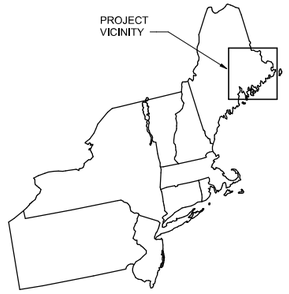
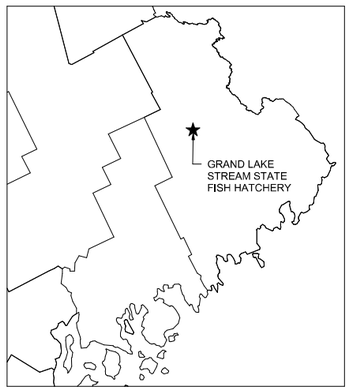
Contract Drawings For

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

Grand Lake Stream, Maine



State Location Map



Vicinity Map

HDR Project No. 10357686
BGS Project No. 3289
Other Project No. 14

ISSUED FOR BID

Date: SEPTEMBER 11,2024

STATE OF MAINE
Jeffrey K. Chandler PE17167
LICENSED
PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:02:07-05'00'

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-00-G.rvt
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INDEX OF DRAWINGS

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02S-102	FRAMING PLAN
02S-301	SECTIONS
02S-302	DETAILS
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03A-201	LOWER PAVILION DOOR SCHEDULE & DETAILS
03A-301	LOWER PAVILION WALL SECTIONS & DETAILS
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ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
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ARCHITECTURAL	M. BASKIN
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PROJECT NUMBER	10357686

STATE OF MAINE
Jeffrey K. Chandler
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Date: 2024.09.09 12:01:54-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

SHEET INDEX

0 1" 2"

FILENAME 103537686-00-G.rvt

SCALE NONE

SHEET 00G-001

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-00-G.rvt
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A/C	AIR CONDITIONING
A/E	ARCHITECT/ENGINEER
A	AMPERE
AB	ANCHOR BOLT
ABAN	ABANDON
ABC	AGGREGATE BASE COURSE
ABT	ABOUT
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
ACP	ACOUSTIC CEILING PANEL, ASPHALTIC CONCRETE PAVEMENT
ACST	ACOUSTIC
AD	ADDENDUM, AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AF	AMP FRAME, AMP FUSE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AGGR	AGGREGATE
AI	AREA INLET, ANALOG INPUT
AIC	AMPS INTERRUPTING CAPACITY
ALIG	ALIGNMENT
ALT	ALTERNATE, ALTITUDE
ALUM	ALUMINUM
AM	ACOUSTICAL MATERIAL
AMB	AMBIENT
ANC	ANCHOR
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APRX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AT	ACOUSTICAL TILE, AMP TRIP
ATC	ACOUSTICAL TILE CEILING
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAGE
AWT	ACOUSTICAL WALL TILE
B TO 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
BITUM	BITUMINOUS
BKG	BACKING
BL	BASE LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOC	BACK OF CURB
BOD	BOTTOM OF DUCT
BOG	BOTTOM OF GRILLE
BOL	BOTTOM OF LOUVER, BOLLARD
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
CTOC	CENTER TO CENTER
C&G	CURB AND GUTTER
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT
CAB	CABINET
CAP	CAPACITY
CAT	CATALOG, CATEGORY
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
CHBD	CHALKBOARD
CHD	CHORD
CHFR	CHAMFER
CHH	COMMUNICATION HANDHOLE
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
CLKG	CAULKING
CLR	CLEAR
CMH	COMMUNICATION MANHOLE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT, CONCRETE OPENING
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE
CON	CONCENTRIC
CONC	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
CTJ	CONTRACTION JOINT
CTR	CENTER
CTRL	CONTROL
CVT	CULVERT
CU	COPPER, CUBIC
CW	CLOCKWISE
CY	CUBIC YARD
d	PENNY (NAIL MEASURE)
D	DEEP, DIFFUSER, DRAIN
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, DIGITAL INPUT
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, DIGITAL OUTPUT, DITTO
DP	DEPTH
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DS	DOWN SPOUT
DT	DOUBLE TEE, DRIP TRAP ASSEMBLY
DUP	DUPLICATE
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
E	EAST
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
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
EXP	EXPANSION, EXPOSED
EXST	EXISTING
EXT	EXTERIOR, EXTERNAL, EXTENSION
F TO F	FACE TO FACE
F&B	FACE AND BYPASS
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
FDR	FEEDER
FDTN	FOUNDATION
FE	FLANGED END
FEC	FIRE EXTINGUISHER CABINET
FES	FLARED END SECTION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE, FACTORY FINISH, FLAT FACE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
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	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
FSW	FRESH SUPPLY WATER
FT	FEET, FOOT
FTG	FOOTING, FITTING
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
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, GLULAM BEAM
GND	GROUND
GP	GUY POLE
GR	GRADE
GRTG	GRATING
GSB	GYPSUM SHEATHING BOARD
GT	GREASE TRAP
GVL	GRAVEL
GW	GUY WIRE
GWB	GYPSUM WALLBOARD
GYP	GYPSUM HARDBOARD
H	HIGH
HB	HOSE BIBB
HBD	HARDBOARD
HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE, HORIZONTAL CENTERLINE
HD	HEAD, HOT DIP
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, VENTILATING AND AIR CONDITIONING
HWD	HARDWOOD
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC
HZ	HERTZ, CYCLES PER SECOND
HZ	HERTZ, CYCLES PER SECOND
ID	INSIDE DIAMETER, INTERIOR DIMENSION
IE	INVERT ELEVATION, FOR EXAMPLE
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, IRON ROD
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
KW	KILOWATT
L	ANGLE, LENGTH, LAVATORY, LINTEL
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
LVL	LAMINATED VENEER LUMBER
LVR	LOUVER
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LWL	LOW WATER LEVEL
MA	MIXED AIR
MACH	MACHINED
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBER
MC	MECHANICAL CONTRACTOR, MECHANICAL COUPLING, MOMENT CONNECTION
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
ML	MASONRY LINTEL
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, NATIONAL
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
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OG	ORIGINAL GROUND
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
OR	OUTSIDE RADIUS
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OVFL	OVERFLOW
OVHG	OVERHANG
OXY	OXYGEN
OZ	OUNCE
P	PAINT
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, PRECAST LINTEL
PLAS	PLASTER
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PNEU	PNEUMATIC
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, PROPOSED
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, POINT OF VERTICAL CURVE
PVC-RGS	PVC COATED RGS
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
RH	RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY
RL	REQUIRED LAP
RLFA	RELIEF AIR
RND	ROUND
RNG	RUNNING
RO	ROUGH OPENING
ROW	RIGHT-OF-WAY
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RSW	RAW SUPPLY WATER
RT	RIGHT
RVT	RESILIENT VINYL TILE
RY	READY
S	SOUTH, SINK
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, SILT FENCE
SG	SHEET GLASS, SEALANT GROOVE
SH	SHOWER
SHT	SHEET
SHTG	SHEATHING
SIL	SILENCE
SIM	SIMILAR
SJ	SLAB JOINT
SL	SLOPE, STEEL LINTEL
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
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
TKBD	TACK BOARD
TOB	TOP OF BOLT, TOP OF BANK, TOP OF BEAM, TOP OF BERM
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, TOE OF SLOPE
TOW	TOP OF WALL
TP	TOILET PARTITION, TELEPHONE POLE, TOE PLATE, TRAP PRIMER
TPD	TOILET PAPER DISPENSER
TPG	TOPPING, THROUGH PLATE GIRDER
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
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE, VERTICAL CENTERLINE
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VERTS	VERTICAL REINFORCING
VG	VERTICAL GRAIN
VIF	VERIFY IN FIELD
VIN	VINYL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VS	VERSUS, VAPOR SEAL
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
WDW	WASTE DRAIN WATER
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	WEATHERPROOF
WS	WATERSTOP, WATER SURFACE
WSCT	WAINSCOT
WT	WEIGHT, WATER TIGHT
WTHP	WATERPROOF, WORKING POINT
WWF	WELDED WIRE FABRIC
XP	EXPLOSION-PROOF
XS	EXTRA STRONG
XSECT	CROSS SECTION
XXS	DOUBLE EXTRA STRONG
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 THAT ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF A WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION, "INC" MAY MEAN INCLUDED OR INCLUDING, AND "REINF" MAY MEAN REINFORCE OR REINFORCING.
4. SEE INSTRUMENTATION AND GENERAL LEGEND SHEETS FOR PROJECT-SPECIFIC EQUIPMENT AND PIPING SYSTEM ABBREVIATIONS.

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-00-G.rvt
9/6/2024 3:05:30 PM

HDR

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Jeffrey K. Chandler PE17167 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:01:42-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

ABBREVIATIONS

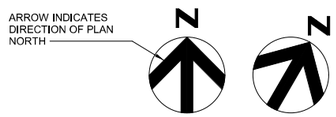
0 1" 2"

FILENAME	103537686-00-G.rvt
SCALE	NONE
SHEET	00G-002

MATERIALS IN PLAN/SECTION

- ACOUSTICAL CEILING TILE (SECTION)
- ASPHALT (PLAN OR SMALL-SCALE SECTION)
- ASPHALT (LARGE-SCALE SECTION)
- BATT INSULATION (SECTION)
- BRICK MASONRY (PLAN AND/OR SECTION)
- CHECKERED PLATE (PLAN)
- CONCRETE (PLAN AND/OR SECTION)
- CONCRETE MASONRY (PLAN AND/OR SECTION)
- DEMOLITION (PLAN AND/OR SECTION)
- EARTH (SECTION)
- FILTER POINT MAT (PLAN)
- FINISHED WOOD (SECTION)
- GLULAM LUMBER (SECTION)
- GRANULAR FILL (SECTION)
- GRATING (SECTION)
- GRATING (PLAN)
- GROUT (SECTION)
- GYPSUM BOARD (SECTION)
- METAL (SECTION)
- ORIENTED STRAND BOARD (SECTION)
- PARTICLE BOARD (SECTION)
- PLYWOOD (LARGE-SCALE SECTION)
- PLYWOOD (SMALL-SCALE SECTION)
- PRECAST CONCRETE (PLAN AND/OR SECTION)
- RIGID INSULATION (SECTION)
- RIPRAP (PLAN AND/OR SECTION)
- SAND (SECTION)
- SOD (SECTION)
- WEEP JOINT MORTAR PROTECTION SYSTEM (SECTION)
- WOOD - CONTINUOUS (SECTION)
- WOOD - BLOCKING (SECTION)

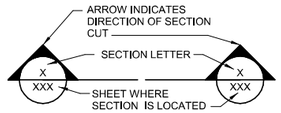
GENERAL SYMBOLOGY



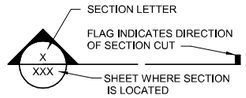
NORTH ARROW

PLAN
1/4" = 1'-0"

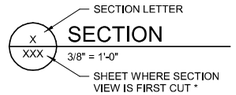
PLAN TITLE



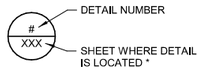
FULL BUILDING SECTION CUT MARKER



SECTION CUT MARKER



SECTION TITLE

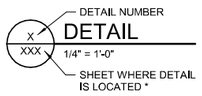


DETAIL MARKER

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.

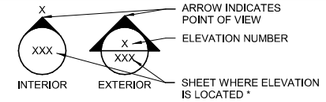
DETAIL MARKER

FOR REFERENCING DETAILS BOUND IN SPECIFICATIONS OR SEPARATE VOLUME.

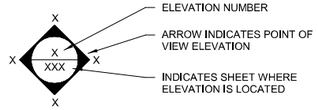


DETAIL TITLE

* EXCEPTIONS WHERE THE SHEET NUMBER IS REPLACED BY A DASH (-).
1) FOR COMMON DETAILS, SECTIONS, ELEVATIONS OR DETAILS THAT ARE CUT OR CALLED OUT ON MULTIPLE SHEETS.
2) SECTIONS, ELEVATIONS OR DETAILS THAT ARE LOCATED ON THE SAME SHEET THEY ARE CUT OR CALLED OUT ON.



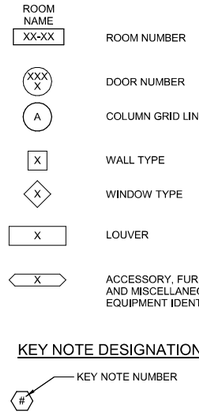
SINGLE ELEVATION OR PHOTO MARKER



MULTIPLE ELEVATION OR PHOTO MARKER

ELEVATION TITLE

ARCHITECTURAL



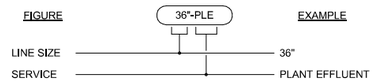
KEY NOTE DESIGNATION

GENERAL LINE SYMBOLOGY

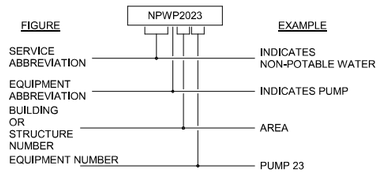
- 4-HOUR FIRE RATED WALL
- 3-HOUR FIRE RATED WALL
- 2-HOUR FIRE RATED WALL
- 1-HOUR FIRE RATED WALL
- COLUMN GRID LINE/CENTERLINE

IDENTIFICATION SYMBOLOGY

PIPING



EQUIPMENT IDENTIFICATION



SHEET NAMING CONVENTION

AREA DESIGNATION

00	GENERAL
01	SITE
02	UPPER PAVILION
03	LOWER PAVILION
04	EFFLUENT TREATMENT
05	OXYGEN SYSTEM
06	STORAGE BUILDING

DISCIPLINE DESIGNATOR & DISCIPLINE ORDER

G	GENERAL
V	SURVEYING/MAPPING
X	DEMOLITION
C	CIVIL
U	MULTI-DISCIPLINE
S	STRUCTURAL
A	ARCHITECTURAL
D	PROCESS
M	MECHANICAL (HVAC)
P	PLUMBING
E	ELECTRICAL
Y	INSTRUMENTATION

SHEET TYPE DESIGNATOR

0	GENERAL (SYMBOLS, LEGENDS)
1	PLANS
2	ELEVATIONS
3	SECTIONS
4	LARGE SCALE VIEWS
5	DETAILS
6	SCHEDULES AND DIAGRAMS
8	PROFILES
9	3D REPRESENTATIONS

EXAMPLE

UPPER PAVILION ARCHITECTURAL SECTION, DRAWING 01

0	2					BUILDING OR AREA 02
BUILDING OR AREA DESIGNATION						
		A				ARCHITECTURAL
DISCIPLINE DESIGNATOR						
			3			SECTIONS
SHEET TYPE DESIGNATOR						
				0	1	SHEET 01
SHEET NUMBER						
0	2	A	3	0	1	EXAMPLE

GENERAL NOTES:

1. THIS IS A STANDARD SHEET SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED 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 SHEET FOR USAGE.

ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Jeffrey K. Chandler PE17167 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:01:31-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GENERAL LEGEND

0 1" 2"

FILENAME	103537686-00-G.rvt
SCALE	NONE
SHEET	00G-003

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-00-G.rvt
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CIVIL MAPPING SYMBOLOGY

- EMBANKMENT SLOPE (CUT)
- EMBANKMENT SLOPE (FILL)
- H:V — EMBANKMENT SLOPE RIGHT ARROW RIGHT
- H:V — EMBANKMENT SLOPE LEFT ARROW LEFT
- 123 — SPOT ELEVATION/POINT #
- SURVEY BENCHMARK
- CP-X — SURVEY CONTROL POINT
- HORIZONTAL CONTROL POINT
- VERTICAL CONTROL POINT
- SECTION CORNER MONUMENT
- SECTION CORNER NO MONUMENT
- FLOW ARROW
- WATER LEVEL IN SECTION/PROFILE
- EXISTING UTILITY POLE
- J — EXTERIOR UTILITY JUNCTION BOX
- XXX — INTERSTATE HIGHWAY SYMBOL
- XXX — US HIGHWAY SYMBOL
- XXX — STATE HIGHWAY SYMBOL
- HAY BALE SILT CHECK
- TEMPORARY SEDIMENT TRAP

- CO — CLEANOUT
- CULVERT END SYMBOL (WITH CULVERT SHOWN BETWEEN SYMBOLS)
- X — FIRE HYDRANT
- F — FUEL OIL METER
- F — FUEL OIL MANHOLE
- F — FUEL OIL VAULT
- GT — GREASE TRAP
- GC — GRIT CHAMBER
- HEADWALL
- I — INDUSTRIAL WASTE WATER METER
- I — INDUSTRIAL WASTE WATER MANHOLE
- G — NATURAL GAS METER
- G — NATURAL GAS RECEIVER
- G — NATURAL GAS TRAP
- G — NATURAL GAS LINE VAULT
- MW — MONITORING WELL
- X — POST INDICATOR VALVE
- PS — X — PUMP STATION
- S — SANITARY MANHOLE
- ST — SEPTIC TANK
- X — TANK BELOW GROUND
- X — TANK HORIZONTAL ABOVE GROUND
- X — TANK VERTICAL ABOVE GROUND

- CB — STORM CATCH BASIN
- CB — STORM ROUND CATCH BASIN
- D — STORM DRAINAGE MANHOLE
- WATER/AIR VENT
- W — WATER BACKFLOW PREVENTER
- WATER BLOWOFF
- W — WATER METER
- WATER SHUTOFF
- WS — WATER SOFTENER
- W — WATER VALVE VAULT
- VALVE

UTILITY/CIVIL LINE SYMBOLOGY

- PIPELINE
- LARGE PIPELINE
- UTILITY BENEATH STRUCTURE
- RAILROAD
- CENTERLINE
- BOTTOM OF DITCH
- PROPERTY LINE
- EASEMENT
- LIMITS OF CONSTRUCTION/DISTURBANCE
- ROW
- EXISTING CONTOUR (MINOR)
- 25 — EXISTING CONTOUR W/ELEVATION (MAJOR)
- EXISTING FENCE
- EXISTING VEGETATION/BRUSH LINE
- FENCE - BARB WIRE
- FENCE - CHAIN LINK
- FENCE - FIELD
- FENCE - OTHER
- FENCE - WOOD
- XX — XX — FENCE - WOVEN WIRE
- FLOOD LIMIT (25 YEAR)
- FLOOD LIMIT (50 YEAR)
- FLOOD LIMIT (100 YEAR)
- FLOOD LIMIT (200 YEAR)
- FLOOD LIMIT (500 YEAR)
- HIGHWAY GUARDRAIL
- LEVEE TOP
- LEVEE TOE
- NEW CONTOUR (MINOR)
- 25 — NEW CONTOUR (MAJOR)
- RB — RB — ROCK BERM
- SF — SF — SILT FENCE
- TOE OF SLOPE
- TOP OF SLOPE
- FO — FIBER OPTIC
- FUEL OIL
- NATURAL GAS
- INDUSTRIAL WASTE WATER
- SANITARY SEWER
- STORM SEWER
- DOMESTIC WATER
- DOMESTIC WATER NON-POTABLE

GENERAL NOTES:

1. THIS IS A STANDARD CIVIL SYMBOLOGY SHEET. ALL SYMBOLS ARE NOT NECESSARILY USED 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 SHEET FOR USAGE.
3. PRIOR TO COMMENCEMENT OF ANY EARTH DISTURBANCE, SEE 01C-103 FOR NOTES SPECIFIC TO LIMIT OF DISTURBANCE, UTILITY COORDINATION, AND EROSION AND SEDIMENT CONTROL.
4. EXISTING CONDITIONS PLANIMETRICS AND DATA OBTAINED FROM OWEN HASKELL, INC. LAND SURVEYORS STANDARD TOPOGRAPHIC AND BOUNDARY SURVEY PREPARED FOR DIFW, DATED JANUARY 19, 2023, TITLED HATCHERY ROAD, GRAND LAKES STREAM, MAINE.
5. CONTRACTOR IS RESPONSIBLE FOR ALL SURVEY STAKING OPERATIONS.
6. NO PROVISIONS HAVE BEEN MADE FOR ANY TEMPORARY CONDITIONS THAT MAY ARISE DURING CONSTRUCTION PRIOR TO COMPLETION OF THE STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION DURING THE PROCESS OF THE PROJECT.
7. CONTRACTOR SHALL MAINTAIN WORKING RED LINE DRAWINGS.

REFERENCE COORDINATE SYSTEM

PROJECTION	- MAINE STATE PLANE
DATUM	- NAD83
ZONE	- EAST
UNITS	- U.S. SURVEY FEET

VERTICAL DATUM IS REFERENCED TO NAVD 88.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Jennifer N. Gagnon PE13751 — LICENSED PROFESSIONAL ENGINEER

Gagnon, Jennifer N

Digitally signed by Gagnon, Jennifer N
Date: 2024.09.09 17:39:16 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GENERAL CIVIL LEGEND

0 1" 2"

FILENAME	10357686-00G-004.DWG
SCALE	NONE

SHEET 00G-004

PIPING SYSTEMS

- COLD WATER, POTABLE (CW)
- HOT WATER, POTABLE (HW)
- HOT WATER RECIRCULATING, POTABLE (HWC)
- NPW- NON POTABLE COLD WATER
- 140– HOT WATER - TEMPERATURE, POTABLE
- TW– TEPID WATER, POTABLE
- TWR– TEPID WATER RETURN, POTABLE
- SAN SANITARY SEWER BELOW GRADE
- SAN– SANITARY SEWER ABOVE GRADE
- V– SANITARY VENT
- AW– ACID WASTE
- AV– ACID VENT
- CWV– COMBINATION WASTE AND VENT
- PD– PRESSURE DRAINAGE
- SD– STORM DRAIN ABOVE GRADE
- SD STORM DRAIN BELOW GRADE
- OD– STORM DRAIN OVERFLOW
- NG– NATURAL GAS
- LP– LIQUEFIED PROPANE
- CA– COMPRESSED AIR
- HWS– HEATING HOT WATER SUPPLY
- HWR– HEATING HOT WATER RETURN
- GHWS– GLYCOL HEATING HOT WATER SUPPLY
- GHWR– GLYCOL HEATING HOT WATER RETURN
- CHWS– CHILLED WATER SUPPLY
- CHWR– CHILLED WATER RETURN
- GCWS– GLYCOL CHILLED WATER SUPPLY
- GCWR– GLYCOL CHILLED WATER RETURN
- CWS– CONDENSER WATER SUPPLY
- CWR– CONDENSER WATER RETURN
- RL– REFRIGERANT LIQUID
- RS– REFRIGERANT SUCTION
- CD– CONDENSATE DRAIN
- CPD– CONDENSATE PUMP DISCHARGE
- STM -15– STEAM SUPPLY - PSI
- BBD– BOILER BLOW DOWN
- BF– BOILER FEED
- SV– STEAM VENT
- WDW– WASTE DRAIN WATER
- RSW– REUSE SUPPLY WATER
- FWS– FRESH WATER SUPPLY

PIPING SYMBOLOGY

- PIPE ANCHOR
- PIPE GUIDE
- EXPANSION JOINT
- PT PRESSURE/ TEMPERATURE PORT
- THERMOMETER
- THERMOWELL
- PRESSURE GAUGE
- T TEMPERATURE GAUGE
- FLEXIBLE PIPING CONNECTION
- WYE STRAINER
- MANUAL AIR VENT
- A AUTOMATIC AIR VENT
- M METER (WATER, GAS, OTHER)
- FCO FLOOR CLEANOUT
- CO CLEANOUT
- WCO WALL CLEANOUT
- GCO DOUBLE GRADE CLEANOUT
- WATER HAMMER ARRESTOR
- EARTHQUAKE VALVE
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER, FLAT ON BOTTOM
- ECCENTRIC REDUCER, FLAT ON TOP
- ELBOW, 90° TURN DOWN
- ELBOW, 90° TURN UP
- TEE, OUTLET UP
- TEE, OUTLET DOWN
- TEE, OUTLET UP W/ 90° TURN
- TEE, OUTLET DOWN W/ 90° TURN
- PIPE BREAK
- PIPE CAP
- BLIND FLANGE
- UNION
- FLOW ARROW
- SHUTOFF VALVE (NORMALLY OPEN)
- SHUTOFF VALVE (NORMALLY CLOSED)
- DRAIN VALVE
- CHECK VALVE
- VB VACUUM BREAKER
- AUTOMATIC FLOW CONTROL VALVE
- CALIBRATED MANUAL BALANCING VALVE
- OR PRESSURE-RELIEF VALVE
- PRESSURE-REDUCING VALVE (PRV)
- AUTOMATIC CONTROL VALVE, 2-WAY
- AUTOMATIC CONTROL VALVE, 3-WAY
- BFP BACKFLOW PREVENTER
- XX-1 PLUMBING FIXTURE

HVAC SYMBOLOGY

- 24x18 SUPPLY AIR OR OUTSIDE AIR DUCT UP (SECTION CUT, FIRST DIMENSION DUCT WIDTH)
- SUPPLY AIR OR OUTSIDE AIR DUCT DOWN (NO SECTION CUT)
- RETURN AIR DUCT UP (SECTION CUT)
- RETURN AIR DUCT DOWN (NO SECTION CUT)
- EXHAUST AIR DUCT UP (NO SECTION CUT)
- EXHAUST AIR DUCT DOWN (NO SECTION CUT)
- ROUND ELBOW UP
- ROUND ELBOW DOWN
- TRANSITION - RECTANGULAR TO ROUND DUCT
- STANDARD BRANCH
- ELBOW - W/TURNING VANE (RECTANGULAR)
- ELBOW - (RECTANGULAR), SMOOTH RADIUS
- 18x24 RECTANGULAR DUCT OR OPENING SIZE FIRST NUMBER INDICATES SIZE OF SIDE SHOWN
- 18ϕ ROUND DUCT SIZE
- R OR D RECTANGULAR DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW
- R OR D ROUND DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW
- 18x24 HIDDEN DUCT
- T 9'-10" B 9'-0" 18x10 DUCT/PIPE ELEVATION TAG ABOVE FINISH FLOOR
- VOLUME DAMPER
- M MOTOR OPERATED DAMPER
- FIRE DAMPER
- S SMOKE DAMPER
- S SMOKE AND FIRE DAMPER
- FLEXIBLE CONNECTION
- FLEXIBLE DUCT - TWO LINE
- FLEXIBLE DUCT - ONE LINE
- ACOUSTICAL LINING - DUCT DIMENSIONS FOR NET FREE AREA
- UC UNDERCUT DOOR
- NEW TO EXISTING CONNECTION
- REMOVE EXISTING UP TO THIS POINT
- HVAC EMERGENCY SHUTDOWN SWITCH

- TAG-SIZE CFM SUPPLY AIR REGISTER
- TAG-SIZE CFM EXHAUST AIR OR RETURN AIR GRILLE
- TAG CFM EXHAUST AIR OR RETURN AIR GRILLE
- TAG CFM SUPPLY AIR ASSEMBLY SQUARE DIFFUSER
- TAG CFM SUPPLY AIR ASSEMBLY ROUND DIFFUSER

TEMPERATURE CONTROL DIAGRAM SYMBOLOGY

MISCELLANEOUS DEVICE IDENTIFIER

CO	SPACE CARBON MONOXIDE SENSOR
CO2	SPACE CARBON DIOXIDE SENSOR
H	SPACE HUMIDITY SENSOR
NO2	SPACE NITROGEN DIOXIDE SENSOR
S	SPACE TEMPERATURE SENSOR
T	THERMOSTAT

CONTROL DEVICE IDENTIFIER

AFS	AIRFLOW MEASURING STATION
AM	AIRFLOW MEASURING SENSOR
CO	CARBON MONOXIDE SENSOR
CO2	CARBON DIOXIDE SENSOR
F	FLOW SWITCH
FRZ	FREEZE STAT
H	HUMIDITY SENSOR
HS	HIGH STATIC SWITCH
LS	LOW STATIC SWITCH
NO2	NITROGEN DIOXIDE SENSOR
P	PRESSURE SENSOR
S	SPACE TEMPERATURE SENSOR
SD	SMOKE DETECTOR
T	TEMPERATURE SENSOR
TS	TEMPERATURE SWITCH
ΔP	DIFFERENTIAL PRESSURE SENSOR

CONTROL INPUT/OUTPUT IDENTIFIER

AI	ANALOG INPUT
AO	ANALOG OUTPUT
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT

COIL IDENTIFIERS

CC	CHILLED WATER COOLING COIL
DG	DIRECT FIRED GAS BURNER
DX	DIRECT EXPANSION COOLING COIL
EH	ELECTRIC HEATING COIL
ER	DIRECT EVAPORATIVE COIL
FC	FACE AND BYPASS COOLING COIL
FH	FACE AND BYPASS HEATING COIL
HC	HEATING HOT WATER HEATING COIL
IG	INDIRECT FIRED GAS BURNER
ST	STEAM HEATING COIL

CONTROL ABBREVIATIONS

BTU	BTU METER
COMM	COMMUNICATION
CT	CURRENT TRANSMITTER
EC	ELECTRONICALLY COMMUTATED
EF	EXHAUST FAN
FM	FLOW METER
M	MOTOR ACTUATOR
MA	MIXED AIR
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTDOOR AIR
RA	RETURN AIR
RL	RELIEF FAN
RF	RETURN FAN
SA	SUPPLY AIR
SF	SUPPLY FAN
TCC	TEMPERATURE CONTROL CONTRACTOR
VFC	VARIABLE FREQUENCY CONTROLLER

- S DUCT MOUNTED SMOKE DETECTOR
- T TEMPERATURE AVERAGING SENSOR
- M MOTOR OPERATED DAMPER
- M MOTOR OPERATED SINGLE BLADE DAMPER
- BACKDRAFT DAMPER
- HUMIDIFIER
- AFS AIRFLOW MEASURING STATION
- INTAKE/ EXHAUST LOUVER
- FILTER
- FRZ FREEZE STAT
- SEE CONTROL ABBREVIATIONS (TYP)
- M XX FAN
- EC XX FAN WITH EC MOTOR
- PUMP
- EC PUMP WITH EC MOTOR

ABBREVIATIONS

AD	ACCESS DOOR
AFR	ABOVE FINISHED ROOF
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
ARF	ABOVE RAISED FLOOR
AV	ABOVE RAISED FLOOR
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSE POWER
BOE	BOTTOM OF EQUIPMENT
BTUH	BRITISH THERMAL UNITS PER HOUR
CAV	CONSTANT AIR VOLUME
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
COP	COEFFICIENT OF PERFORMANCE
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CRAC	COMPUTER ROOM AIR CONDITIONER
CU	CONDENSING UNIT
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DH	DEHUMIDIFIER
DX	DIRECT EXPANSION
EAT	ENTERING AIR TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ESS	EMERGENCY SHUTOFF SWITCH
EWT	ENTERING WATER TEMPERATURE
F	FUTURE
FA	FREE AREA
FCP	FAN CONTROL PANEL
FCU	FAN COIL UNIT
FDBK	FEEDBACK
FLA	FULL LOAD AMPS
FLT	FILTER
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
GC	GENERAL CONTRACTOR
GE	GRAVITY EXHAUST
GI	GRAVITY INTAKE
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
I/O	INPUT/OUTPUT
I/P	CURRENT TO PNEUMATIC
IAQ	INDOOR AIR QUALITY
IPLV	INTEGRATED PART LOAD VALUE
LAT	LEAVING AIR TEMPERATURE
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE-UP AIR UNIT
MBH	THOUSAND BTUH
MCC	MOTOR CONTROL CENTER
NC	NOISE CRITERIA
NO	NUMBER
NRC	NOISE REDUCTION COEFFICIENT
OS&Y	OUTSIDE SCREW AND YOKE
PD	PRESSURE DROP
PPH	POUNDS PER HOUR
RH	RELATIVE HUMIDITY
RTU	ROOFTOP UNIT
S	SIGNAL PORT
SCFM	STANDARD CUBIC FEET PER MINUTE
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SP	STATIC PRESSURE
TC	TECHNOLOGY CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TD	TEMPERATURE DIFFERENTIAL
TES	THERMAL ENERGY STORAGE
TSP	TOTAL STATIC PRESSURE
UH	UNIT HEATER
V&C	VALVE AND CAP
VAV	VARIABLE AIR VOLUME
VRF	VARIABLE REFRIGERANT FLOW
VTR	VENT THROUGH ROOF
WB	WET BULB
WC	WATER COLUMN
WPD	WATER PRESSURE DROP

GENERAL NOTES

GENERAL MECHANICAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL COMPLETELY REMOVE ALL PIPING, DUCTWORK, COILS, EQUIPMENT, TERMINAL UNITS, ASSOCIATED CONTROLS, WIRING, AND OTHER ITEMS SHOWN BOLD AND/OR BOLD DASHED LINES UNLESS SPECIFICALLY NOTED OTHERWISE. THE ITEMS INDICATED ON THE DRAWINGS TO BE REMOVED ARE ONLY TO INDICATE IN GENERAL THE AMOUNT OF DEMOLITION WORK INVOLVED. A SITE INVESTIGATION BY THE CONTRACTOR MUST BE PERFORMED TO AID IN DETERMINING THE COMPLETE EXTENT OF WORK INVOLVED.
2. PIPING AND DUCTWORK EMBEDDED IN FLOORS, WALLS, AND CEILINGS MAY REMAIN IF SUCH MATERIALS DO NOT INTERFERE WITH NEW INSTALLATIONS. REMOVE MATERIALS ABOVE ACCESSIBLE CEILINGS. REMAINING PIPING SHALL BE DRAINED AND CAPPED WITHOUT CREATING DEAD LEGS IN THE SYSTEM. REMAINING DUCTWORK SHALL BE CAPPED.
3. LOCATE, IDENTIFY, AND PROTECT MECHANICAL SERVICES PASSING THROUGH DEMOLITION AREA AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, NOTIFY OWNER AND INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS.
4. EXISTING EQUIPMENT BEING REMOVED AND CONSIDERED SALVAGEABLE BY THE OWNER SHALL BE TURNED OVER TO THE OWNER.
5. CONTRACTORS SHALL COORDINATE AND SCHEDULE ALL NECESSARY UTILITY SHUT-OFFS WITH OWNER PRIOR TO PROCEEDING WITH SUCH WORK.
6. COORDINATE SAW-CUTTING OF THE FLOOR OR WALL WITH OTHER TRADES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING, PAINTING, REPAIRING OR REPLACEMENT OF ALL WALLS, FLOORS, CEILINGS, OR OTHER BUILDING ELEMENTS THAT ARE DISTURBED AS PART OF THE DEMOLITION OR INSTALLATION OF MECHANICAL WORK. SUCH WORK SHALL MATCH THE EXISTING CONSTRUCTION, FINISH, AND RATING. FIRE SEAL WALL OPENINGS AS REQUIRED.
8. REPLACE/REPAIR DAMAGED PIPING AND/OR DUCTWORK INSULATION TO MATCH EXISTING.
9. CONTRACTOR SHALL PROVIDE WORK IN PHASES AS REQUIRED BY THE CONTRACT DOCUMENTS WHILE MINIMIZING POTENTIAL WORK DELAYS AND UTILITY SHUT-DOWNS. COORDINATE ALL WORK WITH PROJECT PHASING PLAN AND WORK SHOWN ON DEMOLITION AND NEW PLANS. ALL EXISTING AREAS OF THE BUILDING NOT A PART OF A CURRENT PHASE OF WORK SHALL REMAIN OPERATIONAL WHILE WORK IN EACH INDIVIDUAL PHASE IS COMPLETED.

GENERAL MECHANICAL NOTES

1. THESE NOTES ARE NOT ALL INCLUSIVE. REFER TO DRAWINGS AND SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
2. THIS IS A STANDARD MECHANICAL (HVAC AND PLUMBING) SYMBOLOGY AND ABBREVIATIONS SHEET. LISTING OF SYMBOLS AND ABBREVIATIONS DOES NOT IMPLY ALL SYMBOLS AND ABBREVIATIONS HAVE BEEN USED ON THIS PROJECT.
3. VALVE SYMBOLS SHOWN HERE ARE APPLICABLE ONLY TO MECHANICAL SHEETS.
4. PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT FOR COMPLETE AND OPERABLE SYSTEMS AS INDICATED ON THE DRAWINGS AS SPECIFIED, OR AS REQUIRED BY CODE.
5. MECHANICAL INSTALLATION SHALL COMPLY WITH THE ADA/ABA ACCESSIBILITY GUIDELINES.
6. DETAILS APPLY TO THE ENTIRE PROJECT AND ARE ONLY REFERENCED TO PROVIDE CLARITY IF THERE ARE MULTIPLE DETAILS THAT COULD APPLY TO A PARTICULAR PROJECT CONDITION.
7. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING WITH OTHER TRADES BEFORE PROCEEDING WITH WORK. DO NOT INSTALL MECHANICAL EQUIPMENT, DUCTWORK, OR PIPING ABOVE ELECTRICAL EQUIPMENT WHERE PROHIBITED BY ELECTRICAL CODES (SWITCHBOARDS, PANELS, ETC.).
8. LIGHT LINE WEIGHT INDICATES EXISTING PIPING, DUCTWORK, AND/OR EQUIPMENT TO REMAIN. BOLD LINE WEIGHT INDICATES NEW WORK TO BE INSTALLED AS WORK OF THIS CONTRACT.
9. COORDINATE INSTALLATION OF OUTSIDE AIR INTAKE WITH INSTALLATION OF PLUMBING VENTS, FLUES AND EXHAUST/RELIEF OUTLETS TO MAINTAIN 10' SEPARATION.
10. ALL WORK IN FINISHED SPACES SHALL BE LOCATED ABOVE CEILINGS, IN CHASES OR OTHER CONCEALED ACCESSIBLE LOCATIONS UNLESS NOTED OTHERWISE. LOCATE AND ARRANGE VALVES, DRAIN FITTINGS, ETC. TO BE ACCESSIBLE THROUGH LAY-IN CEILINGS, ACCESS PANELS OR ACCESS DOORS. PROVIDE AN ACCESS PANEL OR DOOR FOR ALL NON-ACCESSIBLE INSTALLATIONS. COORDINATE LOCATION OF ACCESS PANELS OR DOORS WITH THE ARCHITECT/ENGINEER AND OTHER TRADES.
11. ALL MATERIALS LOCATED IN PLENUM SHALL BE RATED FOR PLENUM INSTALLATION.
12. ALL DUCTWORK, PIPING, AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH ALL TRADES. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS OR AS SHOWN ON THE MECHANICAL OR STRUCTURAL DRAWINGS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED.
13. ALL MISCELLANEOUS METALS AND MATERIALS REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING, DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE PROVIDED BY THE INSTALLING CONTRACTOR.
14. PROVIDE DIELECTRIC UNIONS AT ALL CONNECTIONS OF DISSIMILAR METALS (SUCH AS COPPER TO GALVANIZED STEEL).
15. PROVIDE ISOLATION VALVES AT EACH PIECE OF EQUIPMENT. ALSO PROVIDE ISOLATION VALVES ON EACH BRANCH AND/OR RISER SERVING MULTIPLE PIECES OF EQUIPMENT OR FIXTURES AND ELSEWHERE AS INDICATED. INSTALL VALVES AS CLOSE TO MAIN AS POSSIBLE.

GENERAL HVAC NOTES

1. DUCTWORK DIMENSIONS: FIRST NUMBER INDICATES SIDE OF DUCTWORK SHOWN. ALL DIMENSIONS ARE IN INCHES AND ARE INSIDE CLEAR DIMENSIONS.
2. VOLUME DAMPERS ABOVE PLASTER OR GYPBOARD CEILINGS SHALL HAVE EXTENSION RODS AND CHROME-PLATED ESCUTCHEON PLATES.
3. COORDINATE ALL GRILLE, REGISTER AND DIFFUSER LOCATIONS WITH REFLECTED CEILING PLAN, LIGHTING, AND ALL OTHER CEILING MOUNTED DEVICES.
4. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK AND PIPING SYSTEMS CONNECTED TO FANS, PUMPS AND OTHER EQUIPMENT WHICH REQUIRE VIBRATION ISOLATION.
5. PROVIDE ACCESSIBLE VOLUME DAMPERS OR OTHER MEANS OF AIRFLOW ADJUSTMENT AT ALL DUCT RUN-OUTS TO DIFFUSERS AND GRILLES.
6. PROVIDE DUCT ACCESS DOORS AT OUTSIDE AIR INTAKE PLENUMS.
7. ALL DUCT RUN-OUTS TO DIFFUSERS AND GRILLES SHALL BE THE SAME AS THE DIFFUSER OR GRILLE NECK SIZE UNLESS NOTED OTHERWISE.
8. ALL PIPING RUNOUTS SHALL BE 3/4" UNLESS NOTED OTHERWISE.

GENERAL PLUMBING NOTES

1. SANITARY SEWER PIPING SMALLER THAN 3" SHALL BE SLOPED AT 1/4" PER FOOT, 3" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT.
2. WALL HYDRANTS SHALL BE INSTALLED BETWEEN 18" MIN AND 24" MAX ABOVE FINISH GRADE. COORDINATE ELEVATIONS OF FINISH FLOOR OR FINISH EXTERIOR GRADE. PROVIDE ACCESSIBLE INSIDE SHUTOFF VALVE FOR EACH WALL HYDRANT.
3. INSTALL WALL CLEANOUTS (WCO) ON ALL SANITARY AND STORM RISERS AT 30" ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE. COORDINATE EXACT HEIGHT WITH OTHER TRADES TO ENSURE ACCESSIBILITY.
4. ROUTE ALL STORM PIPING AS HIGH AS POSSIBLE AND SLOPE AT 1/8" PER FOOT UNLESS NOTED OTHERWISE. OVERFLOW DOWN SPOUT NOZZLES SHALL BE INSTALLED AT 12" ABOVE FINISH EXTERIOR GRADE UNLESS NOTED OTHERWISE.
5. PROVIDE BACKFLOW PREVENTERS IN ACCORDANCE WITH THE LOCAL CODES. PROVIDE AIR GAP FITTINGS FOR ALL RPZ BACKFLOW PREVENTERS AND ROUTE DISCHARGE PIPING TO NEAREST FLOOR DRAIN OR FLOOR SINK OR AS SHOWN ON DRAWINGS.
6. PROVIDE GAS REGULATORS, REGULATOR VENT PIPING, SHUTOFF VALVES, DIRT LEGS, AND UNIONS ON ALL GAS FIRED EQUIPMENT. REGULATE GAS PRESSURE AS REQUIRED FOR EACH SPECIFIC PIECE OF GAS FIRED EQUIPMENT.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:01:17-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

MECHANICAL LEGEND

0 1" 2"

FILENAME	103537686-00-G.rvt
SCALE	NONE

SHEET 00G-005

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ONE-LINE, POWER, AND LIGHTING SYMBOLOGY

X 20A 3P OR X 100AF 80AT 3P — LOW VOLTAGE CIRCUIT BREAKER (CB), RATING AND NO. OF POLES AS SHOWN. WHEN SPECIFIC TYPE, OTHER THAN MCCB, IS REQUIRED, X INDICATES TYPE.

TYPES:
- MCCB - MOLDED CASE
- ICCB - INSULATED CASE
- LVP - LOW VOLTAGE POWER
- MCP - MOTOR CIRCUIT PROTECTOR (RATING PER CONNECTED LOAD)

TRIP UNIT:
- L - LONG TIME PICKUP
- S - SHORT TIME PICKUP
- I - INSTANTANEOUS PICKUP
- G - GROUND FAULT PICKUP
- A - ARC ENERGY REDUCTION MODE

X — INTERLOCK: X - INDICATES TYPE

TYPES:
- E - ELECTRICAL
- M - MECHANICAL
- K - KEY

GFP — GROUND FAULT PROTECTION

52 — MEDIUM VOLTAGE CIRCUIT BREAKER

FUSE, RATING, AND NUMBER OF FUSES AS NOTED

FUSED CUTOUT, CURRENT RATING, FUSE RATING, AND QUANTITY AS NOTED

FUSIBLE SWITCH, CURRENT RATING, FUSE RATING, AND QUANTITY AS NOTED (3 POLE UON)

NON-FUSED SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED (3 POLE UON)

DISCONNECT OR DRAWOUT CONNECTION

A C B & A C B — MAGNETIC MOTOR STARTER AND SEPARATELY MOUNTED COMBINATION MAGNETIC MOTOR STARTER

D C & D C — MOTOR/LOAD CONTROLLER AND SEPARATELY MOUNTED MOTOR/LOAD CONTROLLER WITH SHORT CIRCUIT PROTECTION AND DISCONNECT

MOTOR STARTER AND CONTROLLER SUBSCRIPTS:

A - MAGNETIC STARTER NEMA SIZE

B - STARTER TYPE
- NONE - FULL VOLTAGE NON-REVERSING (FVNR)
- FVR - FULL VOLTAGE REVERSING
- 2S - TWO SPEED
- RVAT - REDUCED VOLTAGE AUTO TRANSFORMER

C - CONTROL DIAGRAM OR CONTROLS SCHEDULE NUMBER (IF REQUIRED)

D - CONTROLLER TYPE
- VFD - VARIABLE FREQUENCY DRIVE
- SS - SOLID STATE
- CONT - CONTACTOR

SEPARATELY MOUNTED COMBINATION MOTOR STARTER OR CONTROLLER; SEE ELECTRICAL ONE - LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION

SEPARATELY MOUNTED MOTOR STARTER OR CONTROLLER; SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION.

X — NON-FUSED SAFETY SWITCH, 30A, 3P, X INDICATES AMP RATING GREATER THAN 30A

X Y — FUSED SAFETY SWITCH, 3P, X INDICATES AMP RATING GREATER THAN 30A, Y INDICATES FUSE SIZE

CB — SEPARATELY MOUNTED CIRCUIT BREAKER; SEE ELECTRICAL ONE - LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION

7 1/2 OR HP — MOTOR WITH DESIGN HORSEPOWER (WHEN INDICATED)

G — GENERATOR

ATS — TRANSFER SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED

ATS - AUTOMATIC
MTS - MANUAL

TRANSFORMER
- △ 3-PHASE, 3-WIRE DELTA CONNECTION
- Y 3-PHASE, 4-WIRE GROUNDED WYE CONNECTION

LP100 208/120V 3Ø, 4W — SWITCHBOARD OR PANELBOARD; NAME, VOLTAGE, PHASE, NUMBER OF WIRES WHEN INDICATED

100 KVA — NON-MOTOR LOAD WITH DESIGN KVA, KW, OR AMP

VOLTAGE TRANSFORMER (VT, PT, OR CPT)

CURRENT TRANSFORMER (CT)

WH — UTILITY WATT-HOUR METER PER UTILITY REQUIREMENTS

DMP — DIGITAL METERING PACKAGE

GROUND

LIGHTNING ARRESTER

SPD — LOW VOLTAGE SURGE PROTECTIVE DEVICE

SS — SELECTOR SWITCH

PB — PUSHBUTTON

IC — INSTRUMENTATION / CONTROL DEVICE

SV — SOLENOID VALVE

CONTROL PANEL INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT

CONTROL PANEL WITH DISCONNECT SWITCH INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT

J OR J — JUNCTION OR PULL BOX

PANELBOARD (250V TO 600V)

PANELBOARD (LESS THAN 250V)

X — ELECTRICAL EQUIPMENT ENCLOSURE: SWITCHBOARD, MOTOR CONTROL CENTER, CONTROL PANEL, TRANSFORMER OR OTHER EQUIPMENT AS INDICATED. ESTIMATED SIZE AS INDICATED. WHEN USED X INDICATES EQUIPMENT TYPE.

EQUIPMENT TYPES:
- ATS - AUTOMATIC TRANSFER SWITCH
- CP - CONTROL PANEL
- MTS - MANUAL TRANSFER SWITCH
- MCC - MOTOR CONTROL CENTER
- UPS - UNINTERRUPTIBLE POWER SUPPLY
- VFD - VARIABLE FREQUENCY DRIVE
- SB - SWITCHBOARD
- SG - SWITCHGEAR
- T - TRANSFORMER

Z X Y — CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED

Z X Y — CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)

X Y Z — WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED

X Y Z — WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)

X Y Z — WALL MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED

X Y Z — POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED

X Y Z — POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED

X Y Z — POLE/STANCHION MOUNTED FLOOR LUMINAIRE, LAMP TYPE AS SPECIFIED

Z X Y — CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED

Z X Y — WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED

Z X Y — CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED

Z X Y — WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED

X Y — EMERGENCY LIGHT, NUMBER OF ATTACHED HEADS AS SHOWN

X Y — EMERGENCY LIGHT, REMOTE MOUNTED HEAD

X Y X Y — DOUBLE-FACED CEILING OR WALL MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS

X Y X Y — SINGLE-FACED CEILING OR WALL MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS

LIGHTING FIXTURE SUBSCRIPTS:
- X - INDICATES LUMINAIRE TYPE PER LUMINAIRE SCHEDULE
- Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD
- Z - INDICATES CONTROLLING SWITCH (IF REQUIRED)
- NL - NIGHT LIGHT UNSWITCHED

$ Y X — WALL SWITCH

SUBSCRIPTS:
X - INDICATES TYPE
- NONE - SINGLE POLE
- 2 - DOUBLE POLE
- 3 - THREE-WAY
- 4 - FOUR-WAY
- K - KEY SWITCH
- P - PILOT LIGHT
- L - LIGHTED HANDLE
- DM - DIMMING
- MC - MOMENTARY CONTACT
- T - TIMER

Y - INDICATES CONTROLLING SWITCH (IF REQUIRED)

$ Y X — MANUAL MOTOR STARTER

SUBSCRIPTS:
X - INDICATES TYPE
- HP - HORSEPOWER RATED
- TE - HORSEPOWER RATED WITH THERMAL ELEMENT
- FT - HORSEPOWER RATED WITH FUSETRON FUSE

Y - INDICATES SWITCH TYPE
- NONE - TOGGLE SWITCH TYPE
- R - ROTARY SWITCH TYPE

PC — PHOTOCELL

TC — TIME CLOCK

$ OSX OR OSX — LIGHTING CONTROL OCCUPANCY SENSOR, WALL MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED

OSX — LIGHTING CONTROL OCCUPANCY SENSOR, CEILING MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED

X — ROOM/AREA LIGHTING CONTROL TYPE, SEE LIGHTING CONTROL SCHEDULE FOR REQUIREMENTS

Z a — LOW VOLTAGE DIGITAL WALL SWITCH, NUMBER INDICATES QUANTITY OF PUSH BUTTONS PER SINGLE GANG PLATE, LETTER INDICATES CONTROL ZONE WHEN SHOWN

PLUG-IN RECEPTACLE STRIP, QUANTITY AND SPACING OF RECEPTACLES AS NOTED OR SPECIFIED

X Y — SPECIAL-PURPOSE RECEPTACLE AS DEFINED ON PLANS

X Y OR X Y — TWO RECEPTACLES IN 2-GANG BOX UNDER COMMON COVER PLATE

X Y — DUPLEX RECEPTACLE

X Y — SIMPLEX RECEPTACLE

X Y — RECESSED FLOOR MOUNTED BOX, QUANTITY AND TYPE OF RECEPTACLES AS INDICATED

SUBSCRIPTS:

X - INDICATES TYPE
- GFCI - GROUND FAULT CIRCUIT INTERRUPTER
- IG - ISOLATED GROUND
- TR - TAMPER RESISTANT
- PLH - PLUG LOAD HALF CONTROLLED
- PLD - PLUG LOAD DUAL CONTROLLED
- USB - USB CHARGING STATION
- SPD - SURGE PROTECTIVE DEVICE

Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD

CONDUIT TURNING UP

CONDUIT TURNING DOWN

(#X) — HOMERUN TO SOURCE (E.G. PANELBOARD, MCC) NUMBER IN PARENTHESES REPRESENTS CONDUCTOR SIZE OTHER THAN #12 SINGLE PHASE: 3#12, 1#12G IN 3/4"C THREE PHASE: 3#12, 1#12G IN 3/4"C UNLESS OTHERWISE NOTED, CONDUCTOR SIZE IS FOR ENTIRE CIRCUIT. SOURCE TO LAST DEVICE. ALSO, SEE ONE LINE DIAGRAM FOR CIRCUIT REQUIREMENTS

CONDUIT CONNECTION TO EQUIPMENT

CIRCUIT RUN BETWEEN DEVICES EXPOSED IN NON-ARCHITECTURALLY FINISHED AREAS; CONCEALED IN ARCHITECTURALLY FINISHED AREAS. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.

CONDUIT RUN BETWEEN DEVICES CONCEALED IN NON-ARCHITECTURALLY FINISHED AREAS OR UNDER FLOOR SLAB. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.

(#X) — CIRCUIT HASH MARKS (WHEN INDICATED); LONG, SHORT, SINGLE DOT, AND DOUBLE DOT REPRESENT PHASE, NEUTRAL, EQUIPMENT GROUND, AND ISOLATED EQUIPMENT GROUND, RESPECTIVELY. X REPRESENTS CONDUCTOR SIZE OTHER THAN #12 IN 3/4" CONDUIT.

CIRCUIT CONTINUATION

CONDUIT STUBBED OUT AND CAPPED

CORD AND PLUG CONNECTION

XXX OR XXX — CONDUIT TAG OR CIRCUIT NUMBER - WIRE AND CONDUIT SIZE AS SPECIFIED IN CIRCUIT SCHEDULE ON THE SHEETS

GROUND CABLE

GROUND ROD

GENERAL NOTES:

1. THIS IS A STANDARD ELECTRICAL SYMBOLOGY SHEET. NOT ALL SYMBOLS MAY BE USED 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 SHEET FOR USAGE.
3. SEE P&ID LEGEND SHEET FOR PROJECT SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.

