CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF

MAGNA WRF REUSE PROJECT

Volume 3 of 4
Drawings

Magna Water District

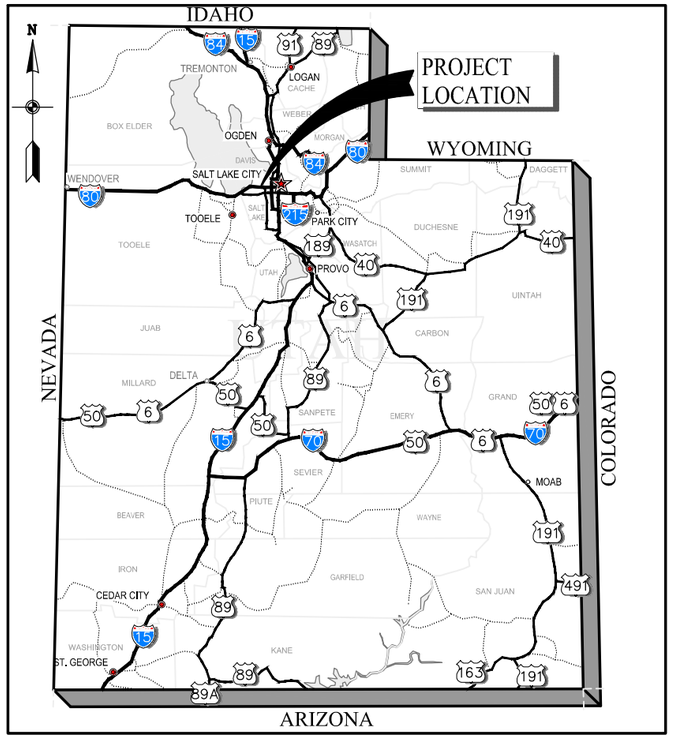
For Information Regarding this Project Contact:
Jeff Beckman, P.E.
154 East 14075 South
Draper, Utah 84020
(801) 495-2224

December 2022

DRAWINGS FOR CONSTRUCTION OF THE

MAGNA WRF REUSE PROJECT

MAGNA WATER DISTRICT



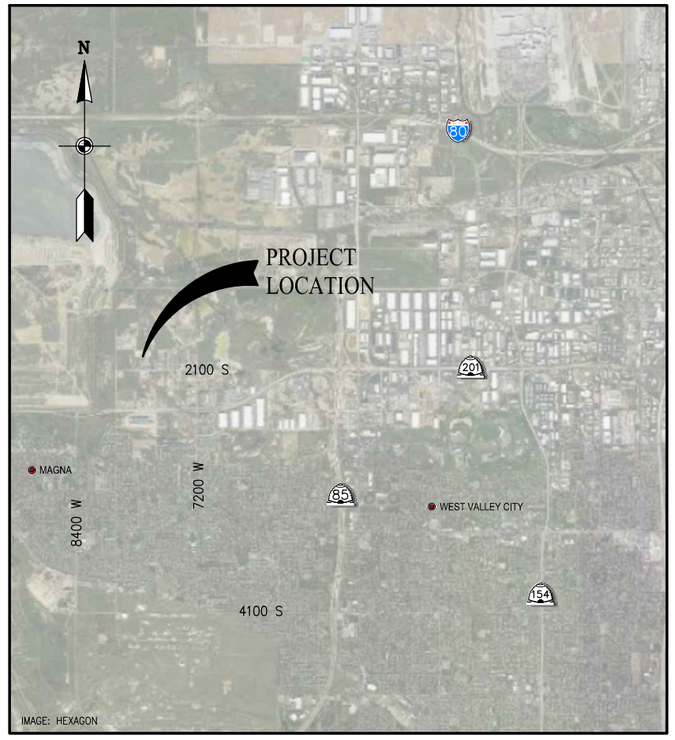
PROJECT LOCATION MAP

PROFESSIONAL ENGINEER
NATHAN ROGERS
No. 11699772
STATE OF UTAH
12–15–2022
CIVIL/MECHANICAL

LICENSED LANDSCAPE ARCHITECT
No. 5278822
JAMIE K. TSANDES
STATE OF UTAH
12–15–2022
LANDSCAPE

129331
FRED L. THALMANN
STATE OF UTAH
12–15–2022
ARCHITECTURAL

PROFESSIONAL ENGINEER
No. 12829530
KYLE ROBERT SMOOT
STATE OF UTAH
12–15–2022
STRUCTURAL



PROJECT VICINITY MAP

PROFESSIONAL ENGINEER
NO. 7020476-2202
LAURA L. RANKIN
STATE OF UTAH
12–15–2022
HVAC

REGISTERED PROFESSIONAL ENGINEER
#6677342
KEITH E. SMITH
STATE OF UTAH
12–15–2022
ELECTRICAL

PROFESSIONAL ENGINEER
No. 11965314
BARBARA HERRERA
STATE OF UTAH
12–15–2022
INSTRUMENTATION/CONTROLS

MAGNA WATER DISTRICT
8885 WEST 3500 SOUTH P.O. BOX 303
MAGNA, UTAH 84044–0303
(801)250–2118

MAGNA WATER DISTRICT

TRUSTEES:	MICK SUDBURY (CHAIR) JEFF WHITE DAN L. STEWART
DISTRICT GENERAL MANAGER:	CLINT DILLEY, P.E.
DISTRICT ENGINEER:	TREVOR ANDRA, P.E.
WATER OPERATIONS MANAGER:	RAYMOND MONDRAGON
WASTEWATER OPERATIONS MANAGER:	DALLAS HENLINE
WASTEWATER OPERATIONS LEAD:	BEAU LAMPER

BOWEN COLLINS & ASSOCIATES

REVISIONS

NO.	DATE	REV. BY	DESCRIPTION

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

DESIGN N. ROGERS
DRAWN R. GARCIA
CHECKED J. BECKMAN
APPROVED N. ROGERS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

GENERAL
TITLE PAGE, PROJECT LOCATION MAP, AND VICINITY MAP

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
G-01

SHEET 001 OF 126

P:\Magna Water District\483-20-02 Reuse Projects\FINAL DESIGN\2,0 Design Phase\2,9 Drawings\sht\4832002_G-01.dwg Plotted: 12/9/2022 7:05 AM By: Nate Rogers

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004	G-04	ABBREVIATIONS
005	G-05	GENERAL NOTES
006	G-06	PROCESS FLOW DIAGRAM AND DESIGN CRITERIA
007	G-07	HYDRAULIC PROFILE
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008	C-01	OVERALL SITE AND SURVEY CONTROL
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010	C-03	SITE GRADING
011	C-04	YARD PIPING PLAN AREA # 1
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016	C-09	EROSION CONTROL PLAN
		LANDSCAPE AND IRRIGATION
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018	L-02	LANDSCAPE PLAN
019	L-03	IRRIGATION NOTES & ANALYSIS
020	L-04	IRRIGATION PLAN AND SCHEDULE
		ARCHITECTURAL
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027	A-07	SECONDARY REUSE BUILDING EXTERIOR ELEVATIONS - 3
028	A-08	SECONDARY REUSE BUILDING SECTIONS - 1
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037	S-07	SECONDARY REUSE BUILDING SECTIONS - 1
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049	M-04	SECONDARY REUSE BUILDING LAYOUT AND KEY - MAIN LEVEL
050	M-05	SECONDARY REUSE BUILDING PUMP STATION PLAN - MAIN LEVEL
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088	I-06	SAMPLE WIRING DIAGRAM - 2
089	I-07	NETWORK ARCHITECTURE - 1
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		GENERAL CIVIL DETAILS
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		GENERAL LANDSCAPE AND IRRIGATION DETAILS
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		GENERAL ARCHITECTURAL DETAILS
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		GENERAL STRUCTURAL DETAILS
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109	GS-03	GENERAL STRUCTURAL DETAILS - 3
110	GS-04	GENERAL STRUCTURAL DETAILS - 4
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BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER — NATHAN ROGERS — NO. 168... — STATE OF UTAH — 12-5-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DESIGN R. GARCIA
DRAWN R. GARCIA
CHECKED J. BECKMAN
APPROVED N. ROGERS
REVIEW

GENERAL

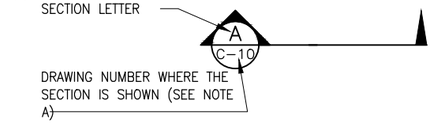
INDEX OF DRAWINGS

PROJECT NUMBER 483-20-02
DATE: DECEMBER 2022

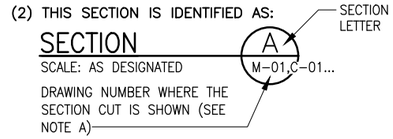
DRAWING NO. G-02
SHEET 002 OF 126

SECTION IDENTIFICATION

(1) SECTION CUT SHOWN ON DRAWING AS:

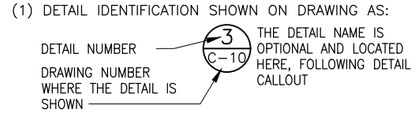


(2) THIS SECTION IS IDENTIFIED AS:

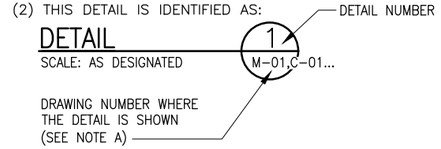


DETAIL IDENTIFICATION

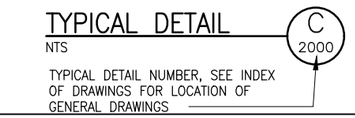
(1) DETAIL IDENTIFICATION SHOWN ON DRAWING AS:



(2) THIS DETAIL IS IDENTIFIED AS:



TYPICAL DETAIL IDENTIFICATION



DRAWING IDENTIFICATION SYSTEM

LETTER	DISCIPLINE
G	GENERAL
C	CIVIL
L	LANDSCAPE
A	ARCHITECTURAL
S	STRUCTURAL
M	MECHANICAL
H	HVAC
P	PLUMBING
E	ELECTRICAL
I	INSTRUMENTATION
GC	GENERAL CIVIL DETAILS
GL	GENERAL LANDSCAPE
GA	GENERAL ARCHITECTURAL DETAILS
GS	GENERAL STRUCTURAL DETAILS
GM	GENERAL MECHANICAL DETAILS
GH	GENERAL HVAC DETAILS
GP	GENERAL PLUMBING DETAILS
GE	GENERAL ELECTRICAL DETAILS
GI	GENERAL INSTRUMENTATION DETAILS

S-02
- S — DISCIPLINE
- 02 — INDIVIDUAL DRAWING NUMBER

NOTES:

A. IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A HORIZONTAL LINE.

B. ELECTRICAL SYMBOLS SHOWN ON ELECTRICAL DRAWINGS. FOR WELDING SYMBOLS USE AMERICAN WELDING SOCIETY STANDARD SYMBOLS. SEE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.

- 1 — COORDINATE IDENTIFICATION
- ELEVATION INDICATOR
- SECTION CORNER
- BENCH MARK
- MONUMENT INDICATOR
- POTHOLE
- TEST HOLE
- BORING HOLE
- SECTION LINE
- PROPERTY LINE
- EASEMENT
- PARCEL
- R/W — RIGHT-OF-WAY
- NEW ASPHALT
- EXISTING ASPHALT
- CENTERLINE
- 4500 — CONTOUR LINE, FINISHED GRADE
- 4500 — CONTOUR LINE, EXISTING GRADE
- 4500.20 — FINISHED ELEVATION
- (4500.20) — EXISTING ELEVATION
- TOP / TOE — CUT OR FILL SLOPE TO BE CONSTRUCTED
- SILT FENCE
- X — X — FENCE
- RAILING
- DITCH
- CULVERT
- RIPRAP
- TREE LINE/VEGETATION
- EXISTING STRUCTURE OR FACILITY
- NEW STRUCTURE OR FACILITY
- FUTURE STRUCTURE OR FACILITY
- NEW PIPELINE (CIVIL SHEETS)
- NEW PIPELINE 10" DIA AND SMALLER (CIVIL SHEETS)
- EXISTING UTILITY PIPELINE
- ATMS — ATMS
- CTV — CABLE
- C(ug) — COMMUNICATION BURIED
- COMM — COMMUNICATION OVERHEAD
- P(ug) — ELECTRICAL BURIED
- OHP — ELECTRICAL OVERHEAD
- FO — FIBER OPTICS OVERHEAD
- FO(ug) — FIBER OPTICS UNDERGROUND
- G — GAS
- IRR — IRRIGATION
- PETRO — PETROLEUM LINE
- SS — SANITARY SEWER
- SD — STORM DRAIN
- T(ug) — TELEPHONE BURIED
- TEL — TELEPHONE OVERHEAD
- W — WATERLINE
- TV — CABLE BOX
- CATCH BASIN
- EB — ELECTRICAL BOX
- HYDRANT
- G — GAS MANHOLE
- S — SEWER MANHOLE
- D — STORM DRAIN MANHOLE
- TELEPHONE MANHOLE
- W — WATER MANHOLE
- WM — WATER METER

- POWER POLE
- TB — TELEPHONE BOX
- LIGHT POLE ONE LUMINAIRE
- LIGHT POLE TWO LUMINAIRS
- LIGHT POLE
- STREET LIGHT WITH BRACKET
- TO BE REMOVED OR ABANDONED
- MASONRY
- STEEL
- INSULATION
- GRAVEL
- CONCRETE
- EARTH
- SAND
- ALUMINUM OR METAL DECKING
- CHECKERED PLATE
- SPAN — GRATING
- PLASTIC, RUBBER OR NEOPRENE
- WOOD (ROUGH FRAMING) OR, OPENING OR DEPRESSION IN SLAB OR WALL
- 12 X 24 — DUCT (FIRST DIMENSION DUCT SIDE SHOWN, SECOND DIMENSION DUCT SIDE NOT SHOWN)
- 24 X 12 — SUPPLY OR OUTSIDE AIR DUCT (FIRST DIMENSION, DUCT WIDTH)
- 24 X 12 — EXHAUST OR RETURN AIR DUCT (FIRST DIMENSION, DUCT WIDTH)
- SIZE / CFM — CEILING SUPPLY DIFFUSER (SIZE IN INCHES)
- SIZE / CFM — CEILING RETURN OR EXHAUST AIR GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
- SIZE / CFM — EXHAUST OR RETURN AIR GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
- SIZE / CFM — SUPPLY GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
- AIR TURNING VANES IN DUCT
- DD — DEFLECTING DAMPER
- FHC — FIRE HOSE CABINET
- FE — FIRE EXTINGUISHER
- UNIT HEATER
- PCOTG — PRESSURE CLEANOUT TO GRADE
- WCO — WALL CLEANOUT
- FCO — FLOOR CLEANOUT
- COTG — CLEANOUT TO GRADE
- BLOW OFF ASSEMBLY
- HUB DRAIN
- FLOOR DRAIN
- FLOOR SINK
- DRAIN TRAP

- CHANGE IN PIPING MATERIAL
- 24" RCP-RW — PIPE SIZE AND TYPE/FLUID ABBREVIATION (USE FOR EXISTING PIPE CALLOUT)
- 10" PW (2) — PIPE CALLOUT (SEE PIPING SCHEDULE)
- ME-2 — EQUIPMENT NUMBER (SEE EQUIPMENT SCHEDULE)
- BACKWATER VALVE
- BACKFLOW PREVENTER
- STOP GATE
- SLIDE GATE
- SLUICE GATE
- GATE VALVE, BURIED WITH VALVE BOX
- MUD VALVE
- BUTTERFLY VALVE, BURIED WITH VALVE BOX
- ECCENTRIC PLUG VALVE, BURIED WITH VALVE BOX
- LUBRICATED PLUG VALVE, BURIED WITH VALVE BOX
- KNIFE VALVE
- GATE VALVE
- BUTTERFLY VALVE
- ECCENTRIC PLUG VALVE
- LUBRICATED PLUG VALVE
- GLOBE VALVE
- BALL VALVE
- DIAPHRAGM VALVE
- CHECK VALVE
- PRESSURE REGULATING VALVE
- BACK-PRESSURE VALVE
- M / P — MOTOR OPERATOR FOR VALVES (M = ELECTRIC, P = PNEUMATIC, H = HYDRAULIC)
- T — TEMPERATURE CONTROL VALVE
- SOLENOID SHIELD
- S — SOLENOID VALVE
- 3 — MULTIPORT VALVE - 3 WAY
- 4 — MULTIPORT VALVE - 4 WAY
- FLOAT OPERATED VALVE
- NEEDLE VALVE
- PRESSURE RELIEF VALVE
- ANGLE VALVE
- HOSE BIBB (H/B)
- B — BUBBLER LEVEL CONTROL
- CENTRIFUGAL OR TURBINE PUMP OR FAN
- METERING PUMP
- PROGRESSIVE CAVITY, POSITIVE DISPLACEMENT PUMP
- BLOWER OR COMPRESSOR
- INJECTOR OR EDUCTOR
- F/A — FLAME ARRESTER
- AIR VACUUM AND AIR RELEASE ASSEMBLY
- M — METER

- THERMOMETER
- T — ROOM THERMOSTAT
- G — PRESSURE GAUGE
- G — PRESSURE GAUGE WITH DIAPHRAGM SEAL
- S — PRESSURE SWITCH
- S — PRESSURE SWITCH WITH DIAPHRAGM SEAL
- FLANGED FITTING
- WELDED FITTING
- MECHANICAL-TYPE FITTING (GROOVED)
- SCREWED, SOCKET-WELD, BELL AND SPIGOT OR HUBLESS FITTING
- SLEEVE-TYPE COUPLING
- FLANGED ADAPTER COUPLING
- FLANGED ADAPTER - SET SCREW TYPE
- EXPANSION JOINT
- MECHANICAL TYPE COUPLING
- EXPANSION JOINT
- EXPANSION LOOP
- FLEXIBLE COUPLING
- UNION
- QUICK DISCONNECT COUPLER
- CAPPED END OR PLUGGED END
- BLIND FLANGE
- REDUCER OR INCREASER
- ECCENTRIC REDUCER OR INCREASER
- CUT PIPE
- STRAINER
- THERMOSTATIC TRAP
- DRAIN
- FLOW TUBE
- M M — MAGNETIC METER
- D M — DENSITY METER
- P M — PROPELLER METER
- ORIFICE PLATE AND FLANGES
- ROTAMETER
- T — CONDENSATE TRAP
- PIPE SUPPORT (IN PLAN ONLY)
- PULSATION DAMPENER
- AD — AREA DRAIN
- LIQUID SURFACE EL
- PIPE ANCHOR

- 1 — REVISION WORK
- 3 — REFERENCE TO NOTE
- 1 — COLUMN LINE GRID
- 1 — WINDOW NUMBER
- 05 — DOOR NUMBER
- 05 — ROOM NUMBER

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER — NATHAN ROGERS — NO. 11683 — STATE OF UTAH — 12-5-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DESIGN N. ROGERS
DRAWN R. GARCIA
REVIEW CHECKED J. BECKMAN
APPROVED N. ROGERS

GENERAL
SYMBOLS

PROJECT NUMBER 483-20-02
DATE: DECEMBER 2022

DRAWING NO. G-03
SHEET 003 OF 126

P:\Magna Water District\483-20-02 Reuse Projects\FINAL DESIGN\2.0 Design Phase\2.9 Drawings\sht\4832002_G-03.dwg Plotted: 12/6/2022 3:56 PM By: Rodolfo Garcia

@	AT
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS
AB	ANCHOR BOLT
ABBR	ABBREVIATION
ABS	ACRYLONITRILE–BUTADIENE–STYRENE
AC	ASPHALTIC CONCRETE OR ALTERNATING CURRENT OR ACTIVATED CARBON
ACI	AMERICAN CONCRETE INSTITUTE
ACP	ASPHALTIC CONCRETE PAVEMENT
ADDL	ADDITIONAL
ADJ	ADJACENT OR ADJUSTABLE
AE	ANALYZER ELEMENT
AER	AERATION
AFF	ABOVE FINISH FLOOR
AGGR	AGGREGATE
AH	AIR HANDLER
AIR CONT	AIR CONDITIONING
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL	ALUMINUM, ALUM
ALTN	ALTERNATIVE, ALTERNATE
ANOD	ANODIZED
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURAL
ARV	AIR RELEASE VALVE
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIAL
ASSY	ASSEMBLY
AUTO	AUTOMATIC
AUX	AUXILIARY
AVAR	AIR VACUUM AND AIR RELEASE VALVE
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
B & S	BELL & SPIGOT
BC	BEGIN CURVE, BOLT CIRCLE
BF	BLIND FLANGE, BUTTERFLY VALVE
BFG	BELOW FINISH GRADE
BFP	BACK FLOW PREVENTER
BFV	BUTTERFLY VALVE
BHD	BULKHEAD
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BLK	BLACK OR BLOCK
BLKG	BLOCKING
BLT	BOLT
BM	BEAM, BENCH MARK
BO	BLOW–OFF ASSEMBLY, BLOW–OFF
BOT	BOTTOM
BPS	BOOSTER PUMPING STATION
BPV	BACK PRESSURE VALVE
BRK	BRICK
BTU	BRITISH THERMAL UNIT
BTWN	BETWEEN
BUR	BUILT–UP ROOFING
BVC	BEGIN VERTICAL CURVE
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
BW	BACK WASH, FILTER BACKWASH
C	CENTIGRADE OR CELSIUS
CAB	CABINET
CAP	CAPACITY
CAV	COMBINATION AIR RELEASE VALVE
CB	CATCH BASIN
CC	CENTER TO CENTER
CCP	CONCRETE CYLINDER PIPE
CD	CEILING DIFFUSER CHEMICAL DRAIN AND VENT
CER	CERAMIC
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFR	CODE OF FEDERAL REGULATIONS
CFS	CUBIC FEET PER SECOND
CG	CHLORINE GAS
CGB	CORD GRIP BUSHING
CHBD	CHALKBOARD
CHEM	CHEMICAL
CHG	CHANGE
CHKD PL	CHECKERED PLATE
CI	CAST IRON
CIP	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION

CL	CHLORINATOR, CHAIN LINK, CENTERLINE OR CHLORINE
CLR	CLEAR, CLEARANCE
CLST	CEMENT LINED STEEL PIPE
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CM	CENTIMETER
CML & C	CEMENT MORTAR LINED AND COATED
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COMM	COMMUNICATION
COMB	COMBINED
CONC	CONCRETE, CONCENTRIC
COND	CONDENSER, CONDENSATE
CONN	CONNECTION
CONST	CONSTRUCTION, CONSTRUCT
CONT	CONTINUED, CONTINUOUS, CONTINUATION
COORD	COORDINATE
COP	COPPER
COTG	CLEAN–OUT TO GRADE
CPLG	COUPLING
CPS	CULINARY PUMP STATION
CPVC	CHLORINATED POLYVINYL CHLORIDE
CS	CAST STEEL OR CAUSTIC SODA
CTRD	CENTERED
CTR	CENTER
CTSK	COUNTERSUNK
CU FT	CUBIC FOOT
CU IN	CUBIC INCH
CU YD	CUBIC YARD
CULV	CULVERT
CV	CHECK VALVE
CW	COLD WATER
CWO	CHAIN WHEEL OPERATOR
CYL	CYLINDER
d	PENNY
DBA	DEFORMED ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEMO	DEMOLITION, DEMOLISH
DEQ	DEPARTMENT OF ENVIRONMENTAL QUALITY
DET	DETAIL
DI	DUCTILE IRON, DROP INLET
DIA	DIAMETER
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DIFF	DIFFUSER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DIR	DIRECTION
DISCH	DISCHARGE
DIST	DISTANCE
DIV	DIVISION
D–LOAD	LOADING CONDITION FOR RCP
DMPR	DAMPER
DN	DOWN, DECANT
DOT	DEPARTMENT OF TRANSPORTATION
DP	DAMP PROOFING
DR	DOOR, DRAIN
DS	DRENCH SHOWER & EYE WASH, DOWNSPOUT
DWG	DRAWING
DWL	DOWEL
E(UG)	ELECTRICAL (UNDERGROUND)
E(OH)	ELECTRICAL (OVERHEAD POWER)
E	EAST
EA	EACH
EB	EXPANSION BOLT
EC	END CURVE
ECC	ECCENTRIC
EF	EACH FACE, EXHAUST FAN
EFF	EFFLUENT
EG	EXISTING GRADE
EL	ELEVATION
ELB	ELBOW
ELEV	ELEVATION
ELEC	ELECTRICAL, ELECTRONIC
EMB	EMBEDMENT
EMER	EMERGENCY
ENCL	ENCLOSURE
ENG	ENGINE
ENGR	ENGINEER
EP	EDGE OF PAVEMENT
EPDM	ETHYL PROPYLENE DIENE MONOMER
EPS	EXPANDED POLYSTYRENE
EQ	EQUAL

EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
ETC	ETCETERA
EVAP	EVAPORATOR
EVC	END VERTICAL CURVE
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EW	EACH WAY, EYE WASH
EXH	EXHAUST
EXIST	EXISTING
EXP ANR	EXPANSION BOLT, ANCHOR
EXP JT	EXPANSION JOINT
EXT	EXTERIOR, EXTENSION, EXTERNAL
F	FAHRENHEIT, FACE
F TO F	FACE TO FACE
FAB	FABRICATION, FABRICATE, OR FABRICATED
FB	FLAT BAR
FC	FLEXIBLE COUPLING
FCA	FLANGE COUPLING ADAPTER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDN	FOUNDATION
FDR	FEEDER
FE	FLOW METER ELEMENT
FEXT	FIRE EXTINGUISHER
FF	FLAT FACE, FAR FACE, FINISH FLOOR
FG	FINISH GRADE, FLOW GLASS
FH	FIRE HYDRANT
FLR	FLOOR
FL	FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FM	FORCE MAIN (SANITARY SEWER)
FND	FOUND
FNSH	FINISH
FO	FIBER OPTIC
FRP	FIBERGLASS REINFORCED PLASTIC
FW	FINISH WATER
FWR	FINISH WATER RESERVOIR
G	GAS
GA	GAGE, GAUGE
GAL	GALLON
GALV	GALVANIZED
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GI	GALVANIZED IRON
GIS	GEOGRAPHIC INFORMATION SYSTEM
GL	GLASS
GLAZ	GLAZING
GLV	GLOBE VALVE
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRADE
GR BRK	GRADE BREAK, GRADE CHANGE
GRTG	GRATING
GRV	GROOVED
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
GYP	GYPSUM BOARD
H	HEIGHT
HAS	HEADED ANCHOR STUD
HB	HOSE BIBB
HD	HUB DRAIN
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSEPOWER, HIGH PRESSURE,HEAT PUMP, HIGH POINT
HR	HEATING RETURN, HOUR, HOSE RACK
HS	HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SECTION
HTG	HEATING
HTR	HEATER
HV	HOSE VALVE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWL	HIGH WATER LEVEL
HWO	HANDWHEEL OPERATED
HYD	HYDRANT, HYDRAULIC

ICFM	INLET CUBIC FEET PER MINUTE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IN	INCH
IN LB	INCH–POUND
INFL	INFLUENT
INSUL	INSULATING
INVT	INVERT
IOB	INLET OUTLET BYPASS
IPS	IRON PIPE SIZE
IRR	IRRIGATION
JA	JORDAN AQUEDUCT
JT	JOINT
JTS	JOINTS
K	KELVIN, KILO OR THOUSAND POUNDS
KG	KILOGRAM
KV	KILOVOLT
KW	KILOWATT
KWH	KILOWATT HOUR
L	LEFT OR LITER
LAB	LABORATORY
LAV	LAVATORY
LB	POUND
LC	LENGTH OF CURVE
LF	LINEAR FEET
LG	LENGTH OR LONG
LH	LEFT HAND
LIP	LIP OF GUTTER
LL	LIVE LOAD
LLV	LONG LEG VERTICAL
LOL	LENGTH OF LINE
LP	LOW POINT
LR	LONG RADIUS
LT	LIGHT, LEFT
LVL	LEVEL
LWL	LOW WATER LEVEL
LWR	LOWER
M	METER, MALE (PIPE THREAD)
MACH	MACHINE
MAN	MAGNETIC, MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL, MECHANISM
MEMB	MEMBRANE
MET	METAL
MFR	MANUFACTURER
MG	MILLION GALLONS
MGD	MILLION GALLONS PER DAY
MH	MANHOLE, MONORAIL HOIST
MI	MALLEABLE IRON
MID	MIDDLE
MIL	1/1,000 INCH
MIN	MINIMUM OR MINUTE
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MO	MASONRY OPENING
MPH	MILES PER HOUR
MTG	MOUNTING
MTL	METAL OR MATERIAL
MTR	MOTOR
MWD	MAGNA WATER DISTRICT
MWS	MAXIMUM WATER SURFACE
N	NORTH
NAVD	NORTH AMERICAN VERTICAL DATUM
NBS	NATIONAL BUREAU OF STANDARDS
NC	NORMALLY CLOSED
NE	NORTHEAST
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
NF	NEAR FACE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NUMBER OR NORMALLY OPEN
NOM	NOMINAL
NPT	NATIONAL PIPE THREAD
NS	NEAR SIDE
NSF	NATIONAL SANITATION FOUNDATION

