CITY OF BOISE

CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

2024 WINTER SPILLWAY MODIFICATIONS
SEPTEMBER, 2024

ISSUED FOR CONSTRUCTIONI

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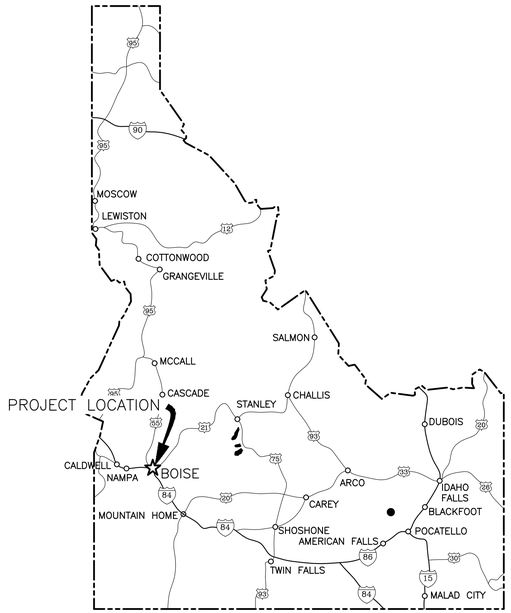
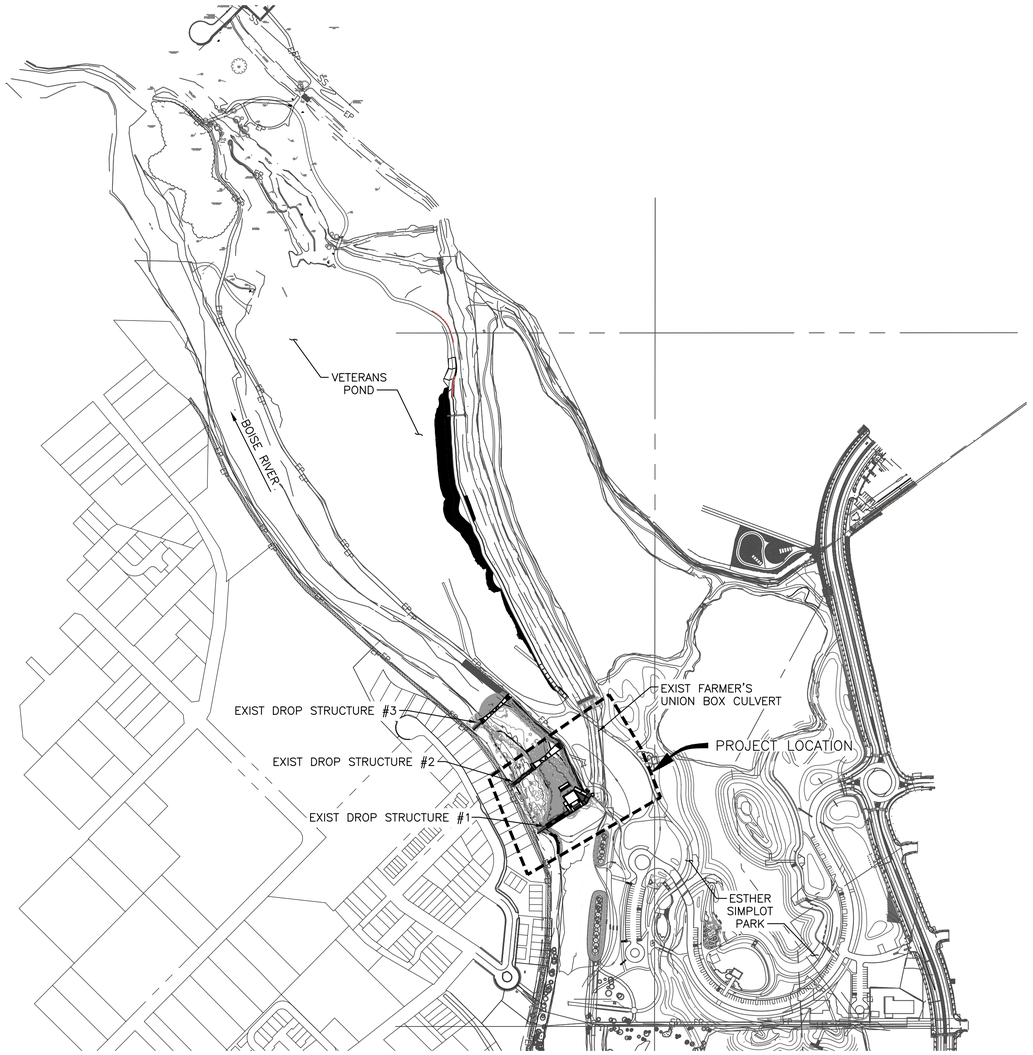
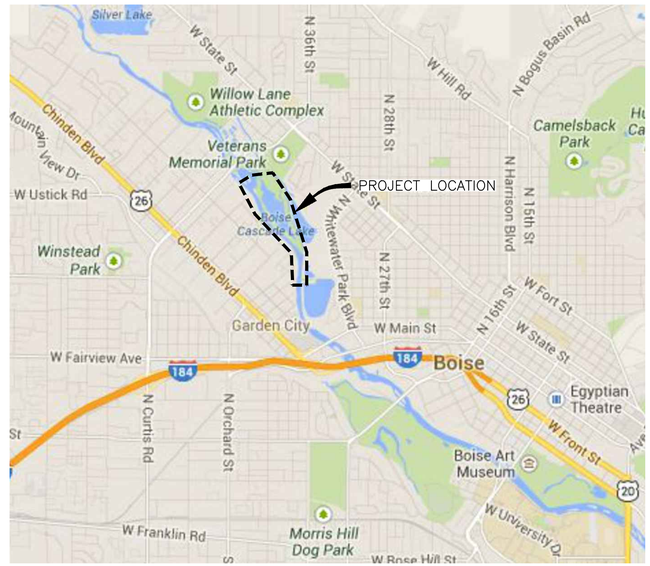
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK
2024 WINTER SPILLWAY MODIFICATIONS



LOCATION MAP
NTS



PROJECT LIMITS
NTS



VICINITY MAP
NTS

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

PROFESSIONAL ENGINEER LICENSED 18506 10 September 2024 STATE OF IDAHO JAMES M. BOAG

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

LOCATION MAP, VICINITY MAP, AND PROJECT LIMITS

DESIGNED J. BOAG
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
G001
SHEET 1 OF 40
SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_G001.dwg Plot date: Sep 09, 2024 01:54pm

DRAWING INDEX

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4	G004	STANDARD SYMBOLS
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6	D101	REACH 2 DROP STRUCTURE 1 DEMOLITION PLAN
7	D102	REACH 2 DROP STRUCTURE 1 DEMOLITION SECTION
8	D103	AIRLINE VAULT DEMOLITION PLAN
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10	C102	REACH 2 DROP STRUCTURE 1 CIVIL PLAN
11	C103	PLUNGE POOL SECTION
12	C104	BARRIER PIPING ALONG CULVERT SECTION
	STRUCTURAL	
13	S102	REACH 2 DROP STRUCTURE 1 TOP PLAN
14	S103	REACH 2 DROP STRUCTURE 1 SECTION
15	S104	REACH 2 DROP STRUCTURE 1 SPILLWAY PLAN
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18	S107	ADJUSTABLE WEIR SLAB FOUNDATION PLAN
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21	GM001	STANDARD MECHANICAL AND PIPING SCHEDULES
22	GM002	STANDARD MECHANICAL DETAILS
23	M101	REACH 2 DROP STRUCTURE 1 MECHANICAL PLAN
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26	M104	STILLING WELL TEMPORARY INSTALLATION OVERVIEW
27	M105	STILLING WELL TEMPORARY INSTALLATION DETAILS
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34	E101	CONTROL BUILDING LIGHTING AND POWER PLAN
35	E102	VAULT ELECTRICAL PLAN AND INCLINOMETER DETAILS
36	E103	WATER LEVEL SENSORS ELECTRICAL DETAILS
37	E104	SITE CONDUIT ROUTING PLAN
38	E105	5 MODIFICATION DIAGRAM
39	E106	6 MODIFICATION DIAGRAM
40	E107	8 DIAGRAM

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McMillen

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J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

DRAWING INDEX

DESIGNED J. BOAG

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

G002

SHEET 2 OF 40

SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_G002.dwg Plot date: Sep 09, 2024 12:10pm

A/C	AIR CONDITIONING
A/E	ARCHITECT/ENGINEER
A	ARCHITECTURAL (DWG DISCIPLINE), AMP
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICALS
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
ABAN	ABANDON
ACHD	ADA COUNTY HIGHWAY DISTRICT
ACK	ACKNOWLEDGE
ACP	ACOUSTIC CEILING PANEL, ASPHALTIC CONCRETE PAVEMENT
AD	ADDENDUM, AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AGGR	AGGREGATE
AI	AREA INLET
ALIG	ALIGNMENT
ALUM	ALUMINUM
ALT	ALTERNATE, ALTITUDE
AM	ACOUSTICAL MATERIAL
AMB	AMBIENT
ANC	ANCHOR
AP	ACCESS PANEL
APRX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIAL
ATC	ACOUSTICAL TILE CEILING
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
B/B	BACK TO BACK
BAL	BALANCE
BBD	BULLETIN BOARD
BC	BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE
BD	BOARD
BE	BOTH ENDS, BELL END
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET
BKG	BACKING
BL	BASE LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLVD	BOULEVARD
BM	BENCHMARK, BEAM
BMP	BEST MANAGEMENT PRACTICE
BOC	BACK OF CURB
BOD	BOTTOM OF DUCT
BOG	BOTTOM OF GRILLE
BOL	BOTTOM OF LOUVER
BOP	BOTTOM OF PIPE
BOR	BOTTOM OF REGISTER
BOT	BOTTOM
BOU	BOTTOM OF UNIT
BP	BASE PLATE
BRG	BEARING
BRGP	BEARING PLATE
BRKT	BRACKET
BS	BOTH SIDES
BTU	BRITISH THERMAL UNIT
BTW	BETWEEN
BTWLD	BUTT WELD
BU	BELL UP, BUILT UP
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
BYP	BYPASS
C TO C	CENTER TO CENTER
C&G	CURB & GUTTER
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT, CIVIL (DRAWING DISCIPLINE)
CAB	CABINET
CAP	CAPACITY
CAT	CATALOG
CAV	CAVITY
CB	CATCH BASIN
CCB	CONCRETE BLOCK
CCW	COUNTER CLOCKWISE
CDF	CONTROLLED DENSITY FILL
CE	CONCRETE EDGE
CER	CERAMIC
CF	CUBIC FEET (FOOT)
CFL	COUNTER FLASHING
CHFR	CHAMFER
CHBD	CHALKBOARD
CHD	CHORD
CI	CURB INLET
CIP	CAST-IN-PLACE
CIPB	CONCRETE INTERLOCKING PAVER BALLAST
CIRC	CIRCULATION, CIRCULAR
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTERLINE, CLASS, CLOSE
CLG	CEILING
CLJ	CONTROL JOINT
CLKG	CAULKING
CLR	CLEAR
CMH	COMMUNICATION MANHOLE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT, CONCRETE OPENING
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE
CONC	CONCENTRIC, CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COOR	COORDINATE
CORR	CORROSIVE, CORRUGATED
CP	CHECKER PLATE, CONTROL POINT
CPLG	COUPLING
CRL	CORROSION RESISTANT LINING
CSC	COMPRESSION SLEEVE COUPLING
CSK	COUNTERSINK
CSS	CLINIC SERVICE SINK
CT	CERAMIC TILE
CTR	CENTER
CTRL	CONTROL
CVT	CULVERT
CU	COPPER, CUBIC
CW	CLOCKWISE
CY	CUBIC YARD
d	PENNY (NAIL MEASURE)
D	DEEP, DIFFUSER
DB	DUCT BANK, DECIBEL, DRY BULB
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEG C	DEGREE CENTIGRADE
DEG F	DEGREE FAHRENHEIT
DEMO	DEMOLITION
DEP	DEPRESSED
DEPT	DEPARTMENT
DET	DETAIL
DI	DROP INLET, DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL, DIAGRAM
DIFF	DIFFERENTIAL, DIFFERENCE
DIM	DIMENSION
DISCH	DISCHARGE
DIST	DISTANCE, DISTRIBUTION
DIV	DIVISION
DL	DEAD LOAD
DMJ	DOUBLE MECHANICAL JOINT
DMPF	DAMP PROOFING
DN	DOWN
DO	DISSOLVED OXYGEN, DITTO
DP	DEPTH
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DR	DIMENSION RATIO
DS	DOWN SPOUT
DT	DOUBLE TEE, DRIP TRAP ASSEMBLY
DUP	DUPLICATE
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
E	EAST, ELECTRICAL (DWG DISCIPLINE)
EA	EACH, EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
ED	EQUIPMENT DRAIN
EDB	ELECTRICAL DUCT BANK
EE	EACH END
EF	EACH FACE
EFF	EFFLUENT, EFFICIENCY
EHH	ELECTRICAL HANDHOLE
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELBOW, ELEVATION
ELEC	ELECTRICAL
EMBD	EMBEDDED
EMER	EMERGENCY
EMH	ELECTRICAL MANHOLE
ENCL	ENCLOSURE
ENGR	ENGINEER
ENTR	ENTRANCE
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE, EQUAL SPACE, EMERGENCY SHOWER
ESEW	EMERGENCY SHOWER AND EYE WASH
EST	ESTIMATE, END SLOPE TRANSITION
EW	EACH WAY, EMERGENCY EYE/FACE WASH
EWC	ELECTRIC WATER COOLER
EWEF	EACH WAY, EACH FACE
EWTB	EACH WAY, TOP AND BOTTOM
EXC	EXCAVATION
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR, EXTERNAL, EXTENSION
F&B	FACE & BYPASS
F TO F	FACE TO FACE
FAB	FABRICATE
FB	FLOOR BEAM
FBD	FIBERBOARD
FBG	FIBERGLASS
FBM	BOARD FOOT MEASURE
FBO	FURNISHED BY OWNER
FC	FLUSHING CONNECTION
FCA	FLANGED COUPLING ADAPTER
FD	FLOOR DRAIN
FDC	FLEXIBLE DUCT CONNECTION
FDTN	FOUNDATION
FDR	FEEDER
FE	FLANGED END
FEC	FIRE EXTINGUISHER CABINET
FES	FLARED END SECTION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE, FACTORY FINISH, FLAT FACE
FG	FINISHED GRADE
FIG	FIGURE
FH	FIRE HYDRANT
FIN	FINISH
FJT	FLUSH JOINT
FL	FLOW, FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLOR	FLUORESCENT
FLR	FLOOR
FLS	FLASHING, FLUSH
FN	FENCE
FO	FINISHED OPENING
FOB	FENCE FLAT ON BOTTOM
FOC	FACE OF CONCRETE, FACE OF CURB
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FOT	FLAT ON TOP
FPT	FEMALE PIPE THREAD
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRTM	FIRE RETARDANT TREATED MATERIAL
FS	FLOOR SINK, FAR SIDE
FT	FEET, FOOT
FTG	FOOTING, FITTING
FUDC	FARMERS UNION DITCH COMPANY
FUR	FURRED, FURRING
FURN	FURNITURE, FURNISH
FUT	FUTURE
FV	FACE VELOCITY
FW	FIELD WELD, FIRE WALL
FWD	FORWARD
FWE	FURNISHED WITH EQUIPMENT
FXTR	FIXTURE
G	GRILLE, GROUND, GENERAL (DWG DISCIPLINE)
GA	GAGE (METAL THICKNESS)
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR, GRADE BREAK
GC	GROOVED COUPLING
GD	GUARD
GEN	GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFMU	GROUND FACE MASONRY UNIT
GG	GUTTER GRADE
GJ	GROOVED JOINT
GL	GLASS
GLB	GLASS BLOCK
GND	GROUND
GP	GUY POLE
GR	GRADE
GRTG	GRATING
GSB	GYPSUM SHEATHING BOARD
GT	GREASE TRAP
GVL	GRAVEL
GWB	GYPSUM WALLBOARD
GYP	GYPSUM HARDBOARD
H	HIGH
HB	HOSE BIB
HBD	HARDBOARD
HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE
HC	HORIZONTAL CENTERLINE
HDR	HEADER
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT, HORSEPOWER
HPC	HORIZONTAL POINT OF CURVATURE
HPS	HIGH PRESSURE SODIUM
HPT	HORIZONTAL POINT OF TANGENCY
HR	HOSE REEL, HOUR
HS	HEADED STUD, HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HTG	HEATING
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HWD	HARDWOOD
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC
HZ	HERTZ, CYCLES PER SECOND
I	INSTRUMENTATION (DWG DISCIPLINE)
ID	INSIDE DIAMETER, INTERIOR DIMENSION
IE	INVERT ELEVATION
IF	INSIDE FACE
IH	INTAKE HOOD
IMP	IMPACT
IN	INCH
INC	INCLUDE, INCANDESCENT
INF	INFLUENT
INSTR	INSTRUMENTATION
INSUL	INSULATION
INT	INTERIOR, INTERSECTION
INTR	INTERMEDIATE, INTERIOR
INV	INVERT
IPS	IRON PIPE SIZE
IPT	INTERNAL PIPE THREAD
IR	INSIDE RADIUS
IRR	IRRIGATION
ISO	ISOMETRIC
JB	JUNCTION BOX
JCT	JUNCTION
JF	JOINT FILLER
JST	JOIST
JT	JOINT
K	KIP
KB	KNEE BRACE
KCMIL	THOUSAND CIRCULAR MILS
KD	KNOCK DOWN
KO	KNOCK OUT
KSI	KIPS PER SQUARE INCH
L	ANGLE, LENGTH, LAVATORY
LAD	LADDER
LAM	LAMINATE
LATL	LATERAL
LB	LAG BOLT, POUND
LCTB	LIQUID CHALK AND TACK BOARD
LDG	LANDING
LDR	LEADER
LE	LIFTING EYE
LF	LINEAR FOOT
LG	LONG
LH	LEFT HAND
LIN	LINEAR
LIQ	LIQUID
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMLU	LIQUID MARKER LECTURE UNIT
LNG	LONGITUDINAL
LOC	LOCATION
LP	LOW POINT
LPS	LOW PRESSURE SODIUM
LR	LONG RADIUS
LT	LEFT
LTD	LIMITED
LTG	LIGHTING
LTL	LINTEL
LTNG	LIGHTNING
LV	LOW VOLTAGE
LVR	LOUVER
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LWL	LOW WATER LEVEL
M	MECHANICAL (DWG DISCIPLINE)
MA	MIXED AIR
MACH	MACHINED
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBER
MC	MECHANICAL CONTRACTOR, MECHANICAL COUPLING
MCB	METAL CORNER BEAD
MCJ	MASONRY CONTROL JOINT
MDMJ	MODIFIED DOUBLE MECHANICAL JOINT
MECH	MECHANICAL
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE, METAL HALIDE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MLO	MAIN LUGS ONLY
MMB	MEMBRANE
MO	MASONRY OPENING
MOD	MODULAR, MODIFY
MON	MONUMENT
MPT	MALE PIPE THREAD
MRGWB	MOISTURE RESISTANT GYPSUM WALLBOARD
MS	MOP SINK
MSL	MEAN SEA LEVEL
MT	MOUNT
MU	MASONRY UNIT
MULL	MULLION
MV	MEDIUM VOLTAGE
MW	MONITORING WELL
N	NORTH, NEUTRAL
NA	NOT APPLICABLE
NAT	NATURAL
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
NC	NORMALLY CLOSED
NEG	NEGATIVE
NF	NEAR FACE, NON-FUSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NS	NEAR SIDE
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
O TO O	OUT-TO-OUT
OA	OUTSIDE AIR, OVERALL
OC	ON CENTER
OCPD	OVER CURRENT PROTECTION DEVICE
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OF	OUTSIDE FACE, OFFICE FURNISHING
OG	ORIGINAL GROUND
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
OR	OUTSIDE RADIUS
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OVFL	OVERFLOW
OVHG	OVERHANG
OZ	OUNCE
P	PAINT, PROCESS (DWG DISCIPLINE)
PA	PUBLIC ADDRESS
PAR	PARALLEL, PARAPET
PB	PANIC BAR, PULL BOX
PBD	PARTICLE BOARD
PC	POINT OF CURVE, PIECE, PRECAST
PCC	POINT OF COMPOUND CURVATURE
PCF	POUNDS PER CUBIC FOOT
PCT	PERCENT
PE	PLAIN END
PED	PEDESTAL
PEN	PENETRATION
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PF	POWER FACTOR
PFMU	PREFACED MASONRY UNIT
PH	PHASE
PI	POINT OF INTERSECTION
PKG	PACKAGE
PL	PLATE, PROPERTY LINE
PLAS	PLASTER
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PNEU	PNEUMATIC
POB	POINT OF BEGINNING
POE	POINT OF END
POL	POLISH
POS	POSITIVE, POSITION
PP	POLYPROPYLENE, POWER POLE
PRC	POINT OF REVERSE CURVATURE
PREF	PREFINISHED
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PREP	PREPARE
PRES	PRESSURE
PRI	PRIMARY
PROP	PROPERTY
PROT	PROTECTION
PS	PIPE SUPPORT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PST	PRESTRESSED
PT	POINT, POINT OF TANGENCY
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWD	PLYWOOD
PWJ	PLYWOOD WEB JOIST
PZ	PIEZOMETER
Q	RATE OF FLOW
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
R&R	REMOVE AND REPLACE
R&S	REMOVE AND SALVAGE
R	RADIUS, REGISTER, RISER
RA	RETURN AIR
RB	RESILIENT BASE, ROCK BERM
RCPT	RECEPTACLE
RD	ROOF DRAIN
REC	RECESS
RECD	RECEIVED
RECT	RECTANGULAR
RED	REDUCER
REF	REFERENCE
REINF	REINFORCING
REM	REMOVE
REQD	REQUIRED
RESIL	RESILIENT
RET	RETAINING, RETURN
REV	REVISION, REVERSE
RF	RESILIENT FLOORING
RFG	ROOFING
RFL	REFLECTED, REFLECTOR
RGH	ROUGH
RGS	RIGID GALVANIZED STEEL
RGS-PVC	PVC COATED RGS
RH	RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY
RL	REQUIRED LAP
RLFA	RELIEF AIR
RND	ROUND
RNG	RUNNING
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RP	RADIUS POINT
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RVT	RESILIENT VINYL TILE
RY	READY
S	SOUTH, SINK, STRUCTURAL (DWG DISCIPLINE)
SA	SUPPLY AIR
SAMU	SOUND ABSORBING MASONRY UNIT
SAN	SANITARY
SB	SPLASH BLOCK
SC	SOLID CORE
SCH	SCHEDULE
SCHEM	SCHEMATIC
SCN	SCREEN
SE	STEEL/ALUMINUM EDGE
SEC	SECONDARY, SECONDS
SECT	SECTION
SEP	SEPARATE
SF	SQUARE FOOT
SG	SHEET GLASS, SEALANT GROOVE
SH	SHOWER
SHT	SHEET
SHTG	SHEATHING
SIL	SILENCE
SIM	SIMILAR
SL	SLOPE
SLTD	SLOTTED
SLV	SLEEVE
SMLS	SEAMLESS
SOG	SLAB ON GRADE
SP	SOUNDPROOF, STANDPIPE
SPA	SPACING
SPEC	SPECIFICATION
SPLY	SUPPLY
SPST	SINGLE POLE SINGLE THROW
SPT	SET POINT
SQ	SQUARE
SR	SHORT RADIUS
SS	SERVICE SINK
SST	STAINLESS STEEL, START SLOPE TRANSTION
ST	STREET
STA	STATION
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL, STRAIGHT
SUB	SUBSTITUTE
SUC	SUCTION
SUSP	SUSPENDED
SY	SQUARE YARD
SYM	SYMBOL
SYMM	SYMMETRICAL
SYN	SYNTHETIC
SYS	SYSTEM
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T	TILE, TREAD
TA	TOILET ACCESSORY, TEMPERED AIR
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEF	TROWELED EPOXY FLOORING
TEMP	TEMPORARY, TEMPERATURE
THD	THREAD
THK	THICK
THRESH	THRESHOLD
THRU	THROUGH
TKBD	TACK BOARD
TOB	TOP OF BOLT, TOP OF BANK, TOP OF BEAM
TOC	TOP OF CURB, TOP OF CONCRETE
TOD	TOP OF DUCT
TOF	TOP OF FOOTING
TOG	TOP OF GRATING
TOL	TOLERANCE, TOP OF LEDGER
TOM	TOP OF MASONRY
TOP	TOP OF PLATE
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB, TOP OF STEEL
TOW	TOP OF WALL
TP	TEST PIT
TPD	TOILET PAPER DISPENSER
TPG	TOPPING
TR	TRANSOM
TRANS	TRANSITION
TRD	TRENCH DRAIN
TYP	TYPICAL
U	URINAL
UG	UNDERGROUND
ULT	ULTIMATE
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	VENT, VELOCITY, VOLT
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARNISH, VARIABLE, VOLT AMPERES REACTIVE
VB	VAPOR BARRIER, VINYL BASE, VALVE BOX
VC	VERTICAL CURVE
VCT	VINYL COMPOSITION TILE, VERTICAL CENTERLINE
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VG	VERTICAL GRAIN
VIF	VERIFY IN FIELD
VIN	VINYL
VS	VERSES, VAPOR SEAL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W/	WITH
W/O	WITHOUT
W	WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM
WB	WOOD BASE
WC	WATER CLOSET, WATER COLUMN
WD	WOOD, WIDTH
WF	WIDE FLANGE, WASH FOUNTAIN
WG	WIRE GLASS, WATER GAGE
WH	WALL HYDRANT, WEEP HOLE
WI	WROUGHT IRON
WL	WATER LEVEL
WLD	WELDED
WM	WIRE MESH
WP	WATERPROOF, WORKING POINT
WTHP	WEATHERPROOF
WS	WATERSTOP, WATER SURFACE
WSCT	WAINSCOT
WT	WEIGHT, WATER TIGHT
WWF	WELDED WIRE FABRIC
XP	EXPLOSION PROOF
XS	EXTRA STRONG
XXS	DOUBLE EXTRA STRONG
XSECT	CROSS SECTION
YH	YARD HYDRANT
YS	YIELD STRENGTH

GENERAL NOTES:

1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF THE WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION; "INC" MAY MEAN INCLUDED OR INCLUDING; "REINF" MAY MEAN EITHER REINFORCE OR REINFORCING.
4. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

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WARNING

0 1/2 1

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

STANDARD ABBREVIATIONS

DESIGNED J. BOAG

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING G003

SHEET 3 OF 40

SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_G003.dwg Plot date: Sep 09, 2024 12:10pm

SHEET SYMBOLS

ARROW INDICATES DIRECTION OF PLAN NORTH

N

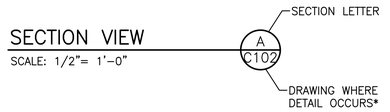
PLAN

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

SECTION IDENTIFICATION

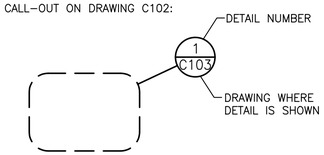
(1) SECTION CUT ON DRAWING C102:

(2) ON DRAWING C103 THIS SECTION IS IDENTIFIED AS:

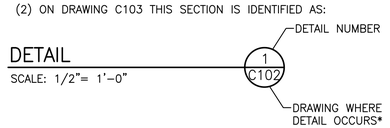


DETAIL IDENTIFICATION

(1) DETAIL CALL-OUT ON DRAWING C102:



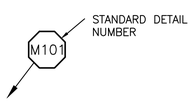
(2) ON DRAWING C103 THIS SECTION IS IDENTIFIED AS:



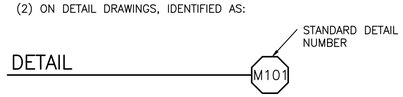
*NOTE: IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON SAME DRAWING. DRAWING NUMBER IS REPLACED BY A LINE.