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ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
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PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Andrew D. Kaner PE18016 LICENSED PROFESSIONAL ENGINEER

Kaner, Andrew D

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

ELECTRICAL LEGEND 1

0 1" 2"

FILENAME 103537686-00-G.rvt

SCALE NONE

SHEET 00G-006

COMMUNICATION SYMBOLOGY

- WALL MOUNTED TELEPHONE OUTLET
- WALL MOUNTED DATA OUTLET
- WALL MOUNTED COMBINATION TELEPHONE AND DATA OUTLET
- RECESSED FLOOR MOUNTED TELEPHONE OUTLET
- RECESSED FLOOR MOUNTED DATA OUTLET
- RECESSED FLOOR MOUNTED COMBINATION TELEPHONE AND DATA OUTLET

AUDIO/VISUAL SYMBOLOGY

- TV — TELEVISION OUTLET
- S — CEILING MOUNT SPEAKER
- S X — WALL MOUNT SPEAKER
  SPEAKER SUBSCRIPTS:
  X - INDICATES HEIGHT
- H — HORN TYPE TRANSDUCER
- VC — VOLUME CONTROL
- PAHE — HEAD END EQUIPMENT
- M — FLOOR MOUNTED MICROPHONE JACK
- H M — WALL MOUNTED MICROPHONE JACK

SECURITY SYMBOLOGY

- DOOR POSITION SWITCH
- COMBINATION ELECTRIC DOOR STRIKE AND POSITION SWITCH
- R P — PROXIMITY CARD READER
- R K — PROXIMITY CARD READER WITH KEYPAD
- M — DUAL TECHNOLOGY MOTION DETECTOR
- REQUEST TO EXIT MOTION DETECTOR
- REQUEST TO EXIT PUSH BUTTON
- G — GLASS BREAK DETECTOR
- PTZ — CCTV CAMERA PAN/TILT/ZOOM WHEN INDICATED
- SEC — SECURITY EQUIPMENT CABINET
- R — REMOTE KEYPAD/CONTROL STATION

EMERGENCY ALARM SYMBOLOGY

- E — ALARM BELL
- E — ALARM HORN
- E — ALARM FLASHING LIGHT
- E — ALARM BELL AND FLASHING LIGHT COMBINATION UNIT
- E — ALARM HORN AND FLASHING LIGHT COMBINATION UNIT
- E — PUSHBUTTON OR PULLSTATION

SITE SYMBOLOGY

- EXTERIOR PAD MOUNTED TRANSFORMER
- POLE - MOUNTED TRANSFORMER
- X / Y — ELECTRICAL HANDHOLE OR MANHOLE
  X - INDICATES SEQUENCE NUMBER
  Y- MHX OR HHX
- X / Y — POLE/STANCHION MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED
- X / Y — POLE MOUNTED AREA OR ROADWAY LUMINAIRE, LAMP TYPE AS SPECIFIED
- X / Y — HIGH MAST LIGHTING, NUMBER OF LUMINAIRES AS SPECIFIED
  LIGHTING FIXTURE SUBSCRIPTS:
  X - INDICATES LUMINAIRE TYPE PER LUMINAIRE SCHEDULE
  Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD
- POWER POLE
- DOWNGUY
- E — UNDERGROUND (UNO) ELECTRICAL AND COMMUNICATION SYSTEMS PATHWAY
- OHE — OVERHEAD ELECTRICAL AND COMMUNICATION SYSTEMS PATHWAY

CONTROL SYMBOLOGY

- ELECTRICAL CONNECTION
- OR OR — NO ELECTRICAL CONNECTION
- SV OR — SOLENOID VALVE
- X / Y — CONTROL/RELAY COIL:
  X-INDICATES TYPE
  Y-INDICATES LOOP NUMBER, WHEN USED
  TYPES:
  CR-CONTROL RELAY — TC-TIME CLOCK
  PC-PHOTOCELL — LC-LIGHTING CONTACTOR
  DP-DEFINITE PURPOSE — TR-TIMING RELAY
  M-MOTOR STARTER
- NORMALLY OPEN CONTACT (N.O.)
- NORMALLY CLOSED CONTACT (N.C.)
- NORMALLY OPEN TIME DELAY RELAY CONTACT WITH TIME DELAY ON CLOSING AFTER COIL IS ENERGIZED
- NORMALLY CLOSED TIME DELAY RELAY CONTACT WITH TIME DELAY ON OPENING AFTER COIL IS ENERGIZED
- NORMALLY OPEN TIME DELAY RELAY CONTACT WITH TIME DELAY ON OPENING AFTER COIL IS DE-ENERGIZED
- NORMALLY CLOSED TIME DELAY RELAY CONTACT WITH TIME DELAY ON CLOSING AFTER COIL IS DE-ENERGIZED
- NORMALLY OPEN TEMPERATURE SWITCH; CLOSE ON RISING TEMPERATURE
- NORMALLY CLOSED TEMPERATURE SWITCH; OPEN ON RISING TEMPERATURE
- NORMALLY OPEN FLOW SWITCH; CLOSE ON INCREASING FLOW
- NORMALLY CLOSED FLOW SWITCH; OPEN ON INCREASING FLOW
- NORMALLY OPEN LEVEL SWITCH, CLOSE ON RISING LEVEL
- NORMALLY CLOSED LEVEL SWITCH, OPEN ON RISING LEVEL
- NORMALLY OPEN PRESSURE SWITCH, CLOSE ON INCREASING PRESSURE
- NORMALLY CLOSED PRESSURE SWITCH, OPEN ON INCREASING PRESSURE
- NORMALLY OPEN LIMIT SWITCH, CLOSE ON REACHING LIMIT
- NORMALLY CLOSED LIMIT SWITCH, OPEN ON REACHING LIMIT
- MICROPROCESSOR (PLC, RTU, ETC.,) OUTPUT
- MICROPROCESSOR (PLC, RTU, ETC.,) INPUT
- FIELD WIRING EXTERNAL TO CONTROL PANEL
- OFF / HAND / AUTO — XOO / OOX — 3 POSITION SELECTOR SWITCH, MAINTAINED CONTACTS; UNLESS OTHERWISE NOTED, 2-POSITION SIMILAR
- NORMALLY OPEN PUSHBUTTON, MOMENTARY CONTACT UNLESS OTHERWISE NOTED
- NORMALLY CLOSED PUSHBUTTON, MOMENTARY CONTACT UNLESS OTHERWISE NOTED

CONTROL SYMBOLOGY

- X — INDICATING LIGHT: X INDICATES LENS COLOR
- X — PUSH TO TEST INDICATING LIGHT: X INDICATES LENS COLOR
  LENS COLORS:
  R - RED — Y - YELLOW
  G - GREEN — W - WHITE
  B - BLUE — A - AMBER
- THERMAL OVERLOAD ELEMENT
- OL / (X) — THERMAL OVERLOAD RELAY CONTACT. WHEN SHOWN X INDICATES QUANTITY.
- CPT — CONTROL POWER TRANSFORMER (CPT)
- RTM — RUN TIME METER

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MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Andrew D. Kaner PE18016 — LICENSED PROFESSIONAL ENGINEER

Kaner, Andrew D

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

ELECTRICAL LEGEND 2

0 1" 2"

FILENAME 103537686-00-G.rvt

SCALE NONE

SHEET 00G-007

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PRIMARY ELEMENT SYMBOLOGY

- ORIFICE PLATE
- PITOT TUBE OR ANNUBAR
- FI — ROTOMETER
- SONIC OR ULTRASONIC FLOWMETER
- M — MAGNETIC FLOWMETER
- FI — MASS DISPERSION FLOWMETER
- FLUME
- WEIR
- PROPELLER OR TURBINE METER
- VENTURI TUBE
- VENTURI FLUME
- FLOAT SWITCH
- TE — TEMPERATURE ELEMENT WITH THERMOWELL
- FG — SIGHT FLOW GLASS

LINE TYPES

- MAIN PROCESS LINE
- SECONDARY PROCESS LINE
- AUXILIARY PROCESS LINE
- DIRECTION OF FLOW
- PNEUMATIC SIGNAL
- ELECTRICAL SIGNAL
- HYDRAULIC SIGNAL
- SOFTWARE OR DATA LINK
- SIGNAL CONNECTION
- CROSSOVER - NO CONNECTION
- CAPILLARY

CROSS REFERENCE SYMBOLOGY

- CONTINUATION ON SHEET Y-3
- CONTINUATION ON SHEET Y-3

INSTRUMENT SYMBOLOGY

- LOCALLY MOUNTED FIELD INSTRUMENTATION
- MOUNTED ON PANEL FRONT
- MOUNTED INSIDE PANEL
- XXX — FRONT PANEL MOUNTED ON AUXILIARY PANEL (SUBSCRIPT INDICATES PANEL)
- MOUNTED INSIDE AUXILIARY PANEL
- PILOT LIGHT
- INSTRUMENT FUNCTIONS SHARING COMMON HOUSING
- I — COMPLEX INTERLOCK AS DEFINED IN CONTROL DIAGRAM OR IN SPECIFICATIONS
- SHARED DISPLAY, SHARED CONTROL, FIELD MOUNTED
- SHARED DISPLAY, SHARED CONTROL, PRIMARY LOCATION - NORMALLY ACCESSIBLE TO OPERATOR
- PROGRAMMABLE LOGIC CONTROL, PRIMARY LOCATION - NORMALLY ACCESSIBLE TO OPERATOR
- PROGRAMMABLE LOGIC CONTROL, FIELD MOUNTED

ACTUATOR SYMBOLOGY

- M P S — OPERATOR ABBREVIATIONS:
  M = MOTOR
  P = PNEUMATIC
  S = SOLENOID
- FLOAT OPERATOR
- SPRING-OPPOSED SINGLE-ACTING PNEUMATIC CYLINDER
- DOUBLE-ACTING PNEUMATIC CYLINDER
- PNEUMATIC DIAPHRAGM
- PNEUMATIC DIAPHRAGM WITH POSITIONER

TYPES OF POWER SUPPLY

A	PLANT COMPRESSED AIR
IA	INSTRUMENTATION AIR
ES	ELECTRIC SUPPLY
NG	NATURAL GAS
HYD	HYDRAULIC

INSTRUMENT IDENTIFICATION LETTERS

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	VARIABLE MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USERS CHOICE			CONTROL	CLOSED
D	USERS CHOICE	DIFFERENTIAL			DEVIATION
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE		GLASS, GAUGE VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN	SCAN		
K	TIME, TIME SCHEDULE	TIME; RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	USER'S CHOICE				MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE		
R	RADIATION		RECORD		RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH	STOP
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECH. ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL PROBE		
X	UNCLASSIFIED	X AXIS	ACCESSORY DEVICES UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		AUXILLIARY DEVICES	
Z	POSITION, DIMENSION	Z AXIS SAFETY INSTRUMENTED SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

MISCELLANEOUS INSTRUMENTATION ABBREVIATIONS

AI	ANALOG INPUT
AO	ANALOG OUTPUT
CL2	CHLORINE (ANALYZER MODIFIER)
CO	CARBON MONOXIDE (ANALYZER MODIFIER)
CO2	CARBON DIOXIDE (ANALYZER MODIFIER)
COMB	COMBUSTIBLES (ANALYZER MODIFIER)
COND	CONDUCTIVITY (ANALYZER MODIFIER)
DEN	DENSITY (ANALYZER MODIFIER)
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
DO	DISSOLVED OXYGEN (ANALYZER MODIFIER)
E/P	VOLTAGE TO PNEUMATIC
H2S	HYDROGEN SULFIDE (ANALYZER MODIFIER)
HCL	HYDROGEN CHLORIDE (ANALYZER MODIFIER)
I/O	INPUT/OUTPUT
I/P	CURRENT TO PNEUMATIC
NOX	NITROGEN OXIDE (ANALYZER MODIFIER)
OI	OPERATOR INTERFACE
O2	OXYGEN (ANALYZER MODIFIER)
P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
SS	SUSPENDED SOLIDS (ANALYZER MODIFIER)
TURB	TURBIDITY (ANALYZER MODIFIER)
WAN	WIDE AREA NETWORK

CONTROL SWITCH NOTATION ABBREVIATIONS

XXX / XXXX

ACK	ACKNOWLEDGE
ESTOP	EMERGENCY STOP
FAIL	FAILURE
FOR	FORWARD-OFF-REVERSE
FR	FORWARD-REVERSE
FS	FAST-SLOW
HA	HAND-AUTO
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
LL	LEAD-LAG
LLS	LEAD-LAG-STANDBY
LOR	LOCAL-OFF-REMOTE
LR	LOCAL-REMOTE
LS	LEAD-STANDBY
MA	MANUAL-AUTO
OAC	OPEN-AUTO-CLOSE
OC	OPEN-CLOSE
OO	ON-OFF
OSC	OPEN-STOP-CLOSE
RJ	RUN-JOG
RJR	RUN-JOG-REVERSE
SIL	SILENCE
SS	START-STOP

VALVES

- BALL VALVE
- BUTTERFLY VALVE
- CONE VALVE
- CHECK VALVE
- DOUBLE-DISK CHECK VALVE
- BALL CHECK VALVE
- DIAPHRAGM VALVE
- GATE VALVE
- GLOBE VALVE
- KNIFE GATE VALVE
- NEEDLE VALVE
- PINCH VALVE
- PLUG VALVE
- THREE-WAY BALL VALVE
- THREE-WAY PLUG VALVE
- PRESSURE-REDUCING VALVE
- PRESSURE-REGULATING VALVE
- THREE-WAY CONTROL VALVE
- OR — PRESSURE-RELIEF VALVE
- X — AIR-RELEASE VACUUM VALVE
  A = AIR RELEASE
  VAC = VACUUM

MISCELLANEOUS SYMBOLOGY

GENERAL NOTES:

1. THIS IS A STANDARD INSTRUMENTATION SYMBOLOGY AND ABBREVIATIONS SHEET. LISTING OF SYMBOLS AND ABBREVIATIONS DOES NOT IMPLY ALL SYMBOLS AND ABBREVIATIONS HAVE BEEN USED ON THIS PROJECT.
2. SEE PROCESS, MECHANICAL AND PLUMBING LEGEND SHEET FOR MISCELLANEOUS PIPING SYMBOLS.
3. 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.
4. VALVE SYMBOLS SHOWN HERE ARE APPLICABLE ONLY TO INSTRUMENTATION DIAGRAMS. SEE PROCESS, MECHANICAL AND PLUMBING LEGEND SHEET FOR VALVE SYMBOLS USED ELSEWHERE ON THE SHEETS.

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MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Andrew D. Kaner PE18016 — LICENSED PROFESSIONAL ENGINEER

Kaner, Andrew D

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

INSTRUMENTATION LEGEND

0 1" 2"

FILENAME 103537686-00-G.rvt

SCALE NONE

SHEET 00G-008

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LIFE SAFETY LEGEND

Area Name Business 15,000 SF Load Factor:150 Calc Occ: 100	NAME OF AREA/SPACE FUNCTION OF SPACE (IBC TABLE 1004.5) SQUARE FOOTAGE OF AREA/SPACE LOAD FACTOR (IBC TABLE 1004.1.2) CALCULATED OCCUPANT LOAD PER AREA/SPACE (IBC 1004)
DOOR Clear Width:33" Max Occ:165 Req Width:28" Calc Occ:140	EGRESS COMPONENT - OCCUPANT LOAD AND WIDTH (IN INCHES) ACTUAL CLEAR WIDTH PROVIDED MAXIMUM ALLOWED OCCUPANT LOAD PER EXIT (IBC 1005.3) REQUIRED MINIMUM WIDTH PER OCCUPANCY (IBC 1005.3) CALCULATED OCCUPANT LOAD PER EXIT (IBC 1004)
STAIR Clear Width:44" Max Occ:146 Req Width:28" Calc Occ:93	EGRESS STAIR - OCCUPANT LOAD AND WIDTH (IN INCHES) ACTUAL CLEAR WIDTH PROVIDED MAXIMUM ALLOWED OCCUPANT LOAD PER STAIR (IBC 1005.3) REQUIRED MINIMUM WIDTH PER OCCUPANCY (IBC 1005.3) CALCULATED OCCUPANT LOAD PER STAIR (IBC 1004)
185'-6" TRAVEL DISTANCE	TRAVEL DISTANCE: LONGEST ROUTE TO AN EXIT (MAXIMUM PER SPACE/AREA SHOWN) (IBC 1017.2)
55'-6" COMMON PATH	COMMON PATH: DISTANCE TRAVELED BEFORE AN EXIT PATH IS CHOSEN (MAXIMUM PER SPACE/ AREA SHOWN) (IBC 1006.2)
45	DOOR FIRE RATING
	ILLUMINATED EXIT SIGN
FEC	FIRE EXTINGUISHER & CABINET RECESSED (SCREENED IF EXISTING) MAX TRAVEL DISTANCE: 75' - (IBC TABLE 906.3(1))
FEC	FIRE EXTINGUISHER & CABINET SURFACE MOUNTED (SCREENED IF EXISTING) MAX TRAVEL DISTANCE: 75' - (IBC TABLE 906.3(1))
FE	FIRE EXTINGUISHER SURFACE MOUNTED (SCREENED IF EXISTING) MAX TRAVEL DISTANCE: 75' - (IBC TABLE 906.3(1))
FHC	FIRE HOSE CABINET RECESSED (SCREENED IF EXISTING)
	FIRE DEPARTMENT CONNECTION
SCH	STAND PIPE
	SUITE
	NOT IN CONTRACT
	CONTROL AREA BOUNDARY

PARTITION RATING GRAPHICS

PARTITIONS REQUIRED TO BE SMOKE RESISTANT, FIRE RESISTANT, OR BOTH FIRE AND SMOKE RESISTANT ARE SHOWN GRAPHICALLY ON PLANS WITH HATCH PATTERNS.

PARTITION RATING GRAPHIC DESIGNATION	PRIORITY
4 HR FIRE RATING	1 HIGHEST
3 HR FIRE RATING	2
2 HR FIRE RATING & SMOKE BARRIER	
2 HR FIRE RATING	3
1 HR FIRE RATING & SMOKE BARRIER	
1 HR FIRE RATING	4
SMOKE PARTITION (NON-RATED)	
NON-RATED PARTITION	5 LOWEST

BUILDING INFORMATION

1. **ADDRESS:** Grand Lake Stream Fish Hatchery...
2. **ZONING DISTRICT:**
3. **OCCUPANCY:** Group U: Utility Rearing Tanks
4. **CONSTRUCTION TYPE:** Type 2B - NonCombustable (Table 601)
5. **SPRINKLERED:** N/A
6. **BUILDING HEIGHT:** Actual Building Height (# of Stories) 25'-10"
   Allowable Building Height (# of Stories) 55'-0" (2)
7. **BUILDING AREAS:** Total Building Area 3,940 SF
   Allowable Building Area (Parcel) 8,500 SF

APPLICABLE BUILDING CODES

THIS PROJECT HAS BEEN DESIGNED UNDER THE REQUIREMENTS OF THE APPLICABLE CODES BELOW

1. **2015 International Building Code (IBC)**
2. **2015 International Energy Conservation Code (IECC)**
3. **2015 International Mechanical Code (IMC)**

APPLICABLE EGRESS REQUIREMENTS

BASED ON: Type 2B - NonCombustable (Table 601) - Group U: - N/A

1. **MAXIMUM ALLOWABLE TRAVEL DISTANCE:** 300 FEET
   Per IBC Table 1017.1 **Actual:**
2. **COMMON PATH OF EGRESS TRAVEL:** 100 FEET
   Per IBC Table 1006.2.1 **Actual:**
3. **MINIMUM NUMBER OF EXITS:** 2
   Per IBC Table 1006.3.1
4. **OCCUPANT LOAD** 3,940 SF / 300SF PER PERSON = 14 OCCUPANTS

BUILDING OCCUPANT LOAD

Name of Area/Space	Use Designation	Function of Space	Occupanct Load Factor	Occupant Load

GENERAL LIFE SAFETY NOTES

1. THIS BUILDING IS AN OPEN AIR PAVILION AND IS NOT HEATED OR COOLED, AND THUS MEETS EXEMPTION C402.2 IN 2015 IECC FOR NOT HAVING TO MEET THERMAL REQUIRMENTS OF THE ENERGY CODE.
2.
3.

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MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

LICENSED ARCHITECT
Michael A. Baskin
5595
STATE OF MAINE

Digitally signed by Baskin, Michael Alan
Date: 2024.09.09 15:56:22-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LIFE SAFETY

0 1" 2"

FILENAME

SCALE As indicated

SHEET 00G-009

GENERAL

G1. SCOPE
THE NOTES ON THIS SHEET AND THE STANDARD STRUCTURAL DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT WHETHER SPECIFICALLY CALLED OUT OR NOT, EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY ON STRUCTURAL SHEETS. IF THERE ARE QUESTIONS, THEY SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ANSWERED IN WRITING PRIOR TO CONSTRUCTION.

G2. APPLICABLE SPECIFICATIONS AND CODES
1. INTERNATIONAL BUILDING CODE (IBC) 2015 WITH APPLICABLE EDITIONS OF THE CODE REFERENCED STANDARDS.
2. ACI 350-06
3. LOCAL JURISDICTION AMENDMENTS

G3. DESIGN CRITERIA
1. APPLIES TO ALL STRUCTURES (UNO)
   A. DEAD LOAD:
      a. ACTUAL TRIBUTARY STRUCTURE WEIGHT
      b. SUPERIMPOSED DEAD LOAD:
   B. LIVE LOAD:
      a. ELEVATED FLOORS: 100 PSF
      b. WALKWAYS, STAIRS, GRATING: 100 PSF
      c. SLAB ON GRADE: 250 PSF
      d. ROOF: 20 PSF (NOT REDUCIBLE)
   C. WIND:
      a. BASIC WIND SPEED: 115 MPH
      b. EXPOSURE: B
      c. IMPORTANCE FACTOR: 1.0
      d. UPPER AND LOWER PAVILIONS ARE OPEN. FILTER BUILDING IS ENCLOSED.
   D. SEISMIC:
      a. ABOVE GRADE, NON WATER BEARING STRUCTURES:
         1. RISK CATEGORY II
         2. IMPORTANCE FACTOR: 1.0
         3. SPECTRAL RESPONSE ACCELERATION, SS = 0.236
         4. SPECTRAL RESPONSE ACCELERATION, S1 = 0.069
         5. SITE CLASS: D
         6. SEISMIC DESIGN CATEGORY: B
         7. SPECTRAL RESPONSE COEFFICIENT, SDS = 0.251
         8. SPECTRAL RESPONSE COEFFICIENT, SD1 = 0.111
         9. ANALYSIS PROCEDURE: ELF
   E. SNOW LOAD:
      a. GROUND SNOW LOAD = 80 PSF
      b. FLAT ROOF SNOW LOAD
         1. UPPER AND LOWER PAVILIONS = 67.2 PSF
         2. EFFLUENT TREATMENT BUILDING = 61.6 PSF
      c. EXPOSURE FACTOR
         1. UPPER AND LOWER PAVILIONS = 1.0
         2. EFFLUENT TREATMENT BUILDING = 1.0
      d. IMPORTANCE FACTOR, ALL BUILDINGS = 1.0
      e. THERMAL FACTOR
         1. UPPER AND LOWER PAVILIONS = 1.2
         2. EFFLUENT TREATMENT BUILDING = 1.1
   F. FLOOD CRITERIA:
      a. LOWEST BUILDING FLOOR ELEVATION =
      b. DRY FLOOD PROOFED ELEVATION =
      c. 100 YEAR FLOOD ELEVATION =

G4. THE FOLLOWING NON-CONTRACTUAL GEOTECHNICAL REPORT WAS DEVELOPED FOR THIS PROJECT AND IS THE BASIS OF THIS STRUCTURAL DESIGN:
GEOTECHNICAL FIRM NAME: SUMMIT GEOENGINEERING SERVICES
ADDRESS: 210 MAINE AVENUE, FARMINGDALE, MN

REPORT NUMBER:
REPORT DATE:
ALLOWABLE [NET] SOIL BEARING =

G5. SAFETY
SAFETY AND STRUCTURE STABILITY DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LIVE LOADS ONLY AS A COMPLETED STRUCTURE.

G6. OPENINGS
OPENINGS FOR PIPES, DUCTS, CONDUITS, ETC. ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE AND PROVIDE OPENINGS AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

G7. SPECIAL INSPECTIONS
SPECIAL INSPECTIONS ARE REQUIRED IN ACCORDANCE WITH CHAPTER 1 AND CHAPTER 17 OF THE IBC (CBC). PAYMENT FOR THESE INSPECTIONS IS NOT THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE FOR FULL ACCESS TO THE WORK BY THE SPECIAL INSPECTOR AND SHALL PROVIDE FOR THESE INSPECTIONS IN HIS CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE SPECIFICATIONS. A SPECIAL INSPECTION PLAN WILL BE SUBMITTED UNDER SEPARATE COVER WITH THE PERMIT APPLICATION.

G8. STANDARD DETAILS
THE STANDARD DETAILS DEPICT TYPICAL DETAILING TO BE USED ON THIS PROJECT. IF CONDITIONS ARE NOT EXPLICITLY SHOWN ON THE DRAWINGS THEY SHALL BE MADE SIMILAR TO THE STANDARD DETAILS. OBTAIN APPROVAL OF ENGINEER IN WRITING FOR SIMILAR CONDITIONS PRIOR TO CONSTRUCTION.

G9. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION AS REQUIRED TO COORDINATE NEW CONSTRUCTION. SUBMIT REQUIRED CHANGES FOR APPROVAL.

G10. CONTRACTOR TO SUBMIT FOR REVIEW ALL EQUIPMENT SIZES, OPERATING WEIGHTS, VIBRATION FORCES, SUPPORT LOCATIONS, ALONG WITH ANY FLOOR OPENINGS, NOTCHES, AND RECESSES REQUIRED BY SUCH EQUIPMENT. CONCRETE SUPPORT PADS AND/OR FRAMING REQUIRED TO SUPPORT SAID EQUIPMENT SHALL NOT BE FABRICATED AND PLACED UNTIL THE CONCRETE SUPPORT PADS AND/OR FRAMING IS APPROVED TO SUPPORT THE EQUIPMENT.

CONCRETE

C1. DESIGN STRENGTHS:
F'c = 4,500 PSI WATER-BEARING STRUCTURES
4,000 PSI ALL OTHER STRUCTURAL CONCRETE
Fy = 60,000 PSI

C2. CONCRETE COVER
UNLESS OTHERWISE NOTED, PROVIDE CONCRETE COVER FOR REINFORCING AS FOLLOWS:
CONCRETE DEPOSITED AGAINST EARTH: 3"
ALL OTHER: 2"
SEE DRAWINGS FOR EXCEPTIONS

C3. SEE SPECIFICATIONS FOR REINFORCING PLACEMENT REQUIREMENTS.

C4. REFER TO OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION FOR EMBEDDED ITEMS AND PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS, AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

C5. PROVIDE 3/4" CHAMFERS AT ALL EXPOSED EDGES (AND 1/2" CHAMFERS AT JOINTS AS SHOWN.) NOT ALL CHAMFERS MAY BE SHOWN ON DRAWINGS.

C6. FIELD ADJUST REINFORCING AT OPENINGS AND EMBEDDED ITEMS AS INDICATED.

C7. ANCHOR BOLTS NOT SPECIFIED BY ENGINEER SHALL BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE PROJECT AND CODE REQUIREMENTS. SUBMIT AS A SHOP DRAWING FOR REVIEW AND APPROVAL BY THE ENGINEER. COORDINATE LOCATION, SIZE AND EMBEDMENT PRIOR TO CASTING CONCRETE.

C8. CONTINUOUS WATERSTOP SHALL BE INSTALLED IN JOINTS SUBJECT TO STATIC WATER PRESSURE.

C9. ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED WITHOUT SPECIFIC APPROVAL FROM THE STRUCTURAL ENGINEER.

C10. CONTRACTOR SHALL SUBMIT A CONCRETE PLACEMENT PLAN (PER SPECIFICATION 03311) IDENTIFYING JOINT TYPES, JOINT LOCATIONS AND CONCRETE PLACEMENT SEQUENCE.

C11. ALL CAST IN PLACE AND POST-INSTALLED ANCHORS INDICATED IN THE STRUCTURAL DOCUMENTS SHALL COMPLY WITH APPENDIX D OF ACI 318 AND CHAPTER 19 OF THE IBC. ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

MASONRY

M1. DESIGN STRENGTHS:
F'm= 1900 PSI
Fy = 60,000 PSI

M2. GROUT FOR FILLING MASONRY CAVITIES TO BE COARSE GROUT UNO, MAXIMUM COARSE AGGREGATE SIZE IS 3/8 INCH.

M3. GROUT POURS SHALL NOT EXCEED 4 FEET IN HEIGHT UNLESS CLEANOUTS ARE PROVIDED IN THE BOTTOM COURSE OF THE CELL(S) TO BE GROUTED AND WRITTEN PERMISSION IS OBTAINED FOR HIGH LIFT GROUTING.

M4. RESTRICTED BAR ANCHORAGE:
IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS FAR AS REQUIRED, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN STANDARD HOOK. SHOW ON SHOP DRAWINGS AND HIGHLIGHT WITH A BOX TO BRING TO ENGINEER'S ATTENTION.

M5. ANCHOR BOLTS:
ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

M6. IF BOND BEAMS AT INTERSECTING WALLS ARE SHOWN ON THE DRAWINGS TO MEET AT DIFFERENT ELEVATIONS, EXTEND REINFORCING OF BOTH BOND BEAMS AROUND INTERSECTING CORNER NOT LESS THAN 4 FEET IN EACH DIRECTION.

M7. LINTEL BLOCKS SHALL NOT BE USED AS BOND BEAM BLOCKS EXCEPT AT OPENINGS WHERE BOND BEAMS AND LINTELS COINCIDE.

ALUMINUM

A1. STRUCTURAL ALUMINUM YIELD STRENGTHS
STRUCTURAL ALUMINUM: Fy=35 KSI
STRUCTURAL ALUMINUM IS ALLOY 6061-T6 UNO

A2. DIMENSIONS:
TO CENTERLINES OF COLUMNS AND BEAMS, TOP SURFACES OF BEAMS AND TUBES AND BACKS OF CHANNELS AND ANGLES UNO.

A3. ELEVATIONS:
TOP OF ALUMINUM REFERS TO TOP SURFACE OR FLANGE OF MEMBER UNO.

A4. WHEN FILLET WELD SIZE IS NOT INDICATED, PROVIDE MAXIMUM WELD SIZE FOR THE MATERIAL THICKNESS IN ACCORDANCE WITH THE LATEST EDITION OF THE "ALUMINUM DESIGN MANUAL" BY THE ALUMINUM ASSOCIATION.

A5. ALUMINUM IN CONTACT WITH DISSIMILAR MATERIALS OR CONCRETE:
CONTACT SURFACES SHALL BE PROVIDED WITH GALVANIC SEPARATION PER SPECIFICATIONS.

STAINLESS STEEL

SS1. DESIGN STRENGTHS:
STAINLESS BARS AND SHAPES - ASTM A484, FY = 30 KSI
STAINLESS STEEL PLATE AND STRIP - ASTM A666 TYPE 316, FY = 30 KSI

SS2. FASTENERS:
BOLTS - ASTM A193, TYPE 316
NUTS - ASTM A194, TYPE 316

SS3. WELDING MATERIALS AND PROCEDURES FOR WELDING STAINLESS STEEL SHALL BE IN ACCORDANCE WITH AWS D1.6.

STEEL

S1. DESIGN STRENGTHS:
WIDE FLANGE AND TEES: Fy=50 KSI
PIPES: Fy=35 KSI
STAINLESS STEEL Fy=33 KSI
HSS SECTIONS Fy=46 KSI
ALL OTHER PLATES AND SHAPES: Fy=36 KSI

S2. DIMENSIONS:
TO CENTERLINES OF COLUMNS AND BEAMS, TOP SURFACES OF BEAMS AND TUBES AND BACKS OF CHANNELS AND ANGLES UNO.

S3. ELEVATIONS:
TOP OF STEEL REFERS TO TOP SURFACE OF MEMBER OR FLANGE UNO.

S4. WHEN FILLET WELD SIZE IS NOT INDICATED, PROVIDE MAXIMUM WELD SIZE BASED ON MATERIAL THICKNESS IN ACCORDANCE WITH AISC SPECIFICATIONS.

S5. ALL BOLTED STRUCTURAL CONNECTIONS ARE BEARING TYPE CONNECTIONS UNLESS OTHERWISE SPECIFIED TO BE SLIP-CRITICAL. PROVIDE LOAD INDICATING WASHERS AT SLIP-CRITICAL CONNECTIONS.

S6. CONFORM TO AISC 360, STEEL CONSTRUCTION MANUAL AND AISC 341, SEISMIC DESIGN MANUAL.

S7. THE SEISMIC LOAD RESISTING SYSTEM (SLRS) IS DENOTED ON THE FRAMING PLANS AND FRAME ELEVATIONS. THE SLRS DESIGNATION INCLUDES THE MEMBER AND CONNECTIONS AT EACH END. FRAMES ARE DENOTED AS FOLLOWS:
A. MOMENT FRAME: (SLRS)
B. CONCENTRICALLY BRACED FRAME: (SLRS)

FOR SLRS SYSTEMS OR PARTS OF SYSTEMS THAT ARE NOT INCLUDED IN FRAMES, (SLRS) IS PLACED NEXT TO THE BEAM SIZE ON THE FRAMING PLAN (eg: ON A COLLECTOR ELEMENT (DRAG STRUT): MEMBER DESIGNATION (SLRS)

S8. ALL STEEL BEAMS SHALL RECEIVE STANDARD CAMBER PER THE SPECIFICATIONS UNLESS NOTED OTHERWISE ON THE PLANS. BEAMS REQUIRING SPECIAL CAMBER ARE DENOTED ON THE BEAMS SHOWN ON THE FRAMING PLANS. EXAMPLE: (+1/2") INDICATES 1/2".

POST-INSTALLED ANCHORS

PA1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONTRACT DRAWINGS. OBTAIN APPROVAL FROM THE ENGINEER–OF-RECORD (EOR) PRIOR TO INSTALLING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.

PA2. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

PA3. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED TO THE ENGINEER OF RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT DESIGN PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE. PRODUCT ICC-ES REPORTS SHALL BE INCLUDED WITH THE SUBMITTAL PACKAGE.

PA4. UNLESS NOTED OTHERWISE ON PLANS, ACCEPTANCE CONCRETE ANCHORS PRODUCTS SHALL BE:
1. MECHANICAL ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE ACCORDANCE WITH ACI355.2 AND ICC-ES AC 193. PRE-APPROVED MECHANICAL ANCHORS INCLUDES:
   A. KWIK BOLT 3 (ICC-ES ESR-2302) AND KWIK BOLT TZ (ICC-ES ESR-1917) BY HILTI, INC.
   B. TRUBOLT+ (ICC-ES ESR-2427) BY ITW RAMSET/REDHEAD.
   C. STRONG BOLT (ICC-ES ESR-1771) AND STRONG BOLT 2 (ICC-ES ESR-3037) BY SIMPSON STRONG TIE ANCHOR SYSTEMS.
2. ADHESIVE ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 308. ADHESIVE ANCHORS SHALL NOT BE USED IN OVERHEAD APPLICATIONS OR SUSTAINED TENSILE LOAD APPLICATIONS WHERE FAILURE WOULD RESULT IN RISK TO THE PUBLIC. PRE-APPROVED ADHESIVE ANCHORS INCLUDE:
   A. HIT-RE-5OO SD (ICC-ES ESR-2322) SYSTEM ADHESIVE ANCHORS BY HILTI, INC.
   B. EPCON G5 (ICC-ES ESR-1137) ADHESIVE ANCHORING SYSTEM BY ITW RAMSET/REDHEAD.
   C. SET-XP (ICC-ES ESR-2508) ADHESIVE ANCHORING SYSTEMS BY SIMPSON STRONG TIE ANCHOR SYSTEMS.

ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Bruce A. Bradley PE15026 · LICENSED PROFESSIONAL ENGINEER
Digitally signed by Bruce Bradley
Date: 2024.09.09 14:01:34-04'00'

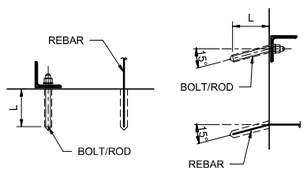
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GENERAL STRUCTURAL NOTES

0 1" 2"

FILENAME 103537686-00-G.rvt
SCALE

SHEET **00S-100**



VERTICAL

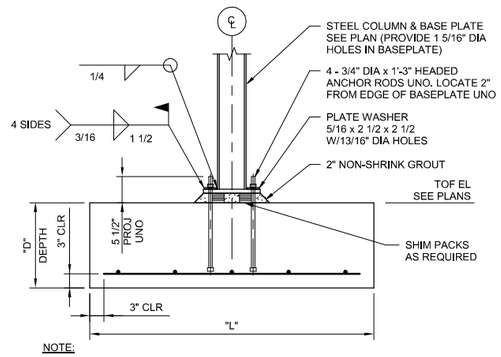
HORIZONTAL

REINFORCING BARS		ANCHOR BOLTS/RODS	
BAR SIZE	EMBED LENGTH (L)	DIA (IN)	EMBED LENGTH (L)
#3	4"	3/8"	5"
#4	5"	1/2"	6"
#5	6"	5/8"	7"
#6	7"	3/4"	8"
#7	8"	7/8"	9"
#8	9"	1"	10"
#9	10"		
#10	12"		

NOTES:

1. ADHESIVE TYPE IS SUBJECT TO APPROVAL OF THE ENGINEER OF RECORD.
2. EMBEDMENT LENGTHS SHOWN ARE MINIMUM UNLESS NOTED OTHERWISE ON DRAWINGS OR AS OTHERWISE REQUIRED BY SPECIFICATIONS.
3. FOR ADDITIONAL REQUIREMENTS, SEE SPECIFICATION SECTION 03 15 19.

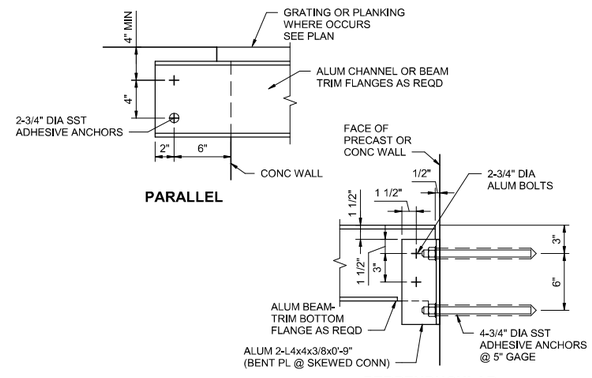
1 - ADHESIVE ANCHOR DETAIL AND SCHEDULE
NOT TO SCALE



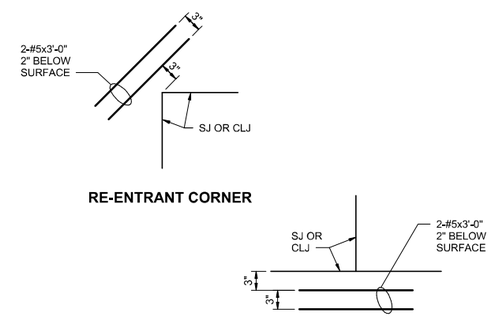
NOTE:

1. FOR FOOTING, SEE PLAN AND SCHEDULE FOR SIZE AND REINFORCING.

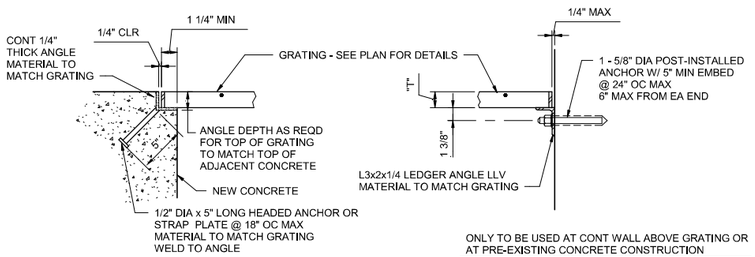
2 - SPREAD FOOTING
NOT TO SCALE



3 - ALUMINUM BEAM TO WALL CONNECTION
NOT TO SCALE



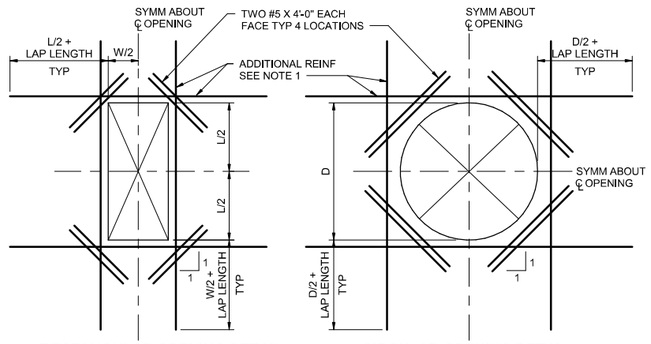
4 - ADDITIONAL SLAB REINFORCING
NOT TO SCALE



NOTES:

1. GRATING SIZE PER CONTRACT DOCUMENTS.
2. ALL ENDS AND OPENINGS SHALL BE BANDED, SEE SPECIFICATION.
3. ATTACH GRATING TO ALL SUPPORT ANGLES WITH BOLTED CLIPS, SPACED AT 2'-0" MAX CENTERS.
4. PROVIDE DISSIMILAR MATERIAL PROTECTION FOR ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATION.

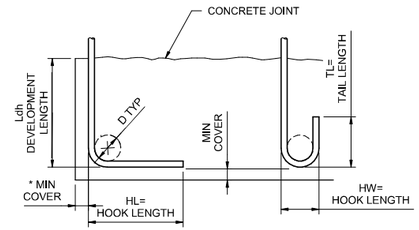
5 - GRATING AND SUPPORT
NOT TO SCALE

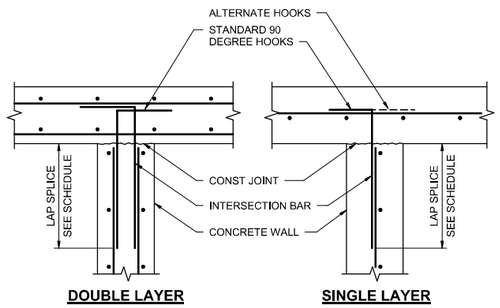


NOTES:

1. PROVIDE ADDITIONAL REINFORCING THE SAME SIZE AS DISCONTINUOUS REINFORCEMENT AT OPENING. QUANTITY OF REINFORCING IN EACH DIRECTION SHALL BE EQUAL TO OR ONE GREATER THAN THE NUMBER OF DISCONTINUOUS BARS. PLACE 1/2 OF ADDITIONAL REINFORCING BARS EACH SIDE OF OPENING, PLACE ADDITIONAL REINFORCEMENT AT 3" OC (TYPICAL BOTH DIRECTIONS AND ALL LAYERS OF REINFORCEMENT). START FIRST BAR 2" CLEAR TO OPENING.
2. EXTEND ADDITIONAL REINFORCING BEYOND EDGE OF OPENING AS SHOWN ABOVE. ADDITIONAL BARS MAY TERMINATE AT THE END OF THE WALL WITH A STANDARD HOOK WHERE THE LENGTH OF THE WALL WILL NOT PERMIT BARS TO EXTEND AS SHOWN ABOVE.
3. TYPICAL WALL OR SLAB REINFORCING NOT SHOWN FOR CLARITY. TERMINATE TYPICAL REINFORCING 2" CLEAR TO OPENING.
4. OPENINGS 12" OR LESS IN SLABS AND WALLS, NO EXTRA REBARS ARE REQUIRED UNLESS SHOWN OTHERWISE. TYPICAL REINFORCING SHALL BE RESPACED (NOT CUT) TO ALLOW FOR OPENINGS TO BE MADE.
5. UNLESS SHOWN OTHERWISE ON DRAWINGS, PROVIDE EXTRA REINFORCING AROUND OPENINGS AS SHOWN AND INDICATED ABOVE.
6. PROVIDE ADDITIONAL DOWELS PER NOTE 1 ABOVE FOR ALL OPENINGS NEAR THE FLOOR SLAB, BASE SLAB, OR CORNERS.

6 - EXTRA REINFORCING AROUND OPENINGS
NOT TO SCALE

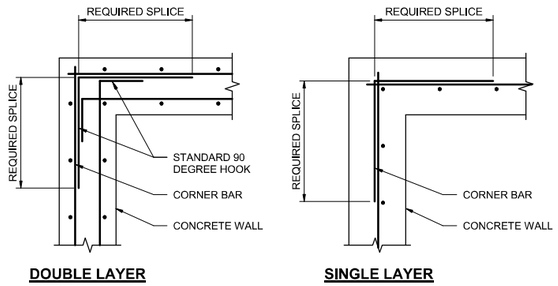




NOTE:

1. INTERSECTION BARS TO BE SAME SPACING AS HORIZONTAL BARS.

7 - WALL REINFORCING @ INTERSECTION
NOT TO SCALE



NOTE:

1. CORNER BARS TO BE SAME SIZE AND SPACING AS HORIZONTAL BARS.

8 - WALL REINFORCING @ CORNER
NOT TO SCALE

LAP SPLICE AND EMDEDMENT LENGTHS f'c =4.0 ksi fy = 60 ksi f'c =4.5 ksi		
BAR	BARS SPACED GREATER THAN 4"	BARS SPACED LESS THAN OR EQUAL TO 4"
#3	14"	20"
#4	19"	32"
#5	29"	46"
#6	39"	62"
#7	55"	87"
#8	69"	107"
#9	76"	116"
#10	97"	140"
#11	120"	146"

NOTES:

1. PROVIDE MINIMUM LAP SPLICE LENGTHS AND EMBEDMENTS PER TABLE UNLESS NOTED OTHERWISE. EMBEDMENT LENGTH EQUALS THE LAP SPLICE LENGTH UNLESS OTHERWISE NOTED.
2. BAR SPACING AT LAP SPLICE IS THE MINIMUM CLEAR DISTANCE BETWEEN LAPPED BARS PLUS ONE BAR DIAMETER.
3. ALL SPLICES TO BE CONTACT SPLICES AND WIRED TOGETHER UNLESS OTHERWISE APPROVED BY THE ENGINEER.

9 - CONCRETE REINFORCING LAP AND EMBEDMENT SCHEDULE
NOT TO SCALE

BAR SIZE GRADE 60	HL	HW	TL	D	f'c=4,0 OR 4,5 KSI
					Ldh *
#3	6"	3"	3"	2 1/4"	6"
#4	8"	4"	4 1/2"	3"	7"
#5	10"	5"	5"	3 3/4"	9"
#6	1'-0"	6"	6"	4 1/2"	10"
#7	1'-2"	7"	7"	5 1/4"	12"
#8	1'-4"	8"	8"	6"	14"
#9	1'-7"	11 3/4"	10 1/2"	9 1/2"	15"
#10	1'-10"	1'-1 1/4"	11 1/2"	10 3/4"	17"
#11	2'-0"	1'-2 3/4"	1'-1"	12"	19"

* COMPLYING WITH MINIMUM COVER REQUIREMENTS OF ACI 318, 12.5.3. OTHERWISE Ldh MUST BE RE-CALCULATED.

10 - REINFORCING HOOK SCHEDULE
NOT TO SCALE

HDR

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PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Bruce A. Bradley PE15026 LICENSED · PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:02:59-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GENERAL STRUCTURAL DETAILS 1

0 1" 2"

FILENAME	103537686-00-G.rvt
SCALE	As indicated
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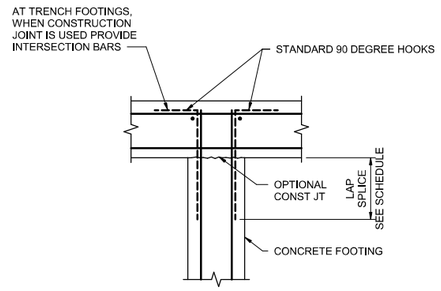
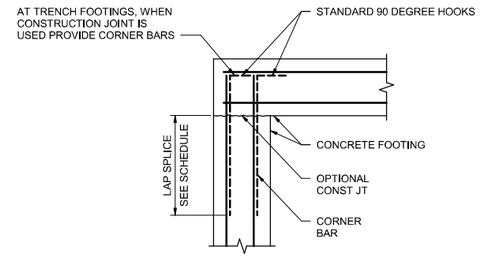


NOTE:

1. INTERSECTION BARS TO BE SAME SIZE AND SPACING AS FOOTING REINFORCING.

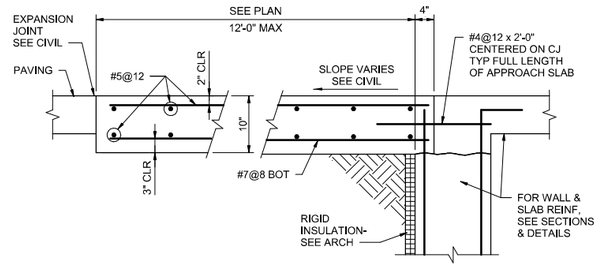
1 - TYPICAL FOOTING REINFORCING AT INTERSECTION
NOT TO SCALE



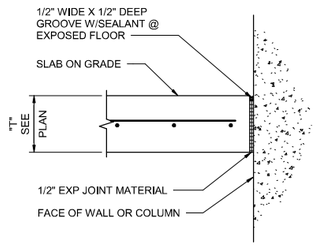
NOTE:

1. CORNER BARS TO BE SAME SIZE AND SPACING AT FOOTING REINFORCING.

2 - TYPICAL FOOTING REINFORCING AT CORNER
NOT TO SCALE



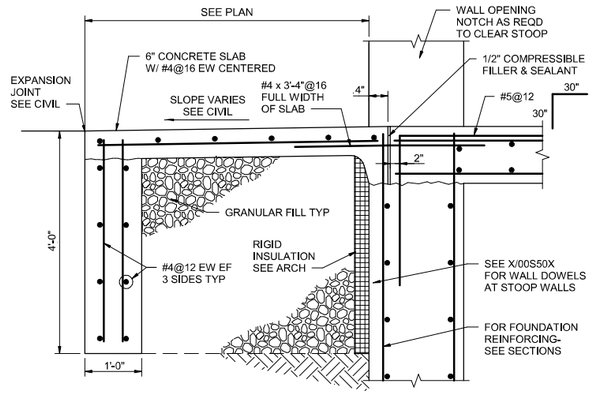
3 - APPROACH SLAB
NOT TO SCALE



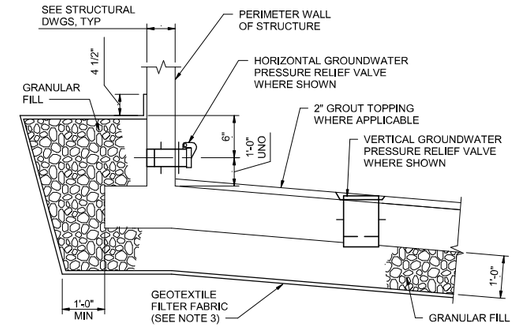
NOTES:

1. AT SLAB-ON-GRADE.

6 - TYPICAL ISOLATION JOINT (IJ)
NOT TO SCALE



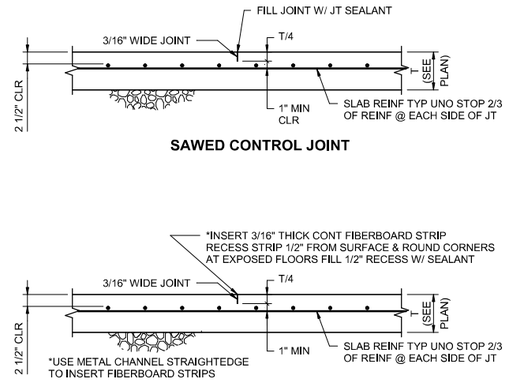
1561 - DOOR STOOP
NOT TO SCALE



NOTES:

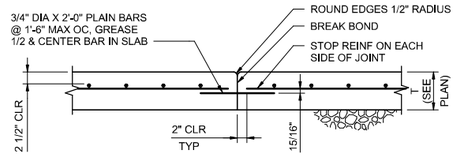
1. SEE PLANS FOR NUMBER AND LOCATION OF PRESSURE RELIEF VALVES.
2. PLACE GRANULAR FILL UNDER ENTIRE STRUCTURE BASE SLAB.
3. LAP FILTER FABRIC 12" AT SPLICES AND COVER PUNCTURES AND TEARS WITH AN ADDITIONAL LAYER OF FABRIC LAPPED 12" ALL AROUND.

5 - GROUNDWATER PRESSURE RELIEF VALVES
NOT TO SCALE



SAWED CONTROL JOINT

FORMED CONTROL JOINT



DOWELLED CONSTRUCTION JOINT (DSJ)

NOTE:

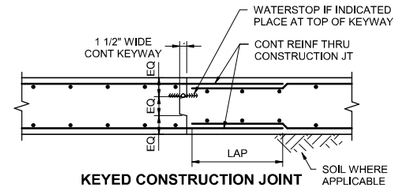
1. ANY ONE OF THE DETAILS ABOVE MAY BE USED AT LOCATIONS INDICATED ON DRAWINGS AS "SJ," AT CONTRACTOR'S OPTION.
2. WHERE "DSJ" IS INDICATED ON PLAN, THE "DSJ" SHALL BE USED.

159159 - SLAB-ON-GRADE JOINT
NOT TO SCALE

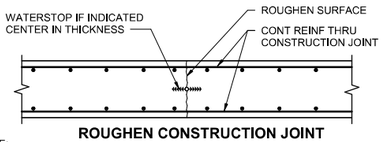
NOTES:.

1. "S" = BAR SPACING INDICATED ON THE DRAWINGS.
2. FOR HORIZONTAL REINF BAR LOCATION RELATIVE TO VERTICAL REINF BAR LOCATION (INSIDE OR OUTSIDE SEE DRAWING (INSIDE SHOWN).

4 - HORIZONTAL WALL JOINTS WITH WATERSTOPS
NOT TO SCALE



KEYED CONSTRUCTION JOINT

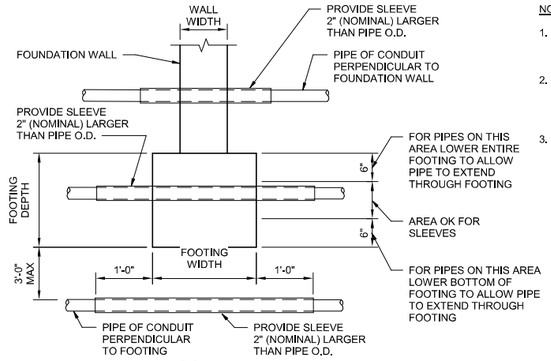


ROUGHEN CONSTRUCTION JOINT

NOTE:

1. SEE SPECIFICATION FOR REQUIREMENT TO TIE WATERSTOPS IN PLACE TO PREVENT MOVEMENT OR FOLDING OVER.

5856 - CONSTRUCTION JOINT (CJ)
NOT TO SCALE



NOTES:

1. FOR PIPES 3'-0" OR LESS BELOW FOOTING, PROVIDE SLEEVES AS SHOWN.
2. FOR PIPES AND CONDUITS MORE THAN 3'-0" BELOW FOOTING, PIPE SLEEVE MAY BE ELIMINATED.
3. COORDINATE WITH MECH, ELECT AND OTHER AFFECTED TRADES.

7 - INSTALLATION OF PIPES/CONDUITS
NOT TO SCALE

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ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Bruce A. Bradley PE15026 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:03:14-04'00'

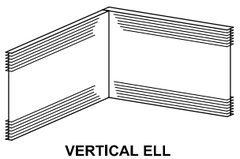
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GENERAL STRUCTURAL DETAILS 2

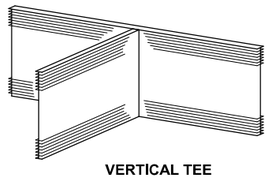
0 1" 2"

FILENAME 103537686-00-G.rvt
SCALE As indicated

SHEET **00S-102**



VERTICAL ELL



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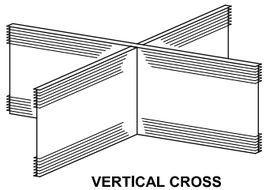
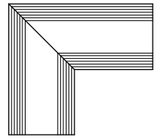
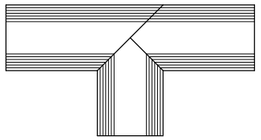


VERTICAL CROSS



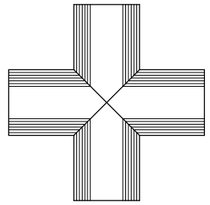
FLAT ELL



FLAT TEE

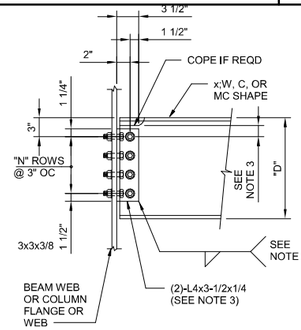
NOTES:

1. BULB TYPE WATERSTOPS SHALL BE HANDLED SIMILAR TO AS SHOWN WITH BULB JOINTS MITERED FOR FULL CONTINUITY OF HOLLOW BULB.
2. ONLY STRAIGHT BUTT JOINT WELDS ARE ALLOWED IN THE FIELD.



FLAT CROSS

1 - SHOP FABRICATED WATERSTOP
NOT TO SCALE

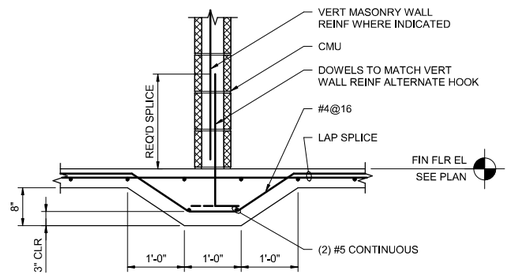


STANDARD BOLTED CONNECTION SCHEDULE		
NOMINAL BEAM SIZE "D"	NUMBER OF BOLT ROWS "N"	WELD SIZE
W8	2	3/16
W10	2	3/16
W12	3	3/16
W14	3	3/16
W16	3	1/4
W18	4	1/4
W21	4	1/4
W24	4	1/4
W27	5	1/4
W30	5	5/16
W33	6	5/16
W36	6	5/16

NOTES:

1. ALL BOLTS SHALL BE 3/4"Ø A325-N FOR STEEL CONSTRUCTION. ALL BOLTS SHALL BE 3/4"Ø SST FOR ALL OTHER CONSTRUCTION.
2. PROVIDE MINIMUM NUMBER OF BOLT ROWS "N" SHOWN AS THE TYPICAL CONN. INCREASE NUMBER OF ROWS AND / OR BOLT DIA. IF INDICATED ON PLANS.
3. MIN. DISTANCE FROM ℄ OF TOP BOLT TO A COPE SHALL BE 1-1/2". WHERE DEEP COPES ARE REQD., INCREASE DISTANCE FROM TOP OF BEAM TO ℄ OF TOP BOLT.
4. USE STANDARD OR SHORT HORIZONTAL SLOTTED HOLES AS REQUIRED.
5. WELD DOUBLE ANGLES TO BEAM WEB IN LIEU OF BOLTING AT CONTRACTORS OPTION.

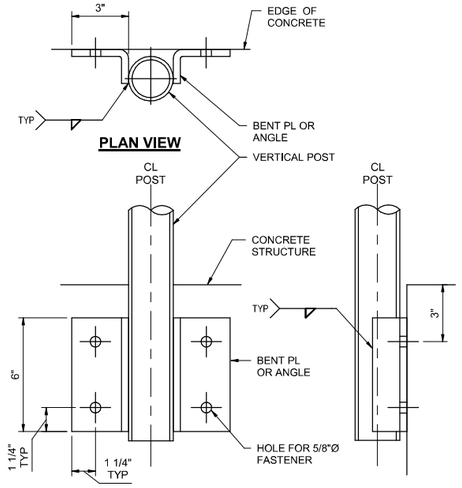
2 - TYPICAL BEAM CONNECTION
NOT TO SCALE



3 - THICKENED SLAB DETAIL
NOT TO SCALE

STOPLOG SCHEDULE							
TYPE	Length	Location	Height	Quantity	Spares	Total	Notes
ALUMINUM C-CHANNEL	3' - 11 1/2"	PRIORITIZATION WEIR STRUCTURE IN UPPER PAVILION	6"	12	3	15	
ALUMINUM C-CHANNEL	3' - 11 1/2"	PRIORITIZATION WEIR STRUCTURE IN UPPER PAVILION	4"	4	1	5	
ALUMINUM C-CHANNEL	3' - 11 1/2"	PRIORITIZATION WEIR STRUCTURE IN UPPER PAVILION	3"	3	1	4	

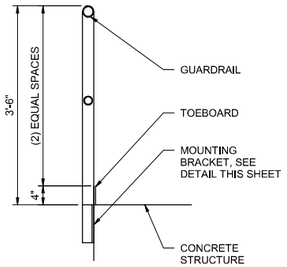
General Notes:
Contactor to Field Verify Lengths and Cut Boards as Needed for Proper Fitment
Contactor to field Verify Heights to order proper amount of boards



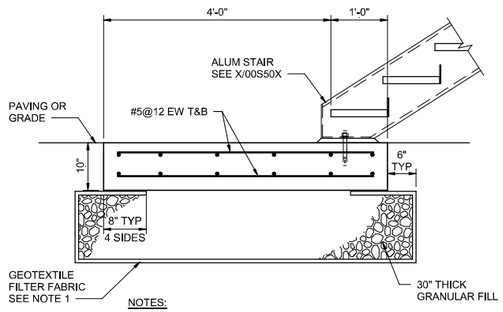
NOTES:

1. TOEBOARD NOT SHOWN.

4 - MTL-GUARDRAIL - SIDE MOUNTED BRACKET - CONC
NOT TO SCALE



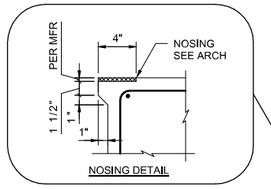
5 - MTL-GUARDRAIL - SIDE MOUNTED - CONC
12" = 1'-0"

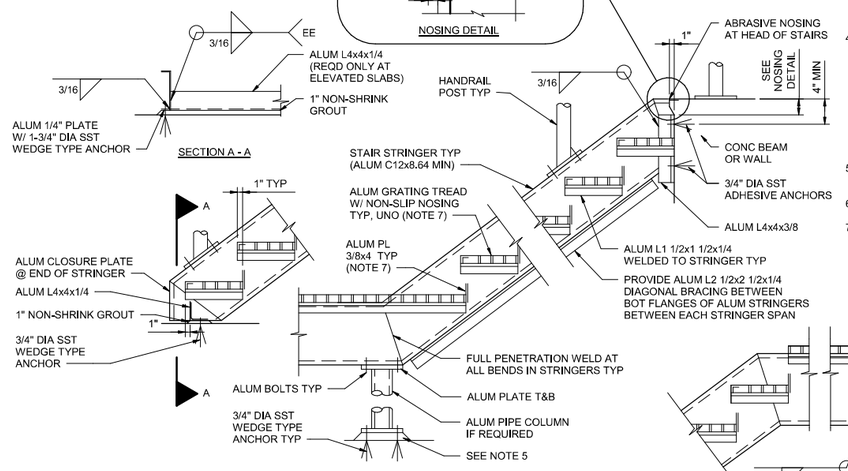


NOTES:

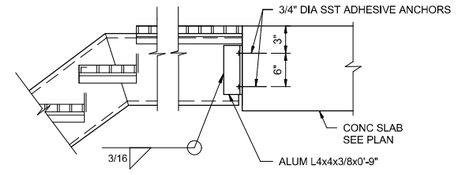
1. LAP FILTER FABRIC 12" AT SPLICES AND COVER PUNCTURES AND TEARS WITH AN ADDITIONAL LAYER OF FABRIC LAPPED 12" ALL AROUND.