NTS	NOT TO SCALE
NW	NORTHWEST
O TO O	OUT TO OUT
OC	ON CENTER, OVER–CROSSING
OD	OUTSIDE DIAMETER, OVERALL DIMENSION
OF	OUTSIDE FACE, OVERFLOW
OFS	OVERFLOW STRUCTURE
OH	OVERHEAD
OPER	OPERATOR, OPERATING
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
OVHD	OVERHEAD
OZ	OUNCE
P	PUMP
PC	PORTLAND CEMENT, POINT OF CURVE OR PRIMARY CLARIFIER
PCC	PORTLAND CEMENT CONCRETE
PCF	POUNDS PER CUBIC FOOT
PE	PLAIN END, POLYELECTROLYTE POLYMER, POLYETHYLENE
PG	PRESSURE GAUGE
pH	HYDROGEN ION CONCENTRATION
PI	PLANT INFLUENT, POINT OF INTERSECTION
PJF	PREMOLDED JOINT FILLER
PL	PLATE, PROPERTY LINE, PLACE
PLYWD	PLYWOOD
PM	PROPELLER METER
POB	POINT OF BEGINNING
PP	POTASSIUM PERMANGANATE
PPD	POUNDS PER DAY
PPH	POUNDS PER HOUR
PPM	PARTS PER MILLION
PR	PAIR
PRC	POINT OF REVERSE CURVE
PREFAB	PREFABRICATED
PRI	PRIMARY
PRV	PRESSURE REGULATING/REDUCING VALVE
PS	PRESSURE SWITCH, PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	POINT OF TANGENT, PRESSURE TREATED
PTDF	PRESSURE TREATED DOUGLAS FIR
PV	PAVEMENT
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PW	POTABLE WATER
RAD	RADIUS
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN OR ROAD
RDCR	REDUCER, REDUCING
RECIRC	RECIRCULATION
RED	REDUCING
REF	REFERENCE, REFER
REG	REGULATING, REGISTER
REINF	REINFORCE, REINFORCED
REQD	REQUIRED
REV	REVISION
RF	ROOF, RAISED FACE
RND	ROUND
RPM	REVOLUTIONS PER MINUTE
RP	RADIUS POINT
RS	RAW SEWAGE
RST	REINFORCING STEEL, RESET
RT	REGULATING TANK, RADIOGRAPHIC, RIGHT
RV	ROOF VENT
R/W	RIGHT OF WAY
RW	RAW WATER
S	SOUTH, SECOND
SA	SAMPLE, SAMPLE LINE
SCFM	STANDARD CUBIC FEET PER MINUTE
SCH	SCHEDULE
SD	STORM DRAIN
SECT	SECTION
SG	SLIDE GATE
SHT	SHEET
SIM	SIMILAR

SLP	SLOPE
SP	SPACING, STATIC PRESSURE
SPA	SPACED
SPEC	SPECIFIED, SPECIFICATION
SPECS	SPECIFICATIONS
SPG	SPACING
SPKR	SPEAKER
SPLY	SUPPLY
SPRT	SUPPORT
SQ	SQUARE
SQ FT	SQUARE FOOT
SR	SUPPLY REGISTER
SS	SANITARY SEWER, SERVICE SINK
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRL	STRUCTURAL
SUC	STRUCTURAL UNDERDRAIN COLLECTOR
SYM	SYMBOL
SYMM	SYMMETRICAL
SYS	SYSTEM
T	THICKNESS, TOP, TOILET
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TAN	TANGENT
TBC	TOP BACK OF CURB
TBM	TEMPORARY BENCH MARK
TDH	TOTAL DYNAMIC HEAD
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERATURE, TEMPORARY
THK	THICK
THR'D	THREADED
TK	TANK
TO	TOP OF
TOC	TOP OF CONCRETE
TOG	TOP OF GRADE
TP	TELEPHONE POLE, TURNING POINT
TW	TOP OF WALL
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UD	UNDERDRAIN
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
USBR	U.S. BUREAU OF RECLAMATION
V	VALVE, VENT, VOLT, VACUUM
VAR	VARIES, OR VARIABLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VIC	VICTAULIC COUPLING
VOL	VOLUME
VPI	VERTICAL POINT OF INFLECTION
VSS	VOLATILE SUSPENDED SOLIDS
VTC	VENT THROUGH CEILING
VTR	VENT THROUGH ROOF
W	WEST, WASTE, WIDE FLANGE (BEAM)
W/	WITH
W/O	WITHOUT
WC	WATER COLUMN OR WATER CLOSET
WCO	WALL CLEANOUT
WD	WOOD
WH	WATER HEATER
WS	WATER STOP, WATER SURFACE
WSP	WELDED STEEL PIPE
WSTP	WATER STOP
WT	WEIGHT
WWM	WELDED WIRE MESH
XMFR	TRANSFORMER
XMTR	TRANSMITTER
XS	EXTRA STRONG
YD	YARD
YP	YARD PIPING
YR	YEAR

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER — NATHAN ROGERS — NO. 164807 — STATE OF UTAH — 12-5-2022

REVISIONS

NO.	DATE	REV. BY	DESCRIPTION

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

REVIEW — CHECKED J. BECKMAN — APPROVED N. ROGERS

DESIGN — DESIGN N. ROGERS — DRAWN R. GARCIA

GENERAL

ABBREVIATIONS

PROJECT NUMBER 483-20-02

DATE: DECEMBER 2022

DRAWING NO.
G-04

SHEET 004 OF 126

P:\Magna Water District\483-20-02 Reuse Projects\FINAL DESIGN\2.0 Design Phase\2.9 Drawings\sht\4832002_G-04.dwg Plotted: 12/6/2022 3:56 PM By: Rodolfo Garcia

GENERAL NOTES

1. SYMBOLS FOR STRUCTURES, PIPE AND ETC. USED FOR IDENTIFICATION ARE SHOWN IN LEGENDS AND SHALL BE FOLLOWED THROUGHOUT THE PLANS WHENEVER APPLICABLE. NOT ALL OF THE VARIOUS COMPONENTS SHOWN IN THESE LEGENDS ARE NECESSARILY USED IN THE PROJECT.

2. SCALE OF THE DRAWINGS OR DETAILS ARE SHOWN IN TITLE BLOCK OR DIRECTLY UNDER THE PLAN OR DETAIL. THE SIZE OF THE ORIGINAL PLOTTED DRAWINGS IS 22"X34". CARE SHOULD BE TAKEN TO VERIFY THE SCALE BAR IN THE TITLE BLOCK AREA TO DETERMINE THE SCALE OF REDUCED REPRODUCTIONS.

3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PERFORM CONSTRUCTION ACTIVITIES PER THE CONTRACT DOCUMENTS. ANY ADDITIONS, DELETIONS, OR MODIFICATIONS SHALL FIRST MEET WITH THE WRITTEN APPROVAL OF THE ENGINEER AND THE OWNER.

4. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMIT(S) AND COMPLY WITH ALL REQUIREMENTS OF GOVERNING AGENCIES.

5. THE CONTRACTOR SHALL KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE ESTABLISHED RIGHTS-OF-WAY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO, VEHICLES AND EQUIPMENT, LIMITS OF TRENCH EXCAVATION, AND EXCAVATED MATERIAL AND BACKFILL STORAGE. IF THE CONTRACTOR REQUIRES ADDITIONAL CONSTRUCTION EASEMENTS, IT SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SUCH EASEMENTS FROM INDIVIDUAL PROPERTY OWNERS.

6. UTILITY LOCATIONS:
   - CONTRACTOR SHALL CONTACT BLUE STAKES TO LOCATE EXISTING UTILITIES.
   - ALL UTILITY LOCATIONS, SHOWN ON DRAWINGS, ARE APPROXIMATE AND ARE NOT INCLUSIVE OF ALL EXISTING UTILITIES.
   - CONTRACTOR TO VERIFY DEPTHS OF UTILITIES IN THE FIELD BY POT HOLING A MINIMUM OF TWO WEEKS TIME OR 100-FEET AHEAD OF PIPELINE CONSTRUCTION TO AVOID CONFLICTS WITH DESIGNED PIPELINE GRADE AND ALIGNMENT. IF A CONFLICT ARISES RESULTING FROM THE CONTRACTOR NEGLECTING TO POT HOLE UTILITIES, THE CONTRACTOR TO RESOLVE THE CONFLICT WITHOUT ADDITIONAL COST OR CLAIM TO THE OWNER.
   - CONTRACTOR SHALL POT HOLE CRITICAL LOCATIONS AND OBTAIN ALL EXISTING PIPE O.D. PRIOR TO ORDERING OR OBTAINING MATERIALS REQUIRED FOR CONNECTIONS TO EXISTING PIPING. UTILITY SHUT-DOWNS AND OTHER WORK WILL NOT BE SCHEDULED OR ALLOWED UNTIL THIS IS ACCOMPLISHED AND MATERIALS ARE ON SITE AND APPROVED FOR USE BY MAGNA WATER DISTRICT.

8. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS FROM DAMAGE WHICH ARE TO REMAIN IN PLACE. ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTORS OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO ORIGINAL OR BETTER CONDITION TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR.

9. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING SERVICE LINES FOR GAS, SEWER, WATER, AND OTHER UTILITIES AND REPAIRING DAMAGE TO SUCH LINES AS A RESULT OF THE CONTRACTOR'S OPERATIONS. SERVICE CONNECTIONS FOR UTILITIES ARE NOT SHOWN ON THE DRAWINGS.

10. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMANCE WITH LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES. CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF THE PUBLIC AND PROTECTION OF PERSONNEL AND WORKERS.

11. IF THE CONTRACTOR CHOOSES TO WORK ON THE PROJECT WHEN HOT MIX ASPHALT IS NOT AVAILABLE, THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE GOVERNING AGENCY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY ASPHALT SURFACING MATERIAL. WHEN PERMANENT ASPHALT BECOMES AVAILABLE, THE CONTRACTOR SHALL REMOVE THE TEMPORARY ASPHALT, FURNISH AND INSTALL THE PERMANENT ASPHALT AT NO ADDITIONAL COST TO THE OWNER.

12. CONTRACTOR SHALL NOT DESTROY, REMOVE, OR DISTURB ANY EXISTING SURVEY MONUMENTS WITHOUT AUTHORIZATION OF CONTROLLING AGENCY. NO PAVEMENT CUTTING OR REMOVAL SHALL BEGIN UNTIL ALL SURVEY MARKERS OR MONUMENT POINTS THAT HAVE THE POTENTIAL OF BEING DISTURBED BY THE CONSTRUCTION OPERATIONS HAVE BEEN PROPERLY REFERENCED BY A REGISTERED LAND SURVEYOR. ALL SURVEY MONUMENTS OR POINTS DISTURBED BY THE CONTRACTOR SHALL BE ACCURATELY RESET BY A REGISTERED LAND SURVEYOR AFTER ALL RESTORATION AND RESURFACING HAS BEEN COMPLETED.

13. TRENCHING OPERATIONS SHALL BE PERFORMED SO AS TO PROTECT THE EXISTING CURB AND GUTTER. DAMAGED CURB AND GUTTER SHALL BE REPLACED TO MATCH EXISTING AT THE CONTRACTOR'S EXPENSE PER APWA STANDARDS FOR MAGNA WATER DISTRICT AND PER UDOT STANDARDS IN UDOT RIGHTS-OF-WAY. TRENCH SUPPORTS AND DEWATERING (NOTE 14) SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR. MAXIMUM OPEN TRENCH DURING WORKING HOURS SHALL BE 300 FEET. ALL TRENCHES SHALL BE BACKFILLED AND/OR PLATED DURING NON-WORKING HOURS, PER EXCAVATION PERMIT REQUIREMENTS.

14. DEWATERING: GROUND WATER AND SURFACE WATER CONTROL SHALL BE PERFORMED AND RESPONSIBLY HANDLED BY THE CONTRACTOR ACCORDING TO, AND IN COMPLIANCE WITH, ALL LOCAL GOVERNING AUTHORITIES. HEAVY GROUND WATER AND/OR SURFACE WATER PUMPING MAY BE REQUIRED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE POTENTIAL PUMPING NEEDS. THE CONTRACTOR SHALL NOT RELY ON OWNER SUPPLIED PROCTOR, GROUND WATER AND/OR SURFACE WATER DATA. CONTRACTOR SHALL OBTAIN DEWATERING PERMIT AS NECESSARY.

15. AERIAL PHOTOS IN DRAWINGS:
THE AERIAL PHOTOS PROVIDED AS BACKGROUND IN THESE DRAWINGS ARE PROVIDED TO HELP CLARIFY THE WORK SITE. HOWEVER, THE PHOTOS DEPICT CONDITIONS AS THEY EXISTED IN 2018. PRESENT DAY CONDITIONS MAY VARY FROM THOSE SHOWN. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING. BID SHALL INCLUDE ALL WORK REQUIRED TO COMPLETE THE PROJECT.

16. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF EXCAVATIONS, AND ANY DAMAGE OF UTILITIES RESULTING FROM SETTLEMENT.

17. CONTRACTOR SHALL PREVENT ANY GROUND WATER OR DEBRIS FROM ENTERING NEW PIPES DURING CONSTRUCTION. THE ENDS OF THE PIPES SHALL BE SEALED AT THE END OF EACH WORKDAY.

18. PROFILE DRAWINGS ARE HORIZONTAL PROJECTIONS OF THE PIPELINE CENTERLINE, UNLESS OTHERWISE NOTED.

19. LAY PIPE TO DEPTH AND ALONG HORIZONTAL ALIGNMENT AS DEFINED IN THESE DRAWINGS. CONTRACTOR SHALL NOT DEVIATE FROM PROPOSED ALIGNMENT OR GRADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. AVOID HIGH AND LOW POINTS EXCEPT WHERE DESIGNED.

20. CONTRACTOR SHALL SALVAGE ALL REMOVED COPPER PIPE AND HYDRANTS AND PROVIDE THEM TO MAGNA WATER DISTRICT, UNLESS NOTED OTHERWISE.

21. CONTRACTOR SHALL BACKFILL TRENCH AREAS WHERE NEW WATERLINES CROSS UNDER EXISTING BURIED UTILITIES WITH FLOWABLE FILL (SOIL CEMENT BACKFILL) IN ACCORDANCE WITH APWA STANDARDS, WHERE MECHANICAL COMPACTION CANNOT BE ADEQUATE PERFORMED.

22. ALL BURIED REBAR, FITTINGS, COUPLINGS, VALVES AND MECHANICAL JOINT NUTS AND BOLTS ARE TO BE COATED WITH NON OXIDE GREASE CHEVRON FM 2 OR APPROVED EQUAL, COVERED WITH 8 MIL POLYETHYLENE SHEETING, AND TAPE WRAPPED.

23. CONTRACTOR SHALL MAINTAIN A 10-FOOT HORIZONTAL AND AN 18-INCH VERTICAL SEPARATION (OUTSIDE OF PIPE TO OUTSIDE OF PIPE/MANHOLE) BETWEEN ALL SEWER AND WATER LINES, UNLESS EXCEPTION IS NOTED.

24. CONTRACTOR SHALL RESTORE OR REPLACE ANY SPRINKLING SYSTEMS AND LANDSCAPING DAMAGED DURING CONSTRUCTION TO EQUAL OR BETTER CONDITION THAN WHAT EXISTED PRIOR TO CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

25. CONTRACTOR SHALL PROTECT ADJACENT PRESSURE PIPELINES AND PROVIDE TEMPORARY THRUST RESTRAINT AS NECESSARY DURING CONSTRUCTION INCLUDING EXISTING VALVES, TEES, BENDS, ETC.. ALL NEW PRESSURE PIPE AND FITTINGS SHALL HAVE THRUST RESTRAINED JOINTS, THRUST BLOCKS, THRUST TIES OR OTHER APPROVED THRUST RESTRAINT. THRUST PROTECTION SHALL BE ADEQUATE FOR THE TEST PRESSURE SPECIFIED.

26. ALL FITTINGS REQUIRED FOR THE COMPLETION OF THE WORK ARE NOT SHOWN IN THE DRAWINGS. MAXIMUM PIPE JOINT DEFLECTION SHALL BE 1-DEGREE. ADDITIONAL FITTINGS REQUIRED TO MAINTAIN THE ALIGNMENT SHOWN IN THE PLANS SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

27. MINIMUM DEPTH OF NEW PIPE: 4 FEET TO TOP OF PIPE UNLESS OTHERWISE NOTED.

28. COORDINATE CONNECTION OF EXISTING WATER MAINS WITH MAGNA WATER DISTRICT.
   - OPERATION OF ALL EXISTING MAIN LINE VALVES TO BE COORDINATED THROUGH MAGNA WATER DISTRICT 48-HOURS IN ADVANCE OF SHUTDOWN. CONNECTIONS TO SOME WATERLINES SERVING COMMERCIAL AREAS MAY REQUIRE NIGHT OR WEEKEND SHUTDOWNS. CONTRACTOR TO PERFORM NIGHT OR WEEKEND WORK IN THESE AREAS AT NO ADDITIONAL COST TO OWNER.
   - MAGNA WATER DISTRICT DOES NOT GUARANTEE WATER SHUT-DOWNS. CONTRACTOR TO DEVISE PLANS TO AVOID WORK STOPPAGES IN THE EVENT A SHUT-DOWN DOES NOT GO AS PLANNED.
   - CONTRACTOR SHALL SUBMIT FOR REVIEW A SEQUENTIAL PLAN FOR CONNECTION, TESTING, AND FLUSHING OF ALL NEW WATER MAINS, HYDRANTS, AND SERVICE CONNECTIONS.

30. CONTRACTOR SHALL PERFORM CHLORINATION TEST, PRESSURE TEST, AND BACTERIA TEST. ALL WATERLINES INSTALLED SHALL BE DISINFECTED IN ACCORDANCE WITH THE "AMERICAN WATER WORKS ASSOCIATION STANDARD FOR DISINFECTING WATER MAINS" (AWWA C651). ALL CHLORINATED WATER SHALL BE DISPOSED OF IN ACCORDANCE WITH THE UTAH DEPT OF ENVIRONMENTAL QUALITY RULES AND REQUIREMENTS FOR SURFACE DISCHARGE AND COORDINATED WITH MAGNA WATER DISTRICT.

31. ASPHALT SHALL BE AC-20-DM-3/4" MIX IN ACCORDANCE WITH APWA 330525.

32. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN A WORKMANLIKE AND SAFE MANNER AND IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND JOB-SITE RELATED CONSTRUCTION CONDITIONS AND REQUIREMENTS. OBTAIN PERMITS, INSPECTIONS AND APPROVALS AS REQUIRED BY JURISDICTIONAL AGENCIES AND PAY ALL ASSOCIATED FEES. CONTRACTOR AND INSTALLERS SHALL BE LICENSED AS REQUIRED BY STATE AND LOCAL JURISDICTIONS, AND BONDED AS DETERMINED BY PROJECT REQUIREMENTS.

33. PRESSURE TEST ALL PIPELINES TO 225 PSI MINIMUM FOR TWO HOURS WITH ZERO LEAKAGE. IN THE CASE OF PIPELINES THAT FAIL TO PASS THE LEAKAGE TEST, THE CONTRACTOR SHALL DETERMINE THE CAUSE OF THE EXCESSIVE LEAKAGE, SHALL TAKE CORRECTIVE MEASURES NECESSARY TO REPAIR THE LEAKS, AND SHALL AGAIN TEST THE PIPELINES, ALL AT NO COST TO THE OWNER.

34. WORKING PRESSURE FOR THE SECONDARY REUSE SYSTEM IS 150 PSI WITH TEST PRESSURE OF 225 PSI. ALL FLANGES, VALVES, FITTINGS, THRUST BLOCKS, ETC. SHALL BE RATED APPROPRIATELY.

35. WORKING PRESSURE FOR THE EFFLUENT RETURN SYSTEM IS 20 PSI WITH TEST PRESSURE OF 100 PSI. ALL FLANGES, VALVES, FITTINGS, THRUST BLOCKS, ETC. SHALL BE RATED APPROPRIATELY.

36. ALL PIPE, FITTINGS, AND VALVES SHALL BE NSF 61 COMPLIANT FOR CULINARY WATER USE.

37. CONTRACTOR TO PROVIDE AND DISTRIBUTE APPROVED WRITTEN NOTICE OF CONSTRUCTION ACTIVITIES TO ALL RESIDENTS AND BUSINESSES LOCATED IN THE CONSTRUCTION AREA AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. WRITTEN NOTICE SHALL BE APPROVED BY THE ENGINEER PRIOR TO DISTRIBUTION.

38. CONTRACTOR SHALL PROVIDE AND UPDATE A CONSTRUCTION SCHEDULE FOR WORKING IN THE PUBLIC RIGHT-OF-WAY PRIOR TO CONSTRUCTION.

39. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTROL OF DRAINAGE AND EROSION DURING CONSTRUCTION AT CONSTRUCTION SITE, STAGING, AND SPOILS AREA. CONTRACTOR SHALL SUBMIT STORM RUNOFF CONTROL PLAN FOR APPROVAL BY ENGINEER AND OBTAIN A SWPPP PERMIT FROM THE UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY.

40. ABANDONING EXISTING WATERLINE:
REMOVE ABANDONED PIPE WHERE UNCOVERED OR DISTURBED BY CONSTRUCTION. WHERE NOT DISTURBED, CONTRACTOR MAY ABANDON EXISTING WATER MAIN IN PLACE AFTER NEW MAIN IS IN FULL SERVICE. PLUG ENDS OF ABANDONED MAIN WITH CONCRETE. OLD WATER MAINS THAT ARE NO LONGER IN SERVICE ARE TO BE DISCONNECTED COMPLETELY FROM THE WORKING SYSTEM. UNLESS CONTRACTOR IS SPECIFICALLY DIRECTED TO REMOVE EXISTING VALVES, THE CONTRACTOR SHALL ABANDON EXISTING VALVES IN PLACE. OPEN VALVE, REMOVE BOTH THE TOP AND BOTTOM OF VALVE BOX AND FILL RESULTING HOLE WITH SAND. RESTORE SURFACE IN ACCORDANCE WITH SURFACE RESTORATION REQUIREMENTS OF THE GOVERNING AGENCY.

41. ALL ASBESTOS CEMENT WATERLINES REQUIRING REMOVAL SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS IN AN APPROVED LOCATION EQUIPPED TO HANDLE SUCH MATERIALS. ANY CUTTING REQUIRED SHALL BE PERFORMED IN ACCORDANCE WITH PROPER REGULATORY PROCEDURES. IN NO CASE SHALL THE PIPE AND FITTINGS BE BROKEN OR CRUSHED.

42. CONTRACTOR SHALL SAW CUT ASPHALT, SIDEWALK TO THE NEAREST JOINT, AND WHERE REQUIRED CURB AND GUTTER TO THE NEAREST JOINT AT THE LIMITS OF ALL TRENCH EXCAVATION.

43. CONTRACTOR SHALL PROVIDE SAFE ACCESS ACROSS TRENCH FOR ONE VEHICLE AT ALL DRIVEWAY ENTRANCES DURING CONSTRUCTION. EXCEPTIONS TO THIS REQUIREMENT SHALL BE COORDINATED WITH ENGINEER AND DRIVEWAY OWNER. ALL TRENCHES SHALL BE BACKFILLED AND/OR PLATED DURING NON-WORKING HOURS.

44. INSTALL ALL MATERIALS ACCORDING TO MANUFACTURER RECOMMENDATIONS AND STATE AND LOCAL REQUIREMENTS. USE ONLY NEW AND UNUSED MATERIALS. ALL MATERIALS SHALL BE PROVIDED BY MANUFACTURERS REGULARLY ENGAGED IN PRODUCING SAID ITEMS, AND WHICH SHALL BE FIRST QUALITY, HEAVY DUTY, COMMERCIAL/INDUSTRIAL GRADE, SUITABLE FOR THE INTENDED USE.

45. CONTRACTOR SHALL RESTORE ALL DAMAGED CURB, GUTTER, SIDEWALK, DRIVEWAY APPROACHES, AND WATER WAYS IN ACCORDANCE WITH APWA MANUAL OF STANDARD PLANS 2017 EDITION, PLAN NO. 205, 211, 221, AND 231 WITHIN MAGNA CITY RIGHT-OF-WAY AND IN ACCORDANCE WITH UDOT STANDARDS IN UDOT RIGHTS-OF-WAY. TO PRESERVE AND PROTECT EXISTING CURB AND GUTTER, CONTRACTOR SHALL FLOWABLE FILL UNDERNEATH CURB AND GUTTER AFTER TUNNELING FOR HYDRANTS OR SERVICE CONNECTIONS.

46. ALL GAS LINES SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 12-INCHES ABOVE OR BELOW THE NEW WATERLINE, AND A MINIMUM HORIZONTAL CLEARANCE OF 3 FEET. ALL GAS LINES RELOCATED OR EXPOSED SHALL BE REBURIED PER DOMINION ENERGY'S REQUIREMENTS.

