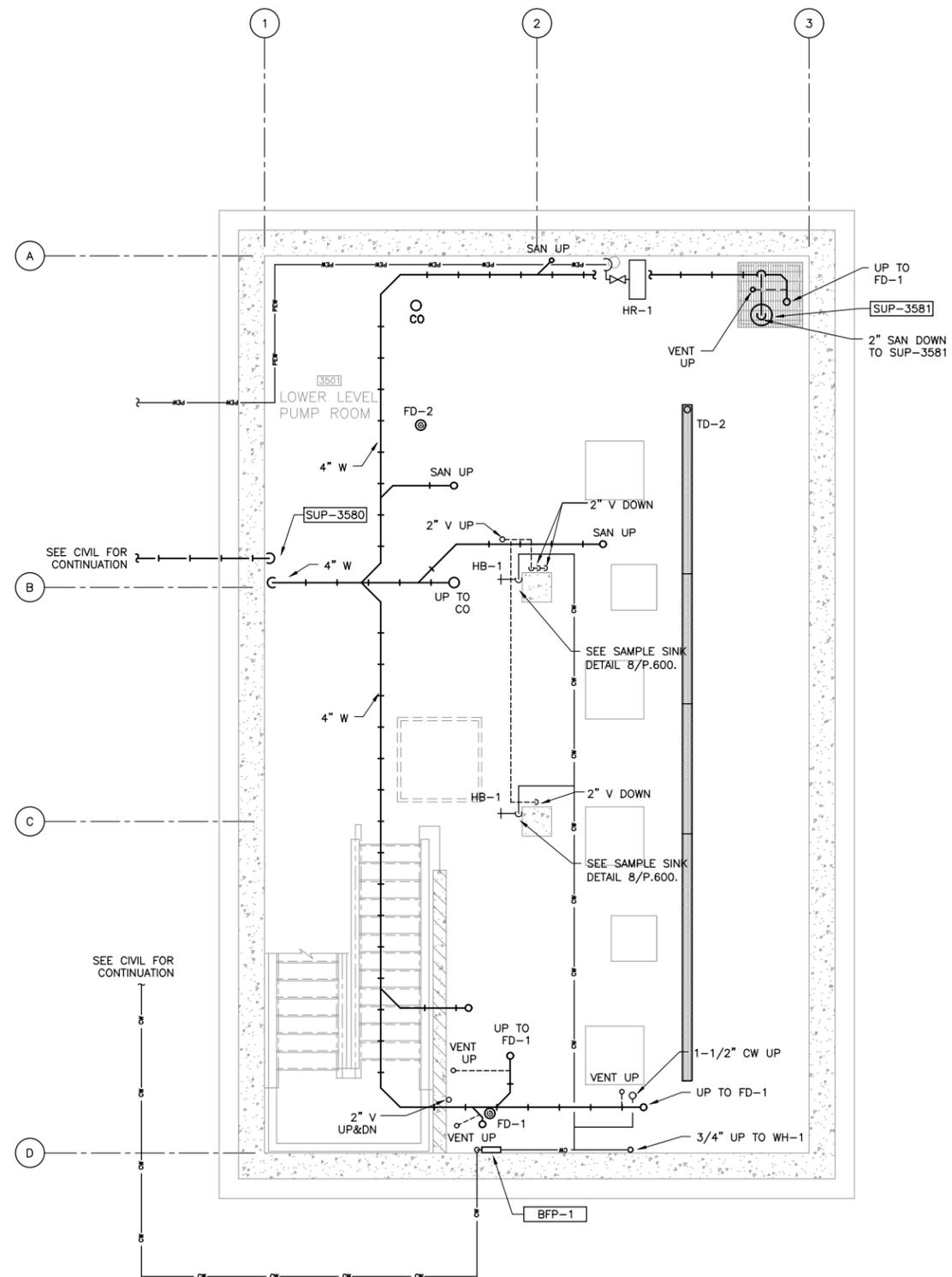
NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SECONDARY TREATMENT BUILDING - 350
ARCHITECTURAL
RESTROOM AND LABORATORY ENLARGED PLANS

SHEET NO.
A.353



1 UNDERFLOOR PIPING PLAN
SCALE: 1/4"=1'-0"
NORTH PLAN NORTH



2 LOWER LEVEL PLUMBING PLAN
SCALE: 1/4"=1'-0"
NORTH PLAN NORTH

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: JV
APPROVED: DAS
CAD DATE: 7/31/2020 10:53:18 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\M\M.350 UNDERFLOOR AND LOWER LEVEL PLUMBING PLAN.dwg

JOB DATE: 2020
JOB NUMBER: 160473

NO.	DATE	BY	REVISION DESCRIPTION

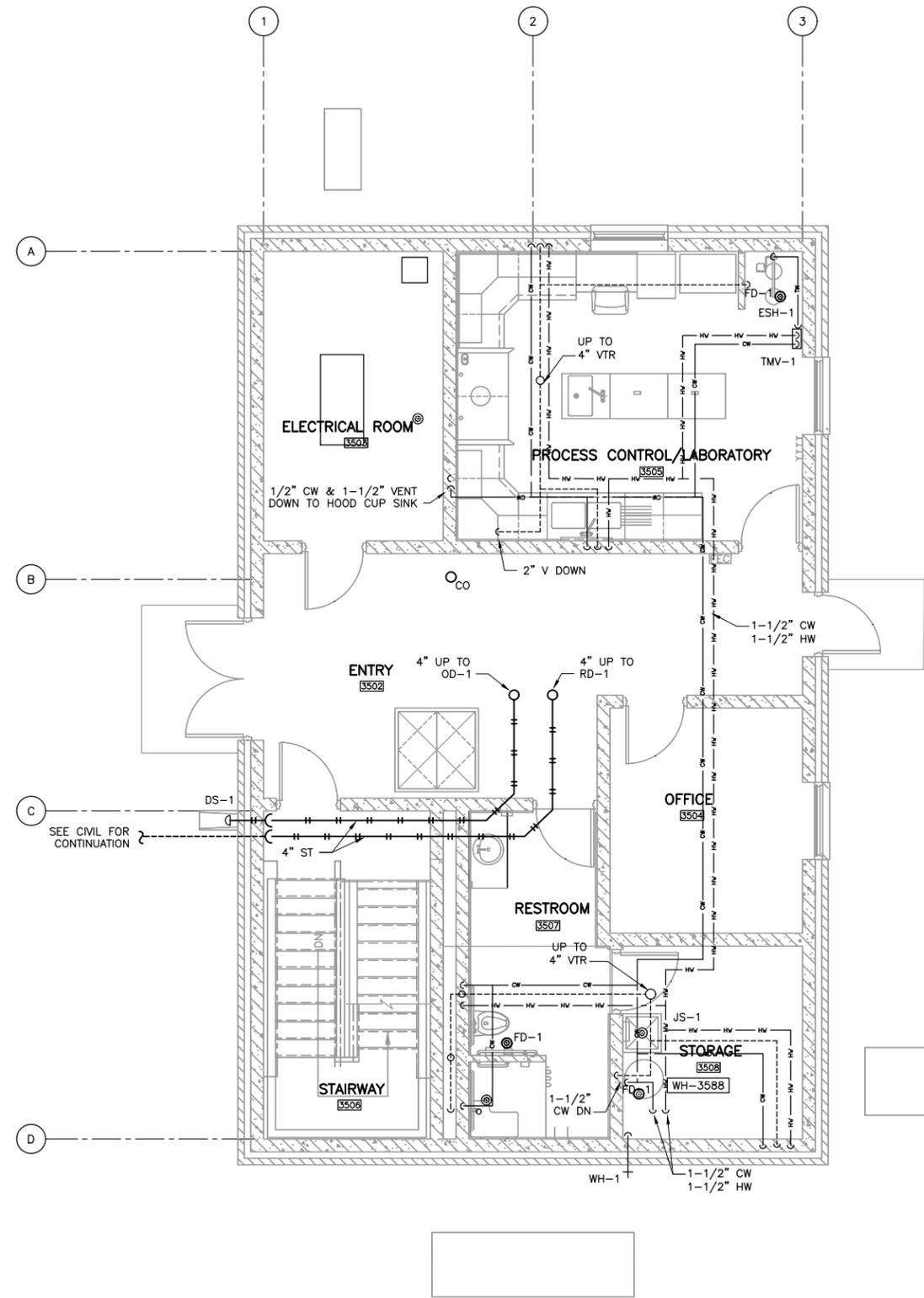


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SECONDARY TREATMENT BUILDING - 350
MECHANICAL
UNDERFLOOR AND LOWER LEVEL PLUMBING PLAN

SHEET NO.
M.350

Xref: xref-1.dwg; XS-350-GRD; XS-350-P00; XMP-350-P00; XMP-350-P01



1 OPERATING LEVEL PIPING PLAN
SCALE: 1/4"=1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: JV
APPROVED: DAS
CAD DATE: 7/31/2020 10:53:08 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\M\M.351 OPERATING LEVEL PLUMBING PLAN.dwg

JOB DATE: 2020
JOB NUMBER: 160473

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NO.	DATE	BY	REVISION DESCRIPTION

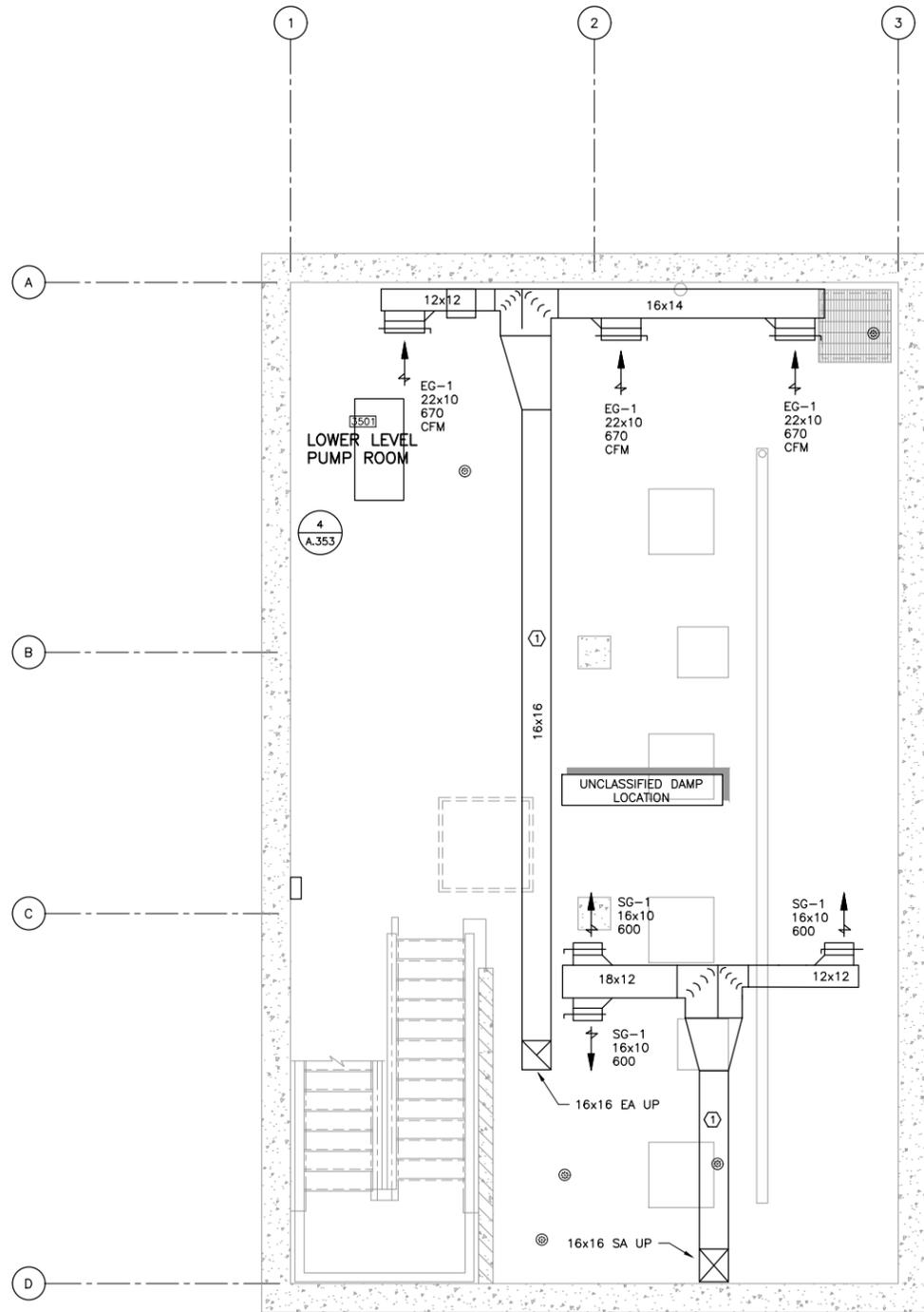


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

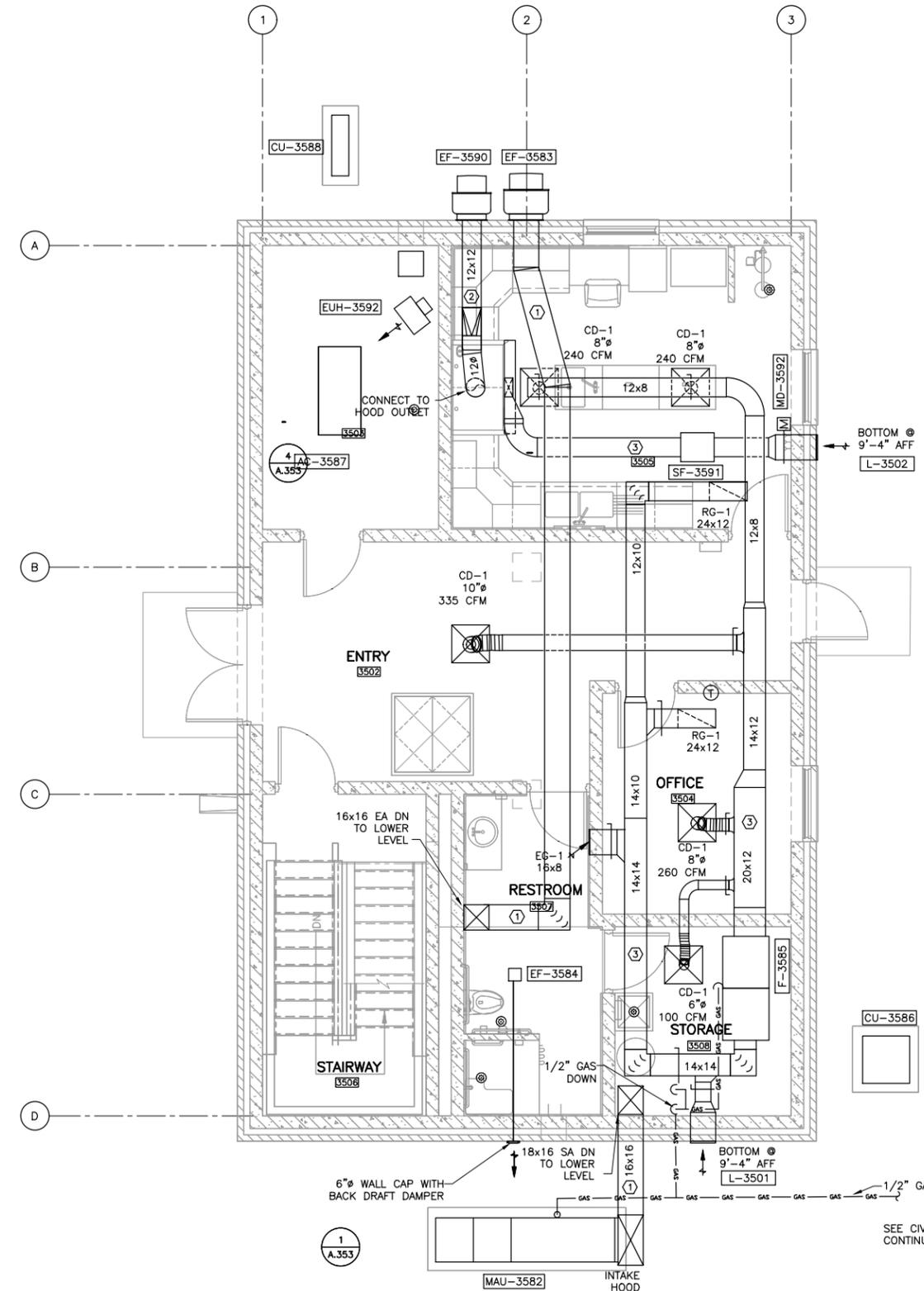
SECONDARY TREATMENT BUILDING - 350
MECHANICAL
OPERATING LEVEL PLUMBING PLAN

SHEET NO.
M.351

Xref: xgl-1-dh01; XS-350-GRD; XA-350-P01; XS-350-P01; XMP-350-P02



1 LOWER LEVEL HVAC PLAN
SCALE: 1/4"=1'-0"



2 OPERATING LEVEL HVAC PLAN
SCALE: 1/4"=1'-0"



- GENERAL NOTES:**
- MECHANICAL EQUIPMENT ON ROOF SHALL BE INSTALLED NOT LESS THAN 10'-0" FROM ROOF EDGE.
 - CONTRACTOR SHALL VERIFY ALL DUCTWORK ROUTING PRIOR TO FABRICATION. FINAL LOCATION OF DUCTWORK SHALL BE COORDINATED WITH NEW STRUCTURE, PIPING, ELECTRICAL, LIGHTING, ETC.
 - PROVIDE BALANCING DAMPERS ON ALL DUCT TAKE-OFF TO DIFFUSERS, GRILLES, AND REGISTERS

- KEY NOTES:**
- SUPPLY AND EXHAUST DUCTWORK SHALL BE ALUMINUM CONSTRUCTION. DAMPERS SHALL BE ALUMINUM CONSTRUCTION. DUCTWORK HANGERS, HANGER RODS, ETC. SHALL BE STAINLESS STEEL.
 - SUPPLY AND EXHAUST DUCTWORK SHALL BE STAINLESS STEEL.
 - SUPPLY AND EXHAUST DUCTWORK SHALL BE GALVANIZED STEEL.

PRELIMINARY
NOT FOR CONSTRUCTION

Xref: xgl-1-dh01: XS-350-GRD; XS-350-P00; XMH-350-P01; XS-350-P01; XS-350-P01; XMH-350-P01

DRAWN BY: JV	JOB DATE: 2020	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0" = 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY. PLAN.dwg
APPROVED: DAS	JOB NUMBER: 160473	
CAD DATE: 7/31/2020 10:52:59 AM		
CAD FILE: J:\2016\160473\CAD\Dwgs\M\M.352 LOWER AND OPERATING LEVEL HVAC		

NO.	DATE	BY	REVISION DESCRIPTION

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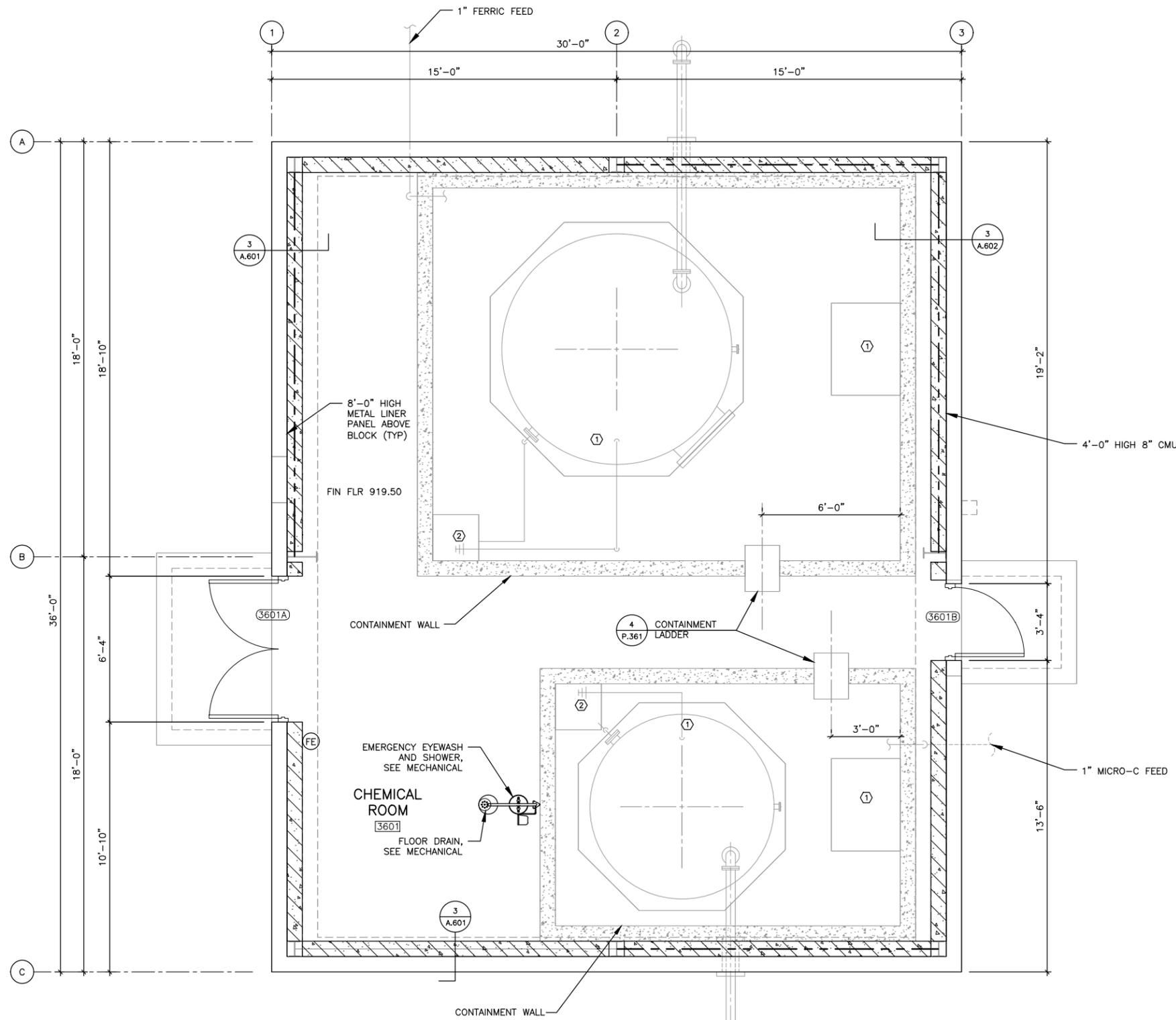
NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SECONDARY TREATMENT BUILDING - 350
MECHANICAL
LOWER AND OPERATING LEVEL HVAC PLAN

SHEET NO.
M.352

NOTES:
 1. SEE A.600 SERIES SHEETS FOR SCHEDULES AND DETAILS.
 2. CONCRETE INSIDE CONTAINMENT AREA, INCLUDING TOP OF EXPOSED CONTAINMENT WALLS SHALL RECEIVE VINYL ESTER LINING FOR CHEMICAL RESISTANCE.