6 - STAIR PAD
NOT TO SCALE





1A



1B

NOTE:

1. FOR ADDL INFORMATION, SEE 1A

7 - STAIR DETAIL
NOT TO SCALE

ALUMINUM STAIR NOTES:

1. DETAILS SHOWN FOR ALUMINUM GRATING TREADS. FRP CHECKERED PL AND ALUMINUM CHECKERED PL TREADS ARE SIMILAR. SEE ARCH STAIR SCHEDULE FOR TREAD MATERIALS.
2. STAIRS AND LANDINGS SHALL BE DESIGNED BY FABRICATOR SUBJECT TO APPROVAL OF ENGINEER. DESIGN LIVE LOAD SHALL BE AS STATED BELOW.
3. ANCHOR ALUMINUM TO CONCRETE WITH 3/4" DIA STAINLESS STEEL ANCHOR BOLTS, NUTS, AND WASHERS AS SHOWN IN DETAIL.
4. ALL STAIRS, LANDINGS, THEIR CONNECTIONS AND SUPPORTS SHALL BE DESIGNED FOR A LIVE LOAD OF 100 PSF UNIFORM LOAD OR A CONCENTRATED LIVE LOAD OF 1000 LB, WHICHEVER PRODUCES THE GREATER STRESSES AND REACTIONS. THE 1000 LB LOAD SHALL BE ABLE TO BE PLACED ANYWHERE ON THE STAIR SYSTEM. STAIR DEFLECTION DUE TO LIVE LOAD SHALL NOT EXCEED SPAN/480. SEE SPECIFICATION SECTION 05 50 00 FOR ADDITIONAL STAIR DESIGN REQUIREMENTS.
5. BASE PLATES FOR ALUMINUM COLUMNS SHALL REST ON 1" NON-SHRINK GROUT.
6. SEE ARCH DETAILS FOR STAIR DETAILS NOT SHOWN.
7. PROVIDE CHECKERED PLATE TREAD CLOSED RISERS WHERE INDICATED ON ARCH DRAWINGS.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
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STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Bruce A. Bradley PE15026 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:03:30-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GENERAL STRUCTURAL DETAILS 3

0 1" 2"

FILENAME 103537686-00-G.rvt
SCALE As indicated

SHEET 00S-103

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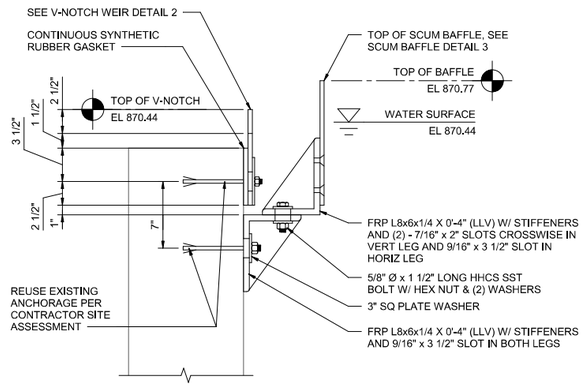
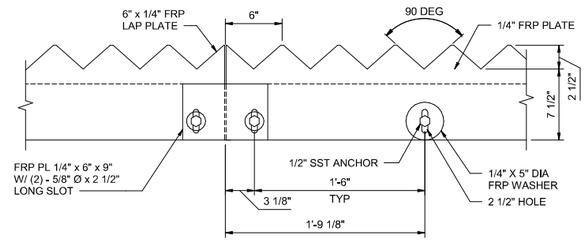
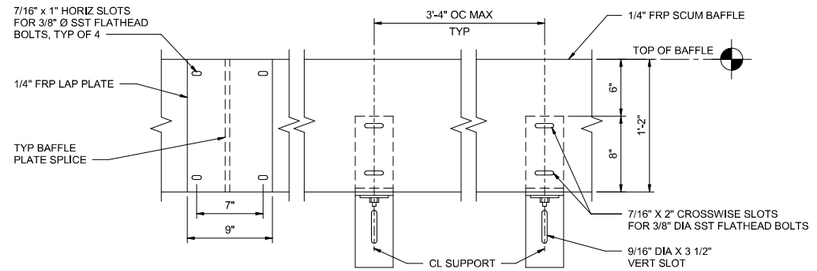


1 00D-501 FRP SCUM BAFFLE & WEIR PLATE DETAIL
NOT TO SCALE



2 00D-501 FRP V-NOTCH WEIR PLATE DETAIL
NOT TO SCALE



3 00D-501 FRP SCUM BAFFLE DETAIL
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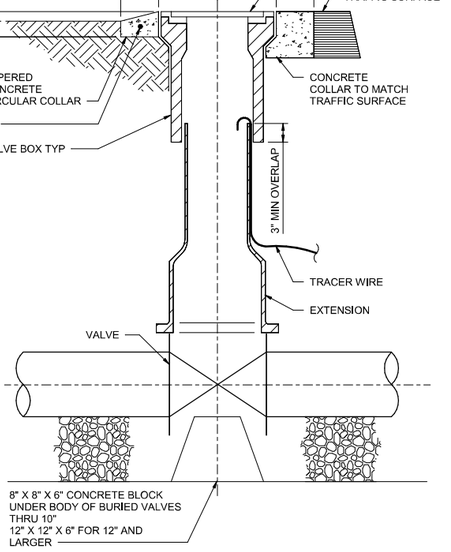
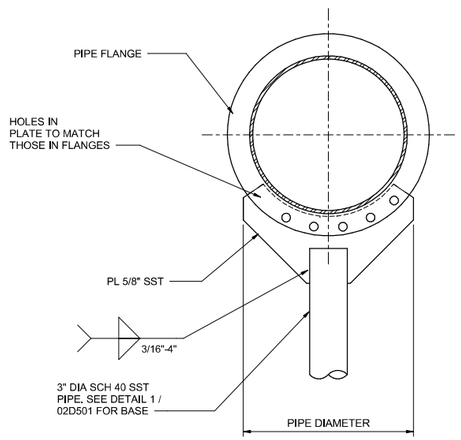


4 00D-501 BURIED VALVE BOX W/ TRACER WIRE DETAIL
NOT TO SCALE



5 00D-501 FLANGED PIPE SUPPORT
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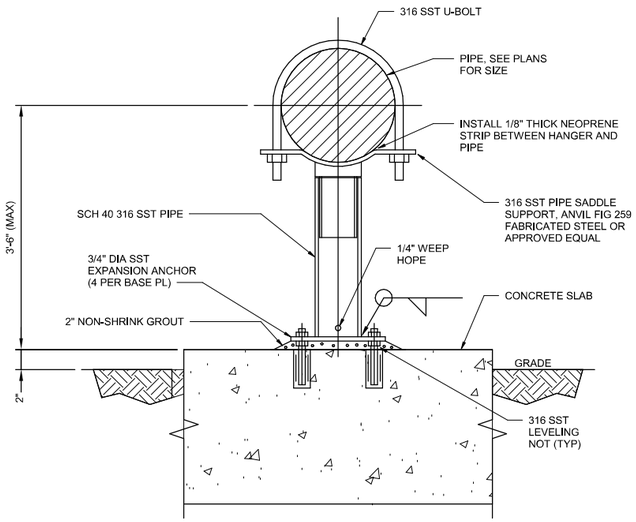
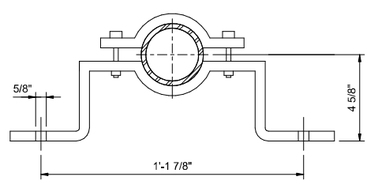


6 00D-501 PIPE SUPPORT
NOT TO SCALE



7 00D-501 OFFSET PIPE CLAMP
NOT TO SCALE

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	09/11/2024	ISSUED FOR BID

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CIVIL	J. GAGNON
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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Jeffrey K. Chandler PE17167 — LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:00:43-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GENERAL PROCESS DETAILS

0 1" 2"

FILENAME 103537686-00-G.rvt
SCALE As indicated

SHEET 00D-501

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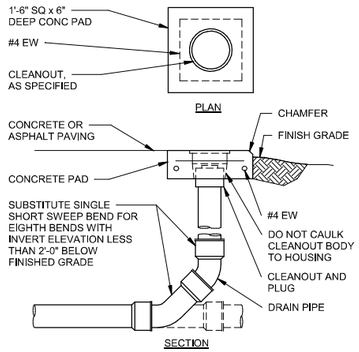
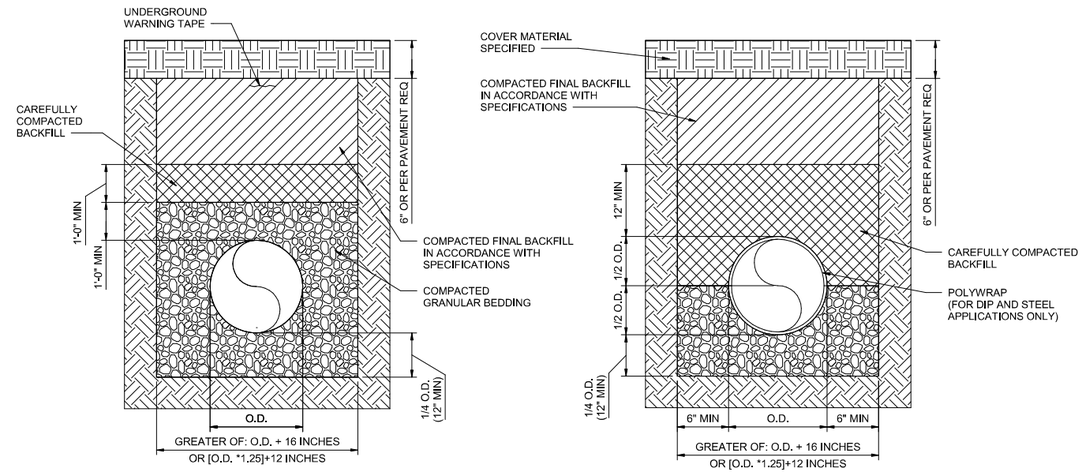


1 00D-502 GRADE CLEANOUT
NOT TO SCALE

NOTE:
THE BEDDING UP TO THE SPRING-LINE OF TYPE B PIPE SHALL BE COMPACTED GRANULAR BEDDING. UNDER STRUCTURES ALL FILL ABOVE THE COMPACTED GRANULAR BEDDING SHALL BE STRUCTURAL FILL



2 00D-502 PIPE INSTALLATION DETAILS
NOT TO SCALE

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
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MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:00:27-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GENERAL PROCESS DETAILS

0 1" 2"

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SCALE As indicated

SHEET 00D-502

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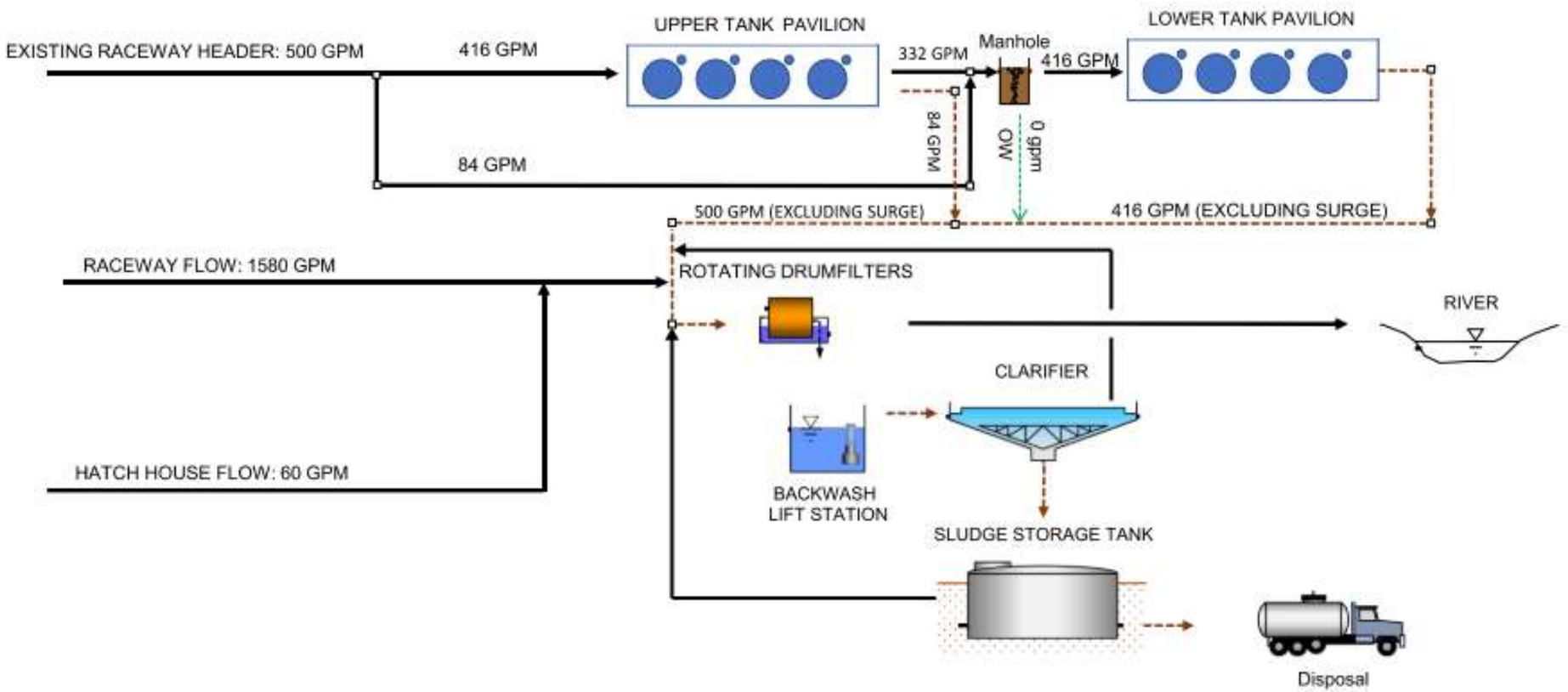
FLOW SCHEMATIC



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STATE OF MAINE
Jeffrey K. Chandler PE17167
LICENSED
PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:00:00-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

PROCESS WATER FLOW SCHEMATIC

0 1" 2"

FILENAME 103537686-00-G.rvt

SCALE 12" = 1'-0"

SHEET **00D-601**

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DRUMFILTER SCHEDULE	
TAG	DF1 & DF2
CAPACITY	1926 GPM
INFLUENT WATER QUALITY	100 mg/L TSS
SIZE OF MEDIA OPENINGS ON DRUMS	40 MICRON*
HEADLOSS AT RINSE INITIATION	250 MM
SCREEN SURFACE AREA	22.5 m^2
WATER TEMP	68° F
DRUM SUBMERGENCE	65% MIN
OPEN AREA OF SCREEN	21% MIN
RINSE PUMP FLOW	34 GPM
RINSE PUMP TDH	116 PSI
RINSE PUMP HP	5 MAX
RINSE PUMP CONNECTION	1.25" DIA MIN
RINSE SUPPLY PRESSURE AT SPRAY	116 PSI
RINSE SUPPLY CONNECTION SIZE	1.25" DIA MIN
DRUM DRIVE MOTOR	2 HP MAX
DRUM DRIVE SPEED	3 RPM & VARIABLE
BACKWASH OUTLET	4" DIA
SERVICE VOLTAGE	208/3
LEVEL AT WHICH INFLUENT BEGINS TO OVERFLOW TO BYPASS	61"
SPRAY STRAINER CONNECTION	1.5" DIA
SPRAY STRAINER OPENINGS	130 MICRON
SPRAY STRAINER MINIMUM AREA	52 IN^2
MAKER & MODEL DRAWN	NP INNOVATIONS F2050-L
FRAME OVERALL LENGTH W/O BYPASS	132" MAX 16FT
MAX OVERALL WIDTH AT SERVICE DECK	91"
INTEGRAL BYPASS WEIR LENGTH PER SIDE	4'-6"

*40 MICRON IS A FUTURE MICRON SIZE, FOR THIS CONTRACT PROVIDE 50 OR 60 MICRON MEDIA

Tag No	Location	Function	Opening width (in)	Opening or Gate Height (in)	Type of Opening	Pipe Penetration Type	Pipe Penetration Invert Elevation (feet) (Note 9)	Gate Invert Elevation (ft)	Top of Wall Elevation (ft)	Top of Frame Elevation (ft)	Sump Bottom Elevation (ft)	Material	Configuration	Power	Actuator Control	Seating Head (ft)	Unseating Head (ft)
PIG-0101	Raceway Header	Pavilion Intake Gate	21	21	14" Pipe	Boot Seal	288.42	288.52	291.25	294.25	287.75	Aluminum	FB, SC, RS, RHC, BS, SMBS, Note 10	NA	NA	3.5	NA
DIG-0101	Filter Building	Drumfilter Isolation Gate	24	24	Rectangluar	NA	NA	278.58	283.5	287	278	Aluminum	FB, SC, RS, HW, SMBS	NA	NA	NA	5
DIG-0102	Filter Building	Drumfilter Isolation Gate	24	24	Rectangular	NA	NA	278.58	283.5	287	278	Aluminum	FB, SC, RS, HW, SMBS	NA	NA	NA	5
SPG-0101	Show Pool	Show Pool Gate	21	21	15" Pipe	Boot Seal	280.89	280.77	286.02	288.5	280.19	Aluminum	FB, SC, NRS, RHC, BS, SMBS	NA	NA	5	NA

General Notes:

1. The height noted for gates with Slab Mounted Bottom Seals (SMBS) refers to the overall opening or gate leaf height as measured from the top of slab. The actual gate opening or leaf height will be reduced by the height of the bottom seal.
2. Dimension refers to gate leaf height. The opening behind these gates is full height.
3. Contractor shall field verify width of existing opening
4. Provide gate with the minimum allowable frame height if the minimum allowable frame height places the top of frame above the elevation called out.
5. Frame height to be minimum required to lift leaf above opening.
6. Frame height to be the minimum required.
7. Gates that are used where pipes penetrate with boot seals (BS) are larger than the pipe diameter stated to account for the outside diameter of the seal.
8. Gates that are used where pipes penetrate with boot seals (BS) have lower installation inverts than the penetrating pipe to account for the outside diameter of the seal.
9. Pipe invert elevation refers to the elevation of the inside invert of the pipe.
10. Top of gate shall be 2' above grade.

Abbreviations:

FB	Flat Back/Surface Mounting
HW	Hand Wheel Operator
RHC	Right Angle Hand Crank Operator
NRS	Non Rising Stem
RS	Rising Stem
SC	Self Contained
BS	Boot Seal
SMBS	Slab Mounted Bottom Seal

NON-CLOG PUMP SCHEDULE											
DESIGNATION	SERVICE	TYPE	NORMAL OPERATING POINT	MOTOR HORSEPOWER	VOLTAGE	FULL SPEED	DISCHARGE SIZE	AVAILABLE SUBMERGENCE	CONTROLS	SOLIDS	BASIS OF DESIGN
SMP0401	FILTER BUILDING	NON-CLOG SCREW PUMP	800 GPM @ 28' TDH	10	208/3	1800 RPM MAX	6"	NA	VFD	3"	VAUGHAN HSC6EMS
CP0401	FILTER BUILDING	NON-CLOG SUBMERSIBLE	160 GPM @ 24' TDH	2.4 HP	208/3	1800 RPM MAX	3"	24"	PACKAGE	3"	GORMAN-RUPP SFDVA
CP0402	FILTER BUILDING	NON-CLOG SUBMERSIBLE	160 GPM @ 24' TDH	2.4 HP	208/3	1800 RPM MAX	3"	24"	PACKAGE	3"	GORMAN-RUPP SFDVA

SELF-PRIMING PUMP SCHEDULE								
DESIGNATION	DESCRIPTION	NORMAL OPERATING POINT	MOTOR HORSEPOWER	VOLTAGE	SOLIDS	DRY REPRIME SUCTION LIFT	MAKE, MODEL, & SPEED DRAWN	MOTOR RPM
CVP0401	CLARIFIER VACUUM PUMP 3" CONNECTION	50 GPM @ 10.5' TDH	2	208/3	2.5"	2.5'	GORMAN-RUPP T3A-B-4	1800
CHP0401	CLARIFIER HOPPER PUMP 3" CONNECTIONS	75 GPM @ 14.5' TDH	2	208/3	2.5"	3.5'	GORMAN-RUPP T3A-B-4	1800

FLOW METER SCHEDULE				
TAG NUMBER	SERVICE	FLOW RANGE (GPM)	METER SIZE (IN)	NEMA (IP) RATING
FM-1	FSW	0-500	14	6P (68)
FM-2	RSW	0-500	12	6P (68)

PIPE LEGEND							
PIPE TAG	FUNCTION	PIPE MATERIALS			FIELD TEST REQUIRMENTS		
		EXPOSED PIPE	BURIED PIPE	UNDERSLAB PIPE	TEST PRESSURE (psi)	TEST MEDIUM	ALLOWABLE LEAKAGE
FSW	Fresh Supply Water	2	1	2	NOTE 4	WATER	(B)
RSW	REUSE SUPPLY WATER	2	1	2	NOTE 4	WATER	(B)
WDW	WASTE DRAIN WATER	3	4	3	NOTE 4	WATER	(B)
PWW	PUMPED WASTE WATER	6 OR 7	6 OR 7	6 OR 7	75	WATER	(A)
SLU	SLUDGE 3" AND SMALLER	7	7	7	75	WATER	(A)
SLU	SLUDGE 4" AND LARGER	6	6	6	75	WATER	(A)
OXY	OXYGEN LINE	5	5	5	100	ARGON	None
DRN	DRAIN	2	2	2	NOTE 3	WATER	(B)

PIPING MATERIAL SCHEDULE		
GROUP NO.	PIPE	JOINTS, FITTINGS, COATINGS AND LININGS
1	AWWA C905 PVC PIPE DIP SCHEDULE DR 25	DIP FITTINGS, RESTRAINED JOINTS
2	PVC, SHEDULE 40, ASTM D1785	POLYVINYL CHLORIDE SCHEDULE 40. NORMAL IMPACT, SOCKET SOLVENT WELDED JOINTS
3	PVC SEWER PIPE, ASTM D3034 AND ASTM F679, SDR26	BELL & SPIGOT FITTINGS W/ RESTRAINING JOINTS WITHIN 30' OF FITTINGS
4	PVC SEWER PIPE, ASTM D3034 AND ASTM F679, SDR35	BELL & SPIGOT FITTINGS W/ RESTRAINING JOINTS WITHIN 30' OF FITTINGS
5	COPPER, ASTM B88, TYPE L, HARD TEMPERED	WROUGHT COPPER OR CAST BRONZE FITTINGS CLEANED FOR OXYGEN SERVICE SEE SPECIFICATIONS
6	DUCTILE IRON, CLASS 150	CEMENT MORTAR LINED, FLANGED OR RESTRAINED MECHANICAL JOINTS
7	PVC, SCHEDULE 80, ASTM D1785	POLYVINYL CHLORIDE SCHEDULE 40. NORMAL IMPACT, SOCKET SOLVENT WELDED JOINTS

NOTES

NOTE 1
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 GALLONS PER INCH OF DIAMTER PER 100 FEET OF BURIED PIPE
(C) PIPES SO DESIGNATED SHALL NOT SHOW LEAKAGE OF MORE THAN 0.15 GALLON PER HOUR PER INCH OF DIAMETER PER 100 FEET OF PIPE

NOTE 2
FOR FIELD TEST PROCEDURES AND ADDITIONAL TEST REQUIREMENTS, SEE SPECIFICATIONS

NOTE 3
STATIC WATER TEST WITH SURFACE 5-FEET ABOVE HIGH POINT OF PIPE

NOTES 4
FOR PIPE LINING AND COATING SEE SPECIFICATIONS

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Jeffrey K. Chandler PE17167
LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 11:58:57-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

PROCESS SCHEDULES 1

0 1" 2"

FILENAME 103537686-00-G.rvt

SCALE

SHEET 00D-602

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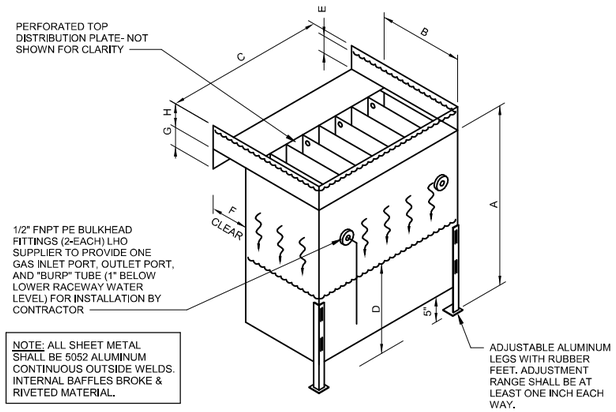
LHO AND DIFFUSER SCHEDULE																		
WATER SUPPLY	DEVICE	LOCATION	TAG	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION D	DIMENSION E	DIMENSION F	DIMENSION G	DIMENSION H	APPROX FLOOR ELEVATIONS	PLATE AREA	O2 FLOW RATE	FLOW METER RANGE	WATER FLOW RATE	UPSTREAM WS	DOWNSTREAM WS
				(FEET)	(FEET)	(FEET)	(FEET)	(INCHES)	(INCHES)	(INCHES)	(INCHES)	(FEET)	(SQFT)	(LPM)	(LPM)	(GPM)	(FEET)	(FEET)
REUSE	LHO	RACEWAY BUILDING	LHO0201	2.92	1.52	4.92	2.48	4	18.75	1	6	287.08	7.50	9.37	0-15	750	290.33	289.56
REUSE	LHO	RACEWAY BUILDING	LHO0202	2.92	1.52	4.92	2.48	4	18.75	1	6	287.08	7.50	9.37	0-15	750	290.33	289.56
REUSE	LHO	RACEWAY BUILDING	LHO0401	2.76	1.52	4.92	2.33	4	18.75	1	6	285.87	7.50	8.57	0-15	750	288.96	288.2
REUSE	LHO	RACEWAY BUILDING	LHO0402	2.76	1.52	4.92	2.33	4	18.75	1	6	285.87	7.50	8.57	0-15	750	288.96	288.2
REUSE	LHO	RACEWAY BUILDING	LHO0601	4.76	1.52	4.92	2.32	4	18.75	1	6	283.87	7.50	6.67	0-15	750	288.96	286.19
REUSE	LHO	RACEWAY BUILDING	LHO0602	4.76	1.52	4.92	2.32	4	18.75	1	6	283.87	7.50	6.67	0-15	750	288.96	286.19
FRESH	CERAMIC DIFFUSER (POINT FOUR MODEL:1DMBDC100)	UPPER PAVILION	CD0201	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.00	0-7	125	NA	NA
FRESH	CERAMIC DIFFUSER (POINT FOUR MODEL:1DMBDC100)	UPPER PAVILION	CD0202	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.00	0-7	125	NA	NA
FRESH	CERAMIC DIFFUSER (POINT FOUR MODEL:1DMBDC100)	UPPER PAVILION	CD0203	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.00	0-7	125	NA	NA
FRESH	CERAMIC DIFFUSER (POINT FOUR MODEL:1DMBDC100)	UPPER PAVILION	CD0204	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.00	0-7	125	NA	NA
FRESH	CERAMIC DIFFUSER (POINT FOUR MODEL:1DMBDC600)	RACEWAY BUILDING	CD0501	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18.00	2-26	2000	NA	NA
FRESH	CERAMIC DIFFUSER (POINT FOUR MODEL:1DMBDC600)	RACEWAY BUILDING	CD0502	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	18.00	2-26	2000	NA	NA
FRESH	NA	HATCHERY BUILDING	CD0503	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.00	0-15	NA	NA	NA
FRESH	NA	HATCHERY BUILDING	CD0504	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.00	0-15	NA	NA	NA
REUSE	CERAMIC DIFFUSER (POINT FOUR MODEL:1DMBDC100)	LOWER PAVILION	CD0301	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.00	0-7	125	NA	NA
REUSE	CERAMIC DIFFUSER (POINT FOUR MODEL:1DMBDC100)	LOWER PAVILION	CD0302	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.00	0-7	125	NA	NA
REUSE	CERAMIC DIFFUSER (POINT FOUR MODEL:1DMBDC100)	LOWER PAVILION	CD0303	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.00	0-7	125	NA	NA
REUSE	CERAMIC DIFFUSER (POINT FOUR MODEL:1DMBDC100)	LOWER PAVILION	CD0304	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.00	0-7	125	NA	NA

General Notes:
1. CONTRACTOR TO FIELD VERIFY DIMENSIONS AND ELEVATIONS BEFORE PROVIDING LHO'S.
2. BASIS OF DESIGN IS POINT FOUR FOR DIFFUSERS AND NP INNOVATIONS FOR LHO'S
3. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS NECESSARY TO CONFIRM PROPER SIZING OF LHO'S.

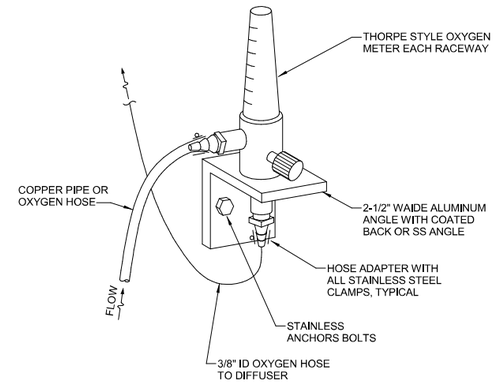
PROCESS MANHOLE SCHEDULE

MANHOLE TAG	INSIDE DIMENSION (FT)	CENTERLINE ELEVATION (FT)	PIPE	IN OR OUT	DIRECTION	ORIGIN OR DESTINATION	LID TYPE	RIM ELEVATION	STEPS AND LID
MH7	4	280.94	18" SDR35	IN	W	Filter Building	24" ID CAST IRON VENTED FRAME AND LID	285.35	NE
		280.93	18" SDR35	OUT	S	MH6 (E)			
MH8	4	279.03	15" SDR35	IN	S	Manhole 9	24" ID CAST IRON VENTED FRAME AND LID	285	WSW
		279.02	12" SDR35	OUT	NW	Filter Building			
		279.02	12" SDR35	OUT	NE	Filter Building			
MH9	4	279.07	12" SDR35	IN	W	Upper and Lower Pavilions	24" ID CAST IRON VENTED FRAME AND LID	285	E
		279.05	12" SDR35	IN	S 30 Deg W	Raceway Drainage			
		279.05	15" SDR35	IN	SE	Raceway Show Pool			
		279.04	15" SDR35	OUT	N	Manhole 8			
MH10	4	280.98	12" C905	IN	SW	Upper Pavilion	24" ID CAST IRON VENTED FRAME AND LID	287.39	SE
		280.78	12" C905	OUT	NE	Lower Pavilion			
MH11	4	282.17	12" C905	IN	NW	Upper Pavilion	24" ID CAST IRON VENTED FRAME AND LID	287.39	NE
		280.06	6" SDR35	IN	W	Upper Pavilion			
		279.99	12" SDR35	OUT	S	MH9			
MH12	4	280.22	6" (WDW)	IN	N	Upper Pavilion	24" ID CAST IRON VENTED FRAME AND LID	287.9	S
		280.22	12" (WDW)	OUT	E	MH9			
MH13	4	290.00	14" C905	IN	S	Raceway Header	24" ID CAST IRON VENTED FRAME AND LID	290.98	S
		290.00	14" C905	OUT	E	Upper Pavilion			

General Notes:
1. Any pump stations, pump station valve vaults, valve basins and air release valve vaults are not included in this manhole schedule. See individual drawings.
2. All Manholes on this schedule will be precast.
3. Manholes are numbered 7-10 to exclude existing manholes that may be referenced from earlier site improvement projects (Manhole 6 for example)



1 / 00D-603 LHO DETAIL
NOT TO SCALE



2 / 00D-603 OXY METER DETAIL
NOT TO SCALE

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER
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IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

PROCESS SCHEDULES 2

0 1" 2"

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SHEET **00D-603**

Mechanical Louver Schedule														
Tag	Building	Associated Systems	Airflow (CFM)	Damper Tag	Width (IN)	Height (IN)	Depth (IN)	Free Area (IN)	Free Area Velocity (FPM)	Pressure Drop (inches of H2O)	Frame Thickness (IN)	Blade Thickness (IN)	Top of Louver Elevation	Accessories	Make & Model
L-1	Effluent Treatment Building	WEF-1	2,000	DP-1	24	24	6	288	1000	0.375	6	6	287.5	1,2	Greenheck-ESD-603

Accessories:
1. Internally mounted aluminum bird screen
2. Kynar/Hylar premium paint finish, owner will select from manufacturer's standard colors. Submit color chart

Notes:
A. Louvers shall be selected at free area velocities no greater than those shown, and in no case, freater than th ebeginning point of water penetration as determined by the AMCA water penetration test.

Exhaust Fan Schedule																
Tag	Building	Fan Type	Drive Type	Airflow (CFM)	NOISE LEVEL (SONES)	Static Pressure (inches of H2O)	Motor					Minimum Damper Dimensions (IN)	Tags		Weight (lb)	Accessories	Make & Model
							HP	RPM	Volts	PH	ENCL		Damper	Curb			
WEF-1	Effluent Treatment Building	Wall	Direct	2000		0.375	1/2	1140	120	1	ODP	15 X 15	DP-1	NA	90	1,2,3	Greenheck USGF-161-B-CW
WEF-2	UPPER PAVILION	WALL	DIRECT	50 (MIN)	10	0.375	NA	3100	120	1	ODP	4" DIA	DP-3	NA	7.4	2,3	FANTECH RVF 4
WEF-3	LOWER PAVILION	WALL	DIRECT	50 (MIN)	10	0.375	NA	3100	120	1	ODP	4" DIA	DP-4	NA	7.4	2,3	FANTECH RVF 4

Accessories:
1. Aluminum bird screen
2. NEMA-1 disconnect mounted and wired

Damper Schedule											
Tag	Building	Associated Equipment	Airflow (CFM)	Width (IN)	Height (IN)	Leakage (CFM/SF@ 1" H2O)	Actuator		Materials	Accessories	Make & Model
							Max Operation Time (sec)	Fail Posiiton	Damper Material		
DP-1	Effluent Treatment Building	L-1	2000	24	24	3	60	Closed	ALUM.	1, 2, 3, 4	Tamco 9000-BF
DP-2	Effluent Treatment Building	WEF-1	2000	15	15	3	60	Closed	ALUM.	1,2,3,4	Ventex 1900 Series
DP-3	UPPER PAVILION	WEF-2	50 (MIN)	4" DIA	4" DIA	3	60	CLOSED	ALUM.	NA	FANTECH RSK 4
DP-4	LOWER PAVILION	WEF-3	50 (MIN)	4' DIA	4' DIA	3	60	CLOSED	ALUM.	NA	FANTECH RSK 4

Accessories:
1. Thermally broken frame and blades
2. Actuator operating and/or holding power requirements shal not exceed 25 watts per acuator
3. Insulated & broken airfoil blades, 304 SS axle and linkage, synthetic axle bearings, silicone blade and jamb seals
4. Removable framed aluminum or SS insect screen

HEAT RECOVERY VENTILATOR SCHEDULE									
TAG	MINIMUM SENSIBLE EFFICIENCY AT 32 F OUTSIDE AIR	ROOM OR SPACE SERVED	FAN DATA		MOTOR DATA		CONTROL	WEIGHT (LB)	MAKE & MODEL	NOTES
			FLOW (CFM)	SP (IN OF H2O)	MAX POWER (WATT)	V/PH				
HRV-1	75% AT 64 CFM	EFFLUENT TREATMENT BUILDING	132	0.4	163	120/1	REMOTE WALL	44	FANTECH VHR 150R ES	1

NOTES:
1. AIR CONNECTIONS 4" ROUND OR 5" OVAL WITH PLASTIC ALUMINUM OR STAINLESS TRANSITIONS TO 4" ROUND PVC DUCT

PROPANE UNIT HEATER SCHEDULE	
TAG	UH-1
BTUH INPUT MINIMUM	30,000
AFUE	82
VOLTS	120
PHASE	1
FULL LOAD AMPS	3.7
MOCP (AMPS)	15
TEMPERATURE RISE (F)	45
BLOWER HP	1/6
MOUNTING HEIGHT (FT)	9
THROW 50 FPM DISTANCE	32
WEIGHT	300 LB
ACCESSORIES	1, 2, and 3
MAKE & MODEL	REZNOR UBX-30

ACCESSORIES
1. BUILT-IN DISCONNECT
2. 24 VOLT TRANSFORMER
3. HORIZ. AIR/VENT KIT, INCL. CONCENTRIC ADAPTER

ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Jeffrey K. Chandler PE17167
LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:02:47-05'00'

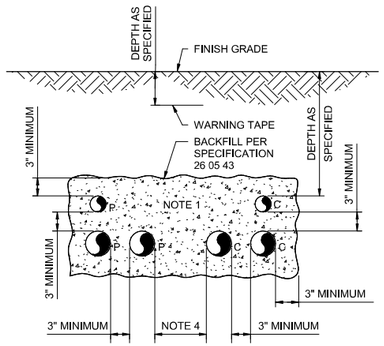
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

MECHANICAL SCHEDULES

0 1" 2"

FILENAME 103537686-00-G.rvt
SCALE

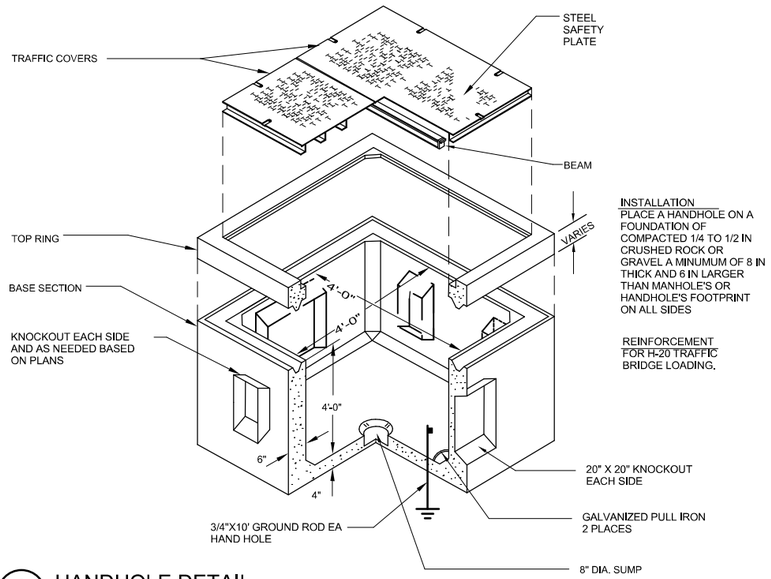
SHEET 00M-601



NOTES:

1. NUMBER OF CONDUITS AS REQUIRED FOR THE APPLICATION.
2. P SUBSCRIPT ELECTRICAL POWER OR CONTROL CONDUIT.
3. C SUBSCRIPT COMMUNICATION (TELEPHONE, DATA, INSTRUMENTATION) CONDUIT.
4. 6" MINIMUM WHEN POWER CONDUIT CONTAINS LESS THAN 1000V. 12" MINIMUM WHEN POWER CONDUIT CONTAINS MORE THAN 1000V.
5. UTILITY PRIMARY CONDUITS SHALL BE BURIED 48" MINIMUM

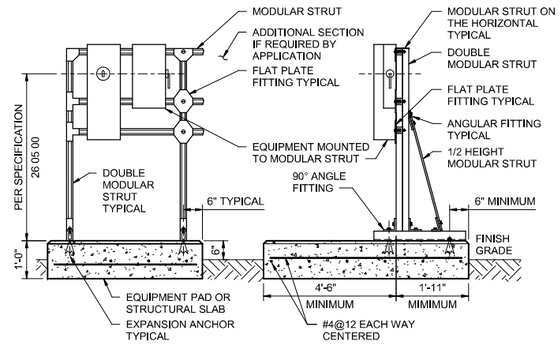
1 DIRECT BURIED CONDUIT(S) SECTION
NOT TO SCALE



INSTALLATION
PLACE A HANDHOLE ON A FOUNDATION OF COMPACTED 1/4 TO 1/2 IN CRUSHED ROCK OR GRAVEL A MINIMUM OF 8 IN THICK AND 6 IN LARGER THAN MANHOLE'S OR HANDHOLE'S FOOTPRINT ON ALL SIDES

REINFORCEMENT FOR H-20 TRAFFIC BRIDGE LOADING.

2 HANDHOLE DETAIL
12" = 1'-0"

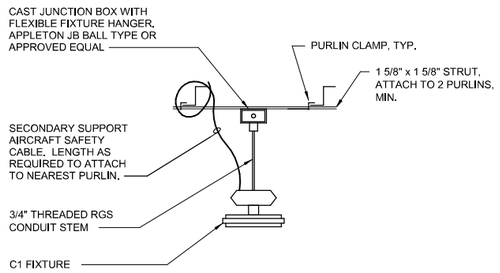


FRONT VIEW **SIDE VIEW**

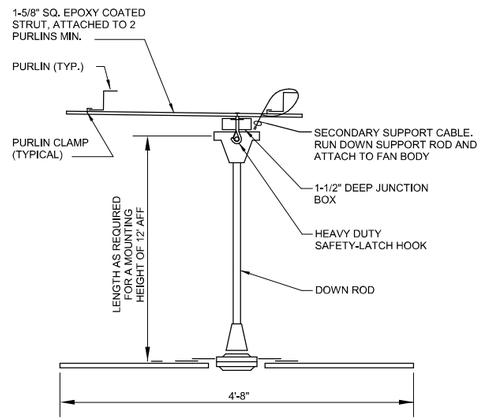
NOTES

1. COMBINED EQUIPMENT LOADS PER 36" SPAN SHALL NOT EXCEED 500LBS.
2. PROVIDE GROUNDING FOR OUTDOOR INSTALLATIONS, PER SPECIFICATION 26 05 00.
3. MODULAR STRUCT WIDTH: 1 5/8".
4. RACK ASSEMBLY MATERIAL: GALVANIZED PER SPECIFICATION 26 05 00.
5. ANCHORS: STAINLESS STEEL, 1/2" DIAMETER, 3 1/2" EMBEDMENT, PER SPECIFICATION 03 15 19.
6. REPAIR CUT ENDS AND DAMAGED SURFACES IN ACCORDANCE WITH SPECIFICATION 05 50 00.

3 MODULAR EQUIPMENT RACK ON CONCRETE PAD
NOT TO SCALE

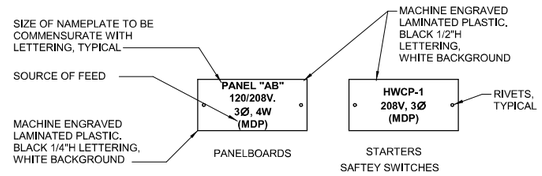


4 C1 FIXTURE MOUNTING DETAIL
NOT TO SCALE



AIR CIRCULATION FANS SHALL BE INDUSTRIAL, HEAVY DUTY FAN WITH 56" BLADE SWEEP, WHITE FINISH & 120 VOLT MOTOR. PROVIDE REMOTE MOUNTED SOLID STATE SPEED CONTROL FOR EACH FAN; LEADING EGDE MODEL 5600-1 OR EQUAL BY ENVIROFAN

5 AIR CIRCULATING FAN MOUNTING DETAIL
NOT TO SCALE



6 NAME PLATES DETAIL
NOT TO SCALE

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Andrew D. Kaner PE18016 LICENSED PROFESSIONAL ENGINEER

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GENERAL ELECTRICAL DETAILS 1

0 1" 2"

FILENAME 103537686-00-G.rvt
SCALE AS NOTED
SHEET 00E-501

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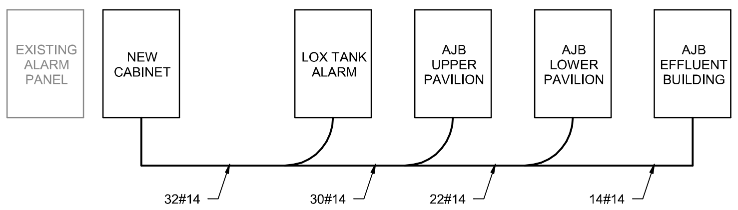
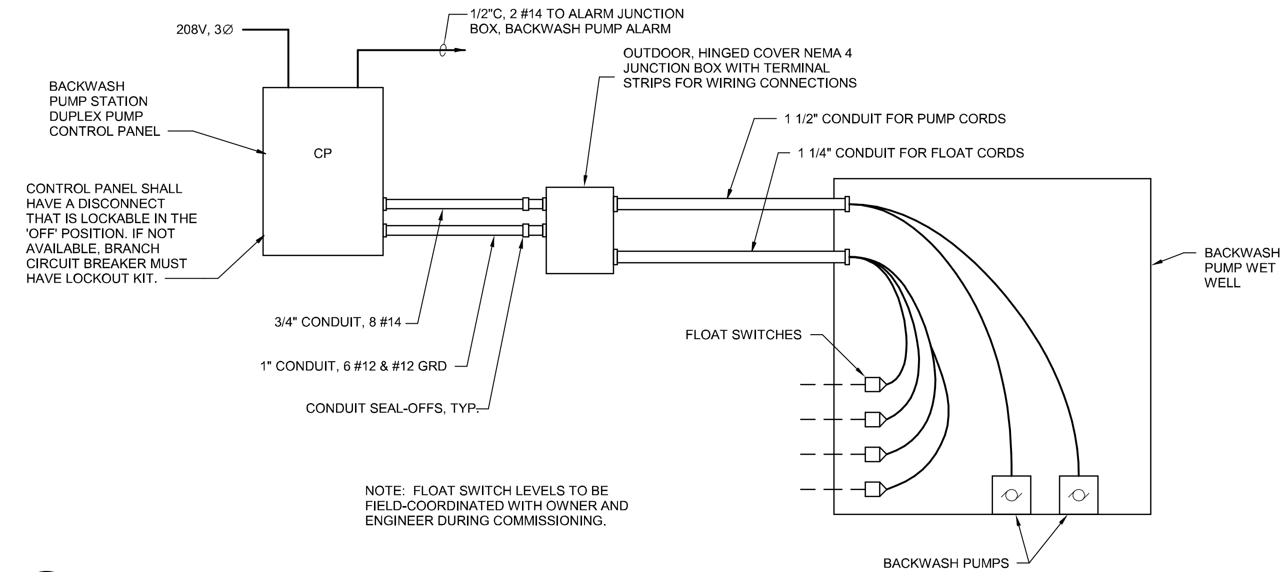


NOTES:

1. COORDINATE WITH SEACOAST SECURITY FOR DETAILED REQUIREMENTS.
2. PROVIDE NEW CABINET NEXT TO EXISTING SECURITY PANEL. PANEL TO INCLUDE TWO 8-INPUT EXPANSION MODULES.
3. PROVIDE 6 SPARE #14 WIRES BACK TO EFFLUENT TREATMENT BUILDING.

1 - ALARM BLOCK DIAGRAM
NOT TO SCALE



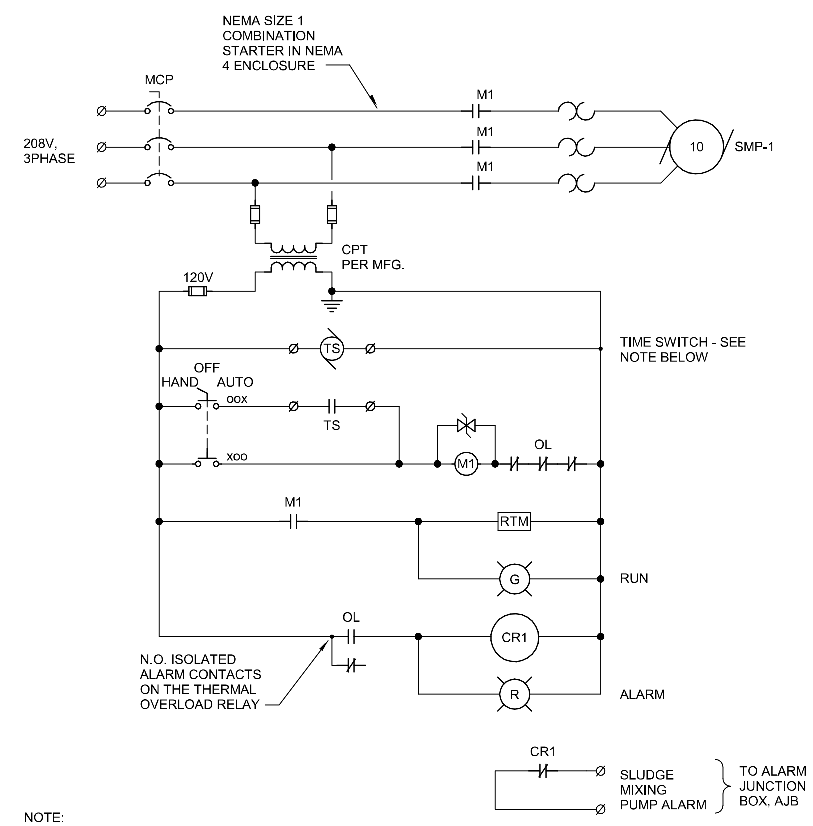
2 - BWPS-1 BACKWASH PUMP SYSTEM - BLOCK DIAGRAM
NOT TO SCALE

ALARM JUNCTION BOX TERMINALS - EFFLUENT BUILDING	
TERMINALS	DESCRIPTION
1a - 1b	CLARIFIER PANEL ALARM
2a - 2b	SLUDGE PUMP TRIP
3a - 3b	EDF-1 ALARM
4a - 4b	EDF-2 ALARM
5a - 5b	BACKWASH PUMP STATION ALARM
6a - 6b	HEAT TRACE 1
7a - 7b	HEAT TRACE 2
8a - 8b	

ALARM JUNCTION BOX TERMINALS - LOWER PAVILION	
TERMINALS	DESCRIPTION
1a - 1b	TANK 1 - LOW LEVEL
2a - 2b	TANK 2 - LOW LEVEL
3a - 3b	TANK 3 - LOW LEVEL
4a - 4b	TANK 4 - LOW LEVEL
5a - 5b	
6a - 6b	
7a - 7b	
8a - 8b	

ALARM JUNCTION BOX TERMINALS - UPPER PAVILION	
TERMINALS	DESCRIPTION
1a - 1b	TANK 1 - LOW LEVEL
2a - 2b	TANK 2 - LOW LEVEL
3a - 3b	TANK 3 - LOW LEVEL
4a - 4b	TANK 4 - LOW LEVEL
5a - 5b	
6a - 6b	
7a - 7b	
8a - 8b	

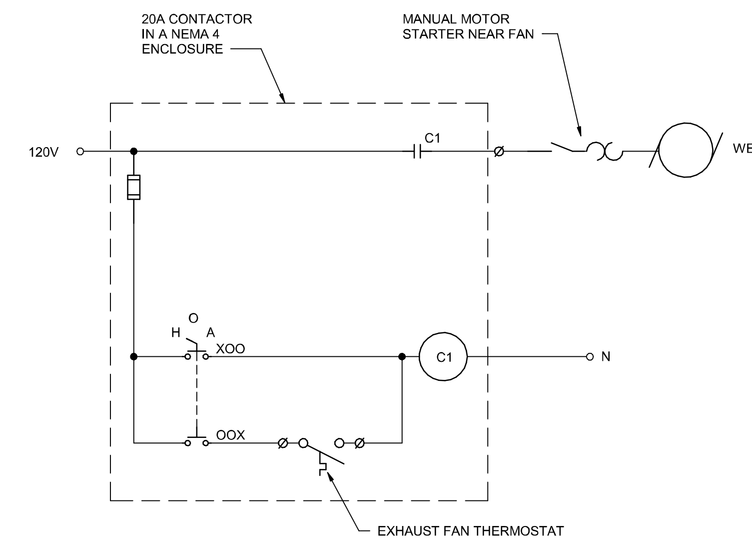
3 - ALARM JUNCTION BOX SCHEDULES
NOT TO SCALE



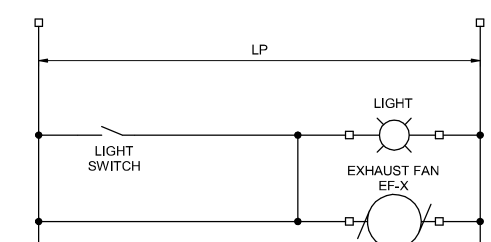
NOTE:

TIME SWITCH SHALL BE 24 HOUR TYPE AND SHALL INCLUDE 96 SEMI-PERMANENT ATTACHED TRIPPERS ALLOWING MIN. ON/OFF TIME OF 15 MINUTES. CLOCK SHALL INCLUDE SKIPPER FEATURE TO ENABLE SWITCHING OPERATION TO BE SKIPPED ON ANY DAY OR DAYS OF THE WEEK, AND SHALL INCLUDE SPRING WOUND CARRY OVER FEATURE. CLOCK SHALL BE COMPLETE WITH NEMA 3R METAL ENCLOSURE.

4 - SMP-1 WIRING DIAGRAM SLUDGE MIXING PUMP
NOT TO SCALE



5 - WIRING DIAGRAM - EXHAUST FAN
NOT TO SCALE



6 - CONTROL DIAGRAM: FAN/LIGHT
12" = 1'-0"

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

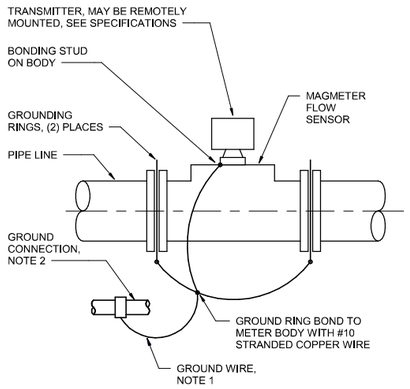
ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

STATE OF MAINE - Andrew D. Kaner - PE18016 - LICENSED - PROFESSIONAL ENGINEER

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GENERAL ELECTRICAL DETAILS 2

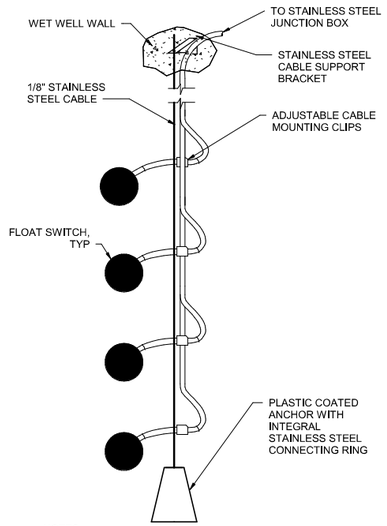
FILENAME: 103537686-00-G.rvt
SCALE: AS NOTED
SHEET: 00E-502



NOTES:

1. NO. 10 AWG INSULATED IF LENGTH IS LESS THAN 6'. IF MORE THAN 6', INSTALL CONDUCTOR IN 3/4" CONDUIT.
2. BOND MAGMETER TO ONE OF THE FOLLOWING ACCEPTABLE GROUNDS:
   A. POWER CIRCUIT GROUND CONDUCTOR AT TRANSMITTER.
   B. NEAREST AVAILABLE EQUIPMENT GROUND CONNECTION POINT.
   C. SEPARATE TAIL FROM EMBEDDED GROUND MAT.

1 / - MAGNETIC FLOW METER GROUNDING RING BONDING
12" = 1'-0"



NOTES:

1. LEVEL FLOATS TO BE MOUNTED WITHIN 18" TO ONE SIDE OF ACCESS OPENING.
2. WHEN FLOATS ARE SET CLOSER THAN 18" OF LEVEL DIFFERENCE, ROTATE FLOATS AROUND PIPE TO AVOID INTERFERENCE.

3 / - TYPICAL WET WELL LEVEL FLOATS INSTALLATION DETAIL
NOT TO SCALE

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-00-G.rvt
9/6/2024 3:05:48 PM

ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	ANDREW GURSKI
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STATE OF MAINE · Andrew D. Kaner PE18016 · LICENSED PROFESSIONAL ENGINEER

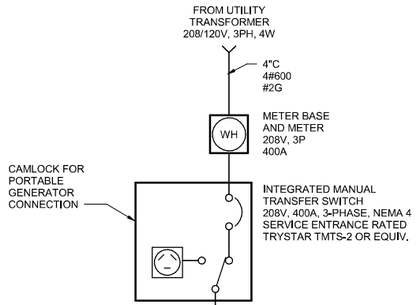
Kaner, Andrew D.

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

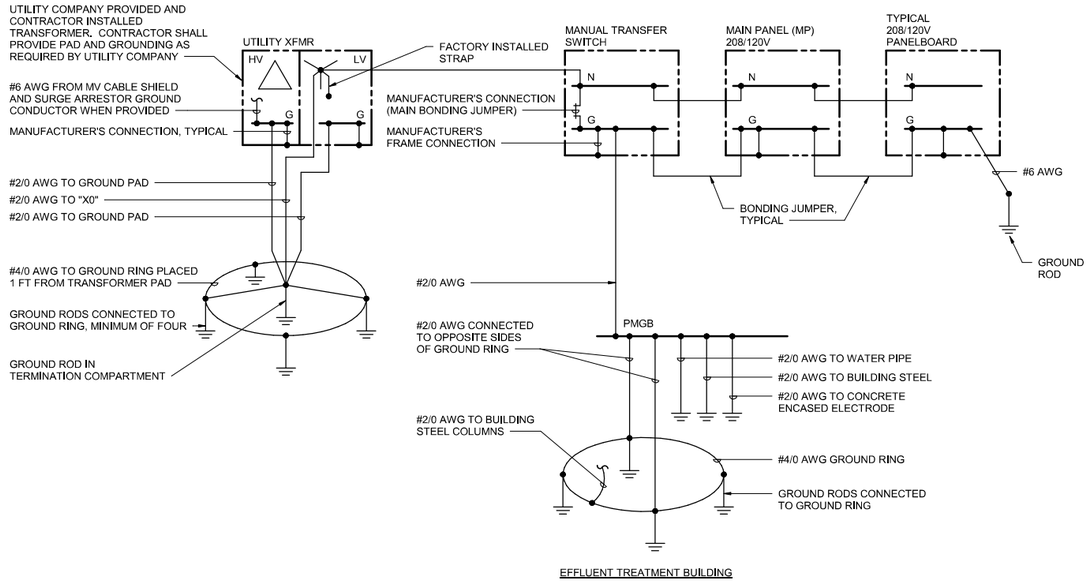
GENERAL INSTRUMENTATION DETAILS 1

0 1" 2"

FILENAME	103537686-00-G.rvt
SCALE	12" = 1'-0"
SHEET	00E-503



1 - ONE LINE DIAGRAM
NOT TO SCALE



2 - GROUNDING DIAGRAM
NOT TO SCALE

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

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CIVIL	J. GAGNON
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MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Andrew D. Kaner
PE18016
LICENSED
PROFESSIONAL ENGINEER

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

DIAGRAMS

0 1" 2"

FILENAME 103537686-00-G.rvt
SCALE AS NOTED

SHEET 00E-601

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_20221035768 6-00-G.rvt
9/6/2024 3:05:45 PM

PANELBOARD NO: MAIN PANEL (MP)

VOLTAGE:	208/120	**BUS RATING...**	400	**ENCLOSURE:**	NEMA 4
PHASE:	3	**MAIN OC DEVICE (A/PHASE):**	400	**MOUNTING:**	SURFACE
WIRE:	4+GND	**INTERRUPTING RATING (KA):**	22	**LOCATION:**	EFFLUENT TREATMENT
200% NEUTRAL:	NO	**SERVICE ENTRANCE LABEL:**	...		