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER
NATHAN ROGERS
No. 168870
STATE OF UTAH
12-5-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

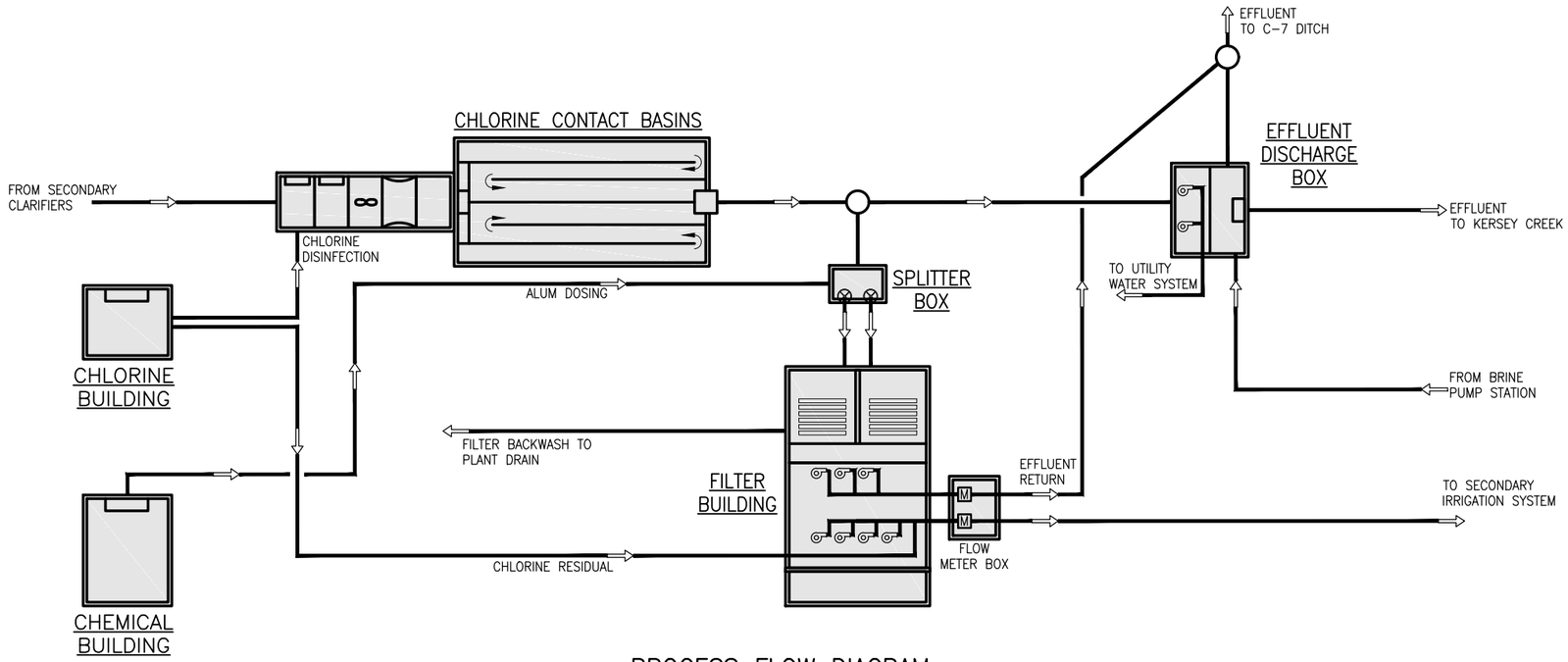
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DESIGN N. ROGERS
DRAWN R. GARCIA
REVIEW
CHECKED J. BECKMAN
APPROVED N. ROGERS

GENERAL
GENERAL NOTES

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
G-05
SHEET 005 OF 126



PROCESS FLOW DIAGRAM

NTS

MAGNA WRF REUSE PROJECT DESIGN CRITERIA

DESCRIPTION	UNITS	CRITERIA	DESCRIPTION	UNITS	CRITERIA
SECONDARY REUSE PUMP STATION BUILDING			SECONDARY REUSE PUMP STATION		
ULTIMATE HYDRAULIC CAPACITY	MGD/gpm	4.65/3,232	PUMP: VERTICAL TURBINE IN WET WELL,		
SECONDARY REUSE PUMPS DESIGN CAPACITY	MGD/gpm	4.65/3,232	VFD, 2+1 STANDBY W/ JOCKEY		
EFFLUENT RETURN PUMPS DESIGN CAPACITY	MGD/gpm	4.65/3,232	NUMBER, LARGE PUMP DESIGN	No.	3
CLOTH MEDIA FILTER UNIT AVG. DESIGN FLOW	MGD/gpm	2.33/1,618	NUMBER, JOCKEY PUMP DESIGN	No.	1
CLOTH MEDIA FILTER UNIT MAX DESIGN FLOW	MGD/gpm	4.65/3,232	MAX CAPACITY, EACH	MGD/gpm	3 @ 2.32/1,616
CLOTH MEDIA FILTER UNIT MAX FUTURE FLOW	MGD/gpm	6.00/4,170		MGD/gpm	1 @ 0.79/550
NUMBER OF CLOTH MEDIA FILTER UNITS	No.	2	TDH, EACH	ft.	3 @ 345
WET WELL VOLUME	gal	127,000		ft.	1 @ 298
CLOTH MEDIA DISK FILTER SYSTEM			SIZE, EACH	hp	3 @ 200
MANUFACTURED BY AQUA-AEROBIC SYSTEMS				hp	1 @ 60
NUMBER OF DISKS PER FILTER, DESIGN	No.	6			
NUMBER OF DISKS PER FILTER, FUTURE	No.	10	EFFLUENT RETURN PUMP STATION		
AREA PER DISK	ft^2	53.8	PUMP: VERTICAL MIXED FLOW IN WET WELL,		
HYDRAULIC LOADING RATE, DESIGN	gpm/ft^2	4.30	VFD, 2+1 STANDBY		
HYDRAULIC LOADING RATE, FUTURE	gpm/ft^2	4.26	NUMBER, PUMP DESIGN	No.	3
NUMBER, BACKWASH PUMP, DESIGN	No.	2	MAX CAPACITY, EACH	MGD/gpm	3 @ 1.55/1,085
NUMBER, BACKWASH PUMP, FUTURE	No.	4	TDH, EACH	ft.	23.0
SIZE, EACH	hp	2	SIZE, EACH	hp	3 @ 10

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER NATHAN ROGERS NO. 168 STATE OF UTAH 12-5-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

DESIGN J. BECKMAN
DRAWN R. GARCIA
REVIEW
CHECKED J. BECKMAN
APPROVED N. ROGERS

VERIFY SCALE
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GENERAL

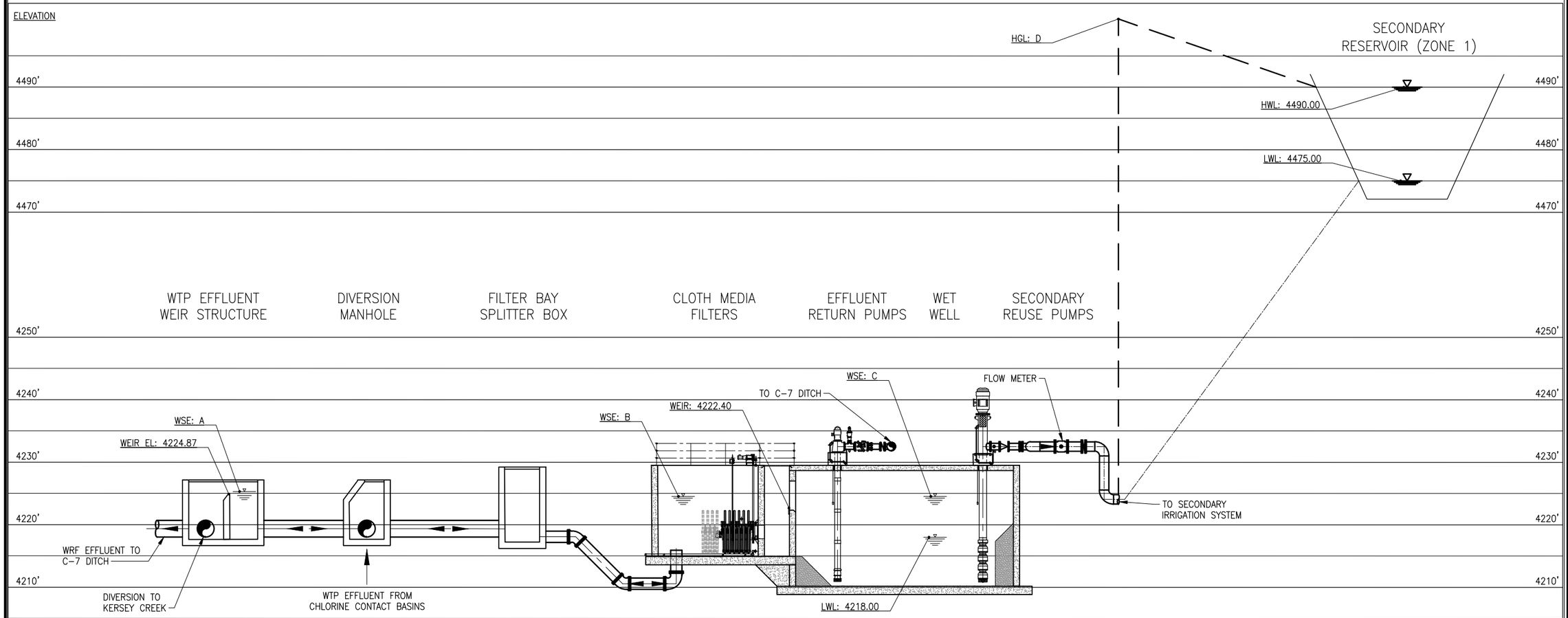
PROCESS FLOW DIAGRAM AND DESIGN CRITERIA

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
G-06

SHEET 006 OF 126

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HYDRAULIC PROFILE
MINIMUM FLOW – 350 GPM (0.5 MGD)
MAXIMUM FLOW – 3,230 GPM (4.65 MGD)

WSE/HGL TABLE

WSE/HGL ID	MINIMUM ELEVATION	MAXIMUM ELEVATION
A	4222.40	4225.52 (AT 4.65 MGD)
B	4222.40	4225.27
C	4218.00 (LWL)	4225.52
D	4508.35 (AT 0.5 MGD)	4548.50

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER
NATHAN ROGERS
No. 11694
STATE OF UTAH
12-5-2022

REVISIONS

NO.	DATE	REV. BY	DESCRIPTION

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
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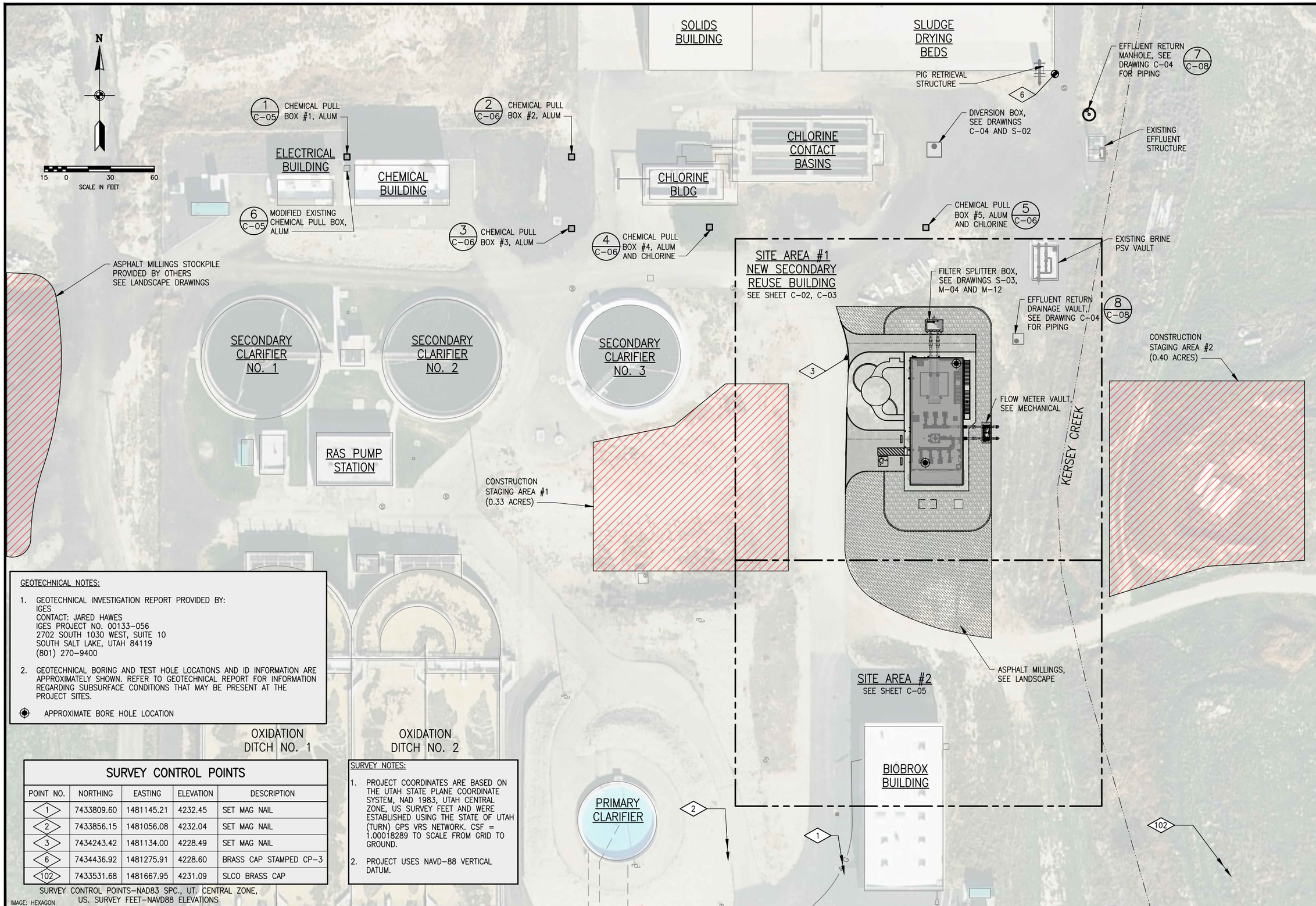
REVIEW
CHECKED J. BECKMAN
APPROVED N. ROGERS

DESIGN
DESIGN N. ROGERS
DRAWN N. ROGERS

GENERAL
HYDRAULIC PROFILE
DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
G-07
SHEET 007 OF 126

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GEOTECHNICAL NOTES:

1. GEOTECHNICAL INVESTIGATION REPORT PROVIDED BY:
   IGES
   CONTACT: JARED HAWES
   IGES PROJECT NO. 00133-056
   2702 SOUTH 1030 WEST, SUITE 10
   SOUTH SALT LAKE, UTAH 84119
   (801) 270-9400
2. GEOTECHNICAL BORING AND TEST HOLE LOCATIONS AND ID INFORMATION ARE APPROXIMATELY SHOWN. REFER TO GEOTECHNICAL REPORT FOR INFORMATION REGARDING SUBSURFACE CONDITIONS THAT MAY BE PRESENT AT THE PROJECT SITES.

⊕ APPROXIMATE BORE HOLE LOCATION

SURVEY CONTROL POINTS

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	7433809.60	1481145.21	4232.45	SET MAG NAIL
2	7433856.15	1481056.08	4232.04	SET MAG NAIL
3	7434243.42	1481134.00	4228.49	SET MAG NAIL
6	7434436.92	1481275.91	4228.60	BRASS CAP STAMPED CP-3
102	7433531.68	1481667.95	4231.09	SLCO BRASS CAP

SURVEY CONTROL POINTS–NAD83 SPC., UT. CENTRAL ZONE, US. SURVEY FEET–NAVD88 ELEVATIONS

SURVEY NOTES:

1. PROJECT COORDINATES ARE BASED ON THE UTAH STATE PLANE COORDINATE SYSTEM, NAD 1983, UTAH CENTRAL ZONE, US SURVEY FEET AND WERE ESTABLISHED USING THE STATE OF UTAH (TURN) GPS VRS NETWORK. CSF = 1.00018289 TO SCALE FROM GRID TO GROUND.
2. PROJECT USES NAVD-88 VERTICAL DATUM.

IMAGE: HEXAGON

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER NATHAN ROGERS 9-16980 STATE OF UTAH 12-15-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

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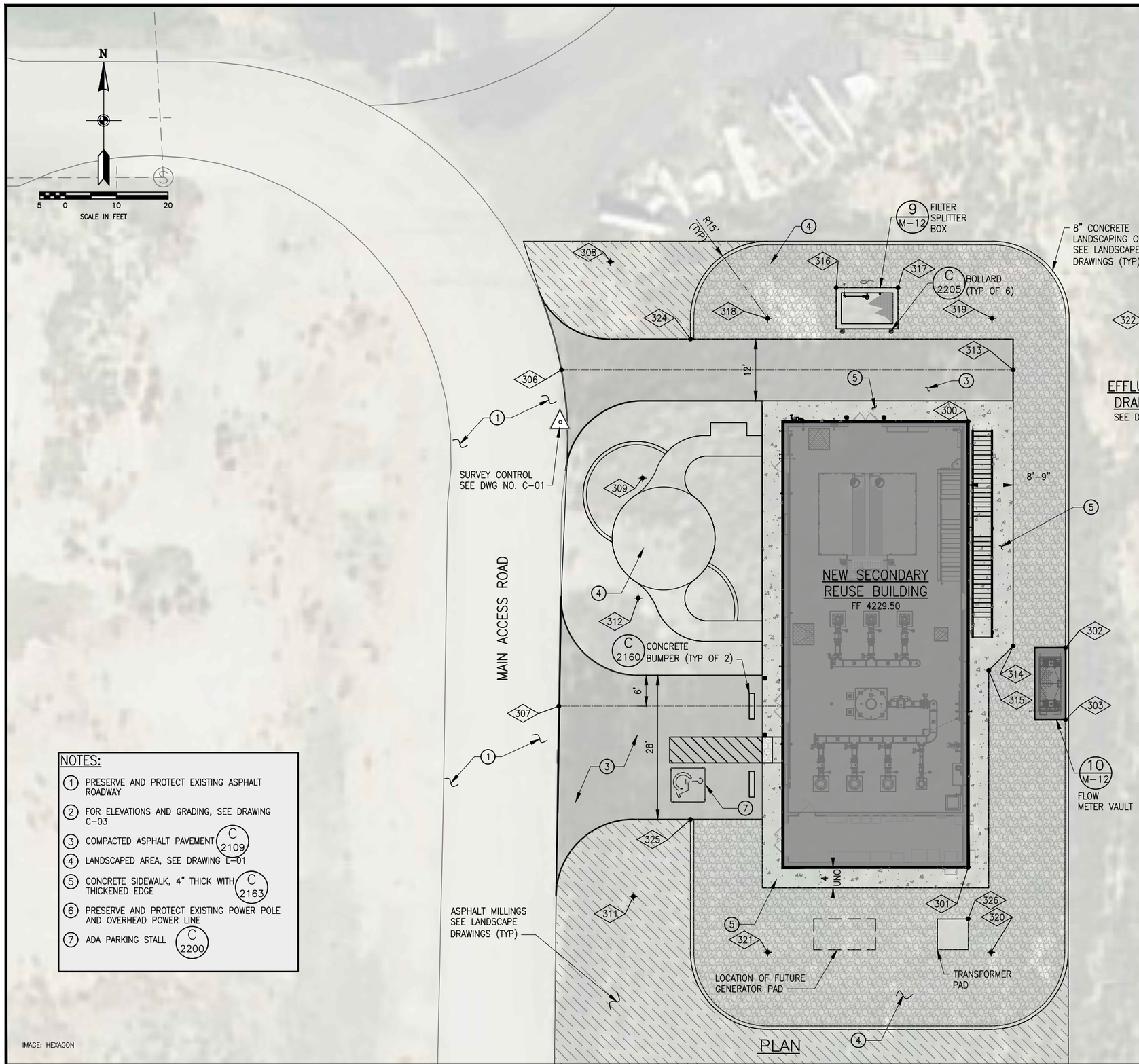
DESIGN N. ROGERS
DRAWN R. GARCIA
CHECKED J. BECKMAN
APPROVED N. ROGERS
REVIEW

CIVIL
OVERALL SITE PLAN AND SURVEY CONTROL

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO. C-01
SHEET 008 OF 126

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NOTES:

1. PRESERVE AND PROTECT EXISTING ASPHALT ROADWAY
2. FOR ELEVATIONS AND GRADING, SEE DRAWING C-03
3. COMPACTED ASPHALT PAVEMENT (C 2109)
4. LANDSCAPED AREA, SEE DRAWING L-01
5. CONCRETE SIDEWALK, 4" THICK WITH THICKENED EDGE (C 2163)
6. PRESERVE AND PROTECT EXISTING POWER POLE AND OVERHEAD POWER LINE
7. ADA PARKING STALL (C 2200)

SITE COORDINATES

POINT NO.	NORTHING	EASTING	DESCRIPTION
300	7434243.55	1481213.24	NE CORNER OF RE-USE PUMP STATION
301	7434156.88	1481213.24	SE CORNER OF RE-USE PUMP STATION
302	7434199.57	1481232.17	NE CORNER METER VAULT
303	7434185.57	1481232.17	SE CORNER METER VAULT
306	7434253.55	1481134.22	CL NEW ACCESS 12-FT ROAD
307	7434188.22	1481133.70	CL NEW ACCESS 12-FT ROAD
308	7434274.55	1481143.68	25-FT RADIUS PT
309	7434232.55	1481149.97	25-FT RADIUS PT
311	7434151.22	1481148.17	25-FT RADIUS PT
312	7434209.22	1481149.14	25-FT RADIUS PT
313	7434253.55	1481221.98	CL END OF ACCESS ROAD
314	7434199.89	1481221.98	PI 8-FT SIDEWALK
315	7434195.15	1481217.24	PI 4-FT SIDEWALK
316	7434269.55	1481187.60	NE CORNER OF SPLITTER BOX
317	7434269.55	1481199.60	NE CORNER OF SPLITTER BOX
318	7434263.55	1481174.27	15-FT RADIUS LANDSCAPE CURB (OUTSIDE FACE)
319	7434263.55	1481217.89	15-FT RADIUS LANDSCAPE CURB (OUTSIDE FACE)
320	7434140.40	1481217.68	15-FT RADIUS LANDSCAPE CURB (OUTSIDE FACE)
321	7434140.40	1481174.28	15-FT RADIUS LANDSCAPE CURB (OUTSIDE FACE)
322	7434260.07	1481247.33	NW CORNER DRAINAGE VAULT
323	7434260.07	1481254.66	NE CORNER DRAINAGE VAULT
324	7434259.55	1481159.28	END OF LANDSCAPE CURB (OUTSIDE FACE)
325	7434166.21	1481159.28	END OF LANDSCAPE CURB (OUTSIDE FACE)
326	7434146.88	1481213.24	NE CORNER OF TRANSFORMER PAD

IMAGE: HEXAGON

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER NATHAN ROGERS 9-16-2022 STATE OF UTAH 12-15-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
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REVIEW CHECKED J. BECKMAN APPROVED N. ROGERS

DESIGN DESIGN J.B./R.G. DRAWN R. GARCIA

CIVIL

SITE PLAN

PROJECT NUMBER 483-20-02

DATE: DECEMBER 2022

DRAWING NO. C-02

SHEET 009 OF 126

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N

5 0 10 20
SCALE IN FEET

EXISTING BRINE PSV VAULT

EFFLUENT RETURN DRAINAGE VAULT
TOC 4226.72

NEW SECONDARY REUSE BUILDING
FF 4229.50

EX-FG 4226.94±
TC 4226.96
EX-FG 4227.13±
TC 4227.20
EX-FG 4227.06±
EX-FG 4227.22±
EX-FG 4227.97±
FG/PC 4228.43
TC 4228.56
FF 4228.40
TC 4226.96
SAW CUT CLEAN EDGE AND MATCH EXISTING ELEVATION
EX-FG 4228.25±
FG 4228.50
FG 4228.57
FG 4228.68
FG 4228.68
FG 4228.92
FG 4228.68
FG 4228.92
SW 4229.42
SW 4229.42
SW 4229.42
SW 4229.50
FG 4228.74
EX-FG 4228.58±
SW 4229.50
4' SIDEWALK
8' SIDEWALK
BOS 4229.00
EX-FG 4228.90±
FG/PC 4229.01
SW 4229.42
SW 4229.50
TC 4229.17
EX-FG 4227.71±
TC 4229.17
EX-FG 4229.03±
SW 4229.50
SAW CUT CLEAN EDGE AND MATCH EXISTING ELEVATION
FG/PC 4229.25
TC 4229.38
SW 4229.42
SW 4229.50
SW 4229.50
4' SIDEWALK
EX-FG 4229.27±
SW 4229.42
SW 4229.42
TOC 4229.78
TOC 4229.78
TC 4229.08
TC 4228.62
FUTURE GENERATOR PAD
TRANSFORMER PAD (SEE ELECTRICAL)
12" CONCRETE CURB (TYP)
TC 4229.40
TC 4228.78
EX-FG 4229.41±
EX-FG 4228.72±

4222 4224 4223 4221 4225 4226 4227 4228 4229

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER
NATHAN ROGERS
No. 11680207
STATE OF UTAH
12-15-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
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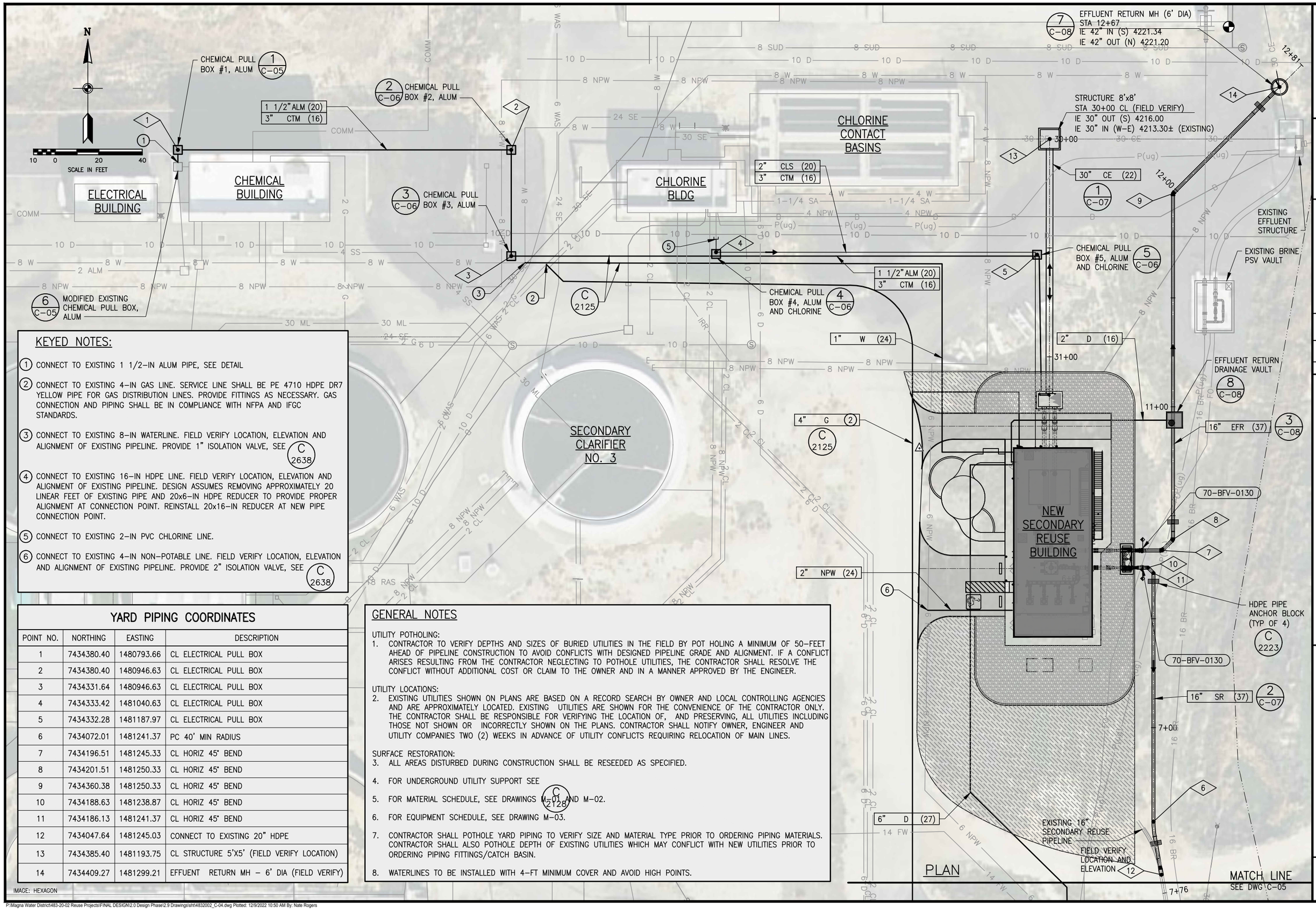
DESIGN J.B./R.G.
DRAWN R. GARCIA
REVIEW
CHECKED J. BECKMAN
APPROVED N. ROGERS

CIVIL
SITE GRADING

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
C-03
SHEET 010 OF 126

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KEYED NOTES:

1. CONNECT TO EXISTING 1 1/2–IN ALUM PIPE, SEE DETAIL
2. CONNECT TO EXISTING 4–IN GAS LINE. SERVICE LINE SHALL BE PE 4710 HDPE DR7 YELLOW PIPE FOR GAS DISTRIBUTION LINES. PROVIDE FITTINGS AS NECESSARY. GAS CONNECTION AND PIPING SHALL BE IN COMPLIANCE WITH NFPA AND IFGC STANDARDS.
3. CONNECT TO EXISTING 8–IN WATERLINE. FIELD VERIFY LOCATION, ELEVATION AND ALIGNMENT OF EXISTING PIPELINE. PROVIDE 1" ISOLATION VALVE, SEE C 2638
4. CONNECT TO EXISTING 16–IN HDPE LINE. FIELD VERIFY LOCATION, ELEVATION AND ALIGNMENT OF EXISTING PIPELINE. DESIGN ASSUMES REMOVING APPROXIMATELY 20 LINEAR FEET OF EXISTING PIPE AND 20x6–IN HDPE REDUCER TO PROVIDE PROPER ALIGNMENT AT CONNECTION POINT. REINSTALL 20x16–IN REDUCER AT NEW PIPE CONNECTION POINT.
5. CONNECT TO EXISTING 2–IN PVC CHLORINE LINE.
6. CONNECT TO EXISTING 4–IN NON–POTABLE LINE. FIELD VERIFY LOCATION, ELEVATION AND ALIGNMENT OF EXISTING PIPELINE. PROVIDE 2" ISOLATION VALVE, SEE C 2638

YARD PIPING COORDINATES

POINT NO.	NORTHING	EASTING	DESCRIPTION
1	7434380.40	1480793.66	CL ELECTRICAL PULL BOX
2	7434380.40	1480946.63	CL ELECTRICAL PULL BOX
3	7434331.64	1480946.63	CL ELECTRICAL PULL BOX
4	7434333.42	1481040.63	CL ELECTRICAL PULL BOX
5	7434332.28	1481187.97	CL ELECTRICAL PULL BOX
6	7434072.01	1481241.37	PC 40' MIN RADIUS
7	7434196.51	1481245.33	CL HORIZ 45° BEND
8	7434201.51	1481250.33	CL HORIZ 45° BEND
9	7434360.38	1481250.33	CL HORIZ 45° BEND
10	7434188.63	1481238.87	CL HORIZ 45° BEND
11	7434186.13	1481241.37	CL HORIZ 45° BEND
12	7434047.64	1481245.03	CONNECT TO EXISTING 20" HDPE
13	7434385.40	1481193.75	CL STRUCTURE 5'X5' (FIELD VERIFY LOCATION)
14	7434409.27	1481299.21	EFFUENT RETURN MH – 6' DIA (FIELD VERIFY)

GENERAL NOTES

UTILITY POTHOLING:

1. CONTRACTOR TO VERIFY DEPTHS AND SIZES OF BURIED UTILITIES IN THE FIELD BY POT HOLING A MINIMUM OF 50–FEET AHEAD OF PIPELINE CONSTRUCTION TO AVOID CONFLICTS WITH DESIGNED PIPELINE GRADE AND ALIGNMENT. IF A CONFLICT ARISES RESULTING FROM THE CONTRACTOR NEGLECTING TO POTHOLE UTILITIES, THE CONTRACTOR SHALL RESOLVE THE CONFLICT WITHOUT ADDITIONAL COST OR CLAIM TO THE OWNER AND IN A MANNER APPROVED BY THE ENGINEER.