STANDARD DETAIL IDENTIFICATION

(1) DETAIL CALL-OUT ON PLAN OR SECTION:



(2) ON DETAIL DRAWINGS, IDENTIFIED AS:



SITE PLAN LINE TYPES

X X	FENCE LINE
OHP	OVERHEAD POWER
P P	UNDERGROUND POWER
455	MAJOR CONTOUR
456	MINOR CONTOUR
...	EDGE OF WATERLINE
TOE TOE	TOE OF SLOPE
TOB TOB	TOP OF BANK
SS SS	SANITARY SEWER
SD SD	STORM DRAIN
EP EP	EDGE OF PAVEMENT
EG EG	EDGE OF GRAVEL
W	WATTLE
SF SF	SILT FENCE
CF CF	CONSTRUCTION FENCE
GAS GAS	GAS LINE
PW PW	POTABLE WATER
PE/L	POWER EASEMENT LINE
GE/L	GAS EASEMENT LINE
- - - - - - - - - - - -	CONSTRUCTION LIMITS
W	STRAW WATTLES
SF	SILT FENCE
TC	TURBIDITY CURTAIN
- - -	PARCEL LINES

SITE PLAN SYMBOLS

	CONIFER TREE: FIR, SPRUCE, LARCH OR PINE, 8" DIAMETER OR LARGER.
	DECIDUOUS TREE: COTTONWOOD, HAWTHORN, ASPEN, 8" DIAMETER OR LARGER.
MH	MANHOLE
EB	ELECTRIC BOX
	STORM DRAIN MANHOLE
FH	FIRE HYDRANT
YH-X	YARD HYDRANT
	SURVEY CONTROL POINT, AS NOTED.
	POLE ANCHOR
	POWER POLE
	LIGHT POLE
	SIGN
	CONTROL POINT
###	SITE COORDINATES
	HORIZONTAL CONTROL POINT
	VERTICAL CONTROL POINT
	HORZ AND VERT CONTROL POINT
80.00	FINISHED ELEVATION
(80.00)	EXISTING ELEVATION
BM-XX	BENCH MARK
B-1	SOIL BORING LOCATION
TP-5	TEST PIT LOCATION
MW	MONITORING WELL
PW	PRODUCTION WELL

HATCH SYMBOLS

	ROCK, TYPE AS NOTED (PLAN/SECTION)
	BED ROCK
	EXISTING GRADE (SECTION)
	NEW SOIL (SECTION)
	CONCRETE (SECTION/PLAN)
	SAND, GROUT (PLAN/SECTION)
	GRATING (PLAN)
	RIP RAP (PLAN/SECTION)
	GRASS (PLAN)
	COFFER DAM
	DEMOLITION AREA
	ASPHALT PAVEMENT PEDESTRIAN
	GRASS PATHWAY PEDESTRIAN
	SAND PATHWAY PEDESTRIAN
	CONCRETE PATHWAY PEDESTRIAN
	CONCRETE PATHWAY PEDESTRIAN

GENERAL NOTES:

1. ALL SYMBOLS ARE NOT NECESSARILY USED THIS IS A STANDARD DRAWING SHOWING COMMON SYMBOLS ON THIS PROJECT.
2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH DRAWING FOR USAGE.

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WARNING

0 1/2 1

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

STANDARD SYMBOLS

DESIGNED J. BOAG
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

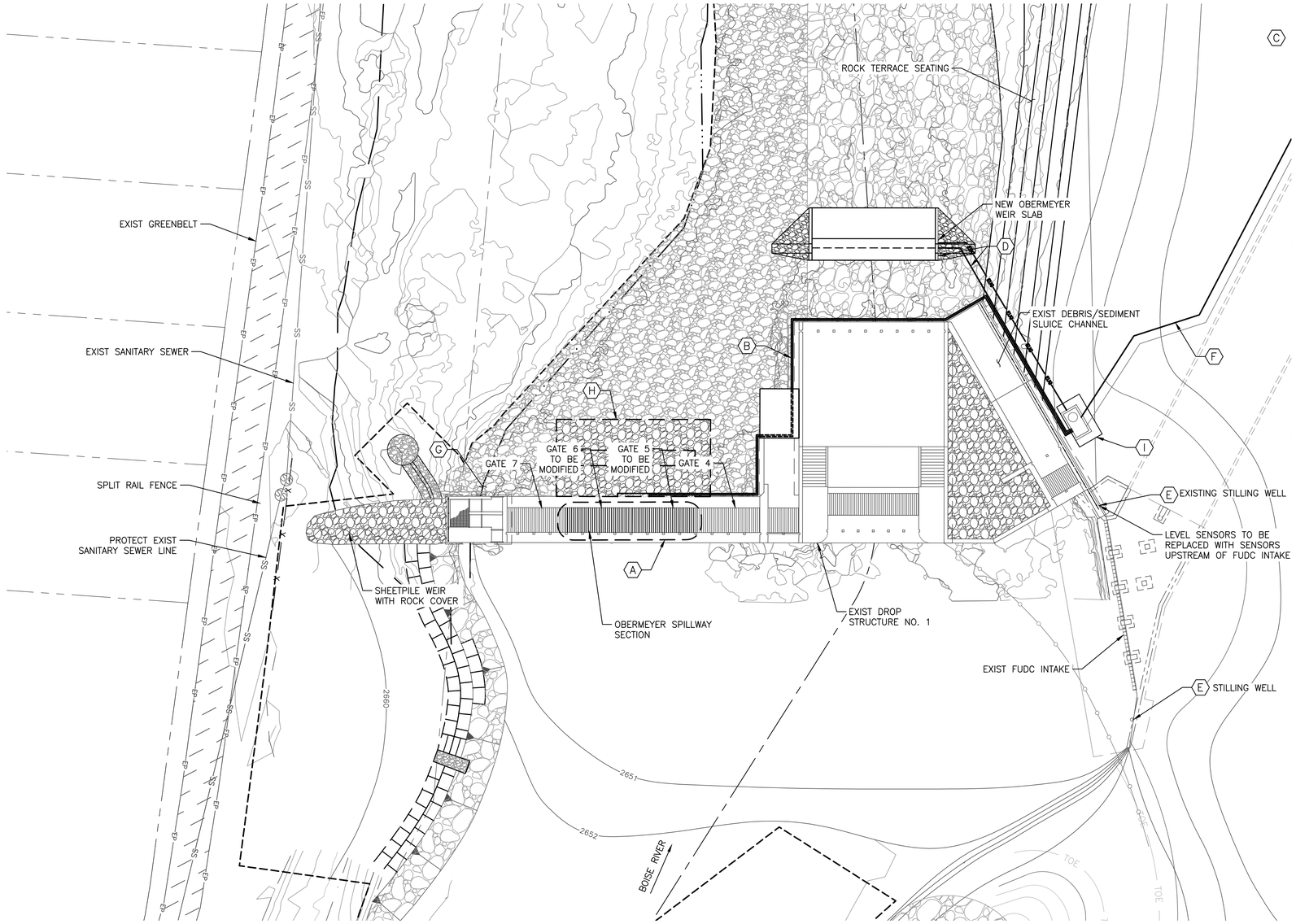
DRAWING G004

SHEET 4 OF 40

SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_G004.dwg Plot date: Sep 09, 2024 12:10pm



REACH 2 DROP STRUCTURE 1 DESIGN MODIFICATION PLAN

SCALE: 1"= 20'

0" 20' 40'

SHEET KEY NOTES:

A REMOVE AND MODIFY GATES 5 AND 6 PER OBEMEYER DRAWINGS. MODIFICATIONS INCLUDE SPLITTING WEIR TO TWO (APPROXIMATELY EQUAL 10' SECTIONS) SECTIONS, ADDING SEAL LEAKS, SEAL FACING BARS, NEW SMALLER AIR BAGS, ADDING AN ADDITIONAL INCLINOMETER AND CABLE, REVISING RETAINING STRAPS. SEE OBERMEYER SHOP DRAWINGS FOR GATE MODIFICATION DETAILS.

B ADD TWO NEW CONTROL ZONES FROM EQUIPMENT BUILDING AND ROUTE ALONG DOWNSTREAM EDGE OF STRUCTURES AS SHOWN ON MECH DRAWINGS. ENCASE LINES IN CONCRETE PER STRUCTURAL DRAWINGS.

C CONFIGURATION OF AIR PIPING IN EQUIPMENT ROOM AS SHOWN ON MECH AND ELEC DRAWINGS. MCMILLEN TO MODIFY PLC PROGRAMMING FOR THE NEW GATE CONFIGURATION.

D NEW 40' W X 4' TALL OBERMEYER WEIR TO BE ADDED TO STABILIZE EXISTING WAVESHAPER GATE TO BE ADDED WITH NEW SLAB, END WALLS, RIPRAP ON END WALLS, AIRLINE(S) AND CONDUIT AS REQUIRED BY OBERMEYER DRAWINGS.

E ABANDON EXISTING EMBEDDED STILLING WELLS AND ADD NEW STILLING WELL UPSTREAM OF FUDC INTAKE. RUN CONDUIT ON UNDERSIDE OF EXISTING HANDRAIL, PAINT CONDUIT TO MATCH HANDRAIL.

F ROUTE NEW AIR LINES AND CONDUIT ALONG EXISTING UTILITY ROUTING.

G MITIGATE LEAKAGE BY INSTALLATION OF MEMBRANE ON LEFT BANK AS SHOWN ON CIVIL DRAWINGS.

H ADD PLUNGE POOL DIRECTLY DOWNSTREAM OF MODIFIED SPILLWAY GATES PER CIVIL DRAWINGS.

I REMOVE UNIT HEATER AND WIRING TO PURGE VALVES IN VAULT. REPLACE TERMINALS FOR INSTRUMENTATION WITH WATERPROOF HEAT SHRINK SPLICES.

REV	DATE	BY	DESCRIPTION
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WARNING

0 1/2 1

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CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
DESIGN MODIFICATION PLAN

DESIGNED J. BOAG
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

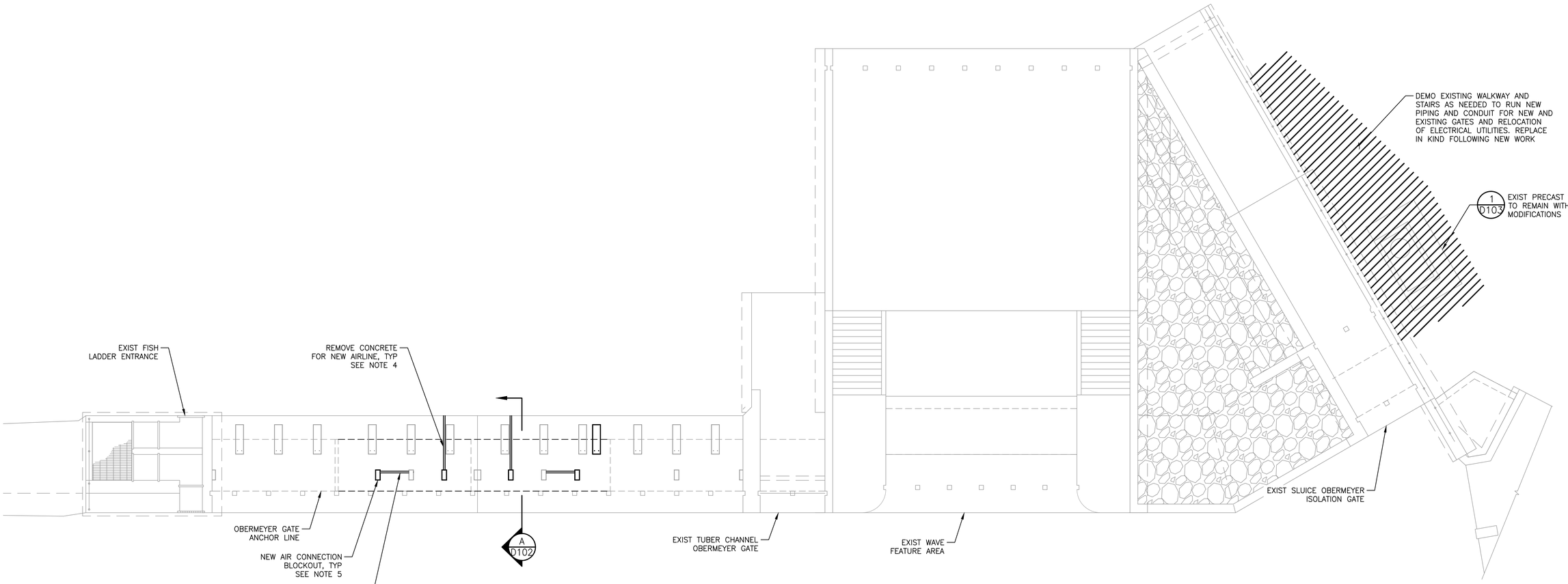
DRAWING G005
SHEET 5 OF 40
SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_G005.dwg Plot date: Sep 09, 2024 12:10pm

SHEET NOTES:

1. ALL AREAS OF CONCRETE DEMOLITION SHALL FIRST BE SAWCUT TO A DEPTH OF 3/4–INCH AROUND THE ENTIRE PERIMETER OF REMOVAL. DRILL CORNERS OF INTERSECTING SAWCUTS TO PREVENT OVERCUT.
2. CONCRETE REMOVAL WITHIN THE LIMITS OF THE SAWCUT MAY BE ACHIEVED THROUGH CHIPPING.
3. EXISTING REINFORCING SHALL NOT BE CUT OR REMOVED.
4. NEW AIRLINES SHALL BE CHIPPED OUT TO A DEPTH OF 2.5 INCHES.
5. NEW AIR CONNECTION BLOCKOUT SHALL BE CHIPPED OUT 6 INCHES.



REACH 2 – DROP STRUCTURE 1 DEMOLITION PLAN

SCALE: 1/8"= 1'–0"

0' 8' 16'

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WARNING

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BOISE WHITEWATER PARK

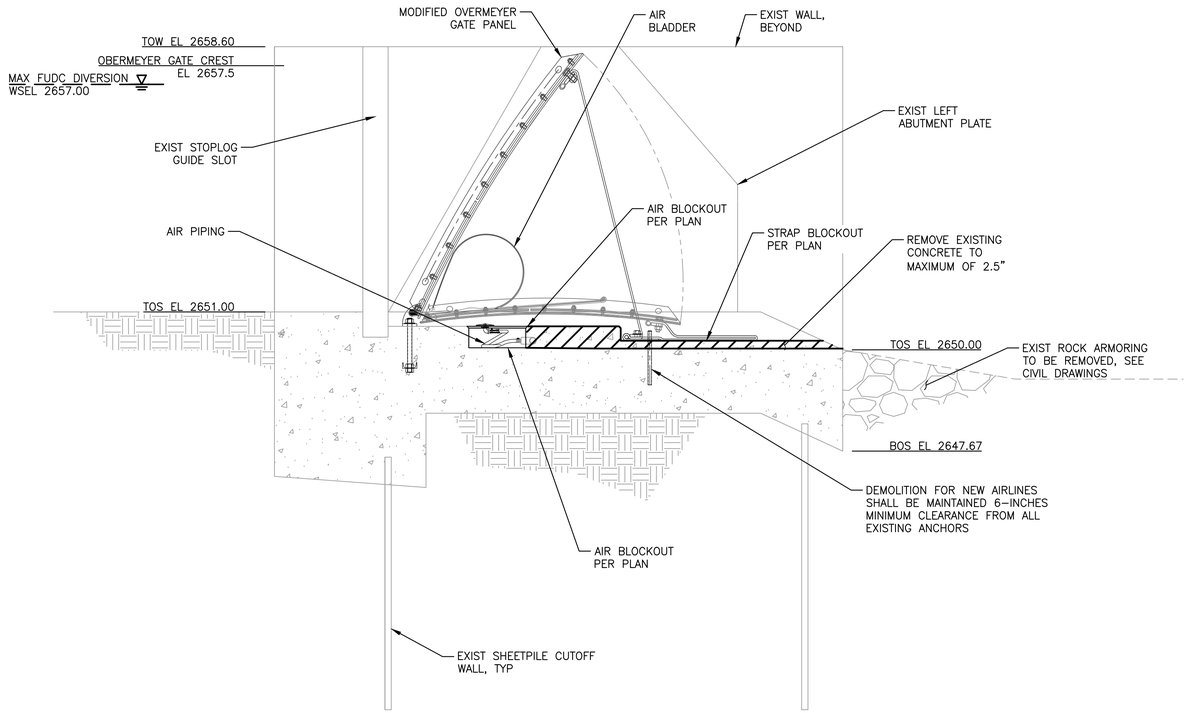
REACH 2 DROP STRUCTURE 1
DEMOLITION PLAN

DESIGNED B. BARRON
DRAWN R. WOOD
CHECKED M. MERKLEIN
ISSUED DATE 9/10/24

DRAWING
D101
SHEET 6 OF 40
SCALE: AS NOTED

JOB NO: 13–108

Path: C:\Box\mcm projects\city of boise\boise river water park design–build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_D101.dwg Plot date: Sep 09, 2024 12:10pm



REACH 2 DROP STRUCTURE 1 SPILLWAY DEMOLITION SECTION

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

0' 2' 4'

A D101

REV	DATE	BY	DESCRIPTION
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WARNING

0 1/2 1

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BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
DEMOLITION SECTION

DESIGNED B. BARRON
DRAWN R. WOOD
CHECKED M. MERKLEIN
ISSUED DATE 9/10/24

DRAWING
D102
SHEET 7 OF 40
SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_D102.dwg Plot date: Sep 09, 2024 12:10pm

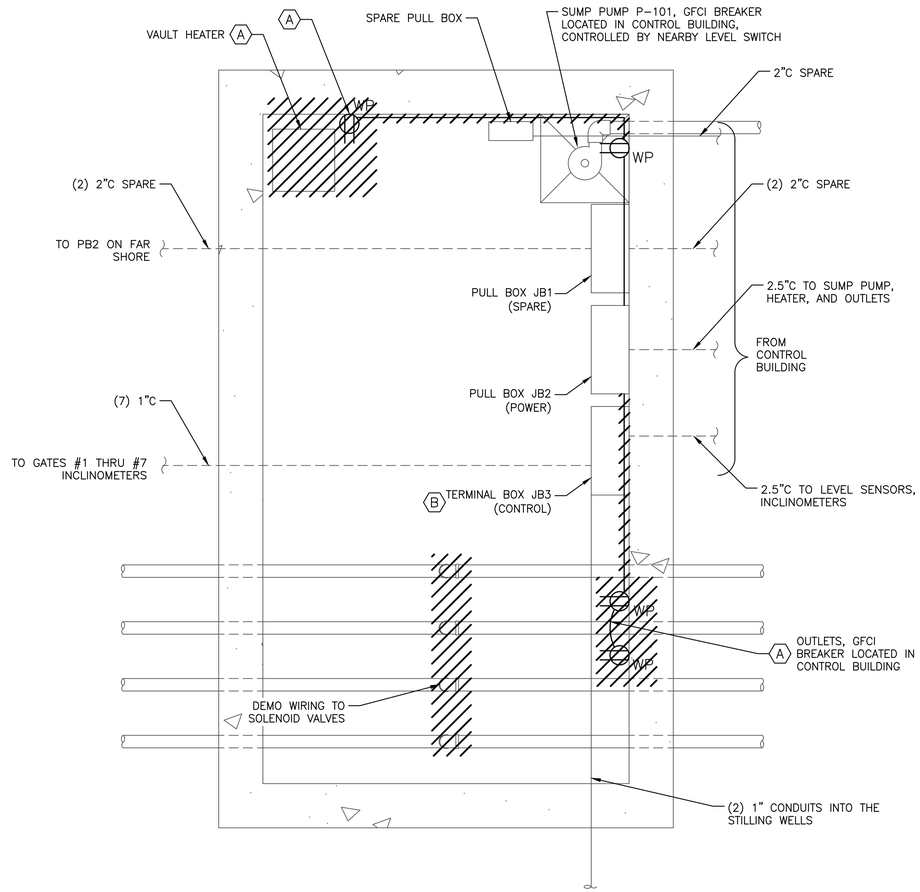
SHEET GENERAL NOTES:

1. DE–ENERGIZE, DISCONNECT, AND REMOVE ALL WIRING FROM CONTROL BUILDING TO VAULT FOR EQUIPMENT TO BE DEMOLISHED.
2. PRESERVE AND PROTECT ANY EQUIPMENT, PULL BOXES, OR CIRCUITS NOT SPECIFICALLY INDICATED FOR DEMOLITION. SEE ELECTRICAL DRAWINGS FOR MORE WORK IN THIS AREA.

SHEET KEY NOTES:

A DEMO INDICATED OUTLETS AND UNIT HEATER AND ASSOCIATED CONDUITS WITHIN VAULT.

B DISCONNECT INCLINOMETER CABLES AND TAPE AND PRESERVE FOR SPLICING. DISCONNECT AND DEMO WIRING FROM LEVEL SENSORS. DEMO TERMINAL BLOCKS, DESICCANTS, AND DIN RAIL FROM JB3 AND CLEAN INTERIOR FOR REUSE.



AIRLINE VAULT DEMOLITION PLAN

SCALE: 1"= 1'–0"

0' 1' 2'

1 D101

REV	DATE	BY	DESCRIPTION
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SEP 10 2024

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WARNING

0 1/2 1

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BOISE WHITEWATER PARK

AIRLINE VAULT DEMOLITION PLAN

DESIGNED M. SKELTON

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

D103

SHEET 8 OF 40

SCALE: AS NOTED

JOB NO: 13–108

Path: C:\Box\mcm projects\city of boise\boise river water park design–build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_D103.dwg Plot date: Sep 09, 2024 12:10pm

SHEET NOTES:

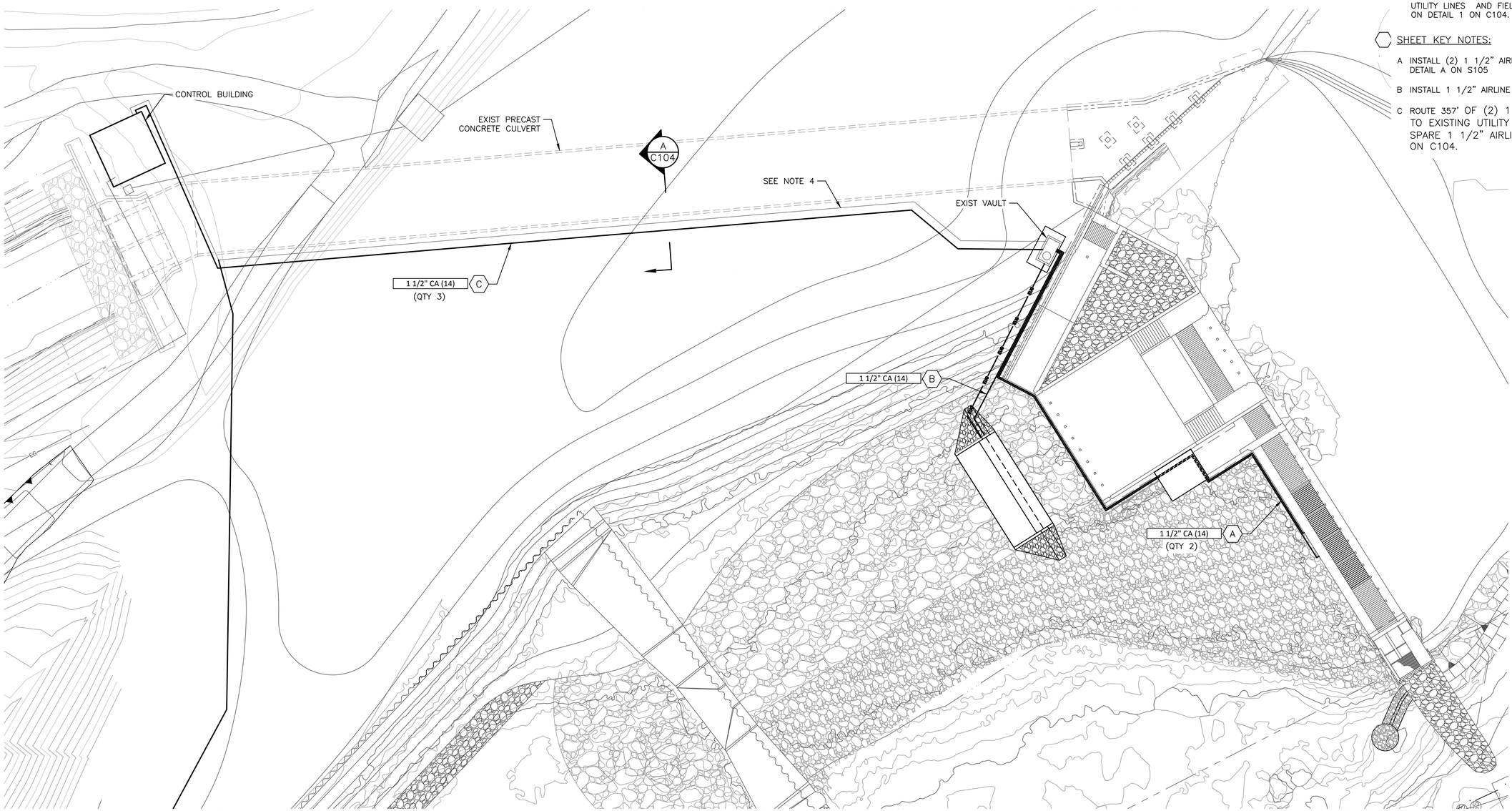
1. REFER TO GM001 FOR PIPE SCHEDULE.
2. REFER TO M101 FOR NEW AIRLINES ROUTING ALONG THE EXISTING DROP STRUCTURES.
3. REFER TO E104 FOR CONDUIT ROUTING PLAN.
4. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING UTILITY LINES AND FIELD FIT PROPOSED PIPING AS SHOWN ON DETAIL 1 ON C104.

SHEET KEY NOTES:

A INSTALL (2) 1 1/2" AIRLINES AND ENCASE PER SECTION DETAIL A ON S105

B INSTALL 1 1/2" AIRLINE

C ROUTE 357' OF (2) 1 1/2" AIRLINES ADJACENT TO EXISTING UTILITY TRENCH AND CONNECT (1) SPARE 1 1/2" AIRLINE AS SHOWN ON DETAIL 1 ON C104.