CKT NO.	DESCRIPTION	CONNECTED LOAD (VA) LTS	REC	MECH	MISC	OCP AMPS	P		OCP AMPS	P	CONNECTED LOAD (VA) LTS	REC	MECH	MISC	DESCRIPTION	CKT NO.
1				1,233				A					2,667			2
3	EDF-1			1,233		20	3	B	40	3			2,667		BWPS-1	4
5				1,233				C					2,667			6
7				1,233				A					1,867			8
9	EDF-2			1,233		20	3	B	30	3			1,867		CLARIFIER	10
11				1,233				C					1,867			12
13				3,867				A						1,505		14
15	SMP-1			3,867		50	3	B	40	3				1,400	LP2 UPPER PAVILION	16
17				3,867				C						865		18
19				1,467				A						1,505		20
21	LP1 STORAGE BLDG.			1,467		100	3	B	40	3				900	LP3 LOWER PAVILION	22
23				1,467				C						865		24
25	LIGHTING (INTERIOR)	630				20	1	A	15	1			500		UH-1	26
27	LIGHTING...	75				20	1	B	15	1			200		HRV-1	28
29	RECEPTACLES		540			20	1	C	20	1					SPARE	30
31	RECEPTACLES		540			20	1	A	20	1					SPARE	32
33	DPM-01				500	20	1	B	20	1					SPARE	34
35	WEF-1			1,200		20	1	C	20	1					SPARE	36
37	HEAT TRACE			2,500		30	2	A	20	1					SPARE	38
39				2,500				B	20	1					SPARE	40
41	HEAT TRACE			2,500		30	2	C								42
43				2,500				A								44
45	SPARE					20	1	B								46
47	SPARE					20	1	C								48
49	SPARE					20	1	A								50
51	SPARE					20	1	B								52
53								C								54
55								A	PER							56
57								B	MFG.	3					SPD	58
59								C								60

LOAD SUMMARY

	LTS	REC	MECH	MISC	SPARE	TOTAL				PHASE BALANCE	
CONNECTED LOAD (KVA)	0.7	1.1	48.9	7.5	---	58.2		208	LINE-TO-LINE VOLTS	PHASE A (KVA)	19
DEMAND FACTOR	1.25	NEC	1.00	1.00	20%	---		162	CONNECTED AMPS	PHASE B (KVA)	19
DESIGN LOAD (KVA)	0.9	1.1	48.9	7.5	11.6	70.0		194	DESIGN AMPS	PHASE C (KVA)	20

PANELBOARD NO: LP3

VOLTAGE:	208Y/120	**BUS RATING...**	100	**ENCLOSURE:**	NEMA 4
PHASE:	3	**MAIN OC DEVICE:**	40/3	**MOUNTING:**	SURFACE
WIRE:	4+GND	**INTERRUPTING RATING (KA):**	22	**LOCATION:**	LOWER PAVILION
200% NEUTRAL:	NO	**SERVICE ENTRANCE LABEL:**	...		

CKT NO.	DESCRIPTION	CONNECTED LOAD (VA) LTS	REC	MECH	MISC	OCP AMPS	P		OCP AMPS	P	CONNECTED LOAD (VA) LTS	REC	MECH	MISC	DESCRIPTION	CKT NO.
1	RECP (NORTH)		900			20	1	A	20	1		900			RECP (SOUTH)	2
3	AIR CIRC. FANS			480		20	1	B	30	1				700	OVERHEAD DOOR - E	4
5	LIGHTING (INTERIOR)	865				20	1	C	30	1				700	OVERHEAD DOOR - C	6
7	LIGHTING...	125				20	1	A	30	1				700	OVERHEAD DOOR -...	8
9	SPARE					20	1	B	20	1					SPARE	10
2	SPARE					20	1	C	20	1					SPARE	12
4	SPARE					20	1	A	PER							14
6	SPARE					20	1	B	MFG.	3					SPD	16
8	SPARE					20	1	C								18

LOAD SUMMARY

	LTS	REC	MECH	MISC	SPARE	TOTAL				PHASE BALANCE	
CONNECTED LOAD (KVA)	1.0	1.8	0.5	2.1	---	5.4		208	LINE-TO-LINE VOLTS	PHASE A (KVA)	3
DEMAND FACTOR	1.25	NEC	1.00	1.00	20%	---		15	CONNECTED AMPS	PHASE B (KVA)	1
DESIGN LOAD (KVA)	1.2	1.8	0.5	2.1	1.1	6.7		19	DESIGN AMPS	PHASE C (KVA)	2

MECHANICAL / ELECTRICAL COORDINATION SCHEDULE

ABBREVIATIONS:

A	AMPS	C	CONTACTOR	E	ELECTRICAL CONTRACTOR	N1	NEMA 1
ENCL	ENCLOSURE	CB	CIRCUIT BREAKER	M	MECHANICAL CONTRACTOR	N3R	NEMA 3R
HP	HORSEPOWER	CP	CONTROL PANEL	NF	NON-FUSED	N4	NEMA 4
KW	KILOWATTS	IN	INTEGRAL WITH EQUIPMENT			N4X	NEMA 4X
PH	PHASE	S	HP RATED TOGGLE SWITCH OR ROTARY SWITCH			N7	NEMA 7
V	VOLTAGE	SS	SAFETY SWITCH			N9	NEMA 9
W	WATTS	VFD	VARIABLE FREQUENCY DRIVE			N12	NEMA 12

EQUIPMENT			ELECTRICAL SYSTEM				DISCONNECT				CONTROLLER			
TAG	DESCRIPTION	LOAD	V	PH	WIRE, CONDUIT	PANEL: CIRCUIT	FURNISHED BY/ INSTALLED BY	TYPE	RATING (AMPS)	ENCL	FURNISHED BY/ INSTALLED BY	TYPE	ENCL	REMARKS
WEF-1	EXHAUST FAN	0.5 HP	120	1	2#12, 1#12G, 3/4"C	MP:35	M/IN	-	-	-	E/E	C	N4	1
UH-1	PROPANE UNIT HEATER	3.7 A	120	1	2#12, 1#12G, 3/4"C	MP:26	M/IN	-	-	-	M/IN	-	-	1
HRV-1	HEAT RECOVERY VENTILATOR	163 W	120	1	2#12, 1#12G, 3/4"C	MP:28	E/E	S	20	N4	M/IN	-	-	2

MEP SCHEDULE NOTES AND REMARKS

GENERAL NOTES:

A. VERIFY/COORDINATE RATINGS FOR EQUIPMENT SUPPLIED BY THE SELECTED MANUFACTURER. WHERE RATINGS ARE OTHER THAN AS REQUIRED FOR SPECIFIED UNIT, DISCONNECTS, MOTOR STARTERS, OVERCURRENT DEVICES AND RELATED REVISIONS SHALL BE PROVIDED ACCORDINGLY. THE CONTRACTOR THAT FURNISHES EQUIPMENT WITH RATINGS OTHER THAN AS NOTED SHALL BE RESPONSIBLE FOR COORDINATION AND COSTS FOR REVISIONS TO ACCOMMODATE SELECTED...

B. FRACTIONAL HORSEPOWER SINGLE PHASE MOTORS SHALL BE PROVIDED WITH INTEGRAL OVERLOAD PROTECTION.

C. SAFETY SWITCHES SHALL BE FUSIBLE UNLESS NOTED OTHERWISE, PROVIDE FUSES SIZED PER MANUFACTURERS RECOMMENDATIONS.

D. ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUIT TO EQUIPMENT AS INDICATED.

E. WHERE DISCONNECT IS NOT SHOWN ON PLANS, LOCATE AT EQUIPMENT PER NEC.

F. MOTORS RATED 120 VOLT AND LESS THAN 1/3 HP SHALL HAVE 15/1 BRANCH CIRCUIT BREAKER IN PANEL. MOTORS RATED 120 VOLT, 1/3 HP AND LARGER SHALL HAVE 20/1 BRANCH CIRCUIT BREAKER IN PANEL.

G. REFER TO SPECIFICATION 23 09 00 FOR ADDITIONAL WIRING REQUIREMENTS.

H. REFER TO SPECIFICATIONS FOR SHORT CIRCUIT CURRENT RATING (SCCR) FOR EQUIPMENT.

REMARKS

1. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND WIRING TO THERMOSTATS FURNISHED BY MECHANICAL CONTRACTOR. SEE 04M-101 FOR T-STAT LOCATIONS.
2. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT AND WIRING TO VENTILATOR CONTROLLER FURNISHED BY MECHANICAL CONTRACTOR. SEE 04M-101 FOR LOCATION.

GENERAL NOTES:

1. REFER TO 06E-101 FOR STORAGE BUILDING PANEL LP1 SCHEDULE.

ELECTRICAL EQUIPMENT INSTALLATION SCHEDULE

BUILDING	AREA DESIGNATION	CONDUIT MOUNTING	CONDUIT MATERIAL	RECEPT. & SWITCHES MOUNTING	SAFETY SWITCH, STARTERS, CONTROL STATIONS, ETC. TYPE	ENCLOSURES, PULL & J-BOX, WIREWAYS TYPE
EFFLUENT TREATMENT BUILDING	DAMP	SURFACE	RGS	SURFACE	NEMA 4	NEMA 4
LOWER PAVILION	WET	SURFACE	RGS	SURFACE	NEMA 4	NEMA 4
UPPER PAVILION	WET	SURFACE	RGS	SURFACE	NEMA 4	NEMA 4

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PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Andrew D. Kaner PE18016 — LICENSED PROFESSIONAL ENGINEER

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

ELECTRICAL SCHEDULES 1

0 1" 2"

FILENAME 103537686-00-G.rvt

SCALE NONE

SHEET 00E-651

LUMINAIRE SCHEDULE

ID	DESCRIPTION	MANUFACTURER	SOURCE			VOLTS	MOUNTING		CONTROL
			TYPE	LUMENS	WATTS		TYPE	HEIGHT	
B1	STRIP LIGHT (4')	LITHONIA: CLX SERIES, 4000K, 80 CRI	LED	5,000	34.8	120	AIRCRAFT CABLE	AS NOTED	A
C1	HIGH BAY W/ INTEGRAL OCCUPANCY SENSOR	LITHONIA: JHBL SERIES, 4000K, 80 CRI	LED	12,000	83	120	PENDANT	12' AFF	B
F1	ARCHITECTURAL GRADE AREA LIGHT LENS: MOLDED REFRACTIVE ACRYLIC DISTRIBUTION: FULL CUTOFF, NEMA TYPE 3 HOUSING: DARK BRONZE ALUMINUM FIXTURE SHALL INCLUDE PHOTOCELL, TWISTLOCK	LITHONIA: KAD 4000K, 30 LED PACKAGE	LED	8,360	69	120	POLE	AS INDICATED	C
	POLE: STEEL WITH HANDHOLE HEIGHT: 18'-0" SIZE: 5" ROUND, NON-TAPERED, 0.120" THICKNESS FINISH: DARK BRONZE	MANUFACTURER STANDARD							
W1	WEATHER-PROOF WALLPACK W/ EMERGENCY BACKUP, COLD-WEATHER RATED	LITHONIA: ARC1 SERIES, 4000K, P3	LED	3,000	25	120	WALL	6" ABOVE DOOR	C
W2	WEATHER-PROOF WALLPACK W/ EMERGENCY BACKUP, COLD-WEATHER RATED	LITHONIA: ARC2 SERIES, 4000K, P5	LED	6,500	25	120	WALL	6" ABOVE DOOR	C

GENERAL NOTES:
1. WHERE LUMINAIRES ARE SHOWN ON THE DRAWINGS AS EMERGENCY TYPE, PROVIDE INTEGRAL BATTERY AND EMERGENCY DRIVER.

LIGHTING CONTROL STRATEGY DESCRIPTION:
A. MANUAL ON / MANUAL OFF: OCCUPANT MANUALLY TURNS THE LIGHTS ON WHEN ENTERING SPACE. OCCUPANT MANUALLY TURNS THE LIGHTS OFF WHEN LEAVING THE SPACE.

B. MANUAL ON / MANUAL ADJUST / MANUAL OFF / TIME SWITCH: OCCUPANT MANUALLY TURNS THE LIGHTS ON WHEN ENTERING THE SPACE. OCCUPANT CAN MANUALLY ADJUST (RAISE OR LOWER) LIGHT LEVEL OR TURN LIGHTS ON / OFF. WHEN ENABLED, TIME SWITCH TURNS LIGHTS ON / OFF AT PROGRAMMED TIMES.

C. PHOTOCELL TURNS LIGHTS ON AT DUSK AND OFF WHEN DAYLIGHT IS PRESENT. LIGHTS ARE AUTOMATICALLY DIMMED TO REDUCE LOAD BY 50% DURING TIME WHEN ACTIVITY HAS NOT BEEN DETECTED FOR 15 MINUTES. WHERE SHOWN ON PLANS, A WALL SWITCH ALLOWS OCCUPANT TO MANUALLY TURN OFF LIGHTS.

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PROJECT NUMBER	10357686

STATE OF MAINE
Andrew D. Kaner
PE18016
LICENSED
PROFESSIONAL ENGINEER

Kanar, Andrew D.

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

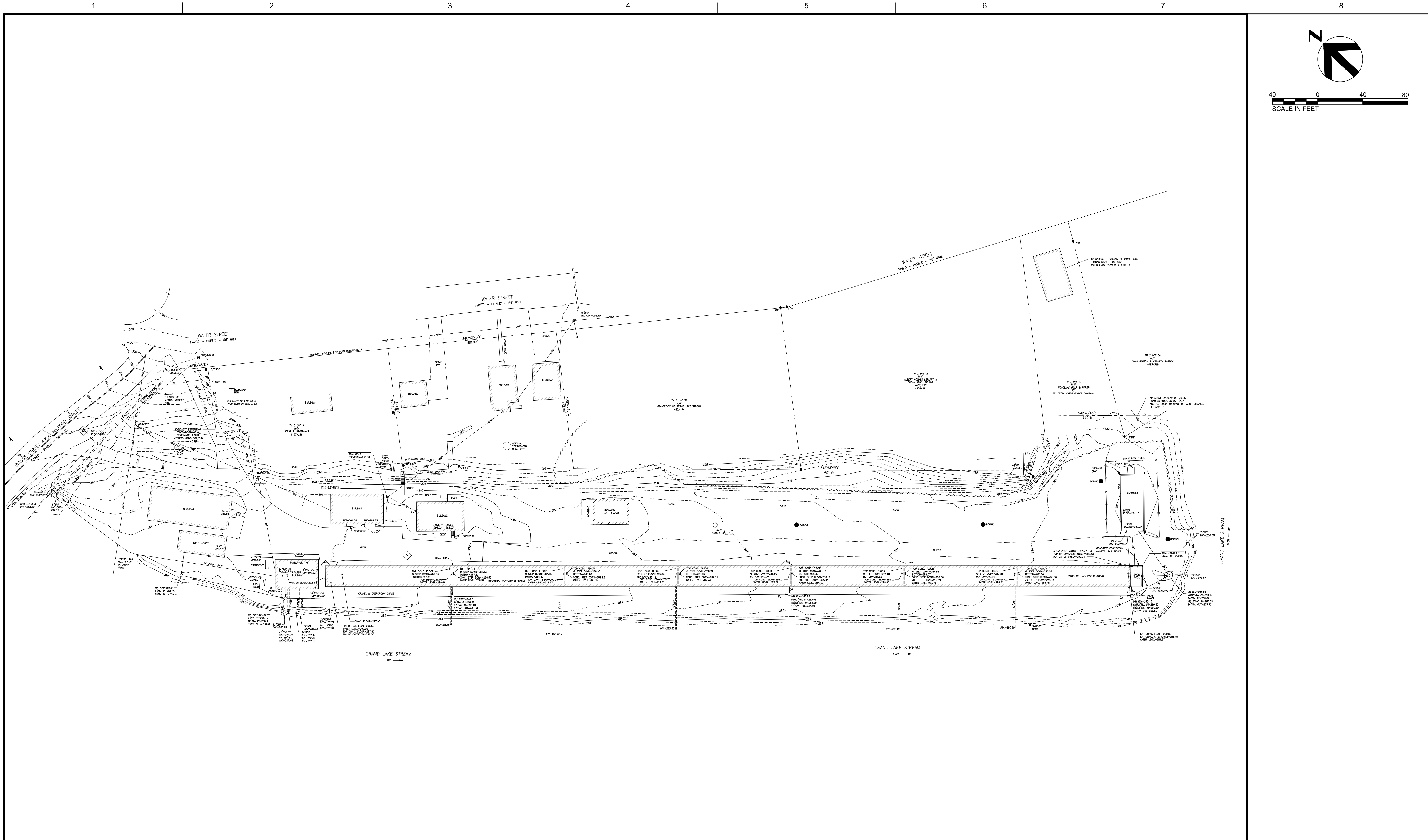
ELECTRICAL SCHEDULES 2

0 1" 2"

FILENAME 103537686-00-G.rvt
SCALE NONE

SHEET
00E-652

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-00-G.rvt
9/6/2024 3:05:39 PM



HDR

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ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Jennifer N. Gagnon
PE13751
LICENSED
PROFESSIONAL ENGINEER

Gagnon, Jennifer N

Digitally signed by Gagnon, Jennifer N
Date: 2024.09.09 17:49:14 -04'00'

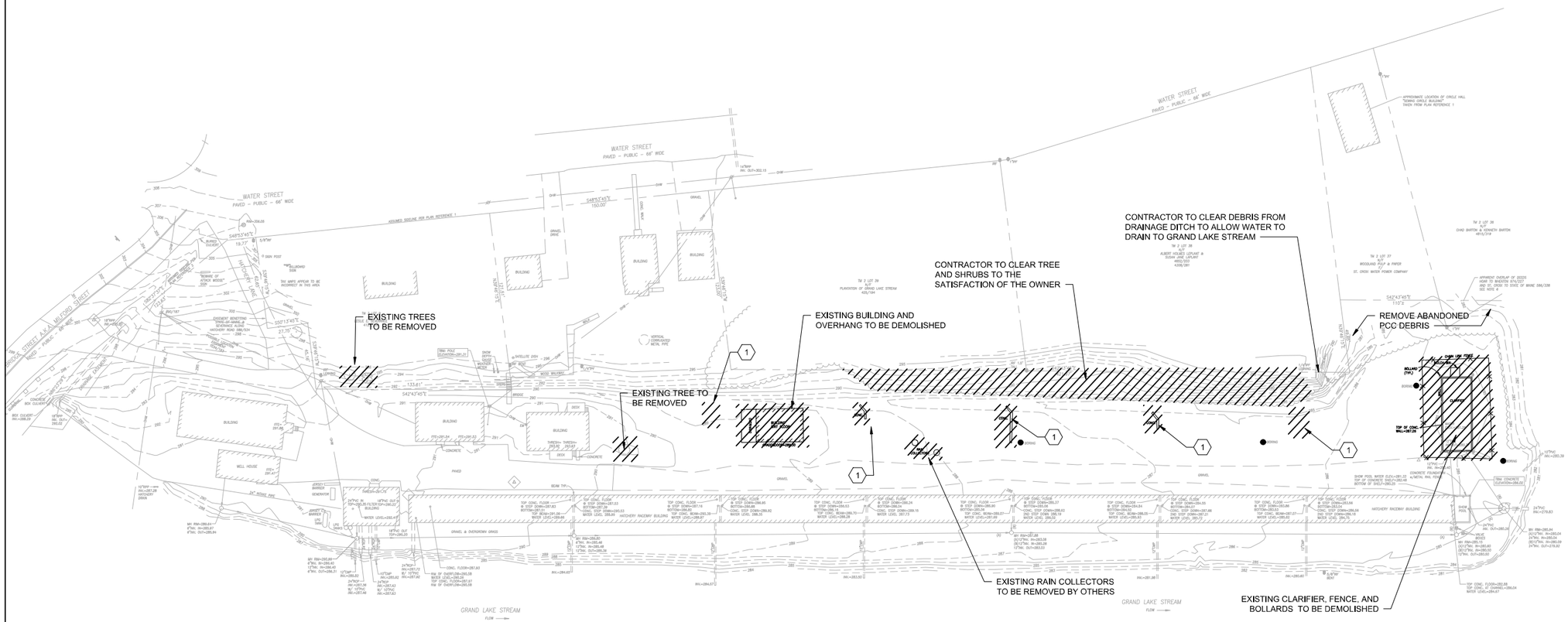
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

EXISTING TOPOGRAPHIC SURVEY

0 1" 2"

FILENAME	10357686-01V-101.DWG
SCALE	1" = 40'

SHEET
01V-101



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STATE OF MAINE
Jennifer N. Gagnon
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Gagnon, Jennifer N

Digitally signed by Gagnon, Jennifer N
Date: 2024.09.09 17:52:47 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

EXISTING SITE DEMOLITION PLAN

0 1" 2"

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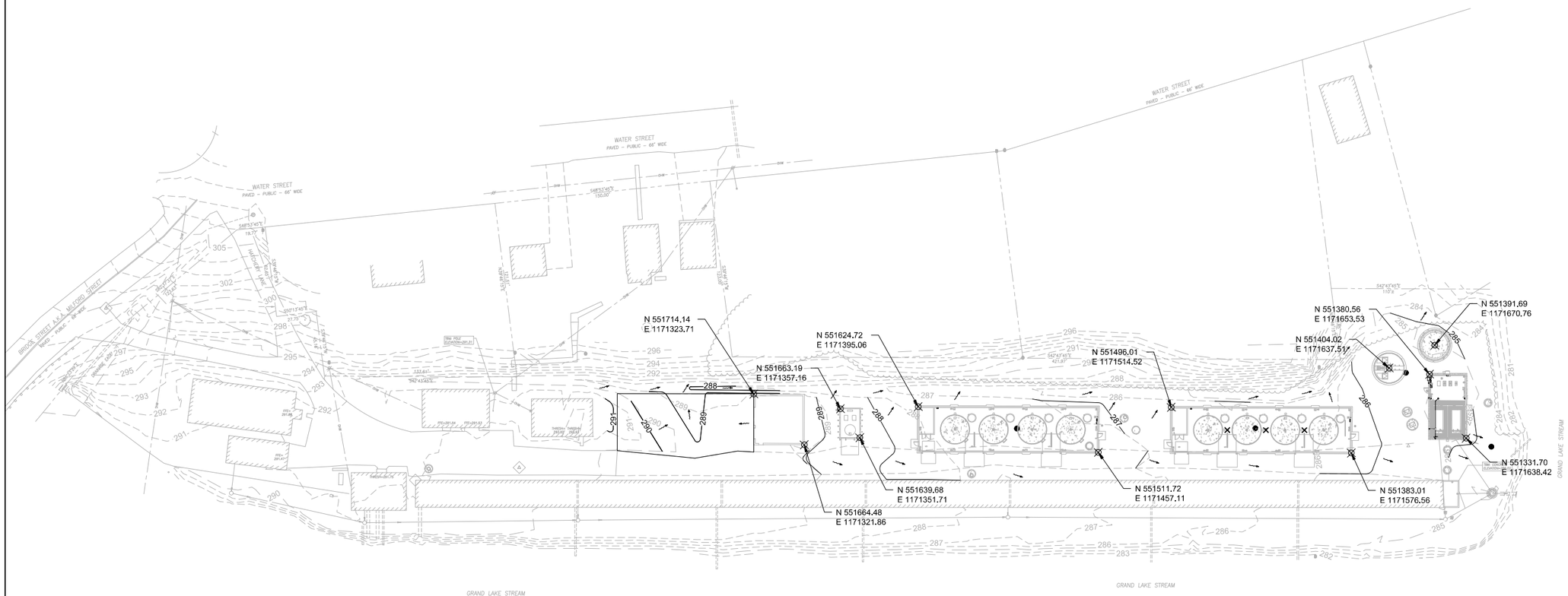
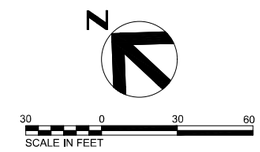
SCALE	1"=30'

SHEET
01C-101





NOTES:
ALL DISTURBED AREAS SHALL BE STABILIZED AND RESTORED BY USING NATIVE PLANTS AND SPECIES AS APPROVED BY OWNER. SEE SHEET 01C-115 FOR ADDITIONAL DETAILS ON RESTORATION AREAS.

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STATE OF MAINE
Jennifer N. Gagnon
PE13751
LICENSED
PROFESSIONAL ENGINEER

Gagnon, Jennifer N

Digitally signed by Gagnon, Jennifer N
Date: 2024.09.09 18:02:18 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

GRADING AND DRAINAGE PLAN

0 1" 2"

FILENAME	10357686-01C-102.DWG
SCALE	1" = 1'

SHEET
01C-102

REFERENCE COORDINATE SYSTEM

PROJECTION - MAINE STATE PLANE
DATUM - NAD83
ZONE - EAST
UNITS - U.S. SURVEY FEET

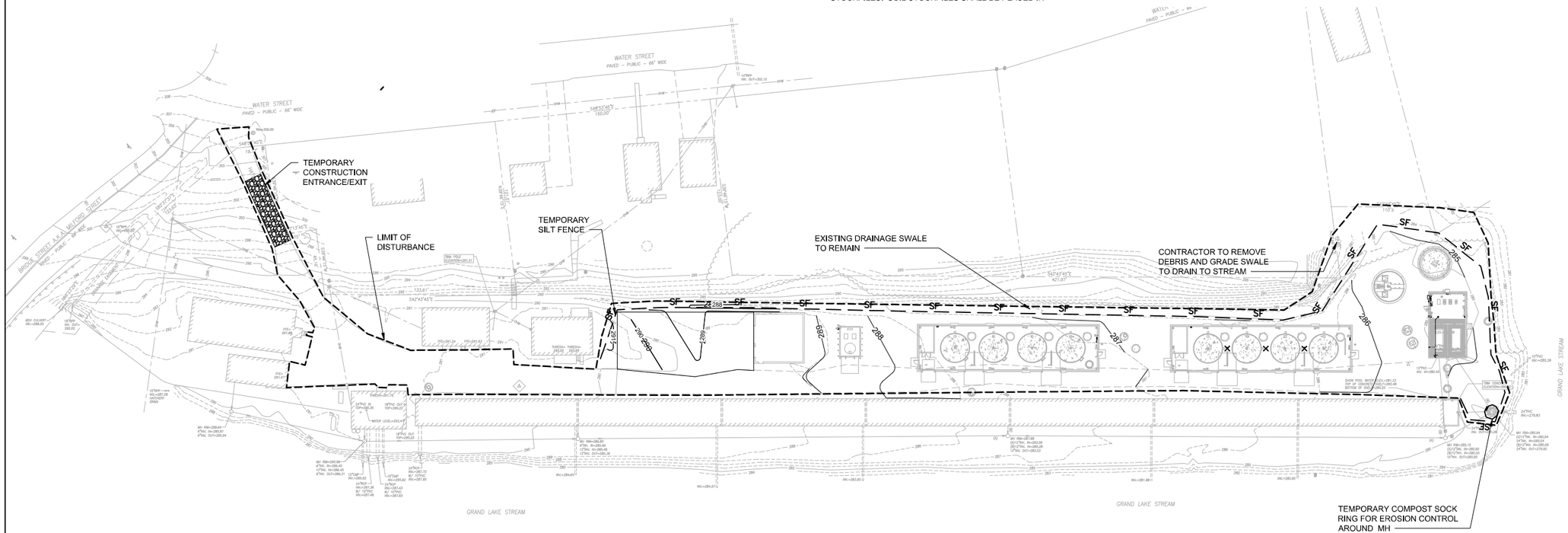
VERTICAL DATUM IS REFERENCED TO NAVD 88.

N

40 0 40 80
SCALE IN FEET

EROSION AND SEDIMENTATION CONTROL NOTES:

1. FOR GENERAL NOTES, SEE 00G-004.
2. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING, AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED E&S PLAN MUST BE AVAILABLE AT THE PROPOSED PROJECT SITE AT ALL TIMES. THE MDEP SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE MDEP MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
3. PRIOR TO COMMENCEMENT OF ANY EARTH DISTURBANCE ACTIVITIES INCLUDING CLEARING AND GRUBBING, CONTRACTOR TO CLEARLY DELINEATE THE LIMITS OF DISTURBANCE (LOD) AS SHOWN ON THE PLANS. INSTALL APPROPRIATE BARRIERS WHERE EQUIPMENT MAY NOT BE PARKED, STAGED, OPERATED OR LOCATED FOR ANY PURPOSE.
4. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE E&S PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
5. AT LEAST THREE DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITY, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, ALL CONTRACTORS INVOLVED IN THESE ACTIVITIES SHALL NOTIFY DIGSAFE BEFORE STARTING CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL REQUIRE THAT DIGSMART SCAN FOR BURRIED UTILITIES BEFORE ANY EXCAVATION IS PERFORMED.
6. SITE ACCESS IS THE FIRST LAND DISTURBANCE ACTIVITY TO TAKE PLACE AT THE SITE AND CONTRACTOR SHALL INSTALL BMPS PER THE ESC PLAN: ENTRANCE TO THE SITE (GRAVEL CONSTRUCTION ENTRANCE AT CONSTRUCTION LAYDOWN YARD EXISTING), CONSTRUCTION ROUTES, AND AREAS DESIGNATED FOR EQUIPMENT OR OTHER USE AT THE SITE INCLUDING PARKING AND STOCKPILES. SOIL STOCKPILES SHALL BE PLACED IN THE AREAS SPECIFIED ON THE E&S PLAN SHEETS AND SIZED IN ACCORDANCE WITH MDEP STANDARDS SPECIFIED ON THE DETAIL SHEETS. TEMPORARY CONSTRUCTION ENTRANCE/EXIT PAD SHOULD HAVE A LENGTH OF 50 FEET AND WIDTH OF 12 FEET, 6-INCHES THICK WITH ANGULAR AGGREGATE (2-3 INCH DIAMETER) PLACED OVER A GEOTEXTILE FILTER.
7. PERFORM MAINTENANCE AT EXISTING CULVERTS, REMOVING ACCUMULATED SEDIMENT IN EXISTING DITCHES AND DRAINAGE AS INDICATED ON EROSION AND SEDIMENT CONTROL PLANS.
8. FOR ALL EXISTING ACCESS ROADS, MEASURES SHALL BE TAKEN TO MAINTAIN COVER ON EXISTING SURFACES, AND KEEPING PUBLIC ROADS CLEAR FROM DEBRIS.
9. INSTALL PERIMETER BMPS (SILT FENCING) IN ACCORDANCE WITH INSTALLATION METHODS SPECIFIED ON PLAN AND DETAIL SHEETS AFTER THE CONSTRUCTION SITE IS ACCESSED, KEEPING ASSOCIATED CLEARING AND GRUBBING LIMITED TO ONLY THAT AMOUNT REQUIRED FOR INSTALLING PERIMETER BMPS.
10. IMPLEMENT CONSTRUCTION ACTIVITIES ONLY AFTER ALL DOWNSLOPE E&S BMPS HAVE BEEN CONSTRUCTED AND STABILIZED. NO ADDITIONAL CLEARING AND GRADING OF UPLAND AREAS ARE PLANNED.
11. INSTALL SILT FENCE WITHIN THE LOD PRIOR TO FILL.
12. AFTER CONSTRUCTION IS COMPLETED, REGRADE THE EXISTING GRAVEL SURFACES, IF NEEDED.
13. REMOVAL OF TEMPORARY SILT FENCING CAN OCCUR FOLLOWING SITE CLEANUP OF THE GRAVEL AND PAVED AREAS. STABILIZE ANY DISTURBANCES ASSOCIATED WITH THE REMOVAL OF THE BMPS, USING GRAVEL OR CRUSHED STONE.
14. ANY WASTE OR EXCESS MATERIALS NOT SUITABLE FOR ON-SITE USAGE SHALL BE DISPOSED OF AT A MDEP APPROVED WASTE SITE. MATERIALS WILL BE REUSED OR RECYCLED IF POSSIBLE. ANY OFF-SITE STOCKPILE/SPOIL AREAS SHALL BE A MDEP-APPROVED SITE WITH AN APPROVED E&S.
15. RESTORATION: AREAS WHERE SOIL IS TEMPORARILY DISTURBED DURING CONSTRUCTION WILL BE GRADED, STABILIZED, AND RESTORED IN ACCORDANCE WITH THE SITE-SPECIFIC EROSION AND SEDIMENTATION CONTROL PLAN. FOLLOWING CONSTRUCTION ACTIVITIES, TEMPORARILY DISTURBED AREAS WILL BE STABILIZED USING APPROPRIATE EROSION AND SEDIMENT CONTROL METHODS.
16. THERE IS A DRAINAGE EASEMENT AGREEMENT WITH ABUTTERS FOR STORMWATER FLOW, ACCESS, AND MAINTENANCE.



PREVENTION OF INVASIVES

1. NO CULTIVARS, INVASIVE OR OTHER UNACCEPTABLE PLANT SPECIES MAY BE USED FOR ANY MITIGATION, BIOENGINEERING, VEGETATIVE BANK STABILIZATION OR ANY OTHER WORK AUTHORIZED BY THIS GP. HOWEVER, NON-NATIVE SPECIES AND CULTIVARS MAY BE USED WHEN IT IS APPROPRIATE AND SPECIFIED IN A WRITTEN VERIFICATION, SUCH AS USING SECALE CEREALE (ANNUAL RYE) TO QUICKLY STABILIZE A SITE. ALL PCNS SHOULD EXPLAIN THE REASON FOR USING NON-NATIVE SPECIES OR CULTIVARS.
2. CONSTRUCTION MATERIALS INSPECTION: CONSTRUCTION MATERIAL SUCH AS SEED MIXES, MULCH, TOPSOIL, FILL, SAND, GRAVEL, CRUSHED STONE, AND ROCK BROUGHT TO THE SITE FROM AN OUTSIDE SOURCE WILL BE FREE OF INVASIVE PLANT MATERIALS. IN ADDITION, DURING ALL ASPECTS OF CONSTRUCTION, SOIL AND/OR SPOIL MATERIALS WILL ONLY BE TEMPORARILY STOCKPILED (I.E., WILL BE SPREAD AND GRADED TO MATCH ORIGINAL CONTOURS AT THE EARLIEST PRACTICABLE TIME FOLLOWING CONSTRUCTION ACTIVITIES). PROPER METHODS FOR SEGREGATING STOCKPILED AND SPOIL MATERIAL WILL BE IMPLEMENTED, AND EXCAVATED SOIL WILL BE REUSED TO THE MAXIMUM EXTENT POSSIBLE ON THE SITE THAT IT WAS EXCAVATED FROM, AS A MEANS TO LIMIT OPPORTUNITIES FOR PROLIFERATION OF NON-NATIVE FLORA AND OTHER INVASIVE SPECIES. APPROPRIATE SEDIMENT AND EROSION CONTROL MEASURES, SUCH AS SITE STABILIZATION VIA MULCHING AND RESEEDING AREAS OF EXPOSED SOIL AS SOON AS PRACTICABLE, WILL BE IMPLEMENTED.
3. CONSTRUCTION EQUIPMENT SANITATION: THE INTRODUCTION OF NON-NATIVE INVASIVE PLANT SPECIES WILL BE CONTROLLED BY ASSURING THAT ALL CONSTRUCTION EQUIPMENT (E.G., HEAVY MACHINERY, AND CONSTRUCTION MATS) IS CLEAN UPON ARRIVAL ON SITE, AS WELL AS CLEAN PRIOR TO LEAVING THE SITE. IN ORDER TO PREVENT THE SPREAD OF INVASIVE WEEDS THAT COULD BE TRANSPORTED FROM RELATIVELY DISTANT LOCATIONS, EFFECTIVE WASHING OF EQUIPMENT PRIOR TO ARRIVAL AT THE SITE WILL BE DONE WITH COMPRESSED AIR, HIGH-PRESSURE WATER, OR A HIGH-PRESSURE STEAM CLEANER, ON A HARD SURFACE WITH CONTROLLED DRAINAGE. ADDITIONALLY, ANY EQUIPMENT UTILIZED IN AREAS WITH AN ABUNDANCE OF INVASIVE SPECIES WILL BE CLEANED PRIOR TO MOVING TO ANOTHER SITE. THE INTENT IS THAT EQUIPMENT SHOULD ARRIVE AT THE SITE CLEAN AND LEAVE THE SITE CLEAN. THE LOCATION OF ANY PROJECT EQUIPMENT CLEANING STATIONS WILL BE IDENTIFIED BY THE CONTRACTOR. IF AN EQUIPMENT CLEANING STATION IS ESTABLISHED ON THE SITE, IT SHALL BE LOCATED SUCH THAT ANY INVASIVE SPECIES SEEDS AND OTHER VIABLE PLANT PARTS CANNOT ESCAPE IN RUNOFF OR THROUGH OTHER MEANS.
4. INVASIVE SPECIES CONTROL AND REMOVAL: IF INVASIVE SPECIES ARE OBSERVED AT THE SITE FOLLOWING CONSTRUCTION ACTIVITIES, THEN APPROPRIATE TREATMENT, CONTROL, AND REMOVAL METHODS WILL BE DEVELOPED THROUGH CONSULTATION WITH APPROPRIATE STATE AND FEDERAL AGENCIES.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Jennifer N. Gagnon
PE13751
LICENSED
PROFESSIONAL ENGINEER

Gagnon, Jennifer N

Digitally signed by Gagnon, Jennifer N
Date: 2024.09.09 18:04:31 -04'00'

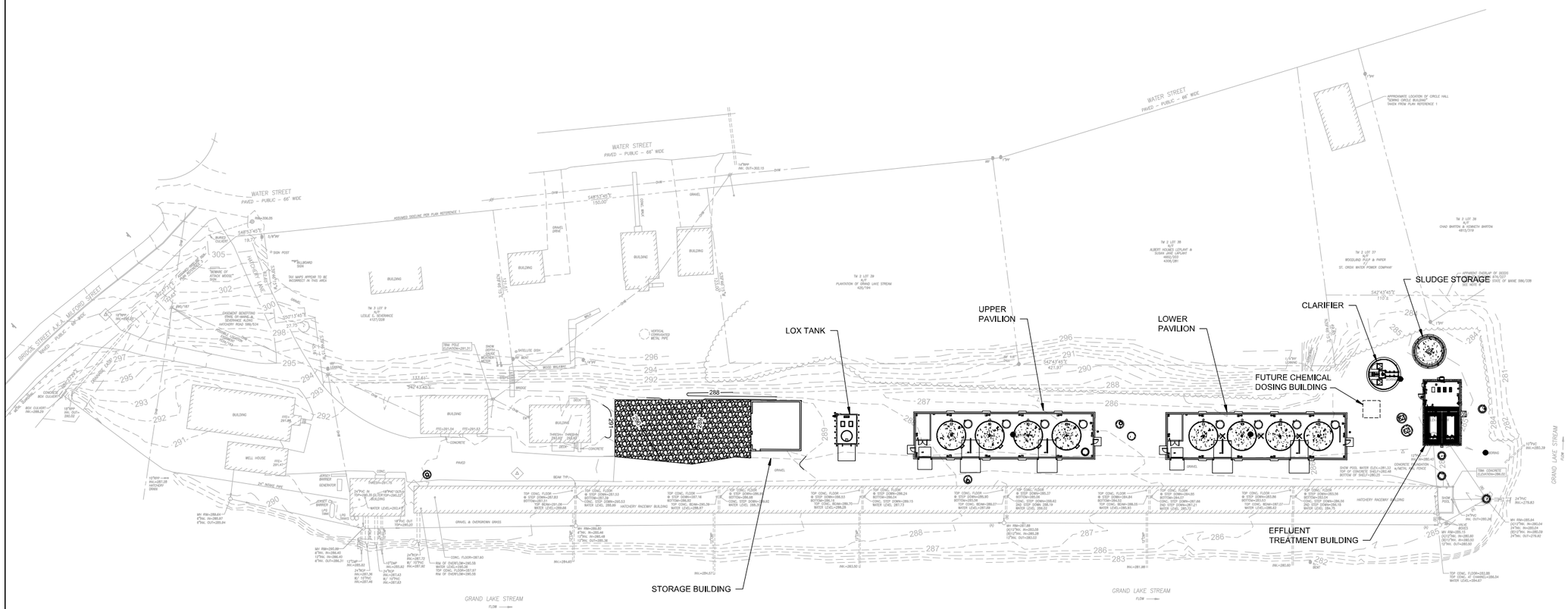
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

EROSION CONTROL PLAN

0 1" 2"

FILENAME	10357686-01C-103.DWG
SCALE	1" = 40'

SHEET 01C-103



09/11/2024	ISSUED FOR BID	
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	ANDREW GURSKI
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STRUCTURAL	B. BRADLEY
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PROJECT NUMBER	10357686

STATE OF MAINE
Jennifer N. Gagnon
PE13751
LICENSED
PROFESSIONAL ENGINEER

Gagnon, Jennifer N

Digitally signed by Gagnon, Jennifer N
Date: 2024.09.09 18:07:54 -04'00'

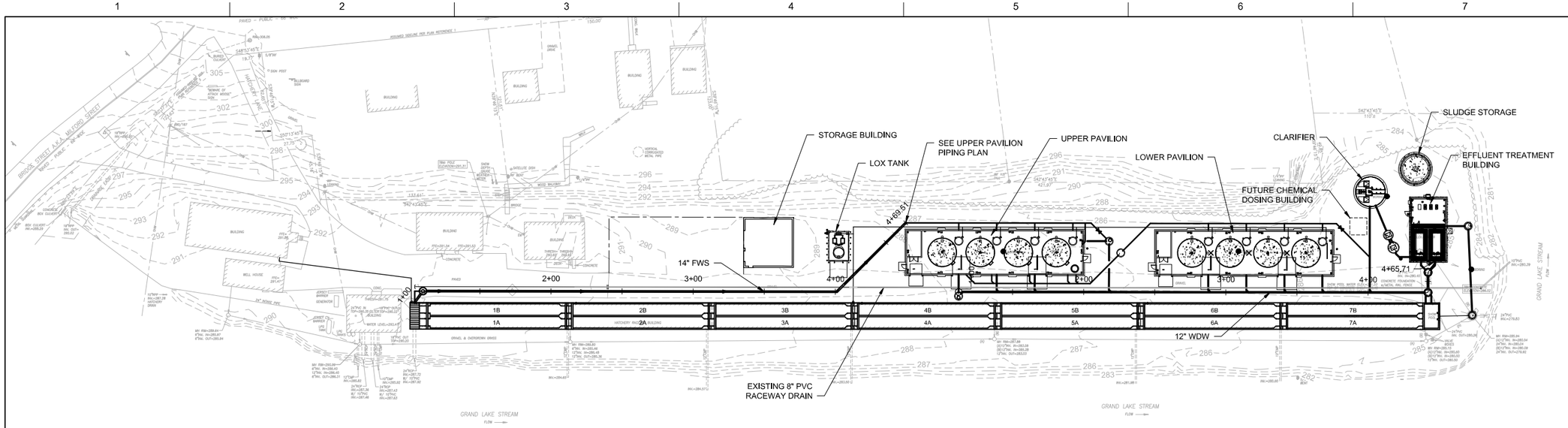
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

OVERALL SITE PLAN

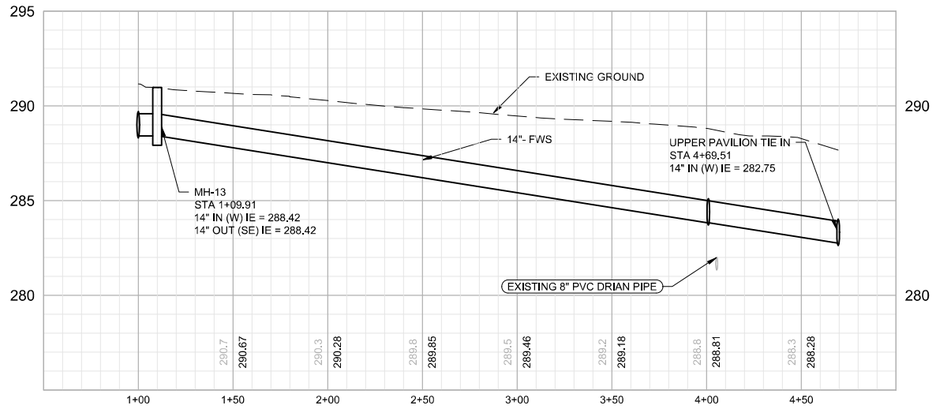
0 1" 2"

FILENAME	10357686-01C-111.DWG
SCALE	1" = 40'

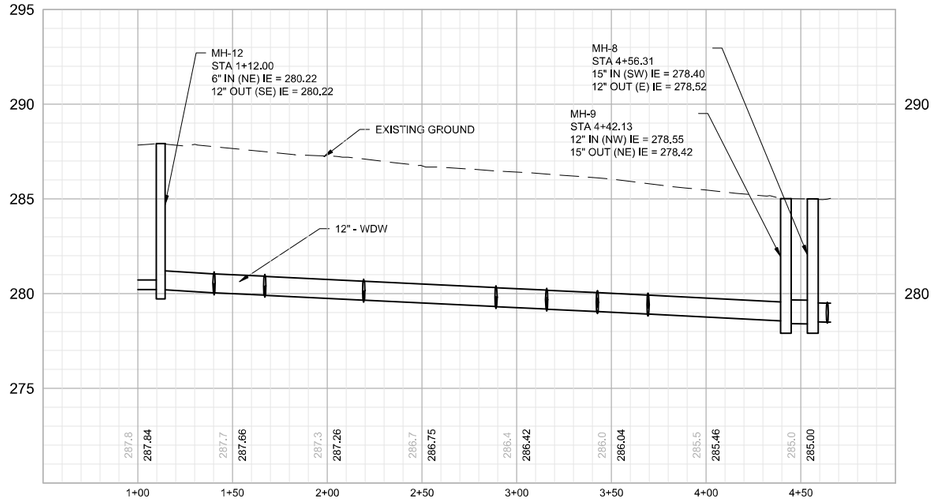
SHEET
01C-111



FWS PROFILE



WDW PROFILE



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PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

Gagnon, Jennifer N

STATE OF MAINE — Jennifer N. Gagnon PE13751 — LICENSED PROFESSIONAL ENGINEER

Digitally signed by Gagnon, Jennifer N
Date: 2024.09.09 18:10:27 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

PLAN AND PROFILE - FWS & WDW

0 1" 2"

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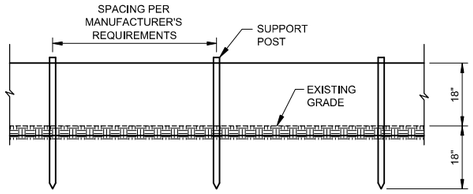
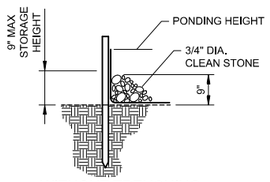
SCALE	1" = 40'

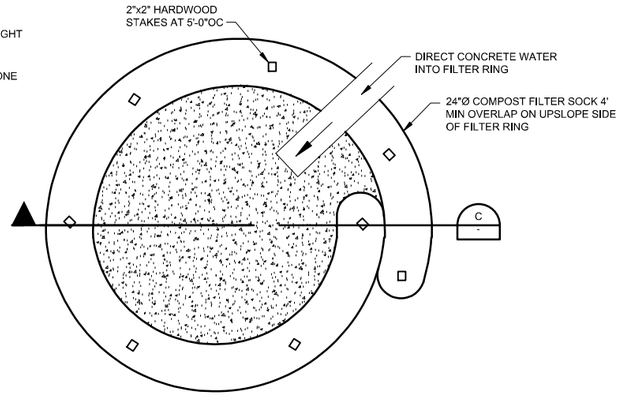
SHEET 01C-201



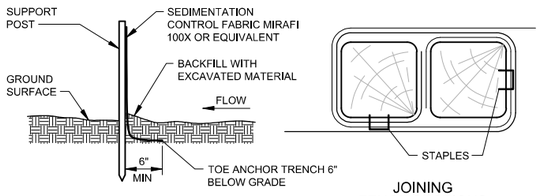
PLAN VIEW



WITHOUT TRENCHING



PLAN



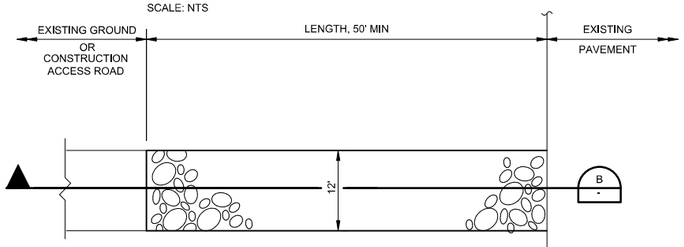
SECTION VIEW

JOINING FENCE SECTIONS

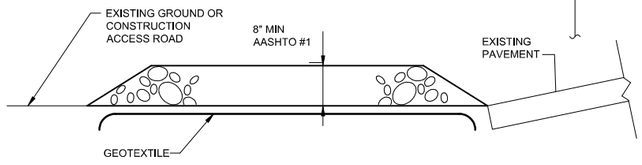
NOTES:
1. FABRIC SHALL MEET/EXCEED PROPERTIES IN MDEP BMP.
2. STAKES SHALL BE HARDWOOD OR STEEL EQUIVALENT.
3. SILT FENCE SHALL BE PLACED ON LEVEL EXISTING GRADE WITH BOTH ENDS OF THE FENCE RUN UPSLOPE 8 FEET AT 45 DEGREES TO PREVENT FLOW RUN-AROUND.
4. REMOVE SEDIMENT WHEN ACCUMULATIONS ARE HALF THE ABOVE-GROUND HEIGHT OF THE FENCE.

SILT FENCE DETAIL

SCALE: NTS



PLAN VIEW

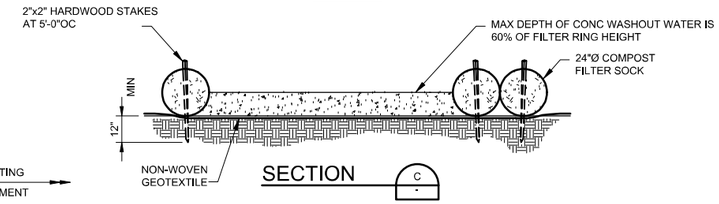


SECTION B

NOTES:
1. AGGREGATE: AGGREGATE SUBBASE
2. AGGREGATE THICKNESS: NOT LESS THAN 6 INCHES OF AASHTO #1.
3. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. LENGTH: AS REQUIRED, BUT NOT LESS THAN 50 FEET. GEOTEXTILE: MIRAFI 600X, OR EQUIVALENT TO BE PLACED OVER THE ENTIRE AREA TO BE COVERED WITH AGGREGATE. PIPING OF SURFACE WATER UNDER ENTRANCE SHALL BE PROVIDED AS REQUIRED.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO EXISTING DRIVES OR PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO TMI ACCESS ROAD SHALL BE REMOVED IMMEDIATELY.
6. A STOCKPILE OF AASHTO #1 STONE SHALL BE MAINTAINED NEARBY FOR USE.
7. IF EXCESS SEDIMENT IS BEING DEPOSITED ON TMI ACCESS ROADEXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE OR ADD WASH RACK.

ROCK CONSTRUCTION ENTRANCE

SCALE: NTS

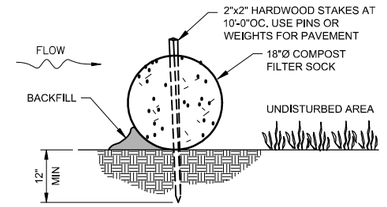


SECTION C

TYPICAL COMPOST SOCK CONCRETE WASHOUT RING

SCALE: NTS

NOTES:
1. IF NEEDED, INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. NON-WOVEN GEOTEXTILE SHALL MEET THE FOLLOWING EQUIVALENT REQUIREMENTS:
   PHYSICAL PROPERTY (TEST METHOD) WITH MINIMUM PERMISSIBLE VALUE
   GRAB TENSILE STRENGTH (ASTM D 4632) - 120 POUNDS
   GRAB TENSILE ELONGATION (ASTM D 4632) - 50%
   TRAPEZOID TEAR STRENGTH (ASTM D 4533) - 50 POUNDS
   CBR PUNCTURE STRENGTH (ASTM D 6241) - 310 POUNDS
   APPARENT OPENING SIZE (ASTM D 4751) - 0.212 MM (US #70 SIEVE)
   UV RESISTANCE (500 HOURS) (ASTM D 4355) - 70% STRENGTH RETENTION
3. 18"Ø FILTER SOCK MAY BE STACKED ONTO DOUBLE 24"Ø SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.



COMPOST FILTER SOCK

SCALE: NTS

NOTES:
1. MATERIAL TO BE MULTI-FILAMENT POLYPROPYLENE.
2. COMPOST FILTER SOCK SHALL BE PLACED ALONG THE BOUNDARY OF ANY TEMPORARY STOCKPILES A MINIMUM OF 4 DAYS AFTER CESSATION OF ACTIVITY.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
5. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. SOCKS SHALL BE REPLACED AFTER TWELVE MONTHS OF USE.
7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES AND SOCK SHALL BE REMOVED.

HDR

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jennifer N. Gagnon PE13751 LICENSED PROFESSIONAL ENGINEER

Gagnon, Jennifer N

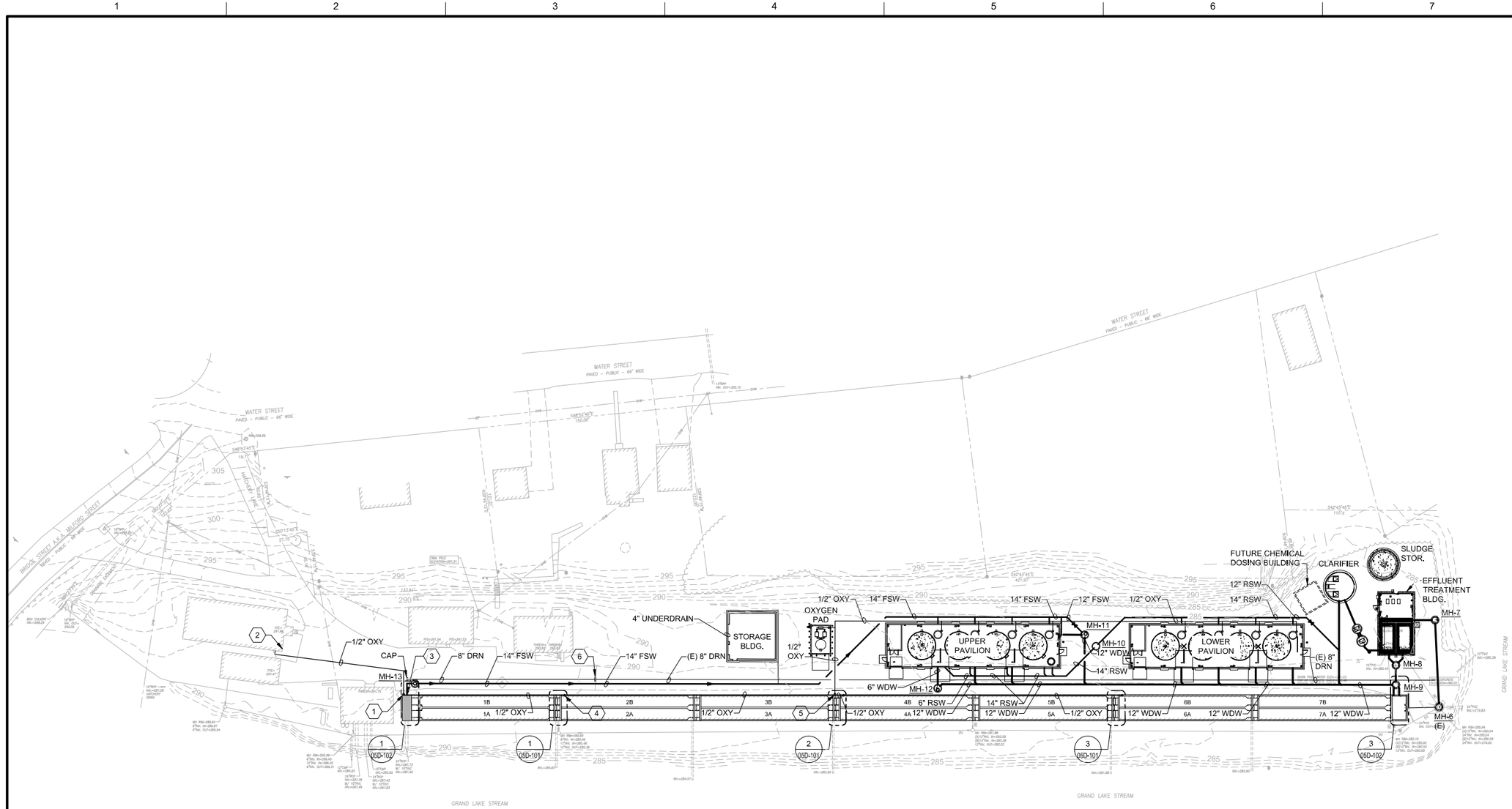
Digitally signed by Gagnon, Jennifer N
Date: 2024.09.09 18:12:37 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

EROSION CONTROL DETAILS

0 1" 2"

FILENAME	10357686-01C-501.DWG
SCALE	Custom
SHEET	01C-501



NOTE: EXISTING 8" PVC DRAIN IS SHOWN APPROX. 10'-0" FROM EXISTING RACEWAY WALL. FIELD VERIFY ACTUAL LOCATION AND DEPTH.