KEYNOTES: 
 1. EQUIPMENT PAD, SEE STRUCTURAL AND PROCESS.
 2. SUMP AREA, SEE STRUCTURAL.



1 OPERATING LEVEL PLAN
 SCALE: 3/8"=1'-0"



PRELIMINARY
 NOT FOR CONSTRUCTION

DRAWN BY: CMB JOB DATE: 2020
 APPROVED: DJH JOB NUMBER: 160473
 CAD DATE: 7/27/2020 1:11:51 PM
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NO.	DATE	BY	REVISION DESCRIPTION

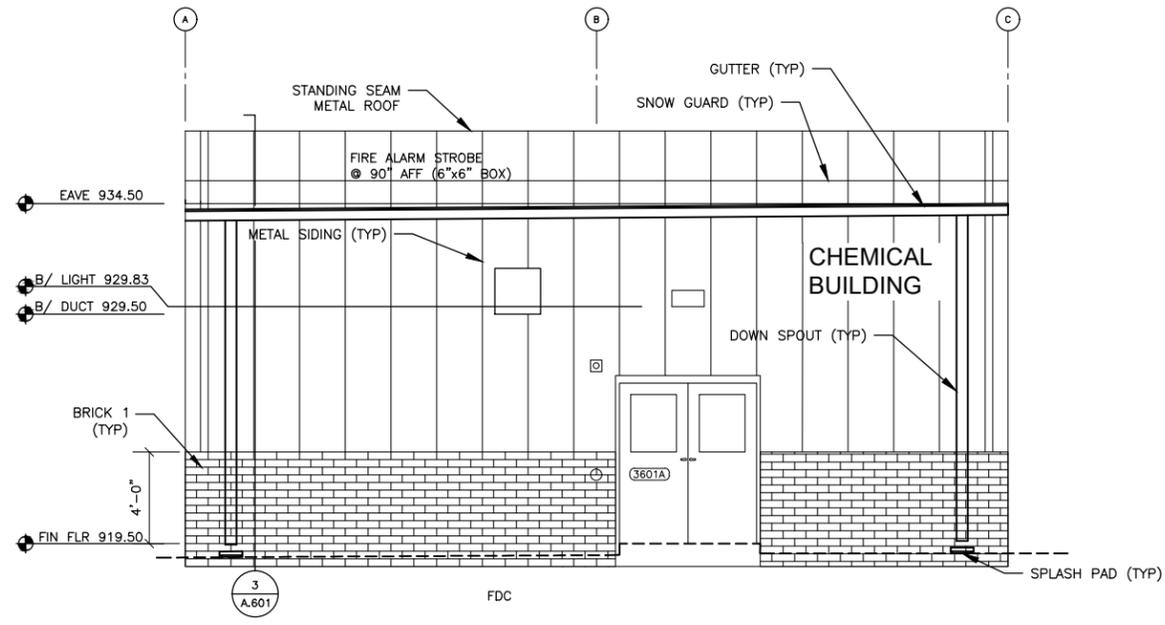
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NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

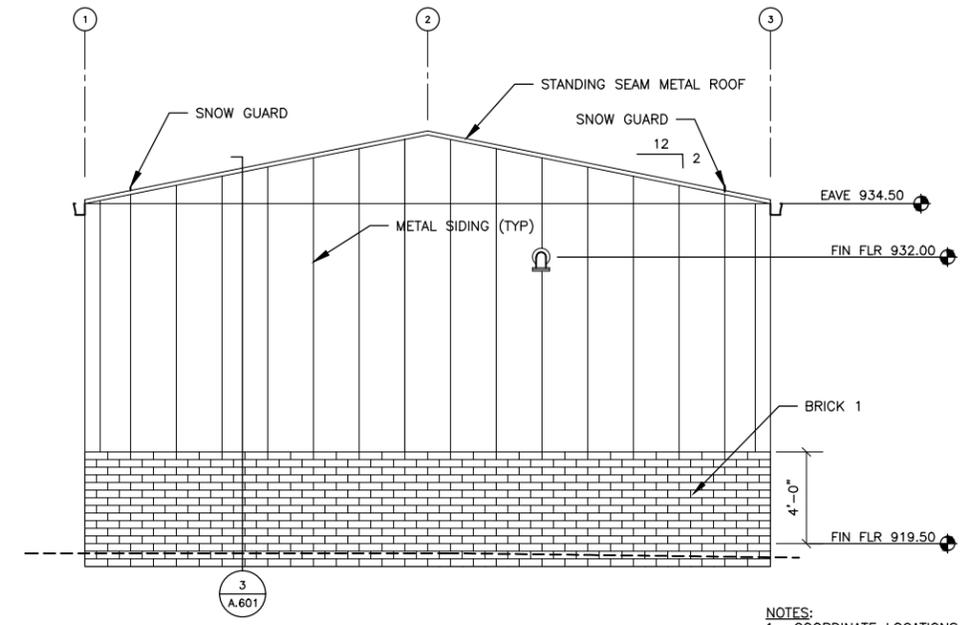
SECONDARY TREATMENT CHEMICAL STORAGE BUILDING - 360
 ARCHITECTURAL
OPERATING LEVEL PLAN

SHEET NO.
A.360

Xref: xgl-1-dh01; XS-360-P01; XA-360-P01; XP-360-P01; XS-360-GRID

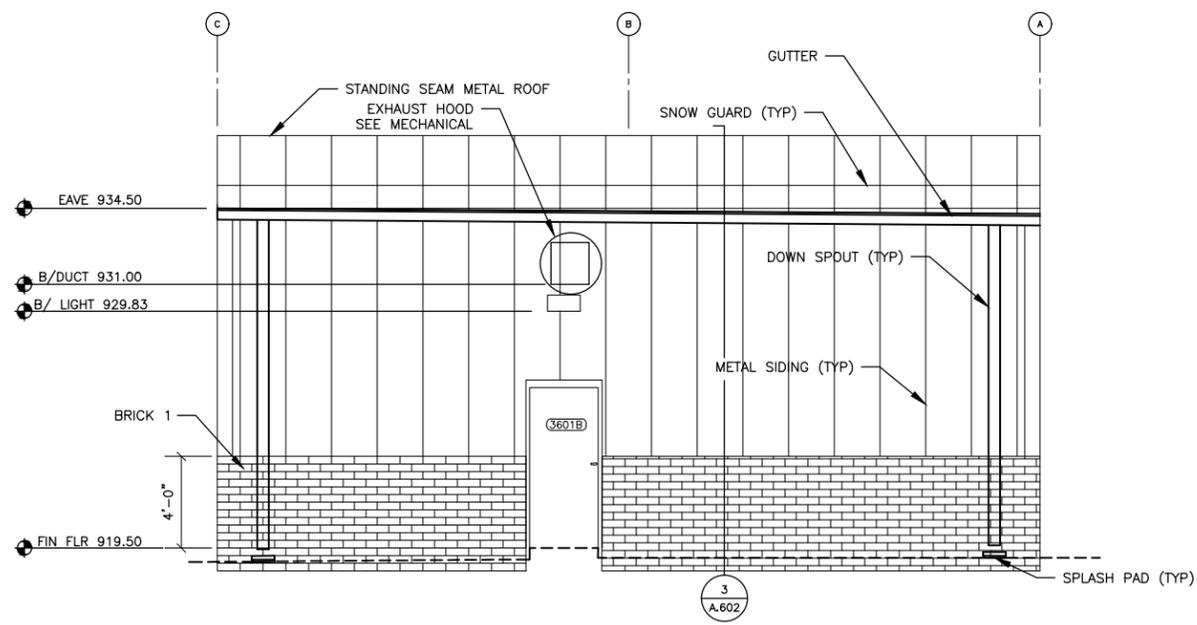


1 WEST ELEVATION
SCALE: 1/4"=1'-0"

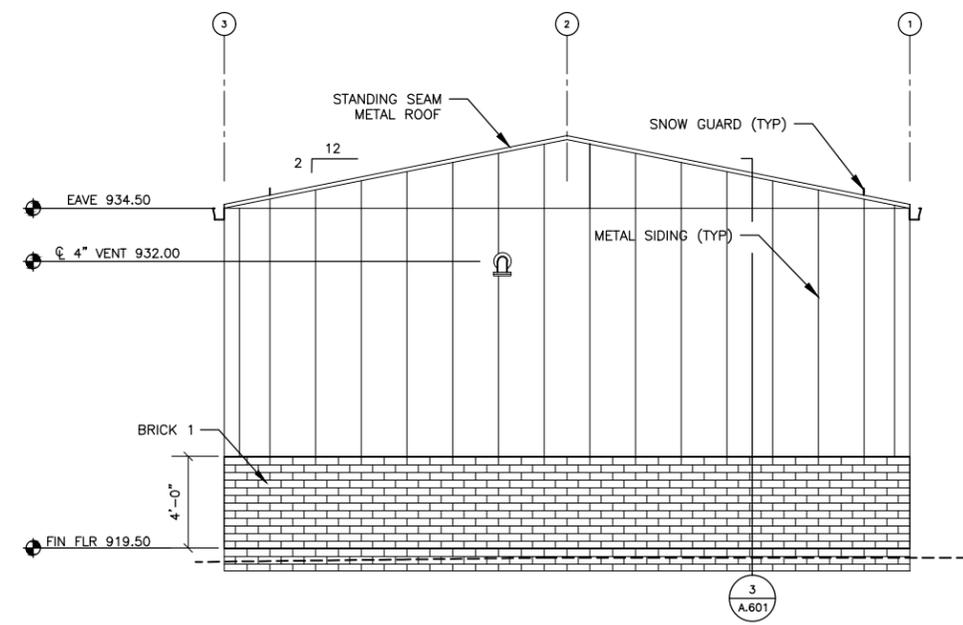


2 SOUTH ELEVATION
SCALE: 1/4"=1'-0"

NOTES:
1. COORDINATE LOCATIONS OF HEAT TAPE ELECTRICAL WITH DOWNSPOUT LOCATIONS (TYP).



3 EAST ELEVATION
SCALE: 1/4"=1'-0"



4 NORTH ELEVATION
SCALE: 1/4"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB
APPROVED: DJH
CAD DATE: 7/30/2020 12:59:30 PM
CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.361 EXTERIOR ELEVATIONS.dwg

JOB DATE: 2020
JOB NUMBER: 160473

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

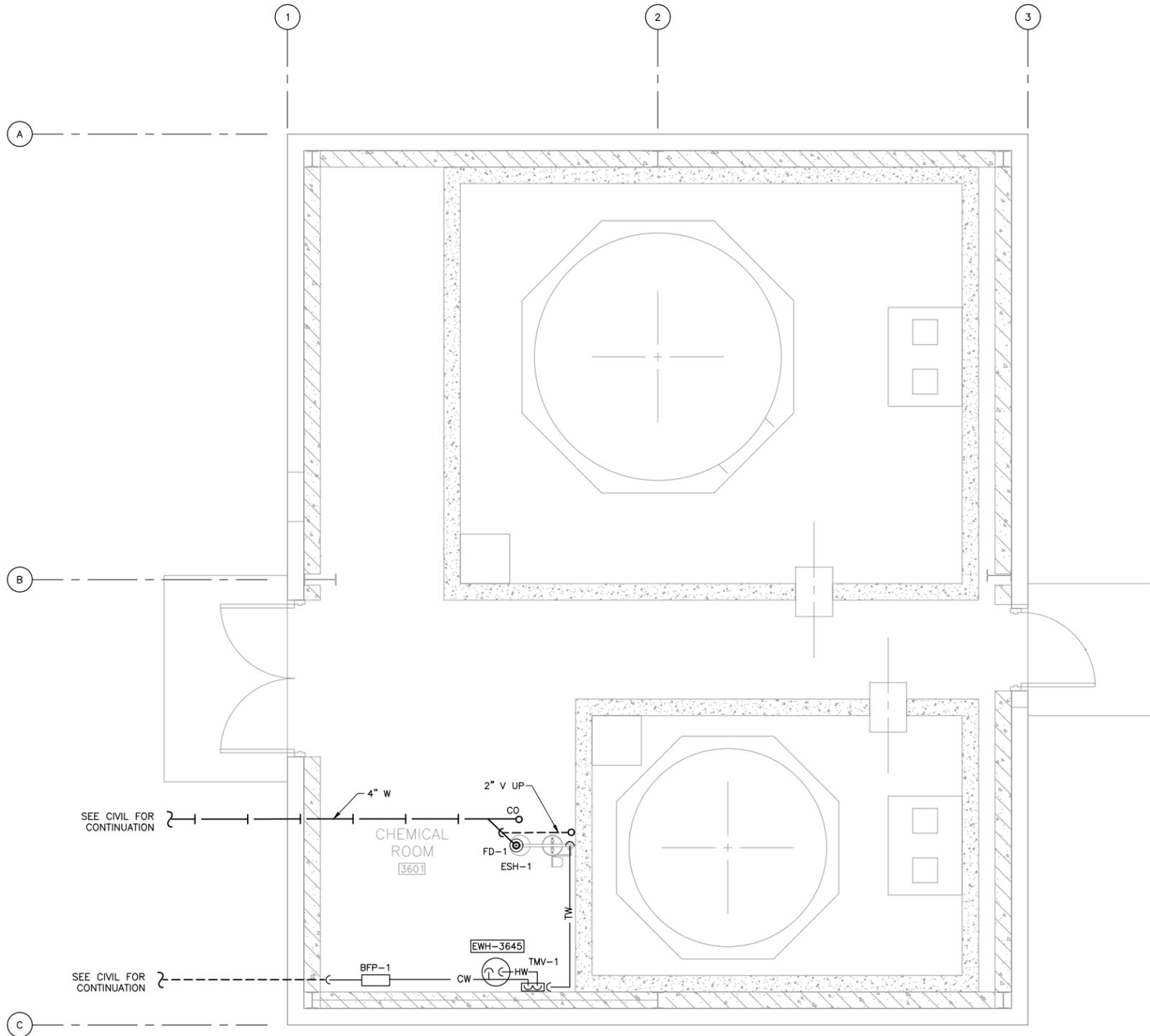


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SECONDARY TREATMENT CHEMICAL STORAGE BUILDING - 360
ARCHITECTURAL
EXTERIOR ELEVATIONS

SHEET NO.
A.361

Xref: xgl-1-dh01: XA-360-ED1_EXT_ELEV



1 OPERATING LEVEL PLUMBING PLAN
 SCALE: 3/8"=1'-0"
 

PRELIMINARY
 NOT FOR CONSTRUCTION

Xref: xgl-1-dh01; XA-360-PD1; XS-360-GRID; XS-360-PD1; XP-360-PD1; XMH-360-PD0

DRAWN BY: JV JOB DATE: 2020
 APPROVED: DAS JOB NUMBER: 160473
 CAD DATE: 7/31/2020 10:56:07 AM
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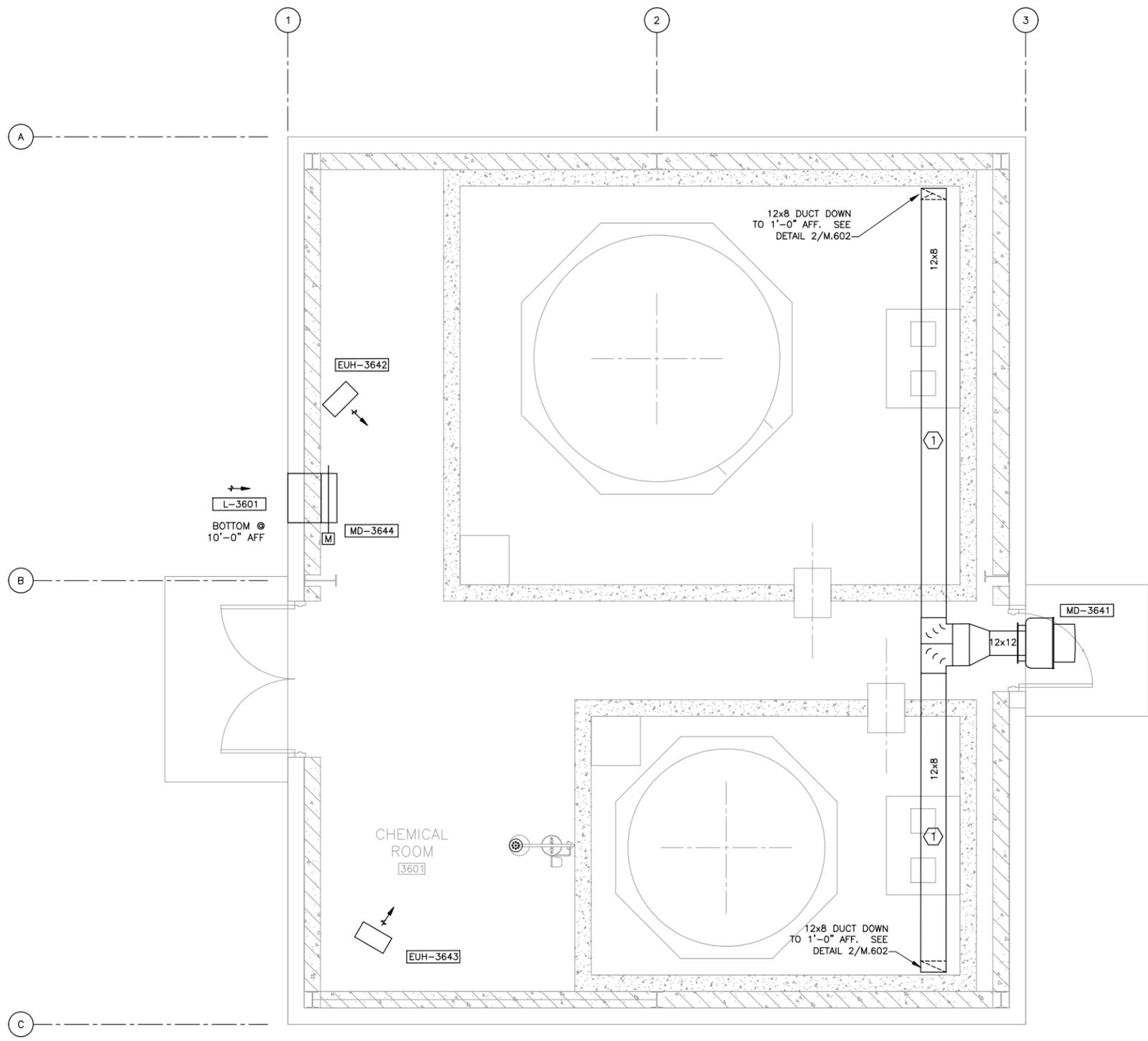
NO.	DATE	BY	REVISION DESCRIPTION



NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

SECONDARY TREATMENT CHEMICAL STORAGE BUILDING - 360
 MECHANICAL
 OPERATING LEVEL PLUMBING PLAN

SHEET NO.
M.360



- GENERAL NOTES:**
- MECHANICAL EQUIPMENT ON ROOF SHALL BE INSTALLED NOT LESS THAN 10'-0" FROM ROOF EDGE.
 - CONTRACTOR SHALL VERIFY ALL DUCTWORK ROUTING PRIOR TO FABRICATION. FINAL LOCATION OF DUCTWORK SHALL BE COORDINATED WITH NEW STRUCTURE, PIPING, ELECTRICAL, LIGHTING, ETC.
 - PROVIDE BALANCING DAMPERS ON ALL DUCT TAKE-OFF TO DIFFUSERS, GRILLES, AND REGISTERS

- KEY NOTES:**
- SUPPLY AND EXHAUST DUCTWORK SHALL BE ALUMINUM CONSTRUCTION. DAMPERS SHALL BE ALUMINUM CONSTRUCTION. DUCTWORK HANGERS, HANGER RODS, ETC. SHALL BE STAINLESS STEEL.
 - CONNECT 3/4" PEW SERVING HOSE REEL TO 6" PEW DISCHARGED FROM PEW PUMP PEW-4211.