UTILITY LOCATIONS:

2. EXISTING UTILITIES SHOWN ON PLANS ARE BASED ON A RECORD SEARCH BY OWNER AND LOCAL CONTROLLING AGENCIES AND ARE APPROXIMATELY LOCATED. EXISTING UTILITIES ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF, AND PRESERVING, ALL UTILITIES INCLUDING THOSE NOT SHOWN OR INCORRECTLY SHOWN ON THE PLANS. CONTRACTOR SHALL NOTIFY OWNER, ENGINEER AND UTILITY COMPANIES TWO (2) WEEKS IN ADVANCE OF UTILITY CONFLICTS REQUIRING RELOCATION OF MAIN LINES.

SURFACE RESTORATION:

3. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESEEDED AS SPECIFIED.
4. FOR UNDERGROUND UTILITY SUPPORT SEE
5. FOR MATERIAL SCHEDULE, SEE DRAWINGS M-01 AND M-02. C 2128
6. FOR EQUIPMENT SCHEDULE, SEE DRAWING M-03.
7. CONTRACTOR SHALL POTHOLE YARD PIPING TO VERIFY SIZE AND MATERIAL TYPE PRIOR TO ORDERING PIPING MATERIALS. CONTRACTOR SHALL ALSO POTHOLE DEPTH OF EXISTING UTILITIES WHICH MAY CONFLICT WITH NEW UTILITIES PRIOR TO ORDERING PIPING FITTINGS/CATCH BASIN.
8. WATERLINES TO BE INSTALLED WITH 4–FT MINIMUM COVER AND AVOID HIGH POINTS.

IMAGE: HEXAGON

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER NATHAN ROGERS 9031680 STATE OF UTAH 12-15-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

REVIEW
CHECKED J. BECKMAN
APPROVED N. ROGERS

DESIGN
DESIGN J.B./R.G.
DRAWN R. GARCIA

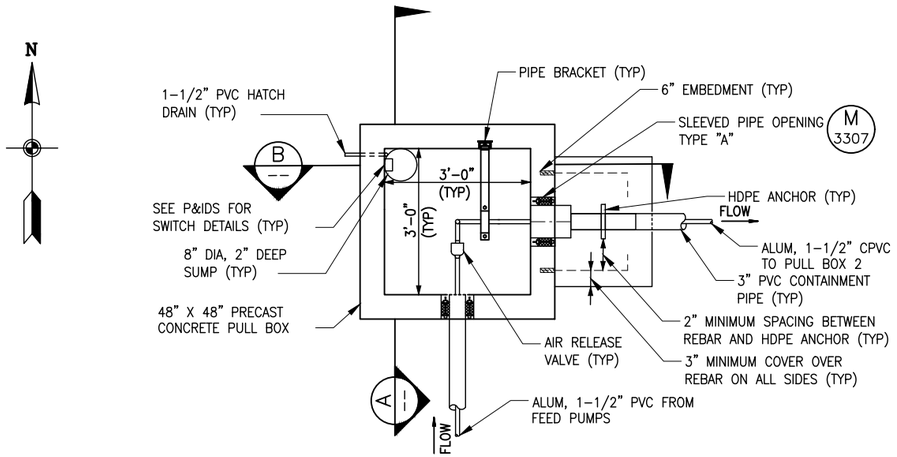
CIVIL
YARD PIPING PLAN
AREA # 1

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
C-04

SHEET 011 OF 126

P:\Magna Water District\483-20-02 Reuse Projects\FINAL DESIGN\2.0 Design Phase\2.9 Drawings\sht\4832002_C-04.dwg Plotted: 12/9/2022 10:50 AM By: Nate Rogers



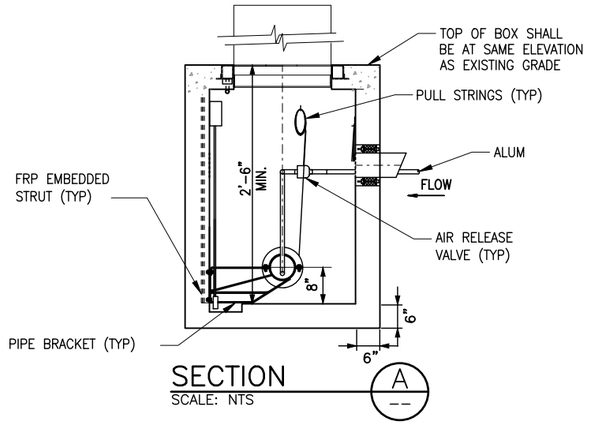
CHEMICAL PULL BOX #1

SCALE: NTS

1 / C-01, C-04

GENERAL NOTES:

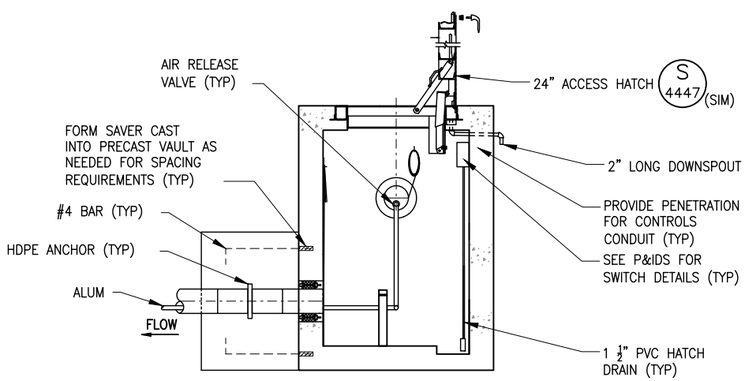
1. SEE SHEETS C-04 FOR CHEMICAL PIPING PLANS.
2. INSTALL SLEEVED PIPE OPENING AFTER CONCRETE HAS CURED FOR A MINIMUM OF 7 DAYS.
3. SEE INDIVIDUAL PULL BOXES FOR BRACKET PLACEMENT, CHEMICAL LINE IDENTIFICATION, AND ROUTING.
4. EACH LINE SHALL BE CONTINUOUS PIPING WITHOUT JOINTS BETWEEN PULL BOXES.
5. EACH CONTAINMENT LINE SHALL BE EQUIPPED WITH 2 PULL STRINGS. PULL STRINGS SHALL BE ROLLED UP NEATLY AND HUNG WITH A STANDARD HANGER OR HOOK MOUNTED TO CONCRETE BOX WALL PER MANUFACTURER RECOMMENDATION. PULL STRINGS SHALL BE POLYETHYLENE FIBER WITH A MINIMUM TENSILE STRENGTH RATING OF 200 LB.
6. SWEEPS OR FABRICATED FITTINGS PER MANUFACTURER RECOMMENDATION TO MAXIMIZE BEND RADIUS AND MINIMIZE TOTAL BENDING DEGREE BETWEEN BOXES.
7. ALL CHEMICAL LINE FITTINGS SHALL BE FUSION WELDED ACCORDING TO AWWA C906.
8. CONTRACTOR SHALL VERIFY ALIGNMENTS AND BOX PLACEMENT TO ENSURE CLEARANCE BETWEEN LINES AND OTHER YARD UTILITIES.
9. CONTRACTOR SHALL CONCRETE ENCASE CHEMICAL CONTAINMENT PIPING PER STANDARD DETAIL S/4110 WHERE COVER IS LESS THAN 2.5 FEET.
10. PULL BOXES SHALL BE PRECAST CONCRETE WITH FRAME AND HATCH COVERS RATED FOR H20 TRAFFIC LOADING.
11. CONTAINMENT PIPING SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SPECIFICATION SECTION 33 08 00 AND GRAVITY TESTED TO ENSURE PIPING DRAINS INTO PULL BOXES.
12. THE INTERIOR SURFACES OF ALL PULL BOXES SHALL BE COATED WITH A CHEMICAL RESISTANT COATING PER SPECIFICATION SECTION 09 90 10.
13. AIR RELEASE VALVES SHALL BE INSTALLED AT THE HIGHEST ELEVATION ON CHEMICAL PIPING.



SECTION

SCALE: NTS

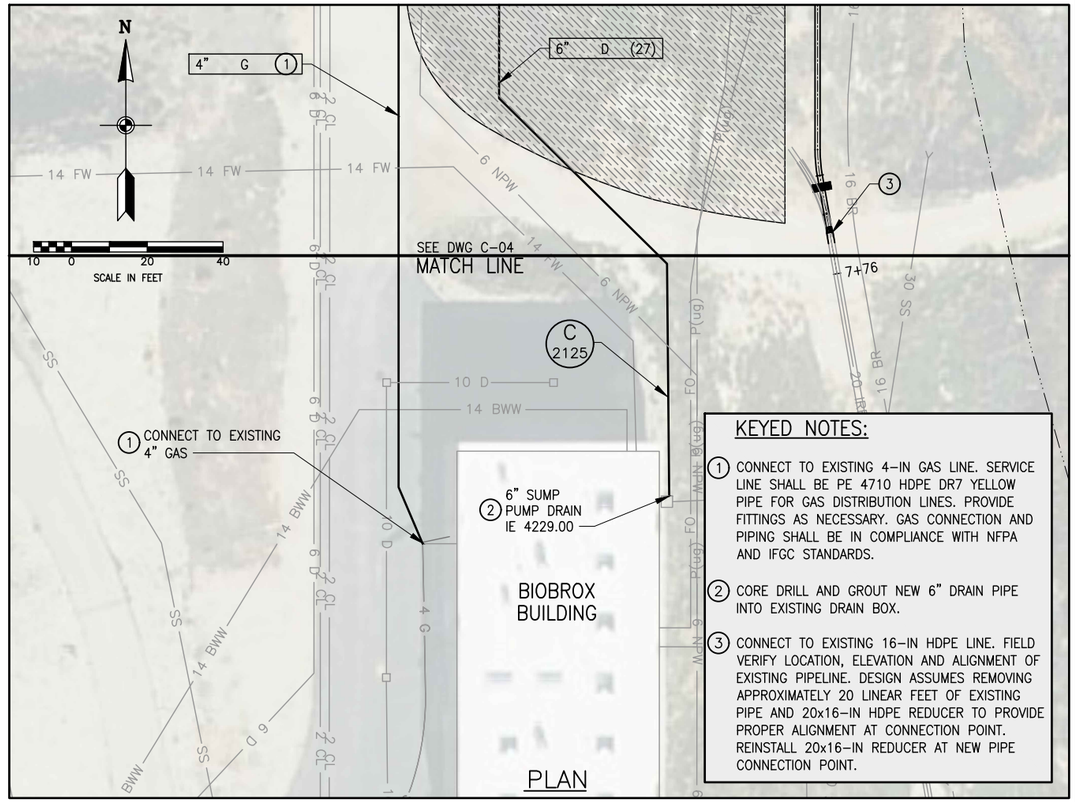
A / --



SECTION

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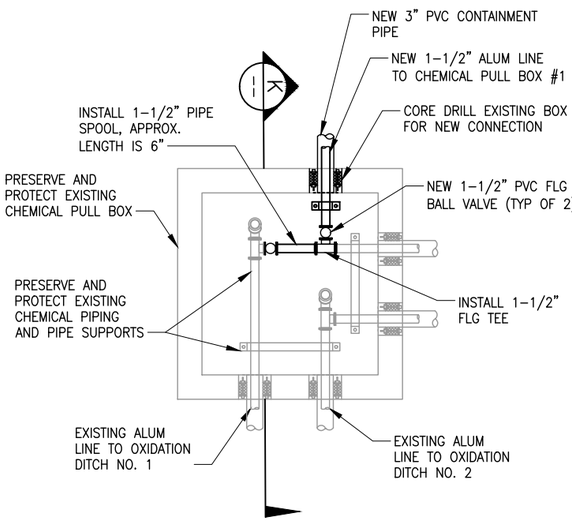
B / --



PLAN

KEYED NOTES:

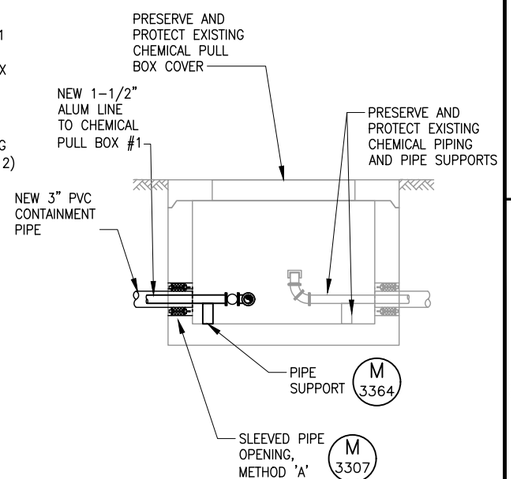
1. CONNECT TO EXISTING 4-IN GAS LINE. SERVICE LINE SHALL BE PE 4710 HDPE DR7 YELLOW PIPE FOR GAS DISTRIBUTION LINES. PROVIDE FITTINGS AS NECESSARY. GAS CONNECTION AND PIPING SHALL BE IN COMPLIANCE WITH NFPA AND IFGC STANDARDS.
2. CORE DRILL AND GROUT NEW 6" DRAIN PIPE INTO EXISTING DRAIN BOX.
3. CONNECT TO EXISTING 16-IN HDPE LINE. FIELD VERIFY LOCATION, ELEVATION AND ALIGNMENT OF EXISTING PIPELINE. DESIGN ASSUMES REMOVING APPROXIMATELY 20 LINEAR FEET OF EXISTING PIPE AND 20x16-IN HDPE REDUCER TO PROVIDE PROPER ALIGNMENT AT CONNECTION POINT. REINSTALL 20x16-IN REDUCER AT NEW PIPE CONNECTION POINT.



EXISTING MODIFIED CHEMICAL PULL BOX

SCALE: NTS

6 / C-01, C-04



SECTION

SCALE: NTS

K / --

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER NATHAN ROGERS 9-16-2022 STATE OF UTAH

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT

MAGNA WRF REUSE PROJECT

MAGNA, UT

DESIGN J.B./R.G. | REVIEW CHECKED J. BECKMAN | DRAWN R. GARCIA | APPROVED N. ROGERS

CIVIL

YARD PIPING PLAN AREA #2, CHEMICAL PULL BOX DETAILS - 1

DATE: DECEMBER 2022 | PROJECT NUMBER 483-20-02

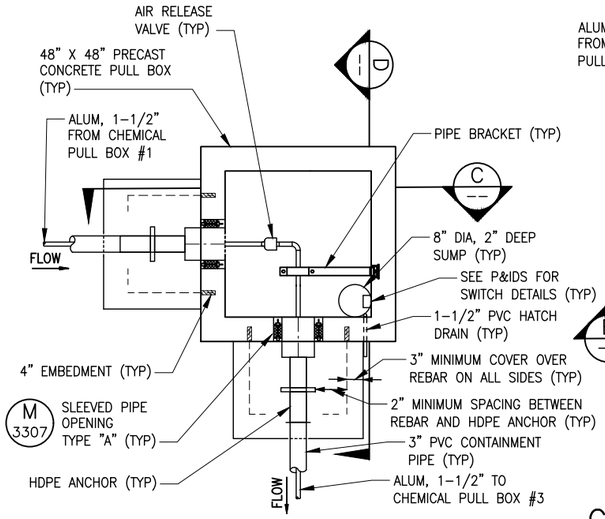
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

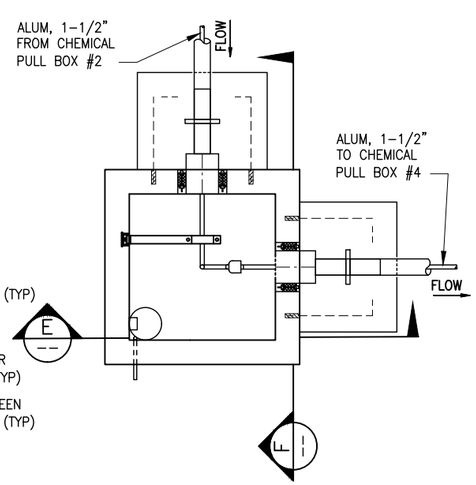
DRAWING NO. C-05

SHEET 012 OF 126

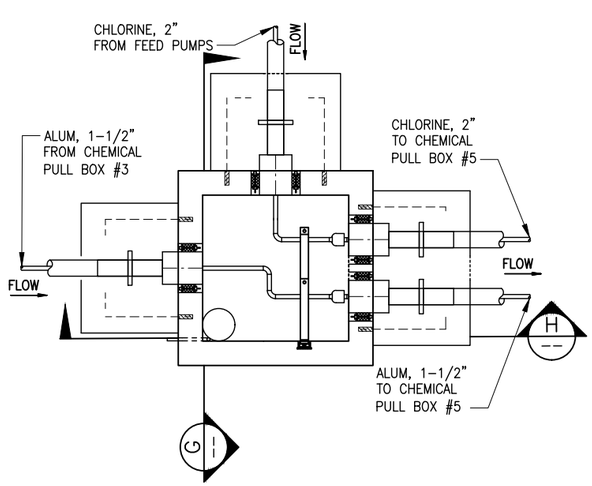
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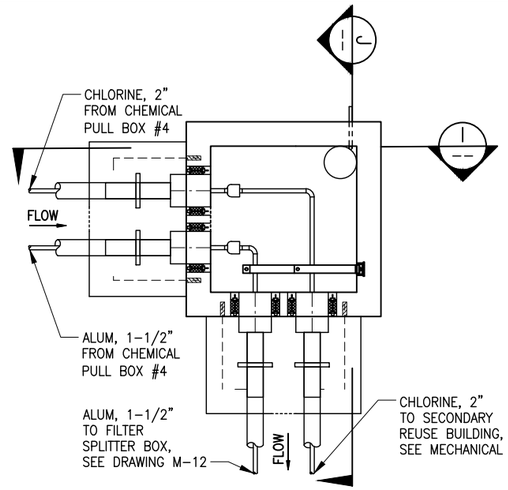
CHEMICAL PULL BOX #2 (2, C-01, C-04)
SCALE: NTS



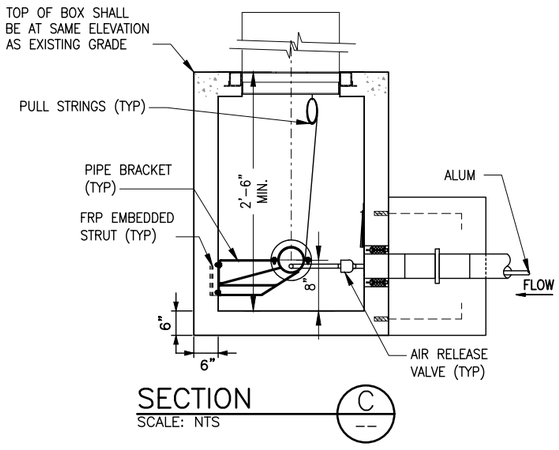
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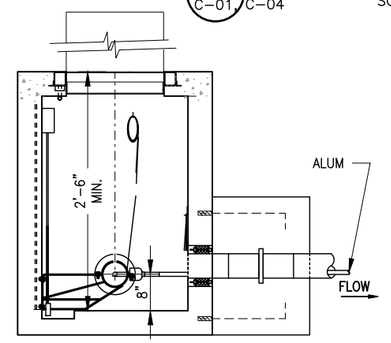
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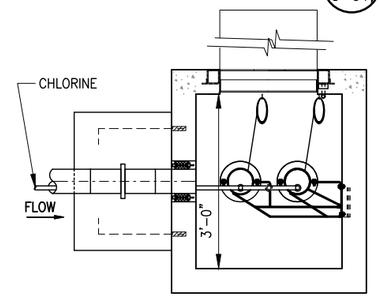
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SCALE: NTS



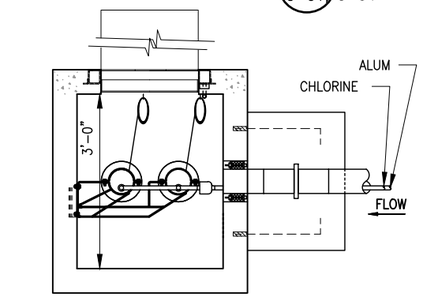
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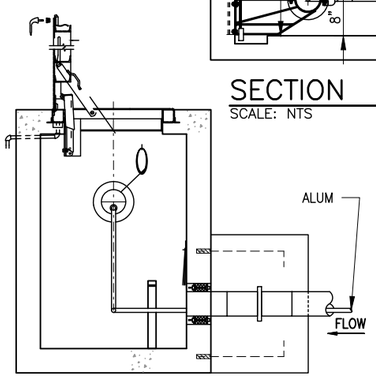
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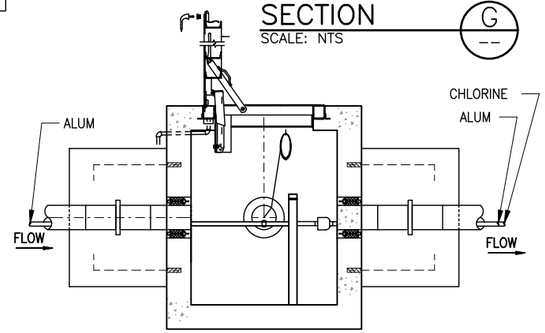
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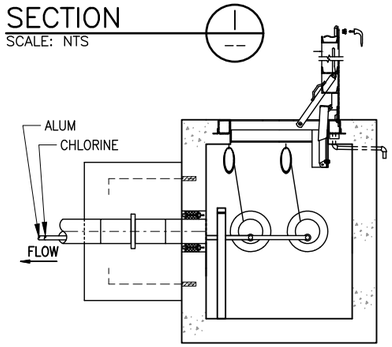
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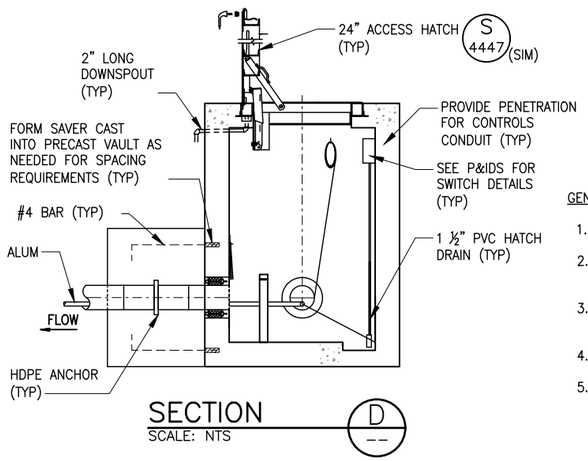
SECTION F
SCALE: NTS



SECTION H
SCALE: NTS



SECTION J
SCALE: NTS



SECTION D
SCALE: NTS

GENERAL NOTES:

1. SEE SHEET C-04 FOR CHLORINE AND ALUM CHEMICAL PIPING PLANS.
2. INSTALL SLEEVED PIPE OPENING AFTER CONCRETE HAS CURED FOR A MINIMUM OF 7 DAYS.
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BOWEN COLLINS & ASSOCIATES

12-15-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DESIGN: STANTEC/BC&A
DRAWN: STANTEC/BC&A
CHECKED: J. BECKMAN
APPROVED: N. ROGERS

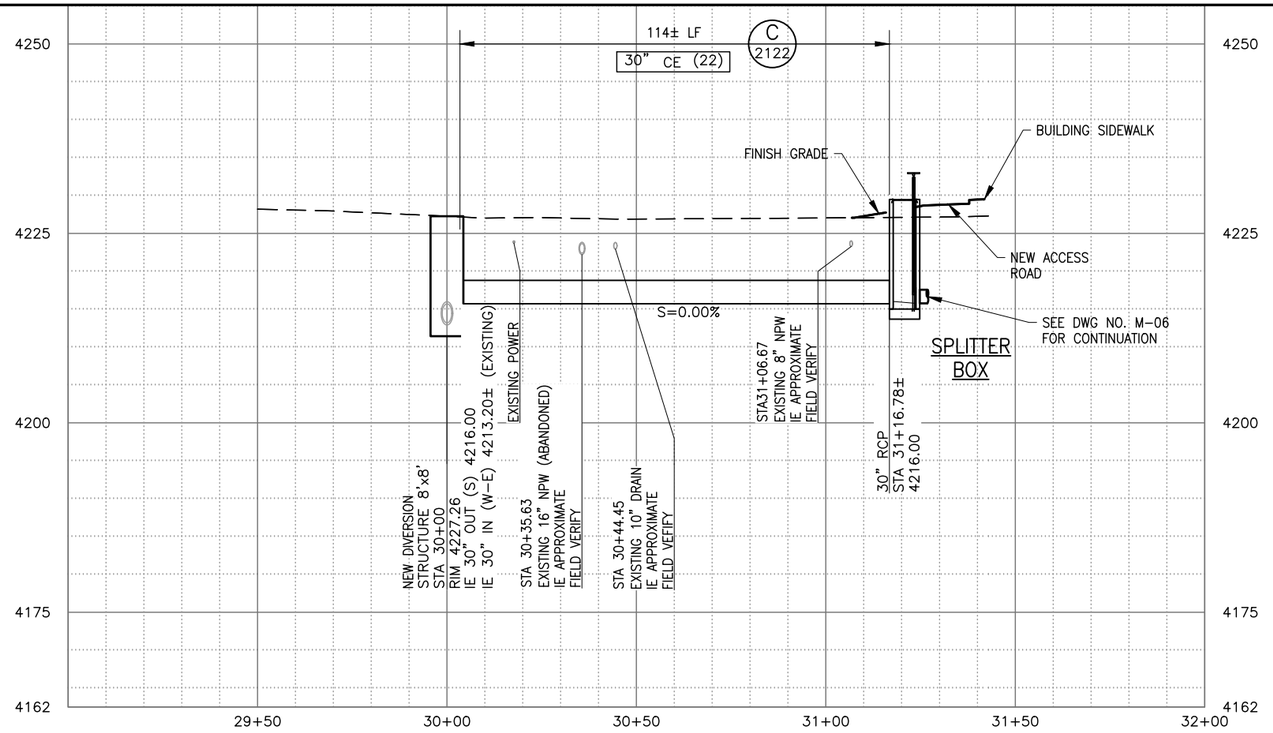
CIVIL

CHEMICAL PULL BOX DETAILS - 2

PROJECT NUMBER: 483-20-02
DATE: DECEMBER 2022

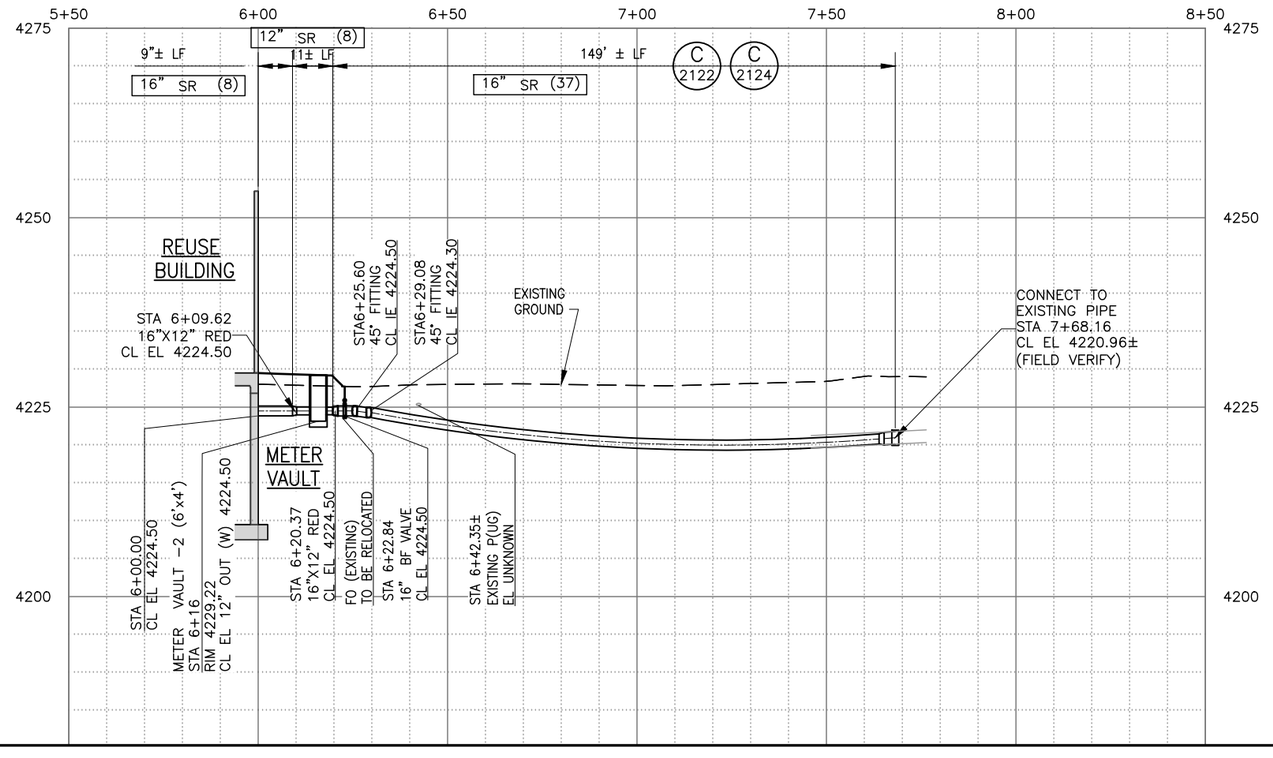
DRAWING NO. C-06
SHEET 013 OF 126

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PROFILE
SCALE: HORIZ 1"=20'
VERT 1"=2'