OVERALL CIVIL PLAN

SCALE: 1"= 20'

0" 20' 40'

REV	DATE	BY	DESCRIPTION
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WARNING

0 1/2 1

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CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

OVERALL CIVIL PLAN

DESIGNED K. VO
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
C101
SHEET 9 OF 40
SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_C101.dwg Plot date: Sep 09, 2024 12:13pm

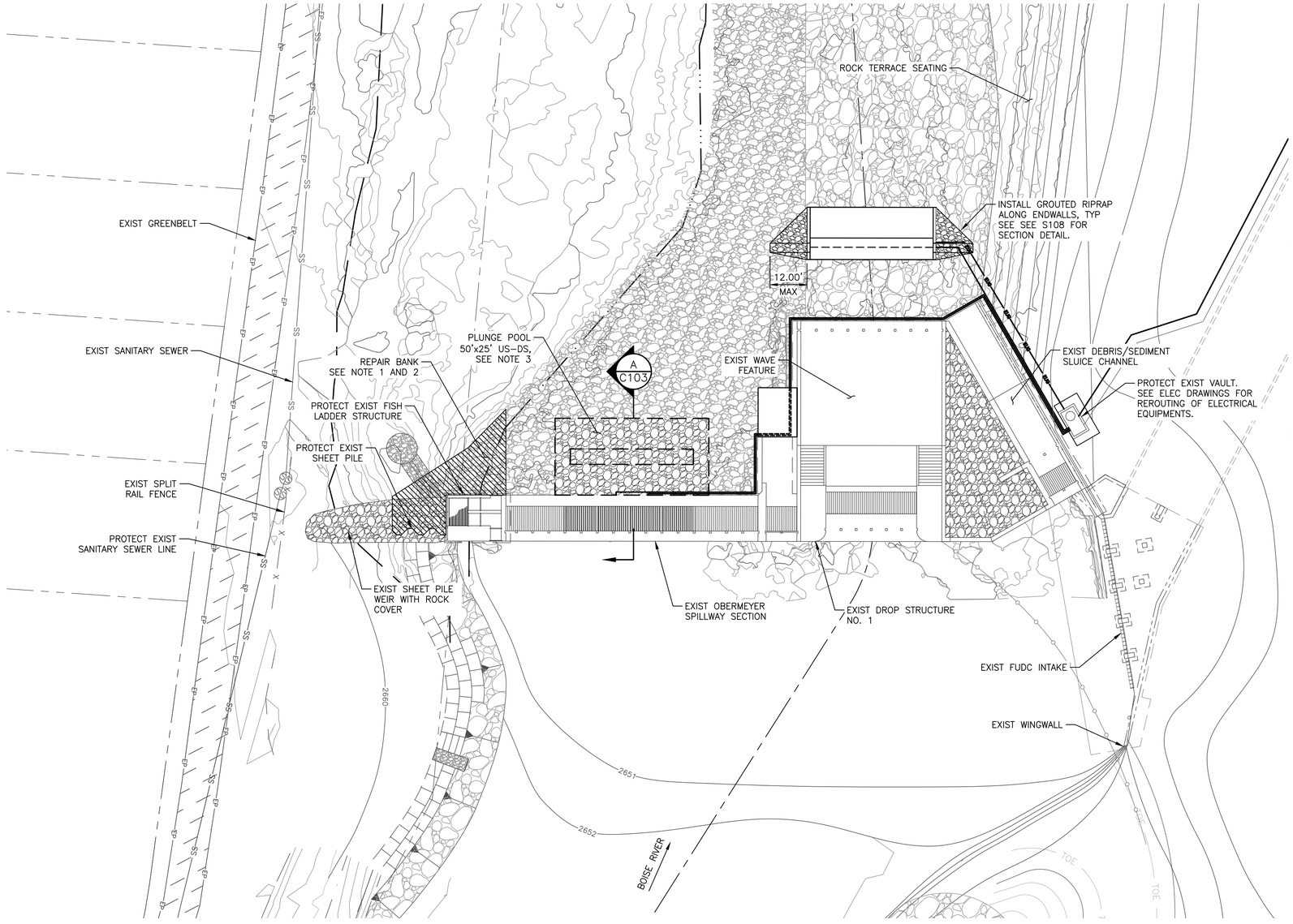
SHEET NOTES:

1. DEMOLISH AND REPLACE ROCK COVER, RIPRAP, AND PORTION OF GROUTED RIPRAP CHANNEL ALONG LEFT BANK BETWEEN THE EXISTING TREELINE TO THE EXISTING SHEET PILE FOR THE INSTALLATION OF THE GEOMEMBRANE LINER AND GROUTING OF RIPRAP.
2. FIELD FIT 40MIL LLDPE GEOMEMBRANE LINER AT A MINIMUM DEPTH OF 6 FT FROM EXISTING GRADE. BACKFILL WITH RIPRAP IN-KIND AND RECONSTRUCT GROUTED RIPRAP CHANNEL IN-KIND. RIPRAP SHALL BE GROUTED AND GRINDED FOR A SMOOTH FINISH.
3. EXCAVATE APPROXIMATELY 412 CYD, INCLUDING OVEREXCAVATION, FOR PLUNGE POOL. POOL SHALL BE CENTERED ALONG MODIFIED GATES. SEE SECTION ON C103 FOR PLUNGE POOL AND BACKFILL DETAILS.

LEGEND:

EXIST RIPRAP, D_{50}=3'ø

EXIST RIPRAP, D_{50}=5'ø



REACH 2 – DROP STRUCTURE 1 CIVIL PLAN

SCALE: 1"= 20'

0" 20' 40'

1 C102

REV	DATE	BY	DESCRIPTION
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WARNING

0 1/2 1

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
CIVIL PLAN

DESIGNED K. VO

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

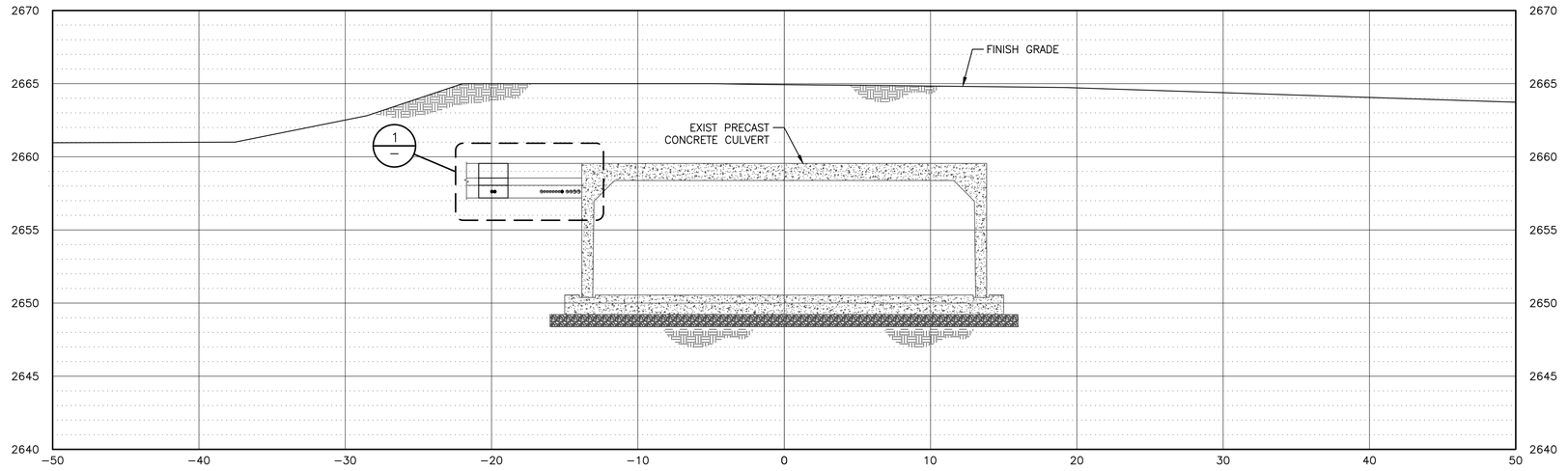
C102

SHEET 10 OF 40

SCALE: AS NOTED

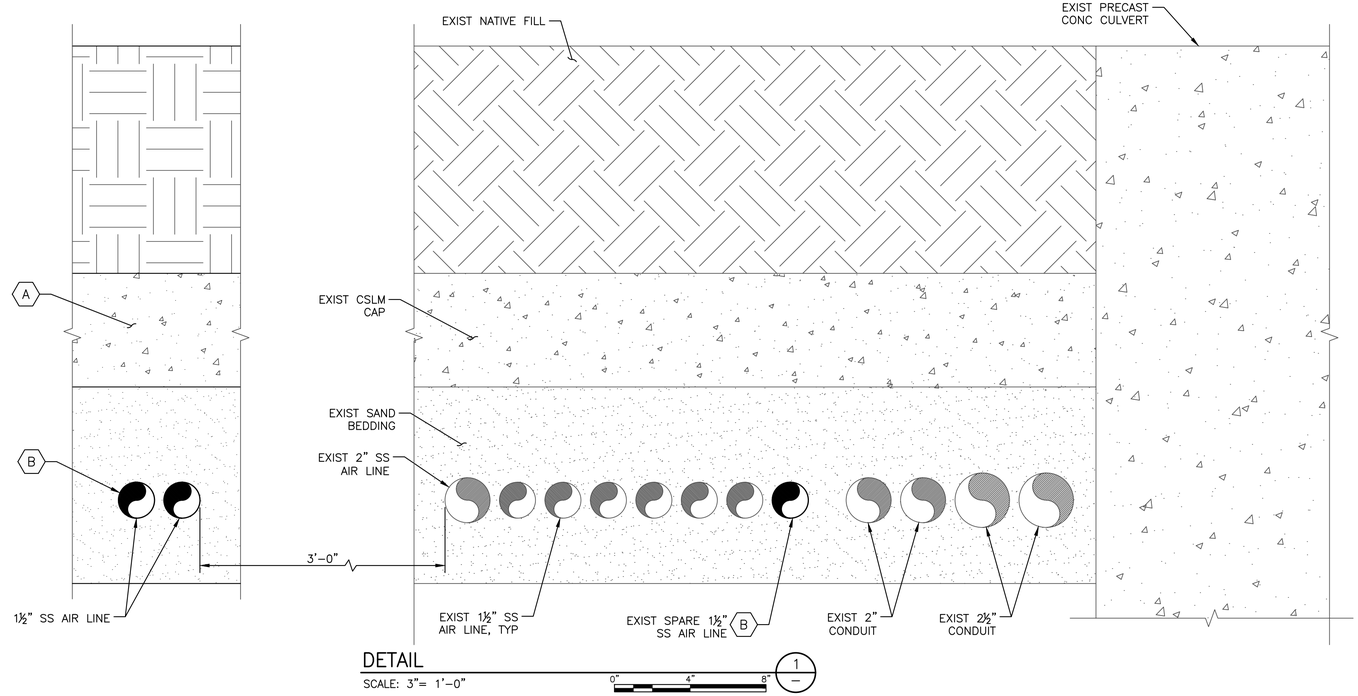
JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_C102.dwg Plot date: Sep 09, 2024 12:13pm



BARRIER PIPING ALONG EXIST CULVERT SECTION (A / C101)

SCALE: 1"= 5'



DETAIL (1 / —)

SCALE: 3"= 1'−0"

SHEET NOTES:

1. SLOPE COMPRESSED AIR LINES AT 1"/100' MINIMUM PER MANUFACTURER'S RECOMMENDATIONS.

SHEET KEY NOTES:

A INSTALL AND EXTEND EXISTING CSLM CAP IN−KIND TO INCLUDE TWO ADDITIONAL AIRLINES.

B INSTALL (2) 1 1/2" AIR LINES AND REPLACE SPARE 1 1/2" AIRLINE WITH NEW AIR LINE.

REV	DATE	BY	DESCRIPTION
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WARNING

0 1/2 1

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CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

BARRIER PIPING ALONG
CULVERT SECTION

DESIGNED K. VO

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

C104

SHEET 12 OF 40

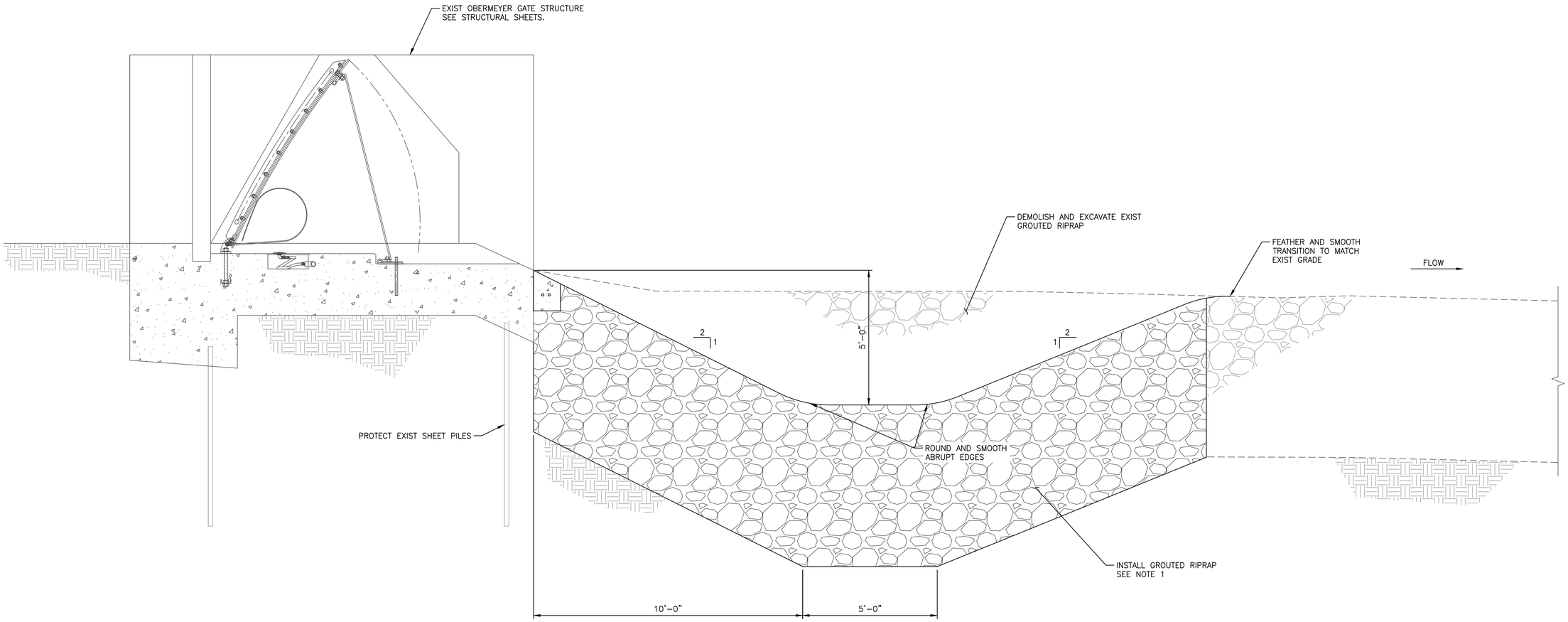
SCALE: AS NOTED

JOB NO: 13−108

Path: C:\Box\mcm projects\city of boise\boise river water park design−build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_C104.dwg Plot date: Sep 09, 2024 12:13pm

SHEET NOTES:

1. PLACE RIPRAP D50 = 3 FT AND GROUT TO MATCH EXIST. SEE SPECS FOR RIPRAP MATERIAL AND GROUTING METHOD. GROUTED RIPRAP SHALL BE GRINDED FOR A SMOOTH FINISH.



PLUNGE POOL SECTION

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

0' 2' 4'

A C102

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

PROFESSIONAL ENGINEER LICENSED 20229 09/10/2024 STATE OF IDAHO KY LUAN M. VO

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

PLUNGE POOL SECTION

DESIGNED K. VO

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

C103

SHEET 11 OF 40

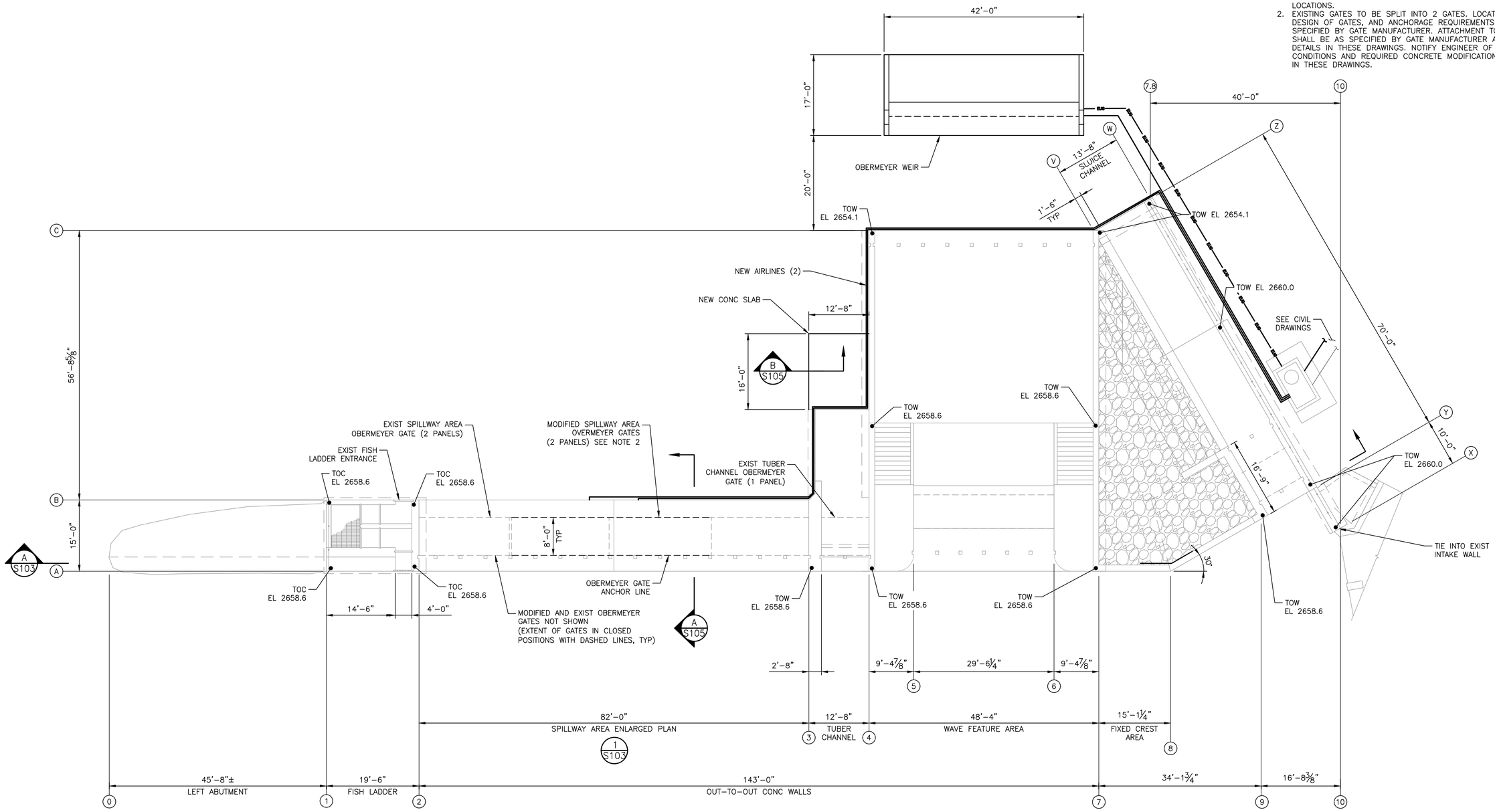
SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_C103.dwg Plot date: Sep 09, 2024 12:13pm

SHEET NOTES:

1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR CONDUIT LOCATIONS.
2. EXISTING GATES TO BE SPLIT INTO 2 GATES. LOCATION OF SPLIT, DESIGN OF GATES, AND ANCHORAGE REQUIREMENTS SHALL BE AS SPECIFIED BY GATE MANUFACTURER. ATTACHMENT TO CONCRETE SHALL BE AS SPECIFIED BY GATE MANUFACTURER AND THE DETAILS IN THESE DRAWINGS. NOTIFY ENGINEER OF ANY CHANGED CONDITIONS AND REQUIRED CONCRETE MODIFICATIONS NOT SHOWN IN THESE DRAWINGS.



REACH 2 – DROP STRUCTURE 1 TOP PLAN

SCALE: 3/32"= 1'-0"

0' 8' 16'

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION

PROFESSIONAL ENGINEER LICENSED 19057 STATE OF IDAHO MARK J. MERKLEIN 09/10/2024

WARNING

0 1/2 1

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
TOP PLAN

DESIGNED M. MERKLEIN
DRAWN R. WOOD
CHECKED M. MERKLEIN
ISSUED DATE 9/10/24

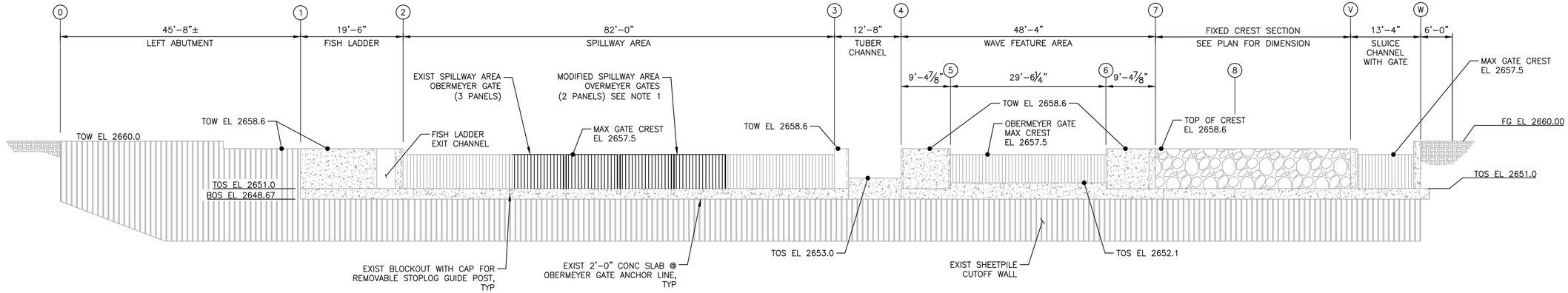
DRAWING
S102
SHEET 13 OF 40
SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_S102.dwg Plot date: Sep 09, 2024 12:13pm

SHEET NOTES:

1. EXISTING GATE TO BE SPLIT INTO 2 GATES. LOCATION OF SPLIT, DESIGN OF GATES, AND ANCHORAGE REQUIREMENTS SHALL BE AS SPECIFIED BY GATE MANUFACTURER. ATTACHMENT TO CONCRETE SHALL BE AS SPECIFIED BY GATE MANUFACTURER AND THE DETAILS IN THESE DRAWINGS. NOTIFY ENGINEER OF ANY CHANGED CONDITIONS AND REQUIRED CONCRETE MODIFICATIONS NOT SHOWN IN THESE DRAWINGS.



REACH 2 – DROP STRUCTURE 1 SECTION

SCALE: 3/32"= 1'–0"

0' 8' 16'

A S102

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

PROFESSIONAL ENGINEER LICENSED 19057 STATE OF IDAHO MARK J. MERKLEIN 09/10/2024

WARNING

0 1/2 1

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
SECTION

DESIGNED M. MERKLEIN
DRAWN R. WOOD
CHECKED M. MERKLEIN
ISSUED DATE 9/10/24

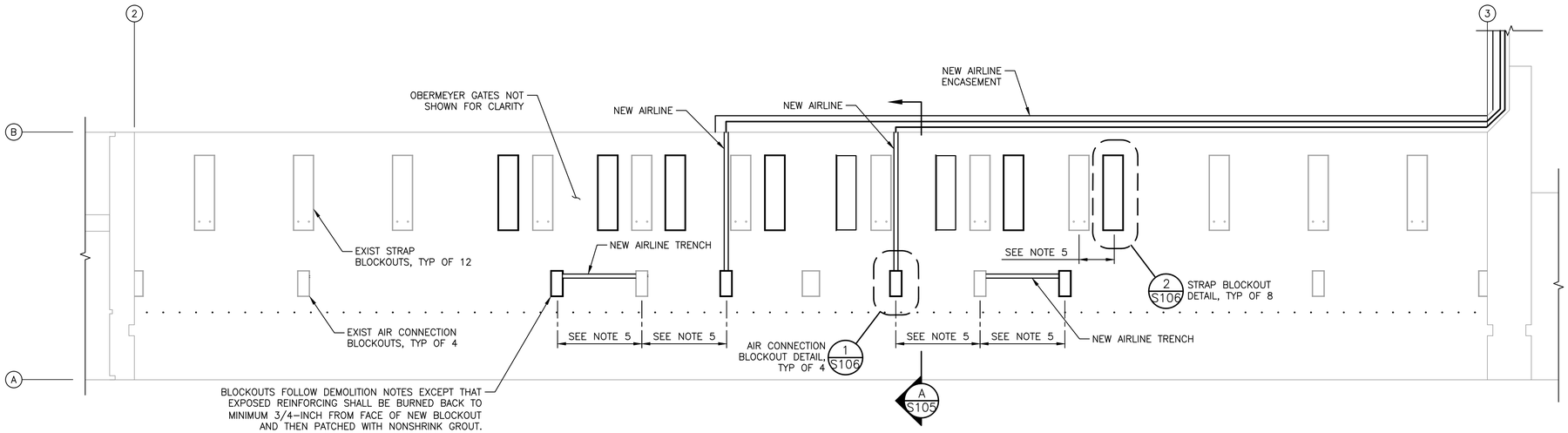
DRAWING
S103
SHEET 14 OF 40
SCALE: AS NOTED

JOB NO: 13–108

Path: C:\Box\mcm projects\city of boise\boise river water park design–build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_S103.dwg Plot date: Sep 09, 2024 12:14pm

SHEET NOTES:

1. ALL NEW AIRLINES SHALL BE ENCASED IN A NON-SHRINK GROUT.
   A. PRIOR TO GROUTING ANCHOR AIRLINES AT MINIMUM 2'-0" SPACING,
   B. ENSURE EXISTING CONCRETE IS ROUGHENED TO 1/4-INCH AMPLITUDE.
   C. APPLY BONDING AGENT TO CONCRETE.
   D. PLACE NONSHRINK EPOXY GROUT TO ENCASE NEW AIRLINES AND COVER NEW AIRLINES WITH MINIMUM 3/4" OF COVER.



REACH 2 DROP STRUCTURE 1 SPILLWAY – GATE BLOCKOUTS AND ANCHOR PLAN

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

0' 4' 8'

1 S102

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION

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09/10/2024

WARNING

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CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
SPILLWAY PLAN

DESIGNED M. MERKLEIN
DRAWN R. WOOD
CHECKED M. MERKLEIN
ISSUED DATE 9/10/24

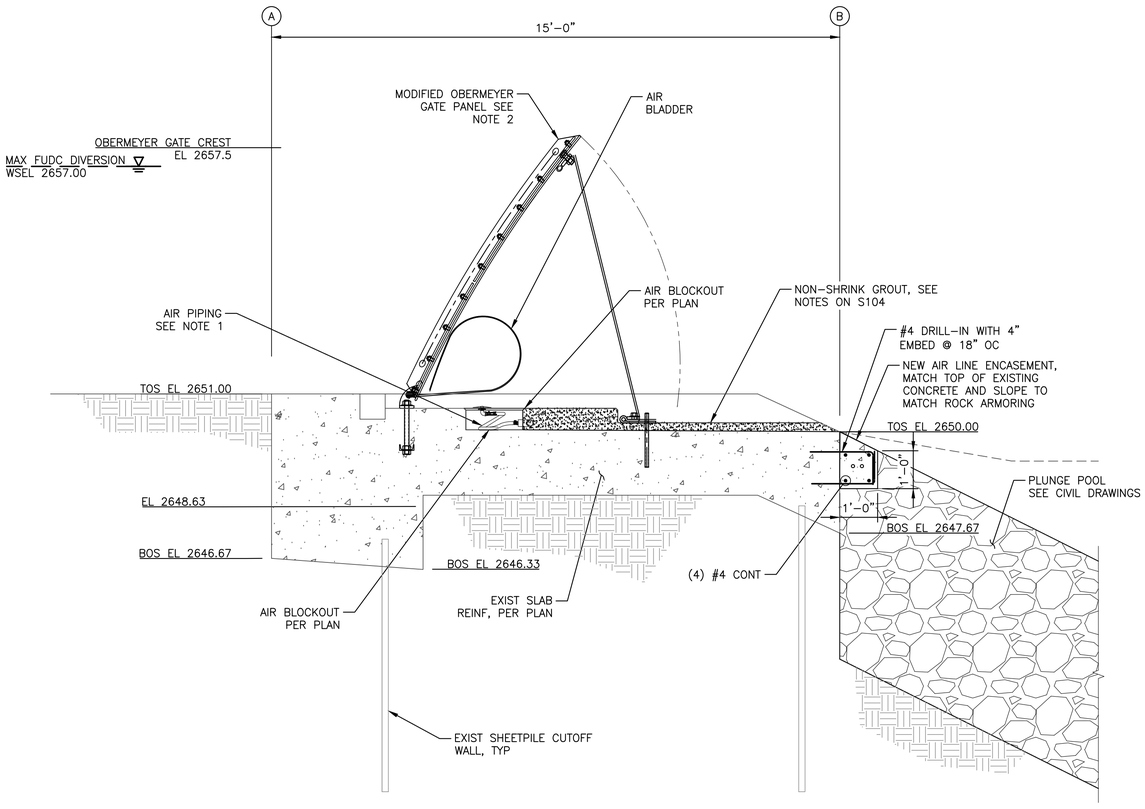
DRAWING
S104
SHEET 15 OF 40
SCALE: AS NOTED

JOB NO: 13-108

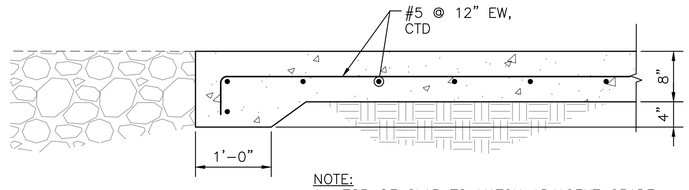
Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_S104.dwg Plot date: Sep 09, 2024 12:14pm

SHEET NOTES:

1. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR FIBER OPTIC AND OBERMEYER GATE CONDUIT REQUIREMENTS.
2. EXISTING GATE TO BE SPLIT INTO 2 GATES. LOCATION OF SPLIT, DESIGN OF GATES, AND ANCHORAGE REQUIREMENTS SHALL BE AS SPECIFIED BY GATE MANUFACTURER. ATTACHMENT TO CONCRETE SHALL BE AS SPECIFIED BY GATE MANUFACTURER AND THE DETAILS IN THESE DRAWINGS. NOTIFY ENGINEER OF ANY CHANGED CONDITIONS AND REQUIRED CONCRETE MODIFICATIONS NOT SHOWN IN THESE DRAWINGS.