1 OPERATING LEVEL HVAC PLAN
SCALE: 3/8"=1'-0"



**PRELIMINARY
NOT FOR CONSTRUCTION**

Xref: xgl-1-dh01; XA-360-PD1; XS-360-GRID; XS-360-PD1; XP-360-PD1; XMH-360-PD1

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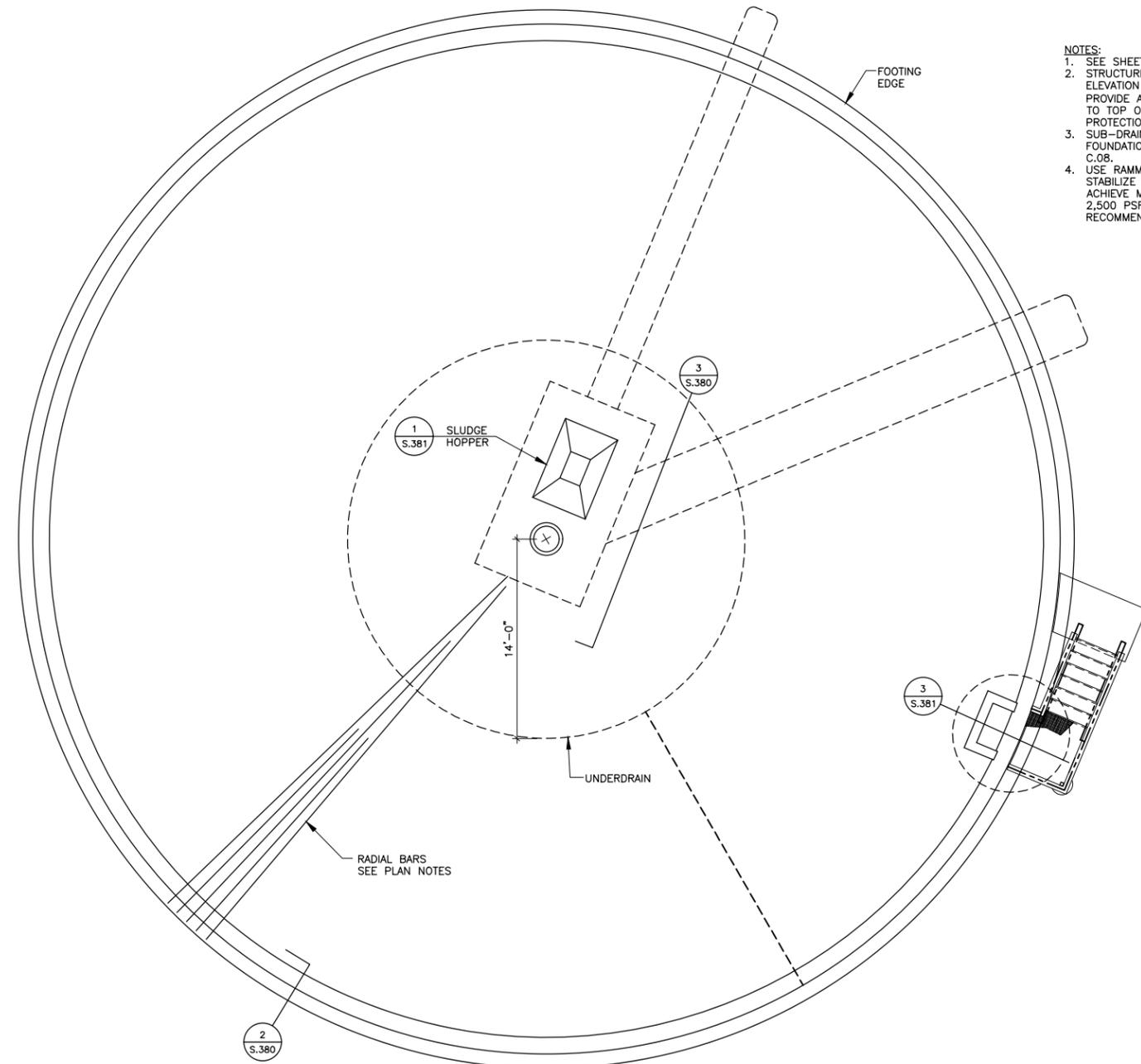
NO.	DATE	BY	REVISION DESCRIPTION

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CITY OF NEVADA
NEVADA, IOWA

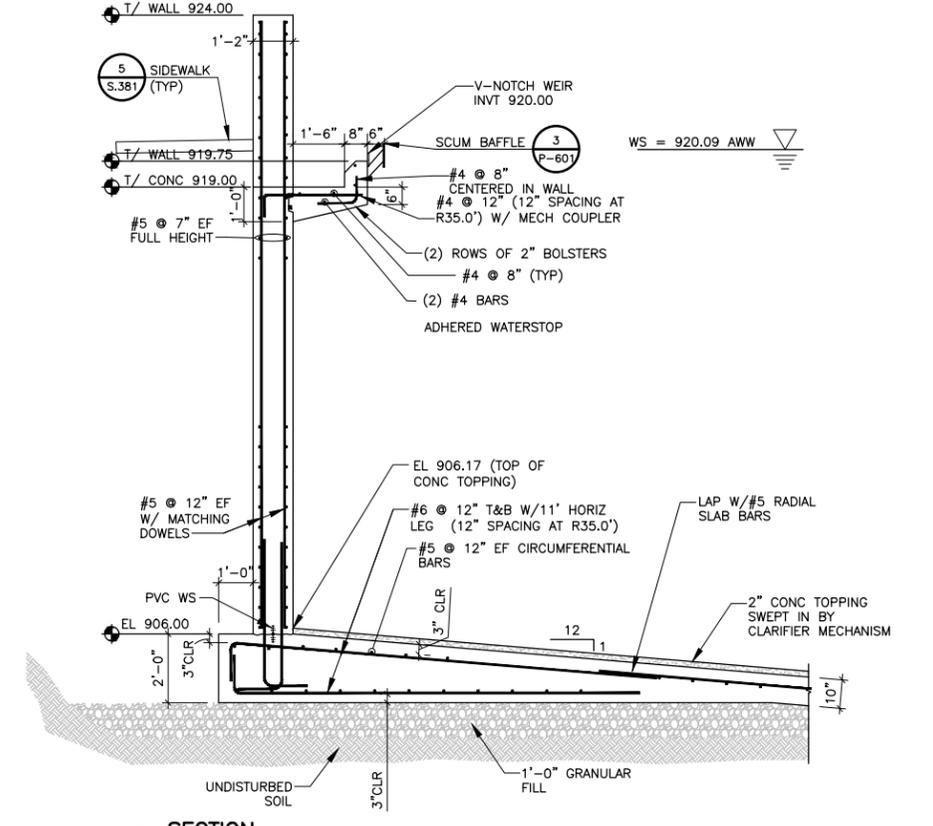
SECONDARY TREATMENT CHEMICAL STORAGE BUILDING - 360
MECHANICAL
OPERATING LEVEL HVAC PLAN

SHEET NO.
M.361

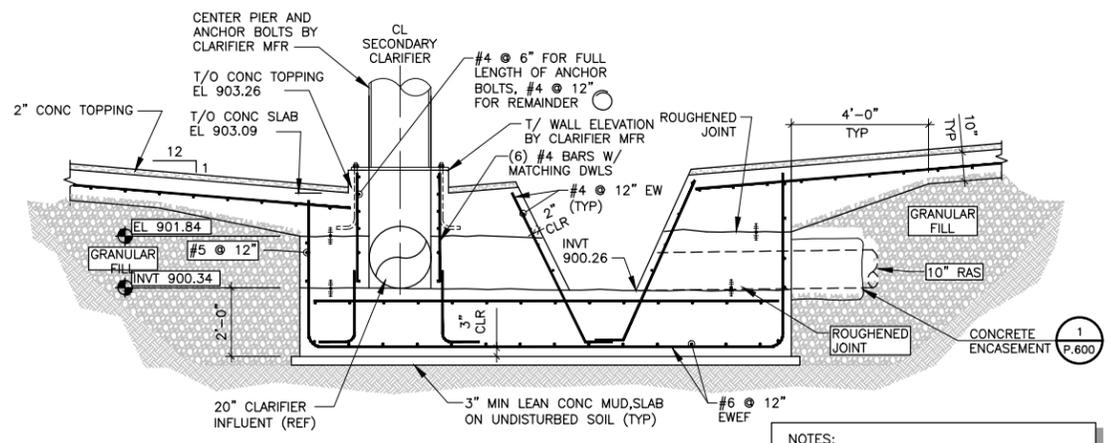


- NOTES:**
1. SEE SHEET S.01 FOR GENERAL NOTES.
 2. STRUCTURE DESIGNED FOR GRADE ELEVATION NO GREATER THAN EL 829.5 TO PROVIDE A MINIMUM OF 3'-6" FREEBOARD TO TOP OF WALL REQUIRED FOR FALL PROTECTION.
 3. SUB-DRAINS ARE REQUIRED AROUND FOUNDATIONS. SEE SUB-DRAINS SHEET C.08.
 4. USE RAMMED AGGREGATE PIERS TO STABILIZE SUBGRADE SOILS AND TO ACHIEVE MINIMUM BEARING CAPACITY OF 2,500 PSF PER GEOTECHNICAL ENGINEER RECOMMENDATION.

1 SECONDARY CLARIFIER No. 2 FOUNDATION PLAN
 SCALE: 3/16"=1'-0"
 NORTH PLAN NORTH



2 SECTION
 SCALE: 3/8"=1'-0"



3 SECTION
 SCALE: NONE

- NOTES:**
1. ALL BARS 2" CLR UNLESS NOTED.
 2. PROVIDE ADHERED WATERSTOP AT ALL CONSTRUCTION JOINTS IN CENTER PIER / SLUDGE HOPPER

PRELIMINARY NOT FOR CONSTRUCTION

DRAWN BY: CMB JOB DATE: 2020 BAR IS ONE INCH ON OFFICIAL DRAWINGS.
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 CAD DATE: 7/9/2020 11:16:25 AM
 CAD FILE: J:\2016\160473\CAD\Dwgs\S\S.380 TYPICAL SECONDARY CLARIFIER FOUNDATION PLAN.dwg

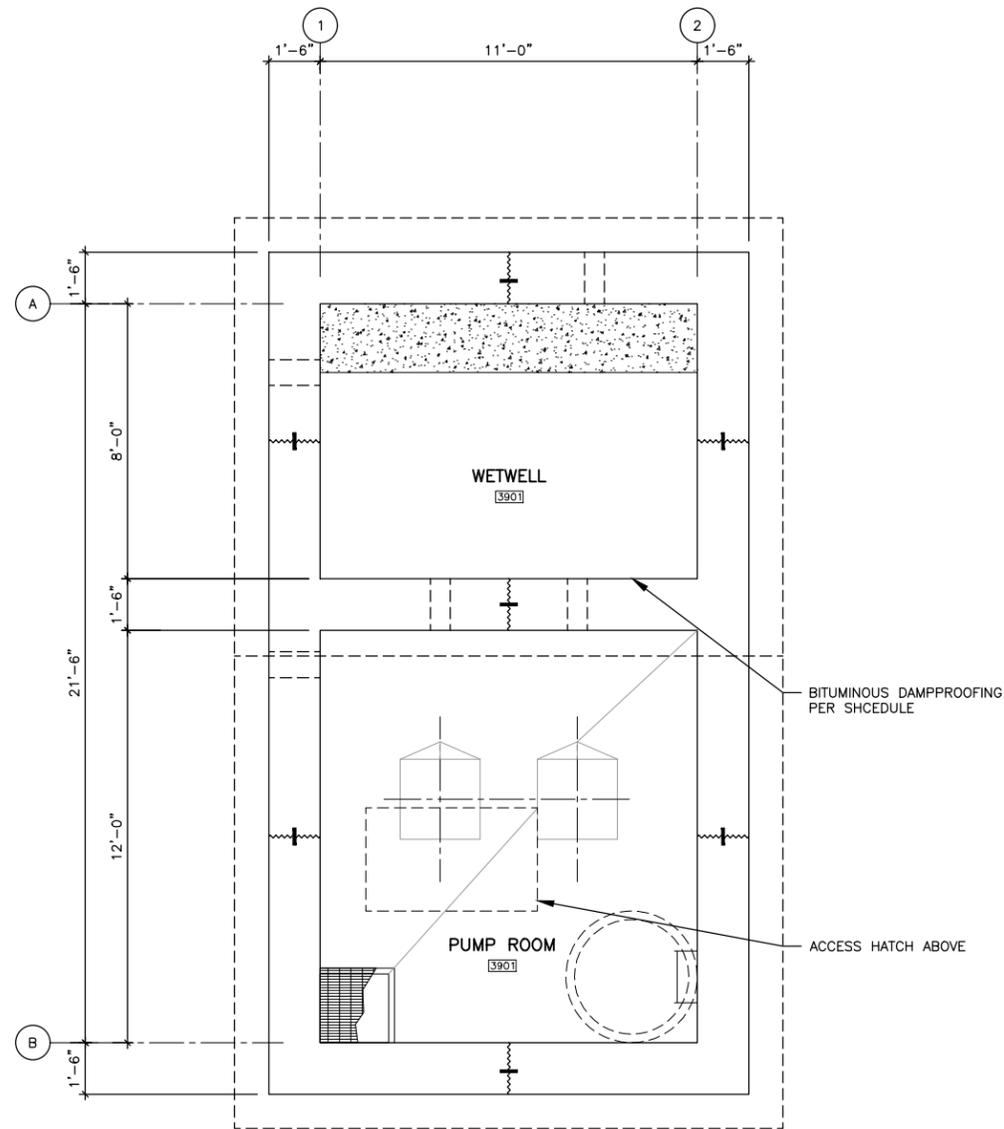
NO.	DATE	BY	REVISION DESCRIPTION



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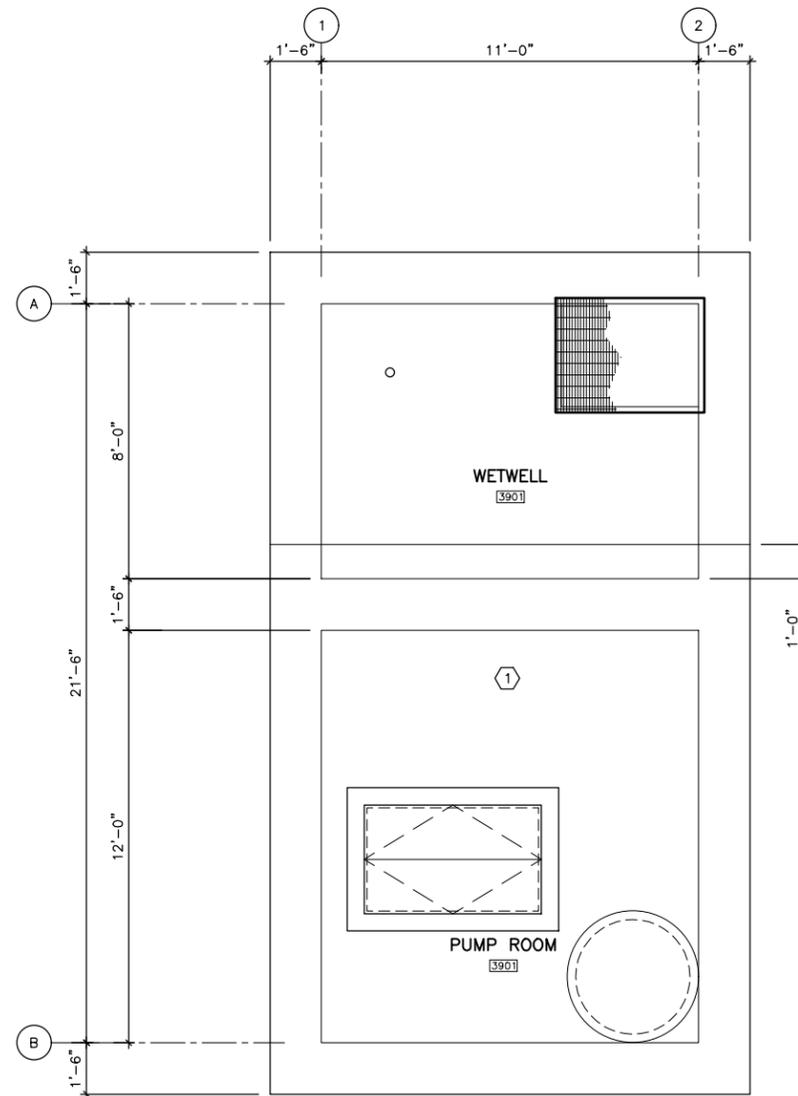
SECONDARY CLARIFIERS - 380
 STRUCTURAL
 TYPICAL SECONDARY CLARIFIER FOUNDATION PLAN

SHEET NO.
S.380



1 LOWER LEVEL PLAN

SCALE: 3/8"=1'-0"



2 UPPER LEVEL PLAN

SCALE: 3/8"=1'-0"



KEYNOTES:
 1. ELASTOMERIC DECK COVERING ON DRY PIT TOP SLAB. SEE P. 390 FOR EXTENDING OVER EDGES.

PRELIMINARY
 NOT FOR CONSTRUCTION

DRAWN BY: CMB,CR JOB DATE: 2020
 APPROVED: DJH JOB NUMBER: 160473
 CAD DATE: 7/30/2020 2:33:40 PM
 CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.390 LOWER AND UPPER LEVEL PLANS.dwg

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
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NO.	DATE	BY	REVISION DESCRIPTION

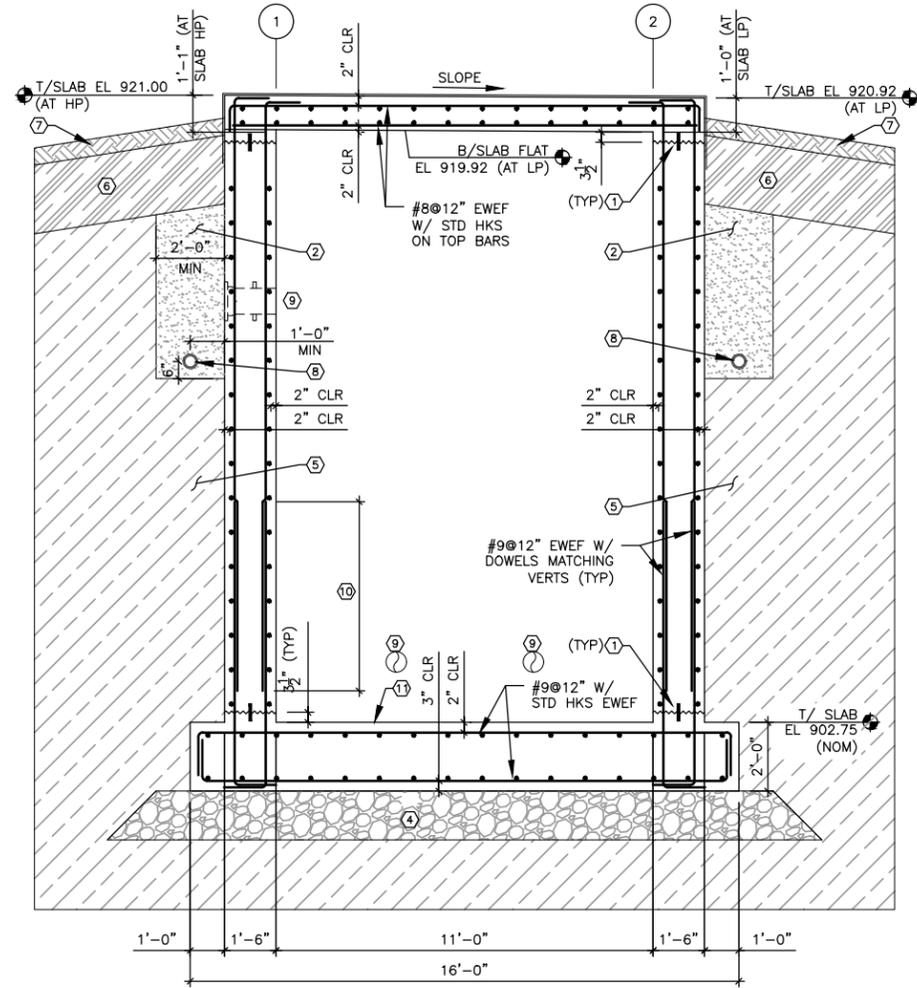


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

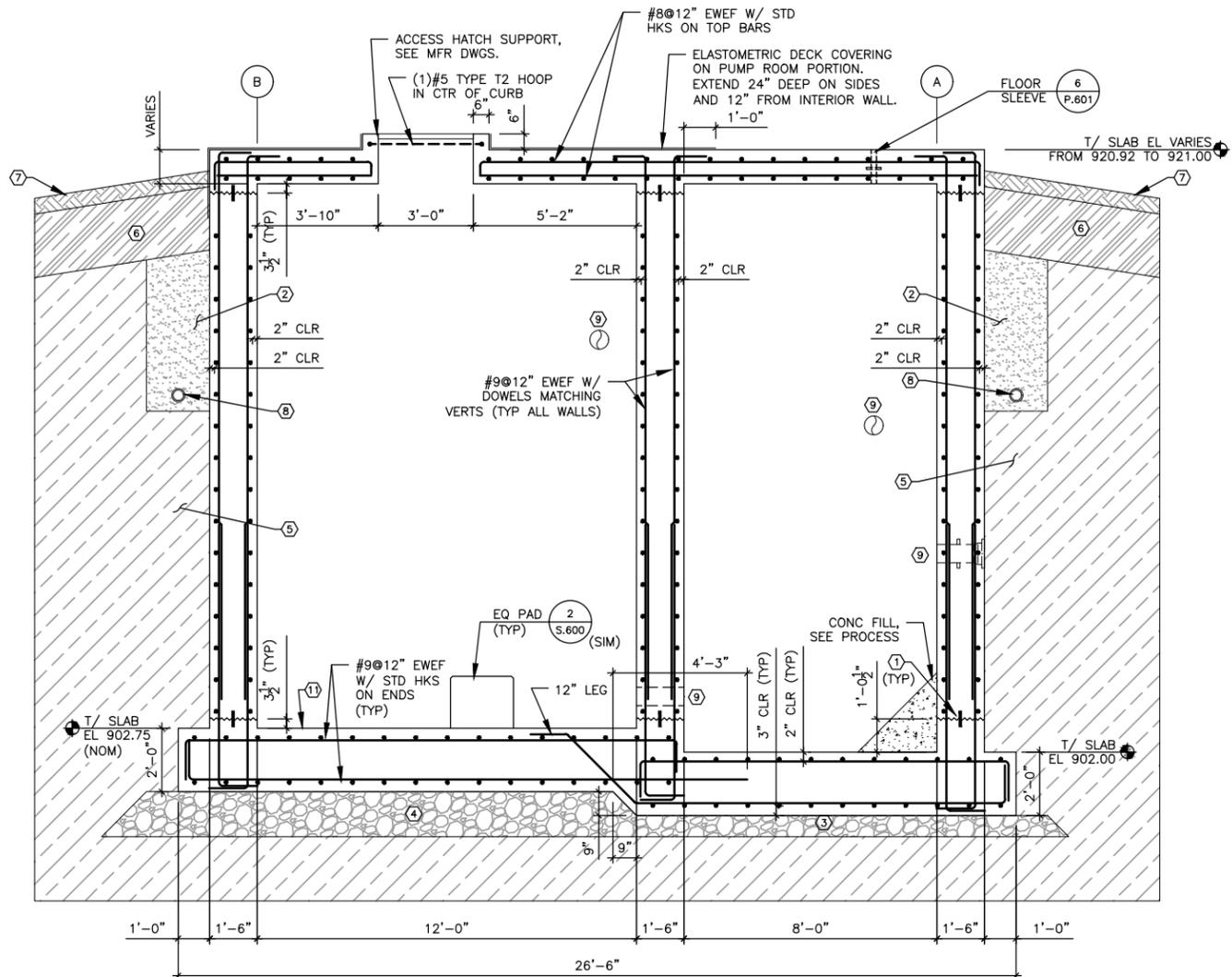
RETURN PUMP STATION - 390
 ARCHITECTURAL
 LOWER AND UPPER LEVEL PLANS

SHEET NO.
A.390

Xref: xgl-1-dh01: XS-390-GRID; XS-390-P00; XS-390-P01



1 SECTION
SCALE: 3/8"=1'-0"



2 SECTION
SCALE: 3/8"=1'-0"

- KEYNOTES:**
1. CONSTRUCTION JOINT ROUGHENED TO 1/4" AMPLITUDE W/ 6" PVC WATERSTOP.
 2. FDGGF OR CRUSHED ROCK WRAPPED IN FILTER FABRIC, FILTER FABRIC EXTEND UPWARD TO AND BENEATH THE ABOVE IMPERVIOUS CLAY LAYER PER IOWA DOT TABLE 4196.01-2.
 3. 8" MIN THICK COMPACTED CRUSHED ROCK SUBBASE WITH LESS THAN 4% PASSING #200 SIEVE.
 4. 1'-5" MIN THICK COMPACTED CRUSHED ROCK SUBBASE WITH LESS THAN 4% PASSING #200 SIEVE.
 5. EXCAVATION BACKFILL WITH COMPACTED STRUCTURAL FILL PER GEOTECHNICAL NOTES IN SHEET G.07.
 6. 2'-0" THICK IMPERVIOUS CLAY LAYER.
 7. SURFACE TOPSOIL, MIN 1% SLOPE.
 8. 6" MIN PERFORATED SUB-DRAIN PIPE, HP INV EL 912.75. SLOPE TO WEST TO INV EL 912.35.
 9. PIPE PENETRATION, SEE PROCESS.
 10. ALT PROJ OF 5'-6" & 11'-0", 5'-6" SPLICE VERT REINF TO DWL (TYP ALL WALLS).
 11. TOP OF SLAB SLOPES FROM HP 903.00 TO LP 902.75 AT SUMP. SEE PLAN.