N

40 0 40 80
SCALE IN FEET

KEYED NOTES: (#)

1. RUN 3/4" OXY THRU EXISTING WALL AND ELBOW DOWN 30" BELOW GRADE. RUN 3/4" OXY TO EXISTING HATCH HOUSE.
2. RUN 3/4" OXY UP 24" ABOVE GRADE. PENETRATE EXISTING HATCH HOUSE WALL AND PROVIDE 3/4" ISOLATION VALVE W/ OXY METER AS SCHEDULED ON SHEET 00D-603.
3. 14" FSW PIPE FROM EXISTING WATER HEADBOX. PROVIDE WALL MOUNTED SLIDE GATE. SEE DETAIL 1/05D-102.
4. 1/2" OXY UP TO 2 THORPE STYLE OXY METERS. SEE SHEET 05D-101 & 05D-102. TYPICAL FOR 4 PLACES.
5. RUN 1" OXY UP ALONG RACEWAY AND PENETRATE RACEWAY STRUCTURE. TEE & RUN OXY EACH WAY SHOWN ALONG RACEWAY WALL USING SS PIPE CLAMP W/ SS HARDWARE.
6. REMOVE EXISTING CAP AND EXTEND EXISTING 8" TILE DRN UP TO EXISTING HEADBOX SLOPED 1%. SEE DETAIL 05D-102.

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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Jeffrey K. Chandler PE17167
LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:03:43-05'00'

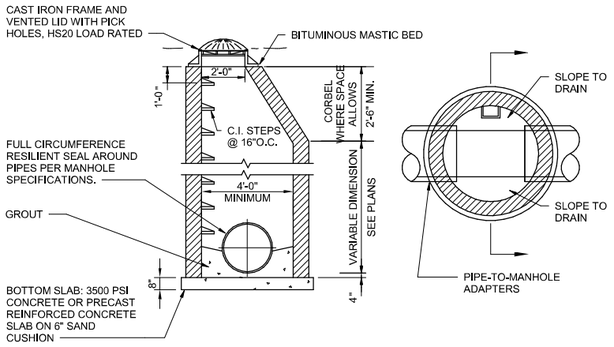
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

OVERALL SITE PIPING PLAN

0 1" 2"

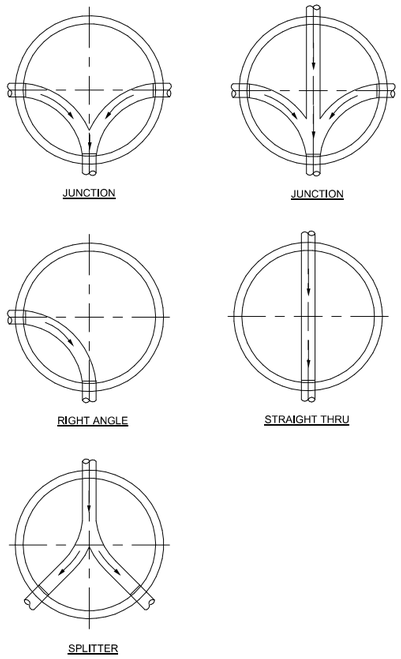
FILENAME 01D-101.DWG
SCALE 1" = 1'

SHEET
01D-101



MANHOLE NOTES:

1. CORBEL TO BE REPLACED WITH REINFORCED FLAT TOP, WHERE REQUIRED FOR CLEARANCE.
2. STEPS REQUIRED, UNLESS DELETED BY SPECIAL PROVISIONS.
3. UNLESS NOTED OTHERWISE, PROVIDE GROUT (SO THAT RESULTING TROUGH DIRECTS WATER FROM ALL PIPES) AT LEAST UP TO THE SPRING LINE OF THE DEEPEST PIPE. GROUT TROUGHS IN THE SHAPE OF CURVES, CROSSES, CONVERGING & DIVERGING WYES AND TEES DEPENDING ON THE PIPING PROPOSED. FORM TROUGHS TO THE O.D. OF PIPE-TO-MANHOLE ADAPTERS.



NOTES:
1. DEPTH OF CHANNELS TO BE 1/2 I.D. OF PIPE.
2. PROVIDE SMOOTH FLOW ACROSS BOTTOM OF MANHOLE.
3. FLOW CHANNEL SHALL HAVE TROWELED FINISH.

1 - MANHOLE DETAIL
12" = 1'-0"

2 - MANHOLE BOTTOM
12" = 1'-0"

ISSUE	DATE	DESCRIPTION
	09/11/2014	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:04:15-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

STANDARD PIPING DETAILS

0 1" 2"

FILENAME 10357686-01-U.rvt
SCALE 12" = 1'-0"

SHEET 01D-501

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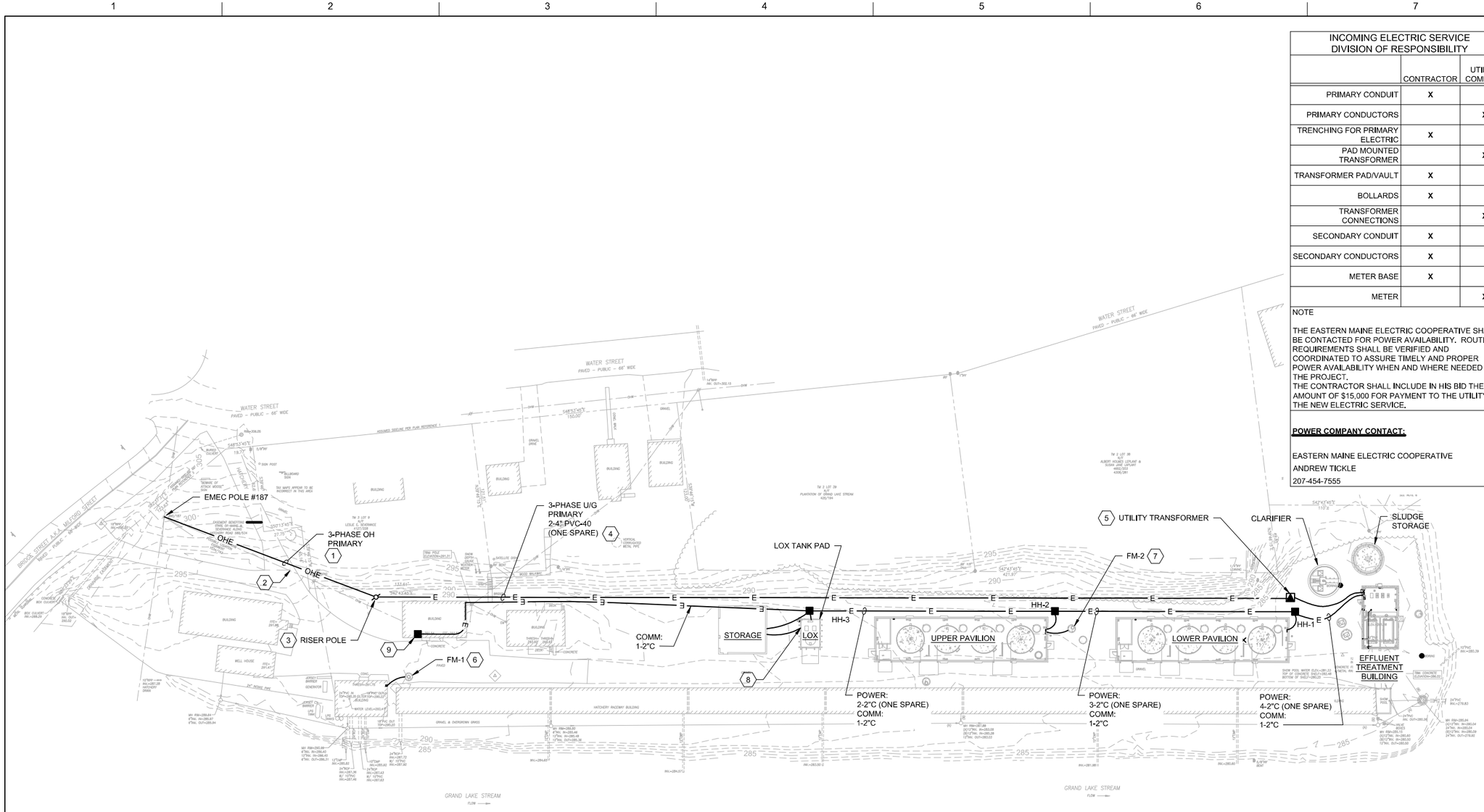


INCOMING ELECTRIC SERVICE DIVISION OF RESPONSIBILITY		
	CONTRACTOR	UTILITY COMPANY
PRIMARY CONDUIT	X	
PRIMARY CONDUCTORS		X
TRENCHING FOR PRIMARY ELECTRIC	X	
PAD MOUNTED TRANSFORMER		X
TRANSFORMER PAD/VAULT	X	
BOLLARDS	X	
TRANSFORMER CONNECTIONS		X
SECONDARY CONDUIT	X	
SECONDARY CONDUCTORS	X	
METER BASE	X	
METER		X

NOTE

THE EASTERN MAINE ELECTRIC COOPERATIVE SHALL BE CONTACTED FOR POWER AVAILABILITY. ROUTING REQUIREMENTS SHALL BE VERIFIED AND COORDINATED TO ASSURE TIMELY AND PROPER POWER AVAILABILITY WHEN AND WHERE NEEDED FOR THE PROJECT.
THE CONTRACTOR SHALL INCLUDE IN HIS BID THE AMOUNT OF $15,000 FOR PAYMENT TO THE UTILITY FOR THE NEW ELECTRIC SERVICE.

POWER COMPANY CONTACT:

EASTERN MAINE ELECTRIC COOPERATIVE
ANDREW TICKLE
207-454-7555

GENERAL NOTES:

1. REFER TO 00E601 FOR CONDUIT AND WIRE DETAILS.
2. UNDERGROUND CONDUITS SHALL BE ROUTED IN PVC CONDUIT BURIED IN EARTH. REFER TO 00E501 FOR TRENCH SECTION DETAILS.
3. COORDINATE SITE DUCT BANK ROUTINGS WITH SITE UTILITIES (I.E. PIPING) AND PHYSICAL SITE TO AVOID CONFLICT.
4. SPARE CONDUITS SHALL BE EQUIPPED WITH PULL CORD AND CAPPED AT EACH END. LABEL EACH END OF CONDUIT WITH SOURCE.
5. PROVIDE SEPARATE HANDHOLES FOR POWER AND COMM. ONE SHOWN FOR CLARITY.

KEYED NOTES: (#)

1. NEW 3-PHASE OH SPAN BY UTILITY COMPANY.
2. EXISTING SINGLE-PHASE LINE TO BE REPLACED WITH 3-PHASE LINE BY UTILITY COMPANY. EXISTING SERVICE TRANSFORMER TO BE RE-LOCATED TO NEW RISER POLE.
3. NEW RISER POLE BY UTILITY COMPANY. INSTALL CONDUIT RISER FOR PRIMARY CABLE PER UTILITY COMPANY REQUIREMENTS. COORDINATE EXACT POLE LOCATION AND REQUIRED TREE/BRANCH REMOVAL WITH OWNER AND UTILITY.
4. INSTALL PRIMARY CONDUIT PER UTILITY COMPANY REQUIREMENTS, CONDUIT TO BE 48" DEEP WITH SAND BEDDING AND SCREENED BACKFILL. PROVIDE CABLE PULL STRING.
5. INSTALL TRANSFORMER VAULT PER UTILITY COMPANY REQUIREMENTS INCLUDING GROUND RING, CABLE TERMINATIONS ARE BY UTILITY.
6. INSTALL FLOW METER FM-1 REMOTE DISPLAY IN EXISTING FILTER BUILDING. COORDINATE EXACT LOCATION WITH OWNER. PROVIDE 120V, 20A CIRCUIT FROM EXISTING BUILDING PANEL. PROVIDE 1/2"C WITH METER SIGNAL WIRE FROM SENSOR TO REMOTE-DISPLAY.
7. INSTALL FLOW METER FM-2 REMOTE DISPLAY IN UPPER PAVILION. PROVIDE 120V, 20A CIRCUIT FROM PANEL LP2. PROVIDE 1/2"C WITH METER SIGNAL WIRE FROM SENSOR TO REMOTE-DISPLAY.
8. PROVIDE TWO 3/4"C FROM STORAGE BUILDING PANEL LP1 TO OXYGEN TANK FOR LIGHT AND RECEPTACLE, SEE 05E-101 FOR DETAILS.
9. CONNECT ALARM SIGNAL CABLES TO EXISTING SECURITY PANEL IN HATCHERY BUILDING. FIELD-VERIFY LOCATION, AND COORDINATE REQUIREMENTS WITH OWNER AND SECURITY COMPANY PRIOR TO INSTALLATION. REFER TO 00E-502 FOR ADDITIONAL DETAILS.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	B. MURRAY
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Andrew D. Kaner
PE18016
LICENSED
PROFESSIONAL ENGINEER

Kaner, Andrew D.

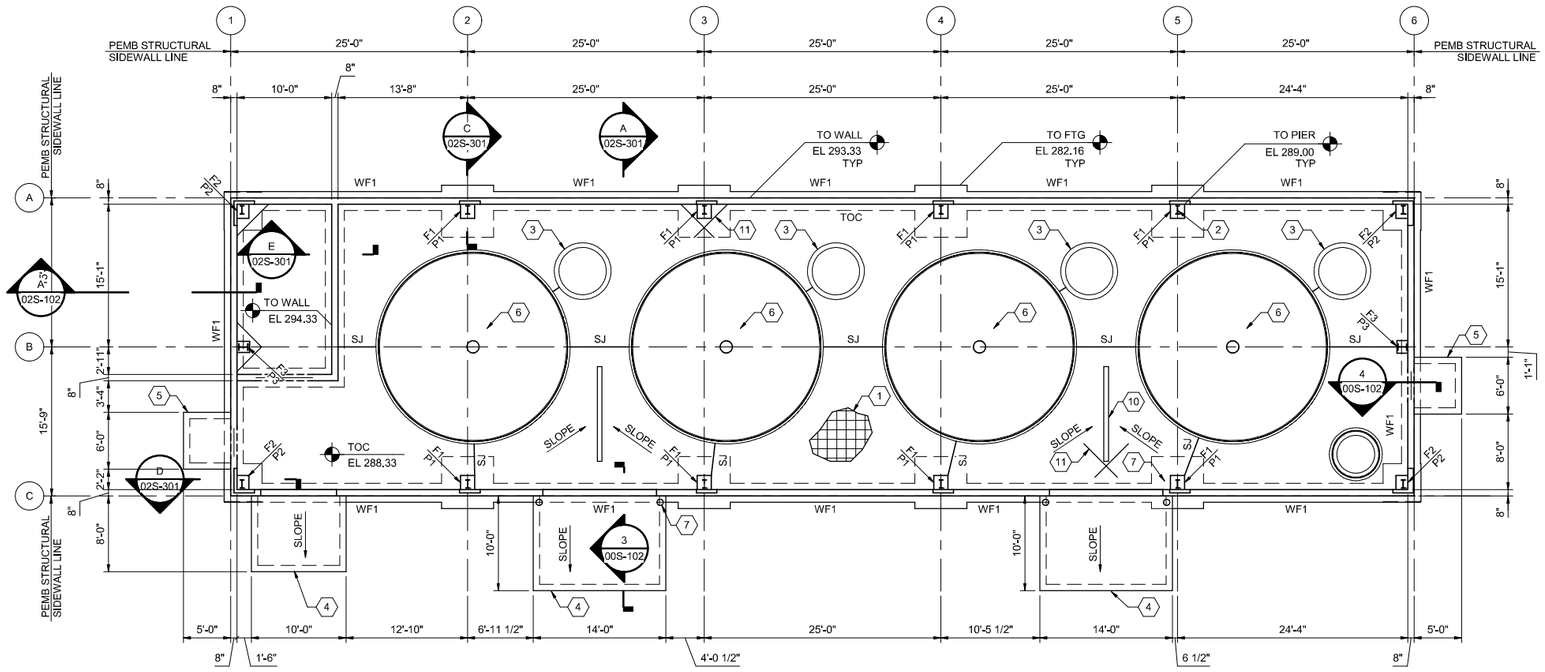
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

OVERALL ELECTRICAL SITE PLAN

0 1" 2"

FILENAME	10357686-01E-101.DWG
SCALE	1"-40'

SHEET 01E-101



FOUNDATION PLAN

1/8" = 1'-0"

FOOTING SCHEDULE - TANK PAVILION					
TYPE	SIZE	REINFORCEMENT	T.O. FOOTING ELEVATION	T.O. PIER ELEVATION	REMARKS
F1	5'-6"x5'-6"x1'-2"	(7)#6 EACH WAY BOTTOM	282.16	289'	SEE DETAIL 1/02S-302
F2	4'-0"x4'-0"x1'-2"	(5)#6 EACH WAY BOTTOM	282.16	289'	SEE DETAIL 2/02S-302
F3	3'-0"x3'-0"x1'-2"	(4)#6 EACH WAY TOP & BOTTOM	282.16	289'	SEE DETAIL 3/02S-302
WF1	2'-0"x1'-0"x CONT.	(3)#5 CONTINUOUS	282.16	NA	SEE DETAIL 1/02S-302

1 FOOTING SCHEDULE

NOT TO SCALE

PLAN NORTH

GENERAL NOTES:

1. SEE SHEET 00S-001 FOR GENERAL STRUCTURAL NOTES.
2. SEE 00S-100 SERIES SHEETS FOR TYPICAL STRUCTURAL DETAILS.
3. COLUMNS BY PRE-ENGINEERED METAL BUILDING MANUFACTURER.
4. REFER TO ARCHITECTURAL, PROCESS, MECHANICAL, PLUMBING, ELECTRICAL, AND DRAWINGS OF OTHER TRADES FOR LOCATIONS OF OPENINGS, DEPRESSIONS, FLOOR SLOPES AND DRAINS.

KEYNOTES: (#)

1. 4" CONCRETE SLAB WITH #4@12" OC, EW MID-DEPTH IN SLAB OVER COMPACTED CLEAN FREE-DRAINING GRANULAR FILL.
2. COLUMNS BY METAL BUILDING MANUFACTURER (MBM).
3. PRECAST WATER CONTROL STRUCTURE, SEE PLUMBING DRAWINGS.
4. CONCRETE APPROACH SLAB AT OVERHEAD DOOR. SEE DETAIL 3/00S-102.
5. CONCRETE STOOP, SEE DETAIL 4/00S-102 STOOP GRADE BEAM SHALL BE TIED INTO PERIMETER GRADE BEAM.
6. SEE SHEET 03S-103 FOR TANK SLAB.
7. 8" DIAMETER SCHEDULE 40 STEEL PIPE BOLLARD FILLED WITH CONCRETE (PAIN YELLOW). TYPICAL OF 8. SEE DETAIL 5/02S-302.
8. PROVIDE 2'-0"x2'-0" #4 BENT BAR CAST MID-DEPTH OF SLAB AT ALL LOCATIONS WHERE SLAB EXTENDS OVER FOUNDATION WALL. SEE DETAILS.
9. PROVIDE #4x48" LONG @ 12" OC CAST MID-DEPTH IN SLAB AT OVERHEAD DOOR LOCATIONS WHERE SLAB EXTENDS OVER FOUNDATION WALL. SEE DETAILS.
10. PREMOLDED TRENCH DRAIN, 3/4" LOWER THAN FFE. SEE PROCESS DRAWINGS.
11. (2) #4x5'-0" LONG CAST IN SLAB AT ALL RE-ENTRANT CORNERS. PLACE BARS 2" FROM CORNER. BEND BARS AS NECESSARY FOR PROPER PLACEMENT.

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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Bruce A. Bradley PE15026 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:04:07-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

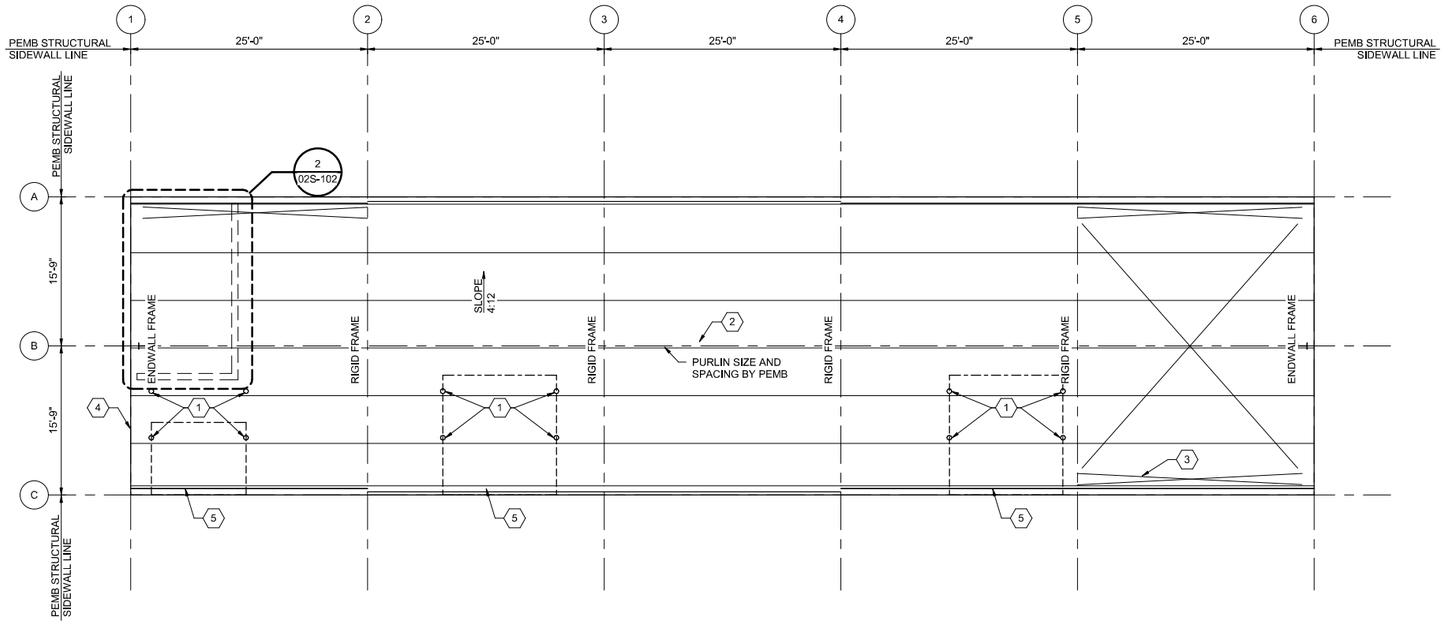
UPPER PAVILION FOUNDATION PLAN

0 1" 2"

FILENAME 10353741-02-S.rvt

SCALE As indicated

SHEET **02S-101**



ROOF FRAMING PLAN

1/8" = 1'-0"

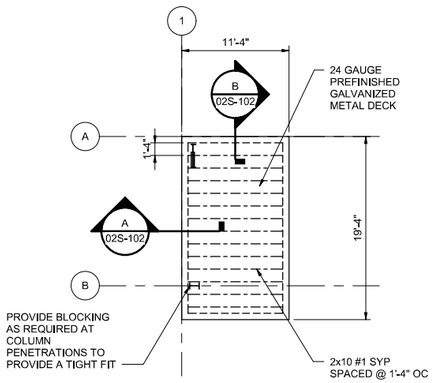
PLAN NORTH

GENERAL NOTES:

1. SEE SHEET 00S-001 FOR DESIGN STANDARDS AND BUILDING CODE INFORMATION.
2. SEE SHEET 00S-001 FOR DESIGN LOADS.
3. PIER CONFIGURATIONS ARE AS INDICATED ON SHEET 02S-302. IF THESE CONFIGURATIONS ARE NOT COMPATABLE TO THE PEMB DESIGN THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SUCH THAT MODIFICATIONS CAN BE MADE PRIOR TO PIER REINFORCEMENT FABRICATION AND CONSTRUCTION.
4. GENERAL ASSUMPTIONS HAVE BEEN MADE BY THE STRUCTURAL ENGINEER FOR THE FOUNDATION DESIGN. THE GENERAL CONTRACTOR AND PEMB SHALL SUBMIT FRAME REACTIONS TO THE ENGINEER FOR VIERIFICATION WITH THE FOUNDATIONS SHOWN. ADJUSTMENTS MAY BE REQUIRED IN THE FIELD PRIOR TO CONSTRUCTION. ANY CHANGES REQUIRED SHALL BE MADE AT NO ADDITIONAL COST TO THE PROJECT.
5. FRAME REACTIONS AND ANCHOR BOLT SETTING PLAN SHALL BE SUBMITTED TO THE ENGINEER CONCURRENTLY WITH THE CONCRETE REINFORCEMENT SHOP DRAWINGS FOR REVIEW AND APPROVAL. ANY CHANGES REQUIRED SHALL BE MADE AT NO ADDITIONAL COST TO THE PROJECT.
6. THE PEMB SHALL DESIGN ALL ANCHOR BOLTS. ANCHOR BOLT SIZES SHALL BE FURNISHED TO THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANCHOR BOLTS.
7. ALL RIGID FRAMES SHALL HAVE PINNED CONNECTIONS TO THE FOUNDATION.
8. COLUMN BASE PLATES SHALL BE LEVELED WITH LEVELING NUTS OR SHIMS AND GROUTED SOLID WITH 2" NON-SHRINK GROUT.
9. PEMB AND CONTRACTOR SHALL PROVIDE BRACING AS NECESSARY TO MAINTAIN FLAT AND LEVEL GIRTS DURING BUILDING ERECTION.

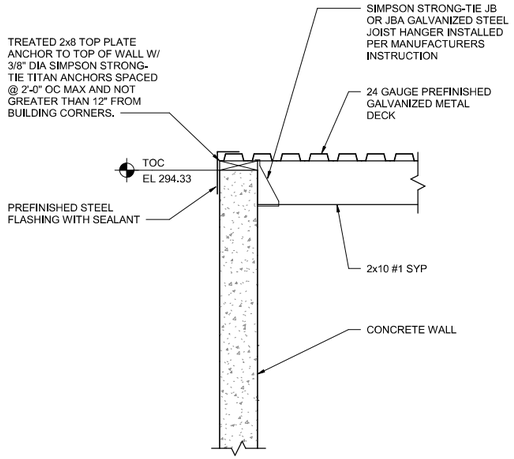
KEYNOTES: (#)

1. DENOTES APPROXIMATE POINT LOAD LOCATIONS FOR OVERHEAD DOOR TRACK. GENERAL CONTRACTOR SHALL COORDINATE WEIGHT AND LOCATION WITH PRE-ENGINEERED METAL BUILDING MANUFACTURER.
2. PURLIN SIZE, SPACING AND MATERIAL PROVIDED BY PEMB.
3. ANTICIPATED LOCATION OF CROSS BRACING IN ROOF AND WALLS.
4. MANDOOR FRAMING PROVIDED AND INSTALLED BY PEMB.
5. OVERHEAD DOOR FRAMING PROVIDED AND INSTALLED BY PEMB.



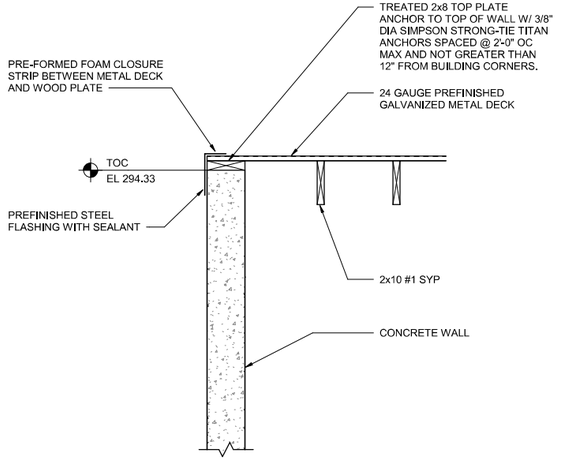
2 / 02S-102 STORAGE ROOM CEILING FRAMING PLAN

1/8" = 1'-0"



A / 02S-102 SECTION

3/4" = 1'-0"



B / 02S-102 SECTION

3/4" = 1'-0"

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CIVIL	J. GAGNON
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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Bruce A. Bradley PE15026 · LICENSED · PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:04:22-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILION FRAMING PLAN

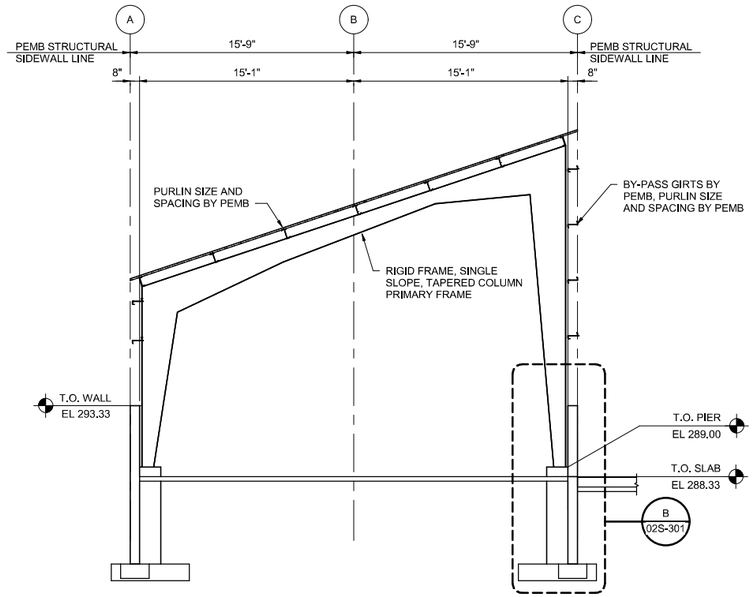
0 1" 2"

FILENAME 10353741-02-S.rvt

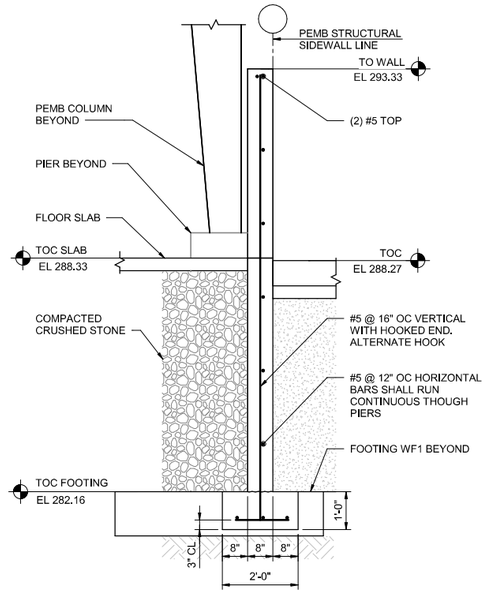
SCALE As indicated

SHEET 02S-102

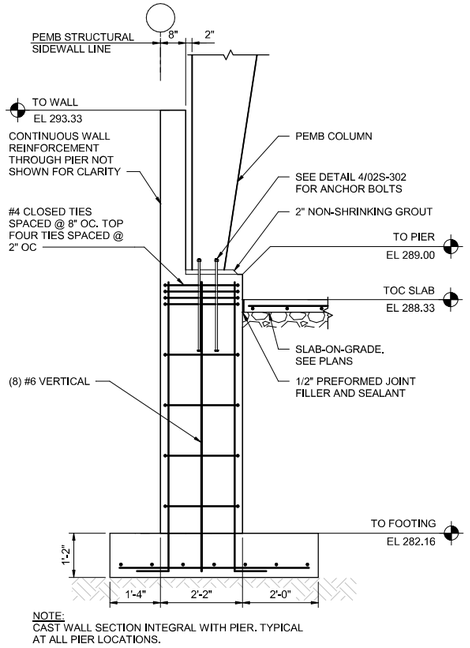
Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-02-S.rvt
9/6/2024 3:08:23 PM



A 02S-101 **PEMB SCHEMATIC SECTION**
3/16" = 1'-0"

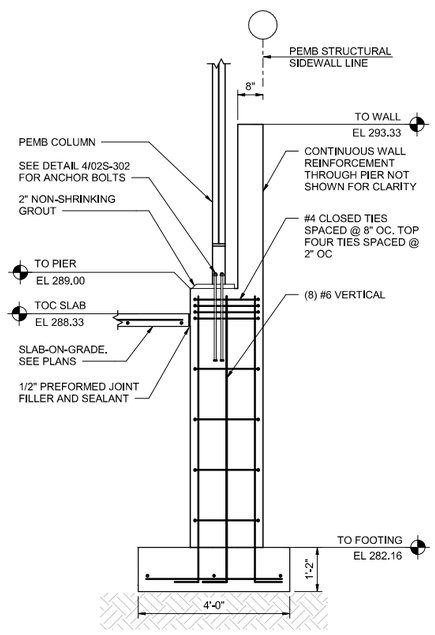


B 02S-301 **SECTION**
1/2" = 1'-0"

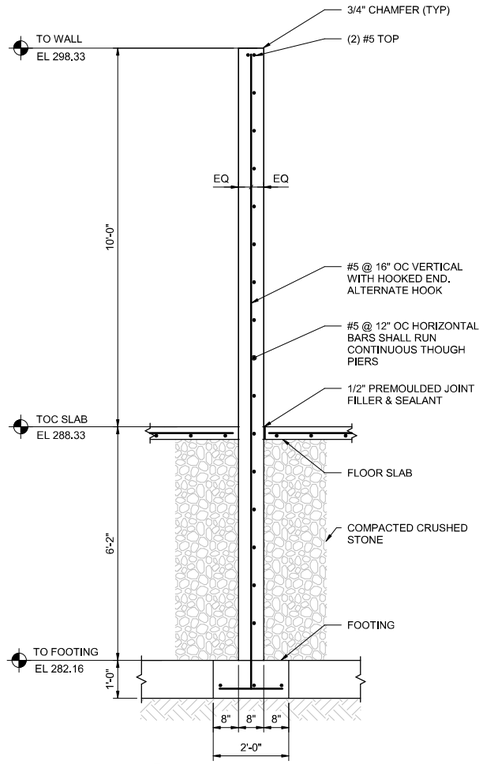


NOTE:
CAST WALL SECTION INTEGRAL WITH PIER. TYPICAL AT ALL PIER LOCATIONS.

C 02S-101 **PIER AT WALL SECTION**
1/2" = 1'-0"



D 02S-101 **PIER AT CORNER WALL SECTION**
1/2" = 1'-0"



E 02S-101 **WALL SECTION**
1/2" = 1'-0"

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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Bruce A. Bradley PE15026 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:04:46-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILION SECTIONS

0 1" 2"

FILENAME 10353741-02-S.rvt
SCALE As indicated

SHEET 02S-301

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-02-S.rvt
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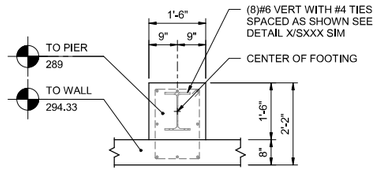
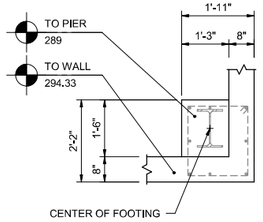
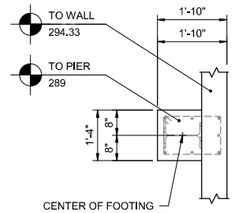


NOTE:
VERIFY PIER SIZE ADEQUACY WITH MBM PRIOR TO FORMING OR CASTING CONCRETE.

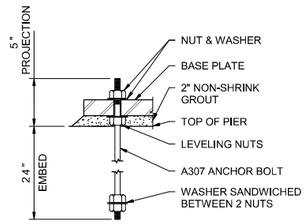
1 PIER TYPE P1
1/2" = 1'-0"



2 PIER TYPE P2
1/2" = 1'-0"

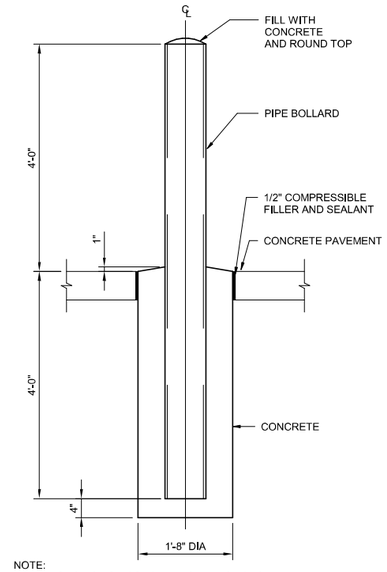


3 02S-101 PIER TYPE P3
1/2" = 1'-0"



NOTE:
ANCHOR BOLTS PROVIDED AND INSTALLED BY GENERAL CONTRACTOR (GC.) ANCHOR BOLT SIZES SPECIFIED BY PEMB.

4 02S-101 ANCHOR BOLT DETAIL
NOT TO SCALE



NOTE:
1. REINFORCING FOR CONCRETE SLAB NOT SHOWN.

5 - BOLLARD
NOT TO SCALE

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PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Bruce A. Bradley PE15026
LICENSED
PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:05:03-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILION DETAILS

0 1" 2"

FILENAME	10353741-02-S.rvt
SCALE	As indicated

SHEET
02S-302

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-02-S.rvt
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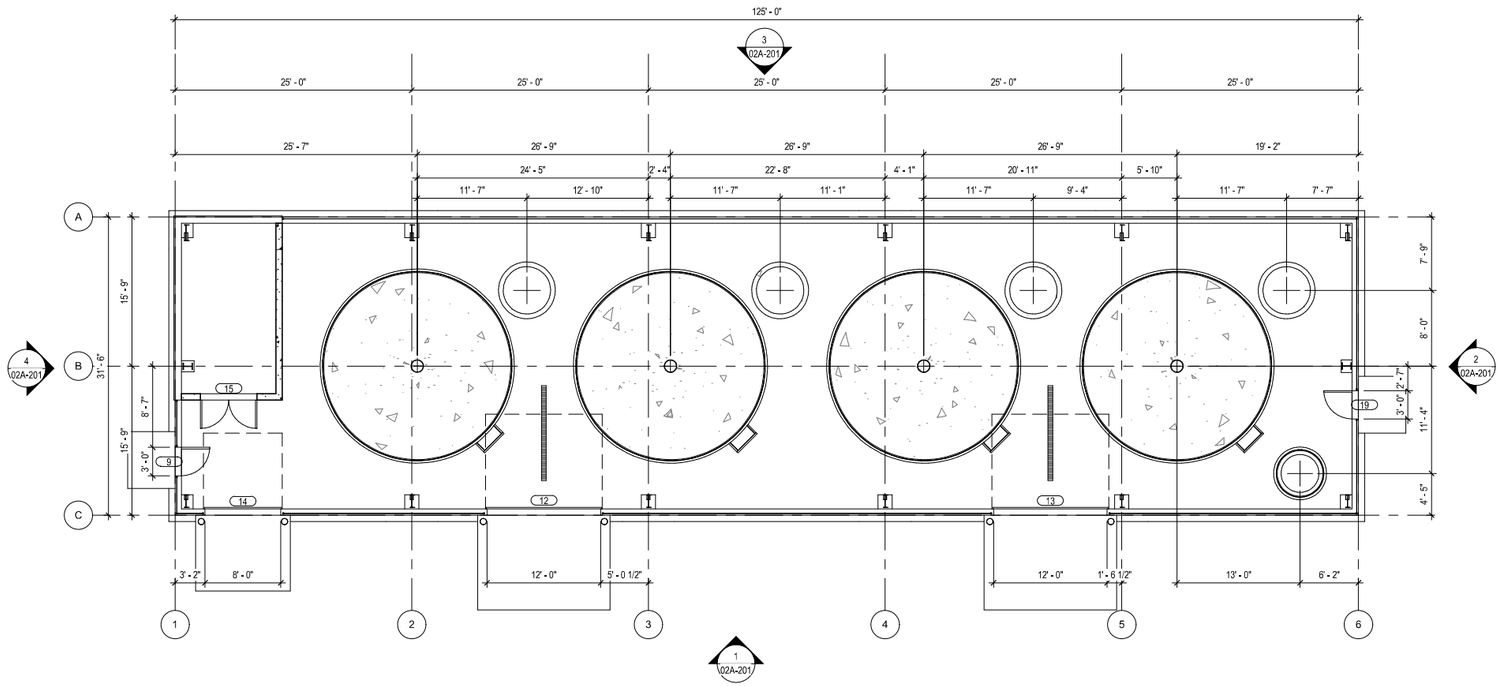

1 UPPER PAVILION FLOOR PLAN

1/8" = 1'-0"

TRUE NORTH

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
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MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

LICENSED ARCHITECT
Michael A. Baskin
5595
STATE OF MAINE

Digitally signed by Baskin, Michael Allan
Date: 2024.09.09 15:57:35-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILION PLAN

0 1" 2"

FILENAME

SCALE 1/8" = 1'-0"

SHEET 02A-101

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/v2022_10357686-A-Maine DIF_GrandLake Stream EXP.rvt
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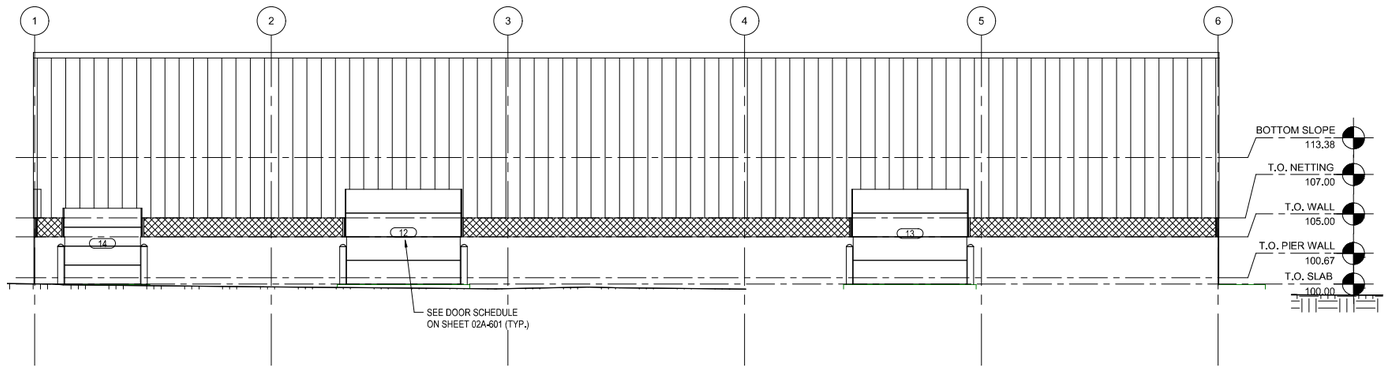
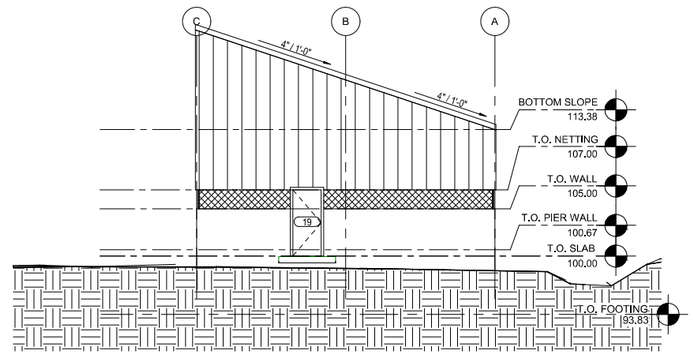
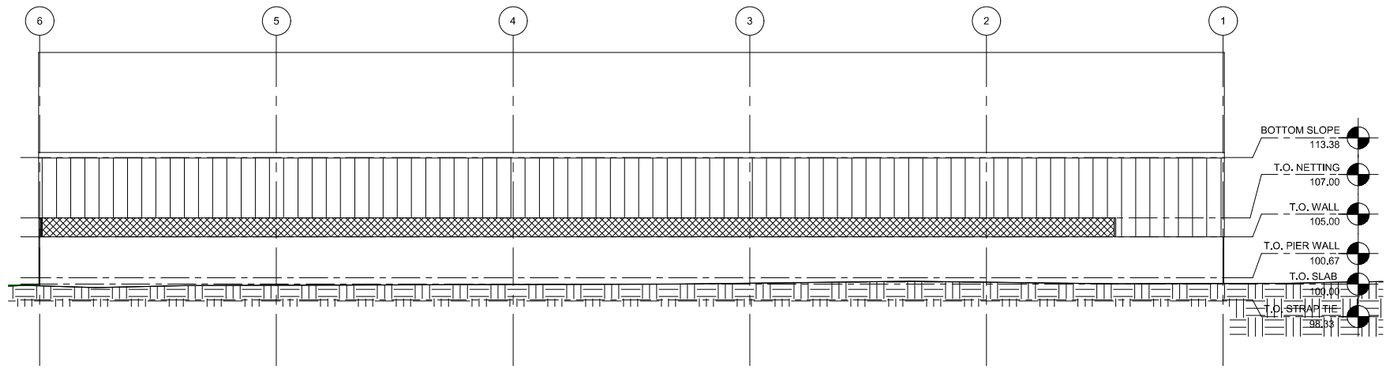


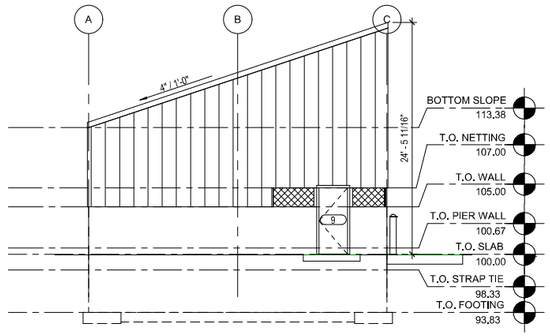
1 UPPER PAVILION SOUTH ELEVATION
1/8" = 1'-0"



2 UPPER PAVILION EAST ELEVATION
1/8" = 1'-0"



3 UPPER PAVILION NORTH ELEVATION
1/8" = 1'-0"



4 UPPER PAVILION WEST ELEVATION
1/8" = 1'-0"

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/v2022_10357686-A-Maine DIF_GrandLake Stream EXP.rvt
9/6/2024 3:11:20 PM

ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
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PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

LICENSED ARCHITECT
Michael A. Baskin
5595
STATE OF MAINE

Digitally signed by Baskin, Michael Alan
Date: 2024.09.09 15:58:00-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

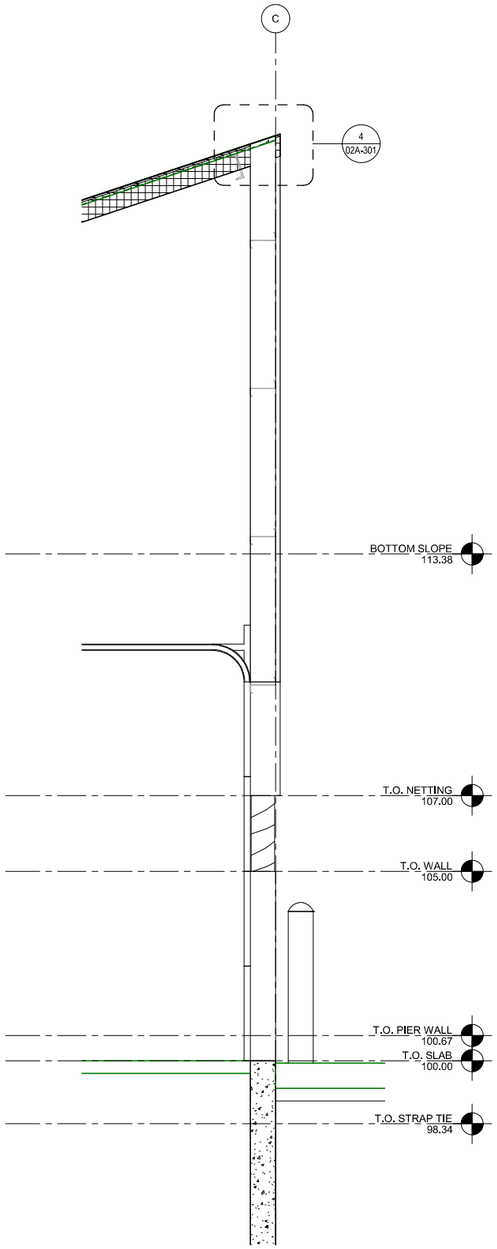
UPPER PAVILION EXTERIOR ELEVATIONS

0 1" 2"

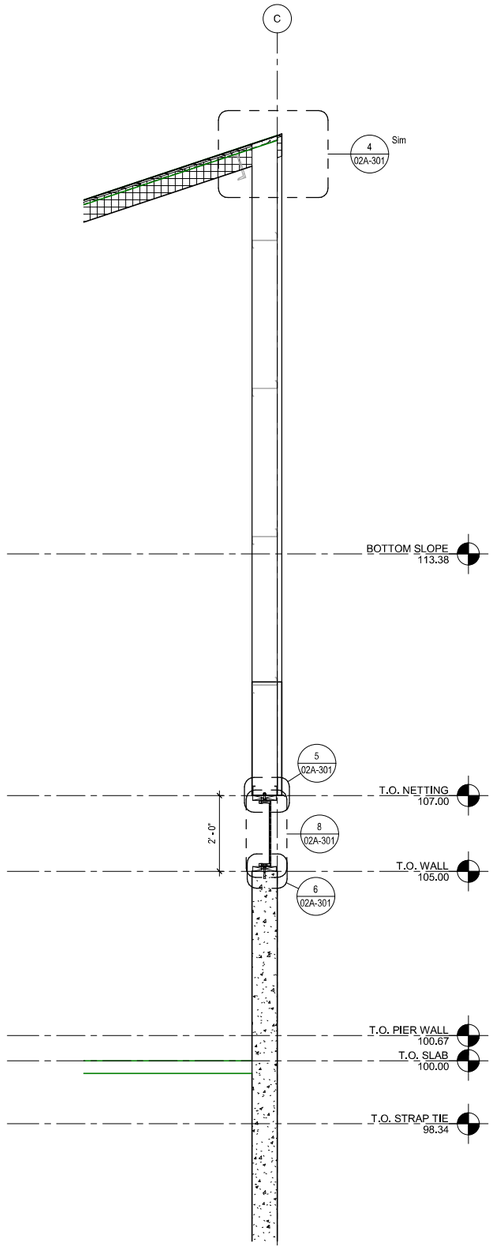
FILENAME

SCALE 1/8" = 1'-0"

SHEET
02A-201



1 Section 1
1/2" = 1'-0"



2 Section 2
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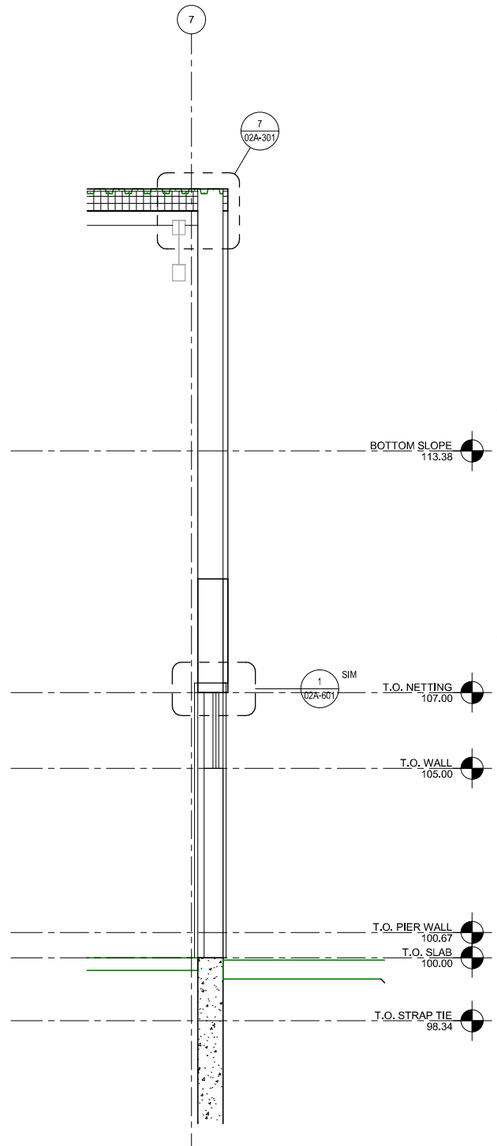
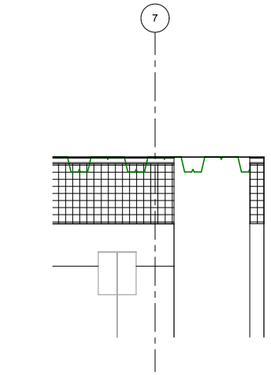
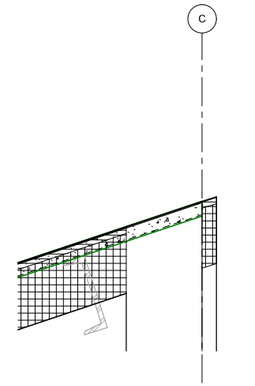


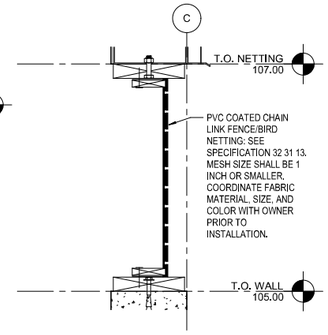
3 Section 3
1/2" = 1'-0"



7 Section 3 - Callout 1
1 1/2" = 1'-0"



4 Section 1 - Callout 1
1 1/2" = 1'-0"



8 Section 2 - Callout 3
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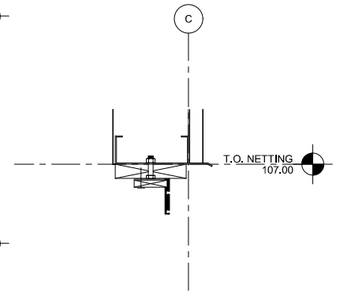
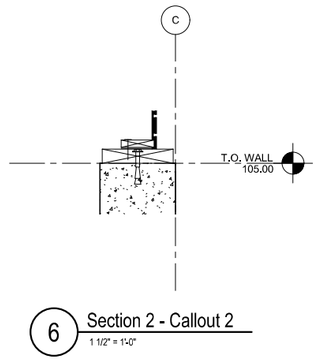


5 Section 2 - Callout 1
1 1/2" = 1'-0"



6 Section 2 - Callout 2
1 1/2" = 1'-0"

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9/6/2024 3:11:17 PM

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PROJECT NUMBER	10357686

LICENSED ARCHITECT
Michael A. Baskin
5595
STATE OF MAINE

Digitally signed by Baskin, Michael Alan
Date: 2024.09.09 15:58:52-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILLION WALL SECTION & DETAILS

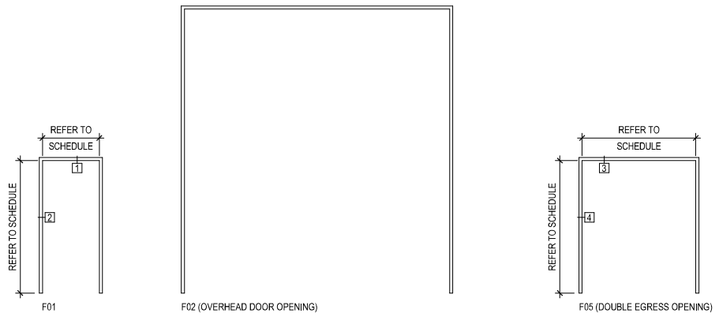
0 1" 2"

FILENAME

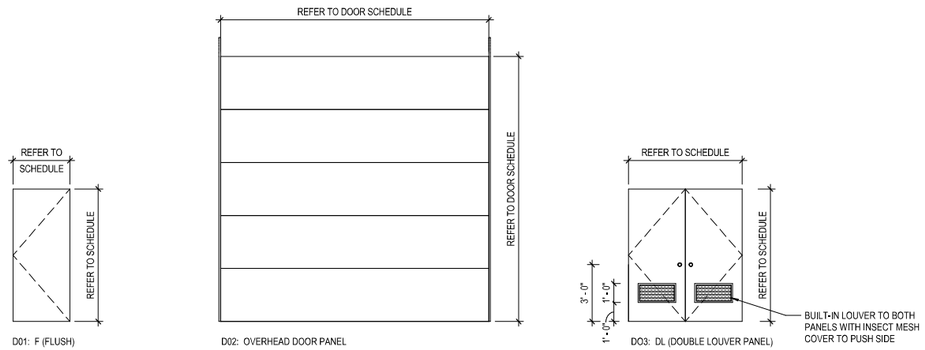
SCALE As indicated

SHEET
02A-301

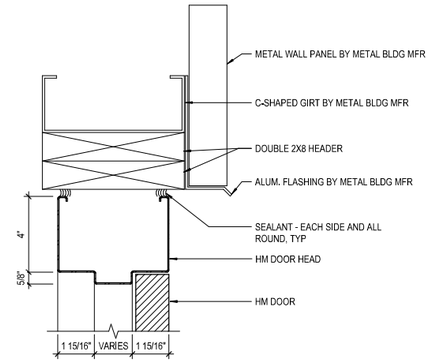
DOOR AND FRAME SCHEDULE																
IDENTIFICATION				DIMENSIONS					DOOR TYPE	PANEL		FRAME			FIRE RATING	HARDWARE GROUP	NOTES
LEVEL	ROOM NO.	ROOM NAME	DOOR NO.	OPENING WIDTH			H	T		Material	Finish	TYPE	Material	Finish			
				W1	W2	Total Width											
T.O. SLAB	201	FEED STORAGE	15	3'-0"	3'-0"	6' - 0"	7' - 0"	2"	D03	METAL	PAINTED	F05	METAL	PAINTED	N/A	2	
T.O. SLAB	200	TANK ROOM	9	-	-	3' - 0"	7' - 0"	2"	D01	METAL	PAINTED	F01	METAL	PAINTED	N/A	2	
T.O. SLAB	200	TANK ROOM	12	-	-	12' - 0"	12' - 0"	2"	D02	METAL	PAINTED	F02	METAL	PAINTED	N/A	2	
T.O. SLAB	200	TANK ROOM	13	-	-	12' - 0"	12' - 0"	2"	D02	METAL	PAINTED	F02	METAL	PAINTED	N/A	2	
T.O. SLAB	200	TANK ROOM	14	-	-	8' - 0"	8' - 0"	2"	D02	METAL	PAINTED	F02	METAL	PAINTED	N/A	2	
T.O. SLAB	200	TANK ROOM	19	-	-	3' - 0"	7' - 0"	2"	D01	METAL	PAINTED	F01	METAL	PAINTED	N/A	2	