SECTION
SCALE: 1/2"= 1'-0"
A S104



NOTE:
1. TOP OF SLAB TO MATCH ADJACENT GRADE.

SECTION
SCALE: 1"= 1'-0"
B S104

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

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09/10/2024

WARNING
0 1/2 1
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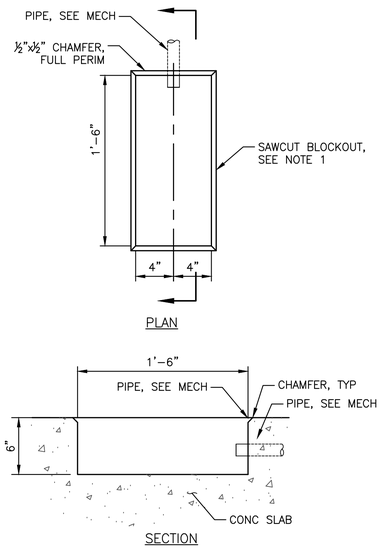
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
SPILLWAY SECTION

DESIGNED M. MERKLEIN
DRAWN R. WOOD
CHECKED M. MERKLEIN
ISSUED DATE 9/10/24

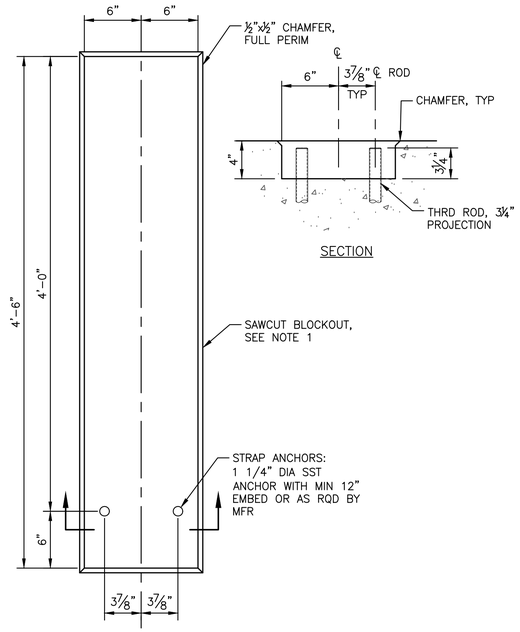
DRAWING
S105
SHEET 16 OF 40
SCALE: AS NOTED

JOB NO: 13-108
Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_S105.dwg Plot date: Sep 09, 2024 12:14pm



AIR CONNECTION BLOCKOUT DETAIL

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



STRAP BLOCKOUT DETAIL

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

SHEET NOTES:

1. SAWCUT BLOCKOUTS WITH 1/2"x1/2" CHAMFER. SAWCUT FINISH SHALL BE SMOOTH AND FLAT WITHIN +/- 0.125". APPLY XYPEX CONCENTRATE CONCRETE WATERPROOFING COATING OR APPROVED EQUAL TO ALL SAWCUT SURFACES. BURN BACK REINFORCEMENT 1.5" FROM SURFACE OF SAWCUT AND PATCH HOLES WITH NON SHRINK GROUT.
2. CORE DRILL BLOCKOUT CORNERS TO PREVENT OVERCUT, OR PATCH OVERCUT WITH NONSHRINK GROUT.
3. STRAP ANCHORS SHALL BE SST HILTI HAS THREADED ROD WITH RE 500 V3 EPOXY OR APPROVED EQUAL.

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

PROFESSIONAL ENGINEER LICENSED 19057 STATE OF IDAHO MARK J. MERKLEIN
09/10/2024

WARNING
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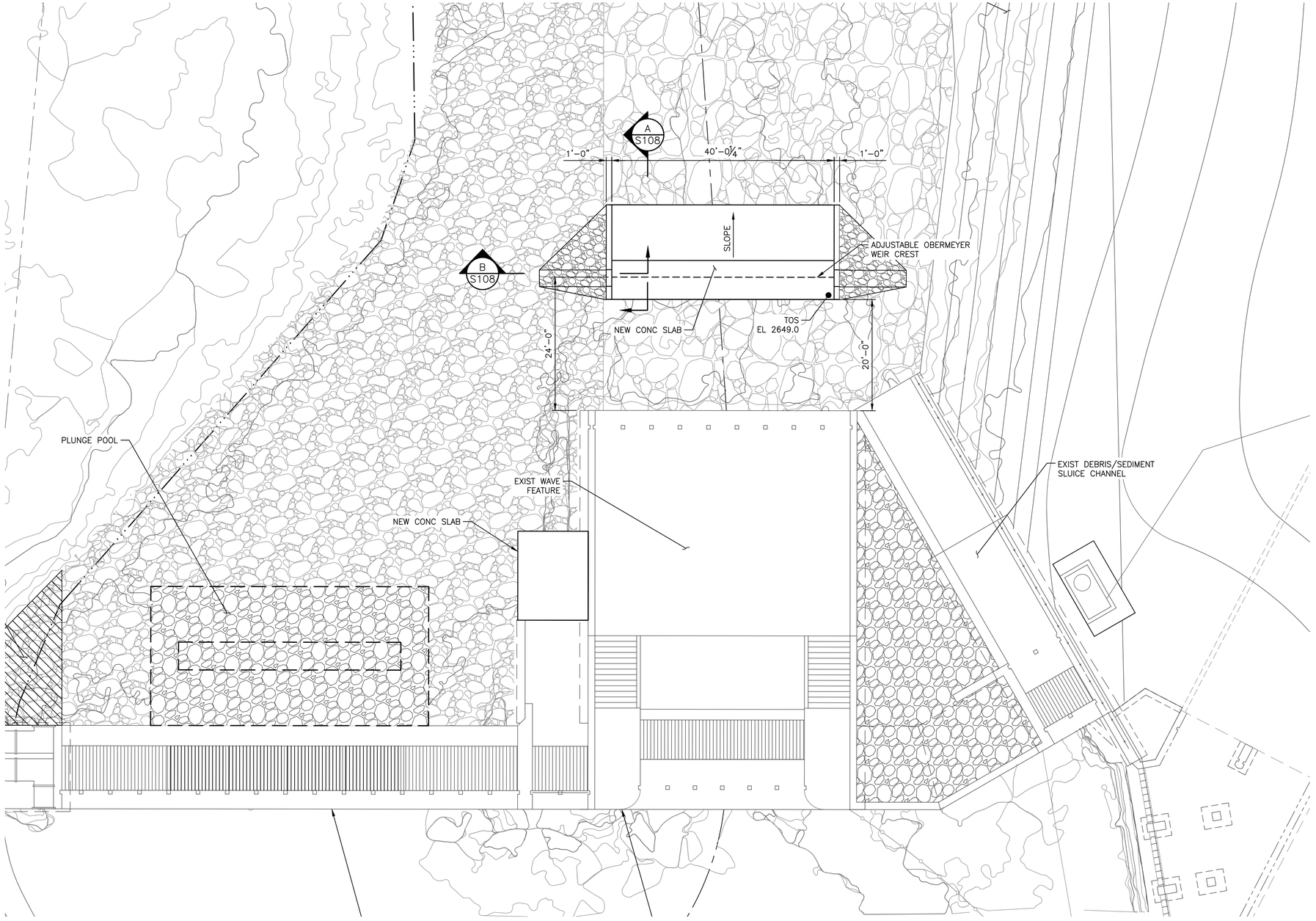
CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

BLOCKOUT DETAILS

DESIGNED M. MERKLEIN
DRAWN R. WOOD
CHECKED M. MERKLEIN
ISSUED DATE 9/10/24

DRAWING
S106
SHEET 17 OF 40
SCALE: AS NOTED

JOB NO: 13-108
Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_S106.dwg Plot date: Sep 09, 2024 12:14pm



ADJUSTABLE WEIR SLAB FOUNDATION PLAN

SCALE: 1"= 10'

0" 10' 20'

1

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

PROFESSIONAL ENGINEER LICENSED 19057 STATE OF IDAHO MARK J. MERKLEIN
09/10/2024

WARNING

0 1/2 1

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CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

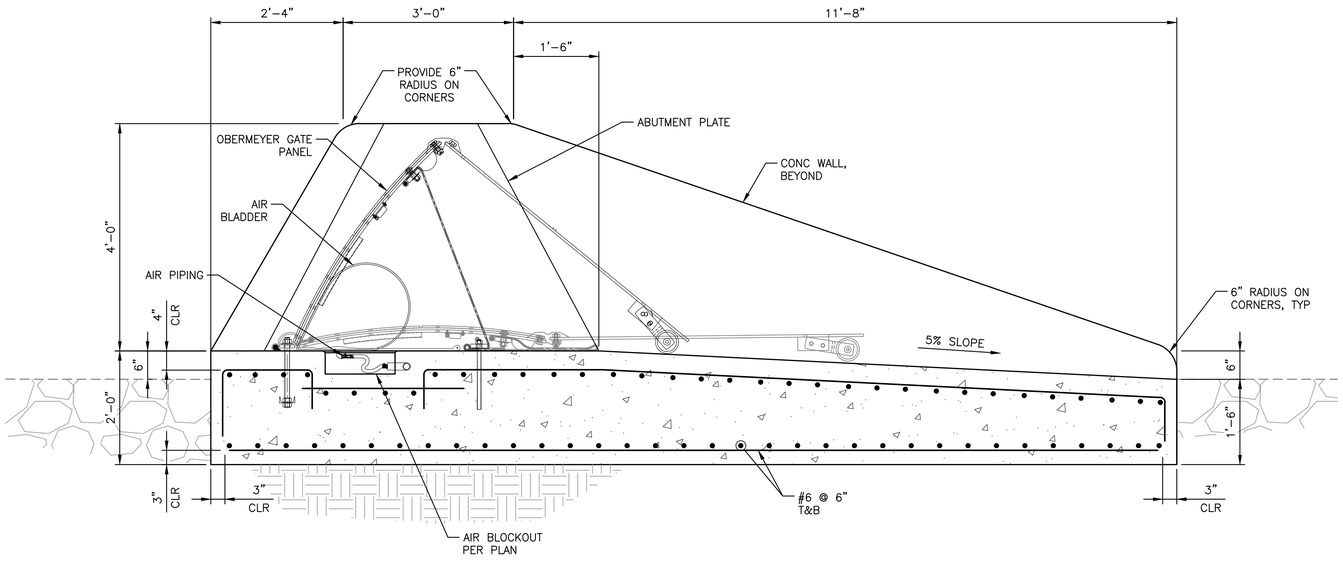
ADJUSTABLE WEIR SLAB
FOUNDATION PLAN

DESIGNED M. MERKLEIN
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
S107
SHEET 18 OF 40
SCALE: AS NOTED

JOB NO: 13-108

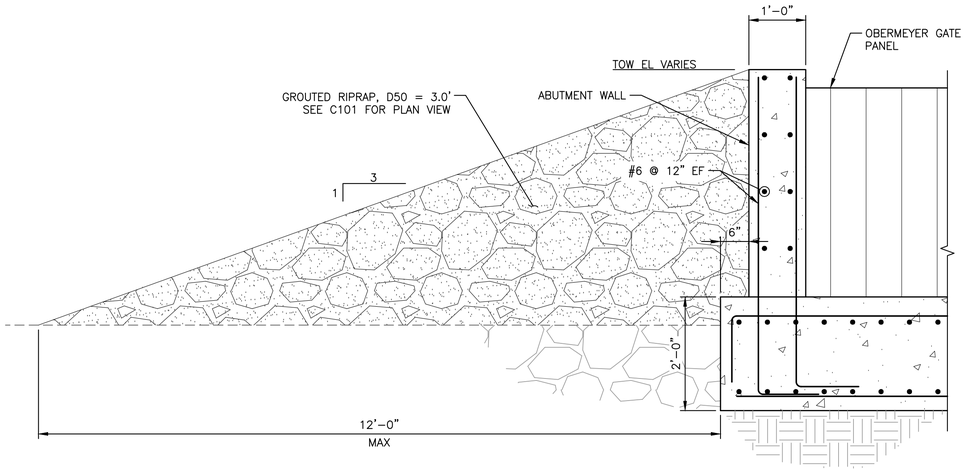
Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_S107.dwg Plot date: Sep 09, 2024 12:15pm



ADJUSTABLE WEIR SLAB FOUNDATION SECTION

SCALE: 3/4"= 1'–0"

A S107



ADJUSTABLE WEIR WALL SECTION

SCALE: 3/4"= 1'–0"

B S107

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

PROFESSIONAL ENGINEER LICENSED 19057 STATE OF IDAHO MARK J. MERKLEIN 09/10/2024

WARNING

0 1/2 1

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CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

ADJUSTABLE WEIR SLAB
FOUNDATION SECTION

DESIGNED M. MERKLEIN

DRAWN R. WOOD

CHECKED M. MERKLEIN

ISSUED DATE 9/10/24

DRAWING

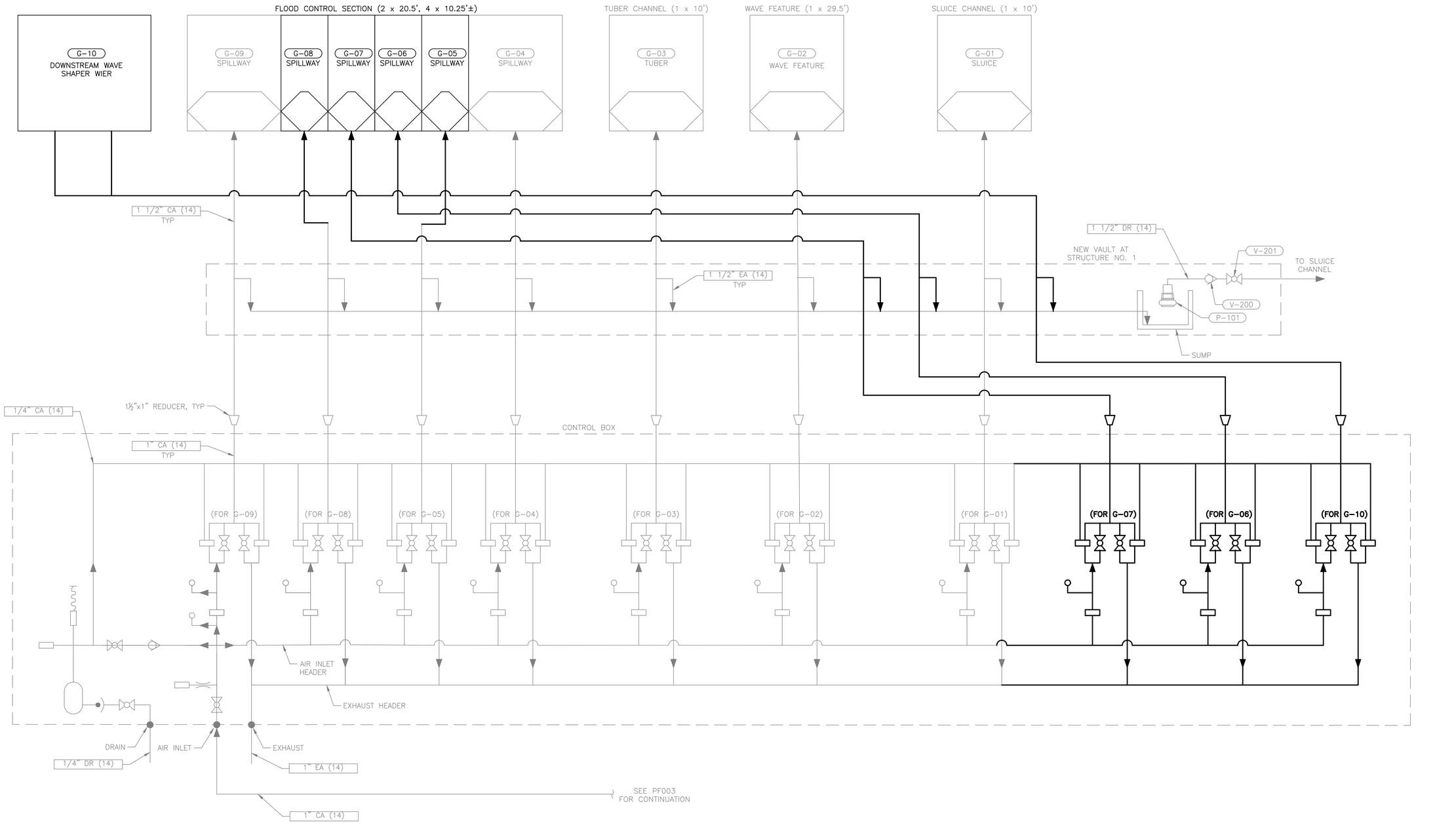
S108

SHEET 19 OF 40

SCALE: AS NOTED

JOB NO: 13–108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_S108.dwg Plot date: Sep 09, 2024 12:15pm



REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

PROFESSIONAL ENGINEER LICENSED P-21397 STATE OF IDAHO MAY MONTANA DALLAS
Sept. 10, 2024

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

REVISED PROCESS FLOW DIAGRAM

DESIGNED J. DALLAS
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
PF002
SHEET 20 OF 40
SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_PF002.dwg Plot date: Sep 09, 2024 12:15pm

FLUID ABBREVIATION	FUNCTION THIS LIST MAY INCLUDE FLUIDS NOT USED IN THIS PROJECT (* SEE NOTE 5)	ALLOWABLE PIPING MATERIAL GROUP NO. (SEE NOTES 1 AND 4)				FIELD TEST REQUIREMENTS (SEE NOTE 3 AND NOTE 4)		
		EXPOSED PIPING (SEE NOTE 14)		BURIED PIPING (SEE NOTE 13)		MINIMUM TEST PRESSURE PSI	TEST MEDIUM	LEAKAGE ALLOWANCE (SEE NOTE 2)
		3" DIA AND SMALLER	4" DIA AND LARGER	3" DIA AND SMALLER	4" DIA AND LARGER			
COMMONLY USED FLUIDS								
TD	TANK / PROCESS DRAIN (TANK/BASIN)	16	12,16	16	12,16,17,27	NOTE 6	WATER	--
VT	VENT (SEE NOTE 18)	15,16	15,16	--	--	15 IN Hg	VACUUM	(A) (D) NOTE 18
OTHER COMMONLY USED FLUIDS								
CA	COMPRESSED AIR	2,14	--	14	--	150	AIR	(A)
EA	EXHAUST AIR	2,14	--	14	--	150	AIR	(A)

PIPING MATERIAL SCHEDULE (SEE NOTE 1)

GROUP NO.	PIPE MATERIAL	FITTINGS / JOINTS	LININGS AND COATINGS (SEE NOTE 13)
1	STEEL, ASTM A53, SCHEDULE 40, BLACK WELDED.	2 1/2" AND SMALLER, MALLEABLE IRON, ASME B16.3, THREADED, BANDED, BLACK, 150 PSI OR STEEL, ASME B16.9, BUTT-WELDED. 3" AND LARGER, CAST IRON, ASME B16.1, 125 PSI FLANGED OR MECHANICAL COUPLING OR (STEEL, ASME B16.9, BUTT WELDED).	NOT APPLICABLE
2	STEEL, ASTM A53, SCHEDULE 40, BLACK WELDED, GALVANIZED	2 1/2" AND SMALLER, MALLEABLE IRON, ASME B16.3, THREADED, BANDED, GALVANIZED 150 PSI. 3" AND LARGER, CAST IRON, ASME B16.1, 125 PSI FLANGED OR MECHANICAL COUPLING.	SEE SECTION 15025
11	DUCTILE IRON, ASME A21.51, (AWWA C151 AND MODIFIED PER SECTION 02565) (TYP SERVICE - RAW, POTABLE & SANITARY SEWER)	DUCTILE IRON AWWA C110 AND MODIFIED PER SECTION 02565, BELL AND SPIGOT JOINTS (RESTRAINT OR NON-RESTRAINT), MECH CPLNG, FLGD OR MECH JTS, 250 PSI ,(PRESS. RATING) 12" AND SMALLER, 150 PSI, (PRESS. RATING) 14" AND LARGER, WITH 125 PSI ASME B16.1 FLANGES. FOR HIGHER PRESS. RATING, REFER TO MFTR CATALOG.	SEE SECTION 02565
14	STAINLESS STEEL, TYPE 316, ASTM A312, SCHEDULE 40S.	STAINLESS STEEL, TYPE 316, THREADED, WELDED SLIP-ON FLANGE ASME B16.3, OR SOCKET WELDED FITTINGS SCHEDULE 40S, OR 150 PSIG THREADED FLANGED. (THREADED JOINTS NOT ALLOWED FOR OZG, OXG, LOX SERVICE)	NOT APPLICABLE
16	POLYVINYL CHLORIDE, SCHEDULE 80, NORMAL IMPACT. ASTM D1785. (TYP SERVICE - INDOORS/COVERED)	POLYVINYL CHLORIDE, SCHEDULE 80, NORMAL IMPACT, SOCKET SOLVENT WELD JOINTS, ASTM D2467. (SOLVENT & GLUE SHALL BE COMPATIBLE WITH FLUID SERVICE)	NOT APPLICABLE

LIST OF SAMPLE LINES

PIPE DESIGNATION	SAMPLE POINT

TYPICAL PIPE DESIGNATION:

NOTES:

NOTE 1
ALTHOUGH SEVERAL PIPE MATERIAL GROUPS MAY BE LISTED ON THIS SHEET FOR A GIVEN FLUID SERVICE, CONTRACTOR SHALL PROVIDE ONLY THE PIPE MATERIAL GROUP SHOWN ON THE DRAWINGS AND SPECIFIED FOR THAT FLUID SERVICE.

NOTE 2
LEAKAGE ALLOWANCE IS AS FOLLOWS
A. PIPES SO DESIGNATED SHALL SHOW ZERO LEAKAGE.
B. PIPES SO DESIGNATED SHALL SHOW ZERO LEAKAGE FOR UNBURIED PIPE AND NOT MORE THAN 0.02 GALLON PER HOUR PER INCH DIAMETER PER 100 FEET OF BURIED PIPE.
C. PIPES SO DESIGNATED SHALL NOT SHOW A LEAKAGE OF MORE THAN 0.15 GALLON PER HOUR PER INCH OF DIAMETER PER 100 FEET OF PIPE.
D. PIPES SO DESIGNATED SHALL NOT SHOW A LOSS OF PRESSURE OF MORE THAN 5 PERCENT.
E. PIPE SO DESIGNATED SHALL NOT SHOW A LOSS OF VACUUM OF MORE THAN 4 INCHES MERCURY COLUMN.

NOTE 3
FOR FIELD TEST PROCEDURES AND ADDITIONAL TEST REQUIREMENTS, SEE PIPING SECTION OF SPECIFICATIONS.

NOTE 4
NO SUBSTITUTIONS U.N.O. IN THE SPECIFICATIONS.

NOTE 5
PIPING GROUP FUNCTION SHOWN THUS * SHALL BE INSULATED PER SPECIFICATIONS.

NOTE 6
STATIC WATER TEST WITH SURFACE 5 FEET ABOVE HIGH POINT OF PIPE.

NOTE 7
INSPECTION AND TESTING SHALL BE IN ACCORDANCE WITH APPLICABLE PLUMBING CODE.

NOTE 8
NO APPARENT LEAKS UNDER NORMAL OPERATING CONDITIONS.

NOTE 13
FOR FULL PIPE LINING AND COATING REQUIREMENTS, SEE SPECIFICATIONS.

NOTE 14
EXPOSED PIPING SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATIONS. COLORS TO BE SELECTED BY OWNER.

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

PROFESSIONAL ENGINEER LICENSED P-21397 STATE OF IDAHO KAY MONTANA DALLAS
Sept. 10, 2024

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

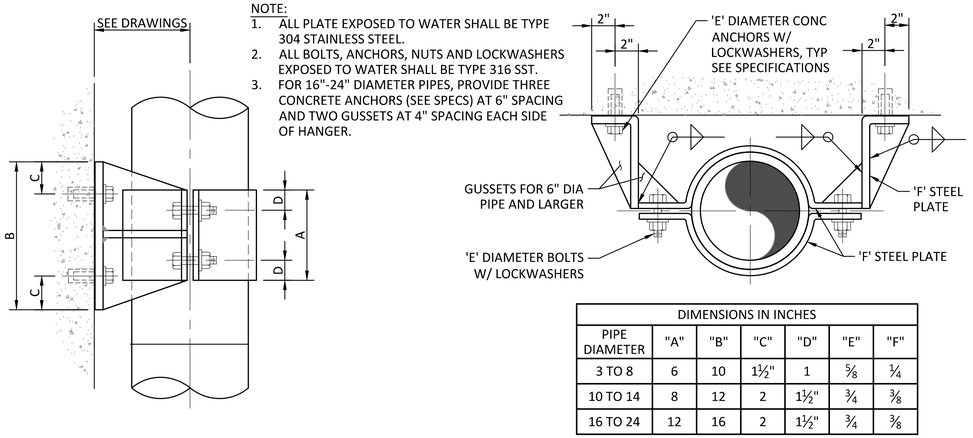
CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

STANDARD MECHANICAL AND PIPING SCHEDULES

DESIGNED J. DALLAS
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
GM001
SHEET 21 OF 40
SCALE: AS NOTED

JOB NO: 13-108
Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad\GM001.dwg Plot date: Sep 09, 2024 12:15pm



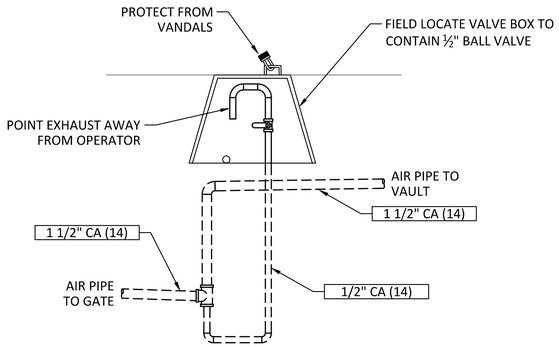
NOTE:
1. ALL PLATE EXPOSED TO WATER SHALL BE TYPE 304 STAINLESS STEEL.
2. ALL BOLTS, ANCHORS, NUTS AND LOCKWASHERS EXPOSED TO WATER SHALL BE TYPE 316 SST.
3. FOR 16"-24" DIAMETER PIPES, PROVIDE THREE CONCRETE ANCHORS (SEE SPECS) AT 6" SPACING AND TWO GUSSETS AT 4" SPACING EACH SIDE OF HANGER.