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CRR JOB DATE: 2020
 APPROVED: GPB JOB NUMBER: 160473
 CAD DATE: 7/21/2020 3:00:35 PM
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NO.	DATE	BY	REVISION DESCRIPTION

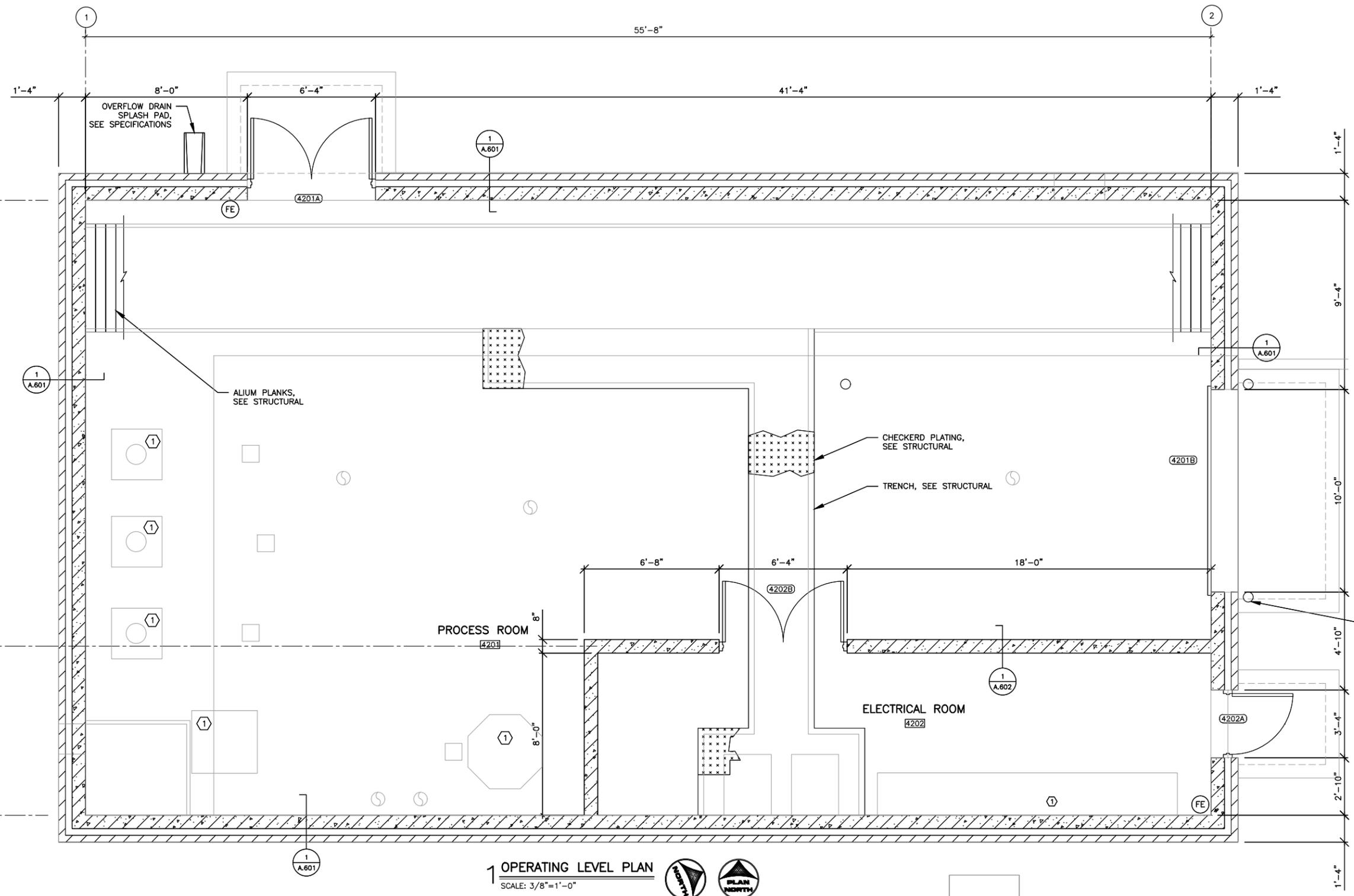


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

RETURN PUMP STATION - 390
 STRUCTURAL
 SECTIONS

SHEET NO.
S.391

Xrefs: xgl-1-dh01: XS-390-S01



NOTES:
1. SEE A.600 SERIES SHEETS FOR SCHEDULES AND DETAILS.

KEYNOTES: 
1. EQUIPMENT PAD; SEE STRUCTURAL, MECHANICAL, AND PROCESS.

BOLLARD  (TYP 2)

1 OPERATING LEVEL PLAN
SCALE: 3/8"=1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB JOB DATE: 2020
APPROVED: DJH JOB NUMBER: 160473
CAD DATE: 7/30/2020 7:44:04 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.420 OPERATING LEVEL PLAN.dwg

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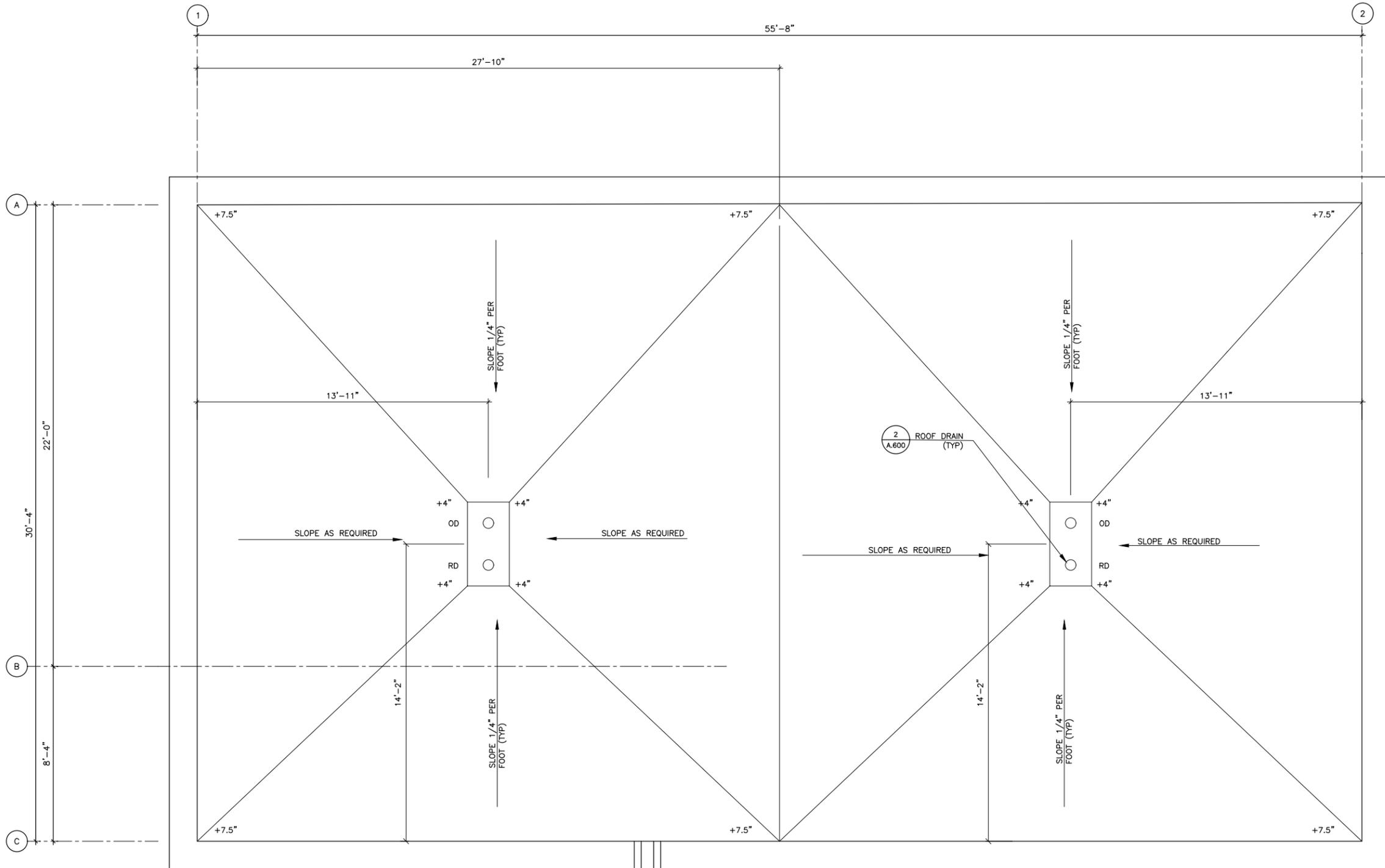


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

UV DISINFECTION BUILDING - 420
ARCHITECTURAL
OPERATING LEVEL PLAN

SHEET NO.
A.420

Xref: xgl-1-dh01; XA-420-P01; XS-420-GRID; XA-420-F02 ROOF PLAN; XS-420-P01



- ROOF PLAN NOTES:**
1. VERIFY ALL LOCATIONS OF CURBS, OPENINGS, PENETRATIONS, AND ROOF MOUNTED EQUIPMENT WITH EQUIPMENT FURNISHED PRIOR TO BEGINNING THE WORK.
 2. MAINTAIN MINIMUM 1/4" PER FOOT SLOPE TO ROOF DRAINS.
 3. CONSTRUCT ROOF CRICKETS ON THE BACKSIDE OF ROOF MOUNTED EQUIPMENT AND HATCH ASSEMBLIES TO ACHIEVE POSITIVE DRAINAGE AND ELIMINATE PONDING.
 4. CONTRACTOR SHALL COORDINATE LOCATIONS OF ROOF DRAINS WITH STRUCTURE BELOW AND ADJUST TAPERED ROOF INSULATION THICKNESSES AND SLOPES AS REQUIRED TO PROVIDE MINIMUM 1/4" PER FOOT SLOPE AND 4" MINIMUM THICKNESS.
 5. PIPE PENRTRATION; SEE A.600 FOR DETAILS.

1 ROOF PLAN
SCALE: 3/8"=1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB
 APPROVED: DJH
 CAD DATE: 7/9/2020 3:01:27 PM
 CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.421 ROOF PLAN.dwg

JOB DATE: 2020
 JOB NUMBER: 160473

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
 IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

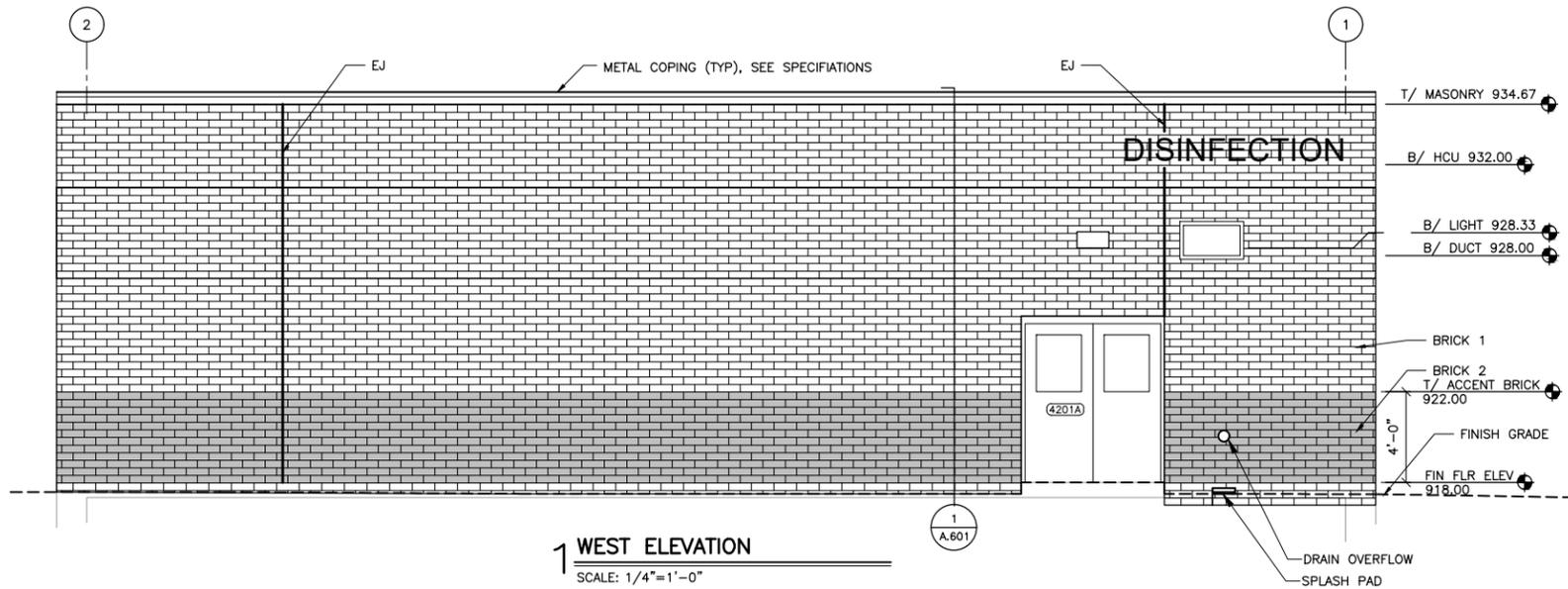


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

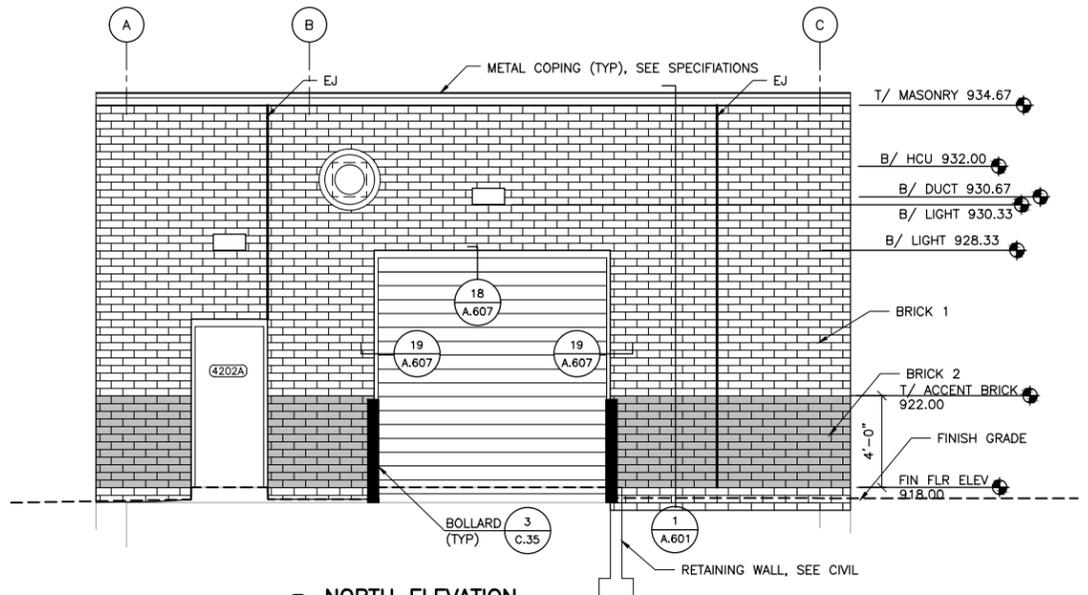
UV DISINFECTION BUILDING - 420
 ARCHITECTURAL
 ROOF PLAN

SHEET NO.
A.421

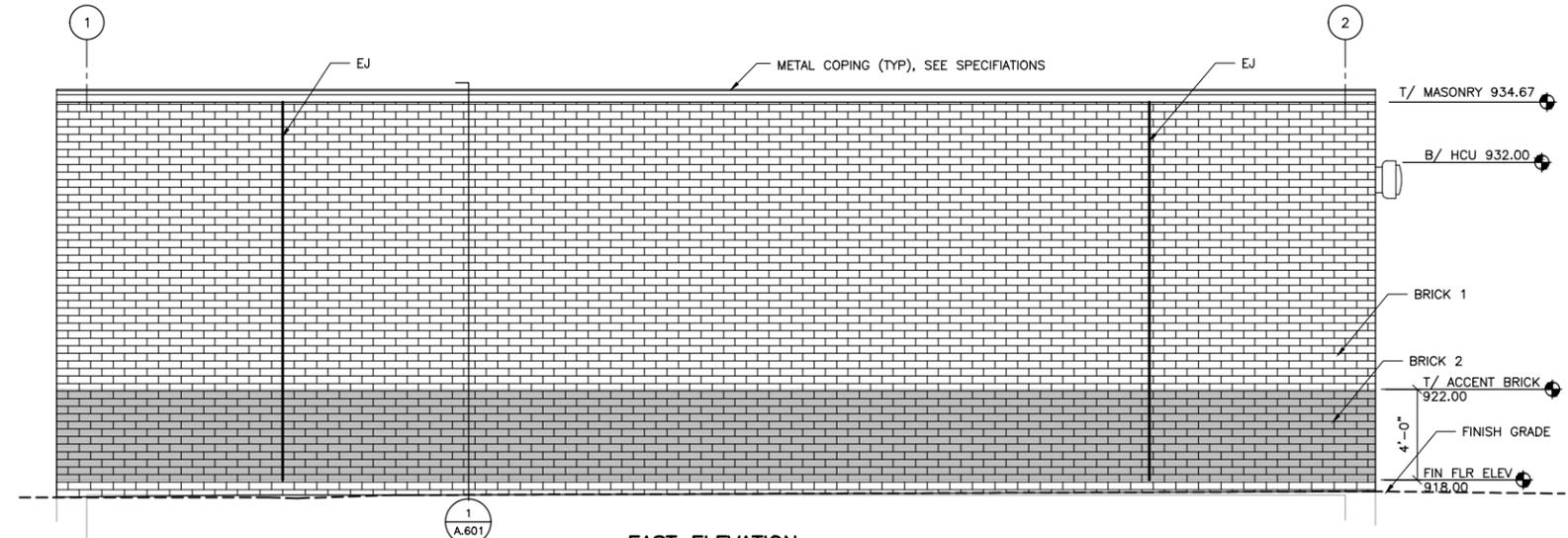
Xref: xgl-1-dh01: XS-420-GRID: XA-420-P02 ROOF PLAN



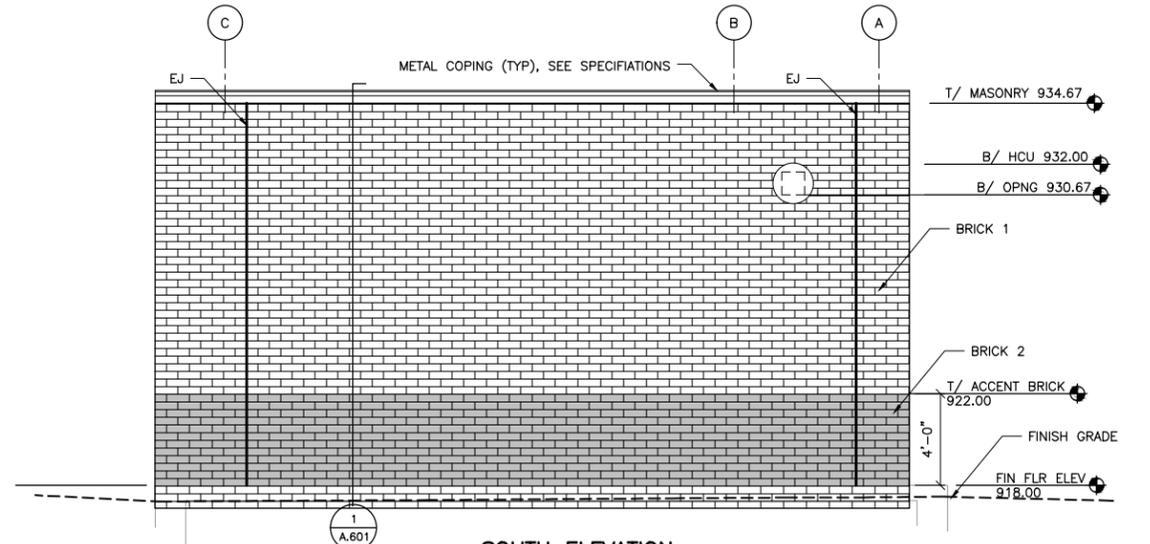
1 WEST ELEVATION
SCALE: 1/4"=1'-0"



2 NORTH ELEVATION
SCALE: 1/4"=1'-0"



3 EAST ELEVATION
SCALE: 1/4"=1'-0"



4 SOUTH ELEVATION
SCALE: 1/4"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB
APPROVED: DJH
CAD DATE: 5/26/2020 8:25:44 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.422 EXTERIOR ELEVATIONS.dwg

JOB DATE: 2020
JOB NUMBER: 160473

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

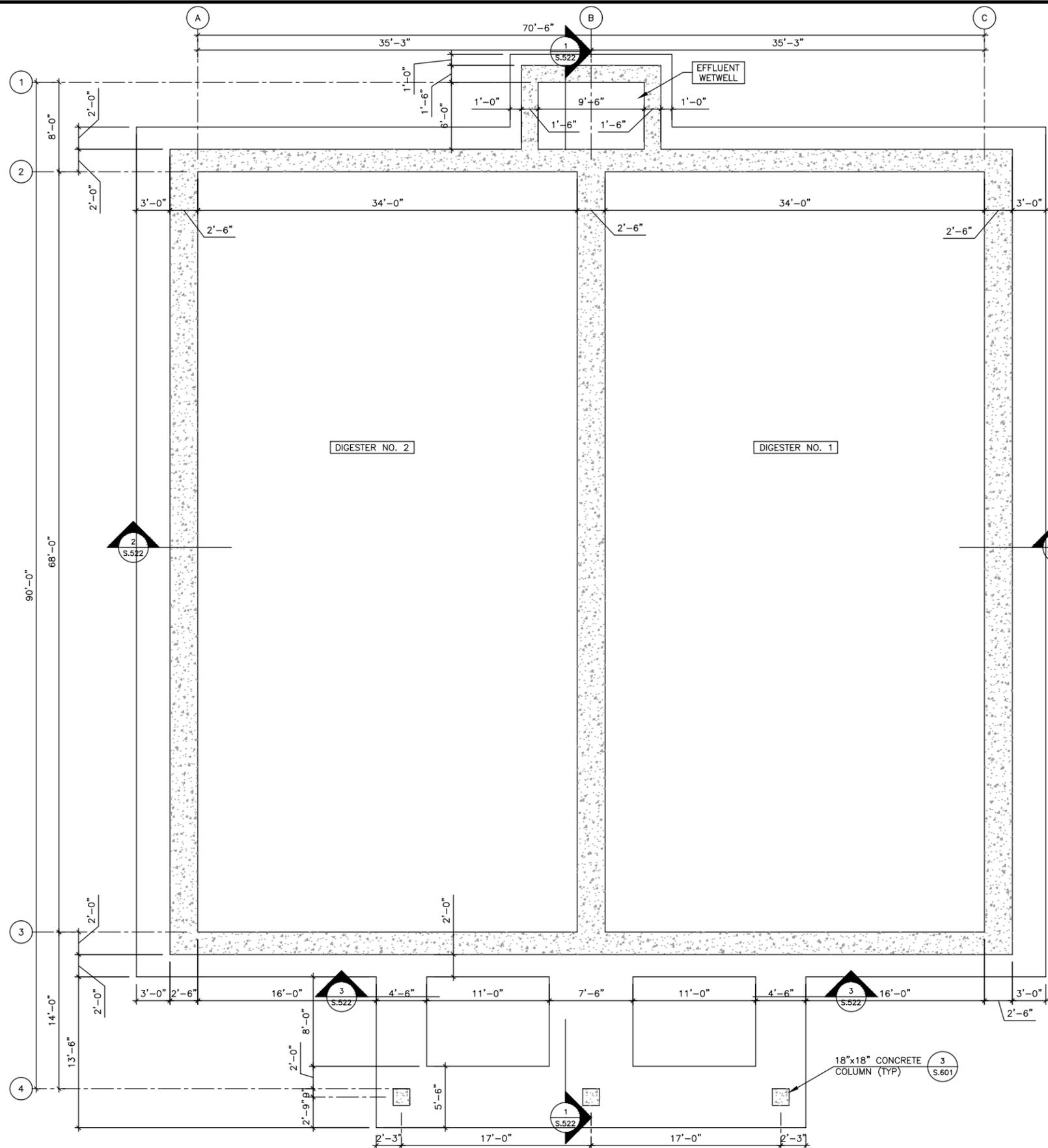


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

UV DISINFECTION BUILDING - 420
ARCHITECTURAL
EXTERIOR ELEVATIONS

SHEET NO.
A.422

Xref: xgl-1-dh01: XA-420-ED1



- GENERAL NOTES:**
1. SEE SHEET G.07 FOR GENERAL STRUCTURAL NOTES.
 2. SEE SHEETS S.600-S.606 FOR STANDARD STRUCTURAL DETAILS.
 3. REFER TO CONCRETE MATERIAL SCHEDULE 3/S.600, USE MIX 1 FOR STRUCTURAL CONCRETE, AND USE MIX 2 FOR CONCRETE FILL.
 4. ROUGHEN ALL CONSTRUCTION JOINT SURFACES TO MIN. 1/4" AMPLITUDE.