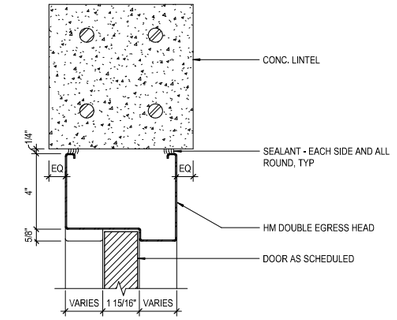
DOOR FRAME TYPES



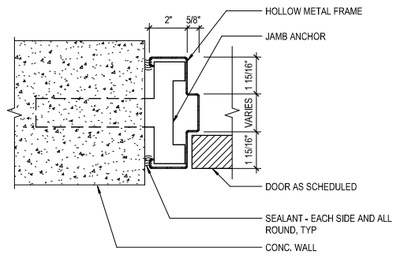
DOOR TYPES



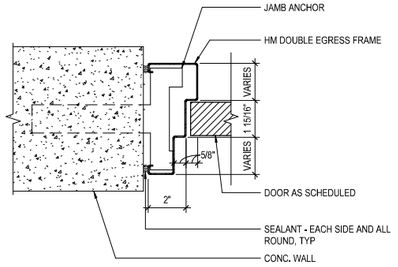
1 HEAD - HM DOOR
3" = 1'-0"



3 HEAD - HM DOUBLE EGRESS DOOR
3" = 1'-0"



2 JAMB - HM DOOR
3" = 1'-0"



4 JAMB - HM DOUBLE EGRESS DOOR
3" = 1'-0"

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/v2022_10357686-A-Maine DIF_GrandLake Stream EXP.rvt
9/6/2024 3:11:13 PM

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

LICENSED ARCHITECT
Michael A. Baskin
5595
STATE OF MAINE

Digitally signed by Baskin, Michael Alan
Date: 2024.09.09 15:59:33-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILION DOOR SCHEDULE AND DETAILS

0 1" 2"

FILENAME

SCALE As indicated

SHEET 02A-601

KEYED NOTES ⟨#⟩

1 TYP. SCREENED SIDE OVERFLOW BOX OF REARING TANK

2 TYP. 20' DIA. DUAL FLOW REARING TANK

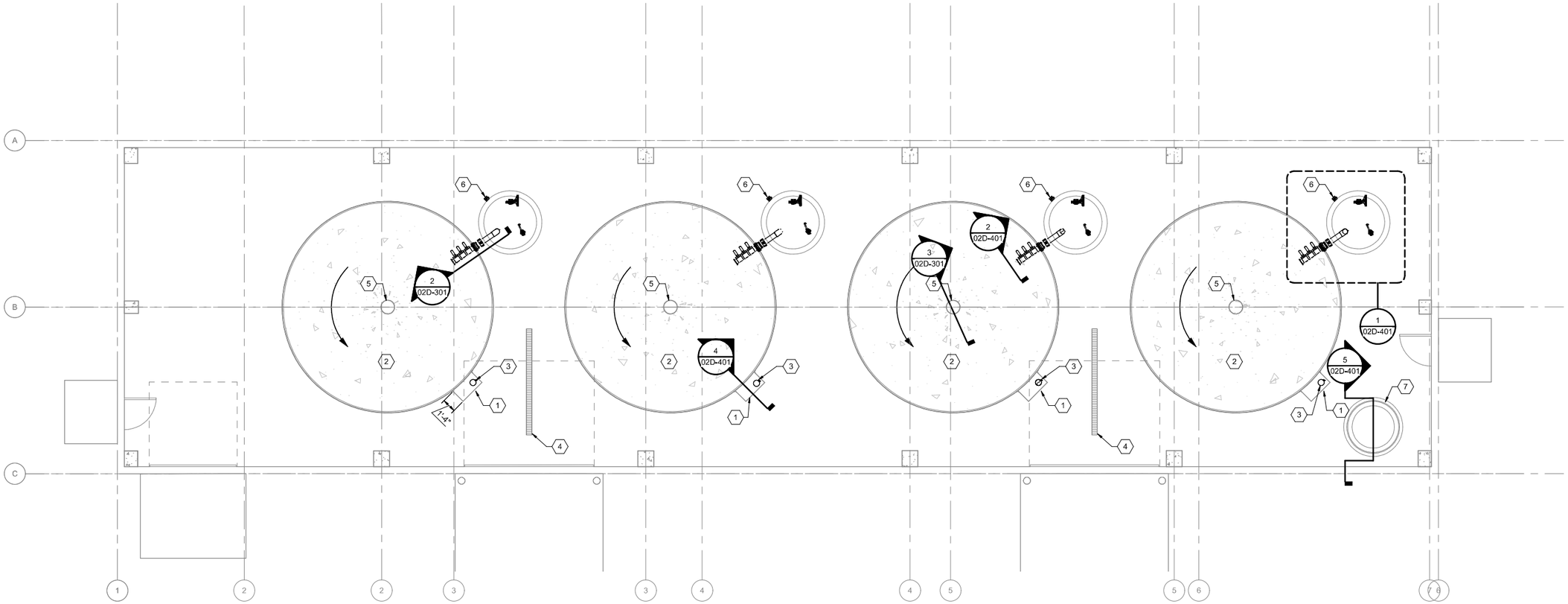
3 TYP. 4" REMOVABLE OVERFLOW STANDPIPE FOR REUSE OF 85% OF TANK FLOW

4 4" INSIDE WIDTH PRE-MOLDED TRENCH DRAIN

5 TYP. BOTTOM DRAIN SUMP LEADS FLOW LADEN WITH SOLIDS TO DRUMFILTER (15% OF TANK FLOW)

6 OXY METER

7 WATER PRIORIZATION LEVEL CONTROL WEIR BOX



0 2' 4' 8'

1 02D-101 ABOVE FLOOR PROCESS PIPING PLAN

3/16" = 1'-0"

N

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CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Jeffrey K. Chandler PE17167
LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:04:44-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILION
ABOVE FLOOR PROCESS PIPING PLAN

0 1" 2"

FILENAME 10353741-02-D.rvt

SCALE 3/16" = 1'-0"

SHEET **02D-101**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-02-D.rvt
9/6/2024 3:12:16 PM

KEYED NOTES (#)

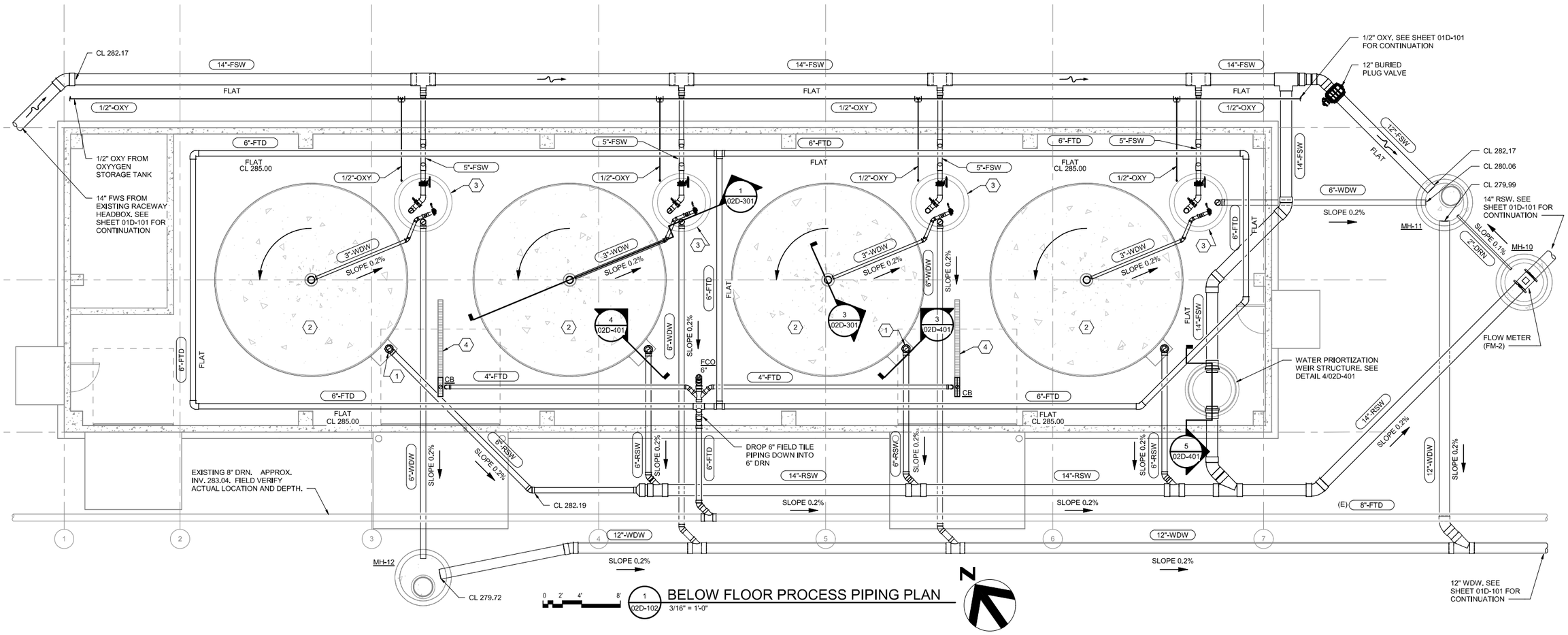
1 TYP. SCREENED SIDE OVERFLOW BOX OF REARING TANK

2 TYP. 20' DIA. DUAL FLOW REARING TANK

3 TYP. 5'-0" ID VALVE BASIN

4 4" INSIDE WIDTH PRE-MOLDED TRENCH DRAIN

(FTD) = FIELD TILE DRAIN PIPING. N-12-HDPE PERFORATED PIPE MEETING SPEC ASTM F477 OR EQUAL UNLESS NOTED OTHERWISE



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STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER

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Date: 2024.09.09 12:05:12-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILION
BELOW FLOOR PROCESS PIPING PLAN

0 1" 2"

FILENAME	10353741-02-D.rvt
SCALE	3/16" = 1'-0"
SHEET	02D-102

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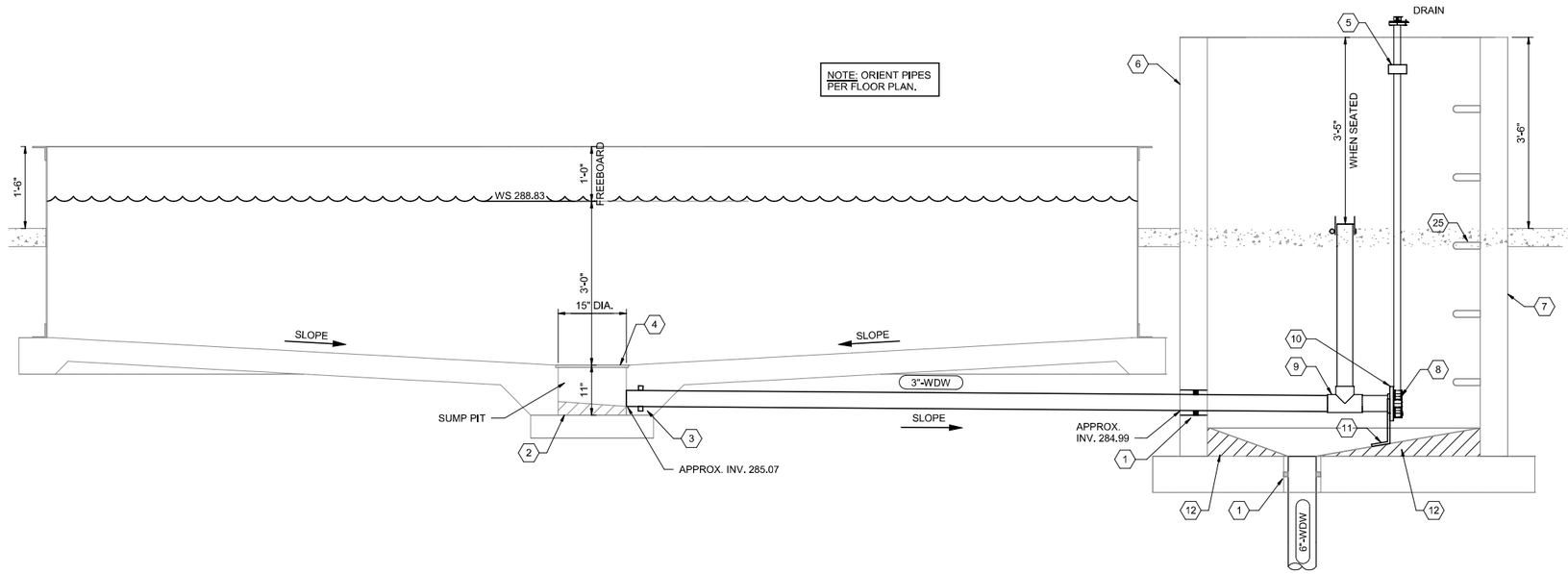
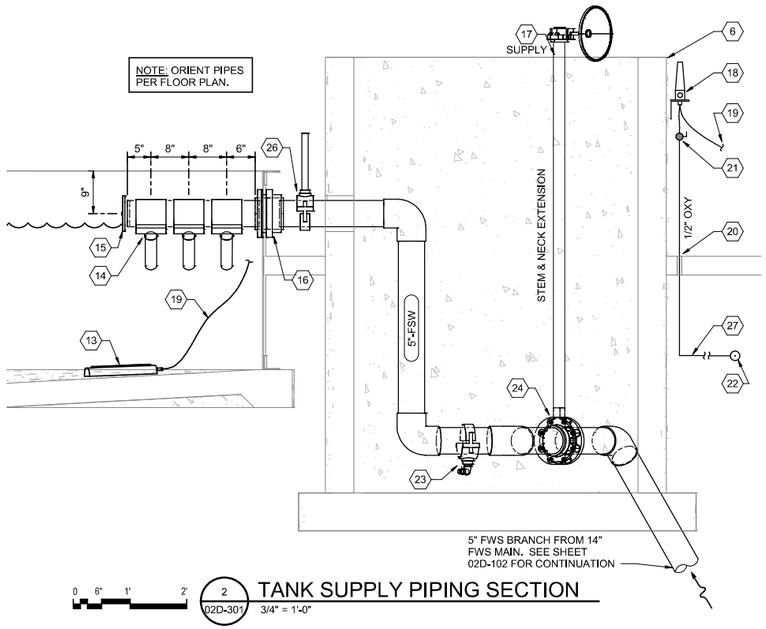


0 6" 1' 2'

1 / 02D-301 TANK DRAIN PIPING SECTION

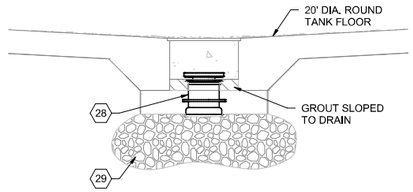
3/4" = 1'-0"



0 6" 1' 2'

2 / 02D-301 TANK SUPPLY PIPING SECTION

3/4" = 1'-0"



0 6" 1' 2'

3 / 02D-301 PAVILION HYDROSTATIC PRESSURE RELIEF VALVE SECTION

3/4" = 1'-0"

KEYED NOTES

1 LINKAGE TYPE SEAL

2 SLOPE GROUT TO DRAIN

3 FIELD APPLIED NON-SWELLING WATERSTOP

4 FISH SCREEN PER STRUCTURAL SHEETS

5 GALV. OR SS VALVE & NECK SUPPORT 2" CLEAR BELOW MANHOLE RIM FOR EACH VALVE

6 VALVE BASIN

7 TOPLESS MANHOLE WITH STEPS & CLEAN, SMOOTH OVER SURFACE

8 KNIFE GATE VALVE WITH STEM & NECK EXTENSION

9 SCH 40 PVC TEE SHOWN WITHOUT UPSTREAM 45 DEGREE BEND FOR CLARITY, INCLUDE BEND & ORIENTATE PER PLAN 1/02D-401

10 PVC ONE-PIECE SOCKET FLANGE

11 SUPPORT FLANGE OR PIPE TO GROUT W/ SS HARDWARE

12 GROUT SLOPED ALL AROUND TO DRAIN

13 CERAMIC OXYGEN DIFFUSER

14 ORIENT NOZZLES SIMLAR TO DETAIL 2/02D-401

15 EXPANSION PLUG

16 TANK ADAPTER: SCH 80 PVC BULKHEAD WITH AT LEAST 8.75" O.D. BODY (FPT TOWARD TANK)

17 WEATHERPROOF GEAR OR LEVER WITH AT LEAST 13 POSITIONS WITHOUT WING NUTS & WITHOUT SET SCREWS

18 SS BRACKET MOUNTED THORPE STYLE OXYGEN METER (0-7 SLPM) WITH TOP 1" B.T.O.C., SHOWN ON OPPOSITE SIDE FOR CLARITY, LOCATE PER PLAN

19 1/4" HOSE TO OXYGEN DIFFUSER

20 TYP. PIPE PENETRATION THRU FLOOR

21 CONNECT ISOLATION BALL VALVE TO METER WITH ADAPTERS AND HOSE OR COPPER PIPE

22 1/2" OXY MAIN APPROX. 21" BELOW FLOOR

23 CURBSTOP VALVE WITH SEMI-PERMANENT SQUARE OPERATOR FOR WINTERIZATION/DRAIN/SEDIMENT FLUSH

24 BUTTERFLY VALVE (FISH TANK SUPPLY VALVE)

25 MANHOLE STEPS

26 5" SADDLE TAP W/ 1" SIGHT GLASS

27 BURIED 1/2" OXY

28 4" FLOOR MOUNTED HYDROSTATIC PRESSURE RELIEF VALVE EQUAL TO PENN-TROY A2550RSN/4

29 CLEAN CRUSHED STONE

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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Jeffrey K. Chandler PE17167 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:05:29-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILION TANK SECTIONS

0 1" 2"

FILENAME 10353741-02-D.rvt

SCALE 3/4" = 1'-0"

SHEET **02D-301**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-02-D.rvt
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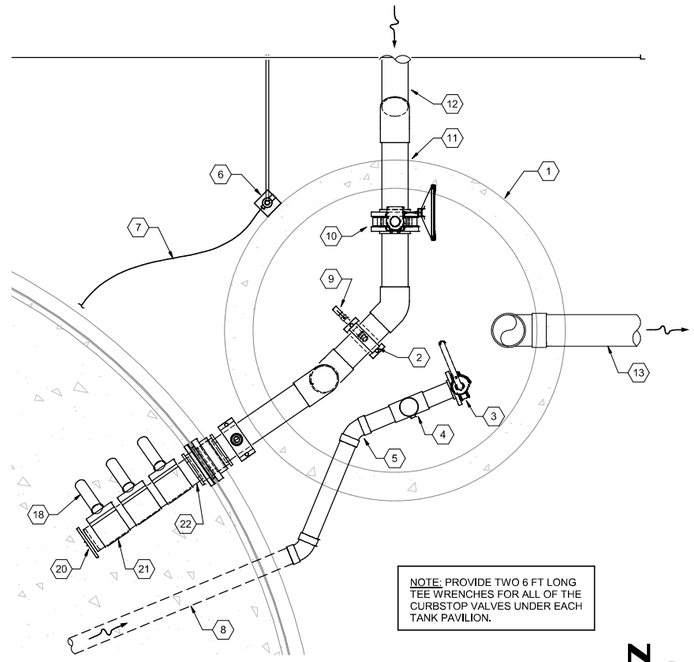
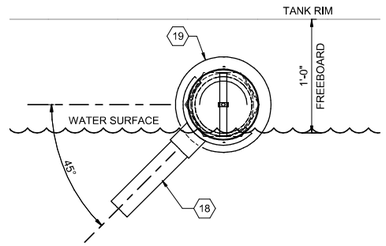


NOTE: PROVIDE TWO 6 FT LONG TEE WRENCHES FOR ALL OF THE CURBSTOP VALVES UNDER EACH TANK PAVILION.

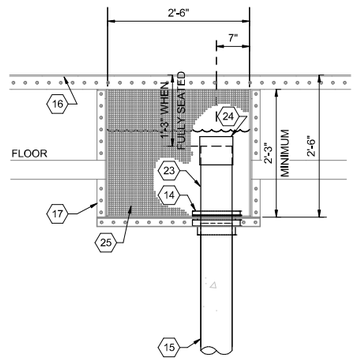
N

0 6" 1' 2'

1 / 02D-401 ENLARGED UPPER PAVILION VALVE BASIN PLAN
3/4" = 1'-0"

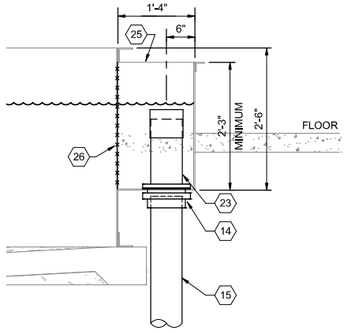


2 / 02D-401 SUPPLY HEADER END SECTION
NOT TO SCALE



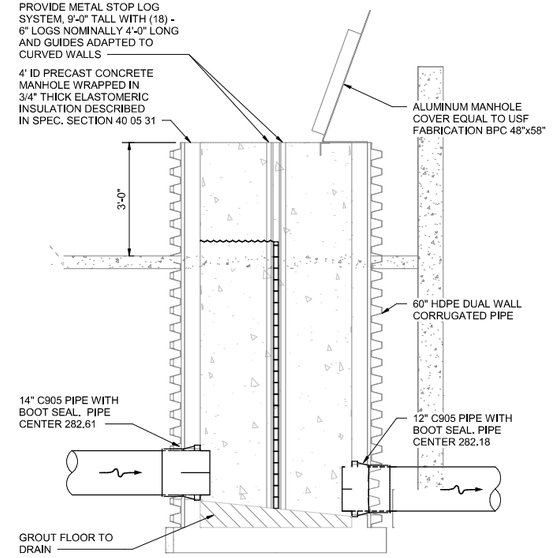
0 6" 1' 2'

3 / 02D-401 TANK OVERFLOW DETAIL
3/4" = 1'-0"



0 6" 1' 2'

4 / 02D-101 TANK OVERFLOW SECTION
3/4" = 1'-0"



5 / 02D-401 WATER PRIORIZATION WEIR STRUCTURE SECTION
NOT TO SCALE

KEYED NOTES (#)

1 TYP. 5'-0" ID VALVE BASIN

2 SCH 40 PVC PIPE WITH METAL SERVICE SADDLE WITH FEMALE THREADED 3/4" OUTLET DOWN. TURN CURBSTOP VALVE WITH GALV. STEEL STREET EL.

3 KNIFE GATE VALVE FOR DRAINING TANK

4 TEE CLOSE TO BEND WITH STANDPIPE FOR OVERFLOW/LEVEL CONTROL

5 45 DEGREE BEND CLOSE TO WALL

6 OXY METER

7 1/4" HOSE TO OXYGEN DIFFUSER

8 3" DRAIN & OW FROM FISH TANK

9 CURBSTOP VALVE WITH SEMI-PERMANENT SQUARE OPERATOR FOR WINTERIZATION/DRAIN/SEDIMENT FLUSH

10 BUTTERFLY VALVE (FISH TANK SUPPLY VALVE)

11 DUCTILE IRON PIPE THRU LINKAGE SEAL

12 5" SUPPLY BRANCH FROM 14" MWS SUB-MAIN

13 6" WDW

14 PVC BULKHEAD/ TANK ADAPTER (SOCKET x SOCKET)

15 6" RSW CONTINUE TO 14" RSW MAIN

16 TANK TOP FLANGE

17 SIDE BOX FLANGE

18 9" LENGTH OF 2" SCH 40 PVC

19 TANK ADAPTER: SCH 80 PVC BULKHEAD WITH AT LEAST 8.75" O.D. BODY (FPT TOWARD TANK)

20 EXPANSION PLUG

21 5x2 SCH 40 GLUE-ON SADDLE

22 5" SUPPLY TO FISH TANK

23 REMOVABLE STANDPIPIPE, DO NOT SOLVENT CEMENT

24 RUBBER COUPLING

25 FLANGED SS WATERTIGHT OPEN TOPPED BOX BY TANK MANUFACTURER BOLTED TO MATCHING OPENING IN TANK WALL WITH 16 GAGE SS PERFORATED SCREEN (1/4" HOLES, 58% OPEN AREA) SANDWICHED WITH GASKETS BETWEEN TANK AND BOX FLANGES. FOR EACH TANK ALSO FURNISH A LOOSE 18 GAGE SS PERFORATED SCREEN (5/32" HOLES, 64% OPEN AREA) FOR MDGIF TO TEMPORARILY TIE TO UNSANDWICHED AREA OF 16 GAGE SCREEN

26 11.25 DEG BEND

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PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Jeffrey K. Chandler PE17167 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:05:46-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILION ENLARGED PLAN & DETAILS

0 1" 2"

FILENAME 10353741-02-D.rvt
SCALE As indicated

SHEET 02D-401

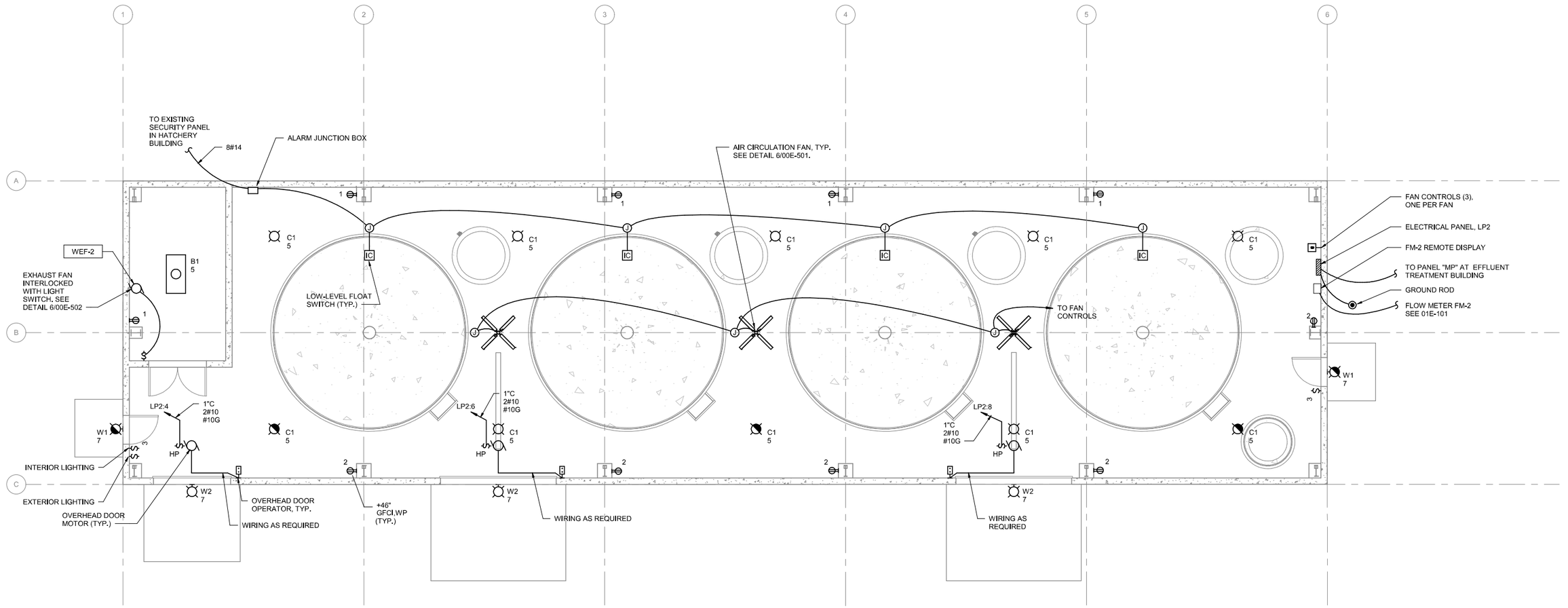
Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-02-D.rvt
9/6/2024 3:11:59 PM

PLAN NORTH

TRUE NORTH

GENERAL NOTE:

1. LUMINAIRES INDICATED AS EMERGENCY SHALL REMAIN ON AT ALL TIMES (NOT SWITCHED).



0 2" 4' 8'

UPPER PAVILION - ELECTRICAL PLAN

3/16" = 1'-0"

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CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
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PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Andrew D. Kaner PE18016 · LICENSED PROFESSIONAL ENGINEER

Kaner, Andrew D

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER PAVILION ELECTRICAL PLAN

0 1" 2"

FILENAME 10357686-02-E.rvt

SCALE 3/16" = 1'-0"

SHEET 02E-101

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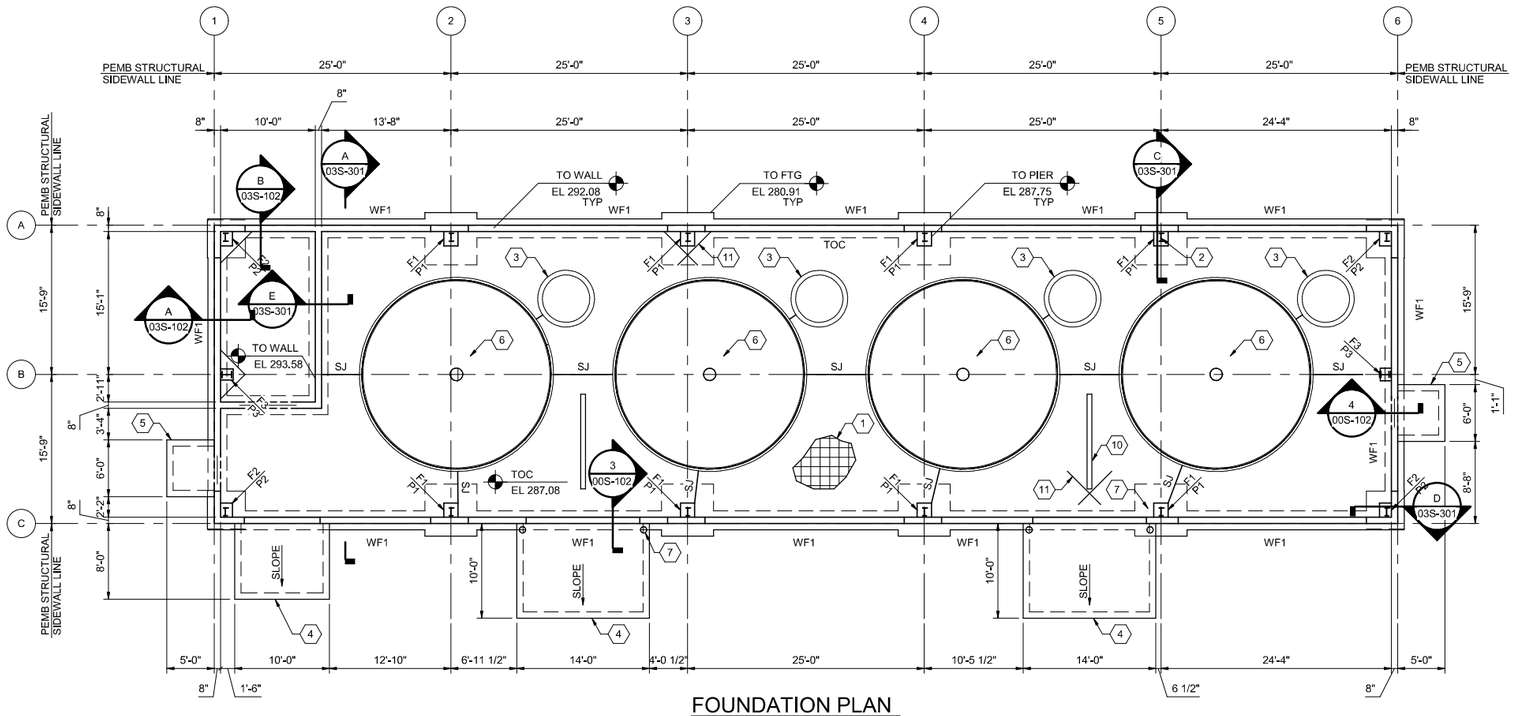

FOUNDATION PLAN

1/8" = 1'-0"

FOOTING SCHEDULE - TANK PAVILION					
TYPE	SIZE	REINFORCEMENT	T.O. FOOTING ELEVATION	T.O. PIER ELEVATION	REMARKS
F1	5'-6"x5'-6"x1'-2"	(7)#6 EACH WAY BOTTOM	280.91	289'	SEE DETAIL 1/03S-302
F2	4'-0"x4'-0"x1'-2"	(5)#6 EACH WAY BOTTOM	280.91	289'	SEE DETAIL 1/03S-302
F3	3'-0"x3'-0"x1'-2"	(4)#6 EACH WAY TOP & BOTTOM	280.91	289'	SEE DETAIL 1/03S-302
WF1	2'-0"x1'-0"x CONT.	(3)#5 CONTINUOUS	280.91	NA	SEE DETAIL 1/03S-302

1 FOOTING SCHEDULE

NOT TO SCALE

PLAN NORTH

TRUE NORTH

GENERAL NOTES:

1. SEE SHEET 00S-001 FOR GENERAL STRUCTURAL NOTES.
2. SEE 00S-100 SERIES SHEETS FOR TYPICAL STRUCTURAL DETAILS.
3. COLUMNS BY PRE-ENGINEERED METAL BUILDING MANUFACTURER.
4. REFER TO ARCHITECTURAL, PROCESS, MECHANICAL, PLUMBING, ELECTRICAL, AND DRAWINGS OF OTHER TRADES FOR LOCATIONS OF OPENINGS, DEPRESSIONS, FLOOR SLOPES AND DRAINS.

KEYNOTES: (#)

1. 4" CONCRETE SLAB WITH #4@12" OC, EW MID-DEPTH IN SLAB OVER COMPACTED CLEAN FREE-DRAINING GRANULAR FILL.
2. COLUMNS BY METAL BUILDING MANUFACTURER (MBM).
3. PRECAST WATER CONTROL STRUCTURE, SEE PLUMBING DRAWINGS.
4. CONCRETE APPROACH SLAB AT OVERHEAD DOOR. SEE DETAIL 3/00S-102.
5. CONCRETE STOOP. SEE DETAIL 4/00S-102. STOOP GRADE BEAM SHALL BE TIED INTO PERIMETER GRADE BEAM.
6. SEE SHEET 03S-103 FOR TANK SLAB.
7. 8" DIAMETER SCHEDULE 40 STEEL PIPE BOLLARD FILLED WITH CONCRETE (PAINT YELLOW), TYPICAL OF 8. SEE DETAIL 4/03S-302.
8. PROVIDE 2'-0"x2'-0" #4 BENT BAR CAST MID-DEPTH OF SLAB AT ALL LOCATIONS WHERE SLAB EXTENDS OVER FOUNDATION WALL. SEE DETAILS.
9. PROVIDE #4x48" LONG @ 12" OC CAST MID-DEPTH IN SLAB AT OVERHEAD DOOR LOCATIONS WHERE SLAB EXTENDS OVER FOUNDATION WALL, SEE DETAILS.
10. PREMOLDED TRENCH DRAIN, SEE PLUMBING DRAWINGS.
11. (2) #4x5'-0" LONG CAST IN SLAB AT ALL RE-ENTRANT CORNERS. PLACE BARS 2" FROM CORNER. BEND BARS AS NECESSARY FOR PROPER PLACEMENT.

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-S.rvt
9/6/2024 3:09:02 PM

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PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Bruce A. Bradley PE15026 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:05:29-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

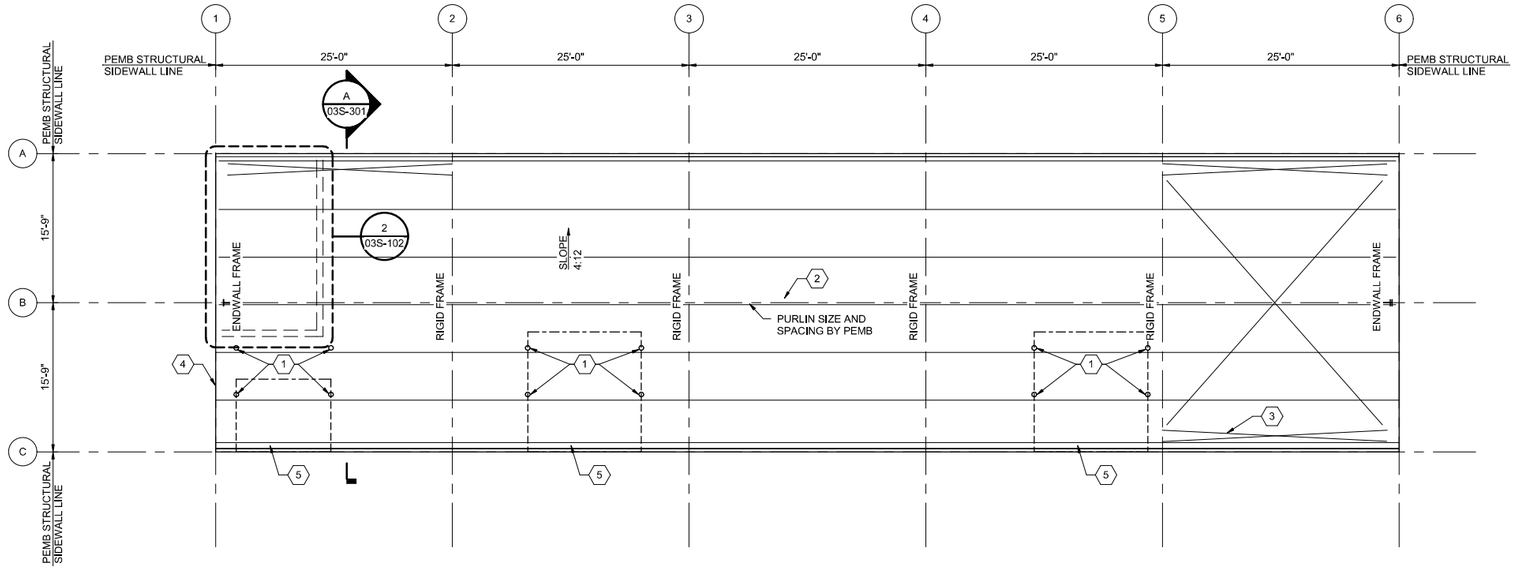
LOWER PAVILION FOUNDATION PLAN

0 1" 2"

FILENAME 10353741-03-S.rvt

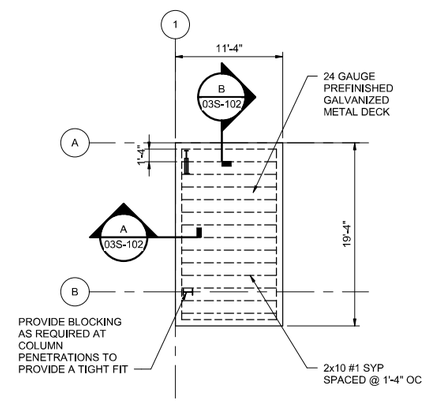
SCALE As indicated

SHEET **03S-101**



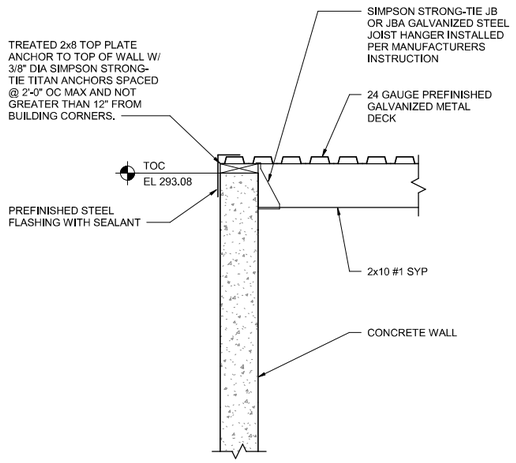
ROOF FRAMING PLAN

1/8" = 1'-0"



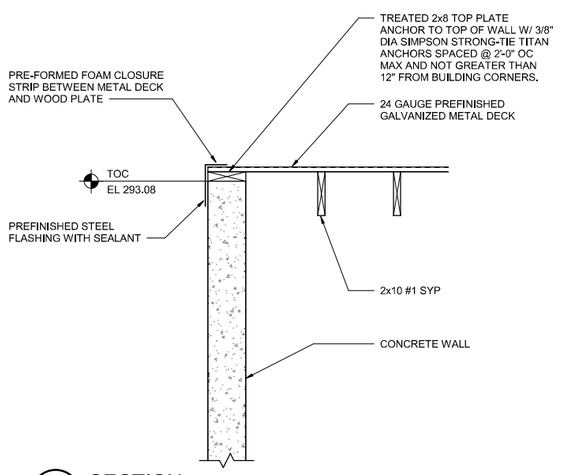
2 / 03S-102 STORAGE ROOM CEILING FRAMING PLAN

1/8" = 1'-0"



A / 03S-102 SECTION

3/4" = 1'-0"



B / 03S-101 SECTION

3/4" = 1'-0"

GENERAL NOTES:

1. SEE SHEET 00S-001 FOR DESIGN STANDARDS AND BUILDING CODE INFORMATION.
2. SEE SHEET 00S-001 FOR DESIGN LOADS.
3. PIER CONFIGURATIONS ARE AS INDICATED ON SHEET 03S-302. IF THESE CONFIGURATIONS ARE NOT COMPATABLE TO THE PEMB DESIGN THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SUCH THAT MODIFICATIONS CAN BE MADE PRIOR TO PIER REINFORCEMENT FABRICATION AND CONSTRUCTION.
4. GENERAL ASSUMPTIONS HAVE BEEN MADE BY THE STRUCTURAL ENGINEER FOR THE FOUNDATION DESIGN. THE GENERAL CONTRACTOR AND PEMB SHALL SUBMIT FRAME REACTIONS TO THE ENGINEER FOR VIERIFICATION WITH THE FOUNDATIONS SHOWN. ADJUSTMENTS MAY BE REQUIRED IN THE FIELD PRIOR TO CONSTRUCTION. ANY CHANGES REQUIRED SHALL BE MADE AT NO ADDITIONAL COST TO THE PROJECT.
5. FRAME REACTIONS AND ANCHOR BOLT SETTING PLAN SHALL BE SUBMITTED TO THE ENGINEER CONCURRENTLY WITH THE CONCRETE REINFORCEMENT SHOP DRAWINGS FOR REVIEW AND APPROVAL. ANY CHANGES REQUIRED SHALL BE MADE AT NO ADDITIONAL COST TO THE PROJECT.
6. THE PEMB SHALL DESIGN ALL ANCHOR BOLTS. ANCHOR BOLT SIZES SHALL BE FURNISHED TO THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANCHOR BOLTS.
7. ALL RIGID FRAMES SHALL HAVE PINNED CONNECTIONS TO THE FOUNDATION.
8. COLUMN BASE PLATES SHALL BE LEVELED WITH LEVELING NUTS OR SHIMS AND GROUTED SOLID WITH 2" NON-SHRINK GROUT.
9. PEMB AND CONTRACTOR SHALL PROVIDE BRACING AS NECESSARY TO MAINTAIN FLAT AND LEVEL GIRTS DURING BUILDING ERECTION.

KEYNOTES: (#)

1. DENOTES APPROXIMATE POINT LOAD LOCATIONS FOR OVERHEAD DOOR TRACK. GENERAL CONTRACTOR SHALL COORDINATE WEIGHT AND LOCATION WITH PRE-ENGINEERED METAL BUILDING MANUFACTURER.
2. PURLIN SIZE, SPACING AND MATERIAL PROVIDED BY PEMB.
3. ANTICIPATED LOCATION OF CROSS BRACING IN ROOF AND WALLS.
4. MANDOOR FRAMING PROVIDED AND INSTALLED BY PEMB.
5. OVERHEAD DOOR FRAMING PROVIDED AND INSTALLED BY PEMB.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Bruce A. Bradley PE15026 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:05:41-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LOWER PAVILION FRAMING PLAN

0 1" 2"

FILENAME 10353741-03-S.rvt

SCALE As indicated

SHEET 03S-102

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-S.rvt
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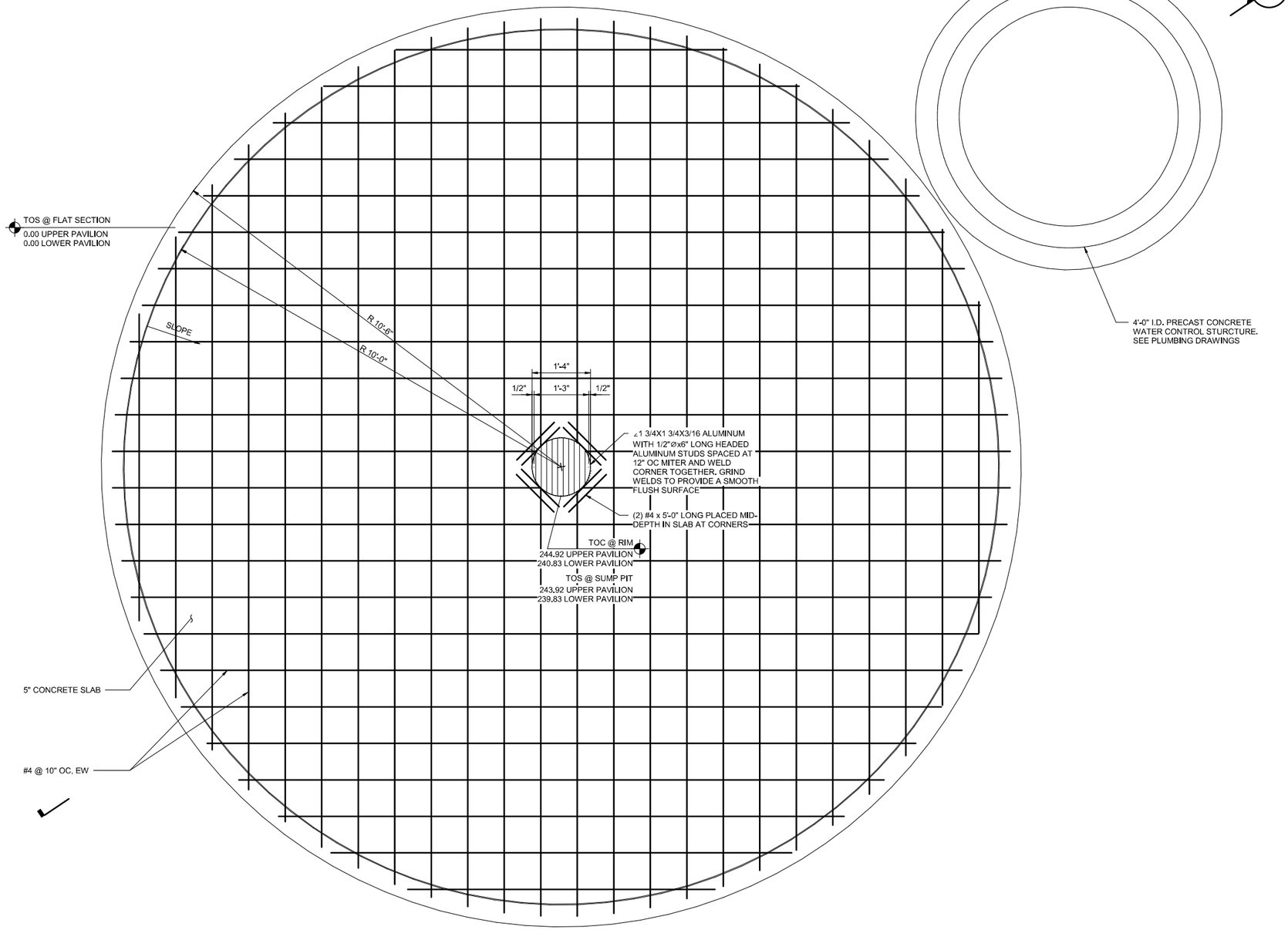

20' TANK SLAB PLAN

3/4" = 1'-0"

GENERAL NOTES:

1. BACKFILL AROUND PERIMETER OF STAINLESS STEEL TANKS SHALL BE PER TANK MANUFACTURER'S WRITTEN INSTRUCTIONS. AT A MINIMUM, NON-ANGULAR, FINE CRUSHED GRAVEL SHALL BE USED PER SPECIFICATION SECTION 02220. EXTERIOR FACE OF TANK WALLS SHALL BE WRAPPED WITH GEOTEXTILE FABRIC PRIOR TO BACKFILL. BACKFILLING OPERATIONS AROUND TANKS SHALL BE PERFORMED ONLY WHEN TANKS ARE FILLED WITH WATER UNLESS WRITTEN PERMISSION IS GIVEN BY MANUFACTURER FOR DRY BACKFILL OPERATIONS. CONTRACTOR SHALL COORDINATE BACKFILL TYPE AND GEOTECHNICAL FABRIC MATERIAL WITH TANK MANUFACTURER.

ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Bruce A. Bradley PE15026 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:05:56-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

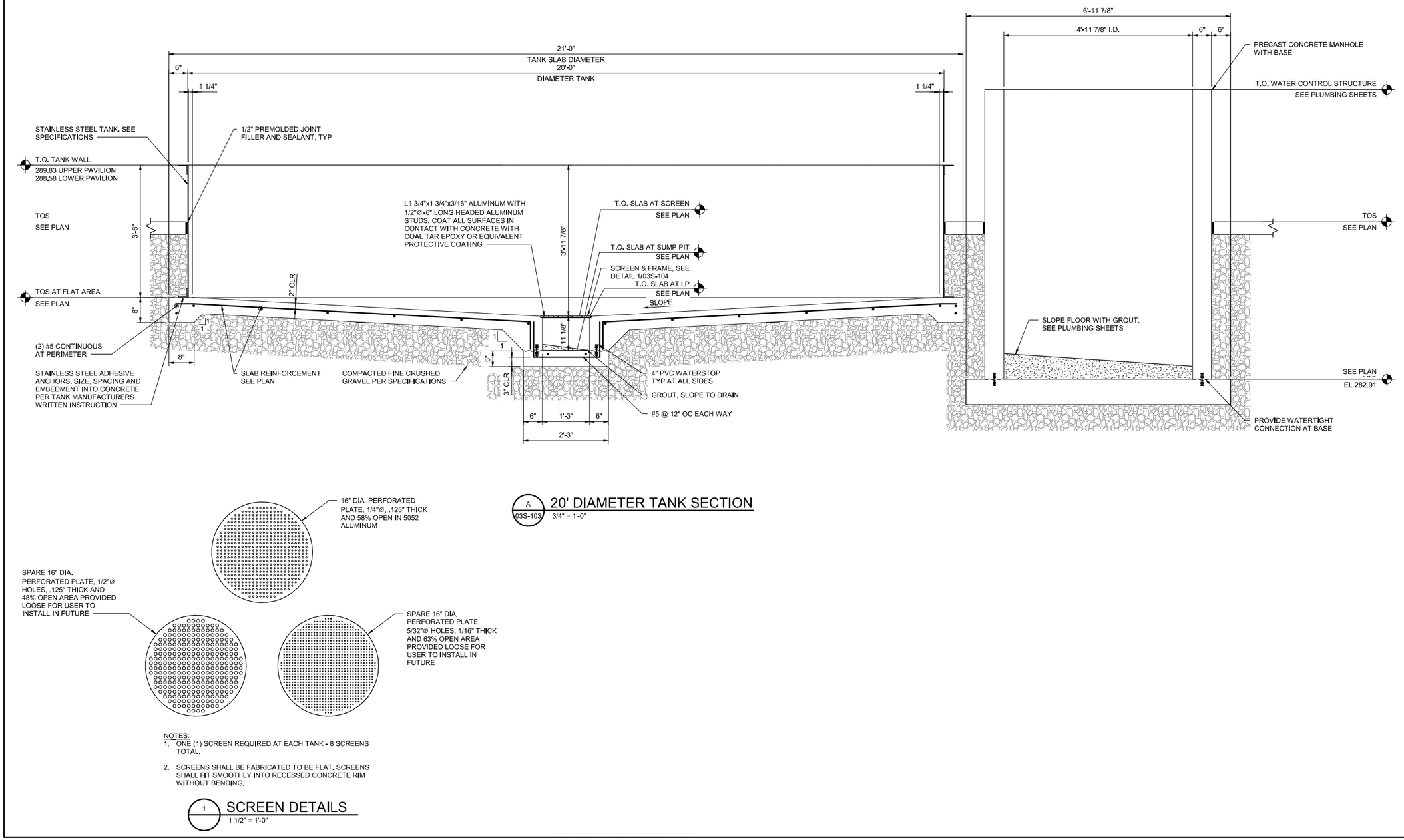
UPPER / LOWER TANK PAVILIONS
20' DIAMETER TANK FOUNDATION

0 1" 2"

FILENAME 10353741-03-S.rvt
SCALE 3/4" = 1'-0"

SHEET **03S-103**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-S.rvt
9/6/2024 3:08:56 PM



A 03S-103 **20' DIAMETER TANK SECTION**
3/4" = 1'-0"

GENERAL NOTES:

1. WATERTIGHT CONNECTION OF TANK TO CONCRETE SLAB SHALL BE DESIGNED AND PROVIDED BY TANK MANUFACTURER. ALL MATERIAL USED FOR ANCHORAGE SHALL BE STAINLESS STEEL.

NOTES:
1. ONE (1) SCREEN REQUIRED AT EACH TANK - 8 SCREENS TOTAL.
2. SCREENS SHALL BE FABRICATED TO BE FLAT. SCREENS SHALL FIT SMOOTHLY INTO RECESSED CONCRETE RIM WITHOUT BENDING.

1 **SCREEN DETAILS**
1 1/2" = 1'-0"

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CIVIL	J. GAGNON
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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Bruce A. Bradley PE15026
LICENSED PROFESSIONAL ENGINEER
Digitally signed by Bruce Bradley
Date: 2024.09.09 14:06:11-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

UPPER / LOWER TANK PAVILIONS
20' DIAMETER TANK FOUNDATION DETAILS

0 1" 2"

FILENAME 10353741-03-S.rvt
SCALE As indicated

SHEET **03S-104**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-S.rvt
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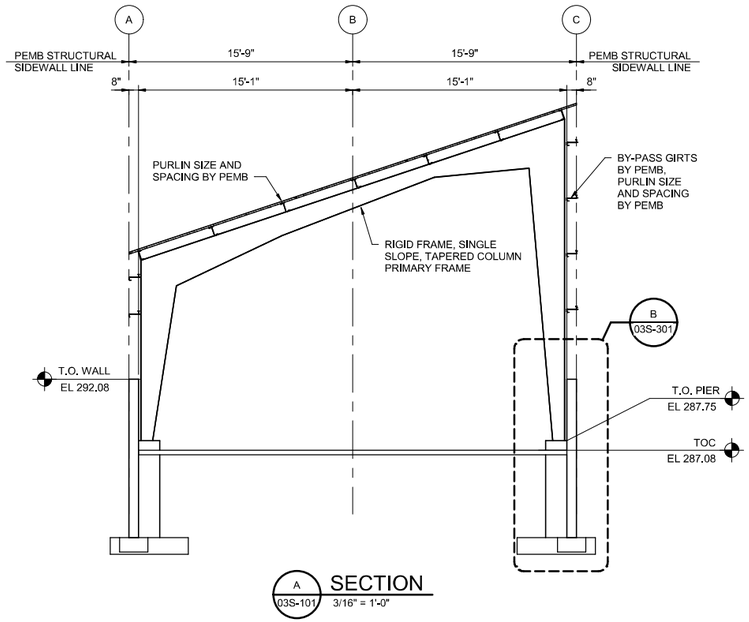
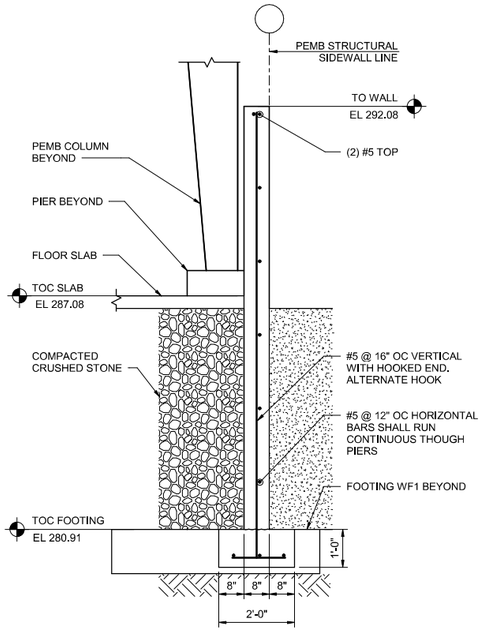
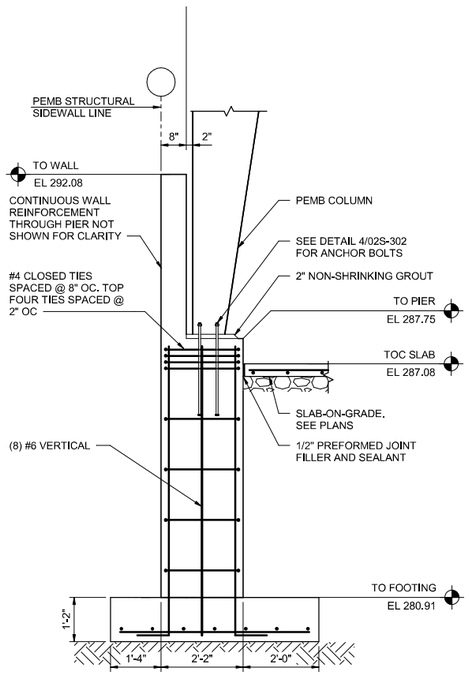


A 03S-101 **SECTION** 3/16" = 1'-0"

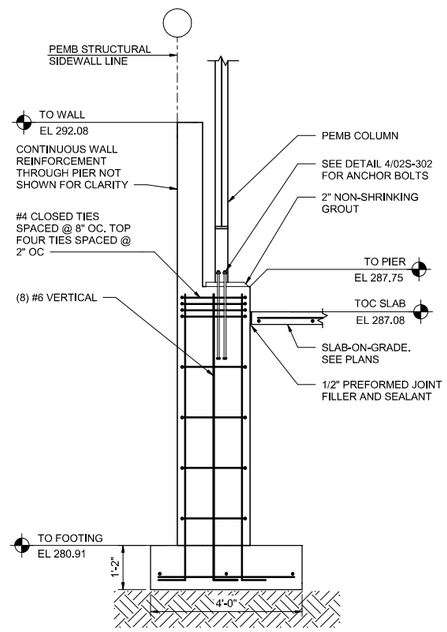


B 03S-301 **SECTION** 1/2" = 1'-0"

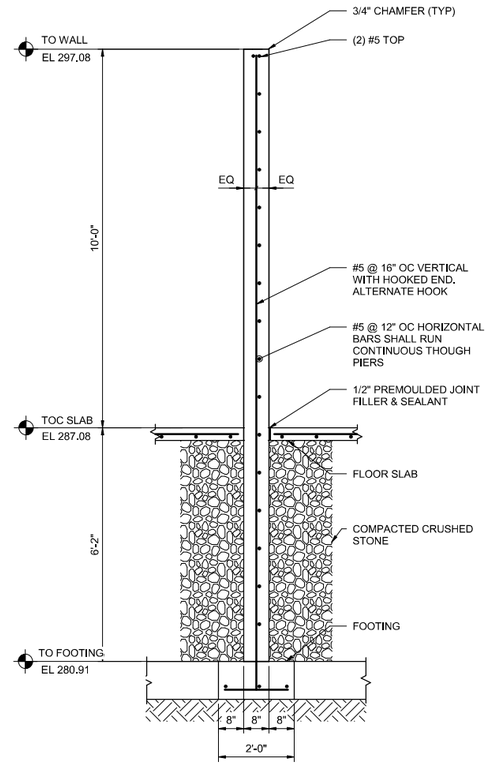


NOTE:
CAST WALL SECTION INTEGRAL WITH PIER. TYPICAL AT ALL PIER LOCATIONS.