DIMENSIONS IN INCHES						
PIPE DIAMETER	"A"	"B"	"C"	"D"	"E"	"F"
3 TO 8	6	10	1½"	1	⅝	¼
10 TO 14	8	12	2	1½"	¾	⅜
16 TO 24	12	16	2	1½"	¾	⅜

PIPE HANGER FOR INDIVIDUAL PIPE

SCALE: NTS

M134



CONDENSATE TRAP AT BOT OF STAIRS ON NORTH SIDE OF SLUICE GATE. TYP THREE NEW AIR LINES.

CONDENSATE PURGE VALVE DETAIL

SCALE: NTS

M900

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

PROFESSIONAL ENGINEER LICENSED P-21397 STATE OF IDAHO KAY MONTANA DALLAS
Sept. 10, 2024

WARNING
0 1/2 1
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CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

STANDARD MECHANICAL DETAILS

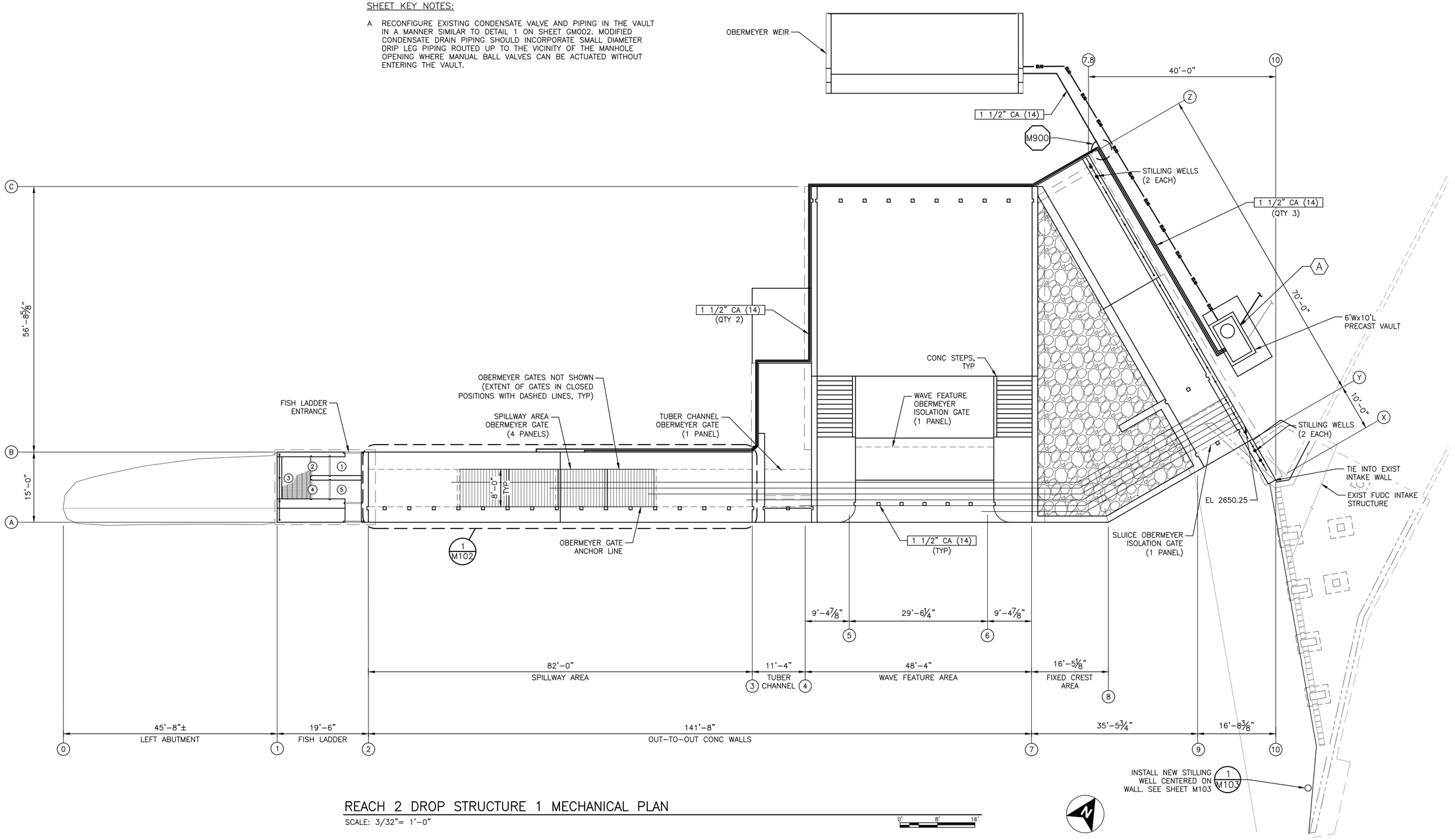
DESIGNED J. DALLAS
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
GM002
SHEET 22 OF 40
SCALE: AS NOTED

JOB NO: 13-108
Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_GM002.dwg Plot date: Sep 09, 2024 12:15pm

SHEET KEY NOTES:

A RECONFIGURE EXISTING CONDENSATE VALVE AND PIPING IN THE VAULT IN A MANNER SIMILAR TO DETAIL 1 ON SHEET GM002. MODIFIED CONDENSATE DRAIN PIPING SHOULD INCORPORATE SMALL DIAMETER DRIP LEG PIPING ROUTED UP TO THE VICINITY OF THE MANHOLE OPENING WHERE MANUAL BALL VALVES CAN BE ACTUATED WITHOUT ENTERING THE VAULT.



REACH 2 DROP STRUCTURE 1 MECHANICAL PLAN

SCALE: 3/32"= 1'-0"

0' 8' 16'

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

PROFESSIONAL ENGINEER LICENSED P-21397 STATE OF IDAHO KAY MONTANA DALLAS

Sept. 10, 2024

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

REACH 2 DROP STRUCTURE 1
MECHANICAL PLAN

DESIGNED J. DALLAS

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

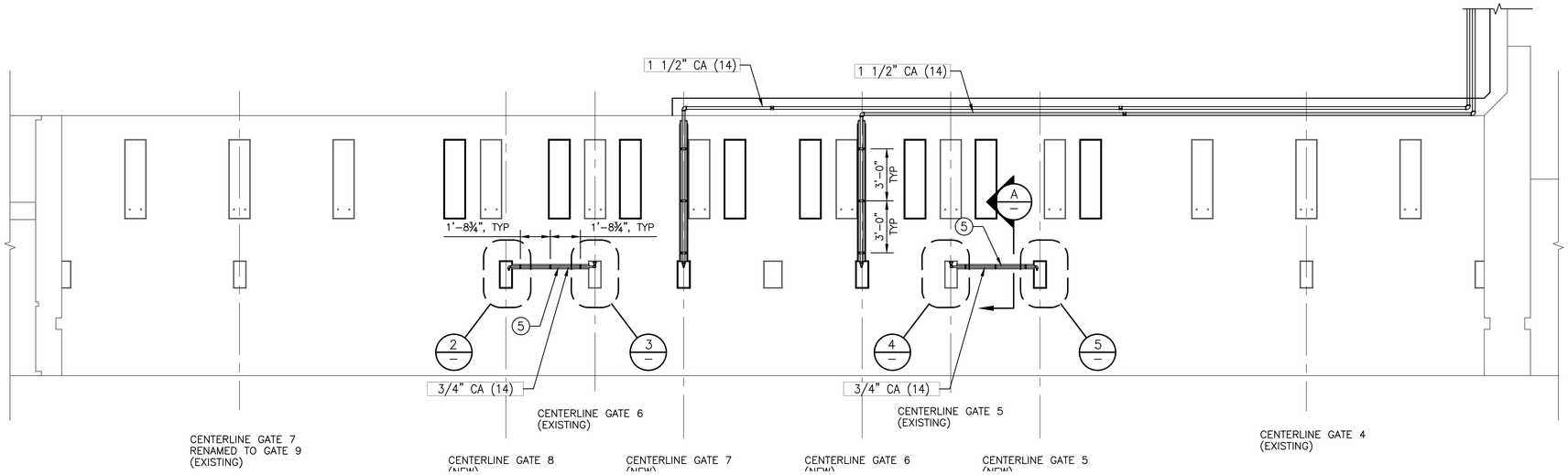
M101

SHEET 23 OF 40

SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_M101.dwg Plot date: Sep 09, 2024 12:15pm



REACH 2 DROP STRUCTURE 1 SPILLWAY – GATE BLOCKOUTS

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

0' 4' 8'

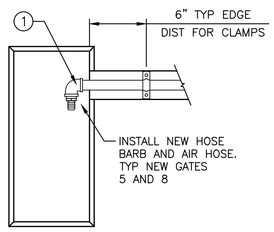
1 / M101

SHEET NOTES:

1. CONTRACTOR TO FIELD VERIFY THAT EXISTING AIR LINE ARRANGEMENT IN AIR BLOCKOUTS MATCHES THAT SHOWN ON OBERMEYER 17-1888-G4-7 SERIES OF DRAWINGS. CONSULT ENGINEER IF AS-BUILD CONDITIONS DIFFER.
2. USE TEFLON TAPE AND APPROPRIATE THREAD SEALANT TO MAKE UP ALL THREADED PIPE JOINTS.
3. CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL EXISTING AIR BLOCKOUTS AND NEW AIR BLOCKOUTS, AND ADJUST PIPE LENGTH ACCORDINGLY.
4. USE STAINLESS STEEL CONCRETE SCREW ANCHORS TO ANCHOR PIPE CLAMPS TO THE STRUCTURE. TITEN HD BY SIMPSON STRONG TIE, OR TAPCON SCREW ANCHOR.

BILL OF MATERIALS

ITEM NUMBER	ITEM DESCRIPTION	SMITH-COOPER INTL. PART NUMBER	QTY
1	150# 90 DEGREE ELBOW, 3/4", STAINLESS STEEL, NPT THREADS	S3116E 006	2
2	150# 90 DEGREE STREET ELBOW, 3/4", STAINLESS STEEL, NPT THREADS	S3116SE006	2
3	150# 45 DEGREE ELBOW, 3/4", STAINLESS STEEL, SOCKET WELD	S3716F 006	2
4	150# 90 DEGREE ELBOW, 1-1/2", STAINLESS STEEL, SOCKET WELD	S3716E 012	2
5	3/4" STAINLESS STEEL SEAMLESS PIPE PER ASTM A312, NPT THREADED ONE END, 58" LONG	S6146SP006	2
6	3/4" STAINLESS STEEL SEAMLESS PIPE PER ASTM A312, NPT THREADED ONE END, 1-1/2" LONG	S6146SP006	3
7	304 SS ROUTING CLAMP FOR 3/4" PIPE	MCMASTER CARR PN: 8874T13	6
8	304 SS ROUTING CLAMP FOR 1-1/2" PIPE	MCMASTER CARR PN: 8874T21	6

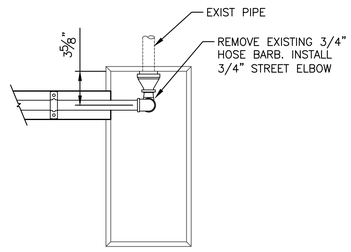


NEW GATE 8 AIR BLOCKOUT

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

0" 8" 16"

2 / —

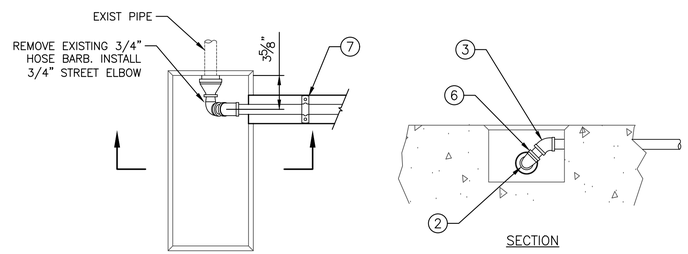


EXISTING GATE 6 AIR BLOCKOUT

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

0" 8" 16"

3 / —

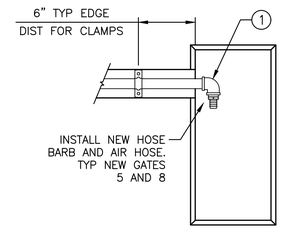


EXISTING GATE 5 AIR BLOCKOUT

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

0" 8" 16"

4 / —

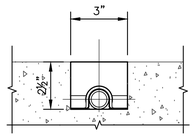


NEW GATE 5 AIR BLOCKOUT

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

0" 8" 16"

5 / —



SECTION

SCALE: 3"= 1'-0"

0" 4" 8"

A / —

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

PROFESSIONAL ENGINEER LICENSED P-21397 STATE OF IDAHO JAY MONTANA DALLAS

Sept. 10, 2024

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

SPILLWAY PLAN AIRLINE MODS

DESIGNED J. DALLAS

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

M102

SHEET 24 OF 40

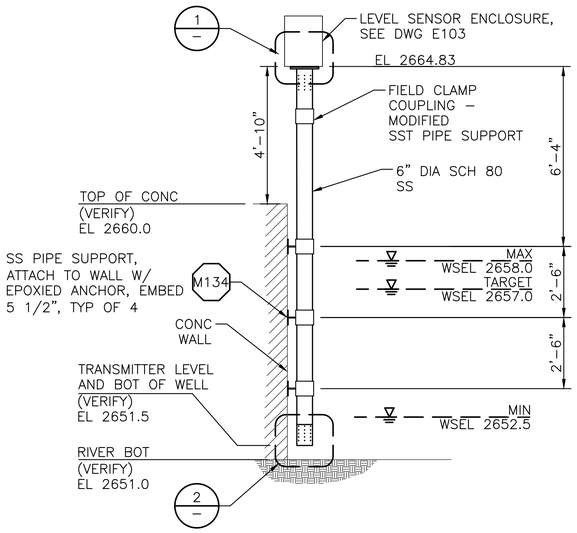
SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_M102.dwg Plot date: Sep 09, 2024 12:15pm

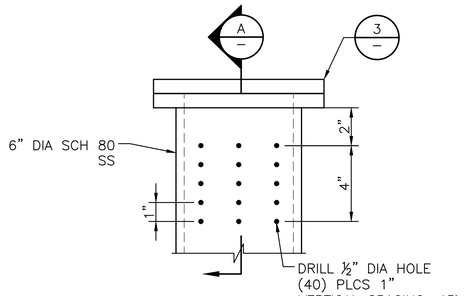
SHEET NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION AND ORDERING MATERIALS. NOTIFY THE ENGINEER OF ANY CONFLICTS BEFORE PROCEEDING THE RELATED WORK.
2. FIELD VERIFY ANY OBSTACLES ATTACHED TO THE WALL THAT MAY INTERFERE WITH STILLING WELL INSTALLATION AS SHOWN. NOTIFY THE ENGINEER OF ANY CONFLICTS BEFORE PROCEEDING WITH RELATED WORK.



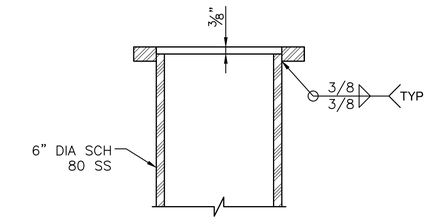
STILLING WELL ELEVATION

SCALE: 3/8"= 1'–0"



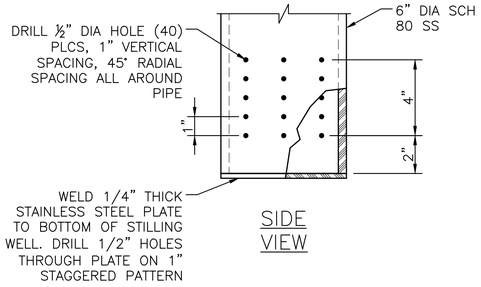
TOP OF STILLING WELL DETAIL

SCALE: 3"= 1'–0"



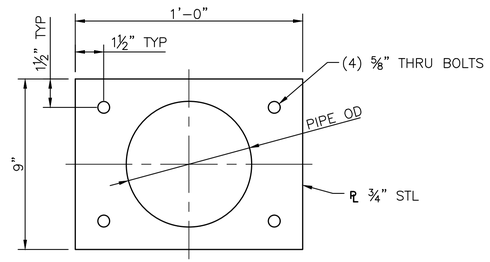
TOP OF STILLING WELL SECTION

SCALE: 3"= 1'–0"



BOTTOM OF STILLING WELL DETAIL

SCALE: 3"= 1'–0"



STILLING WELL CAP PLATE

SCALE: 3"= 1'–0"

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

PROFESSIONAL ENGINEER LICENSED P-21397 STATE OF IDAHO MAY MONTANA DALLAS
Sept. 10, 2024

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

STILLING WELL ELEVATION AND DETAILS

DESIGNED J. DALLAS
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

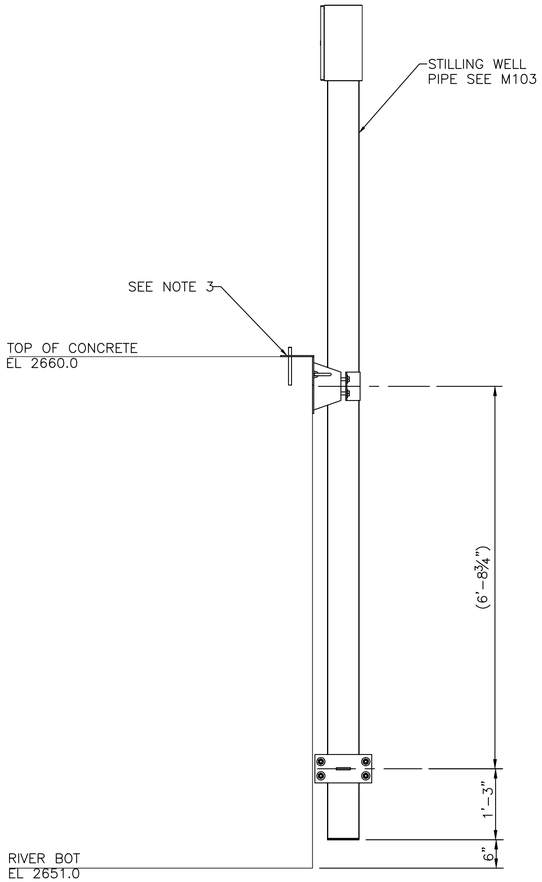
DRAWING
M103
SHEET 25 OF 40
SCALE: AS NOTED

JOB NO: 13–108

Path: C:\Box\mcm projects\city of boise\boise river water park design–build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_M103.dwg Plot date: Sep 09, 2024 12:15pm

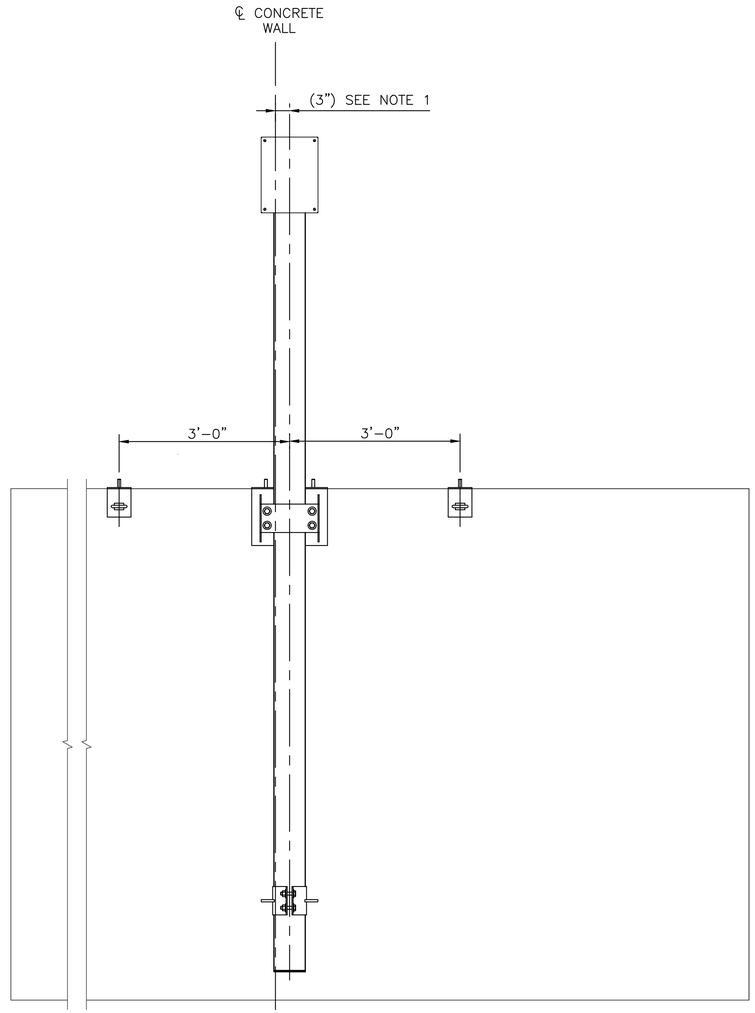
SHEET NOTES:

1. FIELD VERIFY LOCATION OF EXISTING HANDRAIL POSTS TO LOCATE STILLING WELL.
2. ATTACH 1/4" SS GUY WIRE ASSEMBLY TO D-RINGS AND PIPE BRACKETS PRIOR TO LOWERING PIPE INTO RIVER.
3. USE THREADED CONCRETE INSERT ANCHORS WITH 5/8" TAMPER RESISTANT SCREWS.



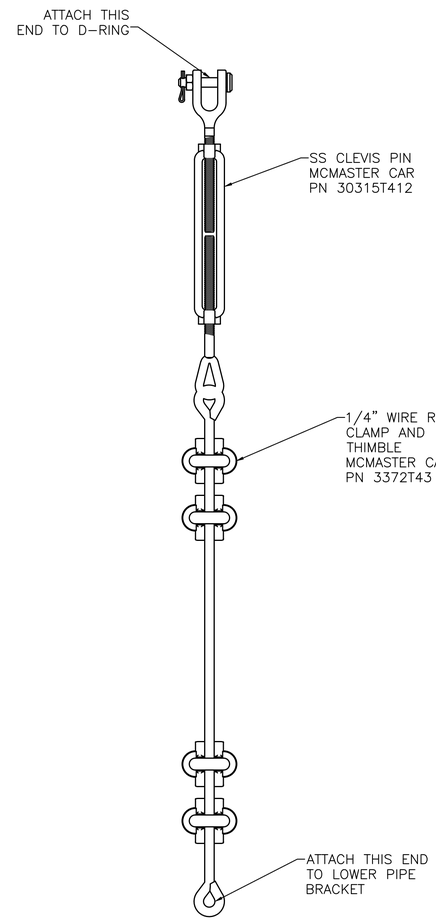
TEMPORARY STILLING WELL SIDE ELEVATION

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



TEMPORARY STILLING WELL FRONT ELEVATION

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



GUY WIRE ASSEMBLY

SCALE: 6"= 1'-0"
QTY REQD: 2
SEE NOTE 2

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

PROFESSIONAL ENGINEER LICENSED P-21397 STATE OF IDAHO KAY MONTANA DALLAS
Sept. 10, 2024

WARNING
0 1/2 1
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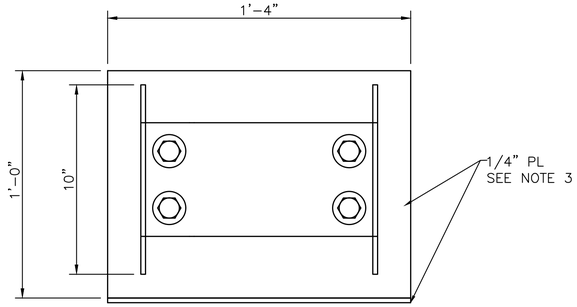
CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

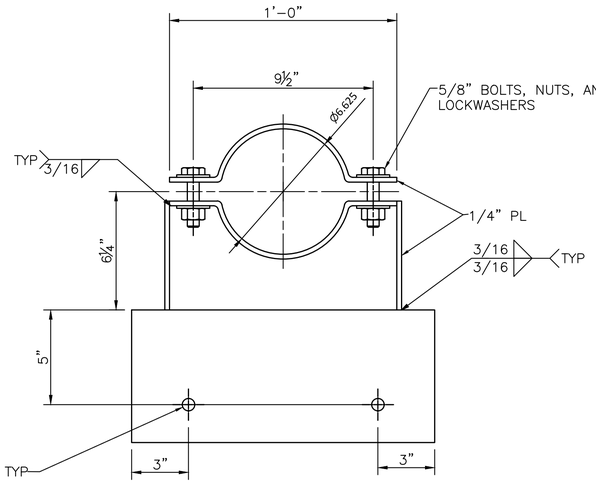
STILLING WELL TEMPORARY INSTALLATION OVERVIEW

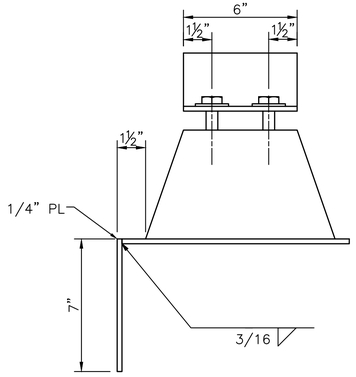
DESIGNED J. DALLAS
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
M104
SHEET 26 OF 40
SCALE: AS NOTED

JOB NO: 13-108

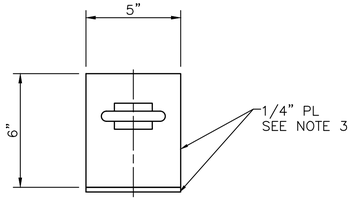


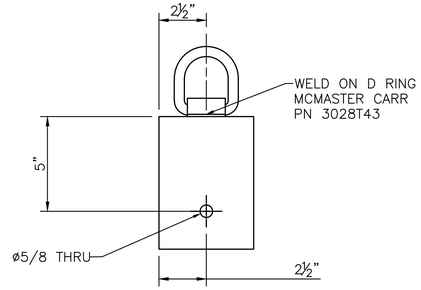


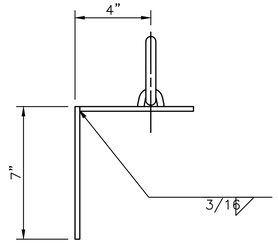


UPPER PIPE HANGER

SCALE: 3"= 1'–0"
QTY REQD: 1

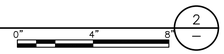


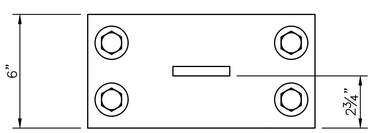


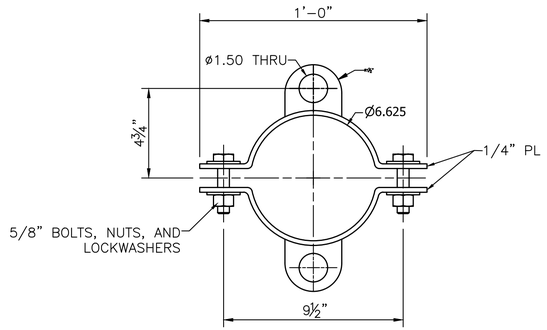


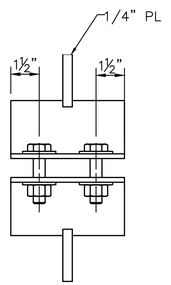
D-RING BRACKET

SCALE: 3"= 1'–0"
QTY REQD: 2



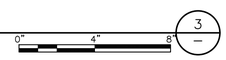






LOWER PIPE HANGER

SCALE: 3"= 1'–0"
QTY REQD: 1
SYMMETRIC ABOUT CL



SHEET NOTES:

1. ALL MATERIALS TO BE SS UNLESS OTHERWISE NOTED.
2. WELD IN ACCORDANCE WITH AWS D1.6.
3. BRACKET MAY BE MADE OF BENT PLATE WITH 1/2" INNER BEND RADIUS.