KEYNOTES: ○

1 LOWER LEVEL PLAN
SCALE: 3/16" = 1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CRR
APPROVED: GPB
CAD DATE: 7/31/2020 9:39:04 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\S\S.520 LOWER LEVEL PLAN.dwg

JOB DATE: 2020
JOB NUMBER: 160473

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

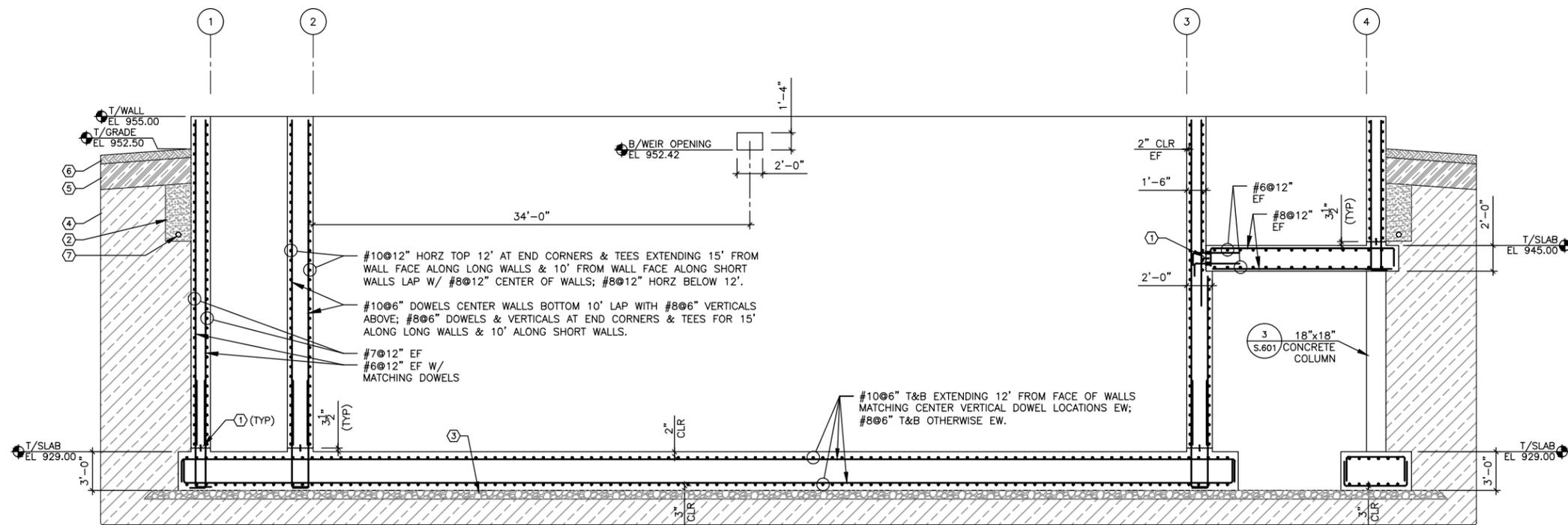


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

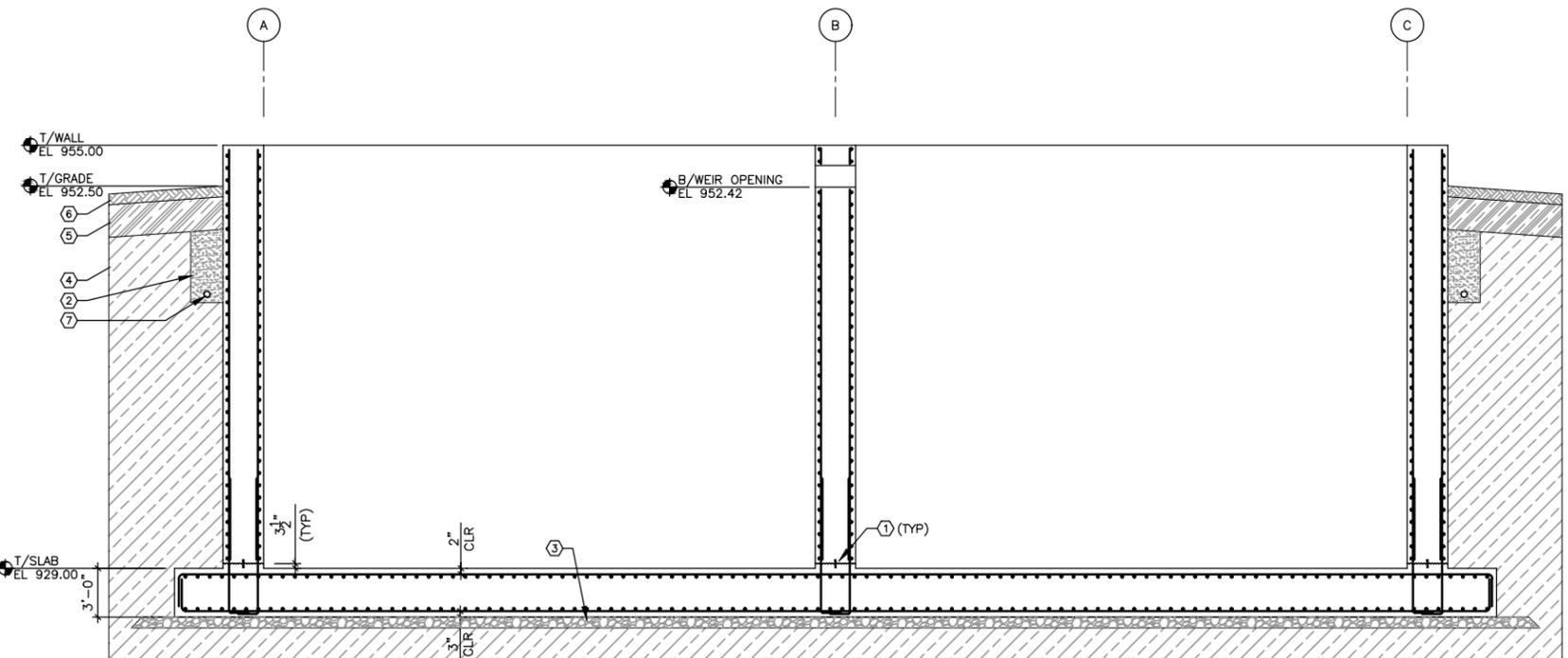
AEROBIC DIGESTERS - 520
STRUCTURAL
LOWER LEVEL PLAN

SHEET NO.
S.520

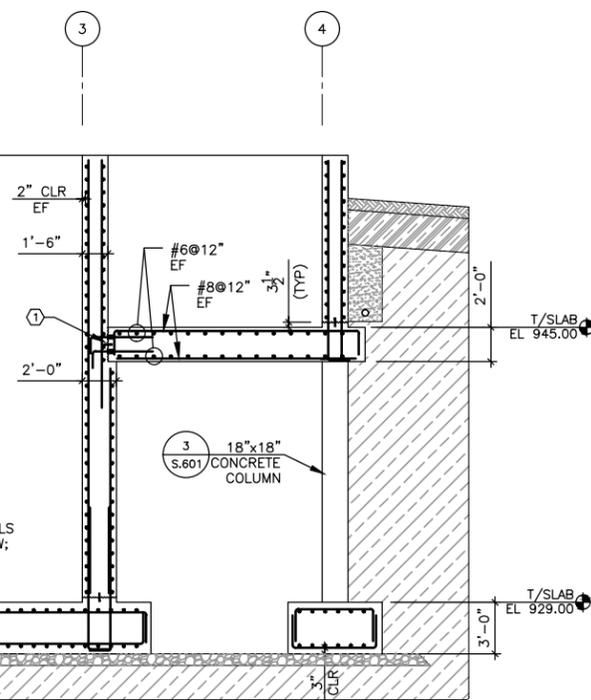
Xref: xgl-1-dh01: XS-520-P00; XS-520-GRID



1 SECTION
SCALE: 3/16" = 1'-0"



2 SECTION
SCALE: 3/16" = 1'-0"



3 SECTION
SCALE: 3/16" = 1'-0"

- GENERAL NOTES:**
- SEE SHEET G.07 FOR GENERAL STRUCTURAL NOTES.
 - SEE SHEETS S.600-S.606 FOR STANDARD STRUCTURAL DETAILS.
 - REFER TO CONCRETE MATERIAL SCHEDULE 3/S.600, USE MIX 1 FOR STRUCTURAL CONCRETE, AND USE MIX 2 FOR CONCRETE FILL.
 - ROUGHEN ALL CONSTRUCTION JOINT SURFACES TO MIN. 1/4" AMPLITUDE.
- KEYNOTES:**
- CONSTRUCTION JOINT ROUGHENED TO 1/4" AMPLITUDE W/ 6" PVC WATERSTOP.
 - FDGFP OR CRUSHED ROCK WRAPPED IN FILTER FABRIC, FILTER FABRIC EXTEND UPWARD TO AND BENEATH THE ABOVE IMPERVIOUS CLAY LAYER PER IOWA DOT TABLE 4196.01-2.
 - 8" MIN THICK COMPACTED CRUSHED ROCK SUBBASE WITH LESS THAN 4% PASSING #200 SIEVE.
 - EXCAVATION BACKFILL WITH COMPACTED STRUCTURAL FILL PER GEOTECHNICAL NOTES IN SHEET G.07.
 - 2'-0" THICK IMPERVIOUS CLAY LAYER.
 - SURFACE TOPSOIL, MIN 1% SLOPE.
 - 6" MIN PERFORATED SUB-DRAIN PIPE, HP INV EL 9XX.XX. SLOPE TO XXXX TO INV EL 9XX.XX.

PRELIMINARY
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DRAWN BY: CRR
APPROVED: GPB
CAD DATE: 7/27/2020 10:41:02 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\S\5.522 SECTIONS.dwg

JOB DATE: 2020
JOB NUMBER: 160473

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

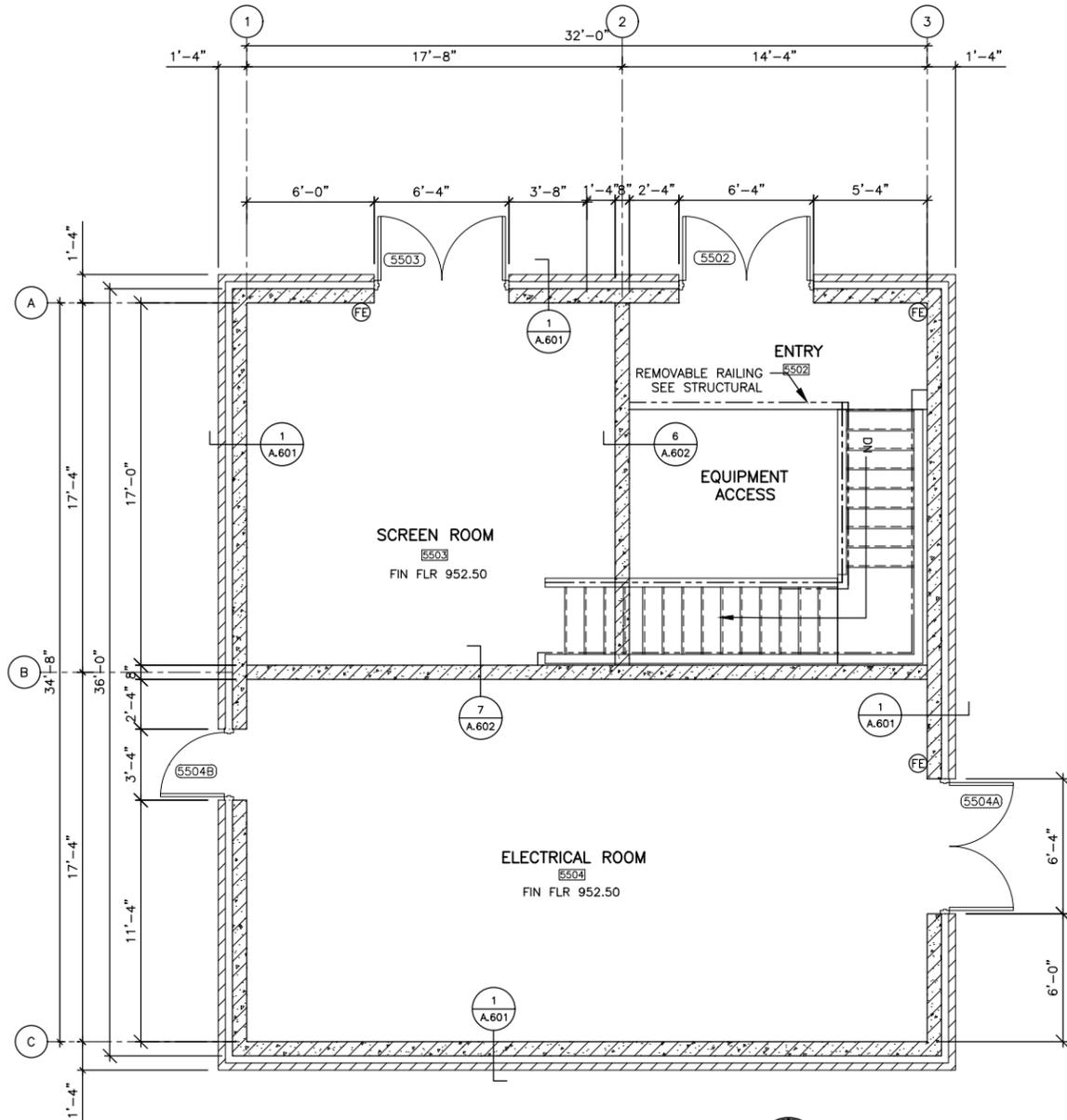
NO.	DATE	BY	REVISION DESCRIPTION



NEVADA WWTF IMPROVEMENTS
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NEVADA, IOWA

AEROBIC DIGESTERS - 520
STRUCTURAL
SECTIONS

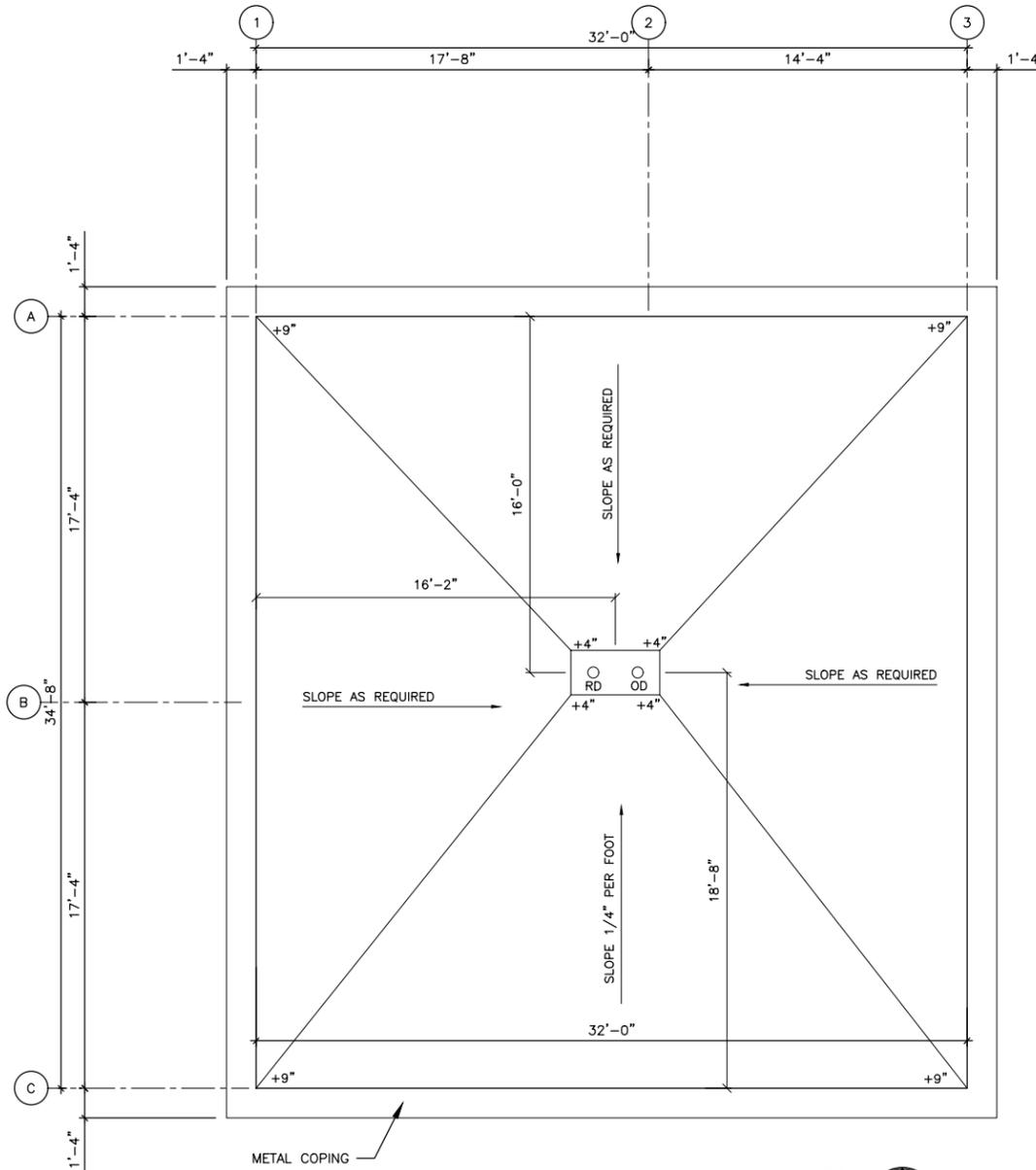
SHEET NO.
S.522



1 OPERATING LEVEL PLAN
SCALE: 1/4"=1'-0"



- GENERAL NOTES:
 1. PAINT WALLS PER SPECIFICATION 09 9000 AND SCHEDULE IN A 600 SERIES SHEETS.
 2. SEE SHEETS A.602 AND A.604 FOR WALL DETAILS AND SCHEDULE.
 3. SEE A.600 SERIES SHEETS FOR ARCHITECTURAL SCHEDULES AND DETAILS.
 4. SEE S SHEET FOR LOWER LEVEL FIRE EXTINGUISHER LOCATION.