C 03S-101 **SECTION** 1/2" = 1'-0"



D 03S-101 **SECTION** 1/2" = 1'-0"



E 03S-101 **SECTION** 1/2" = 1'-0"

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CIVIL	J. GAGNON
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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Bruce A. Bradley
PE15026
LICENSED
PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:06:25-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LOWER PAVILION SECTIONS

0 1" 2"

FILENAME 10353741-03-S.rvt
SCALE As indicated

SHEET 03S-301

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-S.rvt
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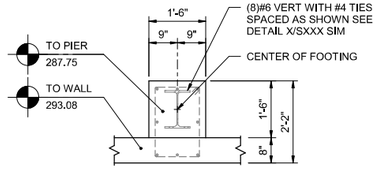
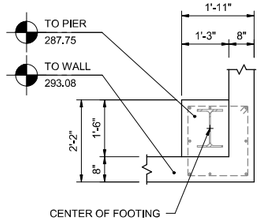
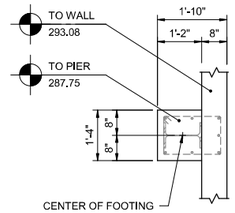


NOTE:
VERIFY PIER SIZE ADEQUACY WITH MBM PRIOR TO FORMING OR CASTING CONCRETE.

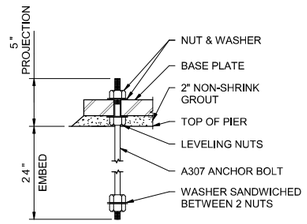
1 PIER TYPE P1
1/2" = 1'-0"



2 PIER TYPE P2
1/2" = 1'-0"

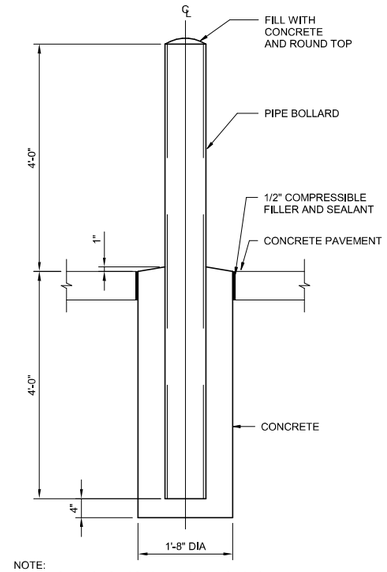


3 PIER TYPE P3
1/2" = 1'-0"



NOTE:
ANCHOR BOLTS PROVIDED AND INSTALLED BY GENERAL CONTRACTOR (GC.) ANCHOR BOLT SIZES SPECIFIED BY PEMB.

4 ANCHOR BOLT DETAIL
NOT TO SCALE



NOTE:
1. REINFORCING FOR CONCRETE SLAB NOT SHOWN.

5 BOLLARD
NOT TO SCALE

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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Bruce A. Bradley PE15026
LICENSED
PROFESSIONAL ENGINEER
Digitally signed by Bruce Bradley
Date: 2024.09.09 14:05:48-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LOWER PAVILION DETAILS

0 1" 2"

FILENAME	10353741-03-S.rvt
SCALE	As indicated

SHEET
03S-302

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-S.rvt
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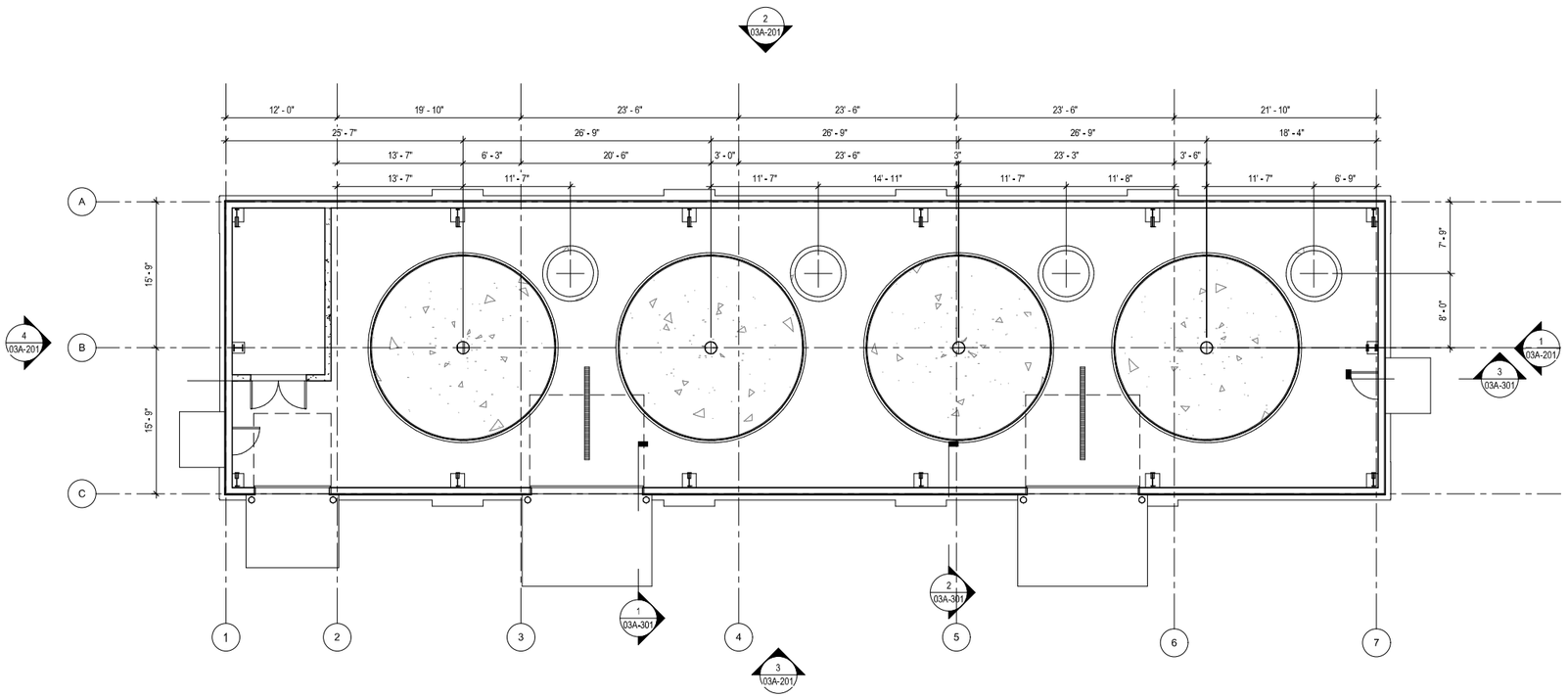

1 PAVILION FLOOR PLAN

1/8" = 1'-0"

TRUE NORTH

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
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ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

LICENSED ARCHITECT
Michael A. Baskin
5595
STATE OF MAINE

Digitally signed by Baskin, Michael Alan
Date: 2024.09.09 16:00:23-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LOWER PAVILION PLAN

0 1" 2"

FILENAME

SCALE 1/8" = 1'-0"

SHEET **03A-101**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/v2022_10357686-A-Maine DIF_GrandLake Stream EXP.rvt
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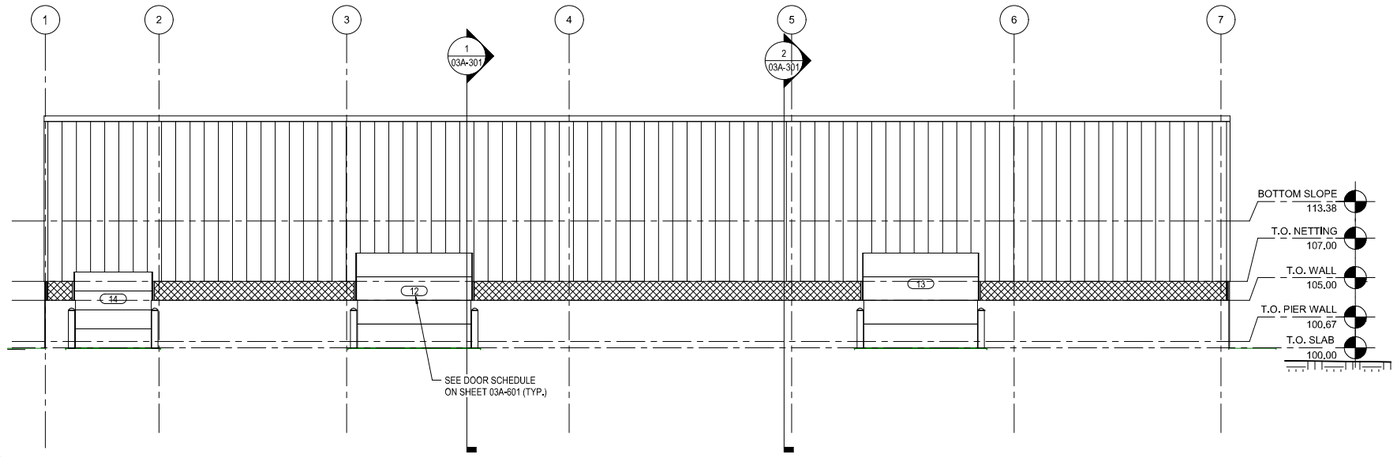
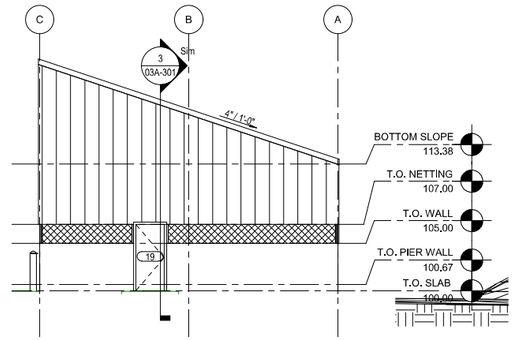
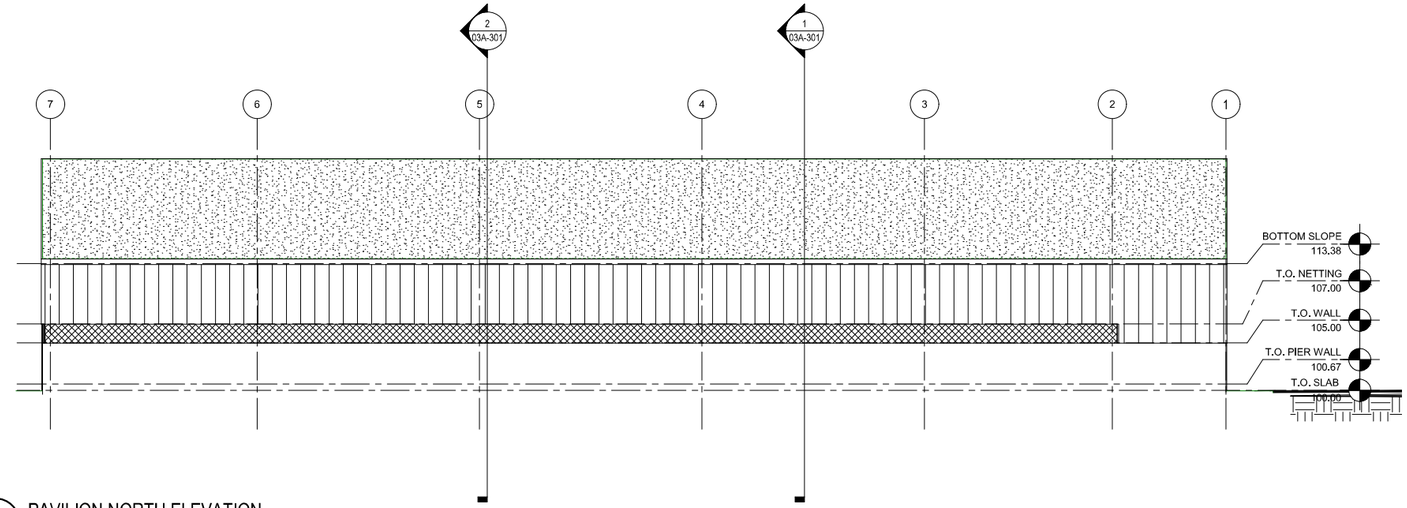


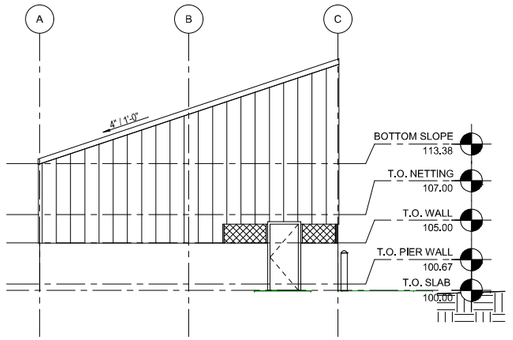
3 PAVILION SOUTH ELEVATION
1/8" = 1'-0"



1 PAVILION EAST ELEVATION
1/8" = 1'-0"



2 PAVILION NORTH ELEVATION
1/8" = 1'-0"



4 PAVILION WEST ELEVATION
1/8" = 1'-0"

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9/6/2024 3:11:07 PM

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

LICENSED ARCHITECT
Michael A. Baskin
5595
STATE OF MAINE

Digitally signed by Baskin, Michael Alan
Date: 2024.09.09 16:00:48-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

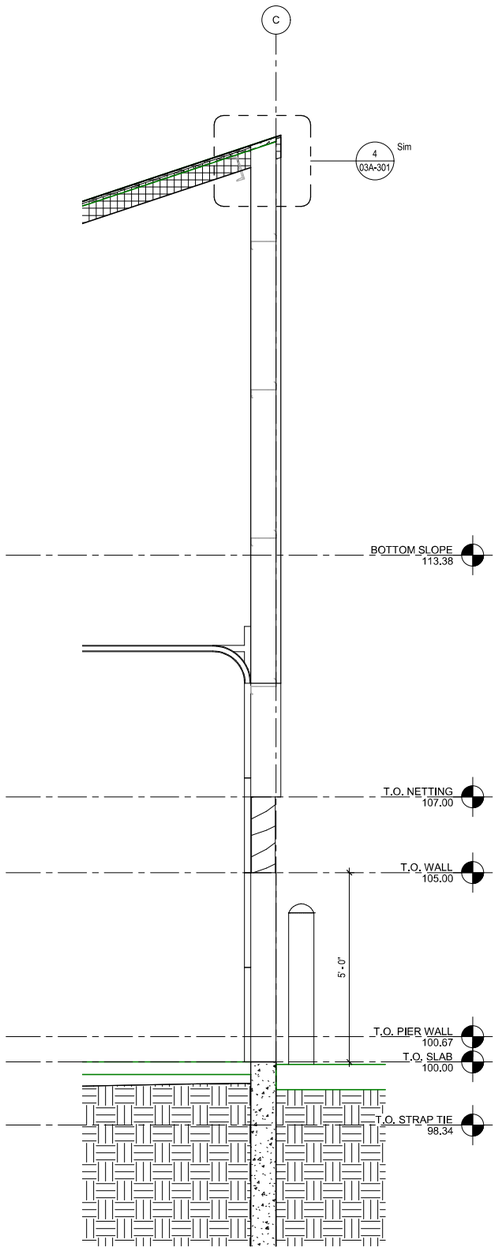
LOWER PAVILION EXTERIOR ELEVATIONS

0 1" 2"

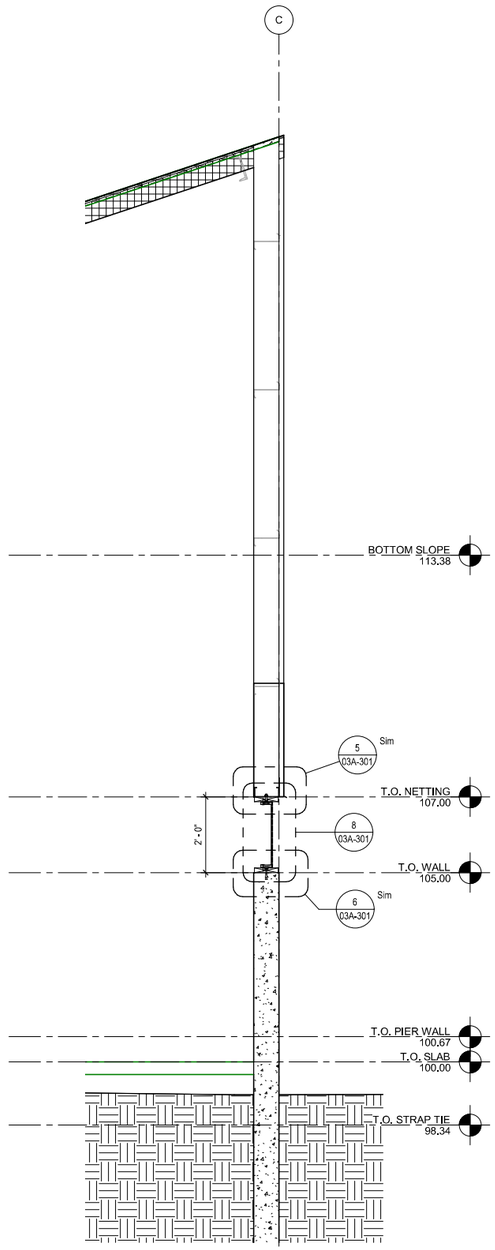
FILENAME

SCALE 1/8" = 1'-0"

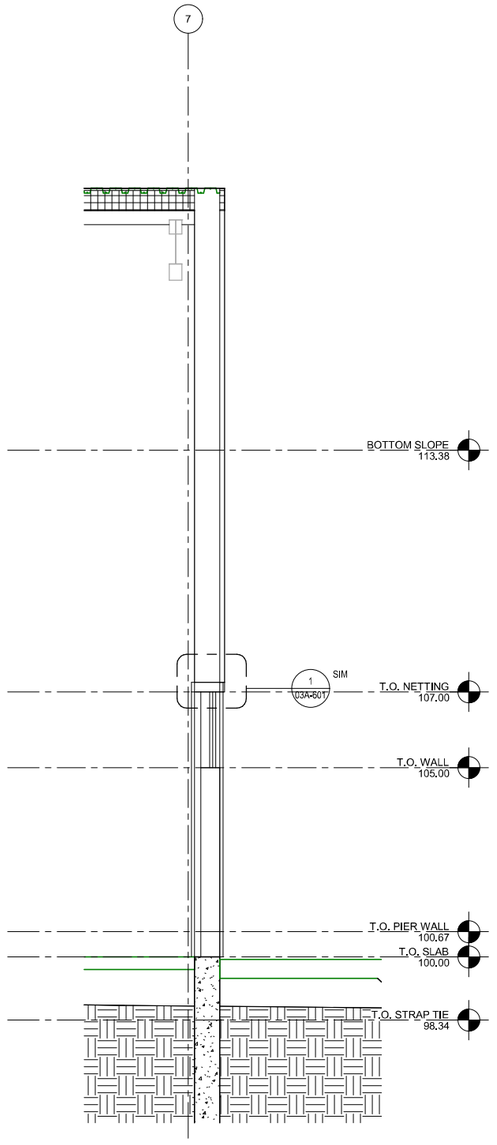
SHEET **03A-201**



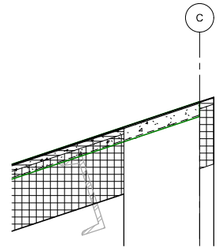
1 Section 1
1/2" = 1'-0"



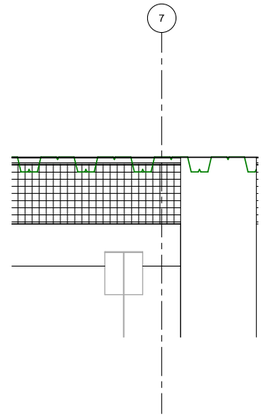
2 Section 2
1/2" = 1'-0"



3 Section 3
1/2" = 1'-0"



4 Section 1 - Callout 1
1 1/2" = 1'-0"



7 Section 3 - Callout 1
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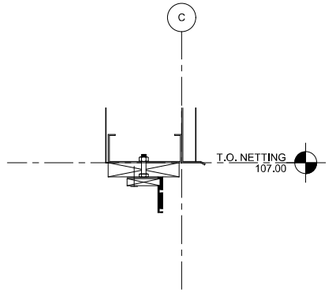
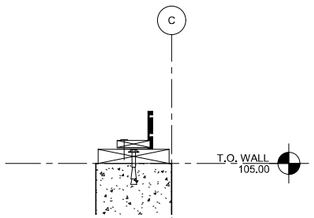
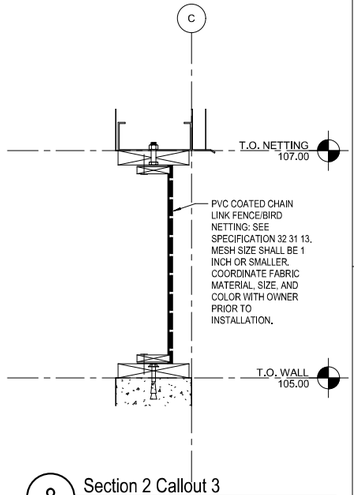


5 Section 2 - Callout 1
1 1/2" = 1'-0"



6 Section 2 - Callout 2
1 1/2" = 1'-0"



8 Section 2 Callout 3
1 1/2" = 1'-0"

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9/6/2024 3:11:04 PM

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

LICENSED ARCHITECT
Michael A. Baskin
5595
STATE OF MAINE

Digitally signed by Baskin, Michael Alan
Date: 2024.09.09 16:01:08-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LOWER PAVILION WALL SECTIONS & DETAILS

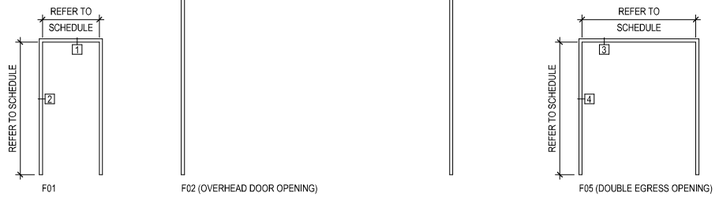
0 1" 2"

FILENAME

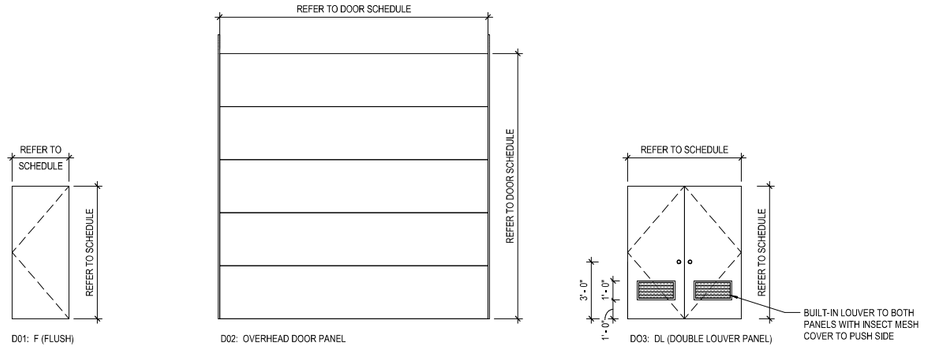
SCALE As indicated

SHEET 03A-301

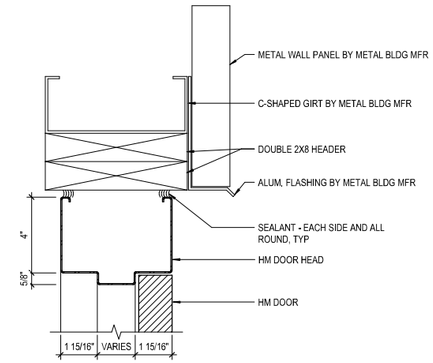
DOOR AND FRAME SCHEDULE																
IDENTIFICATION				DIMENSIONS					DOOR	PANEL		FRAME				HARDWARE	
LEVEL	ROOM NO.	ROOM NAME	DOOR NO.	OPENING WIDTH			H	T	TYPE	Material	Finish	TYPE	Material	Finish	FIRE RATING	GROUP	NOTES
				W1	W2	Total Width											
T.O. SLAB	301	FEED STORAGE	15	3'-0"	3'-0"	6' - 0"	7' - 0"	2"	D03	METAL	PAINTED	F05	METAL	PAINTED	N/A	2	
T.O. SLAB	300	TANK ROOM	9	-	-	3' - 0"	7' - 0"	2"	D01	METAL	PAINTED	F01	METAL	PAINTED	N/A	2	
T.O. SLAB	300	TANK ROOM	12	-	-	12' - 0"	12' - 0"	2"	D02	METAL	PAINTED	F02	METAL	PAINTED	N/A	2	
T.O. SLAB	300	TANK ROOM	13	-	-	12' - 0"	12' - 0"	2"	D02	METAL	PAINTED	F02	METAL	PAINTED	N/A	2	
T.O. SLAB	300	TANK ROOM	14	-	-	8' - 0"	8' - 0"	2"	D02	METAL	PAINTED	F02	METAL	PAINTED	N/A	2	
T.O. SLAB	300	TANK ROOM	19	-	-	3' - 0"	7' - 0"	2"	D01	METAL	PAINTED	F01	METAL	PAINTED	N/A	2	



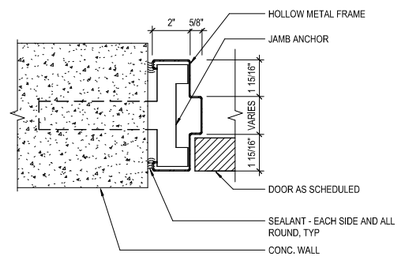
DOOR FRAME TYPES



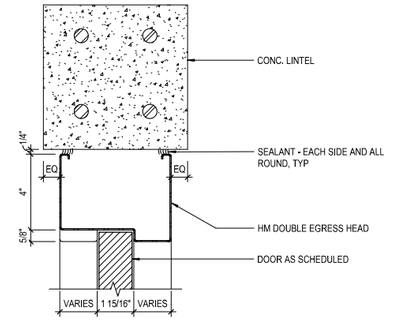
DOOR TYPES



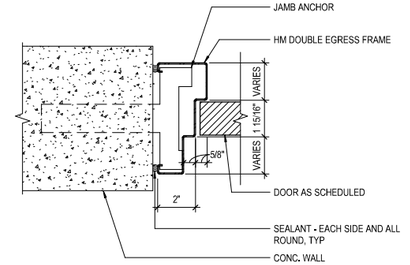
1 HEAD - HM DOOR
3" = 1'-0"



2 JAMB - HM DOOR
3" = 1'-0"



3 HEAD - HM DOUBLE EGRESS DOOR
3" = 1'-0"



4 JAMB - HM DOUBLE EGRESS DOOR
3" = 1'-0"

09/11/2024	ISSUED FOR BID	
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

LICENSED ARCHITECT
Michael A. Baskin
5595
STATE OF MAINE

Digitally signed by Baskin, Michael Alan
Date: 2024.09.09 16:02:00-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LOWER PAVILION DOOR SCHEDULE AND DETAILS

0 1" 2"

FILENAME

SCALE As indicated

SHEET 03A-601

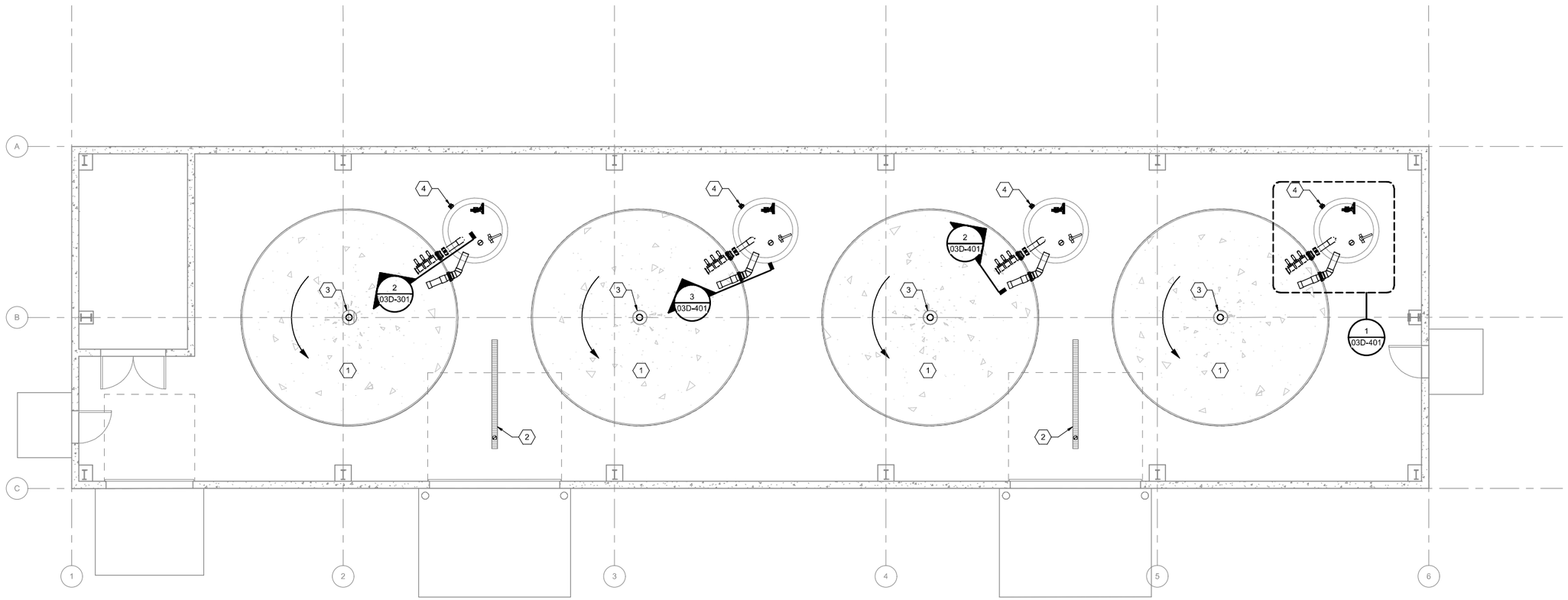
KEYED NOTES ⟨#⟩

1 TYP. 20' DIA. REARING TANK

2 4" INSIDE WIDTH PRE-MOLDED TRENCH DRAIN

3 TYP. BOTTOM DRAIN SUMP LEADS FLOW LADEN WITH SOLIDS TO DRUMFILTER (15% OF TANK FLOW)

4 OXY METER



0 2' 4' 8'

1 / 03D-101 ABOVE FLOOR PROCESS PIPING PLAN

3/16" = 1'-0"

N

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Jeffrey K. Chandler PE17167 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:06:21-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LOWER PAVILION
ABOVE FLOOR PROCESS PIPING PLAN

0 1" 2"

FILENAME 10353741-03-D.rvt

SCALE 3/16" = 1'-0"

SHEET **03D-101**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-D.rvt
9/6/2024 3:13:00 PM

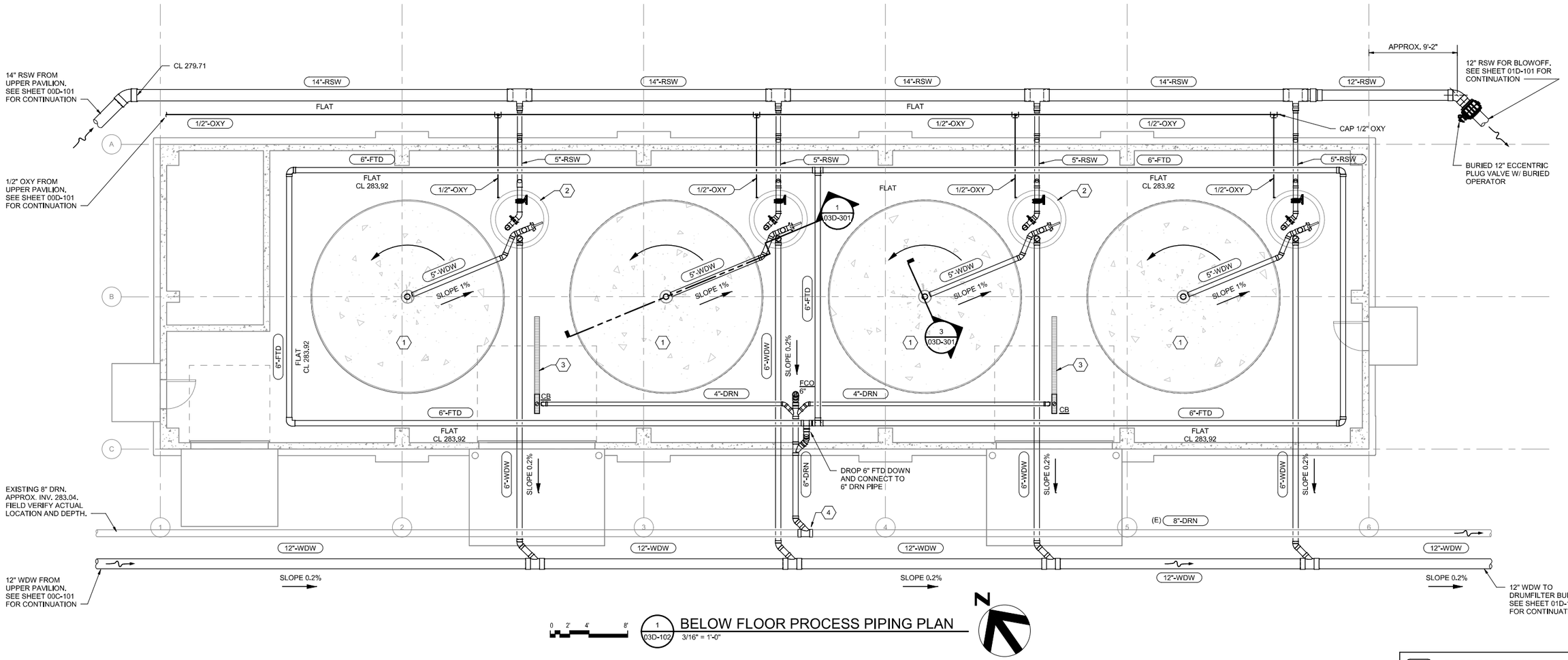
KEYED NOTES

1 TYP. 20' DIA. REARING TANK

2 TYP. 5'-0" ID VALVE BASIN

3 4" INSIDE WIDTH PRE-MOLDED TRENCH DRAIN

4 CONNECT 4" DRN TO EXISTING 8" DRN. FIELD VERIFY LOCATION AND DEPTH



FTD = FIELD TILE DRAIN PIPING. N-12-HDPE PERFORATED PIPE MEETING SPEC ASTM F477 OR EQUAL UNLESS NOTED OTHERWISE

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:06:37-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LOWER PAVILION
BELOW FLOOR PROCESS PIPING PLAN

0 1" 2"

FILENAME 10353741-03-D.rvt
SCALE 3/16" = 1'-0"

SHEET 03D-102

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-D.rvt
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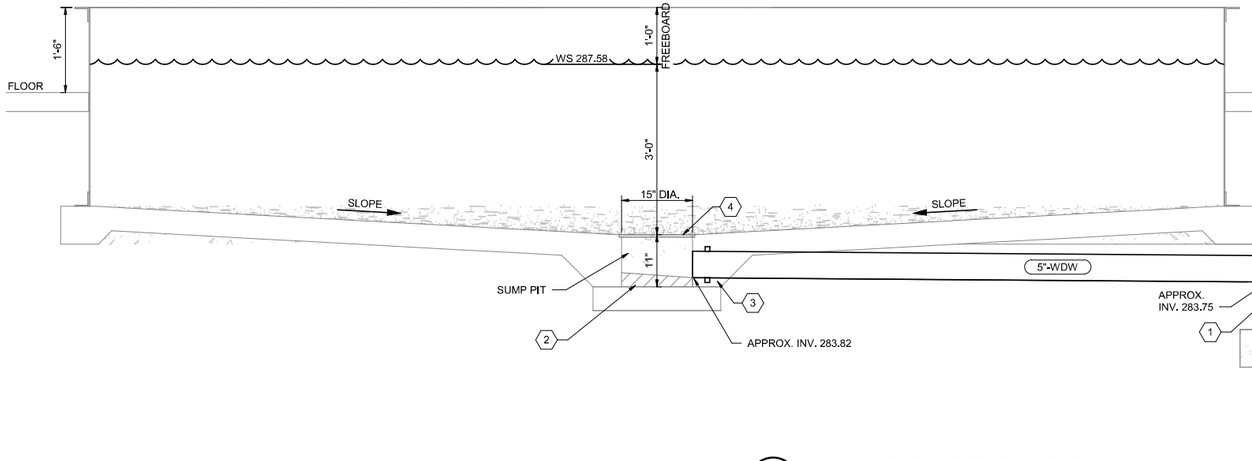
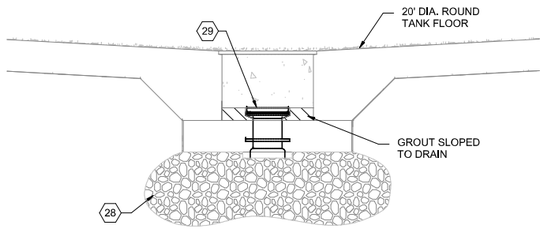


0 6" 1' 2'

1 / 03D-301 TANK DRAIN PIPING SECTION

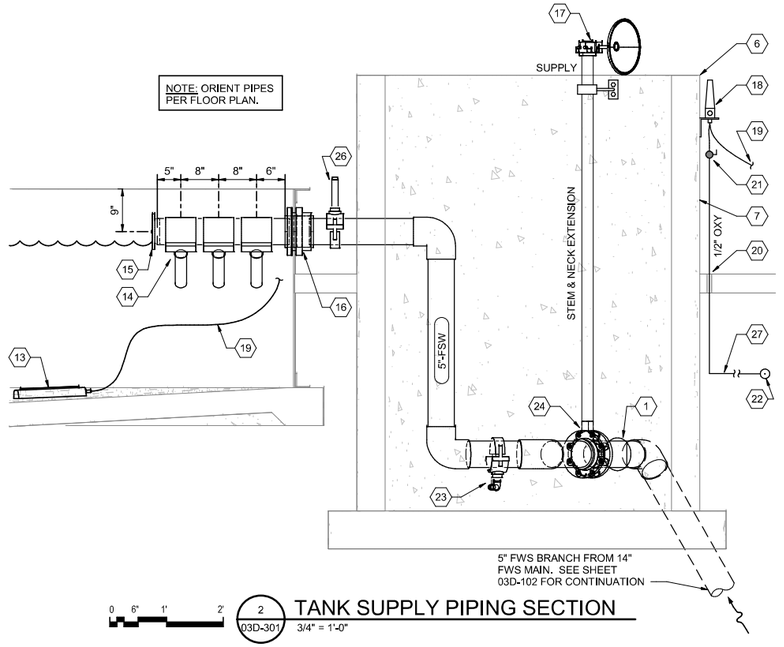
3/4" = 1'-0"



0 6" 1' 2'

3 / 03D-301 PAVILION HYDROSTATIC PRESSURE RELIEF SECTION

1" = 1'-0"



0 6" 1' 2'

2 / 03D-301 TANK SUPPLY PIPING SECTION

3/4" = 1'-0"

KEYED NOTES (#)

1 LINKAGE TYPE SEAL

2 SLOPE GROUT TO DRAIN

3 FIELD APPLIED NON-SWELLING WATERSTOP

4 FISH SCREEN PER STRUCTURAL SHEETS

5 GALV. OR SS VALVE & NECK SUPPORT 2" CLEAR BELOW MANHOLE RIM FOR EACH VALVE

6 VALVE BASIN

7 TOPLESS MANHOLE WITH STEPS & CLEAN, SMOOTH OVER SURFACE

8 BUTTERFLY VALVE WITH STEM & NECK EXTENSION

9 SCH 40 PVC TEE SHOWN WITHOUT UPSTREAM 45 DEGREE BEND FOR CLARITY, INCLUDE BEND & ORIENTATE PER PLAN 1/03D-401

10 PVC ONE-PIECE SOCKET FLANGE

11 SUPPORT FLANGE OR PIPE TO GROUT W/ SS HARDWARE

12 GROUT SLOPED ALL AROUND TO DRAIN

13 CERAMIC OXYGEN DIFFUSER

14 ORIENT NOZZLES SIMLAR TO DETAIL 2/03D-401.

15 EXPANSION PLUG

16 PVC BULKHEAD/ TANK ADAPTER (SOCKET x SOCKET)

17 WEATHERPROOF GEAR OR LEVER WITH AT LEAST 13 POSITIONS WITHOUT WING NUTS & WITHOUT SET SCREWS

18 SS BRACKET MOUNTED THORPE STYLE OXYGEN METER (0-7 SLPM) WITH TOP 1" B.T.O.C., SHOWN ON OPPOSITE SIDE FOR CLARITY, LOCATE PER PLAN

19 1/4" HOSE TO OXYGEN DIFFUSER

20 TYP. PIPE PENETRATION THRU FLOOR

21 CONNECT ISOLATION BALL VALVE TO METER WITH ADAPTERS AND HOSE OR COPPER PIPE

22 1/2" OXY MAIN APPROX. 21" BELOW FLOOR

23 CURBSTOP VALVE WITH SEMI-PERMANENT SQUARE OPERATOR FROM WINTERIZATION/DRAIN

24 BUTTERFLY VALVE (FISH TANK SUPPLY VALVE)

25 MANHOLE STEPS

26 5" PVC SADDLE TAP W/ 1" SIGHT GLASS

27 BURIED 1/2" OXY

28 CLEAN CRUSHED STONE

29 4" FLOOR MOUNTED HYDROSTATIC PRESSURE RELIEF VALVE EQUAL TO PENN-TROY A2550RSN/4

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Jeffrey K. Chandler PE17167 — LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:06:55-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LOWER PAVILION TANK SECTIONS

0 1" 2"

FILENAME 10353741-03-D.rvt

SCALE As indicated

SHEET 03D-301

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-D.rvt
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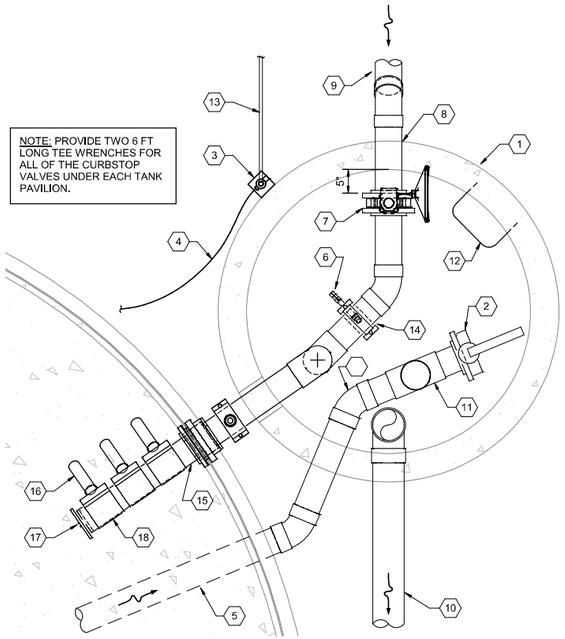
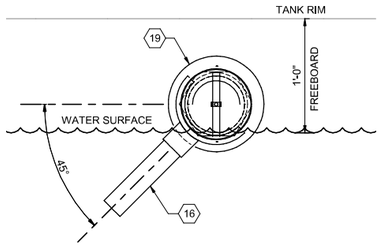


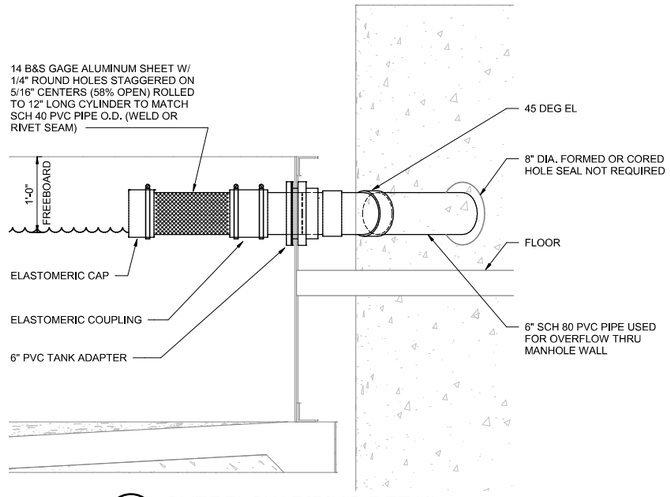
1 03D-401 ENLARGED UPPER PAVILION VALVE BASIN PLAN
3/4" = 1'-0"



2 03D-401 SUPPLY HEADER END SECTION
NOT TO SCALE

KEYED NOTES ⬡ #

1 TYP. 5'-0" ID VALVE BASIN
2 BUTTERFLY VALVE WITH STEM & NECK EXTENSION
3 OXY METER
4 1/4" HOSE TO OXYGEN DIFFUSER
5 5" DRAIN & OW FROM FISH TANK
6 CURBSTOP VALVE WITH SEMI-PERMANENT SQUARE OPERATOR FROM WINTERIZATION/DRAIN
7 BUTTERFLY VALVE (FISH TANK SUPPLY VALVE)
8 DUCTILE IRON PIPE THRU LINKAGE SEAL
9 5" SUPPLY FROM 14" RSS SUB-MAIN
10 6" WDW
11 TEE CLOSE TO BEND WITH STANDPIPE FOR OVERFLOW/LEVEL CONTROL
12 MANHOLE STEPS
13 BURIED 1/2" OXY
14 SCH 40 PVC PIPE WITH METAL SERVICE SADDLE WITH FEMALE THREADED 3/4" OUTLET DOWN. TURN CURBSTOP VALVE WITH GALV. STEEL STREET EL.
15 5" SUPPLY TO FISH TANK
16 9" LENGTH OF 2" SCH 40 PVC
17 EXPANSION PLUG
18 5x2 SCH 40 GLUE-ON SADDLE
19 TANK ADAPTER: SCH 80 PVC BULKHEAD WITH AT LEAST 8.75" O.D. BODY (FPT TOWARD TANK) W/ 5" REDUCING BUSHINGS EACH END



3 03D-401 OVERFLOW PIPING DETAIL
NOT TO SCALE

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Jeffrey K. Chandler
PE17167
LICENSED
PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:07:12-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

LOWER PAVILION ENLARGED PLAN & DETAILS

0 1" 2"

FILENAME 10353741-03-D.rvt
SCALE As indicated

SHEET **03D-401**

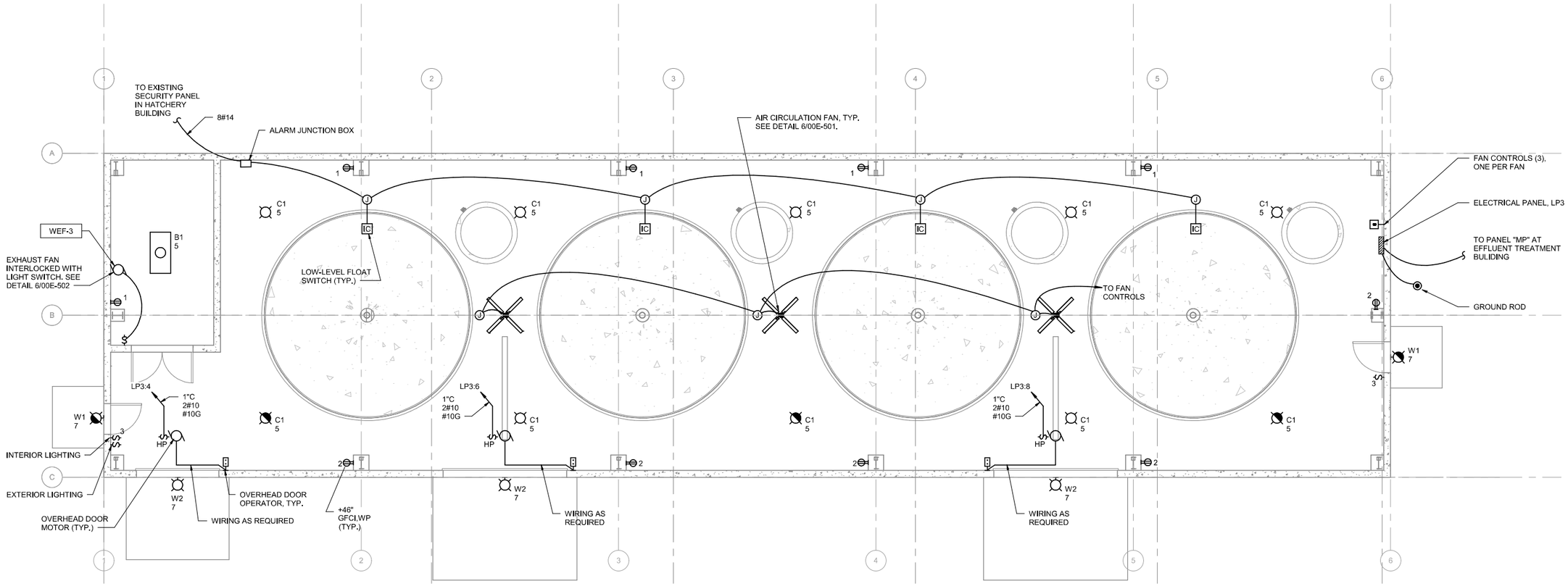
Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-D.rvt
9/6/2024 3:12:45 PM

PLAN NORTH

TRUE NORTH

GENERAL NOTE:

1. LUMINAIRES INDICATED AS EMERGENCY SHALL REMAIN ON AT ALL TIMES (NOT SWITCHED).



0 2' 4' 8'

LOWER PAVILION - ELECTRICAL PLAN

3/16" = 1'-0"

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Andrew D. Kaner PE18016 LICENSED PROFESSIONAL ENGINEER

Kaner, Andrew D

IMPROVEMENTS AT GRAND LAKE STREAM FISH HATCHERY

LOWER PAVILION ELECTRICAL PLAN

0 1" 2"

FILENAME 10357686-03-E.rvt

SCALE 3/16" = 1'-0"

SHEET 03E-101

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-03-E.rvt
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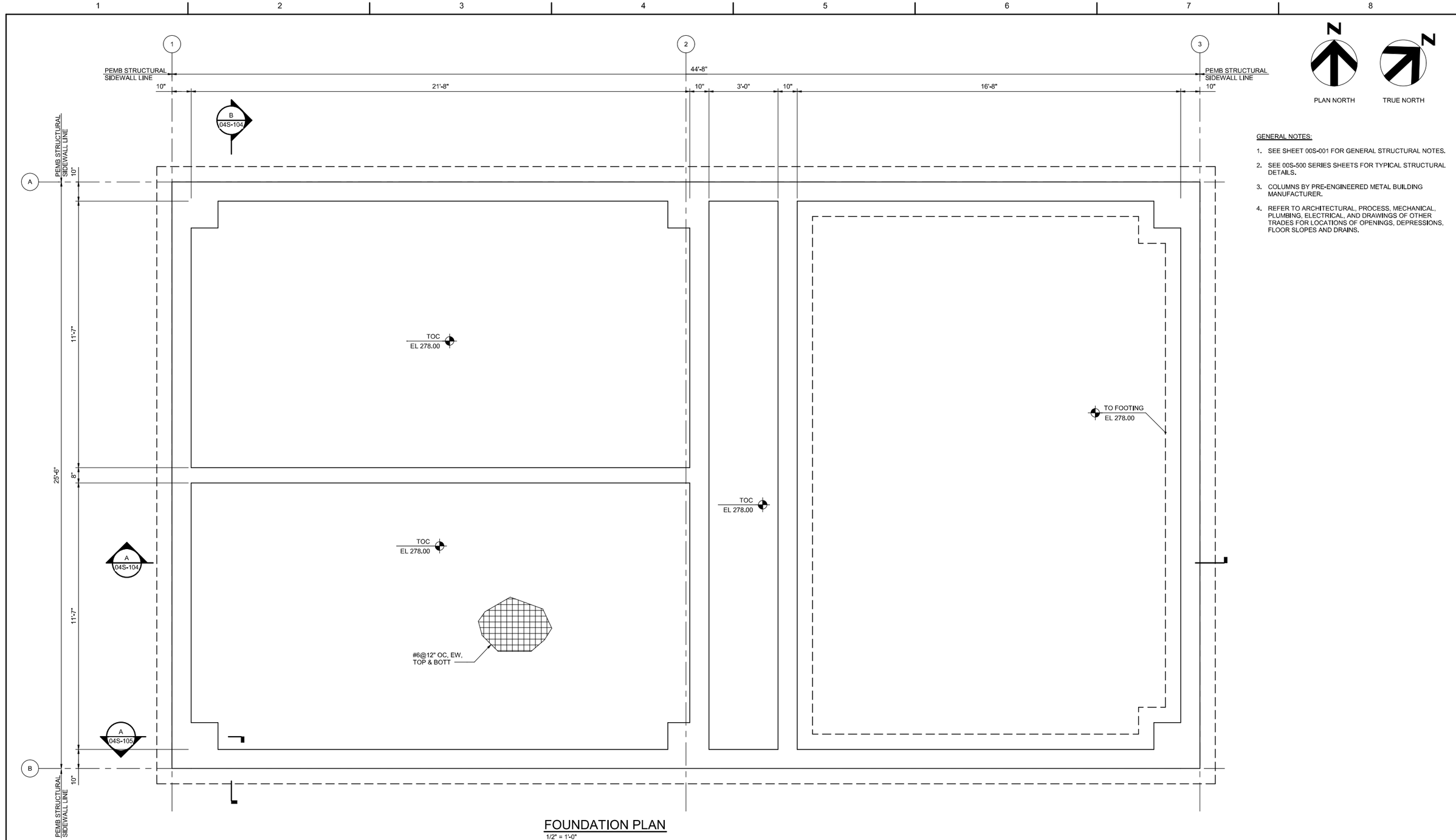

FOUNDATION PLAN

1/2" = 1'-0"

GENERAL NOTES:

1. SEE SHEET 00S-001 FOR GENERAL STRUCTURAL NOTES.
2. SEE 00S-500 SERIES SHEETS FOR TYPICAL STRUCTURAL DETAILS.
3. COLUMNS BY PRE-ENGINEERED METAL BUILDING MANUFACTURER.
4. REFER TO ARCHITECTURAL, PROCESS, MECHANICAL, PLUMBING, ELECTRICAL, AND DRAWINGS OF OTHER TRADES FOR LOCATIONS OF OPENINGS, DEPRESSIONS, FLOOR SLOPES AND DRAINS.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Bruce A. Bradley PE15026
LICENSED PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:07:15-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM FISH HATCHERY

EFFLUENT TREATMENT BUILDING FOUNDATION PLAN

0 1" 2"

FILENAME 10357686-04-S.rvt

SCALE 1/2" = 1'-0"

SHEET **04S-101**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-S.rvt
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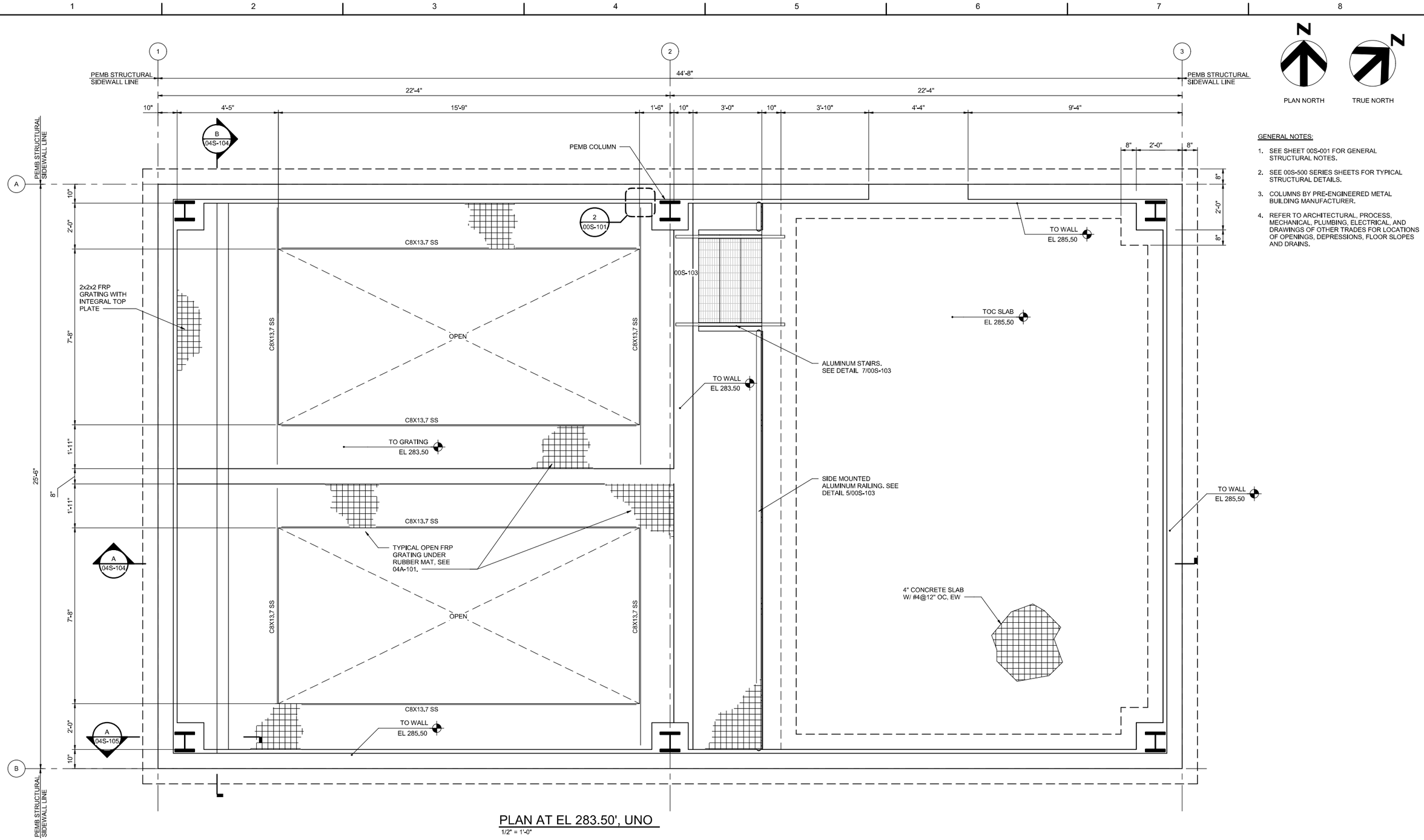