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

PROFESSIONAL ENGINEER LICENSED P-21397 STATE OF IDAHO KAY MONTANA DALLAS
Sept. 10, 2024

WARNING
0 1/2 1
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McMillen

CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

STILLING WELL TEMPORARY
INSTALLATION DETAILS

DESIGNED J. DALLAS
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
M105
SHEET 27 OF 40
SCALE: AS NOTED

JOB NO: 13–108

ABBREVIATIONS

2TSP	MULTI–TWISTED TWO PAIR, OVERALL SHIELDED
A, AMP	AMP AMPERE
AAAC	ALL ALUMINUM ALLOY CONDUCTOR
AF	AMPERE FRAME SIZE
AFF	ABOVE FINISHED FLOOR
AH	AMPERE HOURS
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
A/R	AS REQUIRED
AT	AMPERE TRIP, AUTO, AUTOMATIC
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AVR	AUTOMATIC VOLTAGE REGULATOR
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CTRL	CONTROL
CO	CONDUIT ONLY
CONTD	CONTINUED
CP	CONTROL PANEL
CR	CONTROL RELAY
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
CU	COPPER
DB	DUCT BANK
DET	DETAIL
DIAG	DIAGRAM
DISC	DISCONNECT
DP	DISTRIBUTION PANEL
DSL	MANUAL DISCONNECT SWITCH, 3–POLE, GANG OPERATED
DWG(S)	DRAWING(S)
EL	ELEVATION
EMER	EMERGENCY
EPT	EXCITATION POWER TRANSFORMER
EV	ELECTRICAL VAULT
EQUIP	EQUIPMENT
FDR	FEEDER
GEN	GENERATOR
GFCI	GROUND–FAULT CIRCUIT INTERRUPTER
GFI	GROUND–FAULT INTERRUPTION
GFP	GROUND–FAULT PROTECTION
GND	GROUND
GRS	GALVANIZED RIGID STEEL
GSU	GENERATOR STEP–UP TRANSFORMER
HH	HAND HOLE
HMI	HUMAN–MACHINE INTERFACE
HOA	HAND–OFF–AUTO
HPU	HYDRAULIC POWER UNIT
HTR	HEATER
HZ	HERTZ (CYCLES PER SECOND)
I/O	INPUT/OUTPUT
INST	INSTANTANEOUS
INTLK	INTERLOCK
IP	INTERNET PROTOCOL
IPB	ILLUMINATED PUSH BUTTON
JB	JUNCTION BOX
JCRN	JIB CRANE
KCMIL	THOUSAND CIRCULAR MILLS
kV	KILOVOLTS
kVA	KILOVOLT AMPERES (APPARENT POWER)
kVAR	KILOVARS (REACTIVE POWER)
kW	KILOWATTS (REAL POWER)
kWH	KILOWATT HOUR
LP	LIGHTING PANEL
LTG	LIGHTING
LV	LOW VOLTAGE
mA	MILLIAMPERES
M	MOTOR MAN MANUAL
MAN	MANUAL
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MFM	MULTIFUNCTIONAL METER
MH	MAN HOLE
MTS	MANUAL TRANSFER SWITCH
mV	MILLIVOLTS
NC	NORMALLY CLOSED
NGR	NEUTRAL GROUNDING RESISTOR
NO	NORMALLY OPEN, NUMBER
NP	NAMEPLATE
NTS	NOT TO SCALE
OL	OVERLOAD
PB	PULLBOX, PUSH BUTTON
PC	PHOTOELECTRIC CONTROL UNIT
PCC	POINT OF COMMON CONNECTION
PH ø	PHASE
PNL	PANEL
PLC	PROGRAMMABLE LOGIC CONTROLLER
POI	POINT OF INTER–CONNECTION
PTT	PUSH–TO–TEST
PVC	POLYVINYL CHLORIDE
RCP	RECEPTACLE
REF	REFERENCE
RGS	RIGID GALVANIZED STEEL CONDUIT
RIO	REMOTE I/O
RTD	RESISTANCE TEMPERATURE DETECTOR
S	SYNC SCOPE
SA	SURGE ARRESTER
SC	SURGE CAPACITOR
SDP	STANDBY DISTRIBUTION PANEL
SEC	SECOND
SEL	SELECTOR, SCHWEITZER ENGINEERING LABORATORIES
SPEC	SPECIFICATION
SS	STAINLESS STEEL
S/S	STATION SERVICE
STA	STATION
SW	SWITCH
SWGR	SWITCHGEAR
TB	TERMINAL BLOCK, TERMINAL BOX
TS	THERMOSTAT
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TX	TRANSMITTER
TYP	TYPICAL
UP	UTILITY POWER
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VAC	VOLTS ALTERNATING CURRENT
VC	VIDEO CAMERA
VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF (NEMA 4)
XFMR	TRANSFORMER
XLP	CROSS LINKED POLYETHYLENE
XP	EXPLOSION PROOF
YL	YARD LIGHT

CONTROL RELAY AND DEVICES INDEX

3	CHECKING OR INTERLOCKING RELAY
4	MASTER CONTACTOR
5	STOPPING DEVICE
12	OVER–SPEED DEVICE
13	SYNCHRONOUS–SPEED DEVICE
14	UNDER–SPEED DEVICE
15	SPEED/FREQUENCY MATCHING DEVICE
20	ELECTRIC OPERATED VALVE
21	DISTANCE RELAY
23T	THERMOSTAT
24	VOLT/HERTZ RELAY
25	SYNCHRONOUS CHECK DEVICE
25A	AUTOMATIC SYNCHRONIZATION DEVICE
26	APPARATUS THERMAL DEVICE
27	UNDERVOLTAGE RELAY
30	ANNUNCIATOR RELAY
32	REVERSE POWER RELAY
33	POSITION SWITCH
34	MASTER SEQUENCE DEVICE
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38	BEARING PROTECTION DEVICE
39	VIBRATION DETECTOR
40	FIELD RELAY
41	FIELD CURRENT BREAKER
43	MANUAL TRANSFER/SELECTOR DEVICE
46	REVERSE PHASE/PHASE BALANCE RELAY
48	INCOMPLETE SEQUENCE RELAY
49	MACHINE/TRANSFORMER THERMAL RELAY
50	INSTANTANEOUS OVERCURRENT RELAY
51	AC TIME OVERCURRENT RELAY
51C	VOLTAGE–CONTROLLED TIME OVERCURRENT RELAY
50/51	TIME AND INSTANTANEOUS OVERCURRENT RELAY
52	AC CIRCUIT BREAKER
52G	GENERATOR CIRCUIT BREAKER
52L	LINE CIRCUIT BREAKER
53	EXCITER/DC GENERATOR RELAY
54	HIGH SPEED DC CIRCUIT BREAKER
55	POWERFACTOR RELAY
57	GROUND SWITCH
59	OVERVOLTAGE RELAY
59N	NEUTRAL OVERVOLTAGE RELAY
60	VOLTAGE BALANCE RELAY
61	CURRENT BALANCE RELAY
62	TIME DELAY RELAY
63	LIQUID OR GAS PRESSURE LEVEL/FLOW RELAY
64	GROUND PROTECTIVE RELAY
65	GOVERNOR
67	AC DIRECTIONAL OVERCURRENT RELAY
70	ELECTRIC OPERATED RHEOSTAT
71	TRANSFORMER OIL LEVEL TRIP/ALARM DEVICE
72	DC CIRCUIT BREAKER
74	ALARM RELAY
76	DC OVERCURRENT RELAY
79	AUTOMATIC RECLOSING RELAY
81	FREQUENCY RELAY
810/U	OVER/UNDER FREQUENCY RELAY
83	AUTOMATIC SELECTIVE CONTROL/TRANSFER RELAY
85	CARRIER/PILOT WIRE RECEIVER RELAY
86	LOCKOUT RELAY
87	DIFFERENTIAL PROTECTIVE RELAY
87G	GENERATOR DIFFERENTIAL RELAY
87T	TRANSFORMER DIFFERENTIAL RELAY
89	LINE ISOLATING SWITCH
90	REGULATING DEVICE
94	TRIPPING RELAY
95	SUPERVISION ALARM

METERING SYSTEMS AND DEVICES INDEX

A	AMMETER
AHr	AMPERE HOUR METER
AS	AMMETER SELECTOR SWITCH
C	COUNTER
CMC	CONTACT MAKING CLOCK
D	DEMAND METER
ET	ELAPSE TIME METER
F	FREQUENCY METER
G	GALVANOMETER
GFD	GROUND FAULT DETECTOR
Hz	FREQUENCY METER
KV	KILO–VOLTMETER
KW	KILO–WATTMETER
KWH	KILO–WATT HOUR METER
mA	MILLI–AMMETER (TRANSDUCER)
OHM	OHMMETER
OSC	OSCILLOGRAPH
PH	PHASE METER
PI	POSITION INDICATOR
PF	POWER FACTOR METER
REC	RECORDER
RF	REACTIVE FACTOR METER
SYN	SYNCHROSCOPE
T	TEMPERATURE METER
TLM	TELEMETER
V	VOLTMETER
VAR	VARMETER
VRHr	VAR HOUR METER
VS	VOLTMETER SELECTOR SWITCH
W	WATTMETER
WHr	WATT HOUR METER

PILOT – INDICATOR LIGHT INDEX

A	AMBER
B	BLUE
C	CLEAR
G	GREEN
NE	NEON
O	ORANGE
OP	OPALESCENT
P	PURPLE
R	RED
W	WHITE
Y	YELLOW

GENERAL NOTES:

1. THESE ABBREVIATIONS APPLY TO THE ELECTRICAL DISCIPLINE OF CONTRACT DRAWINGS ONLY.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF THE WORD. FOR EXAMPLE, "AT" MAY MEAN AMPERE TRIP OR AUTO; "NO" MAY MEAN NORMALLY OPEN OR NUMBER; "PB" MAY MEAN EITHER PULLBOX OR PUSH BUTTON.
4. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE–EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

SEP 10 2024

PROFESSIONAL ENGINEER LICENSED 18466 STATE OF IDAHO MITCHELL WAYNE SKELTON

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

STANDARD ELECTRICAL ABBREVIATIONS AND DEVICE INDEXES

DESIGNED M. SKELTON

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

GE001

SHEET 28 OF 40

SCALE: AS NOTED

JOB NO: 13–108

Path: C:\Box\mcm projects\city of boise\boise river water park design–build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_GE001.dwg Plot date: Sep 09, 2024 12:16pm

FIRE ALARM/DETECTION SYSTEM

- FA — FIRE ALARM PANEL
- RA — REMOTE ANNUNC PANEL
- M — MANUAL PULL STATION
- H — GAS MAN RELEASE STN
- A — GAS MAN ABORT STN
- B — F.A. BELL
- S — F.A. SIREN
- DD — DUCT SMOKE DETECTOR
- TD — THERMAL DETECTOR
- ID — IONIZATION DETECTOR
- FV — FIRE WATER VALVE LIMIT
- SD — SMOKE DETECTOR
- FS — FLOW SWITCH
- PS — PRESSURE SWITCH
- TS — THERMAL/SMOKE DETECTOR
- ELD — END OF LINE DEVICE

PRIVATE TELEPHONE SYSTEM

- SB — SWITCHBOARD
- TC — TERMINAL CABINET
- D — DESK PHONE
- W — WALL PHONE

PRIVATE ETHERNET NETWORK SYSTEM

- DATA JACK
- VOICE/DATA JACK

PAGE/SOUND SYSTEM

- A — AMPLIFIER
- WS — SPEAKER, WALL MTD
- CS — SPEAKER, CEIL MTD
- WH — HORN, WALL MTD
- CH — HORN, CEIL MTD
- MIC — MICROPHONE
- P — HANDSET

TELEVISION SYSTEM

- TV — TV JACK
- TV — TV JACK
- TV — TV JACK

INTRUSION ALARM/ACCESS SYSTEM

- IA — CENTRAL ALARM PANEL
- RA — REMOTE ANNUNC PANEL
- M — MANDOOR ALARM CONTACT
- V — VEHICLE DOOR ALARM CONTACT
- W — WINDOW ALARM CONTACT
- E — ELECTRIC DOOR ACCESS CONTROL
- C — CARD DOOR ACCESS CONTROL
- K — KEY ACTIVATED STATION
- B — I.A. BELL
- S — I.A. SIREN
- PB — PUSHBUTTON DOOR ACCESS
- PE — PHOTO ELECTRIC DOOR ACCESS
- MOTION DETECTOR

CLOCK SYSTEM

- M — MASTER CLOCK
- C — SECONDARY CLOCK

WATCHMANS SYSTEM

- C — CONTROL/CENTRAL STATION
- K — KEY STATION

CCTV SYSTEM

- CCTV — CAMERA FIXED POSITION
- CCTV — CAMERA ROTATING
- CCTV — CCTV MONITOR
- CCTV — CCTV MONITOR

LOW VOLTAGE ELECTRICAL DEVICES

- CB — –CIRCUIT BREAKER SWITCH
- UF — –UNFUSED DISCONNECT SWITCH
- F — –FUSED DISCONNECT SWITCH
- –MOTOR STARTER MANUAL
- –MOTOR STARTER MAGNETIC
- CB — –MOTOR STARTER MAG. COMBINATION C.B. SW.
- F — –MOTOR STARTER MAG. COMBINATION FUSED D.S.
- –PUSHBUTTON SW. EMERG. STOP
- –PUSHBUTTON SW. STOP/START
- –PUSHBUTTON STATION
- –SELECTOR SWITCH
- FS — –FLOAT SWITCH
- LI — –LEVEL SWITCH
- BI — –BIN LEVEL SWITCH
- LS — –LIMIT SWITCH
- PS — –PRESSURE SWITCH
- PE — –ELECTRICAL/PNEUMATIC SWITCH
- PT — –-PRESSURE TRANSMITTER
- SV — –SOLENOID VALVE
- T — –THERMOSTAT
- TS — –TEMPERATURE SWITCH
- B–HTR — BASEBOARD HEATER
- C–HTR — CEILING HEATER
- F — WALL HEATER WITH FAN
- BUH — BLOWER UNIT HEATER
- F W — FAN WALL MOUNT
- F C — FAN CEILING MOUNT
- ELECTRIC MOTOR VERTICAL MTD
- ELECTRIC MOTOR HORIZONTAL MTD
- –UTILITY METER

CONTROL ELECTRICAL DEVICES

- $ — SPST SWITCH
- $3 a — –3 WAY SWITCH; LETTER INDICATES LIGHTING CIRCUIT
- $WP — SPST WEATHERPROOF SWITCH
- $M — –MOTOR SWITCH, NONFUSED
- OS — WALL MOUNTED OCCUPANCY SENSOR
- OS — CEILING MOUNTED OCCUPANCY SENSOR
- DUPLEX RECEPTACLE
- SINGLE RECEPTACLE
- WP — DUPLEX WEATHERPROOF RECEPTACLE
- GFI — DUPLEX GROUND FAULT INTERRUPTER RECEPT
- C — CLOCK RECEPTACLE
- FLOOR RECEPTACLE
- SPECIAL PURPOSE RECEPTACLE

ELECTRICAL LIGHTING FIXTURES

- SURFACE/PENDANT FLUORESCENT
- SURFACE/PENDANT FLUORESCENT, NIGHT LIGHT / EMERGENCY
- RECESSED FLUORESCENT
- RECESSED FLUORESCENT, NIGHT LIGHT / EMERGENCY
- LIGHT FIXTURE SURFACE/PENDANT CEILING MOUNT
- LIGHT FIXTURE SURFACE WALL MOUNT
- R — LIGHT FIXTURE RECESSED CEILING MOUNT
- R — LIGHT FIXTURE RECESSED WALL MOUNT
- H — HAZARD LIGHT FIXTURE CEILING MOUNT
- EXIT LIGHT FIXTURE SURFACE/PENDANT CEILING MOUNT
- EXIT LIGHT FIXTURE SURFACE WALL MOUNT
- R — EXIT LIGHT FIXTURE RECESSED WALL MOUNT
- EMERGENCY LIGHT FIXTURE SURFACE/PENDANT CEILING MOUNT
- EMERGENCY LIGHT FIXTURE SURFACE WALL MOUNT
- R — EMERGENCY LIGHT FIXTURE RECESSED CEILING MOUNT
- R — EMERGENCY LIGHT FIXTURE RECESSED WALL MOUNT
- EMERGENCY LIGHTING UNIT, 1 HEAD
- EMERGENCY LIGHTING UNIT, 2 HEAD
- EMERGENCY LIGHTING UNIT, 3 HEAD
- SURFACE MTD. DISTR. PANELBOARD
- FLUSH MTD. DISTR. PANELBOARD

POWER DISTRIBUTION/GROUNDING/ROADWAY LIGHTING

- POLE CONCRETE
- POLE WOOD
- POLE MOUNTED TRANSFORMER
- DOWN GUY
- SIDEWALK GUY
- M — MANHOLE
- H — HANDHOLE
- V — VAULT
- S — PAD MOUNTED SWITCH
- T — TRANSFORMER VAULT
- PAD MOUNTED TRANSFORMER
- GROUND ROD
- GROUND ROD WITH ACCESS BOX
- GROUND CONNECTION EXOTHERMIC
- GROUND CONNECTION MECHANICAL BOLTED
- GROUND CONNECTION TO PIPE RACK
- GROUND COIL (PIGTAIL) 5'0" (1.5M)
- GROUND GRADIENT MAT (SAFETY MAT) 4'X 4'
- GROUND GRADIENT MAT (SAFETY MAT) 4'X 6'
- LF-1 — STREET LIGHT & BRACKET, 1 FIXTURE
- LF-1 LF-1 — STREET LIGHT & BRACKET, 2 FIXTURE
- LF-1 LF-1 LF-1 — STREET LIGHT & BRACKET, 3 FIXTURE
- LF-1 LF-1 LF-1 LF-1 — STREET LIGHT & BRACKET, 4 FIXTURE

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McMillen

CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

ELECTRICAL STANDARD SYMBOLS 1

DESIGNED M. SKELTON
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
GE002
SHEET 29 OF 40
SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_GE002.dwg Plot date: Sep 09, 2024 12:16pm

CB–1	CB–2	CB–3	CB–4	CB–5
CIR BKR HIGH VOLT DRAWOUT ELEC OPER	CIR BKR DRAWOUT ELEC OPER	CIR BKR THERM O/L DRAWOUT ELEC OPER	CIR BKR MAG O/L DRAWOUT ELEC OPER	CIR BKR THERM/MAG O/L DRAWOUT ELEC OPER

CIRCUIT BREAKER SYMBOLS

DS–1	DS–2	DS–3	DS–4	DS–5	DS–6
ISOLATING SWITCH MOTOR OPERATED	INTERRUPTER SWITCH FUSED	CENTER–BREAK SWITCH MOTOR OPERATED	DUAL–BREAK SWITCH MOTOR OPERATED	LOAD–BREAK SWITCH MOTOR OPERATED	HORN GAP SWITCH

H.V. ISOLATING SWITCHES

XF–1	XF–2	XF–3	XF–4	XF–5
TRANSFORMER POWER	TRANSFORMER MAG CORE	TRANSFORMER LOAD TAP CHANGING	TRANSFORMER SPLIT SECONDARY	AUTO–TRANSFORMER

POWER TRANSFORMER SYMBOLS

DELTA–1	DELTA–2	DELTA–3	DELTA–4	WYE–1	WYE–2	ZZ–1	ZZ–2
DELTA 3P3W	DELTA GRD'D 3P4W	DELTA GRD'D 3P3W	BROKEN DELTA	WYE 3POLE	WYE GRD'D 3P4W	ZIG–ZAG 3POLE	ZIG–ZAG GRD'D 3POLE

TRANSFORMER WINDING CONNECTIONS

PT–1	PT–2	CT–1	CT–2	CT–3
POTENTIAL TRANSFORMER	POTENTIAL TRANSFORMER DUAL SECONDARY	CURRENT TRANSFORMER	CURRENT TRANSFORMER CORE BALANCE	CURRENT TRANSFORMER BUSHING

POTENTIAL/CURRENT TRANSFORMER SYMBOLS

HIGH VOLTAGE POWER
LOW VOLTAGE POWER
CONTROL
ENCLOSURE
OH POWER SCHEMATIC
EXIST POWER SCHEMATIC

CONDUCTOR, CROSSING OF PATHS OR CONDUCTORS NOT CONNECTED

CONDUCTOR, JUNCTION OF CONNECTED PATHS, CONDUCTORS OR WIRES

LINETYPE AND CONNECTION SYMBOLS

WT–1	WT–2	LA–1	GRD–SW	IPB–FLEX	IPB–LINK	HTR 100W 480VAC	
WAVE TRAP SMALL	WAVE TRAP LARGE	LIGHTNING ARRESTER	GROUND SW MOTOR OPER	ISOL PH BUS FLEX CONN	ISOL PH BUS REMOVEABLE LINK	HEATER	
WELDING OUTLET	NEUT	LINE	CABLE–1	CABLE–2	X		
	NEUTRAL CONNECTION	IN/OUT LINE	CABLE TERMINATION STRESS CONE	CABLE POTHEAD OIL–FILLED	TEST SWITCH	TEST SWITCH, CURRENT SHORTING	
RELAY–1	RELAY–2	DEVICE–1	TRANSD	INSTR–1	METER–1	METER–2	METER–3
RELAY SINGLE TEXT	RELAY DOUBLE TEXT	CONTROL DEVICE	TRANSDUCER	INSTRUMENT SEL SW	ANALOG METER	ANALOG METER	DIGITAL METER
PL–TEST	PL–1	CONT–NO	CONT–NC	FLOW–NO	FLOW–NC	LVL–NO	LVL–NC
PUSH–TO–TEST LIGHT	PILOT/INDIC LIGHT	CONTACT NORM OPEN	CONTACT NORM CLOSED	FLOW OPER NORM OPEN	FLOW OPER NORM CLOSED	LEVEL OPER NORM OPEN	LEVEL OPER NORM CLOSED
SW–NO	SW–NC	TEMP–NO	TEMP–NC	FOOT–NO	FOOT–NC	PRES–NO	PRES–NC
SWITCH NORM OPEN	SWITCH NORM CLOSED	TEMP ACT SW N.O.	TEMP ACT SW N.C.	FOOT OPER NORM OPEN	FOOT OPER NORM CLOSED	PRESS OPER NORM OPEN	PRESS OPER NORM CLOSED
PBSW–NO	PBSW–NC	SSW–1 OFF MAN AUTO	LIM–NO	LIM–NC	LIM–NOHC	LIM–NCHO	SOL
PB SWITCH NORM OPEN	PB SWITCH NORM CLOSED	SELECTOR SWITCH	LIMIT SW NORM OPEN	LIMIT SW NORM CLOSED	LIMIT SW NORM OPEN HELD CLOSED	LIMIT SW NORM CLOSED HELD OPEN	SOLENOID
FUSE–1	FUSE–2	DS–FUSE	FUSE–LNK	CAP	RES–1	RES–2	HTR–E
FUSE	FUSE DUMMY	DISC SW FUSED	FUSIBLE LINK	CAPACITOR	RESISTOR	RESISTOR ADJUSTABLE	HEATER ELEMENT
BATT	RECT–1	RECT–2	BRAKE	GRD–1	GRD–2	SHUNT	DD–1
BATTERY	RECTIFIER SOLID STATE	RECTIFIER FULLWAVE	DC BRAKE	GROUND	CHASIS GROUND	CURRENT SHUNT	DISCONNECTING DEVICE
CIR–BKR1	CIR–BKR2	OLS–1	OLS–2	R–COIL	MOTOR–DC	MOTOR–AC	GEN–1
CIRC BKR	CIRC BKR W. OL'S	OVERLOAD POWER	OVERLOAD CONTROL	RELAY COIL	MOTOR–DC	MOTOR–AC	GENERATOR

DISCONNECT	CIRCUIT INTERRUPTER	CIRCUIT BREAKER W/ THERMAL OL	CIRCUIT BREAKER W/ MAGNETIC OL	CIRCUIT BREAKER W/ THERMAL OL AND MAGNETIC OL

SELECTOR

TWO–POSITION

	J	K
A1	X	
A2		X

X–CONTACT CLOSED

THREE–POSITION

	J	K	L
A1	X		
A2			X

X–CONTACT CLOSED

TWO–POSITION SELECTOR PUSHBUTTON

CONTACTS	SELECTOR POSITION			
	A		B	
	BUTTON		BUTTON	
	FREE	CONTACTS	FREE	CONTACTS
1–2	X			
3–4		X	X	X

X–CONTACT CLOSED

PUSHBUTTONS

MOMENTARY CONTACTS

SINGLE CIRCUIT	DOUBLE CIRCUIT	MUSHROOM HEAD	WOBBLE STICK	TWO SINGLE CIRCUIT	ONE DOUBLE CIRCUIT	ILLUMINATED
NO / NC	NO & NC					R

CONTACTS

INSTANT OPERATING				TIMED CONTACTS – CONTACT ACTION RETARDED AFTER COIL IS:			
WITH BLOWOUT		WITHOUT BLOWOUT		ENERGIZED		DE–ENERGIZED	
NO	NC	NO	NC	NOTC	NCTO	NOTO	NCTC

OVERLOAD RELAYS

THERMAL	MAGNETIC

SUPPLEMENTARY CONTACTS SYMBOLS

SPST NO		SPST NC		SPDT		TERMS
SINGLE BREAK	DOUBLE BREAK	SINGLE BREAK	DOUBLE BREAK	SINGLE BREAK	DOUBLE BREAK	SPST SINGLE–POLE, SINGLE–THROW
						SPDT SINGLE–POLE, DOUBLE–THROW
DPST, 2NO		DPST, 2NC		DPDT		DPST DOUBLE–POLE, SINGLE–THROW
SINGLE BREAK	DOUBLE BREAK	SINGLE BREAK	DOUBLE BREAK	SINGLE BREAK	DOUBLE BREAK	DPDT DOUBLE–POLE, DOUBLE–THROW
						NO NORMALLY OPEN
						NC NORMALLY CLOSED

METER (INSTRUMENT)

INDICATE TYPE BY LETTER: V, AM

TO INDICATE FUNCTION OF METER OR INSTRUMENT, PLACE SPECIFIED LETTER OR LETTERS WITHIN SYMBOL

AM or A	AMMETER	VA	VOLTMETER
AH	AMPERE HOUR	VAR	VARMETER
AM or A	MICROAMMETER	VARH	VARHOUR METER
mA	MILLAMMETER	W	WATTMETER
PF	POWER FACTOR	WH	WATTHOUR METER
V	VOLT METER		

PILOT LIGHTS

INDICATE COLOR BY LETTER

NON PUSH–TO–TEST: R

PUSH–TO–TEST: R

A–AMBER, B–BLUE, C–CLEAR, G–GREEN, NE–NEON, R–RED, W–WHITE, Y–YELLOW

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WARNING
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McMillen

CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

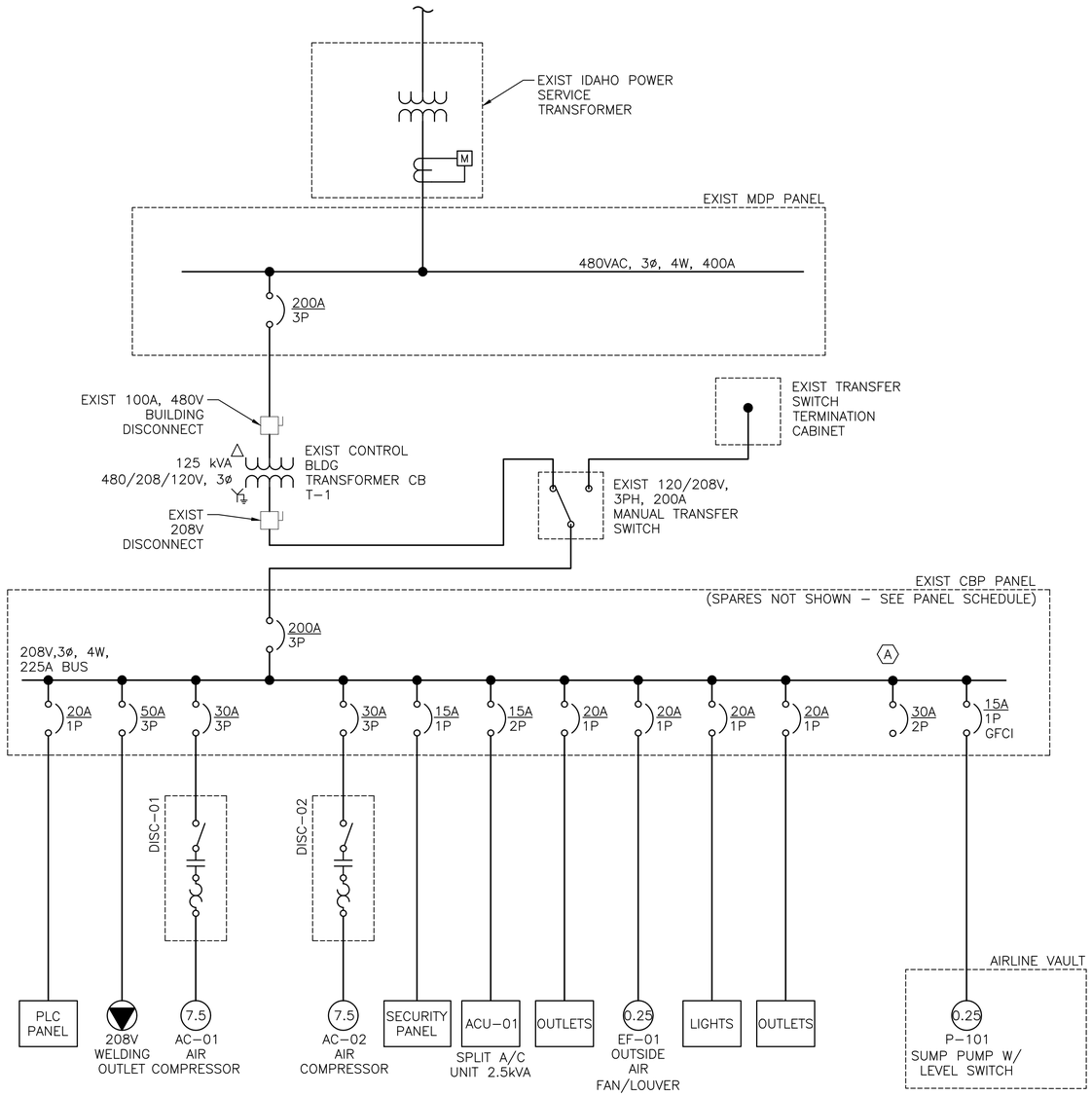
ELECTRICAL STANDARD SYMBOLS 2

DESIGNED M. SKELTON
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
GE003
SHEET 30 OF 40
SCALE: AS NOTED

JOB NO: 13–108

Path: C:\Box\mcm projects\city of boise\boise river water park design–build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_GE003.dwg Plot date: Sep 09, 2024 12:16pm



SHEET KEY NOTES:

A DE-ENERGIZE AND DEMOLISH WIRING FROM BREAKER PREVIOUSLY FEEDING VAULT HEATER.