2 ROOF PLAN
SCALE: 1/4"=1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB JOB DATE: 2020 BAR IS ONE INCH ON OFFICIAL DRAWINGS.
 APPROVED: DJH JOB NUMBER: 160473
 CAD DATE: 7/31/2020 9:42:54 AM
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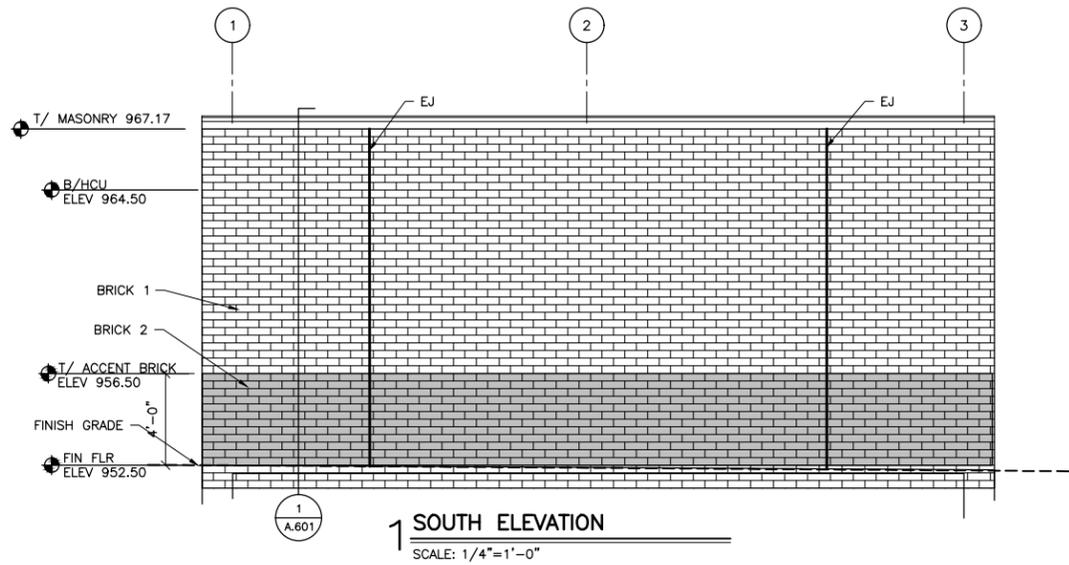
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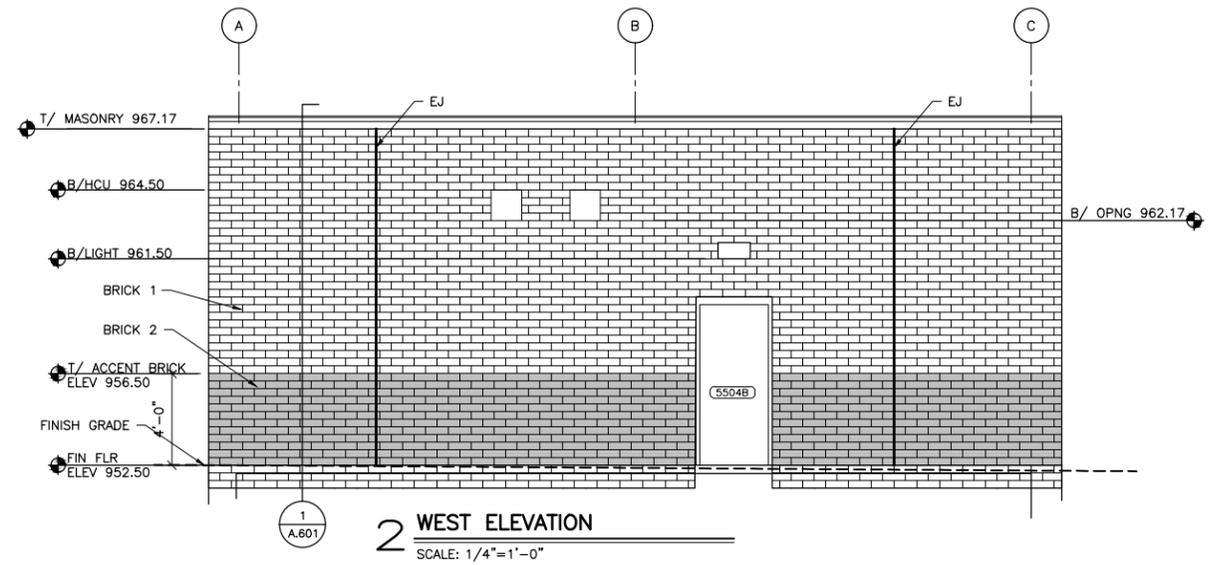
NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SOLIDS PROCESSING BUILDING - 550
ARCHITECTURAL
OPERATING LEVEL AND ROOF PLAN

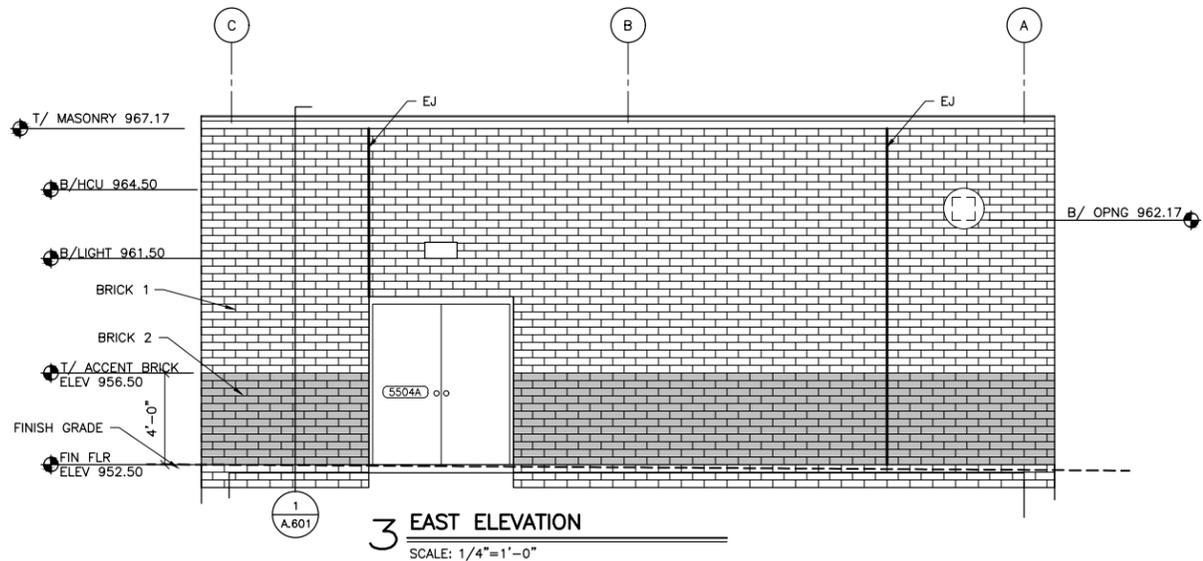
SHEET NO.
A.550



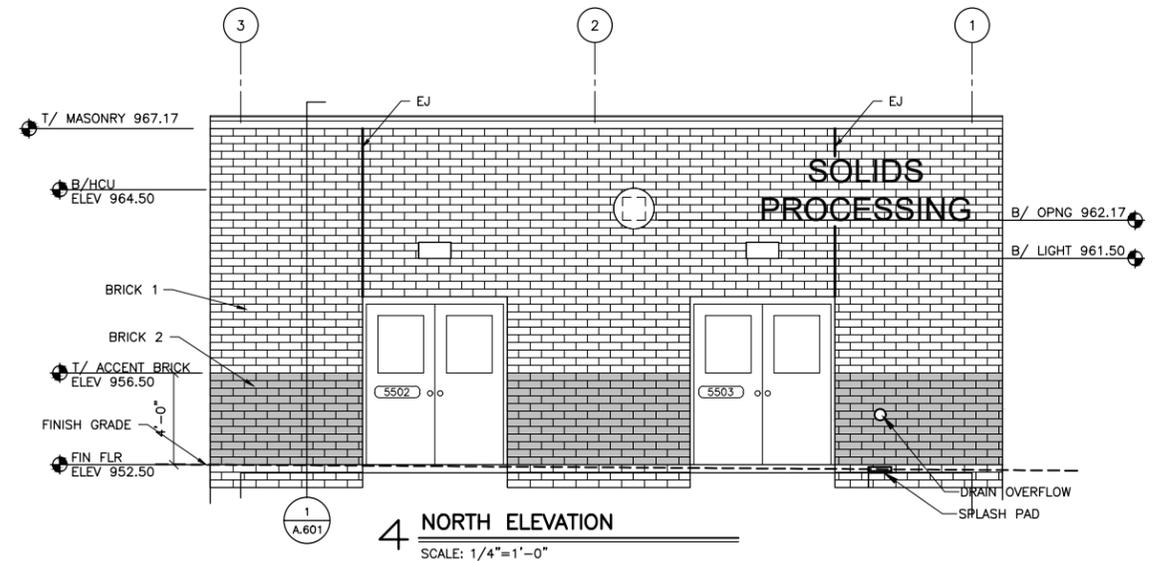
1 SOUTH ELEVATION
SCALE: 1/4"=1'-0"



2 WEST ELEVATION
SCALE: 1/4"=1'-0"



3 EAST ELEVATION
SCALE: 1/4"=1'-0"



4 NORTH ELEVATION
SCALE: 1/4"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB
APPROVED: DJH
CAD DATE: 7/17/2020 12:33:26 PM
CAD FILE: J:\2016\160473\CAD\Dwgs\A\A.551 EXTERIOR ELEVATIONS.dwg

JOB DATE: 2020
JOB NUMBER: 160473

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
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NO.	DATE	BY	REVISION DESCRIPTION

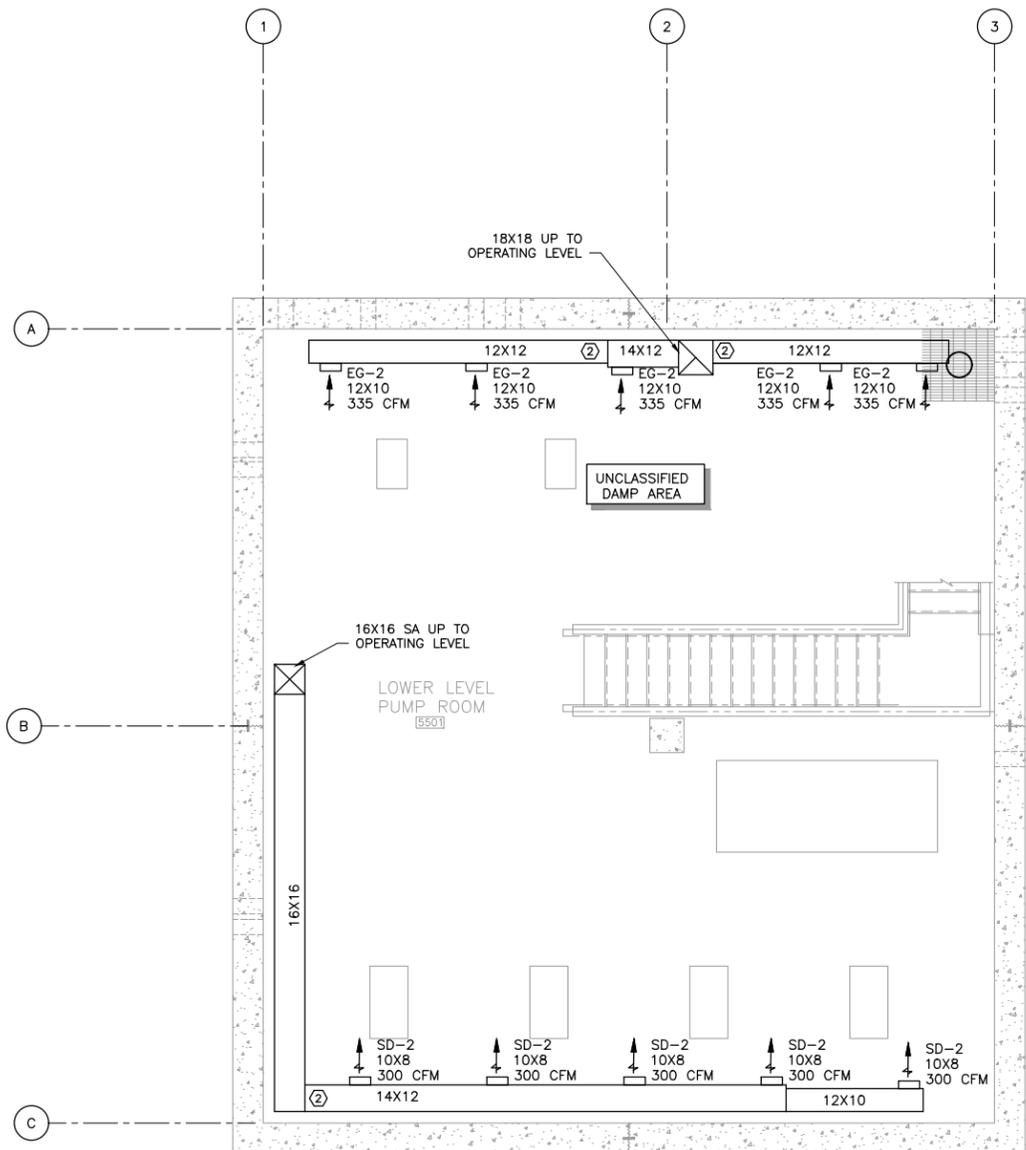


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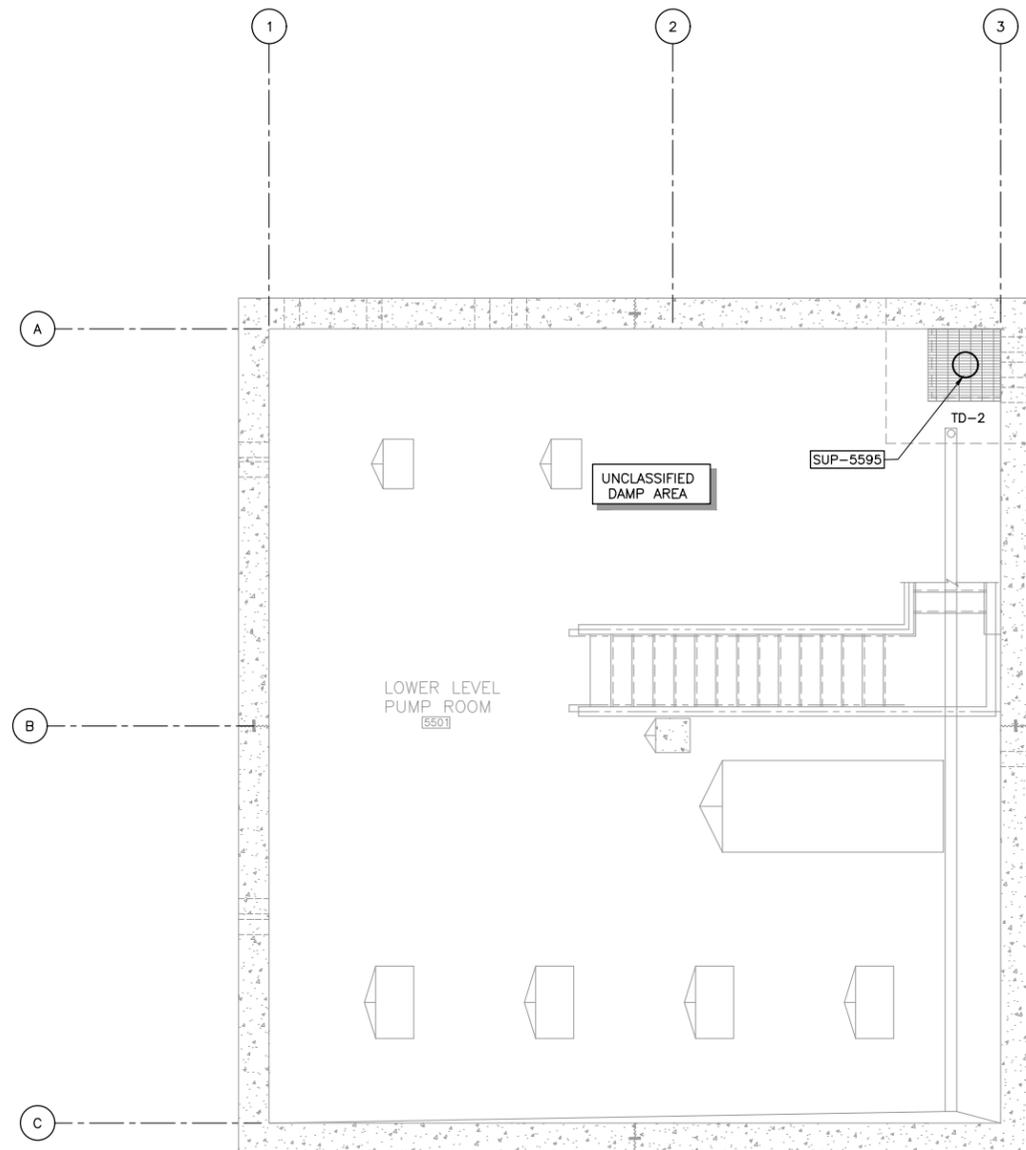
SOLIDS PROCESSING BUILDING - 550
ARCHITECTURAL
EXTERIOR ELEVATIONS

SHEET NO.
A.551

Xref: xgl-1-dh01: XA-950-ED1



1 LOWER LEVEL HVAC PLAN
SCALE: 1/4"=1'-0"



1 LOWER LEVEL PLUMBING PLAN
SCALE: 1/4"=1'-0"

- GENERAL NOTES:**
- MECHANICAL EQUIPMENT ON ROOF SHALL BE INSTALLED NOT LESS THAN 10'-0" FROM ROOF EDGE.
 - CONTRACTOR SHALL VERIFY ALL DUCTWORK ROUTING PRIOR TO FABRICATION. FINAL LOCATION OF DUCTWORK SHALL BE COORDINATED WITH NEW STRUCTURE, PIPING, ELECTRICAL, LIGHTING, ETC.
 - PROVIDE BALANCING DAMPERS ON ALL DUCT TAKE-OFF TO DIFFUSERS, GRILLES, AND REGISTERS

- KEY NOTES:**
- SUPPLY AND EXHAUST DUCTWORK SHALL BE ALUMINUM CONSTRUCTION. DAMPERS SHALL BE ALUMINUM CONSTRUCTION. DUCTWORK HANGERS, HANGER RODS, ETC. SHALL BE STAINLESS STEEL.
 - SUPPLY AND EXHAUST DUCTWORK SHALL BE STAINLESS STEEL.
 - SUPPLY AND EXHAUST DUCTWORK SHALL BE GALVANIZED STEEL.

PRELIMINARY
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DRAWN BY: JV
APPROVED: DAS
CAD DATE: 7/31/2020 10:18:10 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\M\M.550 LOWER LEVEL PLUMBING AND HVAC PLAN.dwg

JOB DATE: 2020
JOB NUMBER: 160473

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IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

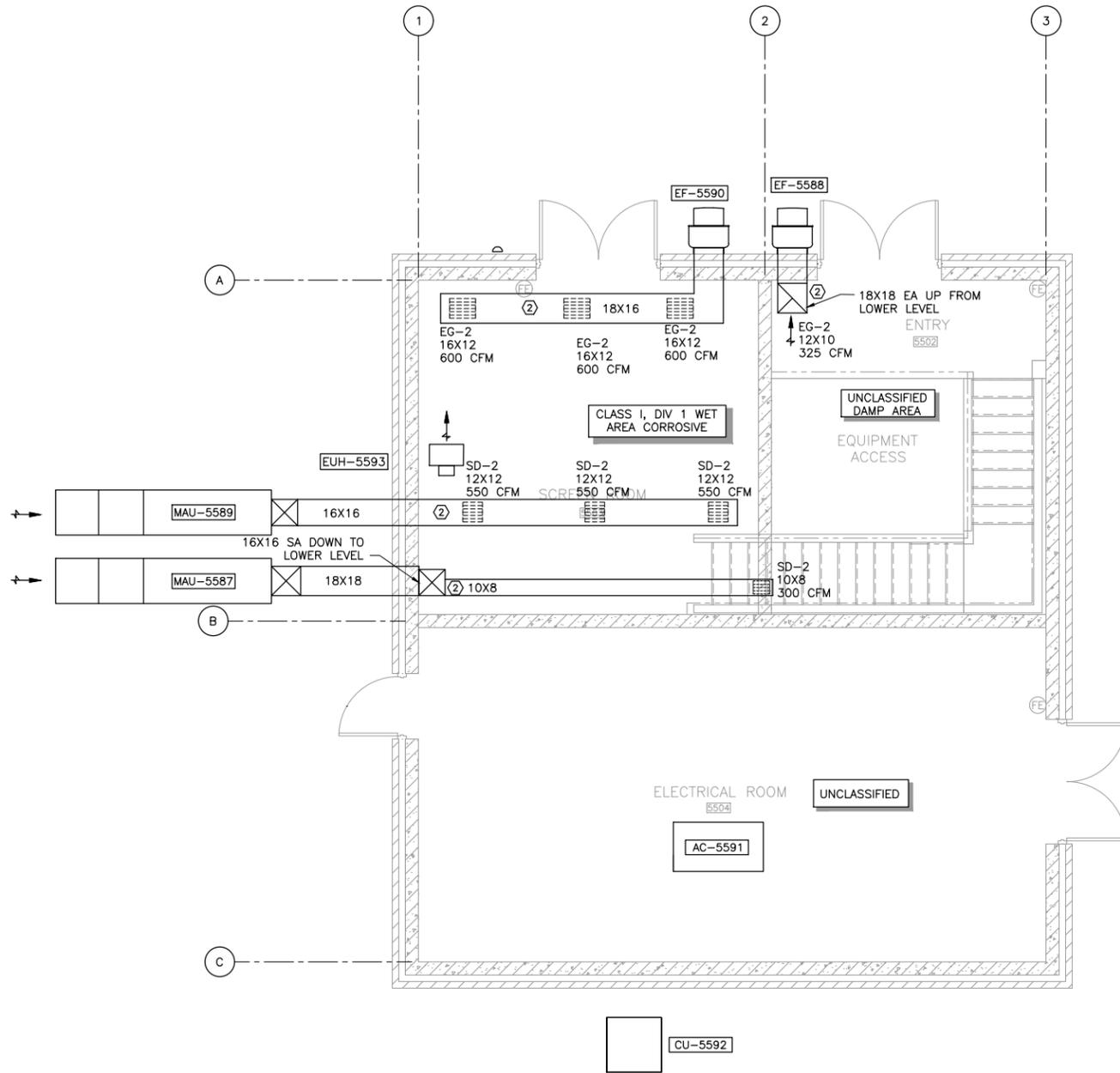


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

SOLIDS PROCESSING BUILDING - 550
MECHANICAL
LOWER LEVEL PLUMBING AND HVAC PLAN

SHEET NO.
M.550

Xref: xgl-1-dh01: XS-550-P00; XS-550-CRID; XMHP-550-P00



1 OPERATING LEVEL HVAC PLAN

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

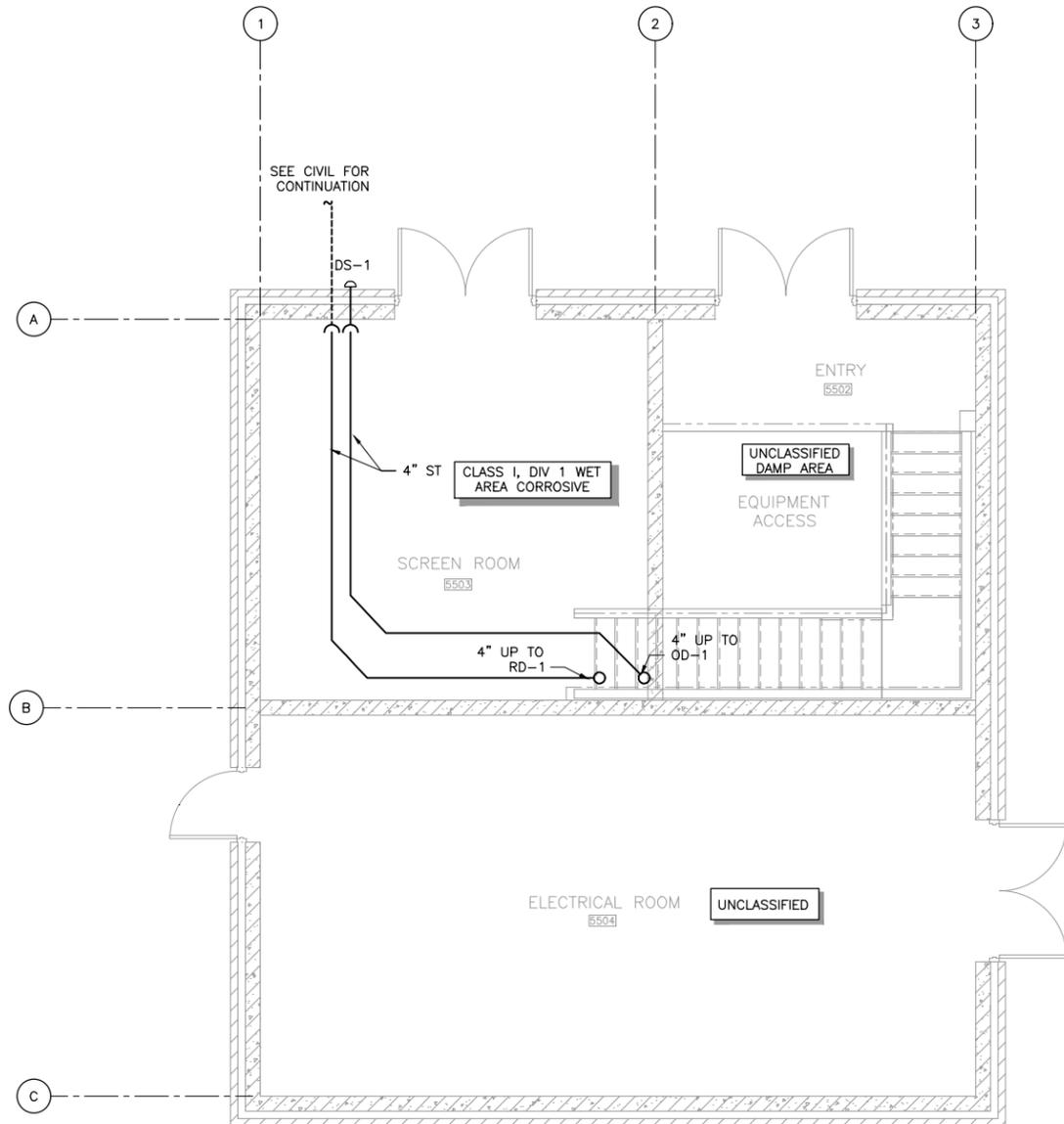


GENERAL NOTES:

- MECHANICAL EQUIPMENT ON ROOF SHALL BE INSTALLED NOT LESS THAN 10'-0" FROM ROOF EDGE.
- CONTRACTOR SHALL VERIFY ALL DUCTWORK ROUTING PRIOR TO FABRICATION. FINAL LOCATION OF DUCTWORK SHALL BE COORDINATED WITH NEW STRUCTURE, PIPING, ELECTRICAL, LIGHTING, ETC.
- PROVIDE BALANCING DAMPERS ON ALL DUCT TAKE-OFF TO DIFFUSERS, GRILLES, AND REGISTERS

KEY NOTES: ⊕

- SUPPLY AND EXHAUST DUCTWORK SHALL BE ALUMINUM CONSTRUCTION, DAMPERS SHALL BE ALUMINUM CONSTRUCTION. DUCTWORK HANGERS, HANGER RODS, ETC. SHALL BE STAINLESS STEEL.
- SUPPLY AND EXHAUST DUCTWORK SHALL BE STAINLESS STEEL.
- SUPPLY AND EXHAUST DUCTWORK SHALL BE GALVANIZED STEEL



2 OPERATING LEVEL PLUMBING PLAN

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



**PRELIMINARY
NOT FOR CONSTRUCTION**

DRAWN BY: JV
 APPROVED: DAS
 CAD DATE: 7/31/2020 10:23:00 AM
 CAD FILE: J:\2016\160473\CAD\Dwgs\M\M.551 OPERATING LEVEL PLUMBING AND HVAC

JOB DATE: 2020
 JOB NUMBER: 160473

NO.	DATE	BY	REVISION DESCRIPTION

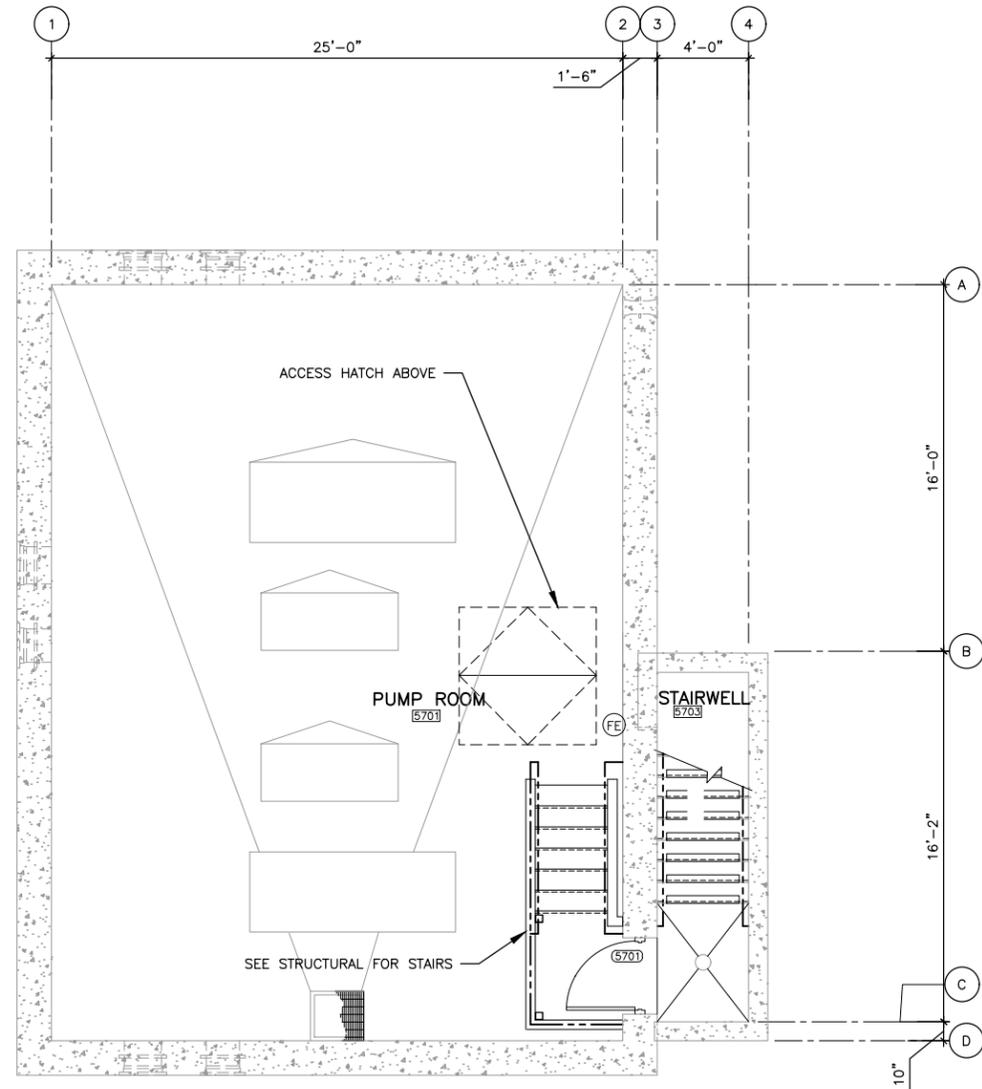


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
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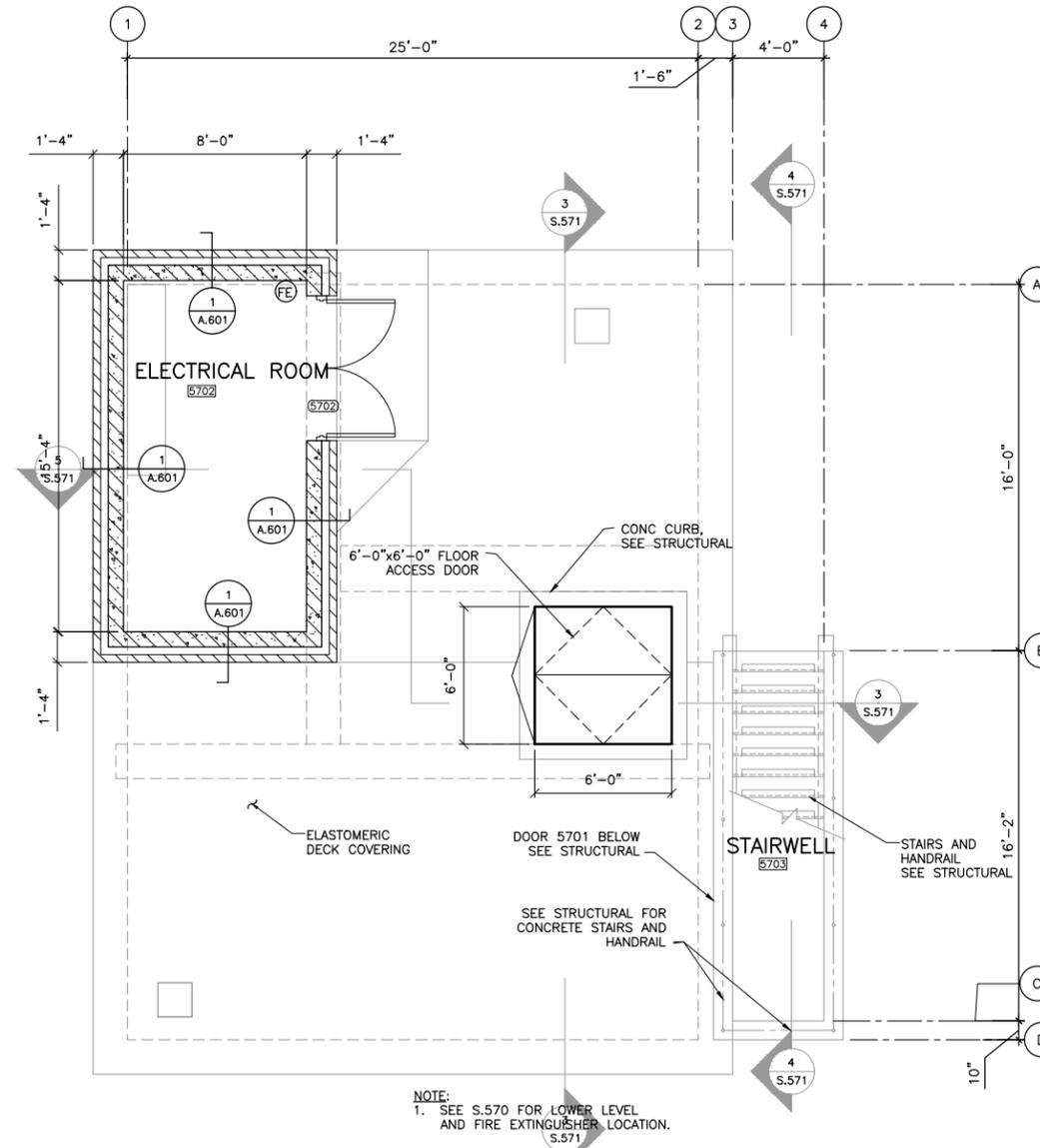
SOLIDS PROCESSING BUILDING - 550
 MECHANICAL
 OPERATING LEVEL PLUMBING AND HVAC PLAN

SHEET NO.
M.551

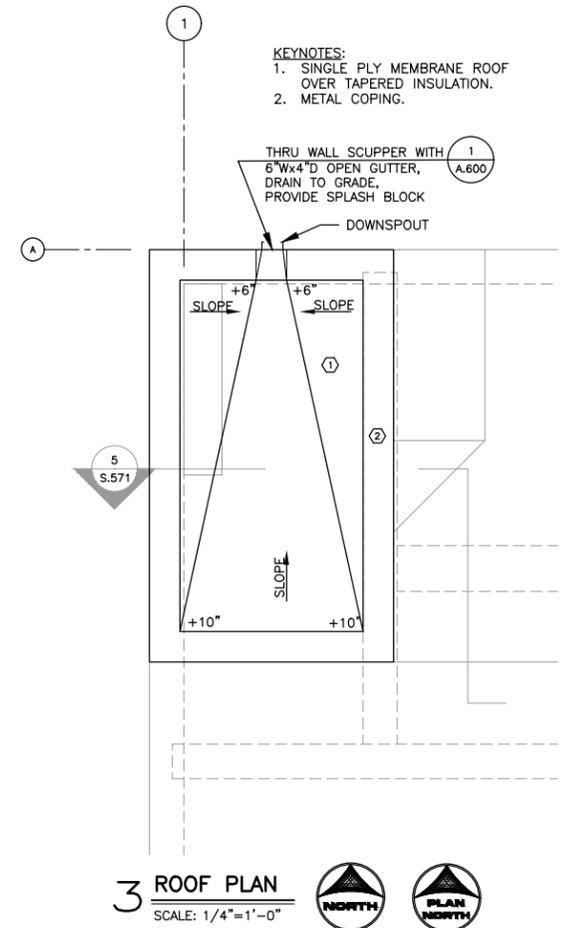
Xref: xgl-1-dh01; XA-550-PD1; XS-550-GRID; XMHP-550-PD1



1 LOWER LEVEL PLAN
SCALE: 1/4"=1'-0"



2 OPERATING LEVEL PLAN
SCALE: 1/4"=1'-0"



3 ROOF PLAN
SCALE: 1/4"=1'-0"



PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB	JOB DATE: 2020	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
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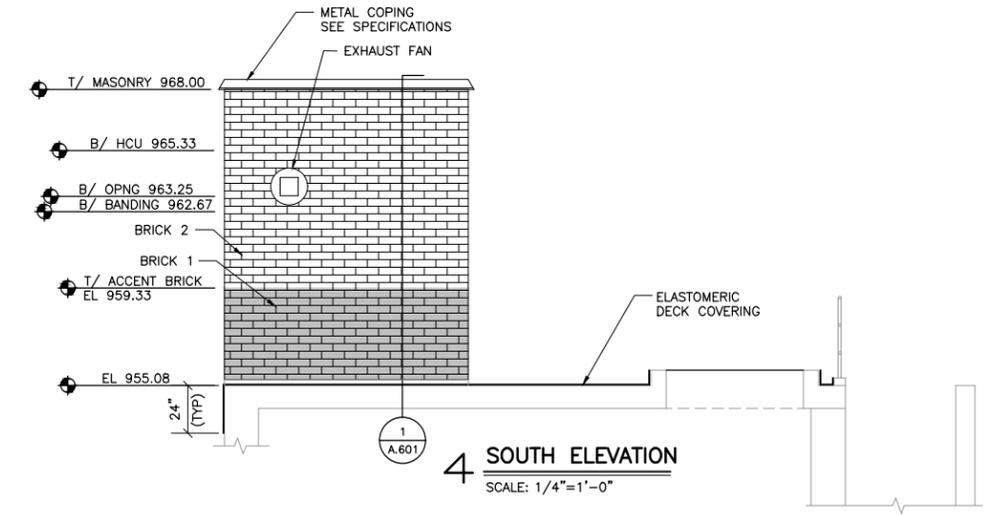
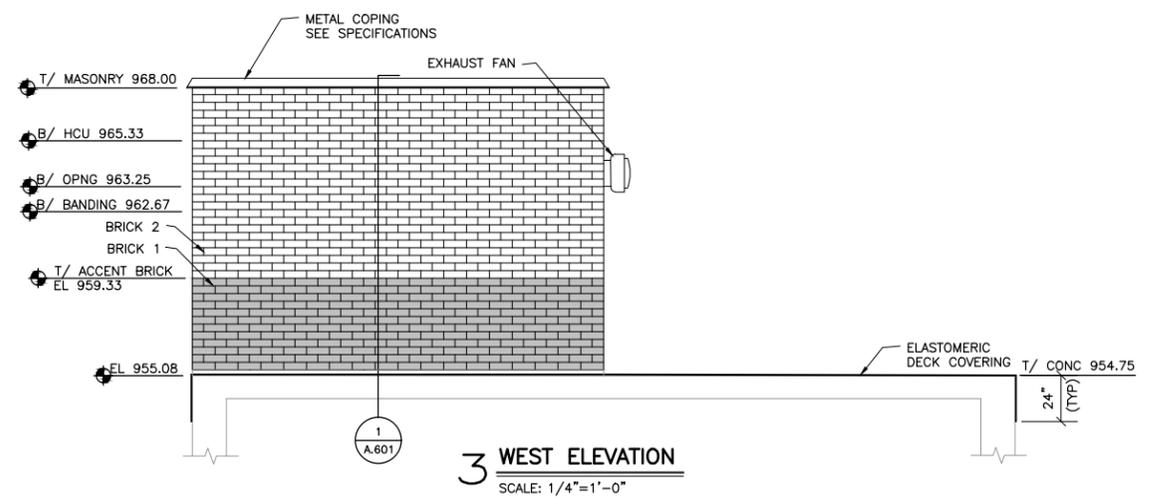
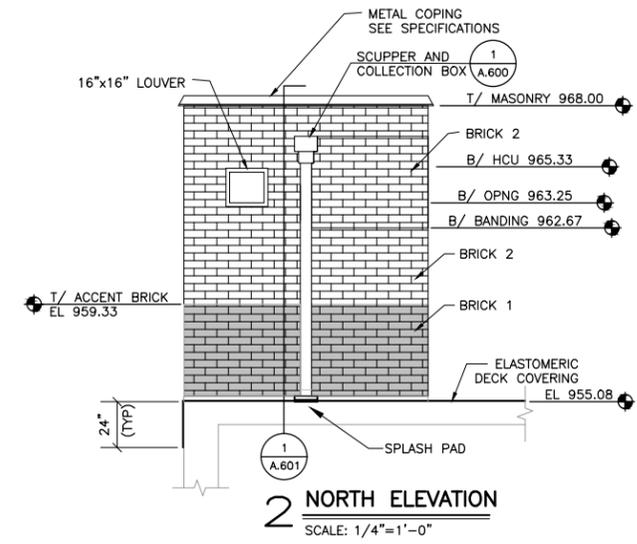
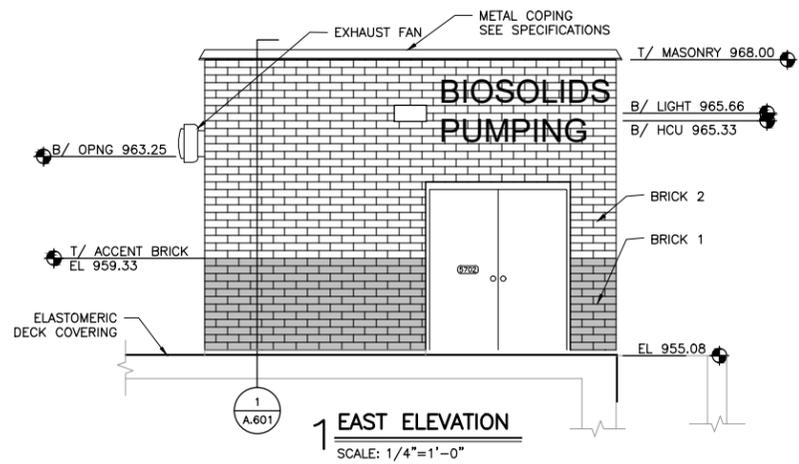


NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

BIOSOLIDS PUMPING BUILDING - 570
ARCHITECTURAL
OPERATING LEVEL PLANS

SHEET NO.
A.570

Xref: xgl-1-dh01; XA-570-P01; XS-570-P01; XA-570-P02; ROOF PLAN; XS-570-GRID; XS-570-P00



NOTES:
 SEE A-600 SERIES FOR DOOR AND WINDOW TYPES AND DETAILS.
 COORDINATE LOCATIONS OF HEAT TAPE ELECTRICAL WITH DOWNSPOUT LOCATIONS (TYP)

PRELIMINARY
 NOT FOR CONSTRUCTION

DRAWN BY: CMB
 APPROVED: DJH
 CAD DATE: 7/31/2020 12:24:19 PM
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JOB DATE: 2020
 JOB NUMBER: 160473

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NO.	DATE	BY	REVISION DESCRIPTION