1
C-04



PROFILE
SCALE: HORIZ 1"=20'
VERT 1"=2'

2
C-04

IMAGE: HEXAGON

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER
NATHAN ROGERS
No. 11689007
STATE OF UTAH
12-15-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

REVIEW
CHECKED J. BECKMAN
APPROVED N. ROGERS

DESIGN
DESIGN N. ROGERS
DRAWN R. GARCIA

CIVIL
YARD PIPING PROFILES - 1

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
C-07

SHEET 014 OF 126

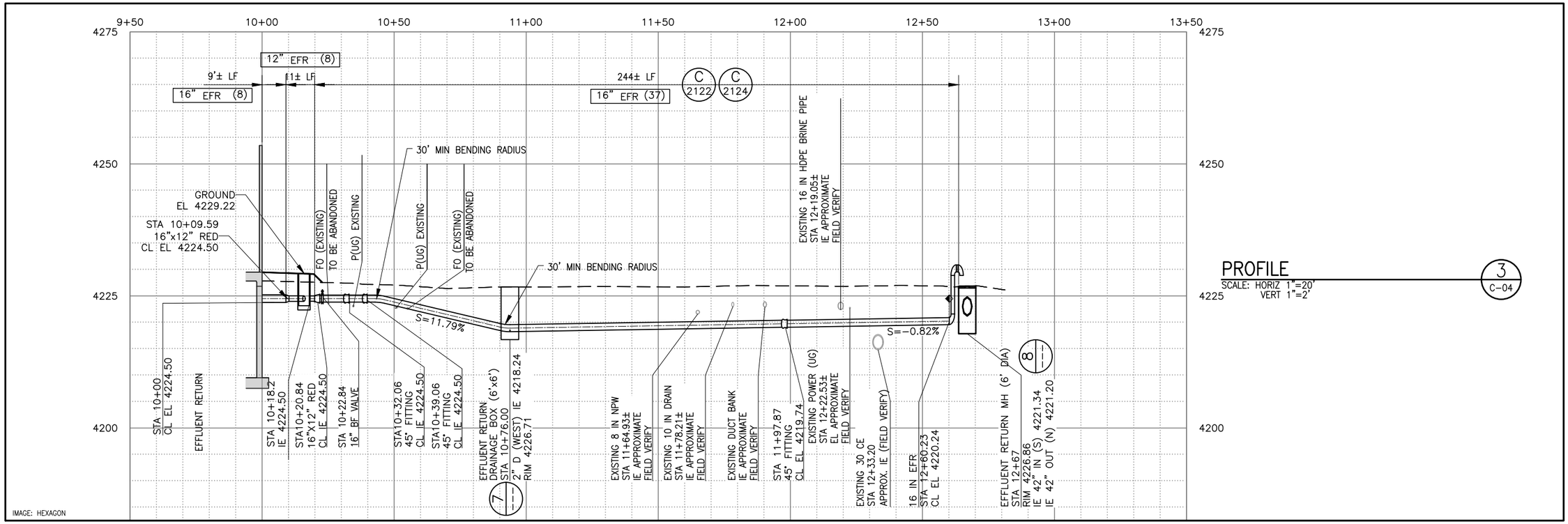
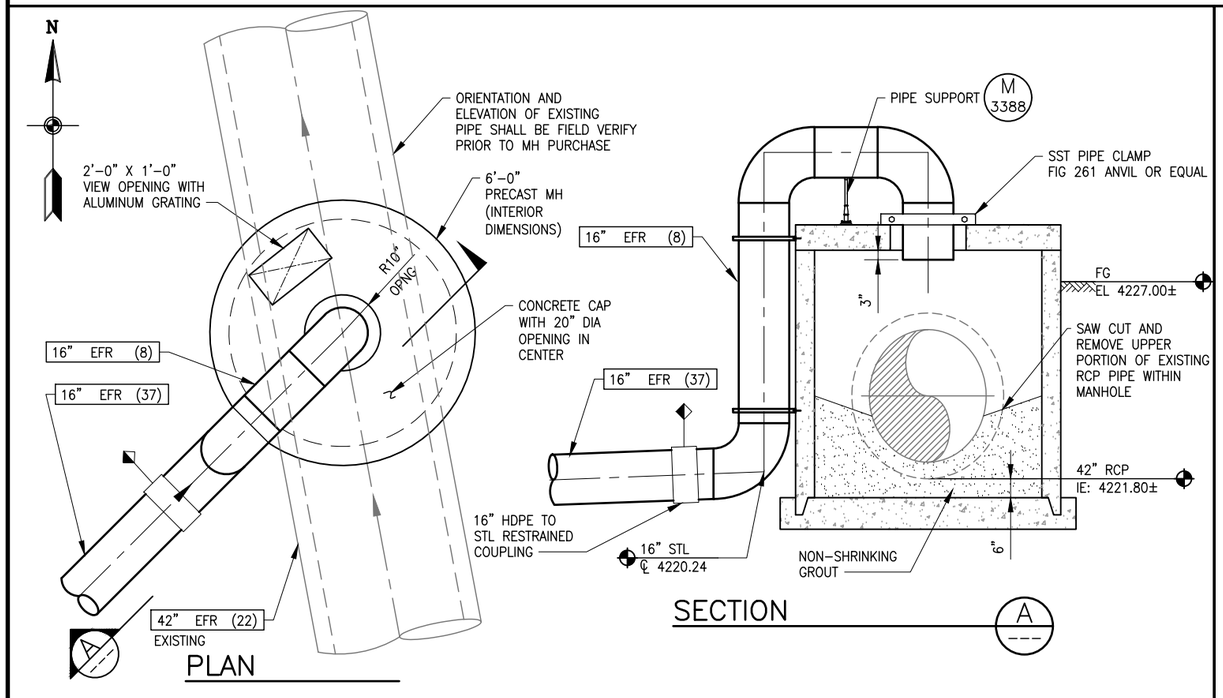


IMAGE: HEXAGON

PROFILE

SCALE: HORIZ 1"=20'
VERT 1"=2'

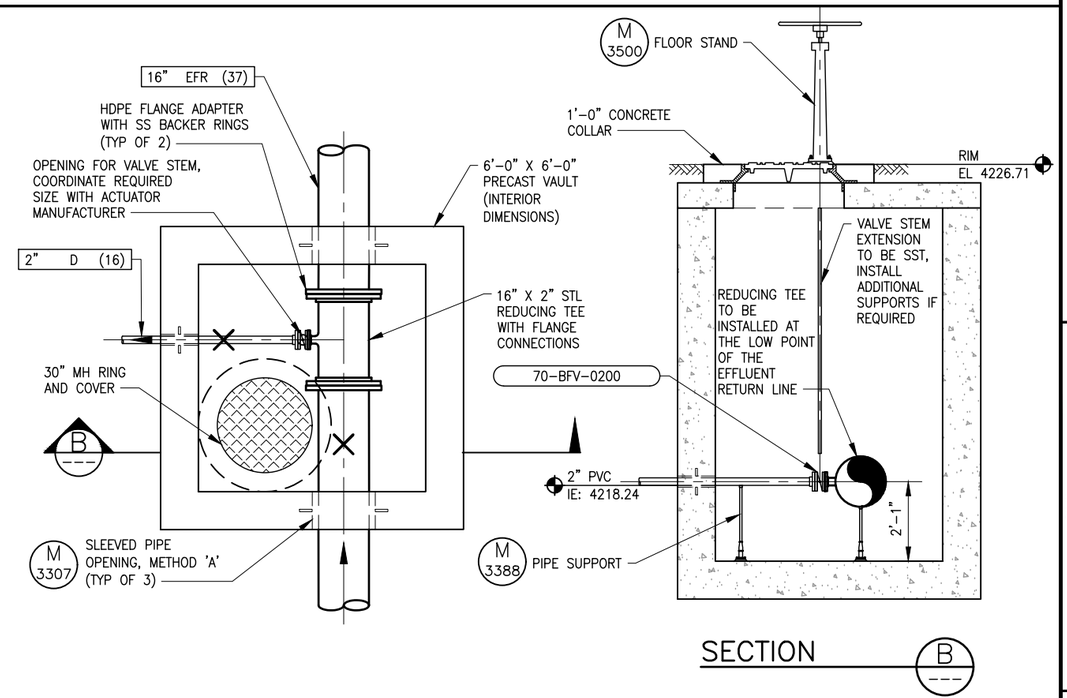
3 / C-04



EFFLUENT RETURN MANHOLE DETAIL

SCALE: 1"=2'

7 / C-01, C-04



EFFLUENT RETURN DRAINAGE VAULT

SCALE: 1"=2'

8 / C-01, C-04

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER — NATHAN ROGERS — NO. 16807 — STATE OF UTAH — 12/9/2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

DESIGN N. ROGERS
DRAWN R. GARCIA
REVIEW
CHECKED J. BECKMAN
APPROVED N. ROGERS

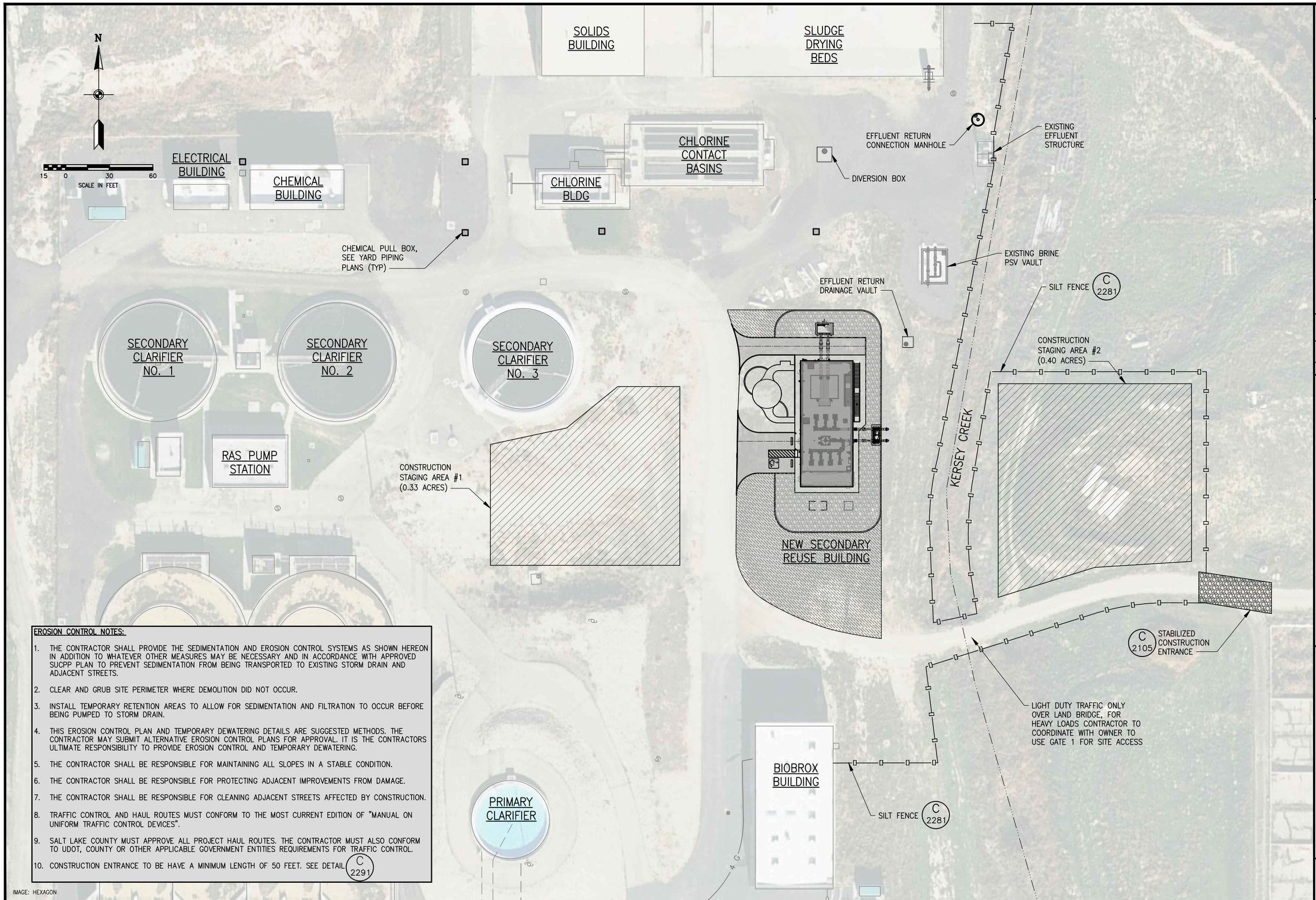
CIVIL
YARD PIPING PROFILES - 2

PROJECT NUMBER 483-20-02
DATE: DECEMBER 2022

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DRAWING NO. C-08
SHEET 015 OF 126

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EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL PROVIDE THE SEDIMENTATION AND EROSION CONTROL SYSTEMS AS SHOWN HEREON IN ADDITION TO WHATEVER OTHER MEASURES MAY BE NECESSARY AND IN ACCORDANCE WITH APPROVED SUCPP PLAN TO PREVENT SEDIMENTATION FROM BEING TRANSPORTED TO EXISTING STORM DRAIN AND ADJACENT STREETS.
2. CLEAR AND GRUB SITE PERIMETER WHERE DEMOLITION DID NOT OCCUR.
3. INSTALL TEMPORARY RETENTION AREAS TO ALLOW FOR SEDIMENTATION AND FILTRATION TO OCCUR BEFORE BEING PUMPED TO STORM DRAIN.
4. THIS EROSION CONTROL PLAN AND TEMPORARY DEWATERING DETAILS ARE SUGGESTED METHODS. THE CONTRACTOR MAY SUBMIT ALTERNATIVE EROSION CONTROL PLANS FOR APPROVAL. IT IS THE CONTRACTORS ULTIMATE RESPONSIBILITY TO PROVIDE EROSION CONTROL AND TEMPORARY DEWATERING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SLOPES IN A STABLE CONDITION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ADJACENT IMPROVEMENTS FROM DAMAGE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ADJACENT STREETS AFFECTED BY CONSTRUCTION.
8. TRAFFIC CONTROL AND HAUL ROUTES MUST CONFORM TO THE MOST CURRENT EDITION OF "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
9. SALT LAKE COUNTY MUST APPROVE ALL PROJECT HAUL ROUTES. THE CONTRACTOR MUST ALSO CONFORM TO UDOT, COUNTY OR OTHER APPLICABLE GOVERNMENT ENTITIES REQUIREMENTS FOR TRAFFIC CONTROL.
10. CONSTRUCTION ENTRANCE TO BE HAVE A MINIMUM LENGTH OF 50 FEET. SEE DETAIL C 2291

IMAGE: HEXAGON

P:\Magna Water District\483-20-02 Reuse Projects\FINAL DESIGN\2.0 Design Phase\2.9 Drawings\sht\4832002_C-09.dwg Plotted: 12/9/2022 10:53 AM By: Nate Rogers

BOWEN COLLINS & ASSOCIATES

PROFESSIONAL ENGINEER NATHAN ROGERS NO. 11680 STATE OF UTAH 12-15-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

DESIGN N. ROGERS
DRAWN R. GARCIA
REVIEW
CHECKED J. BECKMAN
APPROVED N. ROGERS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

CIVIL

EROSION CONTROL PLAN

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
C-09
SHEET 016 OF 126

LANDSCAPE NOTES:

1. CHANGES TO IRRIGATION SYSTEM DESIGN OR LANDSCAPING DESIGN MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

2. ALL CONTRACTORS SHALL COMPLY WITH IA STANDARDS STANDARDS AND DETAILS WHEN INSTALLING THE IRRIGATION SYSTEM AND INSTALLING LANDSCAPING AS WELL AS LANDSCAPE CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE STATE AND CITY/COUNTY CODES.

3. ALL LANDSCAPING AND IRRIGATION MUST BE MAINTAINED BY CONTRACTOR FOR 30 DAYS AFTER SUBSTANTIAL COMPLETION. CONTRACTOR SHALL WARRANTY THE IRRIGATION AND LANDSCAPING FOR 1 YEAR AFTER SUBSTANTIAL COMPLETION.

4. ALL CONTRACTORS SHALL SUBMIT, TO THE OWNER, TWO COPIES OF AN APPROVED SET OF LANDSCAPE AND IRRIGATION DRAWINGS, PRIOR TO THE WARRANTY PERIOD INSPECTION.

5. THE LANDSCAPE PLANTING ARE TO BE USED IN CONJUNCTION WITH THE SITE AND ELECTRICAL PLANS TO FORM COMPLETE INFORMATION FOR THIS REFER TO SITE PLAN FOR EXISTING AND PROPOSED DEVELOPMENT AND AREAS OF CONSTRUCTION.

6. THE CONTRACTOR SHALL EXAMINE THE SITE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND NOTIFY THE OWNER IN WRITING OF UNSATISFACTORY CONDITIONS. DO NOT PROCEED UNTIL CONDITIONS HAVE BEEN CORRECTED.

7. BEFORE STARTING WORK, CONTRACTOR SHALL CONTACT APPROPRIATE UTILITY COMPANIES FOR EXISTING AND PROPOSED UNDERGROUND UTILITIES, IRRIGATION SLEEVES, ELECTRICAL CONDUITS, SIGNAGE, ETC. CONTRACTOR SHALL REPAIR ALL DAMAGED IMPROVEMENTS AT CONTRACTORS EXPENSE.

8. ALL SHRUB AND TREE LOCATIONS ARE TO BE STAKED OUT ON SITE FOR APPROVAL BY OWNER OR LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

9. SEE SPECIFICATIONS FOR TOPSOIL AND MULCH PLACEMENT. TOPSOIL TO BE APPLIED AT A DEPTH OF 6–INCHES IN TURF AREAS AND 12–INCHES IN ROCK MULCH AREAS. TOPSOIL SHALL BE PLACED ONLY AROUND THE FULL MATURE CANOPY OF PLANT MATERIALS. TOPSOIL DOES NOT NEED TO BE APPLIED TO AREAS WITHIN THE GRAVEL BEDS THAT DO NOT HAVE PLANTINGS.

10. STAGING AREAS SHALL BE SEEDED AND RESTORED TO PRE–EXISTING GRADES. SEEDING AREAS TO BE ESTABLISHED TO A UNIFORM COVERAGE OF 85 PERCENT. AREAS THAT ARE BELOW 85 PERCENT COVERAGE SHALL BE RE–SEEDED. BROADCAST SEEDING IS NOT ALLOWED, ONLY DRILL OR HYDROMULCH WITH SEED. THIS PERTAINS TO AREAS THAT REQUIRE RESTORATION DUE TO DISTURBANCE OR STAGING. SEE SEED MIX BELOW FOR SPECIES AND APPLICATION RATE.

11. PROVIDE LANDSCAPE AND IRRIGATION SYSTEM MAINTENANCE FOR 30 DAYS AFTER SUBSTANTIAL COMPLETION OF THE LANDSCAPE INSTALLATION. LANDSCAPE MAINTENANCE SHALL INCLUDE ALL FERTILIZING, WEEDING, TRIMMING, MOWING, WATERING, PLANT REPLACEMENTS, RESEEDING BARE AREAS, LANDSCAPE AND IRRIGATION SYSTEM REPAIRS AS REQUIRED.

12. LANDSCAPE CONTRACTOR TO PROVIDE 1–YEAR WARRANTY AFTER SUBSTANTIAL COMPLETION FOR LANDSCAPE AND IRRIGATION.

13. GRADING, TOPSOIL PLACEMENT AND COMPACTED SOILS:
FINISH SUBGRADE AND TOPSOIL PLACEMENT AND GRADING SHALL CONSIST OF:

    13.1. PREPARE SUBGRADE BY ROUGH GRADING AND REMOVING ALL IRREGULARITIES AND DEBRIS, THEN TILL AND SCARIFY SUBSOIL TO A DEPTH OF 12 INCHES BEFORE PLACING TOPSOIL. PROVIDE LASER LEVELING ON LARGE FLAT AREAS TO CREATE A UNIFORM LEVEL SUBGRADE.

    13.2. SUBGRADE SOIL SHALL BE IN A LOOSENED AND ROUGH SURFACE FINISH BEFORE TOPSOIL IS PLACED OVER SUBGRADE. (SUBGRADE SURFACE SHALL NOT BE SMOOTH, BUT A ROUGH SURFACE SHALL EXIST FOR A TRANSITION ZONE OF TOPSOIL TO SUBSOIL). IF AREAS OF SUBGRADE BECOME COMPACTED BEFORE TOPSOIL IS PLACED, SUBGRADE SHALL BE TILLED AGAIN BEFORE TOPSOIL PLACEMENT.

    13.3. PLACING ALL SOIL ADDITIVES AND FERTILIZERS FOR THE AREAS AS NOTED ON THE PLAN AND NOTES. THEN TILL (NO SCARIFYING) ADDITIVES TO A DEPTH OF 4–INCHES.

    13.4. AFTER TILLING, BRING AREAS TO UNIFORM GRADES BY FLOATING AND/OR HAND RAKING. IN LARGE OPEN LEVEL AREAS, PERFORM LASER LEVELING TO CREATE UNIFORM LEVEL AREAS.

    13.5. MAKE MINOR ADJUSTMENT OF FINISH GRADES AS DIRECTED BY THE DISTRICT OR LANDSCAPE ARCHITECT.

    13.6. REMOVE WASTE MATERIALS OVER 1" IN SIZE SUCH AS STONES, ROOTS, OR OTHER UNDESIRABLE FOREIGN MATERIALS AND FINISH RAKING, DISHING, DRAGGING, AND SMOOTHING SOIL READY FOR PLANTING.

    13.7. NO GRADING OR SOIL PLACEMENT SHALL BE UNDERTAKEN WHEN SOILS ARE WET OR FROZEN.

14. AREAS REQUIRING TRENCHING OR STAGING ACTIVITIES CONTRACTOR TO SEED DISTURBED AREA TO MATCH EXISTING. ANY DAMAGES DONE TO FENCING, ADJACENT PROPERTIES, OR EXISTING IRRIGATION SYSTEMS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DISTRICT.

15. ALL DISTURBED AND AREAS FOR STAGING OUTSIDE OF THE PROJECT CORRIDOR SHALL BE RESTORED TO EXISTING CONDITIONS.

16. BOULDERS SHALL BE PLACED $\frac{1}{3}$ INTO THE GROUND TO PROVIDE STABILITY.

17. CONTRACTOR SHALL APPLY WEED BARRIER FABRIC BELOW ALL ROCK MULCH AREAS. FABRIC SHALL BE DEWITT PRO 5 OR APPROVED EQUAL.