SHEET NOTES:

1. EXISTING EQUIPMENT SHOWN ON THIS DRAWING PROVIDED BASED ON RECORD DRAWINGS FROM AUGUST 30, 2019. VERIFY FIELD CONDITIONS PRIOR TO PERFORMING MODIFICATIONS.

PANEL SCHEDULE

CBP PANELBOARD		LOCATION: CONTROL BUILDING					PROJECT: BOISE WHITEWATER PARK							
120/208V, 3PH, 4W		225A Bus		200A MCB		NEMA 1	SOURCE OF SUPPLY: TRANSFORMER CB T-1 VIA MANUAL TRANSFER SWITCH							
MOUNTING: SURFACE		AVAIL. FAULT: 24 kA RMS		DEMAND LOAD: 114.3 A			DATE:		08/11/2023			NEUTRAL: ISOLATED		
CKT	DESCRIPTION	LOAD VA	LOAD TYPE	LOAD AMP	CB AMP	CB POLE	PHASE	CB POLE	CB AMP	LOAD AMP	LOAD TYPE	LOAD VA	DESCRIPTION	CKT
1	SUMP PUMP IN VAULT (P-101) (GFCI)	696	M	5.8	15	1	A	1	20	3.0	R	360	RECEPTACLES	2
3	SPARE			0.0	30	2	B	1	20	1.5	R	180	RECEPTACLES	4
5							C	1	20	5.8	M	696	OUTSIDE AIR FAN (EF-01)/LOUVER	6
7	AIR COMPRESSOR (AC-01)	2,880	LM	24.0	30	3	A	1	20	2.9	L	350	LIGHTS	8
9		2,880	LM				B	1	15	0.0			SPARE	10
11		2,880	LM				C	1	15	5.0	C	600	SECURITY PANEL	12
13	AIR COMPRESSOR (AC-02)	2,880	M	24.0	30	3	A	1	20	8.3	C	1,000	PLC PANEL (CP-03)	14
15		2,880	M				B	1	15	0.0			SPARE	16
17		2,880	M				C	1	15	0.0			SPARE	18
19	208V WELDING OUTLET	4,800	G	40.0	50	3	A	2	15	12.0	C	1,248	SPLIT A/C UNIT	20
21		4,800	G				B				C	1,248		22
23		4,800	G				C	2	40	0.0			SPARE	24
25	SPARE			0.0	60	3	A							26
27							B	2	40	0.0			SPARE	28
29							C							30
31	SPARE			0.0	40	3	A	3	60	0.0			SPARE	32
33							B							34
35							C							36
37	SPARE			0.0	100	3	A	3	100	0.0			SPARE	38
39							B							40
41							C							42

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CITY OF BOISE
J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

ONE LINE DIAGRAM

DESIGNED M. SKELTON
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
E001
SHEET 31 OF 40
SCALE: AS NOTED

JOB NO: 13-108

CIRCUIT SCHEDULE										
CABLE FIELD ID	CABLE INDEX ID	STATUS	CABLE TYPE	CABLE	VOLTAGE/ TYPE	FROM	THROUGH	TO	CONDUIT INDEX ID	DESCRIPTION
	C001	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-1	R003, R011	SIGNAL FOR GATE INCLINOMETER 1
	C002	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-2	R003, R012	SIGNAL FOR GATE INCLINOMETER 2
	C003	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-3	R003, R013	SIGNAL FOR GATE INCLINOMETER 3
	C004	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-4	R003, R014	SIGNAL FOR GATE INCLINOMETER 4
	C005	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-5A	R003, R015	SIGNAL FOR GATE INCLINOMETER 5A
	C006	NEW	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-5B	R003, R015	SIGNAL FOR GATE INCLINOMETER 5B
	C007	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-6A	R003, R016	SIGNAL FOR GATE INCLINOMETER 6A
	C008	NEW	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-6B	R003, R016	SIGNAL FOR GATE INCLINOMETER 6B
	C009	EXIST	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-7	R003, R017	SIGNAL FOR GATE INCLINOMETER 7
	C010	NEW	SIGNAL	TSP/MSC	4-20mA	CP-03	JB3 IN VAULT	ZT-8	R003, R018	SIGNAL FOR GATE INCLINOMETER 8
	C011	EXIST	POWER	2#12, 1#12G	120V, 1PH	CBP	CP-03, JB2 IN VAULT	P-101	R001, R002, R009	POWER FOR VAULT SUMP PUMP
	C012	NEW	SIGNAL	TSP	4-20mA	CP-03	JB3 IN VAULT, EXIST STILLING WELL	LE-1	R003, R007, R008	SIGNAL FOR WATER LEVEL SENSOR 1
	C013	NEW	SIGNAL	TSP	4-20mA	CP-03	JB3 IN VAULT, EXIST STILLING WELL	LE-2	R003, R007, R008	SIGNAL FOR WATER LEVEL SENSOR 2
	C014	NEW	SIGNAL	TSP	4-20mA	CP-03	-	CP-04	R010	SIGNAL FOR GATE #5B PRESSURE TRANSMITTER
	C015	NEW	SIGNAL	TSP	4-20mA	CP-03	-	CP-04	R010	SIGNAL FOR GATE #6B PRESSURE TRANSMITTER
	C016	NEW	SIGNAL	TSP	4-20mA	CP-03	-	CP-04	R010	SIGNAL FOR GATE #8 PRESSURE TRANSMITTER
	C017	NEW	CONTROL	3#14	24VDC	CP-03	-	CP-04	R020	CONTROL FOR GATE #5B SOLENOID VALVES
	C018	NEW	CONTROL	3#14	24VDC	CP-03	-	CP-04	R020	CONTROL FOR GATE #6B SOLENOID VALVES
	C019	NEW	CONTROL	3#14	24VDC	CP-03	-	CP-04	R020	CONTROL FOR GATE #8 SOLENOID VALVES

RACEWAY SCHEDULE									
CONDUIT FIELD ID	CONDUIT INDEX ID	STATUS	CONDUIT TYPE	CONDUIT SIZE	FROM	THROUGH	TO	CIRCUITS	DESCRIPTION
	R001	EXIST	PVC	2-1/2"C	CBP	-	CP-03	C011	EXIST POWER CONDUIT FOR SUMP PUMP
	R002	EXIST	PVC	2-1/2"C	CP-03	-	JB2 IN VAULT	C011	EXIST POWER CONDUIT FOR SUMP PUMP
	R003	EXIST	PVC	2-1/2"C	CP-03	-	JB3 IN VAULT	C001 THRU C010, C012, C013	EXIST SIGNAL CONDUIT FOR INCLINOMETERS & LEVEL SENSORS
	R004	EXIST	PVC	2"C	CP-03	-	JB4 IN VAULT	-	EXIST SPARE TO JB4
	R005	EXIST	PVC	2"C	CP-03	JB1 IN VAULT	PB2	-	EXIST SPARE TO WEST SHORE PB2
	R006	EXIST	PVC	2"C	CP-03	JB1 IN VAULT	PB2	-	EXIST SPARE TO WEST SHORE PB2
	R007	EXIST	RGS	1"C	JB3 IN VAULT	-	EXIST STILLING WELL	C012, C013	EXIST SIGNAL CONDUIT FOR UPSTREAM LEVEL SENSORS
	R008	NEW	RGS	1"C	EXIST STILLING WELL	-	UPSTREAM STILLING WELL	C012, C013	SIGNAL CONDUIT FOR UPSTREAM LEVEL SENSORS
	R009	EXIST	RGS	1"C	JB2 IN VAULT	-	P-101	C011	EXIST POWER CONDUIT FOR SUMP PUMP
	R010	EXIST	RGS	2-1/2"C	CP-03	-	CP-04	C014, C015, C016	EXIST CONTROL CONDUIT FOR GATE PRESSURE TRANSMITTERS
	R011	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-1	C001	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 1
	R012	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-2	C002	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 2
	R013	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-3	C003	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 3
	R014	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-4	C004	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 4
	R015	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-5A/5B	C005, C006	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETERS 5A & 5B
	R016	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-6A/5B	C007, C008	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETERS 6A & 6B
	R017	EXIST	RGS	1"C	JB3 IN VAULT	-	ZT-7	C009	EXIST SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 7
	R018	NEW	RGS/PVC	1"C	JB3 IN VAULT	-	ZT-8	C010	SIGNAL CONDUIT TO BLOCKOUT FOR GATE INCLINOMETER 8
	R019	EXIST	RGS	1"C	JB3 IN VAULT	-	EXIST STILLING WELL	-	EXIST SPARE CONDUIT TO EXIST STILLING WELL
	R020	NEW	RGS	1"C	CP-03	-	CP-04	C017, C018, C019	CONTROL FOR GATES #5B, #6B, & #8 SOLENOID VALVES

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

SEP 10 2024

PROFESSIONAL ENGINEER LICENSED 18466 STATE OF IDAHO MITCHELL WAYNE SKELTON

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

RACEWAY AND CIRCUIT SCHEDULES

DESIGNED M. SKELTON

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

E002

SHEET 32 OF 40

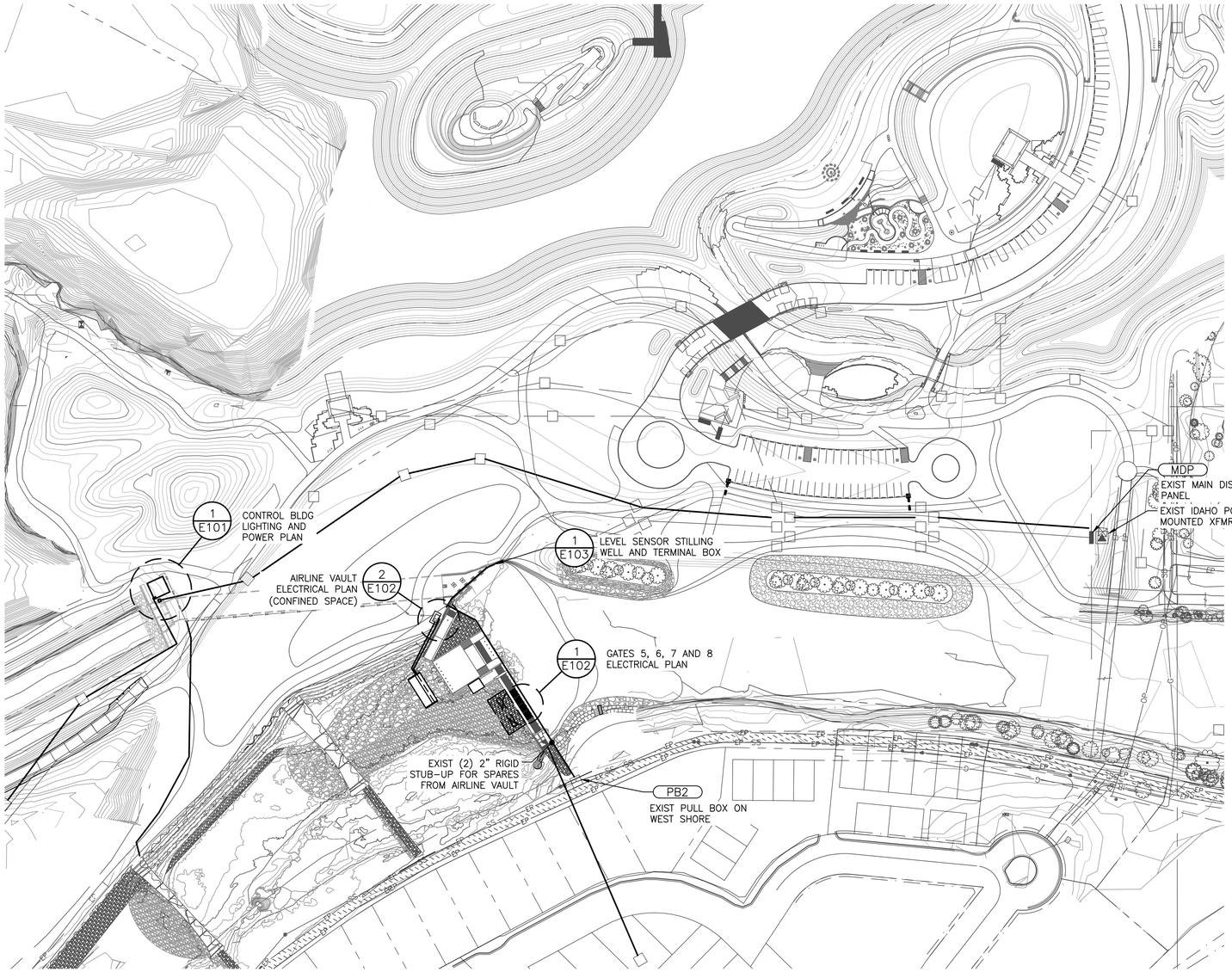
SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_E002.dwg Plot date: Sep 09, 2024 12:16pm

SHEET GENERAL NOTES:

1. REFER TO CIVIL PLANS FOR COORDINATION WITH OTHER EXISTING UTILITIES ON SITE AND FOR INSTRUCTIONS REGARDING LOCATING AND VERIFYING ALL EXISTING UNDERGROUND UTILITIES.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN ON CIVIL PLANS IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS REGARDING UNDERGROUND FACILITIES DAMAGE PREVENTION. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED AS A RESULT OF SITE WORK. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES OR LOCATING SERVICES FOR EXACT UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO DIGGING.
3. PRESERVE AND PROTECT ALL FACILITIES, STRUCTURES, AND LANDSCAPING OUTSIDE OF THE CONSTRUCTION AREA UNLESS NOTED OTHERWISE.
4. EXISTING EQUIPMENT, DEVICES, AND CONNECTIONS WHERE SHOWN TO REMAIN ARE TO BE PROTECTED DURING ENTIRE CONSTRUCTION PROCESS. PROTECT ALL CONNECTIONS TO KEEP EXISTING EQUIPMENT ACTIVE. WHERE CONNECTIONS ARE DISRUPTED DUE TO CONSTRUCTION ACTIVITIES, REPAIR AND REPLACE DAMAGED CONNECTIONS.
5. CONTRACTOR TO PROVIDE THE OWNER WITH 24 HOUR NOTICE PRIOR TO DISCONNECTING POWER OR OTHER UTILITIES.
6. SEE DWG E104 FOR CONDUIT ROUTING PLAN.



ELECTRICAL SITE PLAN

SCALE: 1"= 80'

0' 80' 160'

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

SEP 10 2024

PROFESSIONAL ENGINEER LICENSED 18466 STATE OF IDAHO MITCHELL WAYNE SKELTON

WARNING

0 1/2 1

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

ELECTRICAL SITE PLAN

DESIGNED M. SKELTON

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

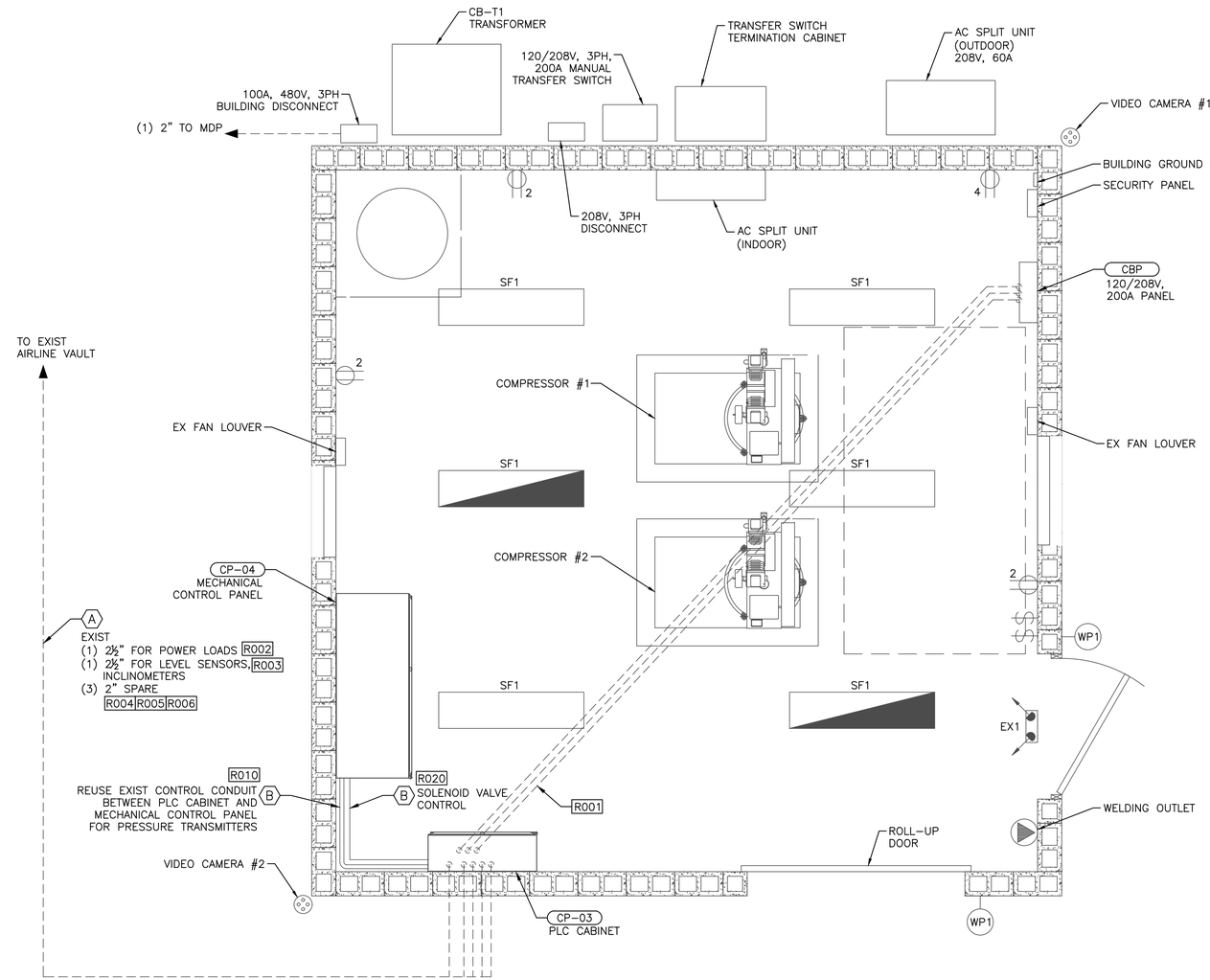
E100

SHEET 33 OF 40

SCALE: AS NOTED

JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_E100.dwg Plot date: Sep 09, 2024 12:16pm



CONTROL BUILDING LIGHTING AND POWER PLAN

SCALE: 1/2"= 1'–0"

0' 2' 4'

1 E100

SHEET KEY NOTES:

A REUSE 2.5" CONTROL CONDUIT TO ROUTE EXISTING SENSOR CABLES AND NEW INCLINOMETER CABLES FROM PLC CABINET TO AIR LINE VAULT FOR SPILLWAY GATES #5B, #6B, AND #8. PRESERVE SPARE CONDUITS FOR FUTURE USE.

B PROVIDE CABLES FOR NEW GATE INFLATE/DEFLATE SOLENOID VALVES IN NEW CONDUIT AND CABLES FOR NEW GATE PRESSURE TRANSMITTER IN EXISTING CONDUIT.

SHEET NOTES:

1. UNLESS NOTED OTHERWISE, ALL EQUIPMENT SHOWN ON THIS DRAWING IS EXISTING AND PROVIDED AS FIO BASED ON RECORD DRAWINGS FROM AUGUST 30, 2019.
2. SEE DRAWING E002 FOR RACEWAY AND CIRCUIT SCHEDULES.

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

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PROFESSIONAL ENGINEER LICENSED 18466 STATE OF IDAHO MITCHELL WAYNE SKELTON

WARNING

0 1/2 1

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

CONTROL BUILDING
LIGHTING AND POWER PLAN

DESIGNED M. SKELTON

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

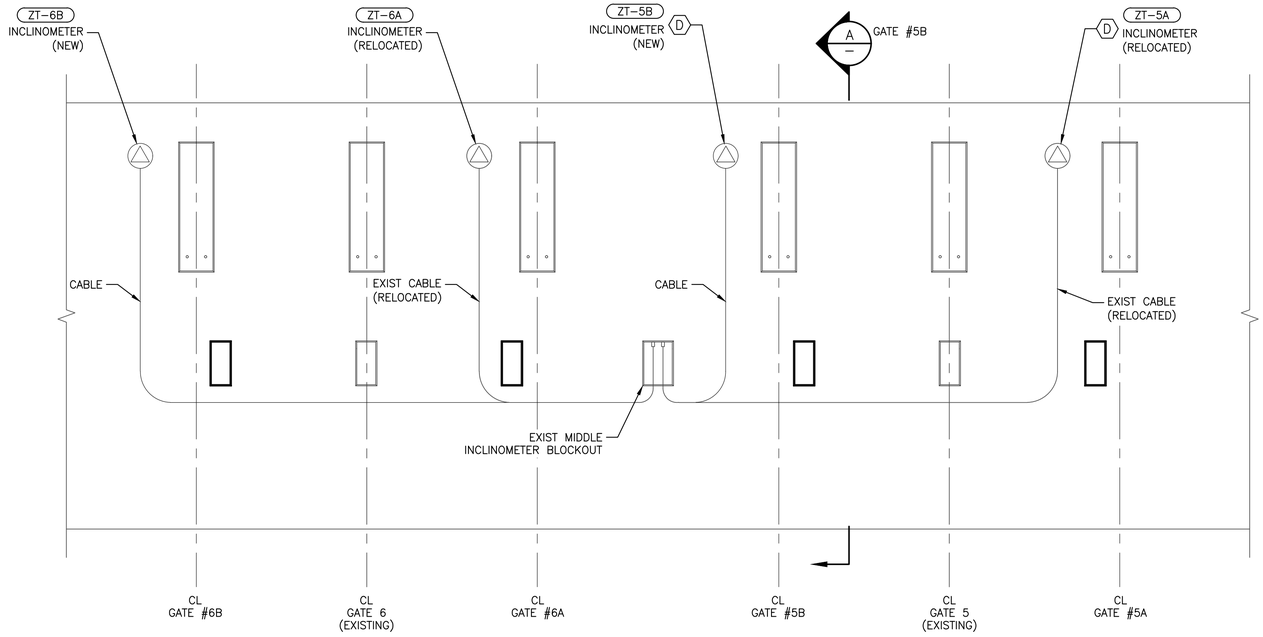
E101

SHEET 34 OF 40

SCALE: AS NOTED

JOB NO: 13–108

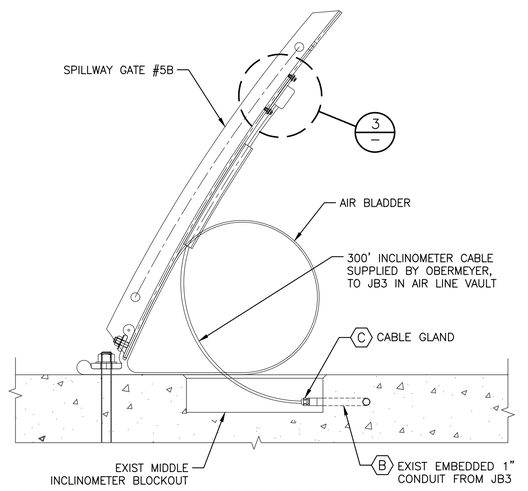
Path: C:\Box\mcm projects\city of boise\boise river water park design–build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_E101.dwg Plot date: Sep 09, 2024 12:17pm



GATES 5A, 5B, 6A AND 6B ELECTRICAL PLAN

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

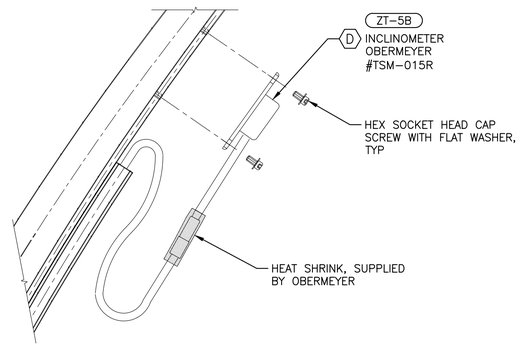
1 / E100



GATE #5B SECTION

SCALE: 1"= 1'-0"

A / —



INCLINOMETER DETAIL

SCALE: NTS

3 / —

SHEET KEY NOTES:

A REUSE EXISTING 2.5" CONDUIT FROM BUILDING TO EXISTING JB3 FOR LEVEL SENSOR AND INCLINOMETER CIRCUITS. PROVIDE HEAT SHRINK BUTT SPLICES WITHIN JB3 TO SPLICE INCLINOMETER CABLE FROM GATES TO SIGNAL WIRING FROM BUILDING.

B REUSE EXISTING 1" CONDUITS TO ROUTE GATES #5A, #5B, #6A, AND #6B INCLINOMETER CABLES FROM JB3 TO GATES #5 & #6 MIDDLE INCLINOMETER BLOCKOUT.