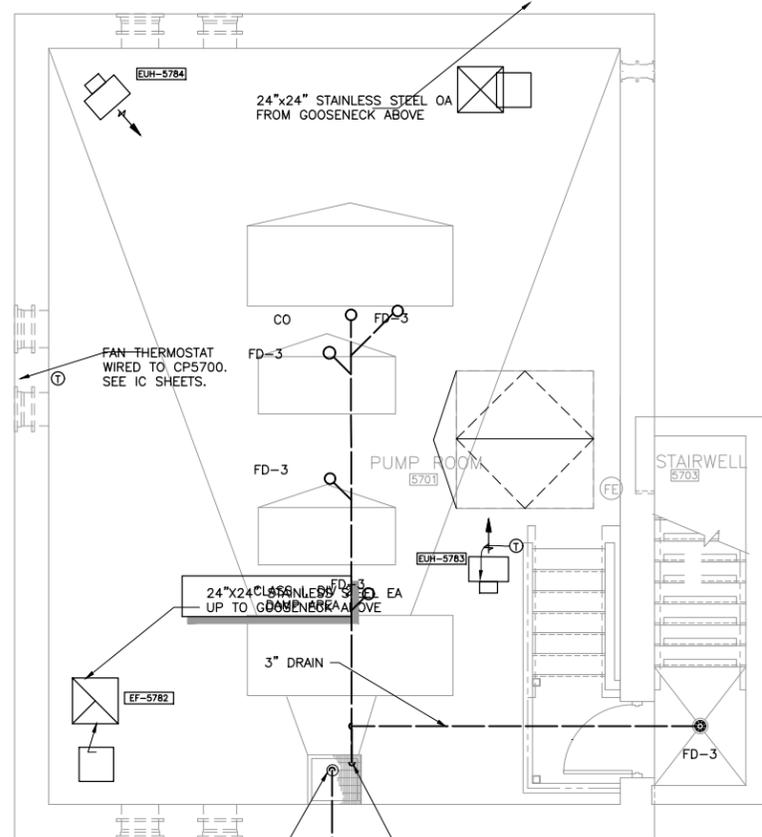


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

BIOSOLIDS PUMPING BUILDING - 570
 ARCHITECTURAL
 EXTERIOR ELEVATIONS

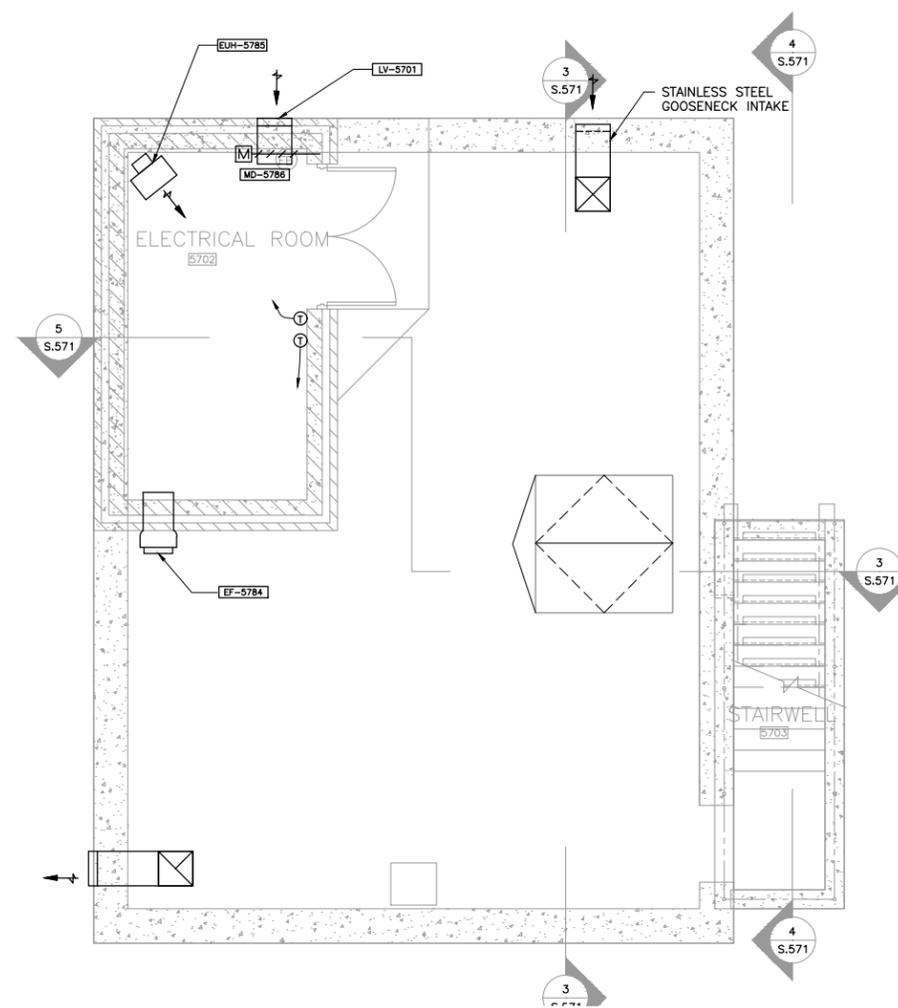
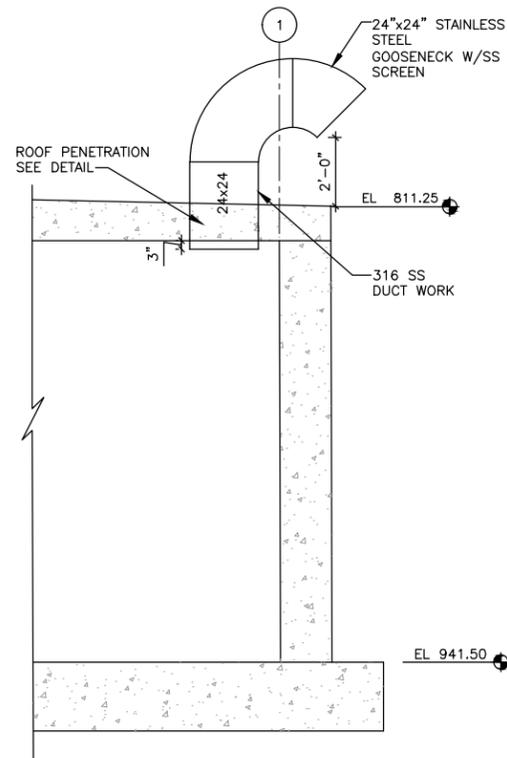
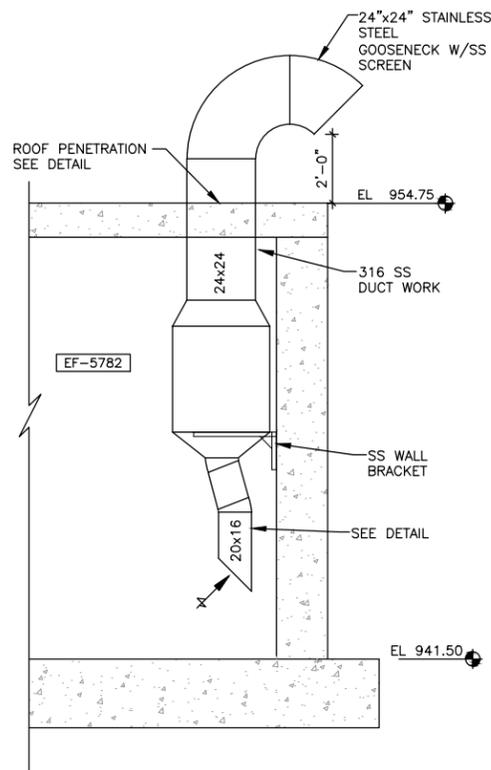
SHEET NO.
A.571

Xref: xgl-1-dh01: XA-570-ED1



1 LOWER LEVEL HVAC PLAN

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



2 LOWER AND UPPER LEVEL HVAC PLAN

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



PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: JV
APPROVED: DAS
CAD DATE: 7/29/2020 11:22:43 AM
CAD FILE: J:\2016\160473\CAD\Dwgs\M\M.570 LOWER AND OPERATING LEVEL HVAC PLAN.dwg

JOB DATE: 2020
JOB NUMBER: 160473

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NO.	DATE	BY	REVISION DESCRIPTION



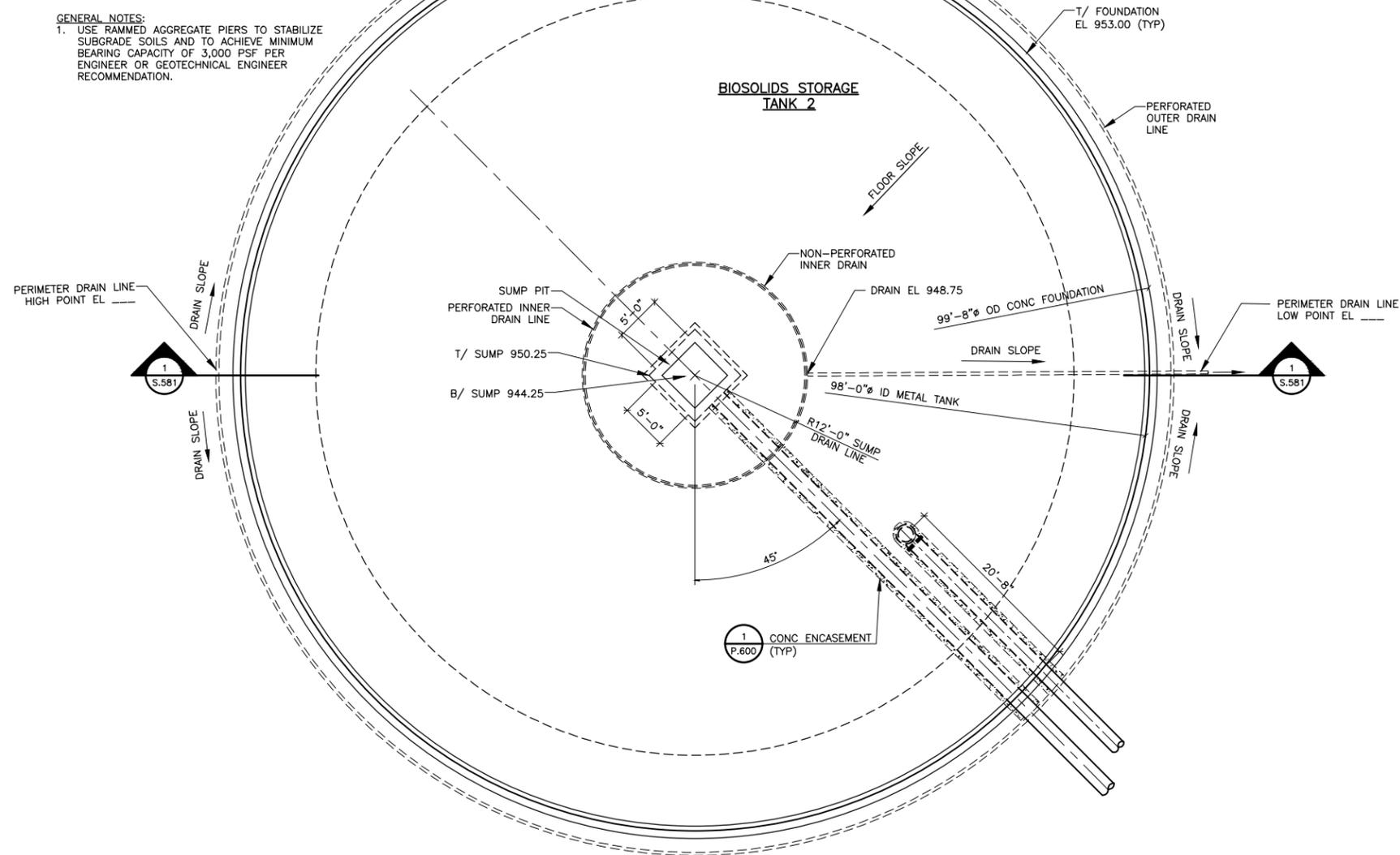
NEVADA WWTF IMPROVEMENTS
CITY OF NEVADA
NEVADA, IOWA

BIOSOLIDS PUMPING BUILDING - 570
MECHANICAL
LOWER AND OPERATING LEVEL HVAC PLAN

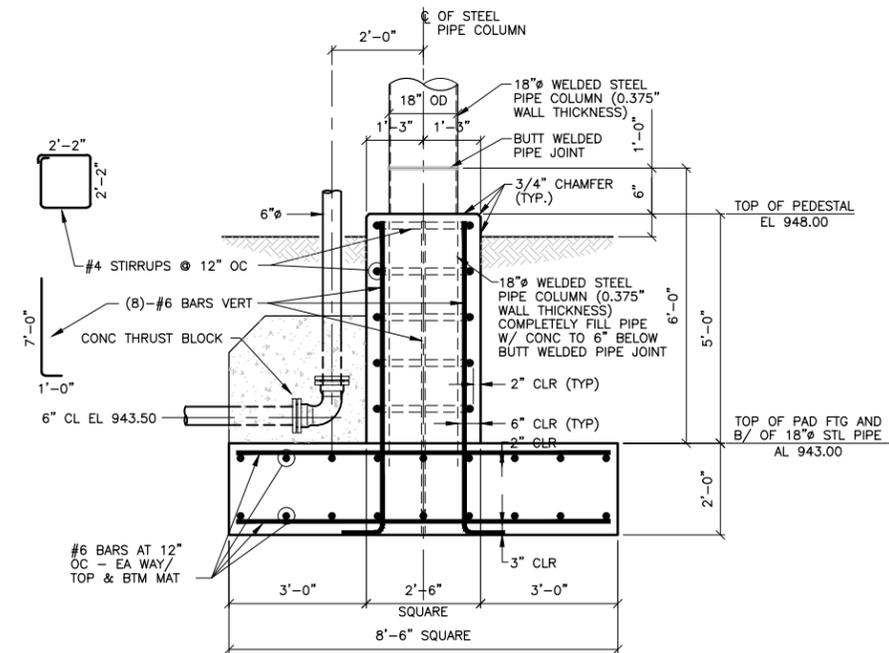
SHEET NO.
M.570

Xref: xgl-1-dh01: xe-570-p00; xs-570-p01; xa-570-p01; xmhp-570-p00; xmhp-570-p01

GENERAL NOTES:
 1. USE RAMMED AGGREGATE PIERS TO STABILIZE SUBGRADE SOILS AND TO ACHIEVE MINIMUM BEARING CAPACITY OF 3,000 PSF PER ENGINEER OR GEOTECHNICAL ENGINEER RECOMMENDATION.



1 LOWER LEVEL SUCTION PLAN
 SCALE: 1/8"=1'-0"



2 LOADOUT PIPE DETAIL
 SCALE: 1/2"=1'-0"

PRELIMINARY
 NOT FOR CONSTRUCTION

DRAWN BY: CMB
 APPROVED: GPB
 CAD DATE: 7/10/2020 9:09:24 AM
 CAD FILE: J:\2016\160473\CAD\Dwgs\S\S.580 FOUNDATION PLAN.dwg

JOB DATE: 2020
 JOB NUMBER: 160473

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
 IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

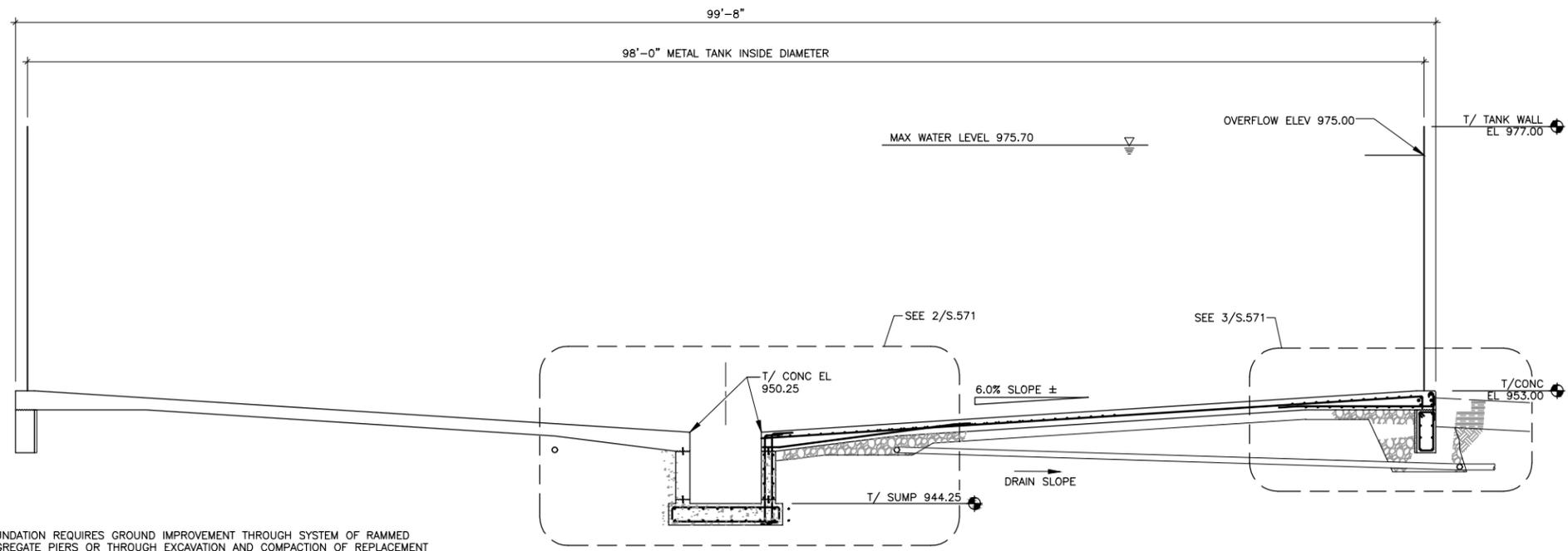


NEVADA WWTF IMPROVEMENTS
 CITY OF NEVADA
 NEVADA, IOWA

BIOSOLIDS STORAGE TANKS - 580
 STRUCTURAL
 FOUNDATION PLAN

SHEET NO.
S.580

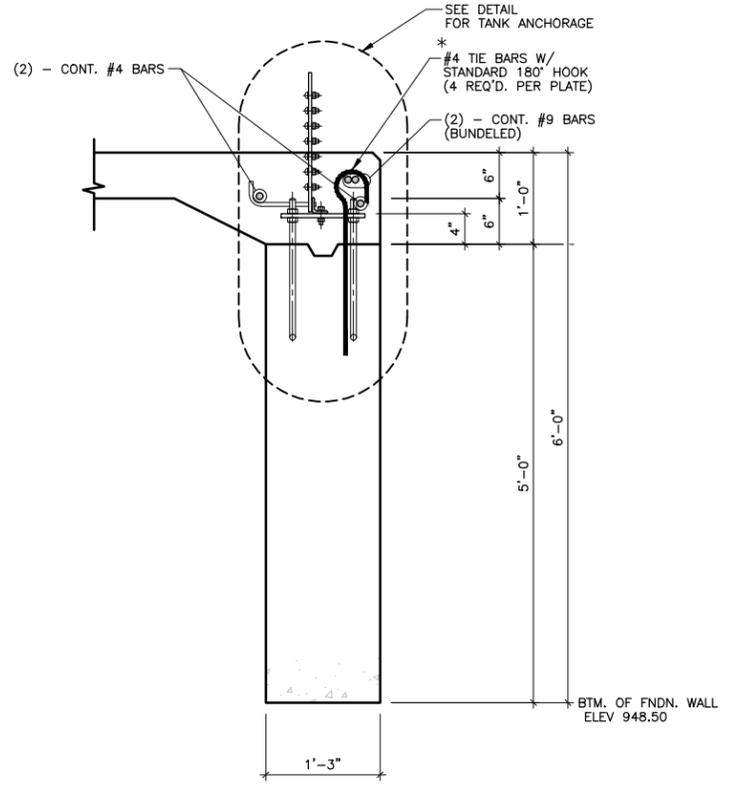
Xref: xgl-1-dh01: XS-580-P00; XS-580-000



- NOTES:**
- FOUNDATION REQUIRES GROUND IMPROVEMENT THROUGH SYSTEM OF RAMMED AGGREGATE PIERS OR THROUGH EXCAVATION AND COMPACTION OF REPLACEMENT FILL RESULTING IN A UNIFORM BEARING CAPACITY OF AT LEAST 2500 PSF.
 - DRAINAGE SYSTEM IS REQUIRED WITH A MINIMUM OF 8" OF FREE DRAINING GRADED GRANULAR FILL MATERIAL (FDGGF) BENEATH ALL CONCRETE SLABS AND FOUNDATIONS AT 1% SLOPE TO PERIMETER DRAINS AND FROM THERE TO SITE DRAINAGE SYSTEM AT 1% SLOPE.

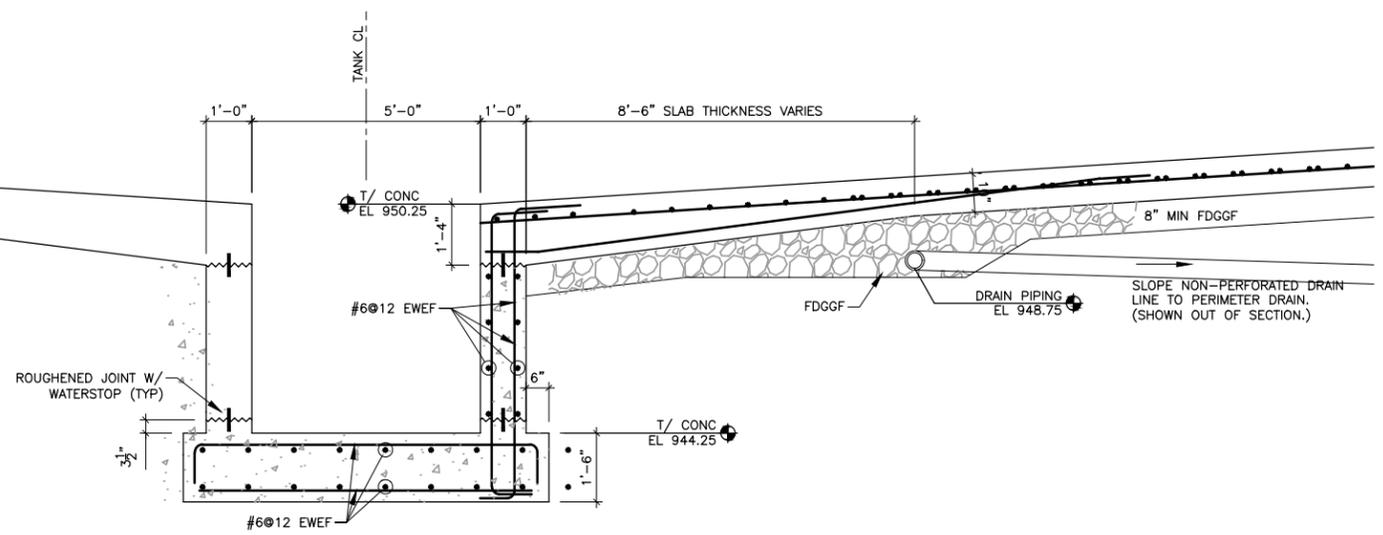
1 SECTION

SCALE: 3/16"=1'-0"



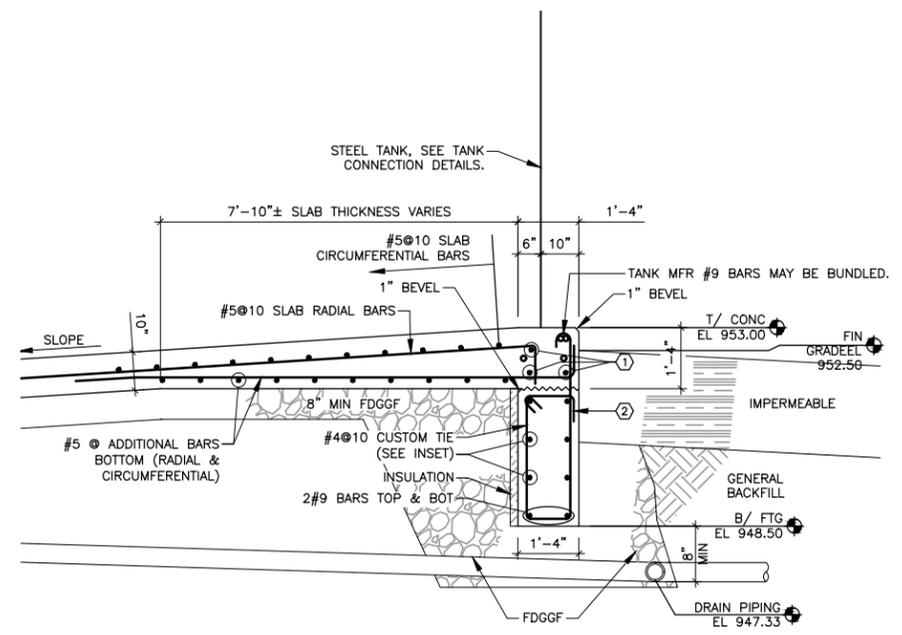
4 TANK CONNECTION DETAIL

SCALE: 1"=1'-0"



2 SUMP SECTION

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



3 PERIMETER SECTION

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

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWN BY: CMB
 APPROVED: GPB
 CAD DATE: 6/18/2020 8:01:23 AM
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JOB DATE: 2020
 JOB NUMBER: 160473

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NO.	DATE	BY	REVISION DESCRIPTION



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 CITY OF NEVADA
 NEVADA, IOWA

BIO-SOLIDS STORAGE TANKS - 580
 STRUCTURAL
 SECTIONS

SHEET NO.
S.581

Xref: xgt-1-dh01: XS-580-500