BOWEN COLLINS & ASSOCIATES

LICENSED LANDSCAPE ARCHITECT No. 5278822 JANET M. BECKMAN STATE OF UTAH 12-15-2022

REVISIONS

NO.	DATE	REV. BY	DESCRIPTION

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DESIGN J. TSANDES
DRAWN C. GLABAU
REVIEW CHECKED J. BECKMAN
APPROVED J. TSANDES

LANDSCAPE

LANDSCAPE NOTES AND SCHEDULE

PROJECT NUMBER 483-20-02
DATE: DECEMBER 2022

DRAWING NO.
L-01
SHEET 017 OF 126

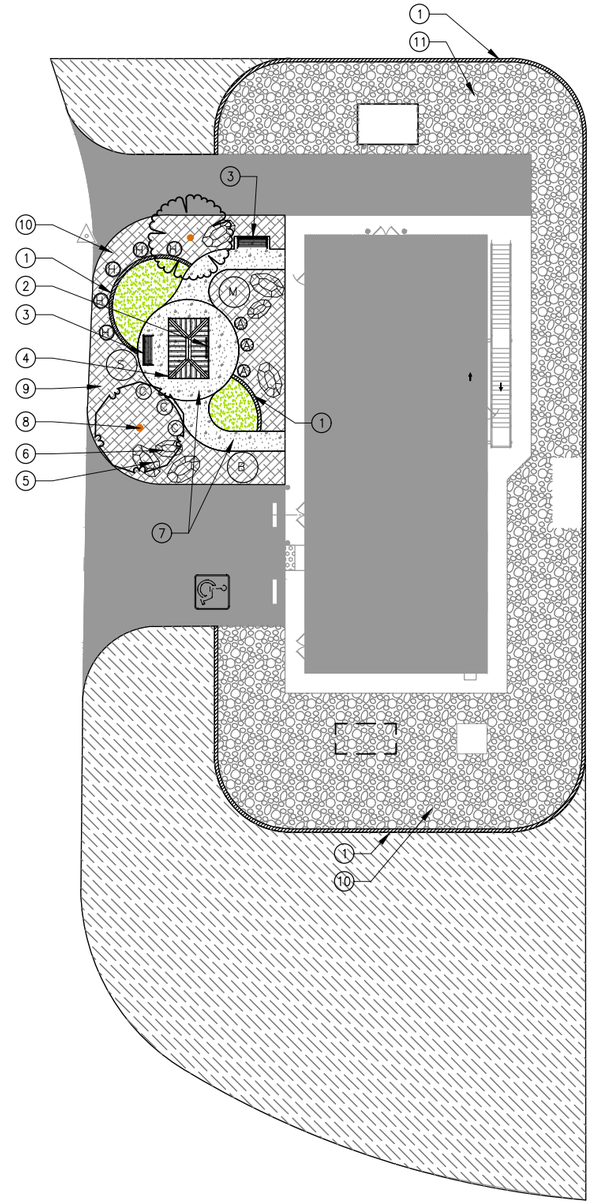
P:\Magna Water District\483-20-02 Reuse Projects\FINAL DESIGN\2.0 Design Phase\2.9 Drawings\sht\4832002_L-01.dwg Plotted: 12/9/2022 8:58 AM By: Nate Rogers

TREES	BOTANICAL / COMMON NAME	SIZE	QTY
	PRUNUS CERASIFERA 'THUNDERCLOUD' THUNDERCLOUD PURPLE-LEAF PLUM	2" CAL	1
	ZELKOVA SERRATA 'JFS-KW1' CITY SPRITE® JAPANESE ZELKOVA	2" CAL	1
SHRUBS	BOTANICAL / COMMON NAME	SIZE	QTY
B	BUDDLEJA X 'MISS MOLLY' MISS MOLLY BUTTERFLY BUSH	5 GAL	1
C	CARYOPTERIS INCANA 'PAVILION PINK' PAVILION PINK BLUEBEARD	5 GAL	3
M	PHILADELPHUS X VIRGINALIS 'MINNESOTA SNOWFLAKE' MINNESOTA SNOWFLAKE MOCKORANGE	5 GAL	1
S	SYRINGA MEYERI 'PALIBIN' DWARF KOREAN LILAC	5 GAL	1
ANNUALS/PERENNIALS	BOTANICAL / COMMON NAME	SIZE	QTY
H	HEMEROCALLIS X 'HAPPY RETURNS' HAPPY RETURNS DAYLILY	1 GAL	5
GRASSES	BOTANICAL / COMMON NAME	SIZE	QTY
A	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' KARL FOERSTER FEATHER REED GRASS	5 GAL	3
GROUND COVERS	BOTANICAL / COMMON NAME	SIZE	QTY
	ASPHALT MILLINGS COMPACTED ASPHALT MILLINGS FROM EXISTING SITE. MILLINGS TO BE PROVIDED BY DISTRICT AND INSTALLED BY CONTRACTOR AT A DEPTH OF 6-INCHES WITH 90% COMPACTION. CONTRACTOR TO SCREEN FOR DEBRIS AND ROCK OVER 4-INCH IN DIAMETER.	FLAT	7,483 SF
	BIONATIVE SOD BY BIOGRASS	SOD	223 SF
	CONCRETE CONCRETE SIDEWALK AND PATIO AREAS. PER DETAIL L-2819.	FLAT	550 SF
	CONCRETE MOW CURB 8" WIDE CONCRETE MOW CURB	FLAT	251 SF
	GRAVEL MULCH ROCKUTAH 2-4" SOUTH TOWN COBBLE OR APPROVED EQUAL OVER WEED BARRIER FABRIC. ROCK TO BE PLACED AT A DEPTH 2X'S THE DIAMETER OF ROCK.	FLAT	4,388 SF
	GRAVEL MULCH ROCKUTAH 2" PARADISE GRAVEL OR APPROVED EQUAL OVER WEED BARRIER FABRIC. ROCK TO BE PLACED AT A DEPTH 2X'S THE DIAMETER OF ROCK.	FLAT	1,161 SF

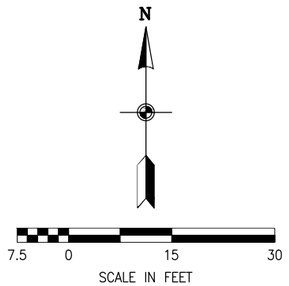
LANDSCAPE NOTES:

1. 8" CONCRETE MOW CURB TO SEPARATE VARYING GROUND COVER MATERIALS AND BOUNDARIES. SEE SHEET L-03. 380 LF. (L 2801)
2. INSTALL (1) UPRIGHT (DOUBLE SIDED) NPS STYLE EXHIBITS BASE SIGN BY INTERPRETIVE GRAPHICS OR APPROVED EQUAL FOR SECONDARY WATER INFORMATION. INSTALL PER MANUFACTURES STANDARDS. GRAPHICS TO BE PROVIDED BY OWNER/OR LANDSCAPE ARCHITECT.
3. INSTALL (2) TALLGRASS BACKED BENCHES BY SITESCAPES AS SHOWN ON DETAIL ON SHEET GL-01. INSTALL PER MANUFACTURERS SPECIFICATIONS. (L 2812)
4. INSTALL (1) 8'x 12' POLIGON HIP ROOF RAMADA PAVILION PER MANUFACTURERS SPECIFICATIONS. CONTRACTOR TO PROVIDE CONCRETE FOOTINGS PER MANUFACTURE SPECIFICATION THAT ARE APPROPRIATELY DESIGNED FOR AREA WIND AND SNOW LOAD. (L 2813)
5. PLACE (4) 4'-5' BOULDERS FROM THE TREATMENT PLANT WITH THE BOTTOM ⅓ BURIED.
6. PLACE (2) 2'-3' BOULDERS FROM THE TREATMENT PLANT WITH THE BOTTOM ⅓ BURIED.
7. 4" THICK CONCRETE SIDEWALK AND PATIO AREA. (C 2163)
8. PLANT TREES, SEE SHEET GL-01. (L 2862)
9. PLANT SHRUBS, PERENNIALS, AND GRASSES, SEE SHEET GL-01. (L 2866)
10. INSTALL ALL ROCK MULCH AREAS WITH WEED BARRIER FABRIC. SEE SHEET GL-01. (L 2818)

NOTE: SEE GL-01 FOR LANDSCAPE AND SITE FURNISHING DETAILS.



PLAN



BOWEN COLLINS ASSOCIATES

LICENSED LANDSCAPE ARCHITECT No. 5278822 JARED R. TSANDES STATE OF UTAH 12-15-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

DESIGN J. TSANDES
DRAWN C. GLABAU

CHECKED J. BECKMAN
APPROVED J. TSANDES

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

LANDSCAPE
LANDSCAPE PLAN

PROJECT NUMBER 483-20-02
DATE: DECEMBER 2022

DRAWING NO. L-02
SHEET 018 OF 126

IRRIGATION NOTES

1. THESE IRRIGATION NOTES ARE PART OF THE IRRIGATION CONSTRUCTION DOCUMENTS PACKAGE (HEREAFTER REFERRED TO AS CD'S). COMPLETE CD'S SHALL INCLUDE ALL OF THE FOLLOWING: PLAN DRAWINGS, LEGEND, NOTES, DETAILS AND SPECIFICATION SECTION. CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND BE FAMILIAR WITH ALL COMPONENTS IN THE CD'S PACKAGE, ALL OF WHICH ARE NECESSARY TO CORRECTLY BID AND BUILD THE IRRIGATION SYSTEM FOR THIS PROJECT.

2. IRRIGATION CD'S ARE BASED ON DOCUMENTS, PLANS OR DIRECTIONS PROVIDED BY OTHERS TO THE IRRIGATION CONSULTANT.

3. THE IRRIGATION DESIGN IS BASED ON A MINIMUM POC SIZE, A MINIMUM DYNAMIC PRESSURE AT THE POC, AND A MINIMUM WATER VOLUME AT THE POC. THIS DESIGN ASSUMES A MINIMUM OF A 1" POC, @ 55 PSI, AND 13 GPM. ACTUAL SITE CONDITIONS MAY VARY FROM THESE PARAMETERS. SITE CONDITIONS WHICH VARY FROM THE POC SIZE, PRESSURE OR VOLUME MAY RENDER THE INSTALLATION NON-OPERABLE AND OR MAY REQUIRE RE-DESIGN.

4. IRRIGATION DESIGN INTENT ASSUMES A PEAK ET OF 1.75" PER WEEK, THAT ALL OF THE IRRIGATED AREA SHALL BE WATERED IN AN 8 HOUR WATERING WINDOW, PLACING 1/2" OF WATER PER APPLICATION, WITH A 4 DAY PER WEEK WATERING SCHEDULE.

5. UTILITY LOCATIONS & DEPTHS, FINAL GRADES, HARDSCAPE FEATURES AND OR PLANTINGS MAY NOT BE INDICATED WITHIN THE IRRIGATION CD'S. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW OF OTHER PLANS, AND/OR SITE VERIFICATION OF THESE ITEMS. IRRIGATION CONTRACTOR SHALL VERIFY LOCATION OF EXISTING FEATURES OR OTHER SITE IMPROVEMENTS THAT WILL AFFECT OR BE AFFECTED BY IRRIGATION SYSTEM INSTALLATION. IF ANY PART OF THE CD'S CANNOT BE FOLLOWED DUE TO EXISTING OR PROPOSED CONDITIONS CONTACT THE OWNER APPROVED REPRESENTATIVE (OAR) FOR INSTRUCTIONS PRIOR TO COMMENCING OR PROCEEDING WITH THAT WORK.

6. CONTRACTOR SHALL SELF-VERIFY MATERIAL COUNTS AND SQUARE FOOTAGES. ANY QUANTITIES SHOWN IN IRRIGATION LEGEND ARE PROVIDED AS COURTESY OWNER INFORMATION ONLY. SHOWN PLAN QUANTITIES SHALL TAKE PRECEDENCE OVER ANY LISTED LEGEND QUANTITIES. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE LARGER QUANTITY INDICATED.

7. CONTRACTOR SHALL CONTACT THE LOCAL UNDERGROUND UTILITY PROVIDER OR LOCATOR SERVICES FOR UTILITY LOCATION AND IDENTIFICATION 48 HOURS PRIOR TO ANY EXCAVATION ON PROJECT SITE.

8. PERFORM EXCAVATION IN THE VICINITY OF UNDERGROUND UTILITIES AND EXISTING BUILDINGS, FEATURES OR HARDSCAPES WITH CARE; AND IF NECESSARY, BY HAND. CONTRACTOR BEARS FULL RESPONSIBILITY FOR THIS WORK AND DISRUPTION OR DAMAGE SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER.

9. EXACT LOCATIONS OF MAJOR IRRIGATION COMPONENTS AND ROUTING OF MAIN LINE AND WIRING TO BE APPROVED BY THE OAR IN THE FIELD PRIOR TO INSTALLATION. IRRIGATION MAIN LINE AND/OR OTHER COMPONENTS ARE SHOWN SCHEMATICALLY ON PLAN FOR GRAPHIC CLARITY ONLY. ALL IRRIGATION COMPONENTS SHALL BE LOCATED IN LANDSCAPED AREAS.

10. IRRIGATION PLANS MAY SHOW ISOLATION VALVES AND OR REMOTE CONTROL VALVES (RCV'S) IN GROUPS AND LOCATIONS. CONTRACTOR SHALL PLACE RCV'S IN LOGICAL GROUPINGS AND LOCATIONS AS FIELD CONDITIONS PERMIT. ALL REMOTE CONTROL VALVES AND QUICK COUPLER VALVES SHALL BE ISOLATED FROM THE MAIN LINE VIA A MANIFOLD ISOLATION VALVE AS SHOWN IN DETAILS.

11. QUICK COUPLER VALVES IN LANDSCAPED AREAS SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO PLAN LOCATIONS. IRRIGATION CONTRACTOR MAY LOCATE QUICK COUPLER VALVES AT HIS DISCRETION, FOLLOWING DESIGN INTENT TO PLACE QUICK COUPLER VALVES SO THAT SPACING SHALL NOT EXCEED 200 FEET APART TO ALLOW FOR MANUAL HAND WATERING OF PLANT MATERIAL WITH 100 FEET OF HOSE.

12. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE ALL SLEEVES NECESSARY FOR MAIN LINE, WIRE AND LATERAL LINE ARE INSTALLED AS NEEDED, PRIOR TO HARDSCAPE FEATURES. NOT ALL SLEEVING NECESSARY TO COMPLETE THIS PROJECT MAY BE SHOWN ON PLAN. PORTIONS OF IRRIGATION SLEEVES MAY HAVE OR MAY NOT HAVE BEEN PREVIOUSLY INSTALLED BY OTHERS. COORDINATE LOCATION, INSTALLATION AND USAGE WITH GENERAL CONTRACTOR AND OR OAR.

13. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN EXISTING LANDSCAPE PLANT MATERIAL SERVICED BY EXISTING IRRIGATION SYSTEM IN A HEALTHY MANNER. CONTRACTOR SHALL NOT HAVE EXISTING IRRIGATION SYSTEM DISABLED FOR MORE THAN 48 HOURS AT ANY TIME. UPON DISABLING OR DEMOLISHING EXISTING IRRIGATION, CONTRACTOR SHALL INSTALL NEW MAIN AND WIRES TO RESTORE OPERATION IN NO MORE THAN 48 HOURS. CONTRACTOR SHALL BE RESPONSIBLE TO PREVENT DEBRIS FROM ENTERING EXISTING PIPING.

14. CONTRACTOR SHALL ENSURE THAT THERE IS PROPER COVERAGE AND OVERLAP FROM NEW IRRIGATION SYSTEM TO ANY EXISTING IRRIGATION SYSTEM. ANY DISCREPANCIES OR DIFFICULTIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.

15. IRRIGATION SOURCE IS RECLAIMED OR EFFLUENT WATER FROM THE TREATMENT PLANT. AS SUCH, 'PURPLE', RECLAIMED IRRIGATION PRODUCTS SHALL BE USED, INCLUDING:
    - VALVE BOXES AND LIDS
    - PIPE FOR MAIN AND LATERAL
    - QUICK COUPLER VALVE COVER
    - HUNTER ICV-XXX-G-FS-R REMOTE CONTROL VALVES
    - HUNTER PRS-30 R RECLAIMED SPRAY HEAD CAPS
    - HUNTER PCB-R BUBBLER NOZZLES

CRITICAL ANALYSIS

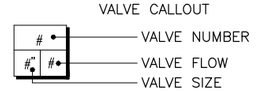
GENERATED:	2022-10-18 09:58
P.O.C. NUMBER: 01	
WATER SOURCE INFORMATION:	MINS REQ'D: 1", 13.0 GPM'S @ 55.0 PSI STATIC
FLOW AVAILABLE	
CUSTOM MAX FLOW:	13 GPM
FLOW AVAILABLE	13 GPM
PRESSURE AVAILABLE	
STATIC PRESSURE AT POC:	55 PSI
PRESSURE AVAILABLE:	55 PSI
DESIGN ANALYSIS	
MAXIMUM STATION FLOW:	7.25 GPM
FLOW AVAILABLE AT POC:	13 GPM
RESIDUAL FLOW AVAILABLE:	5.75 GPM
PRESSURE REQ. AT CRITICAL STATION:	33.18 PSI
LOSS FOR FITTINGS:	0.03 PSI
LOSS FOR MAIN LINE:	0.26 PSI
LOSS FOR POC TO VALVE ELEVATION:	0 PSI
LOSS FOR BACKFLOW:	14 PSI
CRITICAL STATION PRESSURE AT POC:	47.47 PSI
PRESSURE AVAILABLE:	55 PSI
RESIDUAL PRESSURE AVAILABLE:	7.53 PSI

IRRIGATION_SCHEDULE

SYMBOL	MANUFACTURER/MODEL	QTY
Q T H F	HUNTER PROS-06-PRS30-CV 10 SERIES	5
Q T H H H 10 F	HUNTER PROS-06-PRS30-CV 12 SERIES	3
25 50 10 20	HUNTER PCB	21

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	HUNTER ICV-G-FS 1", 1-1/2", 2", AND 3" PLASTIC ELECTRIC REMOTE CONTROL VALVES, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE. WITH FILTER SENTRY.	2
	HUNTER HQ-44LRC-R QUICK COUPLER VALVE, PURPLE RUBBER LOCKING COVER FOR RECLAIMED WATER USE, RED BRASS AND STAINLESS STEEL, WITH 1" NPT INLET, 2-PIECE BODY.	1
	MUELLER ORISEAL H-10288 STOP & WASTE VALVE	1
D	FORD B11-333 BRASS VALVE (USED AS DRAIN)	1
C	HYDRO POINT WTLC-C-06-PL HIGH-IMPACT PLASTIC NEMA 3R RATED, KEY-LOCK ENTRY, WALL MOUNT ENCLOSURE. INCLUDES METAL MOUNTING PLATE WITH BUILT-IN BUBBLE LEVEL.	1
F	AMIAD 1-S-STEEL SCREEN AMIAD 1" SUPER MANUAL PLASTIC FILTER, NPT THREAD, STEEL SCREEN ELEMENT. ENGINEERED-PLASTIC MATERIAL, MAXIMUM WORKING PRESSURE 150PSI.	1
POC	POTABLE POINT OF CONNECTION MINS REQ'D: 1", 13.0 GPM'S @ 55.0 PSI STATIC	1
———	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 SOLVENT WELD BELL & SPIGOT END PIPE, MINIMUM SIZE 1" / MAXIMUM SIZE 3". USE ONLY IPS WELD-ON BRAND P-70 PRIMER AND 711 GLUE FOR ALL SOLVENT WELD JOINTS. ALL LATERAL FITTINGS SHALL BE PVC S/40.	204.6 L.F.
— — — —	IRRIGATION MAINLINE: PVC SCHEDULE 40 SOLVENT WELD BELL & SPIGOT END PIPE, FOR MAIN LINES THROUGH 3". MUST USE S/80 FITTINGS, AND IPS WELD-ON BRAND P-70 PRIMER AND 711 GLUE FOR ALL JOINTS THROUGH 2". MUST USE LEEMCO JOINT RESTRAINT FITTINGS FOR 2-1/2" AND LARGER.	20.6 L.F.
= = = = = = = =	PIPE SLEEVE: PVC SCHEDULE 40 TYPICAL IRRIGATION PIPE SLEEVE. SEPARATE SLEEVES FOR PIPE AND WIRING, WIRING SHALL BE IN GRAY ELECTRICAL CONDUIT. EXTEND 12" BEYOND EDGES OF PAVING OR CONSTRUCTION.	32.3 L.F.

VALVE CALLOUT



BOWEN COLLINS & ASSOCIATES

LICENSED LANDSCAPE ARCHITECT No. 5278822 JAMES R. TSANDES STATE OF UTAH 12-15-2022

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

REVIEW
CHECKED J. BECKMAN
APPROVED J. TSANDES

DESIGN
DESIGN J. TSANDES
DRAWN C. GLABAU

LANDSCAPE

IRRIGATION NOTES & ANALYSIS

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
L-03
SHEET 019 OF 126

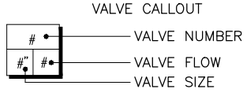
IRRIGATION SCHEDULE

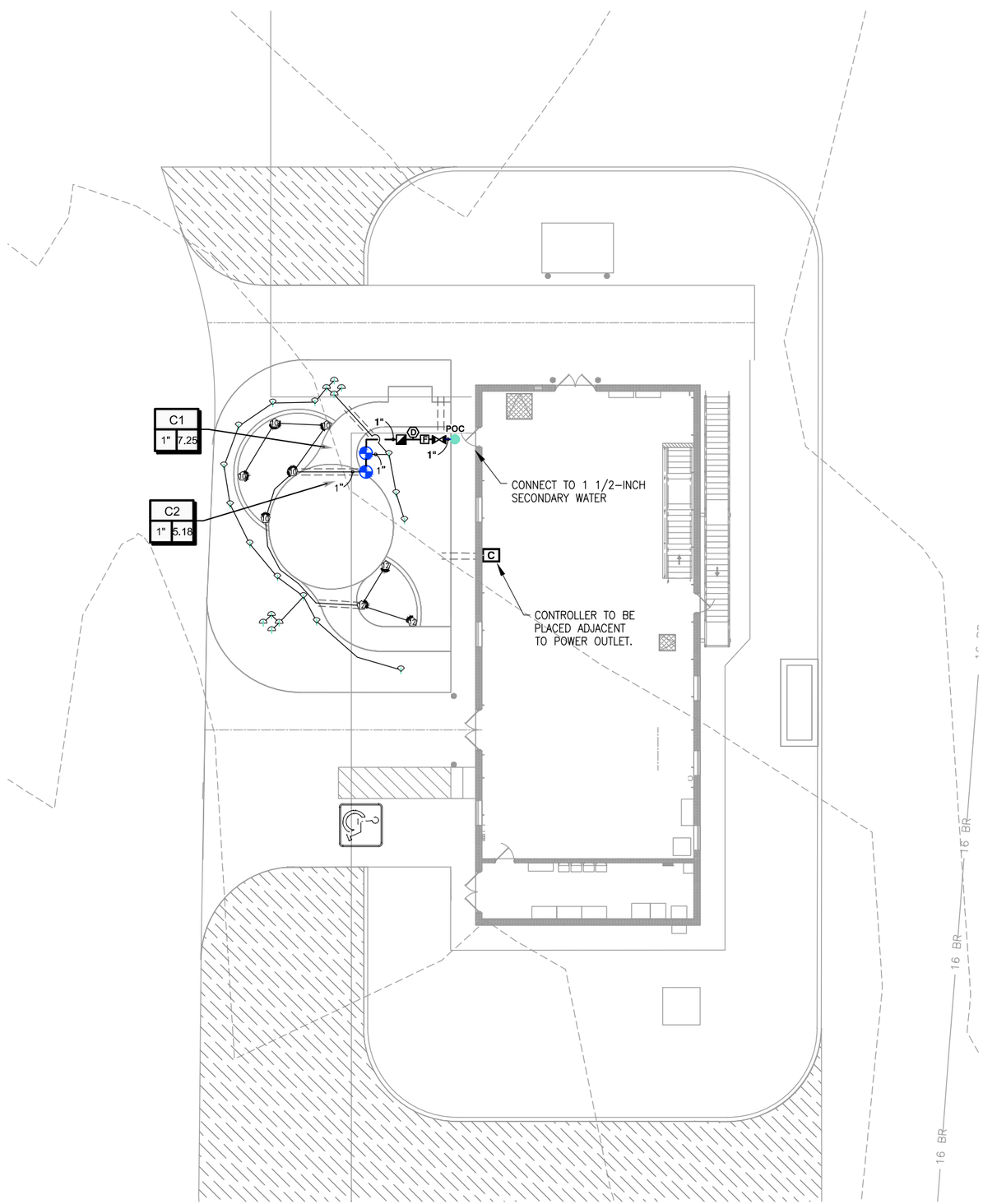
SYMBOL	MANUFACTURER/MODEL	QTY
10Q 10T 10H 10F	HUNTER PROS-06-PRS30-CV 10 SERIES	5
12Q 12T 12H 12H 12Q 12F	HUNTER PROS-06-PRS30-CV 12 SERIES	3
25 50 10 20	HUNTER PCB	21

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	HUNTER ICV-G-FS 1", 1-1/2", 2", AND 3" PLASTIC ELECTRIC REMOTE CONTROL VALVES, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE. WITH FILTER SENTRY.	2
	HUNTER HQ-44LRC-R QUICK COUPLER VALVE, PURPLE RUBBER LOCKING COVER FOR RECLAIMED WATER USE, RED BRASS AND STAINLESS STEEL, WITH 1" NPT INLET, 2-PIECE BODY.	1
	MUELLER ORISEAL H-10288 STOP & WASTE VALVE	1
D	FORD B11-333 BRASS VALVE (USED AS DRAIN)	1
C	HYDRO POINT WTLC-C-06-PL HIGH-IMPACT PLASTIC NEMA 3R RATED, KEY-LOCK ENTRY, WALL MOUNT ENCLOSURE. INCLUDES METAL MOUNTING PLATE WITH BUILT-IN BUBBLE LEVEL.	1
F	AMIAD 1-S-STEEL SCREEN AMIAD 1" SUPER MANUAL PLASTIC FILTER, NPT THREAD, STEEL SCREEN ELEMENT. ENGINEERED-PLASTIC MATERIAL, MAXIMUM WORKING PRESSURE 150PSI.	1
POC	POTABLE POINT OF CONNECTION MINS REQ'D: 1", 13.0 GPM'S @ 55.0 PSI STATIC	1
———	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 SOLVENT WELD BELL & SPIGOT END PIPE, MINIMUM SIZE 1" / MAXIMUM SIZE 3". USE ONLY IPS WELD-ON BRAND P-70 PRIMER AND 711 GLUE FOR ALL SOLVENT WELD JOINTS. ALL LATERAL FITTINGS SHALL BE PVC S/40.	204.6 L.F.
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========	PIPE SLEEVE: PVC SCHEDULE 40 TYPICAL IRRIGATION PIPE SLEEVE. SEPARATE SLEEVES FOR PIPE AND WIRING, WIRING SHALL BE IN GRAY ELECTRICAL CONDUIT. EXTEND 12" BEYOND EDGES OF PAVING OR CONSTRUCTION.	32.3 L.F.

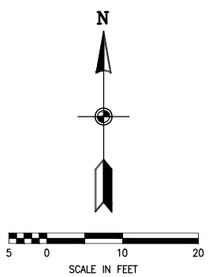
NOTE: SEE GL-02 FOR IRRIGATION DETAILS.

VALVE CALLOUT





PLAN



BOWEN COLLINS & ASSOCIATES

LICENSED LANDSCAPE ARCHITECT No. 5278822 STATE OF UTAH — 12-15-2022

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

DESIGN
DESIGN R. JACOBSEN
DRAWN R. JACOBSEN

REVIEW
CHECKED J. BECKMAN
APPROVED J. TSANDES

LANDSCAPE

IRRIGATION PLAN AND SCHEDULE

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
L-04
SHEET 020 OF 126

BUILDING CODE DATA

APPLICABLE CODES:

BUILDING CODE:	2018 INTERNATIONAL BUILDING CODE.
ELECTRICAL CODE:	2020 NATIONAL ELECTRICAL CODE.
PLUMBING CODE:	2018 INTERNATIONAL PLUMBING CODE.
MECHANICAL CODE:	2018 INTERNATIONAL MECHANICAL CODE.
ENERGY CODE:	2018 INTERNATIONAL ENERGY CONSERVATION CODE.
ACCESSIBILITY CODE:	2018 INTERNATIONAL BUILDING CODE (ICC/ANSI A117.1-2009)
FIRE CODE:	2018 INTERNATIONAL FIRE CODE.