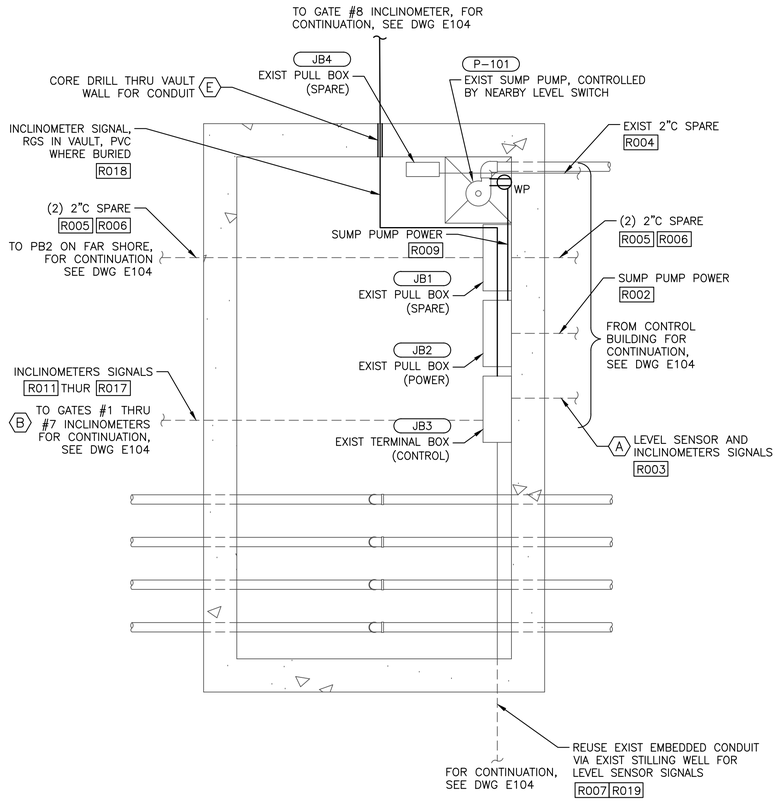
C REPLACE EXISTING GATES #5 & #6 CABLE GLANDS WITH TWO-HOLE CABLE GLANDS AND PULL BOTH EXISTING AND NEW INCLINOMETER CABLES THROUGH IT. SEAL CABLE GLAND AND CONDUIT WITH HEAT SHRINK.

D RELOCATE EXISTING GATES #5 & #6 INCLINOMETERS TO GATES #5A & #6A. PROVIDE NEW INCLINOMETER ON GATES #5B & #6B.

E FILL VOID AROUND CONDUIT WITH GROUT. PROVIDE TRANSITION TO PVC AND TWO-PIECE PVC EXPANSION FITTING ON OUTSIDE OF VAULT.

SHEET NOTES:

1. SEE DRAWING E002 FOR RACEWAY AND CONDUIT SCHEDULES.



AIRLINE VAULT ELECTRICAL PLAN

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

2 / E100

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

SEP 10 2024

PROFESSIONAL ENGINEER LICENSED 18466 STATE OF IDAHO MITCHELL WAYNE SKELTON

WARNING

0 1/2 1

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

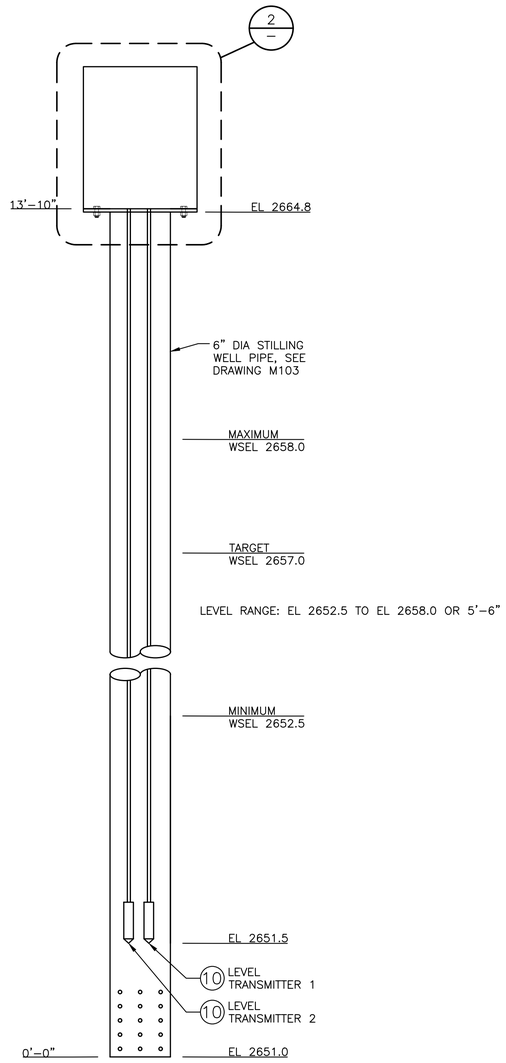
VAULT ELECTRICAL PLAN
AND INCLINOMETER DETAILS

DESIGNED M. SKELTON
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
E102
SHEET 35 OF 40
SCALE: AS NOTED

JOB NO: 13-108

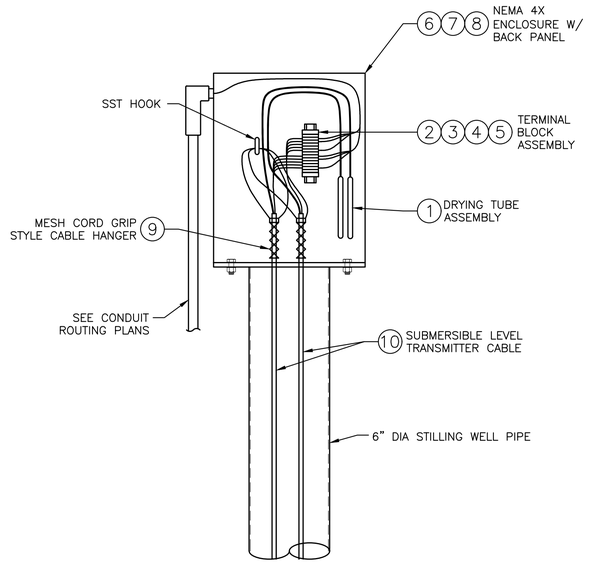
Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_E102.dwg Plot date: Sep 09, 2024 12:17pm



WATER LEVEL SENSORS INSTALLATION DETAIL

SCALE: NTS

1 / E001



DETAIL

SCALE: NTS

2 / –

SHEET NOTES:

1. SUPPORT LEVEL SENSOR CABLES WITH MANUFACTURER PROVIDED/APPROVED STRAIN RELIEF/PRESSURE CONNECTORS FROM KELLER AMERICA.
2. COIL EXTRA CABLE FOR SENSOR IN ENCLOSURE.
3. ENSURE STILLING WELL, ENCLOSURE, AND CONDUITS ARE BONDED TO GROUND ACCORDING TO NEC. USE GROUNDING BUSHINGS ON CONDUIT ENTRY TO ENCLOSURE.
4. ATTACH DRYING TUBES TO LEVEL SENSOR CABLE VENT TUBE.

MATERIAL LIST

ITEM	QTY	DESCRIPTION	MANUFACTURER	PART NO.
1	2	DRYING TUBES	KELLER AMERICA	N.A.
2	12	UNIVERSAL TERMINAL BLOCKS, UKFN, 30A	PHOENIX	3004362
3	2	END COVER FOR UK4	PHOENIX	3003020
4	2	END BRACKETS, TYPE E/UK	PHOENIX	1201442
5	1	DIN RAIL STYLE MOUNTING TRACK	PHOENIX	1201730
6	1	NEMA 4X SS ENCLOSURE 16Hx12Wx8D	HOFFMAN	CSD16128SS
7	1	BACK PANEL FOR 16Hx12W	HOFFMAN	CP1612G
8	1	PADLOCK HANDLE	HOFFMAN	CWHPTO
9	2	SINGLE EYE MESH CORD GRIP STYLE CABLE HANGER	KELLER AMERICA	N.A.
10	2	INDUSTRIAL SUBMERSIBLE PRESSURE TRANSDUCER, 4–20mA OUTPUT, RANGE AS SHOWN	KELLER AMERICA	ACCULEVEL SERIES

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

SEP 10 2024

PROFESSIONAL ENGINEER LICENSED 18466 STATE OF IDAHO MITCHELL WAYNE SKELTON

WARNING

0 1/2 1

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

WATER LEVEL SENSORS
ELECTRICAL DETAILS

DESIGNED M. SKELTON
DRAWN R. WOOD
CHECKED M. McMILLEN
ISSUED DATE 9/10/24

DRAWING
E103
SHEET 36 OF 40
SCALE: AS NOTED

JOB NO: 13–108

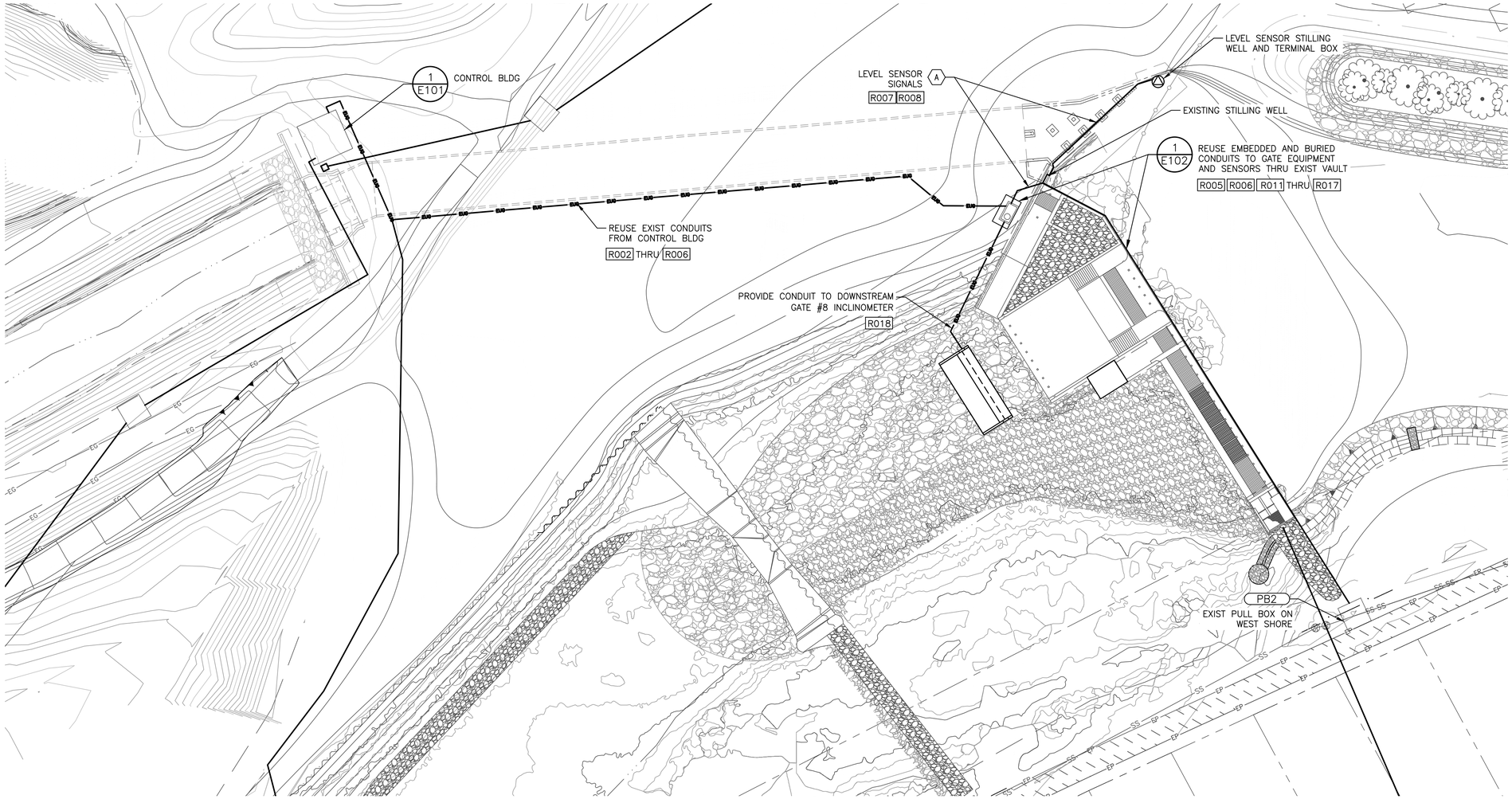
Path: C:\Box\mcm projects\city of boise\boise river water park design–build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_E103.dwg Plot date: Sep 09, 2024 12:17pm

SHEET KEY NOTES:

A REUSE CONDUITS FROM VAULT TO EXIST STILLING WELL, THEN ROUTE OUT OF STILLING WELL TO EXPOSED ON RIVER SIDE OF CONCRETE. ROUTE CONDUIT ON UNDERSIDE OF EXISTING HANDRAIL TO NEW STILLING WELL. PAINT EXPOSED CONDUIT TO MATCH HANDRAIL.

SHEET NOTES:

1. SEE DRAWING E002 FOR RACEWAY AND CONDUIT SCHEDULES.



SITE CONDUIT ROUTING PLAN

SCALE: 1"= 30'

0" 30' 60"

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTIONI

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PROFESSIONAL ENGINEER LICENSED 18466 STATE OF IDAHO MITCHELL WAYNE SKELTON

WARNING

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

SITE CONDUIT ROUTING PLAN

DESIGNED M. SKELTON

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

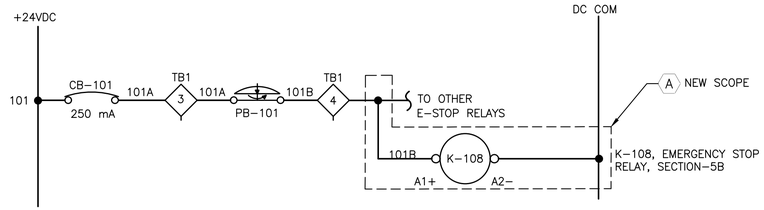
E104

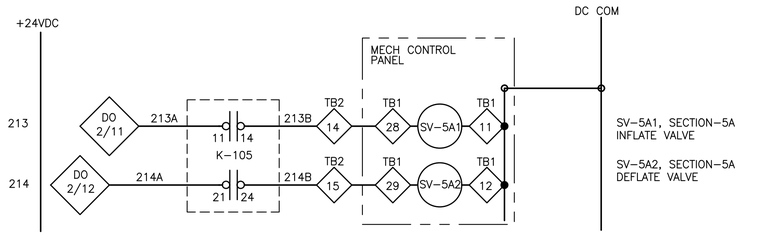
SHEET 37 OF 40

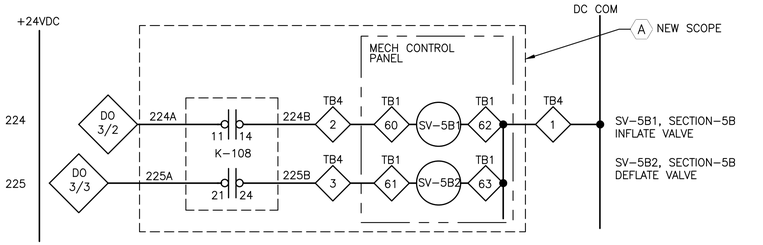
SCALE: AS NOTED

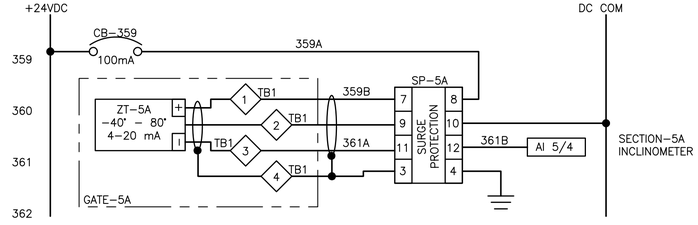
JOB NO: 13-108

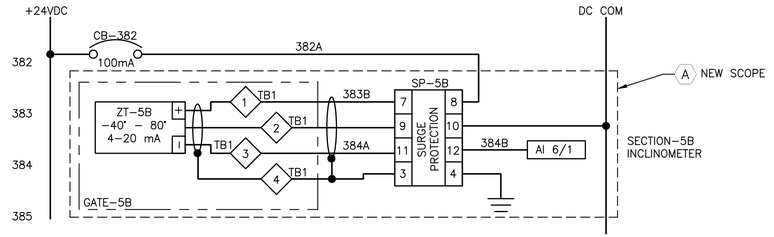
Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_E104.dwg Plot date: Sep 09, 2024 12:17pm

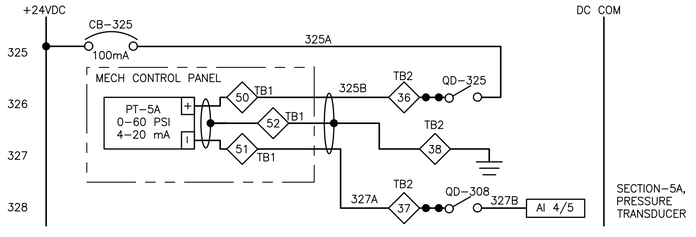


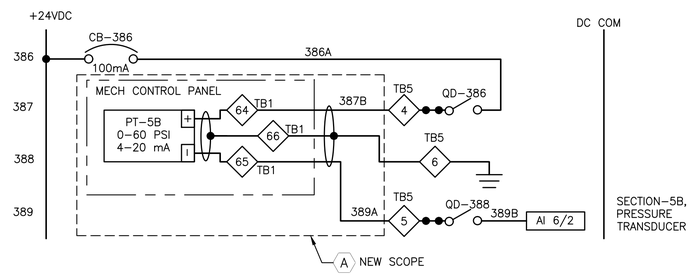












GATE #5 MODIFICATION DIAGRAM

SCALE: NTS

SHEET KEY NOTES:

A PROVIDE NEW MATERIALS AND WIRING SHOWN TO MATCH EXISTING SIMILAR COMPONENTS.

SHEET NOTES:

1. PROVIDE THE FOLLOWING CHANGES TO THE PLC AND HMI PROGRAMMING:
   A. REVISE SIGNAL AND CONTROL LOOP FOR GATE #5 TO LOOP #5A.
   B. ADD SIGNALS FOR THE NEW INCLINOMETER ZT-5B AND PRESSURE TRANSMITTER PT-5B.
   C. ADD CONTROL LOOP FUNCTIONALITY FOR GATE #5B SIMILAR TO GATE #5A.

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

SEP 10 2024

PROFESSIONAL ENGINEER LICENSED 18466 STATE OF IDAHO MITCHELL WAYNE SKELTON

WARNING

0 1/2 1

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McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

GATE #5 MODIFICATION DIAGRAM

DESIGNED M. SKELTON

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

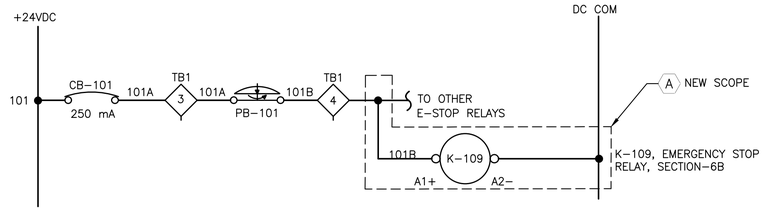
DRAWING

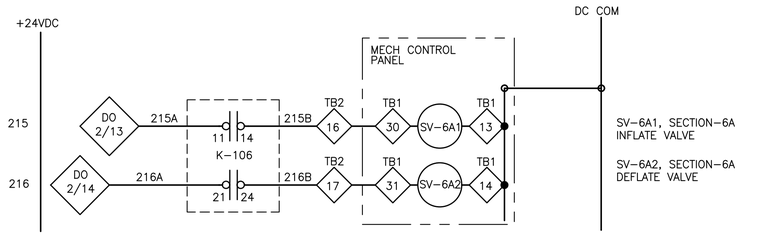
E105

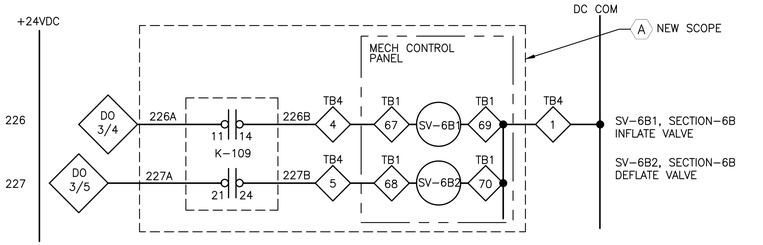
SHEET 38 OF 40

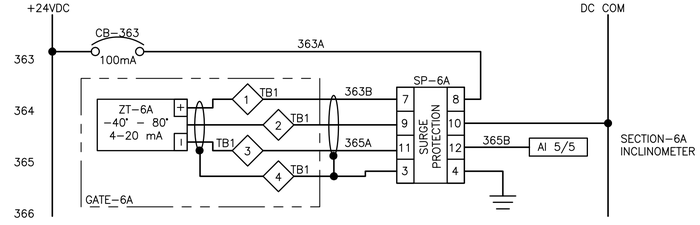
SCALE: AS NOTED

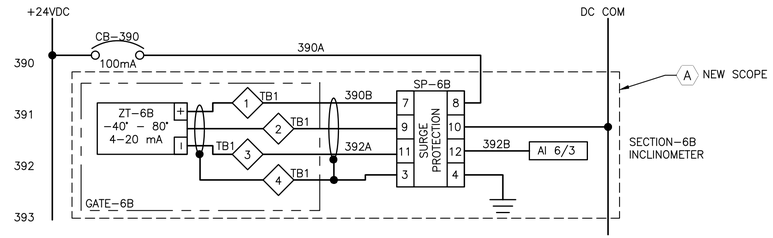
JOB NO: 13-108

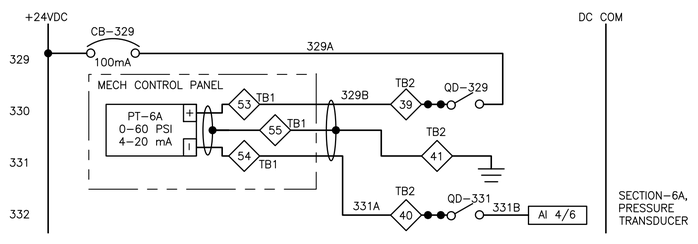


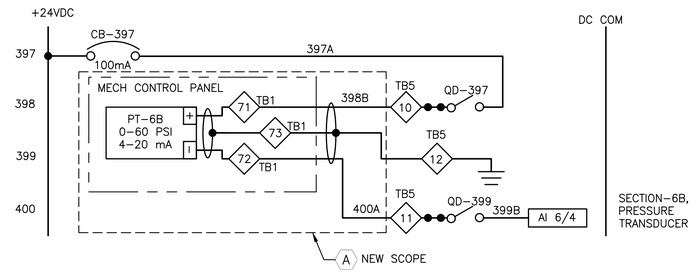












SHEET KEY NOTES:

A PROVIDE NEW MATERIALS AND WIRING SHOWN TO MATCH EXISTING SIMILAR COMPONENTS.

SHEET NOTES:

1. PROVIDE THE FOLLOWING CHANGES TO THE PLC AND HMI PROGRAMMING:
   A. REVISE SIGNAL AND CONTROL LOOP FOR GATE #6 TO LOOP #6A.
   B. ADD SIGNALS FOR THE NEW INCLINOMETER ZT-6B AND PRESSURE TRANSMITTER PT-6B.
   C. ADD CONTROL LOOP FUNCTIONALITY FOR GATE #6B SIMILAR TO GATE #6A.

GATE #6 MODIFICATION DIAGRAM

SCALE: NTS

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

SEP 10 2024

PROFESSIONAL ENGINEER LICENSED 18466 STATE OF IDAHO MITCHELL WAYNE SKELTON

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

GATE #6 MODIFICATION DIAGRAM

DESIGNED M. SKELTON

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

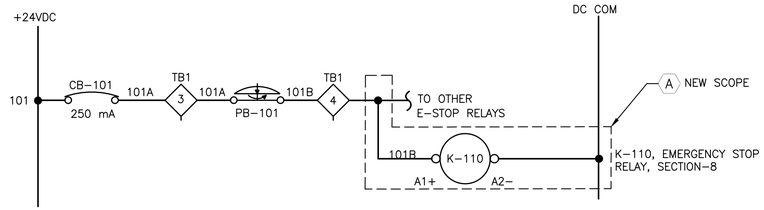
E106

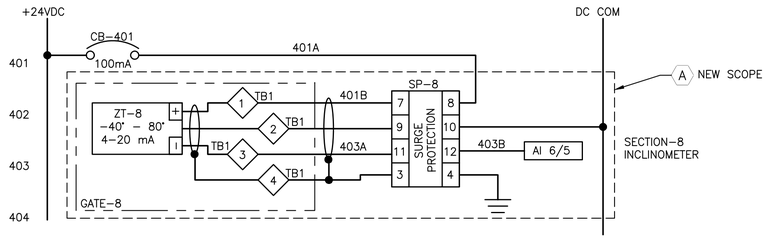
SHEET 39 OF 40

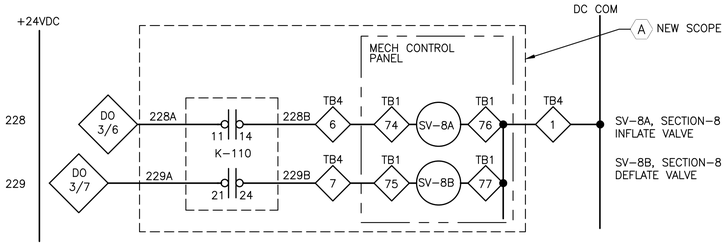
SCALE: AS NOTED

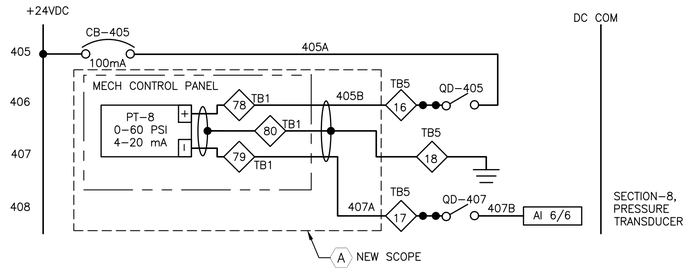
JOB NO: 13-108

Path: C:\Box\mcm projects\city of boise\boise river water park design-build\14.0 mcloughlin modifications\14.11 internal design\6.0 plans and specs\6.3 cad_E106.dwg Plot date: Sep 09, 2024 12:17pm









GATE #8 DIAGRAM

SCALE: NTS

SHEET KEY NOTES:

A PROVIDE NEW MATERIALS AND WIRING SHOWN TO MATCH EXISTING SIMILAR COMPONENTS.

SHEET NOTES:

1. PROVIDE THE FOLLOWING CHANGES TO THE PLC AND HMI PROGRAMMING:
   A. CREATE CONTROL LOOP FOR GATE #8 FOR MANUAL ONLY CONTROL WITH POSITION DISPLAY AT THE HMI.
   B. ADD SIGNALS FOR THE NEW INCLINOMETER ZT-8 AND PRESSURE TRANSMITTER PT-8.

REV	DATE	BY	DESCRIPTION
0	9/10/24	MDM	ISSUED FOR CONSTRUCTION!

SEP 10 2024

PROFESSIONAL ENGINEER LICENSED 18466 STATE OF IDAHO MITCHELL WAYNE SKELTON

WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMillen

CITY OF BOISE

J.A. AND KATHRYN ALBERTSON FAMILY FOUNDATION
BOISE WHITEWATER PARK

GATE #8 DIAGRAM

DESIGNED M. SKELTON

DRAWN R. WOOD

CHECKED M. McMILLEN

ISSUED DATE 9/10/24

DRAWING

E107

SHEET 40 OF 40

SCALE: AS NOTED

JOB NO: 13-108