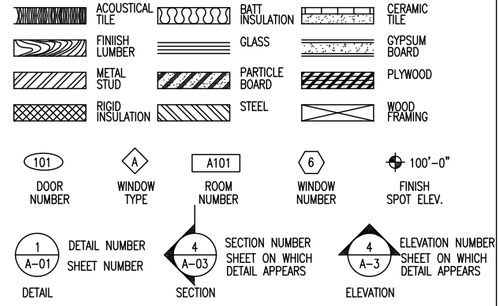
SECONDARY REUSE BUILDING

OCCUPANCY:	F-2 IBC 306
TYPE OF CONSTRUCTION:	II-B IBC TABLE 601
FIRE SPRINKLERS:	NONE IBC 903
STORIES:	1 IBC TABLE 504.4
STORIES ALLOWED:	3 IBC TABLE 504.4
BUILDING AREA:	MAIN FLOOR: 3,120 SF. DRY WELL: 225 SF.
BUILDING AREA ALLOWED:	23,000 SF IBC TABLE 506.2
BUILDING HEIGHT:	24'-8"
BUILDING HEIGHT ALLOWED:	55' IBC TABLE 504.3
OCCUPANT LOAD:	MAIN FLOOR: 3,120 SF / 300 = 11 OCCUPANTS DRY WELL: 225 SF / 300 = 1 OCCUPANT (IBC TABLE 1004.5 MECHANICAL EQUIPMENT ROOM)
TRAVEL DISTANCE:	MAIN FLOOR TRAVEL DISTANCE: 51'< 300' (OK) (IBC TABLE 1017.2 300' WITH OUT SPRINKLER SYSTEM) DRY WELL TRAVEL DISTANCE: 73'< 75' (OK) (IBC TABLE 1006.2.1 75' WITH OUT SPRINKLER SYSTEM)

ABBREVIATIONS

&	AND
∠	ANGLE
A.B.	ANCHOR BOLT
A.F.F.	ABOVE FINISHED FLOOR
ALUM.	ALUMINUM
APPROX.	APPROXIMATE
B.C.	BEGIN CURVE
BD.	BOARD
BLDG.	BUILDING
BOT.	BOTTOM
BRG.	BEARING
C.B.	CATCH BASIN
C.I.	CAST IRON
CL./℄	CENTERLINE
CLG.	CEILING
C.J.	CONSTRUCTION JOINT
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
△	DELTA ANGLE
D.B.E.	DECK BEARING ELEVATION
DIA./Ø	DIAMETER
DD.	DECK DRAIN
DET.	DETAIL
D.F.	DRINKING FOUNTAIN
DN.	DOWN
DWGS.	DRAWINGS
E.	EAST
EA.	EACH
E.C.	END CURVE
E.G.	EXISTING GRADE
E.J.	EXPANSION JOINT
ELEC.	ELECTRICAL/ELECTRIC
EL / ELEV.	ELEVATION
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.W.C.	ELECTRIC WATER COOLER
EXIST.	EXISTING
FND.	FOUNDATION
F.D.	FLOOR DRAIN
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.G.	FINISHED GRADE
FIN.	FINISH
F.S	FINISHED SURFACE
FL.	FLOOR
F.L.	FLOW LINE
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVANIZED
G.I.	GALVANIZED IRON
GYP.	GYPSUM
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HT.	HEIGHT
H.W.	HOT WATER
I.D.	INSIDE DIAMETER
IMBED.	IMBEDDED/IMBEDMENT
IN.	INCH
INV.	INVERT
INSUL.	INSULATION
J-BOX	JUNCTION BOX
JAN.	JANITOR
JT.	JOINT
L.F.	LINEAR FEET
LAV.	LAVATORY
LOC.	LOCATION
MAX.	MAXIMUM
MECH.	MECHANICAL
MEZZ.	MEZZANINE
MFG.	MANUFACTURER
MH	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MON.	MONUMENT
MTD.	MOUNTED
N	NORTH
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OPP.	OPPOSITE
P.I.	POINT OF INTERSECTION
PL.	PLATE
P. LAM.	PLASTIC LAMINATE
R	RADIUS
R.D.	ROOF DRAIN
REF.	REFRIGERATOR
REINF.	REINFORCING
REQ'D	REQUIRED
REV.	REVISED
RM.	ROOM
R.O.	ROUGH OPENING
S	SOUTH
S.C.	SOLID CORE
S.C.W.	SOLID CORE WOOD
SCHED.	SCHEDULE
SDMH	STORM DRAIN MANHOLE
SHT.	SHEET
SIM.	SIMILAR
SPEC'S	SPECIFICATIONS
SQ.	SQUARE
S.S.	STAINLESS STEEL
STA	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL/STRUCTURE
SUSP.	SUSPENDED
T	TANGENT
TEL.	TELEPHONE
TEMP.	TEMPORARY
T.C.	TOP OF GRATE
T.&G.	TONGUE AND GROOVE
T.O.	TOP OF
T.R	TOP OF RIM
TYP.	TYPICAL
VERT.	VERTICAL
VEST.	VESTIBULE
W	WEST / WATER
W/	WITH
W.C.	WATER CLOSET
W/O	WITHOUT
W.R.	WATER RESISTANT

SYMBOL LEGEND



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BOWEN COLLINS & ASSOCIATES

FRED L. THALMANN 129331 12/15/2022 STATE OF UTAH

NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UTAH

DESIGN F. THALMANN
DRAWN F. THALMANN
REVIEW
CHECKED J. BECKMAN
APPROVED F. THALMANN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

ARCHITECTURAL

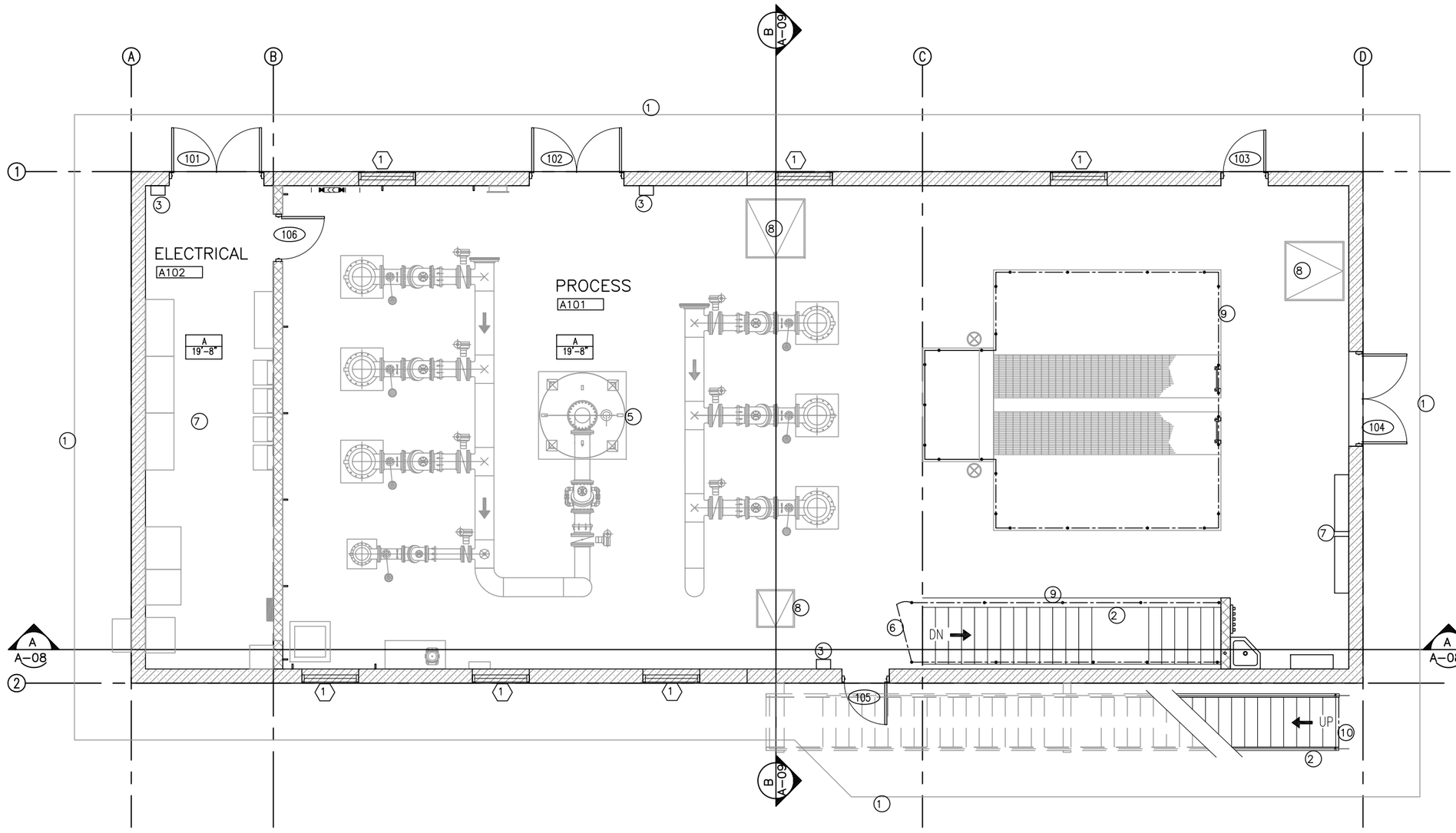
CODE DATA & ABBREVIATIONS

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
A-01

SHEET 021 OF 126

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MAIN FLOOR PLAN
1/4"=1'-0"

KEYED NOTES

1. CONCRETE SITE PAVING SEE CIVIL DRAWINGS
2. STAIR, SEE STRUCTURAL DRAWINGS
3. FIRE EXTINGUISHER AND CABINET. REFER TO DETAIL 11/GA-01
4. NOT USED
5. PROCESS EQUIPMENT & PIPING, SEE MECHANICAL DRAWINGS.
6. GATE SEE STRUCTURAL DRAWINGS
7. ELECTRICAL EQUIPMENT AND PANELS SEE ELECTRICAL DRAWINGS.
8. FLOOR HATCH, SEE STRUCTURAL DRAWINGS
9. STAINLESS STEEL GUARD RAILING, SEE STRUCTURAL DRAWINGS
10. GATE, SEE STRUCTURAL DRAWINGS

CEILING TYPES

A / HEIGHT — EXPOSED STRUCTURE AND DECK EPOXY PAINTED P3

WALL TYPES

- EXTERIOR WALL 12"X8"X16" CMU HI-R MASONRY: REFER TO EXTERIOR ELEVATIONS FOR ACCENT BANDING, COLOR & FINISH. RUNNING BOND, REFER TO STRUCTURAL FOR REINFORCING. WITH INTEGRAL WATER REPELLENT IN BLOCK AND MORTAR AND ANTI-GRAFFITI SEALER
- PARTITION WALL: 8"X8"X16" CMU MASONRY: RUNNING BOND, REFER TO STRUCTURAL FOR REINFORCING AND WALL HEIGHT. SMOOTH FINISH.
- CONCRETE FOUNDATION WALL: REFER TO STRUCTURAL

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR DIMENSIONS.
2. REFER TO HVAC DRAWINGS FOR LOUVER SIZE AND LOCATIONS.

A101 ROOM NUMBER
101 DOOR NUMBER
1 WINDOW TYPE

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NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UTAH

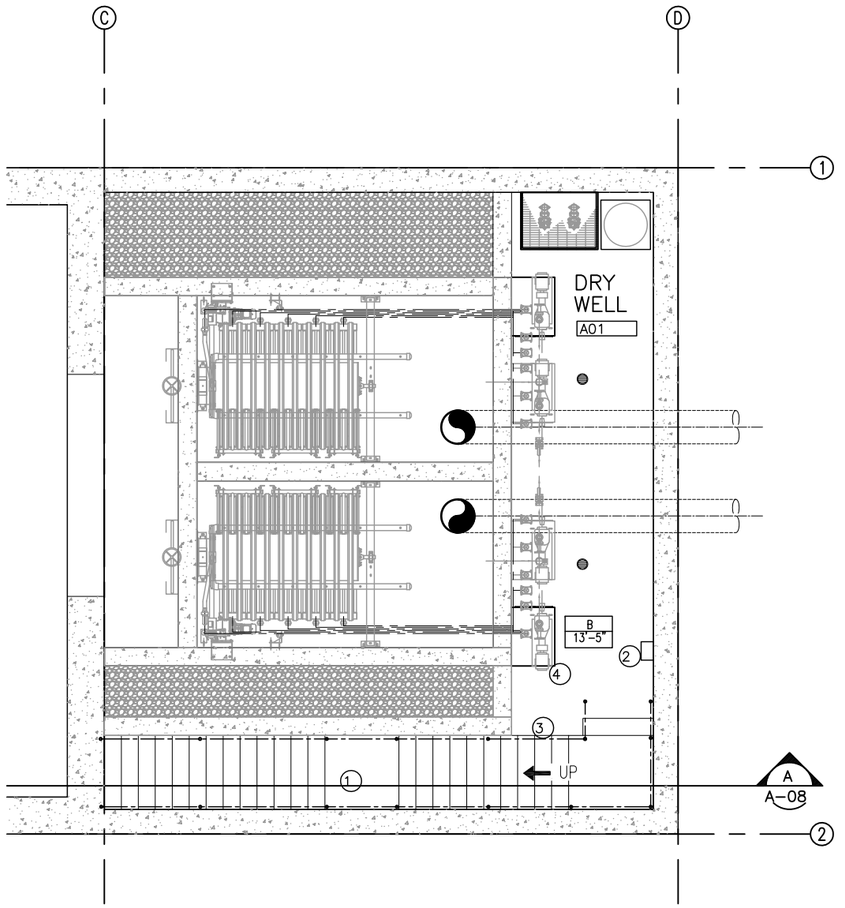
VERIFY SCALE
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DRAWN F. THALMANN
CHECKED J. BECKMAN
APPROVED F. THALMANN

ARCHITECTURAL
SECONDARY REUSE BUILDING FLOOR PLAN

PROJECT NUMBER 483-20-02
DATE: DECEMBER 2022

DRAWING NO. A-02
SHEET 022 OF 126



DRY WELL
1/4"=1'-0"

N

KEYED NOTES

1. STAIR, SEE STRUCTURAL DRAWINGS
2. FIRE EXTINGUISHER AND CABINET. REFER TO DETAIL 11/GA-01
3. STAINLESS STEEL HAND RAILING, SEE STRUCTURAL DRAWINGS
4. PROCESS EQUIPMENT & PIPING, SEE MECHANICAL DRAWINGS.

CEILING TYPES

B / HEIGHT — EXPOSED CONCRETE STRUCTURE SEALED

WALL TYPES

CONCRETE FOUNDATION WALL: REFER TO STRUCTURAL

GENERAL NOTES

1. REFER TO STRUCTURAL DRAWINGS FOR DIMENSIONS.
2. REFER TO HVAC DRAWINGS FOR LOUVER SIZE AND LOCATIONS.

A101 — ROOM NUMBER

101 — DOOR NUMBER

1 — WINDOW TYPE

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12/15/2022
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NO.	DATE	REV. BY	DESCRIPTION
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MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UTAH

DESIGN F. THALMANN
DESIGN
DRAWN F. THALMANN

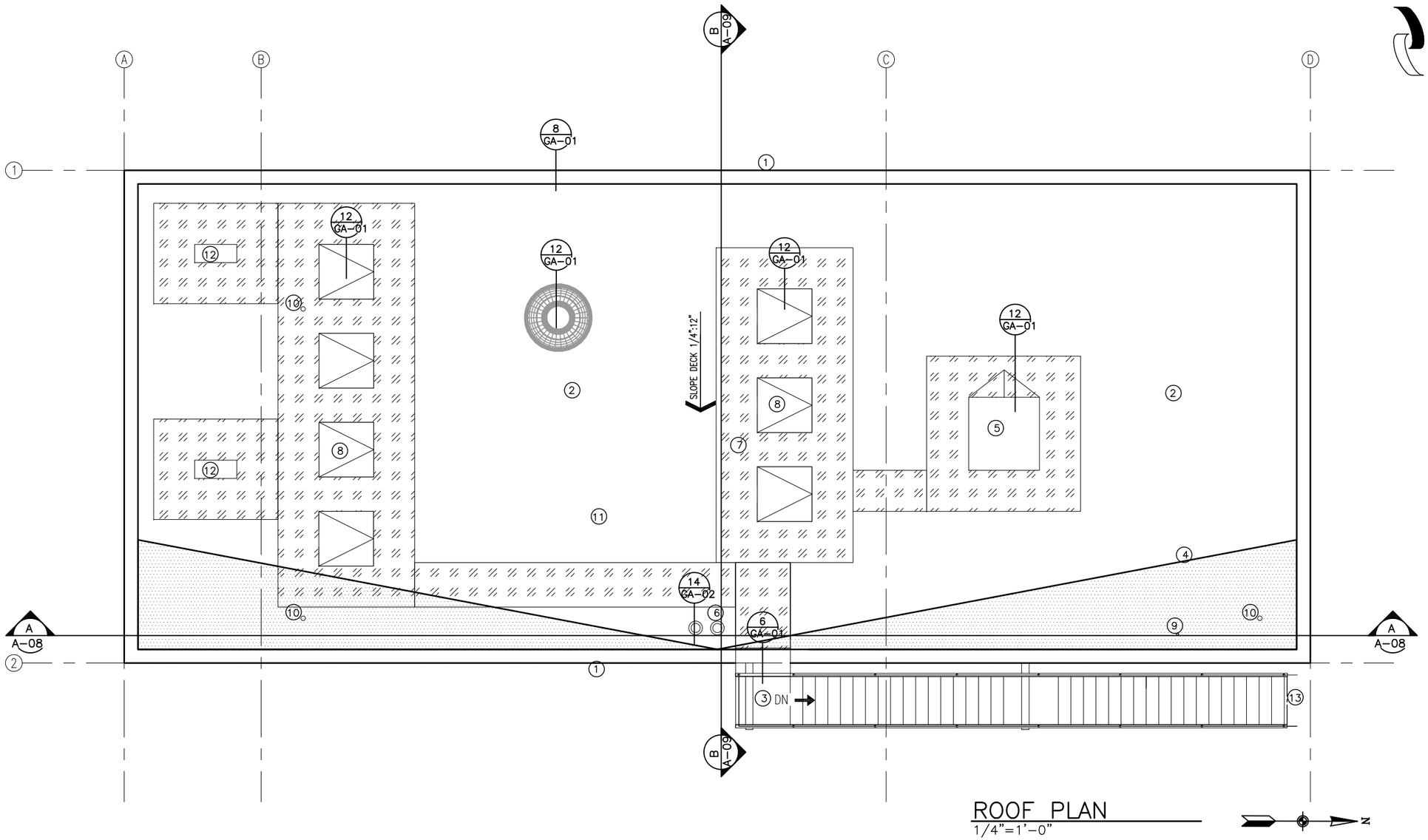
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VERIFY SCALE
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ARCHITECTURAL
SECONDARY REUSE BUILDING
DRY WELL FLOOR PLAN

PROJECT NUMBER 483-20-02
DATE: DECEMBER 2022

DRAWING NO.
A-03
SHEET 023 OF 126



ROOF PLAN
1/4"=1'–0"

KEYED NOTES

1. STANDING SEAM METAL COPING STYLE AND COLOR TO MATCH EXISTING. SEE DETAIL 8/GA–01
2. SINGLE–PLY FULLY ADHERED ROOFING SYSTEM OVER 1/2" PROTECTION BOARD OVER R–38 RIGID INSULATION OVER VAPOR BARRIER OVER 1/4" DENS DECK SHEATHING OVER STEEL DECK.
3. ROOF ACCESS STAIR SEE STRUCTURAL DRAWINGS
4. TAPERED RIGID INSULATION CRICKET SLOPE 1/2" PER FT. MIN..
5. EVAP–COOLER MOUNTED ON CURBS SEE HVAC DRAWINGS.
6. PRIMARY AND SECONDARY ROOF DRAINS THROUGH EXTERIOR WALL. PROVIDE CONCRETE SPLASH BLOCK AT GROUND. SEE DETAIL 9/GA–01
7. SINGLE–PLY WALKWAY 3' MIN AROUND HATCH AND EQUIPMENT ATTACHED TO ROOF MEMBRANE PER MFR. RECOMMENDATIONS.
8. 4' X 4' ALUMINUM EQUIPMENT HATCH, SEE DETAIL 18/GA–02
9. TYPICAL PIPE PENETRATIONS, SEE DETAIL 13/GA–02
10. HOT PIPE PENETRATIONS, SEE DETAIL 17/GA–02
11. EXHAUST FAN MOUNTED ON CURBS SEE HVAC DRAWINGS.
12. HVAC EQUIPMENT SEE HVAC DRAWINGS.
13. GATE, SEE STRUCTURAL DRAWINGS

GENERAL NOTES

1. SEE HVAC & PLUMBING DRAWINGS FOR ROOF PENETRATIONS
2. REFER TO HVAC DRAWINGS FOR EQUIPMENT SIZE AND LOCATIONS.

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12931
12/15/2022
STATE OF UTAH

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REVISIONS

VERIFY SCALE
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MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UTAH

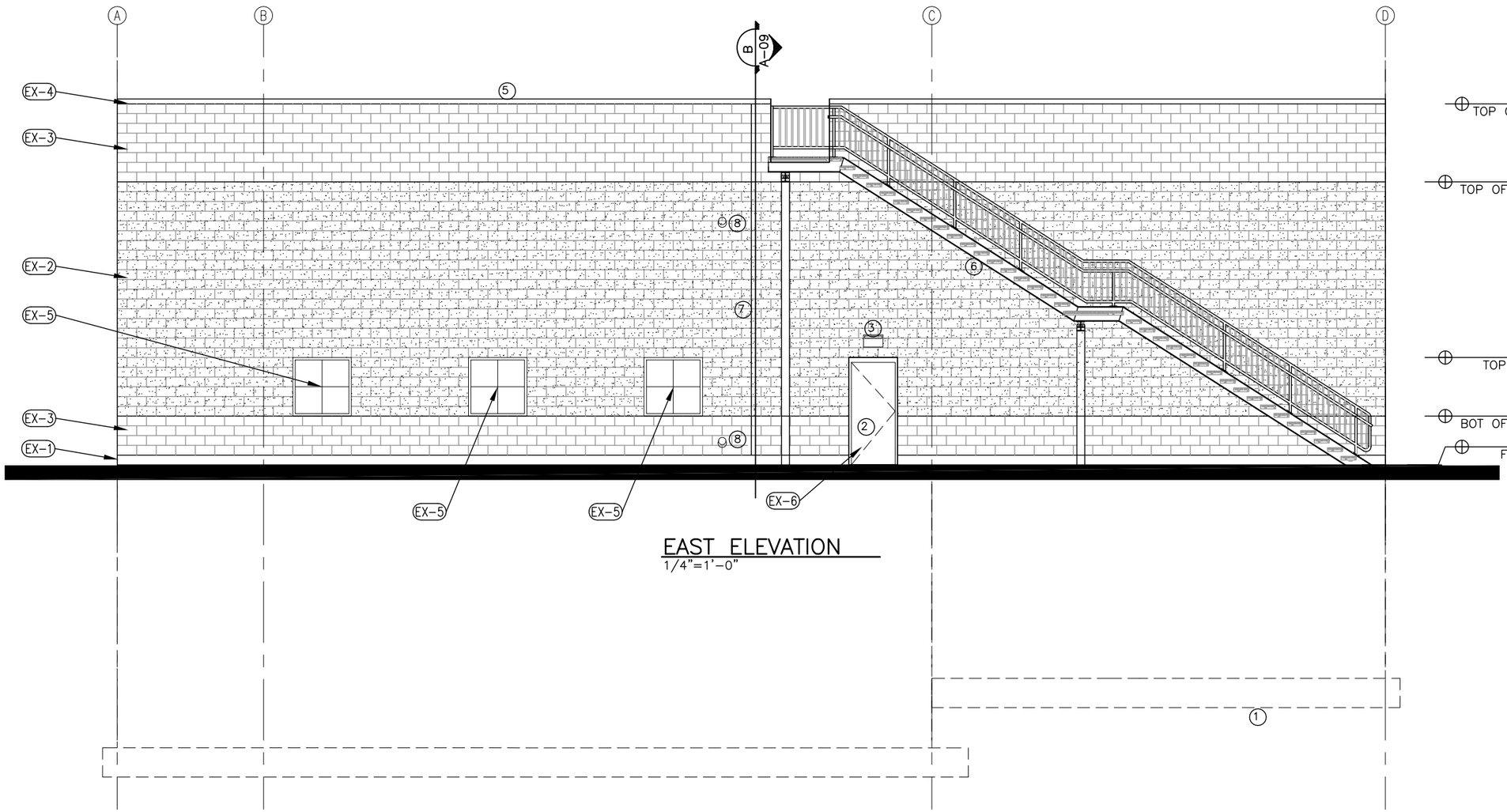
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CHECKED F. THALMANN
APPROVED

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DESIGN
DRAWN F. THALMANN

ARCHITECTURAL
SECONDARY REUSE BUILDING ROOF PLAN

PROJECT NUMBER 483–20–02
DATE: DECEMBER 2022

DRAWING NO.
A–04
SHEET 024 OF 126



EAST ELEVATION

1/4"=1'-0"

KEY NOTES

1. LINE OF FOOTING AND FOUNDATION REFER TO STRUCTURAL DRAWINGS
2. DOOR AND FRAME REFER TO DOOR SCHEDULE DRAWING A-10
3. WALL PACK LIGHT FIXTURE, COLOR BRONZE, REFER TO ELECTRICAL DRAWINGS
4. NOT USED
5. STANDING SEAM METAL PARAPET COPING.
6. STAIR SEE STRUCTURAL DRAWINGS
7. CONTROL JOINT. SEALANT TO MATCH MORTAR COLOR SEE STRUCTURAL DRAWINGS FOR LOCATION
8. ROOF DRAIN BRONZE OUTLET, SEE DETAIL 15/GA-02 AND PLUMBING DRAWINGS

EXT. COLOR SCHEDULE

TAG	MATERIAL	MFR	FINISH	COLOR	REMARKS
EX-1	CONC WALL	---	---	SACK RUBBED	MED SAND BLAST
EX-2	CMU 8" HIGH	SUNROC	SPLIT FACE ACCENT BAND	TBD	MATCH EXISTING BIOBROX BLDG
EX-3	CMU 8" HIGH	SUNROC	SMOOTH FACE	TBD	MATCH EXISTING BIOBROX BLDG
EX-4	PARAPET COPING	MBCI	PRE-FINISHED	TBD	MATCH EXISTING BIOBROX BLDG
EX-5	WINDOW	---	PRE-FINISHED	TBD	MATCH EXISTING BIOBROX BLDG
EX-6	DOOR & FRAME	---	PAINTED	TBD	MATCH EXISTING BIOBROX BLDG

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MAGNA WRF REUSE PROJECT
MAGNA, UTAH

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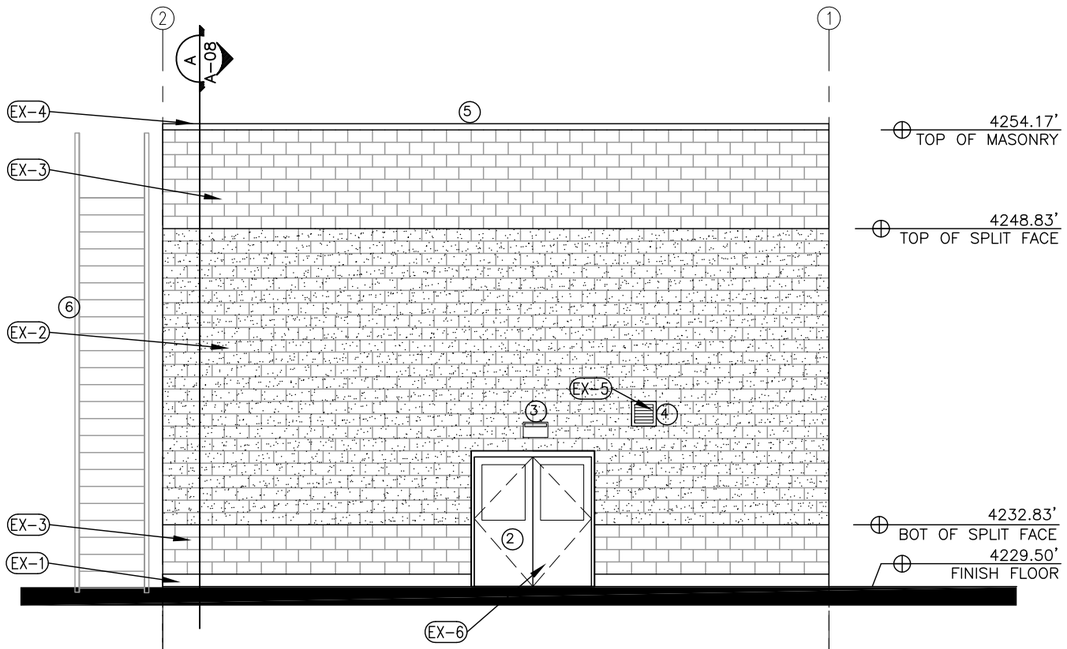
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SECONDARY REUSE BUILDING
EXTERIOR ELEVATIONS-1

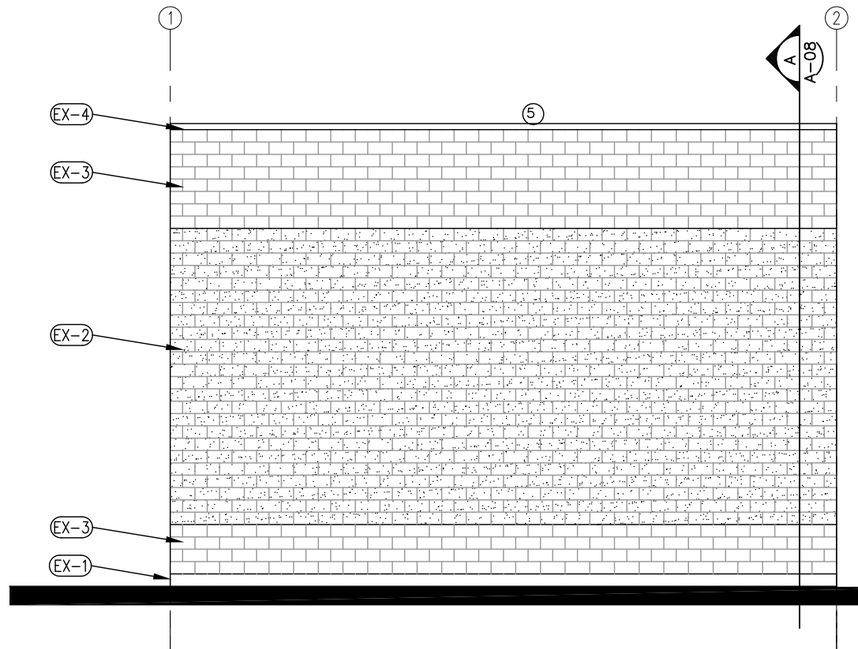
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DRAWING NO. A-05
SHEET 025 OF 126

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



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

KEY NOTES

1. LINE OF FOOTING AND FOUNDATION REFER TO STRUCTURAL DRAWINGS
2. DOOR AND FRAME REFER TO DOOR SCHEDULE DRAWING A-10
3. WALL PACK LIGHT FIXTURE, COLOR BRONZE, REFER TO ELECTRICAL DRAWINGS
4. HVAC LOUVER. REFER TO HVAC DRAWINGS
5. STANDING SEAM METAL PARAPET COPING.
6. STAIR SEE STRUCTURAL DRAWINGS

EXT. COLOR SCHEDULE

TAG	MATERIAL	MFR	FINISH	COLOR	REMARKS
EX-1	CONC WALL	---	---	SACK RUBBED	MED SAND BLAST
EX-2	CMU 8" HIGH	SUNROC	SPLIT FACE ACCENT BAND	TBD	MATCH EXISTING BIOBROX BLDG
EX-3	CMU 8" HIGH	SUNROC	SMOOTH FACE	TBD	MATCH EXISTING BIOBROX BLDG
EX-4	PARAPET COPING	MBCI	PRE-FINISHED	TBD	MATCH EXISTING BIOBROX BLDG
EX-5	LOUVER/WINDOW	---	PRE-FINISHED	TBD	MATCH EXISTING BIOBROX BLDG
EX-6	DOOR & FRAME	---	PAINTED	TBD	MATCH EXISTING BIOBROX BLDG

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12331
12/15/2022
STATE OF UTAH

REVISIONS

NO.	DATE	REV. BY	DESCRIPTION

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UTAH

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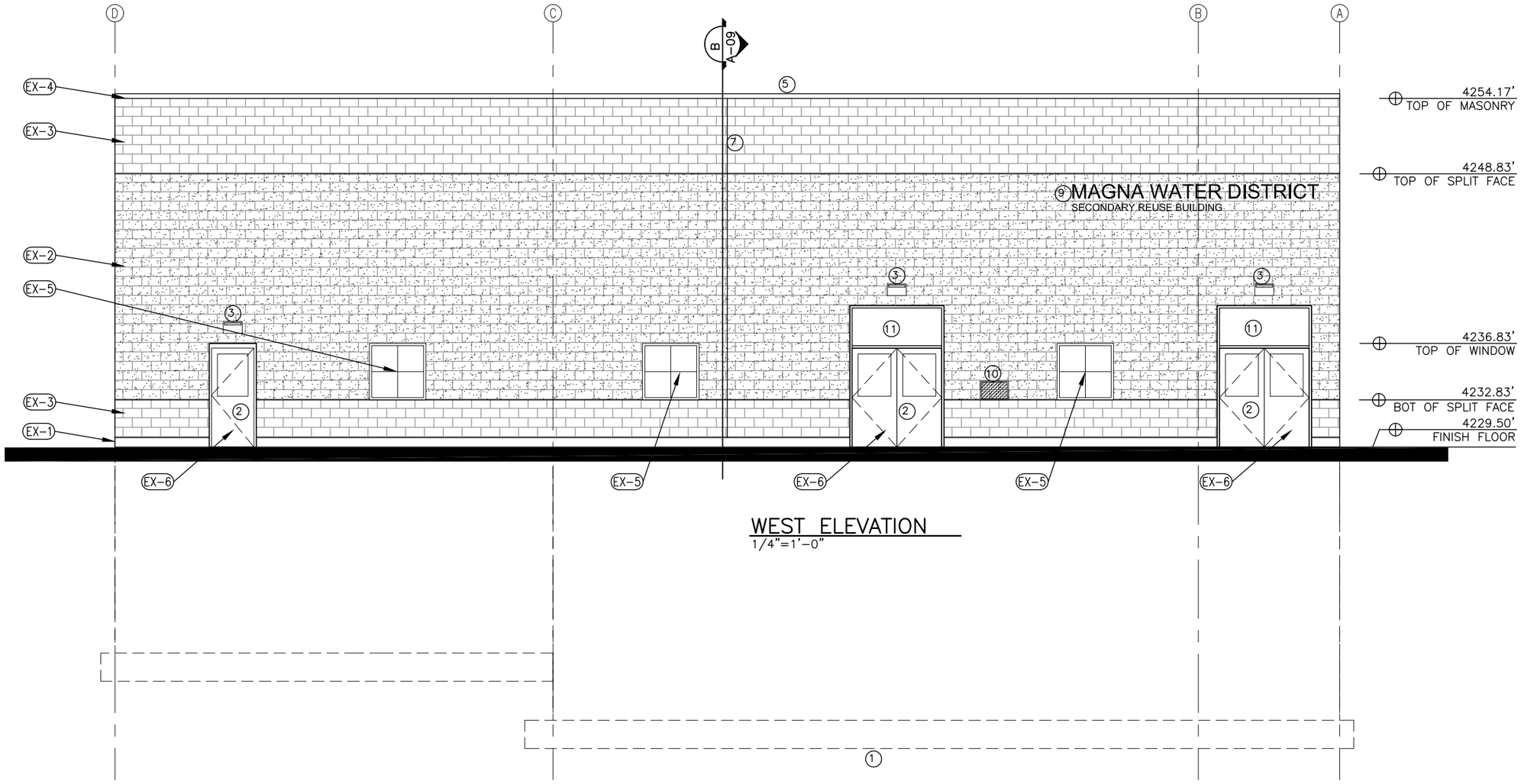
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APPROVED F. THALMANN

ARCHITECTURAL
SECONDARY REUSE BUILDING
EXTERIOR ELEVATIONS-2

PROJECT NUMBER 483-20-02
DATE: DECEMBER 2022

DRAWING NO.
A-06

SHEET 026 OF 126



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

KEY NOTES

1. LINE OF FOOTING AND FOUNDATION REFER TO STRUCTURAL DRAWINGS
2. DOOR AND FRAME REFER TO DOOR SCHEDULE DRAWING A-10
3. WALL PACK LIGHT FIXTURE, COLOR BRONZE, REFER TO ELECTRICAL DRAWINGS
4. NOT USED
5. STANDING SEAM METAL PARAPET COPING.
6. NOT USED
7. CONTROL JOINT. SEALANT TO MATCH MORTAR COLOR SEE STRUCTURAL DRAWINGS FOR LOCATION
8. NOT USED
9. CAST ALUMINUM LETTERS BLACK ANODIZED MOUNTED TO MASONRY FOR BUILDING NAME. SIZE 12" HIGH AND 6" HIGH. FONT: CENTURY GOTHIC PANEUROPEAN BOLD BY MONOTYPE (MATCH FONT AT ADMINISTRATION OFFICE)
10. CAST BRONZE BUILDING PLAQUE MOUNTED TO MASONRY PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR
11. TRANSOM PANEL HOLLOW METAL TO MATCH DOOR, WITH REMOVABLE MULLION

EXT. COLOR SCHEDULE

TAG	MATERIAL	MFR	FINISH	COLOR	REMARKS
EX-1	CONC WALL	---	---	SACK RUBBED	MED SAND BLAST
EX-2	CMU 8" HIGH	SUNROC	SPLIT FACE ACCENT BAND	TBD	MATCH EXISTING BIOBROX BLDG
EX-3	CMU 8" HIGH	SUNROC	SMOOTH FACE	TBD	MATCH EXISTING BIOBROX BLDG
EX-4	PARAPET COPING	MBCI	PRE-FINISHED	TBD	MATCH EXISTING BIOBROX BLDG
EX-5	WINDOW	---	PRE-FINISHED	TBD	MATCH EXISTING BIOBROX BLDG
EX-6	DOOR & FRAME	---	PAINTED	TBD	MATCH EXISTING BIOBROX BLDG

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FRED L. THALMANN 12331 STATE OF UTAH 12/15/2022

REVISIONS

NO.	DATE	REV. BY	DESCRIPTION

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MAGNA WRF REUSE PROJECT
MAGNA, UTAH

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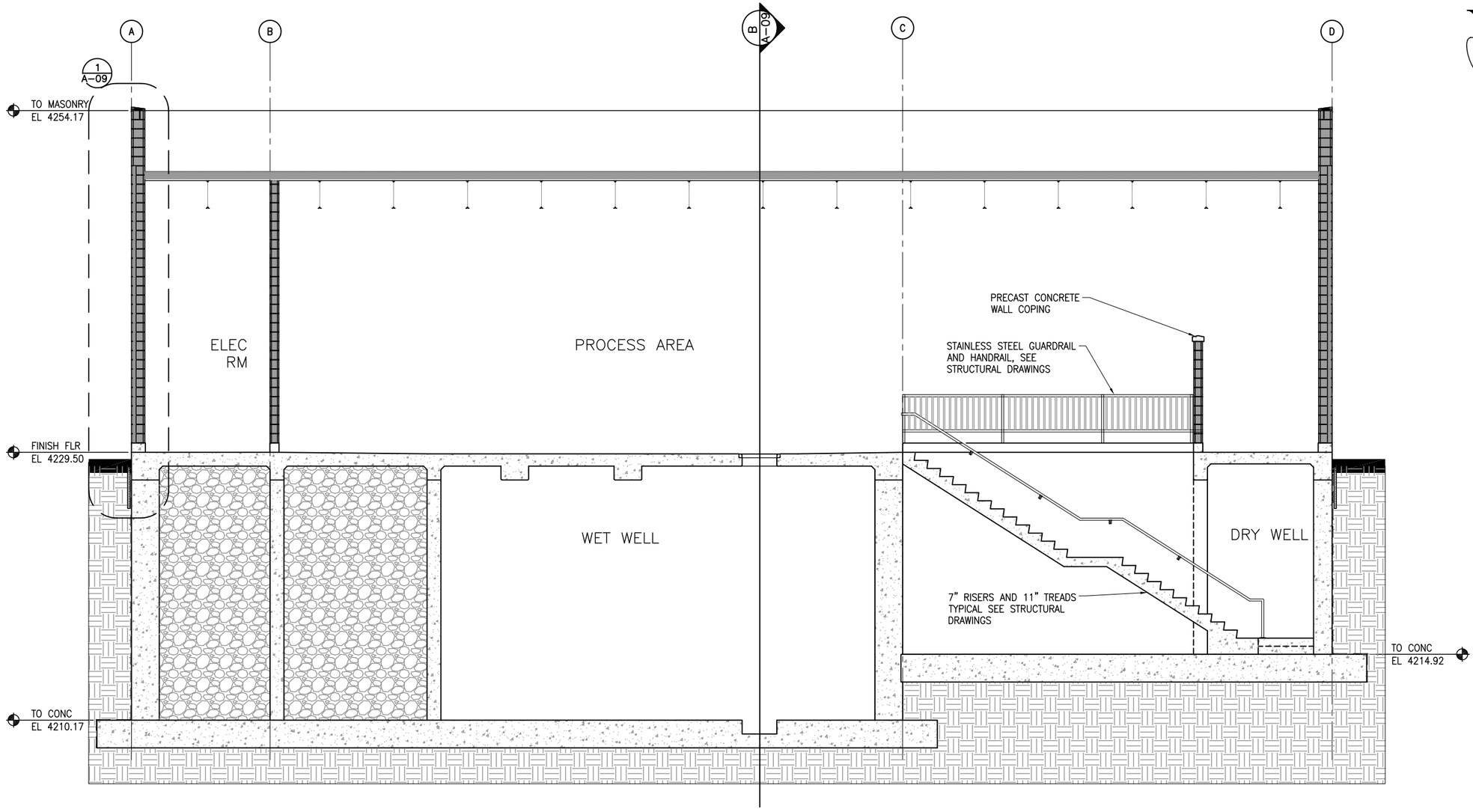
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ARCHITECTURAL
SECONDARY REUSE BUILDING
EXTERIOR ELEVATIONS-3

PROJECT NUMBER 483-20-02
DATE: DECEMBER 2022

DRAWING NO. A-07
SHEET 027 OF 126

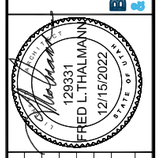
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BUILDING SECTION A
1/4"=1'-0"

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BOWEN COLLINS & ASSOCIATES



NO.	DATE	REV. BY	DESCRIPTION
			REVISIONS

PROJECT
MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UTAH

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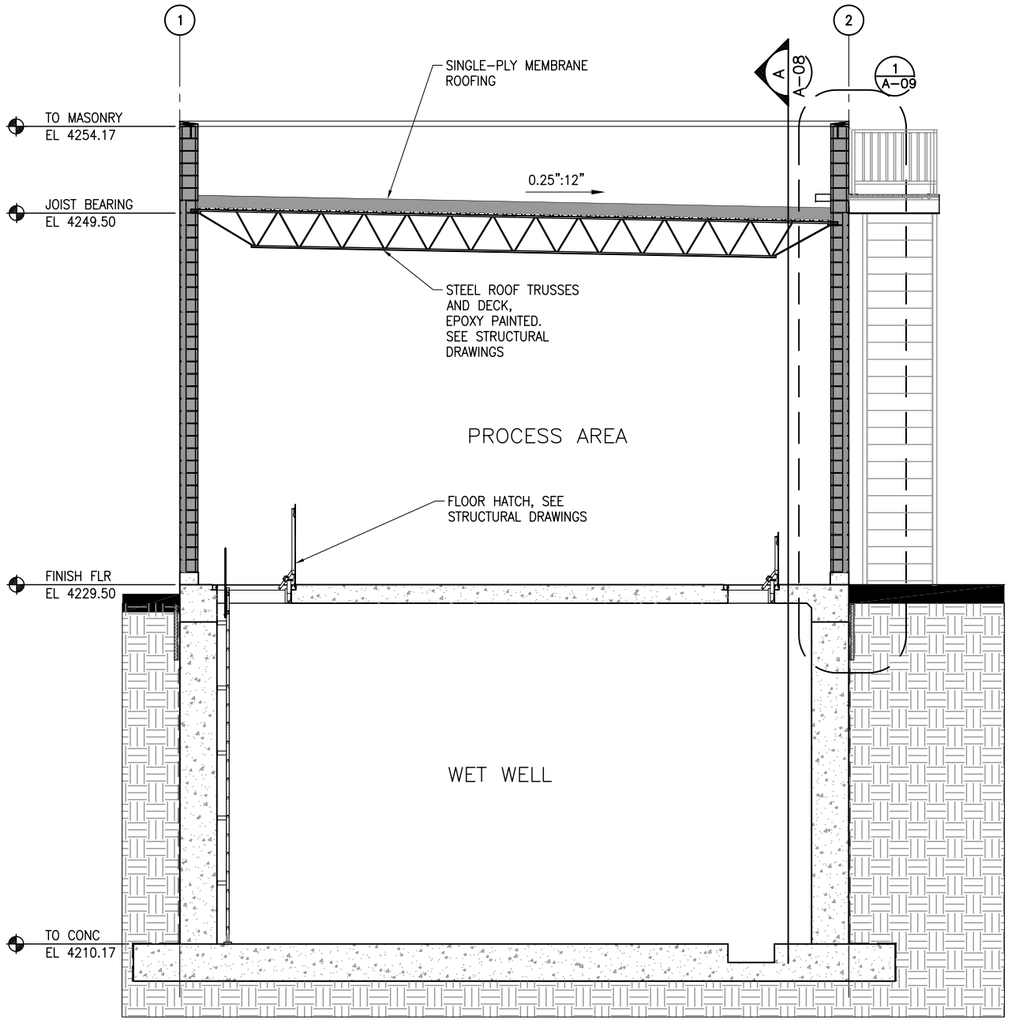
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ARCHITECTURAL
SECONDARY REUSE BUILDING SECTIONS-1

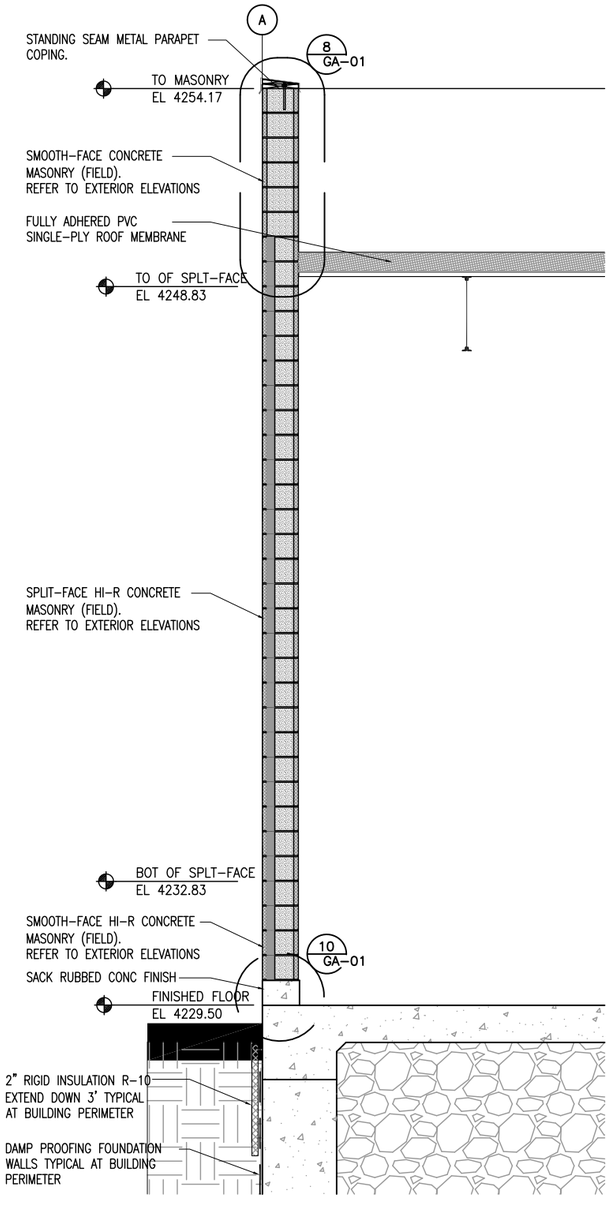
DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO.
A-08

SHEET 028 OF 126



BUILDING SECTION B
1/4"=1'-0"



1 / A-08 WALL SECTION
1/2"=1'-0"
A-09

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MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UTAH

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APPROVED F. THALMANN

ARCHITECTURAL
SECONDARY REUSE BUILDING SECTIONS-2

PROJECT NUMBER 483-20-02
DATE: DECEMBER 2022

DRAWING NO.
A-09

SHEET 029 OF 126

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DOOR SCHEDULE

AREA	NO. (00)	DOOR SIZE WIDTH	HEIGHT	THICK.	DOOR TYPE	DOOR MAT.	DOOR FINISH	OPENING DETAILS HEAD	RIGHT JAMB	LEFT JAMB	SILL THRES	FRAME TYPE	FRAME MAT.	FRAME FINISH	RATING	HRDW. GROUP	REMARKS	DOOR SIGNAGE ROOM NAME	ROOM NUM	DETAIL
	101	6'-4"	7'-0"	1 3/4"	D-1	HM	P2	5/GA-01	1/GA-01	1/GA-01	2/GA-01	F-2	HM	P2	---	1	PAIR OF INSULATED EXTERIOR DOORS WITH GLASS TYPE A AND HOLLOW METAL TRANSOM PANEL			
	102	6'-4"	7'-0"	1 3/4"	D-1	HM	P2	5/GA-01	1/GA-01	1/GA-01	2/GA-01	F-2	HM	P2	---	1	PAIR OF INSULATED EXTERIOR DOORS WITH GLASS TYPE A AND HOLLOW METAL TRANSOM PANEL			
	103	3'-0"	7'-0"	1 3/4"	D-1	HM	P2	1/GA-01	1/GA-01	1/GA-01	2/GA-01	F-1	HM	P2	---	3	INSULATED EXTERIOR DOORS WITH GLASS TYPE A			
	104	6'-4"	7'-0"	1 3/4"	D-1	HM	P2	1/GA-01	1/GA-01	1/GA-01	2/GA-01	F-1	HM	P2	---	2	PAIR OF INSULATED EXTERIOR DOORS WITH GLASS TYPE A			
	105	3'-0"	7'-0"	1 3/4"	D-2	HM	P2	1/GA-01	1/GA-01	1/GA-01	2/GA-01	F-1	HM	P2	---	3	INSULATED EXTERIOR DOORS			
	106	3'-0"	7'-0"	1 3/4"	D-2	HM	P2	1/GA-01	1/GA-01	1/GA-01	---	F-1	HM	P2	---	4	INTERIOR DOOR	ELECTRICAL ROOM	---	16/A-10

FINISH AND FLOOR SCHEDULE

AREA	RM. NO. (000)	ROOM NAME	FLOOR	WALLS, WAINSCOTS, BASES, DOORS NORTH WALL	NORTH WAINSCOT	NORTH BASE	EAST WALL	EAST WAINSCOT	EAST BASE	SOUTH WALL	SOUTH WAINSCOT	SOUTH BASE	WEST WALL	WEST WAINSCOT	WEST BASE	CEILING TYPE	CEILING HEIGHT	REMARKS
	A101	PROCESS AREA	EP1	P1	---	---	P1	---	---	P1	---	---	P1	---	---	P3 EXPOSED STRUCT	19'-8"	DOOR AND FRAME: P2
	A102	ELECTRICAL ROOM	EP1	P1	---	---	P1	---	---	P1	---	---	P1	---	---	P3 EXPOSED STRUCT	19'-8"	DOOR AND FRAME: P2
	A01	DRY WELL	S1	S1	---	---	S1	---	---	S1	---	---	S1	---	---	S1 EXPOSED STRUCT	13'-5"	

INTERIOR COLOR SCHEDULE (CONTRACTOR TO VERIFY ALL COLOR SELECTIONS WITH OWNER & ARCHITECT)

MARK	MATERIAL	MANUFACTURER	COLOR	STYLE_NUMBER	REMARKS
EP1	EPOXY PAINT	SEE SPEC. 09 90 00	GRAY	---	(SYSTEM NO. 21A) EPOXY COATING CONCRETE FLOORS WITH NON-SLIP FINISH
S1	SEALER	SEE SPEC. 09 90 00	CLEAR	---	(SYSTEM NO. 21) CLEAR SEAL CONCRETE WITH NON-SLIP FINISH AT FLOORS
P1	LATEX PAINT	SEE SPEC. 09 90 00	RELIABLE WHITE SW6091	SEMI-GLOSS	(SYSTEM NO. 115) PROCESS ROOM, ELECTRICAL ROOM
P2	EPOXY PAINT	SEE SPEC. 09 90 00	TBD (MATCH EXISTING)	SEMI-GLOSS	(SYSTEM NO. 4) HM DOORS AND FRAMES (MATCH EXISTING BUILDING)
P3	EPOXY PAINT	SEE SPEC. 09 90 00	RELIABLE WHITE SW6091	SEMI-GLOSS	(SYSTEM NO. 4) STEEL JOISTS AND DECK (MATCH EXISTING BUILDING)

NOTES

1. ALL EQUIPMENT HOUSE KEEPING PADS THRU-OUT PROJECT SHALL THE SAME FINISH AS THE ADJACENT FLOOR FINISH.

HARDWARE GROUPS

HARDWARE GROUP 1 (ELECTRICAL ROOM, PROCESS AREA)

3	PAIR	BUTTS	BB1279	4.5 X 4.5	630	HAGGER
2	EACH	EXIT	98L	X CYL AS REQ.	630	VON DUPRIN
1	EACH	REMOVABLE MULION	KR 4954 X CYL AS REQ		SP28	VON DUPRIN
2	EACH	CLOSER	P4041 CUSH, HOLD OPEN ARM			LCN
2	EACH	WEATHER STRIP	S88BC X 5110 GASKETING			PEMKO
1	EACH	WEATHER STRIP	S88BL (TRANSOM) GASKETING			PEMKO
2	EACH	SWEEP	315_C-N			PEMKO
2	EACH	KICKPLATE K1050	10" X 2" LDW		630	ROCKWOOD
1	EACH	THRESHOLD	171A			PEMKO

HARDWARE GROUP 2 (FILTER AREA)

3	PAIR	BUTTS	BB1279	4.5 X 4.5	630	HAGGER
2	EACH	EXIT	98L	X CYL AS REQ.	630	VON DUPRIN
1	EACH	REMOVABLE MULION	KR 4954 X CYL AS REQ		SP28	VON DUPRIN
2	EACH	CLOSER	P4041 CUSH, HOLD OPEN ARM			LCN
2	EACH	WEATHER STRIP	S88BC X 5110 GASKETING			PEMKO
2	EACH	SWEEP	315_C-N			PEMKO
2	EACH	KICKPLATE K1050	10" X 2" LDW		630	ROCKWOOD
1	EACH	THRESHOLD	171A			PEMKO

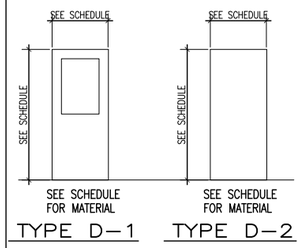
HARDWARE GROUP 3 (EXTERIOR MAN DOORS)

1 1/2 PAIR	BUTTS	BB1279 NRP 4.5 X 4.5			630	HAGER
1	EACH	EXIT	99L	36" X CYL AS REQ.	630	VON DUPRIN
1	EACH	CLOSER	P4041 EDA			LCN
1	EACH	EDGE SEAL	S88BL			PEMKO
1	EACH	KICKPLATE K1050	10" X 2" LDW		630	ROCKWOOD
1	EACH	STOP	409		630	ROCKWOOD
1	EACH	SWEEP	315 CN			PEMKO
1	EACH	THRESHOLD	171A			PEMKO

HARDWARE GROUP 4 (INTERIOR DOOR TO ELECTRICAL RM)

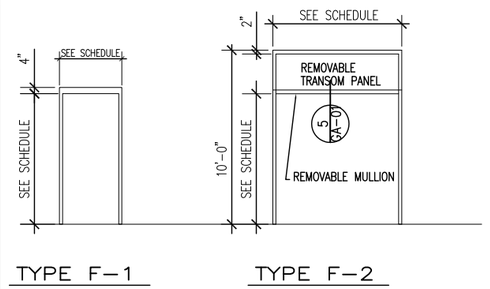
1 1/2 PAIR	BUTTS	BB1279 NRP 4.5 X 4.5			630	HAGER
1	EACH	EXIT	99L	36" X CYL AS REQ.	630	VON DUPRIN
1	EACH	CLOSER	P4041 EDA			LCN
1	EACH	EDGE SEAL	S88BL			PEMKO
1	EACH	KICKPLATE K1050	10" X 2" LDW		630	ROCKWOOD
1	EACH	STOP	409		630	ROCKWOOD

DOOR TYPES



TYPE D-1 TYPE D-2

DOOR FRAME TYPES



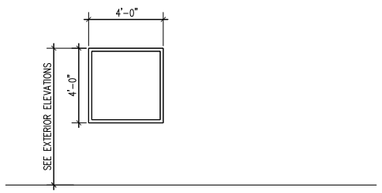
TYPE F-1 TYPE F-2

NOTES

1. SECURE ALL DOOR HARDWARE SCREWS WITH "LOC-TIGHT" COMPOUND.

2. KEYING INFORMATION: COORDINATE WITH OWNER FOR KEYING HIERARCHY, ALL CYLINDERS SHALL BE OPENED BY OWNERS PLANT MASTER KEY.

WINDOW TYPES



TYPE A

WINDOW SCHEDULE

AREA	(1)	WINDOW SIZE WIDTH	HEIGHT	FRAME MATERIAL	WINDOW TYPE (A)	GLASS TYPE	FRAME FINISH	OPENING DETAILS HEAD	RIGHT JAMB	LEFT JAMB	SILL	REMARKS CONTRACTOR TO COORDINATE ALL WINDOW DIMENSIONS WITH MANUFACTURER.
	1	4'-0"	4'-0"	ALUMINUM	A	B	TBD	3/GA-01	3/GA-01	3/GA-01	4/GA-01	FIXED

GLASS TYPES

A. 1" THICK INSULATING GLASS: 1/4" GRAY TINT TEMPERED GLASS EXTERIOR AND 1/4" CLEAR TEMPERED GLASS INTERIOR WITH 1/2" AIR SPACE. TINT: PPG SOLARBAN 60 GRAY LOW-E

B. THICK INSULATING GLASS: 1/4" TINTED FLOAT GLASS EXTERIOR AND 1/4" CLEAR FLOAT GLASS INTERIOR WITH 1/2" AIR SPACE. TINT: PPG SOLARBAN 60 GRAY LOW-E

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BOWEN COLLINS & ASSOCIATES

FRED L. THALMANN 129331 STATE OF UTAH 12/15/2022

REVISIONS

NO.	DATE	REV. BY	DESCRIPTION

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING

MAGNA WATER DISTRICT
MAGNA WRF REUSE PROJECT
MAGNA, UTAH

DESIGN F. THALMANN
DRAWN F. THALMANN
CHECKED J. BECKMAN
APPROVED F. THALMANN
REVIEW

ARCHITECTURAL

DOOR AND WINDOW SCHEDULES

DATE: DECEMBER 2022
PROJECT NUMBER 483-20-02

DRAWING NO. A-10

SHEET 030 OF 126

C:\Users\FredT\Desktop\CURRENT PROJECTS\21_MAGNA WATER REUSE PROJECT BCA\DRAWINGS\A-10.dwg Plotted: 12/5/2022 2:16 PM By: Fred Thalmann