PLAN AT EL 283.50', UNO

1/2" = 1'-0"

PLAN NORTH

TRUE NORTH

GENERAL NOTES:

1. SEE SHEET 00S-001 FOR GENERAL STRUCTURAL NOTES.
2. SEE 00S-500 SERIES SHEETS FOR TYPICAL STRUCTURAL DETAILS.
3. COLUMNS BY PRE-ENGINEERED METAL BUILDING MANUFACTURER.
4. REFER TO ARCHITECTURAL, PROCESS, MECHANICAL, PLUMBING, ELECTRICAL, AND DRAWINGS OF OTHER TRADES FOR LOCATIONS OF OPENINGS, DEPRESSIONS, FLOOR SLOPES AND DRAINS.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Bruce A. Bradley PE15026 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:07:29-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM FISH HATCHERY

EFFLUENT TREATMENT BUILDING
PLAN AT EL 283.50'

0 1" 2"

FILENAME 10357686-04-S.rvt

SCALE 1/2" = 1'-0"

SHEET **04S-102**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-S.rvt
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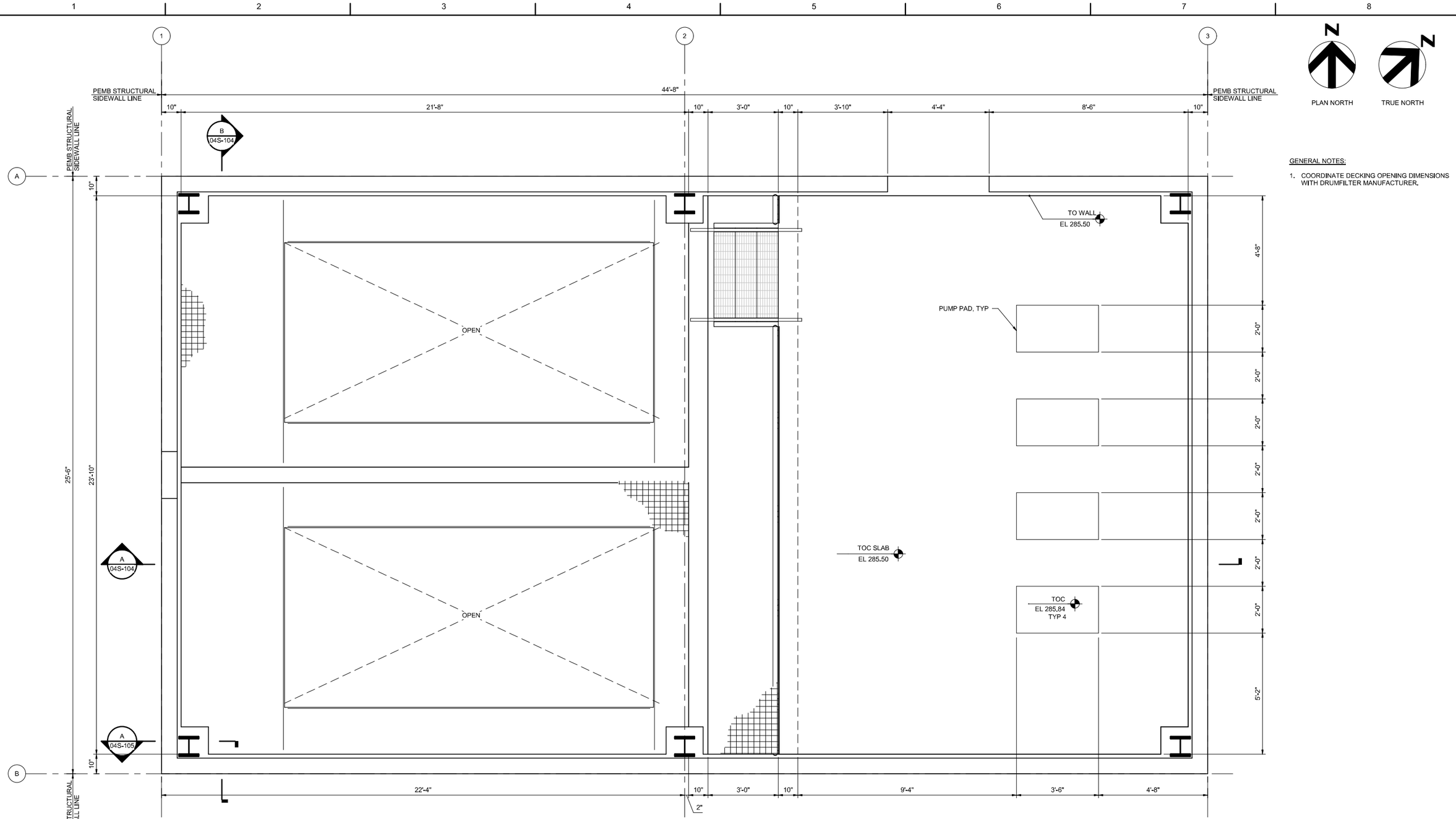

PLAN AT EL 285.50', UNO

1/2" = 1'-0"

PLAN NORTH

TRUE NORTH

GENERAL NOTES:

1. COORDINATE DECKING OPENING DIMENSIONS WITH DRUMFILTER MANUFACTURER.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Bruce A. Bradley PE15026
LICENSED
PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:07:46-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM FISH HATCHERY

EFFLUENT TREATMENT BUILDING PLAN AT 285.50'

0 1" 2"

FILENAME 10357686-04-S.rvt

SCALE 1/2" = 1'-0"

SHEET **04S-103**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-S.rvt
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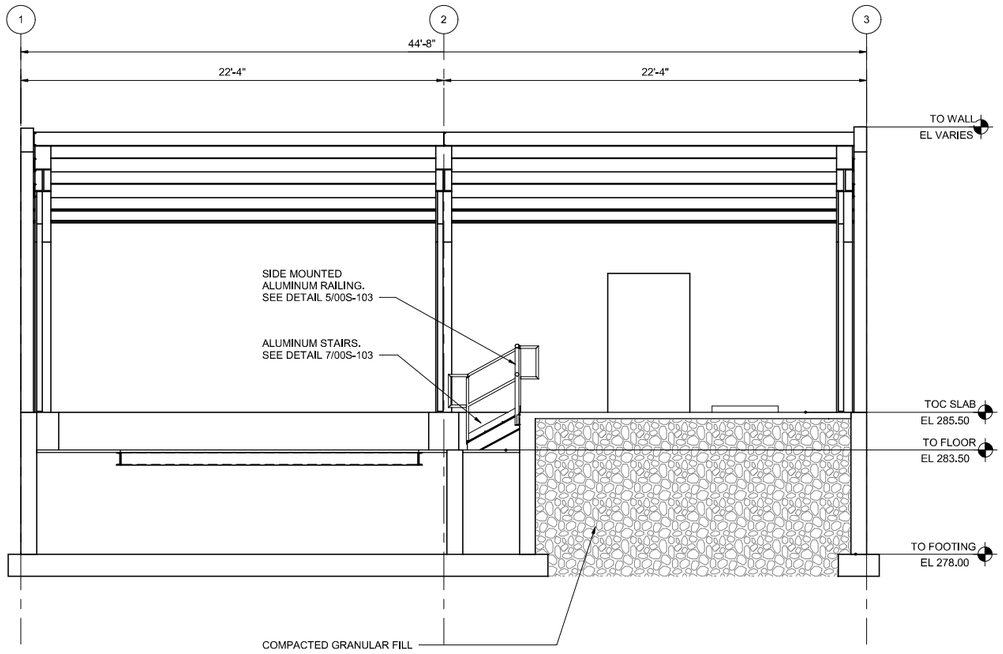
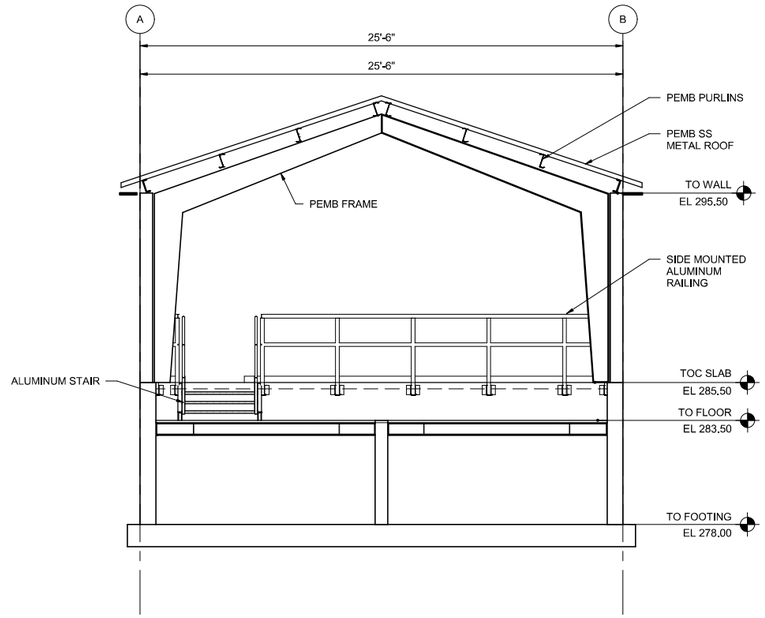


A 04A-101 SECTION
1/4" = 1'-0"



B 04S-101 SECTION
1/4" = 1'-0"

PLAN NORTH

TRUE NORTH

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-S.rvt
9/6/2024 3:09:56 PM

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Bruce A. Bradley PE15026
LICENSED PROFESSIONAL ENGINEER
Digitally signed by Bruce Bradley
Date: 2024.09.09 14:08:02-04'00'

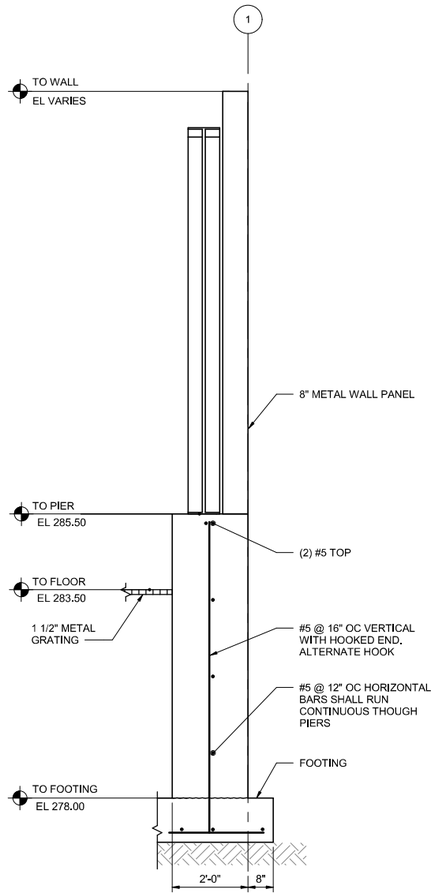
IMPROVEMENTS AT GRAND LAKE STREAM FISH HATCHERY

EFFLUENT TREATMENT BUILDING SECTIONS

0 1" 2"

FILENAME 10357686-04-S.rvt
SCALE 1/4" = 1'-0"

SHEET
04S-104



A / 04A-101 WALL SECTION AT CORNER
1/2" = 1'-0"

PLAN NORTH

TRUE NORTH

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Bruce A. Bradley PE15026
LICENSED PROFESSIONAL ENGINEER
Digitally signed by Bruce Bradley
Date: 2024.09.09 14:08:18-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM FISH HATCHERY

EFFLUENT TREATMENT BUILDING SECTIONS

0 1" 2"

FILENAME	10357686-04-S.rvt
SCALE	1/2" = 1'-0"

SHEET **04S-105**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-S.rvt
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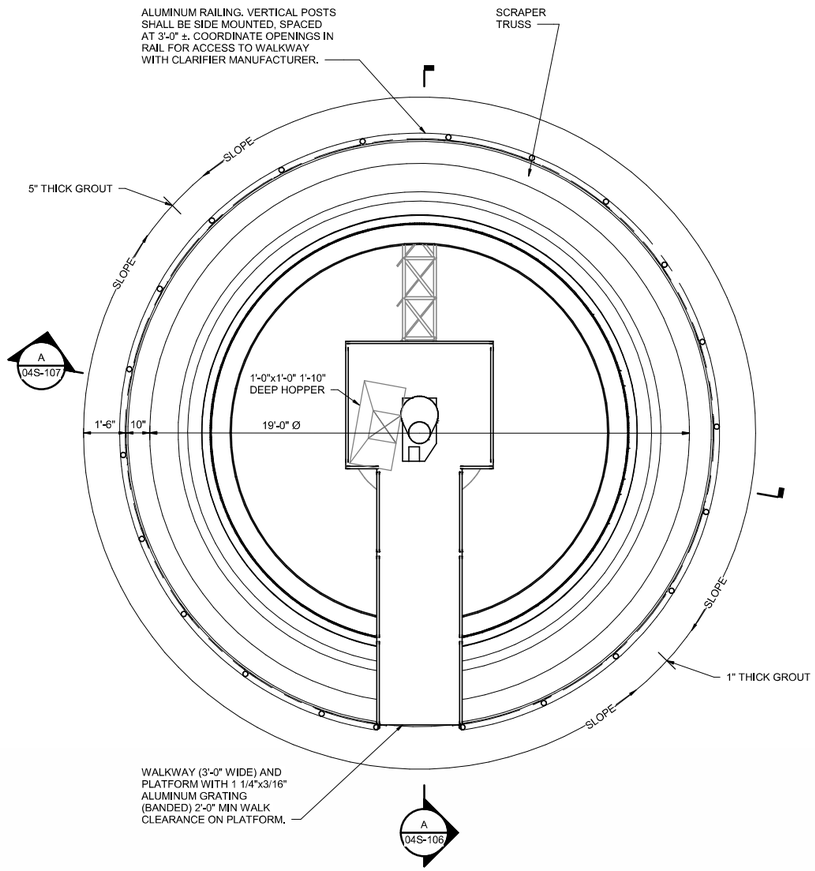
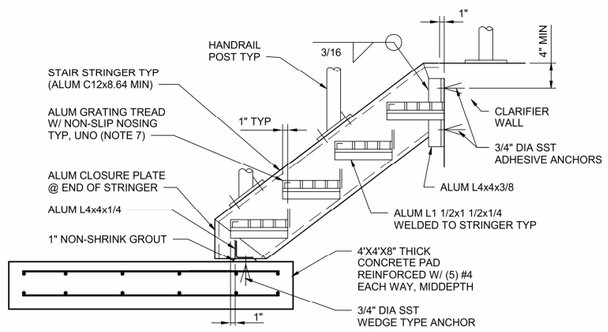


CLARIFIER PLAN

3/8" = 1'-0"

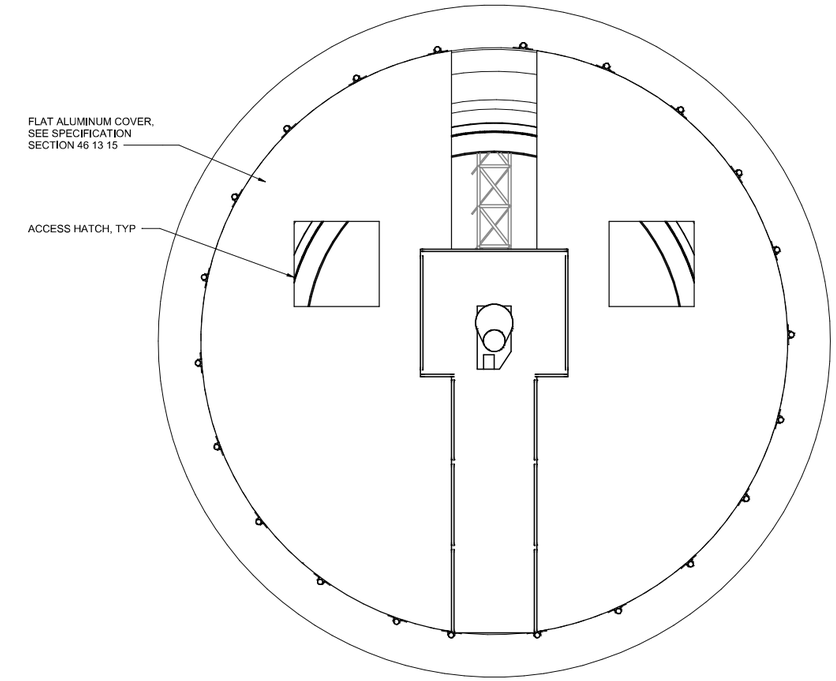


CLARIFIER STAIR

3/4" = 1'-0"

CLARIFIER STAIR NOTES:

1. DETAILS SHOWN FOR ALUMINUM GRATING TREADS.
2. STAIRS AND LANDINGS SHALL BE DESIGNED BY FABRICATOR SUBJECT TO APPROVAL OF ENGINEER. DESIGN LIVE LOAD SHALL BE AS STATED BELOW.
3. ANCHOR ALUMINUM TO CONCRETE WITH 3/4" DIA STAINLESS STEEL ANCHOR BOLTS, NUTS, AND WASHERS AS SHOWN IN DETAIL.
4. ALL STAIRS, LANDINGS, THEIR CONNECTIONS AND SUPPORTS SHALL BE DESIGNED FOR A LIVE LOAD OF 100 PSF UNIFORM LOAD OR A CONCENTRATED LIVE LOAD OF 1000 LB, WHICHEVER PRODUCES THE GREATER STRESSES AND REACTIONS. THE 1000 LB LOAD SHALL BE ABLE TO BE PLACED ANYWHERE ON THE STAIR SYSTEM. STAIR DEFLECTION DUE TO LIVE LOAD SHALL NOT EXCEED SPAN/480. SEE SPECIFICATION SECTION 05 50 00 FOR ADDITIONAL STAIR DESIGN REQUIREMENTS.
5. BASE PLATES FOR ALUMINUM COLUMNS SHALL REST ON 1" NON-SHRINK GROUT.

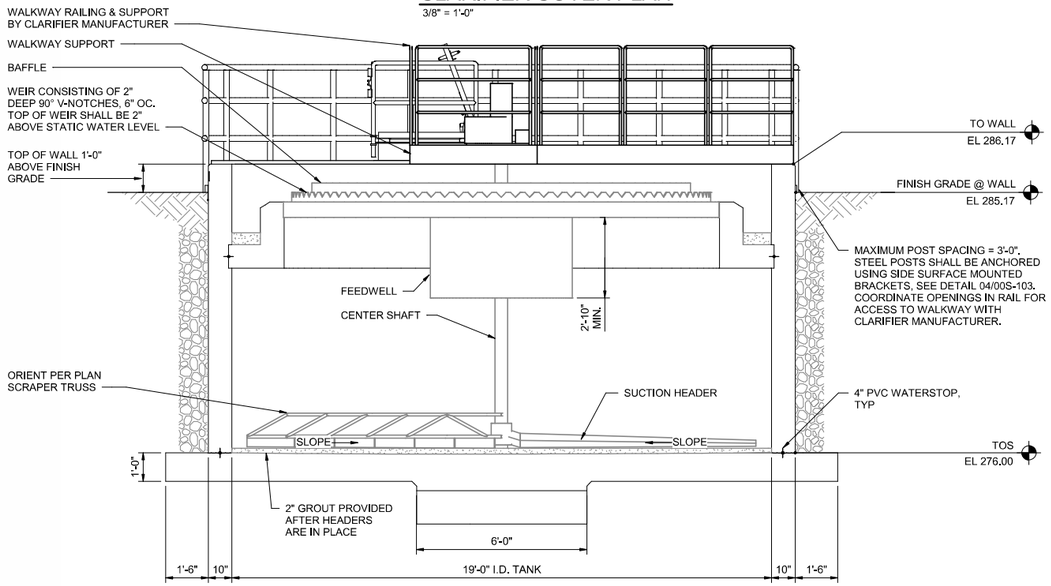


CLARIFIER COVER PLAN

3/8" = 1'-0"

GENERAL NOTES:

1. ADD 3, EQUALLY SPACED, 6" HORIZONTAL PRESSURE RELIEF VALVES INTO OUTER MOST WALL CLARIFIER.



CLARIFIER SECTION

A 04S-106 — 3/8" = 1'-0"

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE — Bruce A. Bradley PE15026 — LICENSED PROFESSIONAL ENGINEER

Digitally signed by Bruce Bradley
Date: 2024.09.09 14:08:38-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM FISH HATCHERY

EFFLUENT TREATMENT BUILDING CLARIFIER PLANS AND SECTION

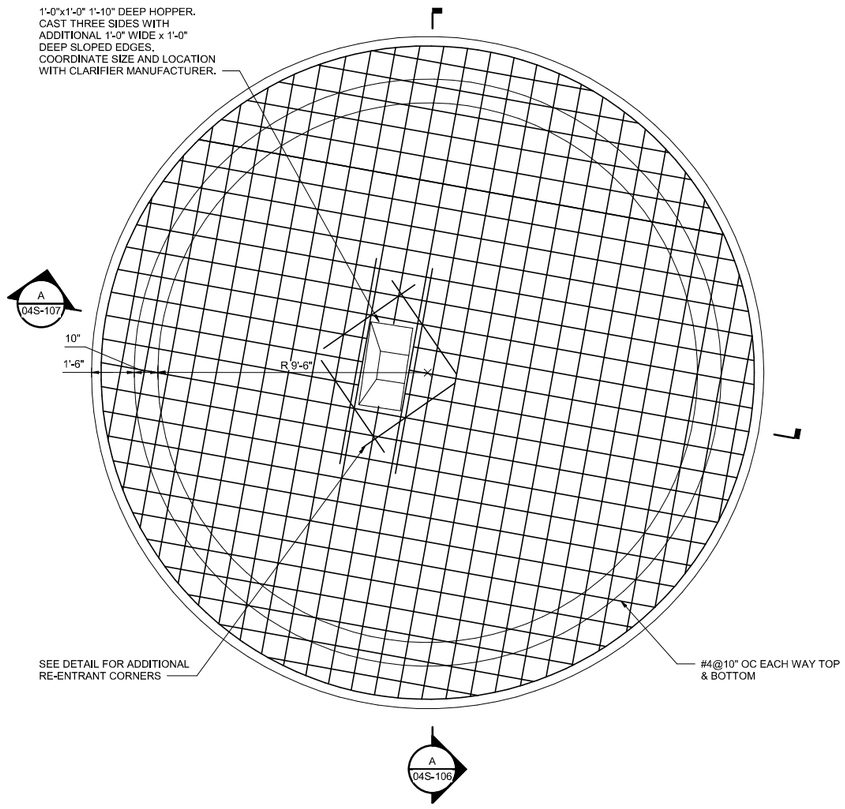
0 1" 2"

FILENAME 10357686-04-S.rvt

SCALE 3/8" = 1'-0"

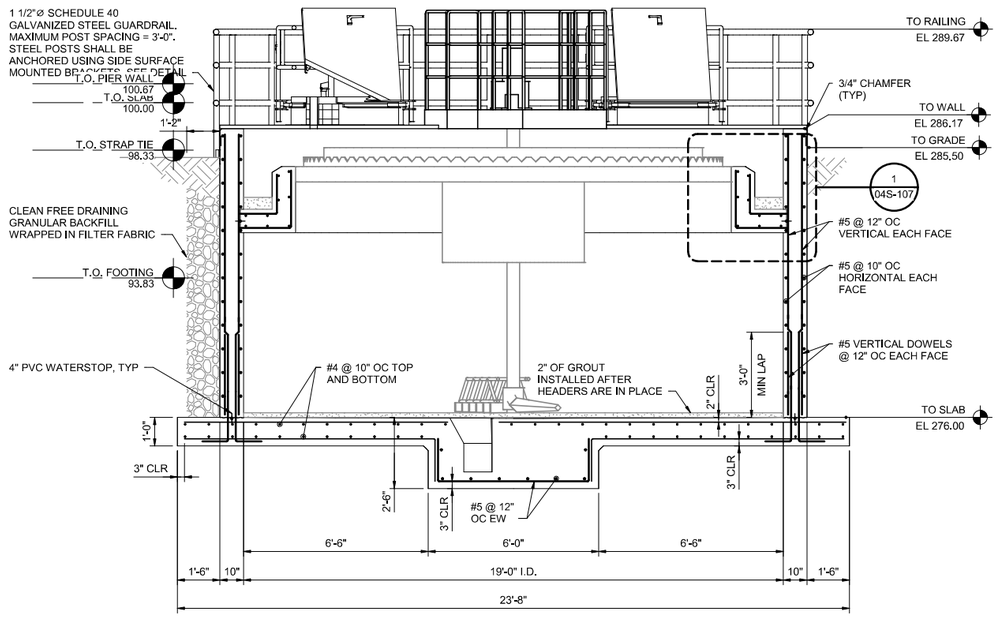
SHEET **04S-106**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-S.rvt
9/6/2024 3:09:51 PM

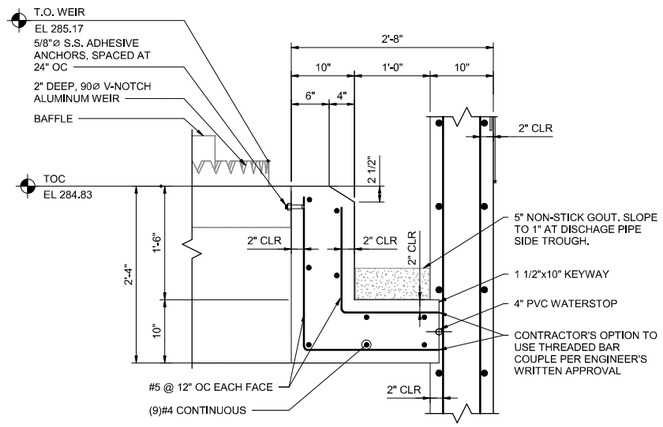


NOTES:
1. CLARIFIER CONCRETE SLAB SHALL HAVE A ROUGH BROOM FINISH.
2. SMOOTH FINISH STEEL FORMS OR SMOOTH FORM LINERS SHALL BE USED FOR ALL CLARIFIER WALLS, RACEWAY WALLS SHALL HAVE A SMOOTH SURFACE FINISH FREE FROM ABRASIONS, HOLES, PITS, FLAWS OR ANY SURFACE IRREGULARITIES AND IS NON-ABRASIVE TO TOUCH AS DETERMINDED BY THE ENGINEER OR OWNER'S REPRESENTATIVE. SEE SPECIFICATION SECTION.
3. COORDINATE ALL PIPE PENETRATIONS WITH PLUMBING SHEETS.

FOUNDATION PLAN
3/8" = 1'-0"



A
04S-106 SECTION
3/8" = 1'-0"



1
04S-107 TROUGH DETAIL
1" = 1'-0"

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-S.rvt
9/6/2024 3:09:42 PM

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Bruce A. Bradley PE15026
LICENSED PROFESSIONAL ENGINEER
Digitally signed by Bruce Bradley
Date: 2024.09.09 14:08:54-04'00'

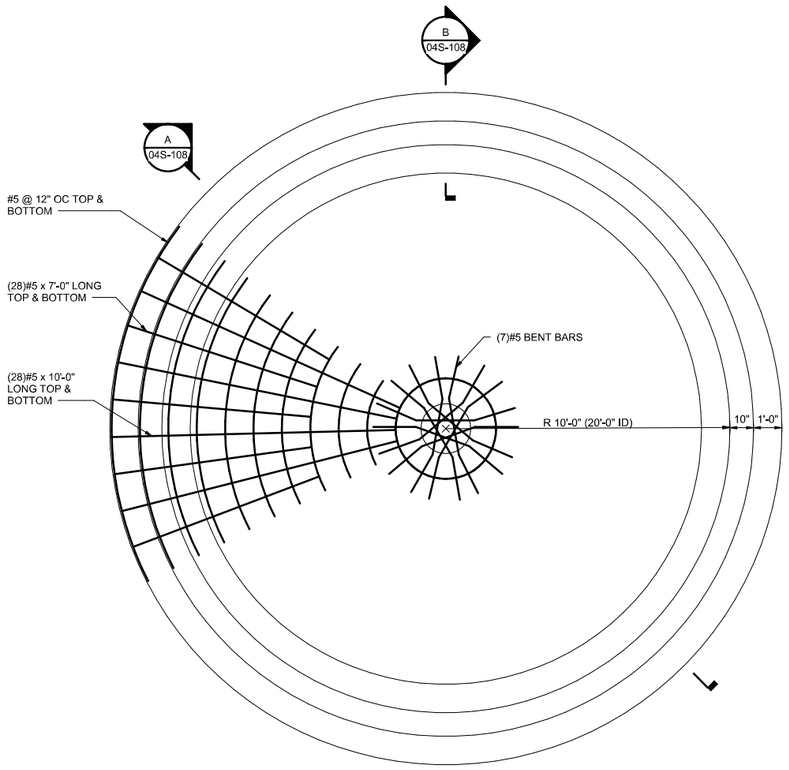
IMPROVEMENTS AT GRAND LAKE STREAM FISH HATCHERY

EFFLUENT TREATMENT BUILDING CLARIFIER FOUNDATION PLAN, SECTION AND DETAILS

0 1" 2"

FILENAME 10357686-04-S.rvt
SCALE As indicated

SHEET 04S-107

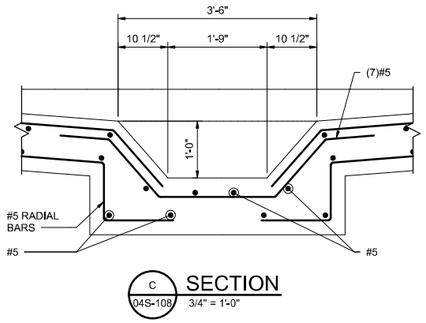


NOTES:
SLUDGE STORAGE TANK FLOORS SHALL BE STEEL TROWEL FINISHED, EITHER BY HAND OR BY MACHINE, TO PRODUCE A DENSE, SMOOTH, HAD SURFACE.

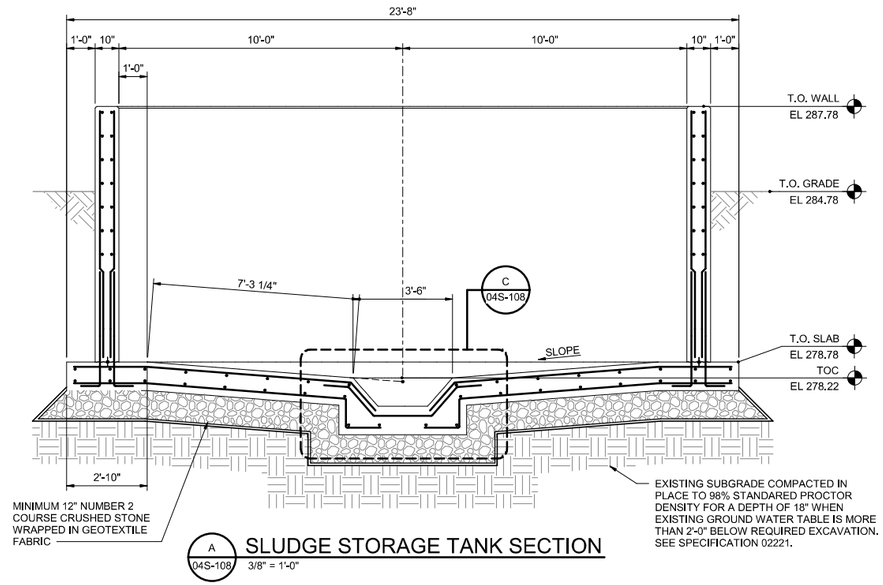
SMOOTH FINISH STEEL FORMS OR SMOOTH FORM LINERS SHALL BE USED FOR ALL SLUDGE STORAGE TANK WALLS. WALLS SHALL HAVE A SMOOTH SURFACE FINISH FREE FROM ABRASIONS, HOLES, PITS, FLAWS OR ANY SURFACE IRREGULARITIES AND IS NON-ABRASIVE TO THE TOUCH AS DETERMINED BY THE ENGINEER OR OWNER'S REPRESENTATIVE, SEE SPECIFICATION SECTION 03002.

COORDINATE ALL PIPE PEMETRATIONS WITH PLUMBING SHEETS, ADD 3 EQUALLY SPACED, 6" HORIZONTAL PRESSURE RELIEF VALVES INTO OUTER MOST WALL OF CLARIFIER.

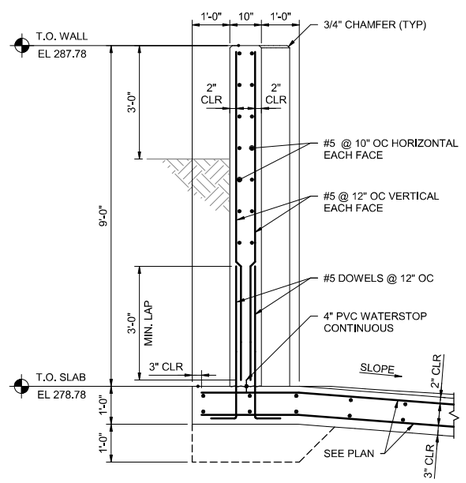
SLUDGE STORAGE TANK PLAN
3/8" = 1'-0"



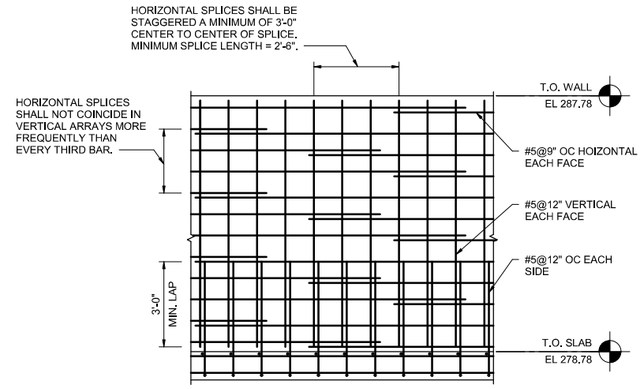
C 04S-108 **SECTION**
3/4" = 1'-0"



A 04S-108 **SLUDGE STORAGE TANK SECTION**
3/8" = 1'-0"



B 04S-108 **WALL SECTION**
1/2" = 1'-0"



2 04S-102 **WALL ELEVATION SHOWING REINFORCING**
3/8" = 1'-0"

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Bruce A. Bradley PE15026 LICENSED PROFESSIONAL ENGINEER
Digitally signed by Bruce Bradley
Date: 2024.09.09 14:09:10-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM FISH HATCHERY

EFFLUENT TREATMENT BUILDING SLUDGE STORAGE TANK PLAN, SECTIONS AND DETAILS

0 1" 2"

FILENAME 10357686-04-S.rvt
SCALE As indicated

SHEET **04S-108**

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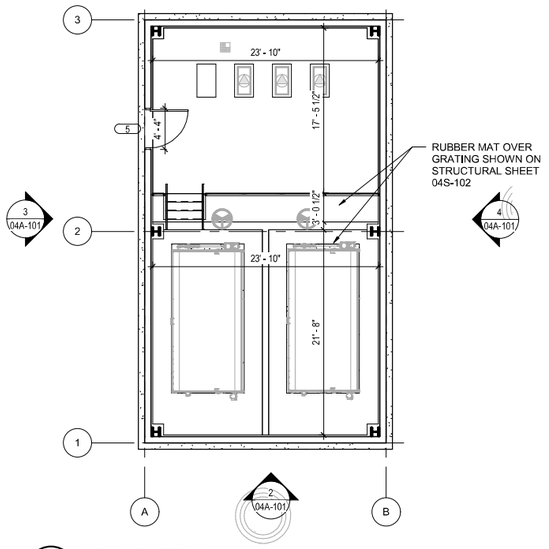
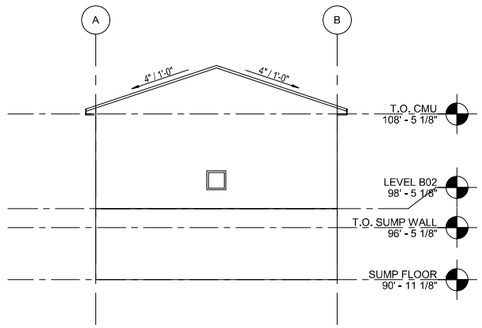
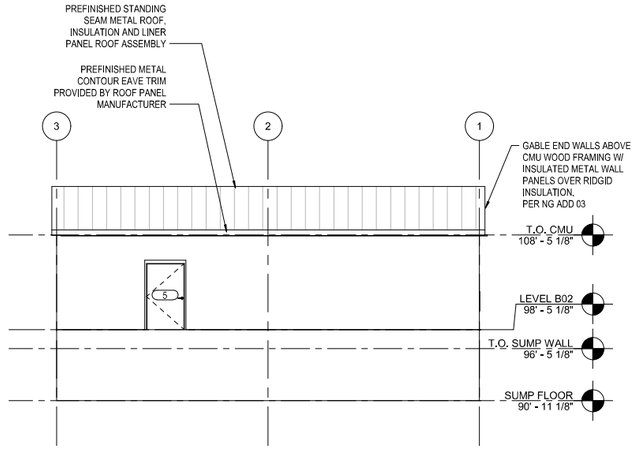


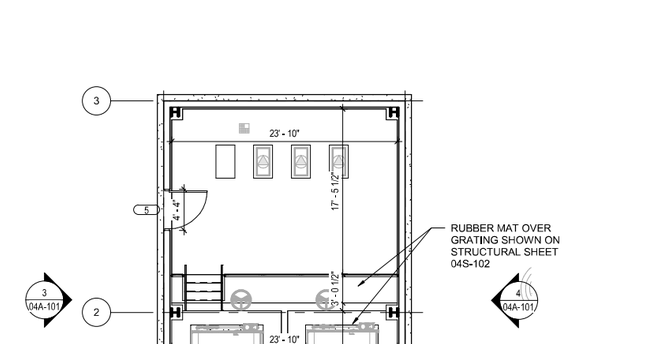
1 DRUMFILTER PLAN
1/8" = 1'-0"



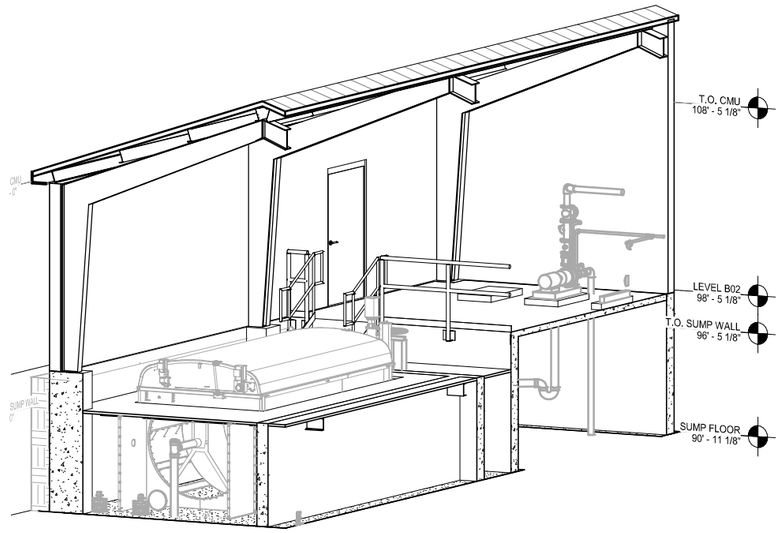
2 SOUTH ELEVATION
1/8" = 1'-0"



3 WEST ELEVATION
1/8" = 1'-0"



4 EAST ELEVATION
1/8" = 1'-0"



5 3D VIEW

DOOR AND FRAME SCHEDULE

IDENTIFICATION				DIMENSIONS					DOOR	PANEL		FRAME				HARDWARE	
LEVEL	ROOM NO.	ROOM NAME	DOOR NO.	OPENING WIDTH			H	T	TYPE	Material	Finish	TYPE	Material	Finish	FIRE RATING	GROUP	NOTES
				W1	W2	Total Width											
T.O. SLAB	400	UPPER LEVEL	5	-	-	4' - 0"	7' - 0"	1 3/4"	D03	METAL	PAINTED	F05	METAL	PAINTED	N/A	2	

HDR

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

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CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

LICENSED ARCHITECT
Michael A. Baskin
5595
STATE OF MAINE

Digitally signed by Baskin, Michael Alan
Date: 2024.09.09 16:03:00-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

EFFLUENT TREATMENT BUILDING PLAN AND ELEVATIONS

0 1" 2"

FILENAME

SCALE 1/8" = 1'-0"

SHEET 04A-101

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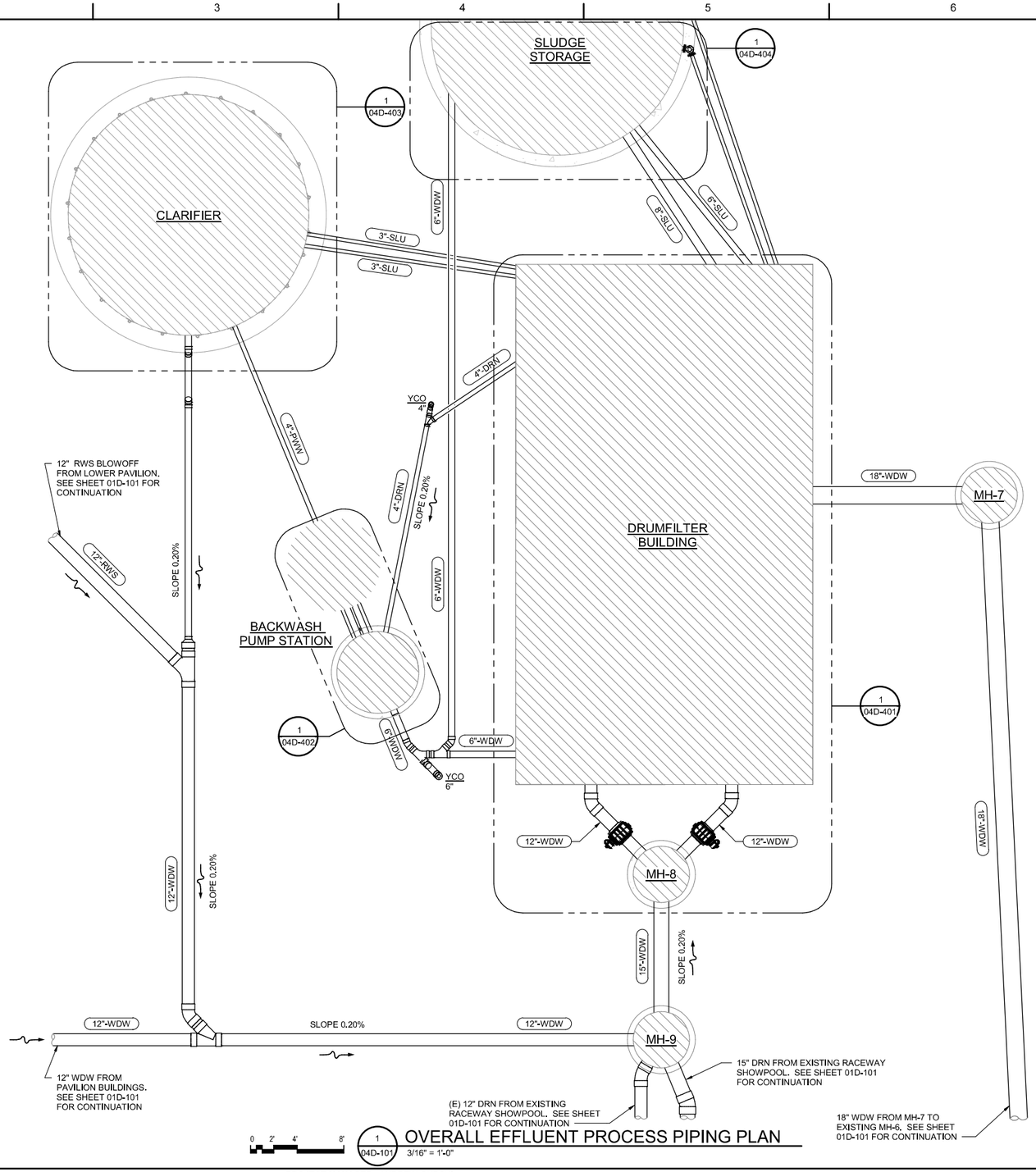


ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:07:51-05'00'

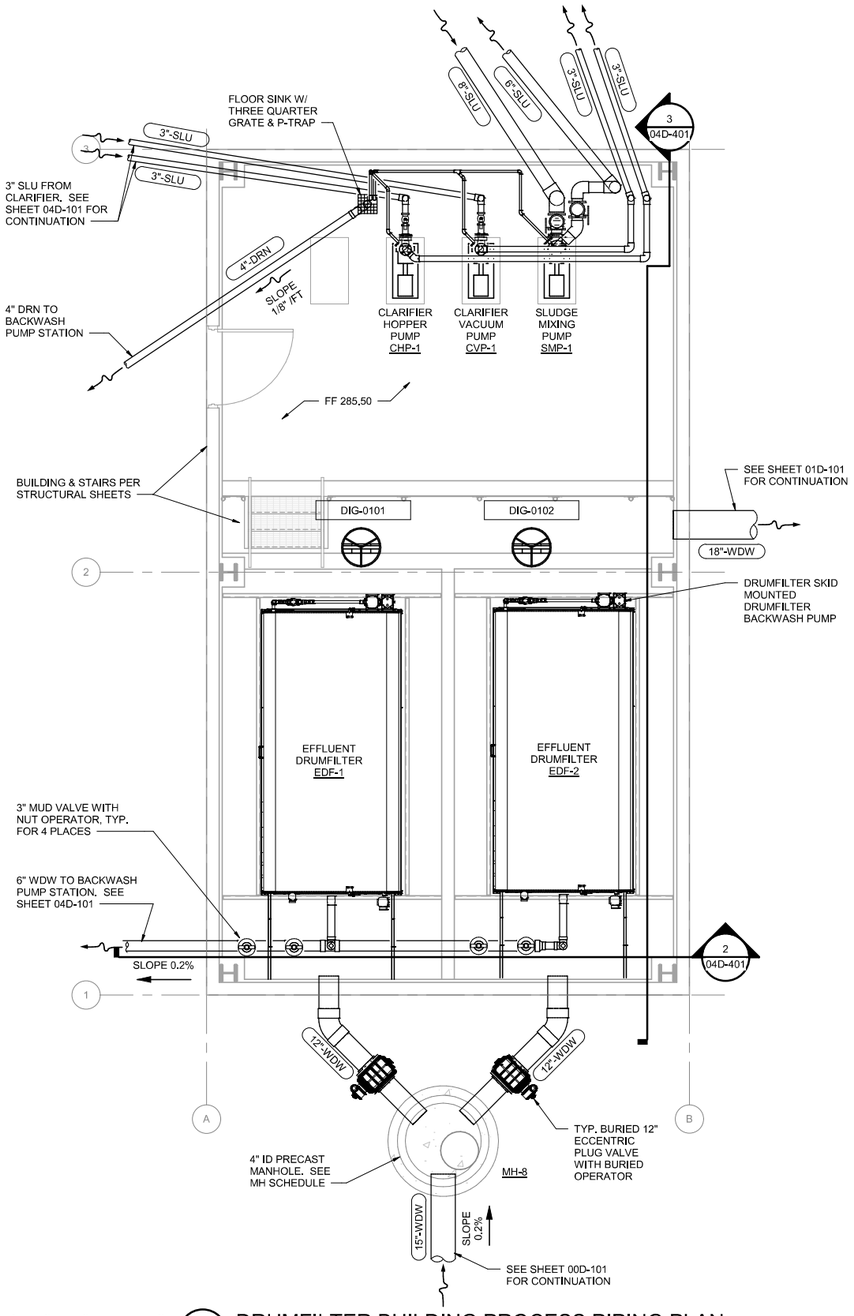
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

OVERALL EFFLUENT PROCESS PIPING PLAN

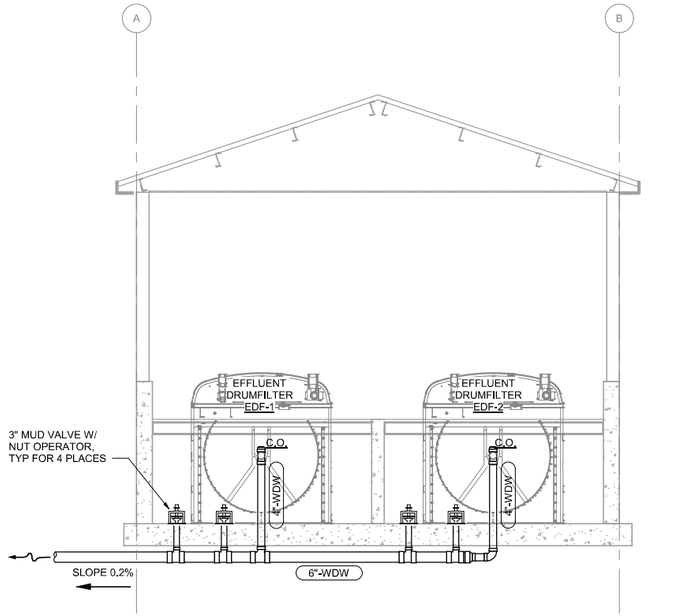
0 1" 2"

FILENAME 10353741-04-D.rvt
SCALE 3/16" = 1'-0"

SHEET **04D-101**



DRUMFILTER BUILDING PROCESS PIPING PLAN



0 2' 4' 8'

2 04D-401

DRUMFILTER BACKWASH PIPING SECTION

0 2' 4' 8'

3 04D-401

DRUMFILTER BUILDING PIPING SECTION

TRUE NORTH

GENERAL NOTES:

1. ANCHOR DRUMFILTER TO CONCRETE WITH STAINLESS HARDWARE PER RECOMMENDATIONS OF DRUMFILTER MANUFACTURER.
2. FOR CLARITY, PIPING SUPPORTS ARE NOT SHOWN BUT ARE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN & PROVIDE AND THEY SHALL NOT IMPEDE ACCESS TO OR MAINTENANCE OF DRUMFILTER, PIPING, VALVES, GAGES, PUMPS, STRAINERS, ETC. AND SUPPORTS SHALL BE GALVANIZED, SS, FRP OR ALUMINUM AND FASTENERS SHALL BE SS. LEAVE SPACE FOR A PERSON TO STEP OVER 12" PIPING BEFORE & AFTER TRUE WYE.
3. EACH MUD VALVE SHALL HAVE A 30-INCH STEM EXTENSION SUPPORTED TO THE NEAREST CONCRETE SUMP WALL. PROVIDE 3-INCH DIAMETER HOLE IN DECKING/GRATING ABOVE AND SLIT IN FLOOR MAT ABOVE FOR PASSAGE OF OPERATING WRENCH SOCKET.
4. LOCATE FLOOR SINK 3 FEET FARTHER SOUTHWEST THAN SHOWN AND PROVIDE P-TRAP AND 2-INCH VENT UP INSIDE FACE OF WALL AND OFFSET WITH 45-DEGREE ELS TO NEAR ROOF RIDGE AND PROVIDE 3-INCH VENT THROUGH ROOF 3 FT FROM ROOF EDGE.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Jeffrey K. Chandler PE17167 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:08:08-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

DRUMFILTER BUILDING PROCESS PIPING PLAN

0 1" 2"

FILENAME 10353741-04-D.rvt
SCALE 1/4" = 1'-0"

SHEET **04D-401**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-D.rvt
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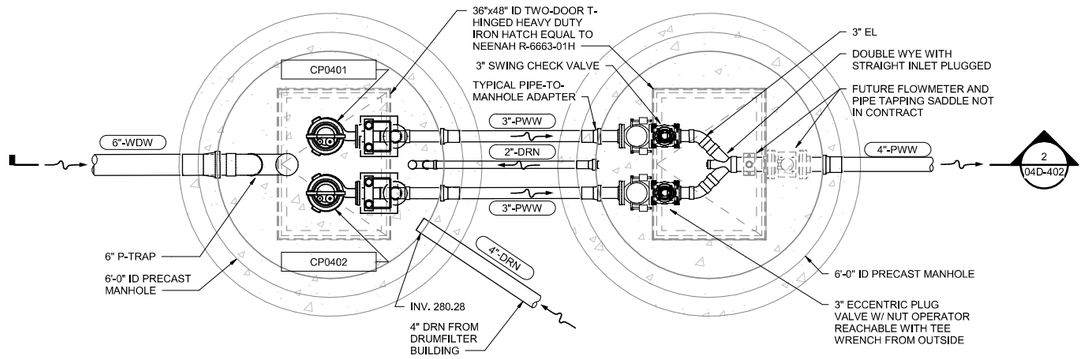
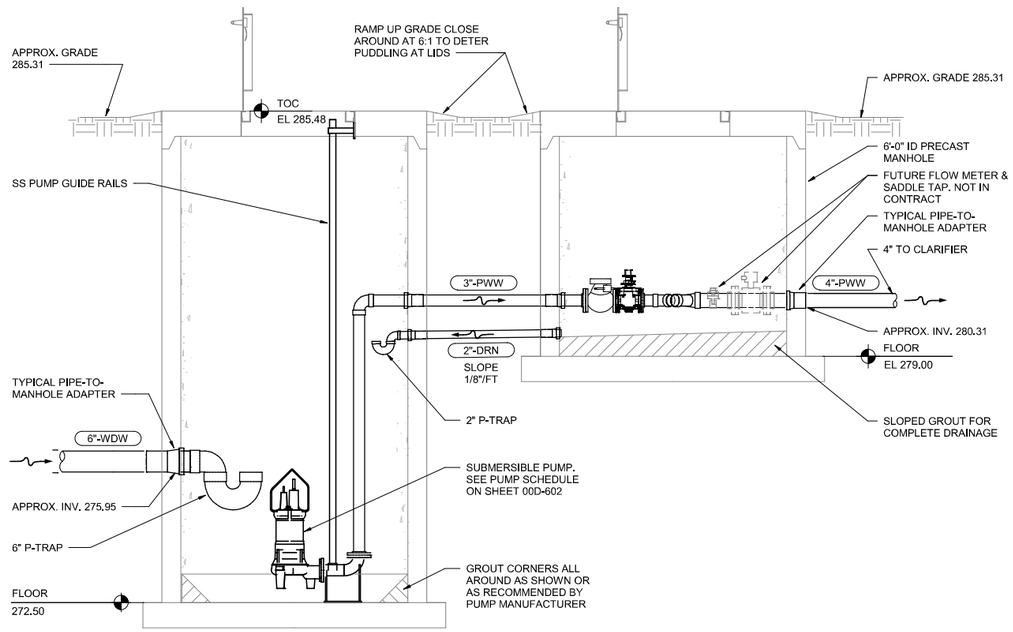


0 1' 2' 4'

1
04D-402

BACKWASH PUMP STATION PIPING PLAN

1/2" = 1'-0"



0 1' 2' 4'

2
04D-402

BACKWASH PUMP STATION PROCESS PIPING SECTION

1/2" = 1'-0"

N

TRUE NORTH

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE · Jeffrey K. Chandler PE17167 · LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:08:46-05'00'

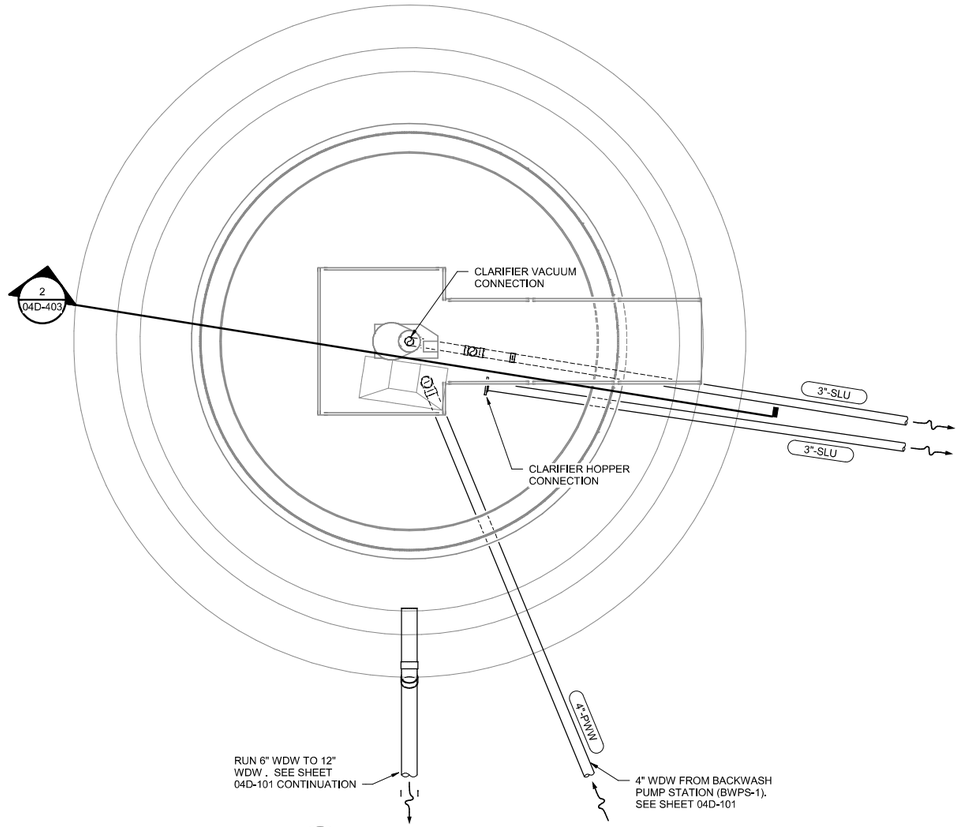
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

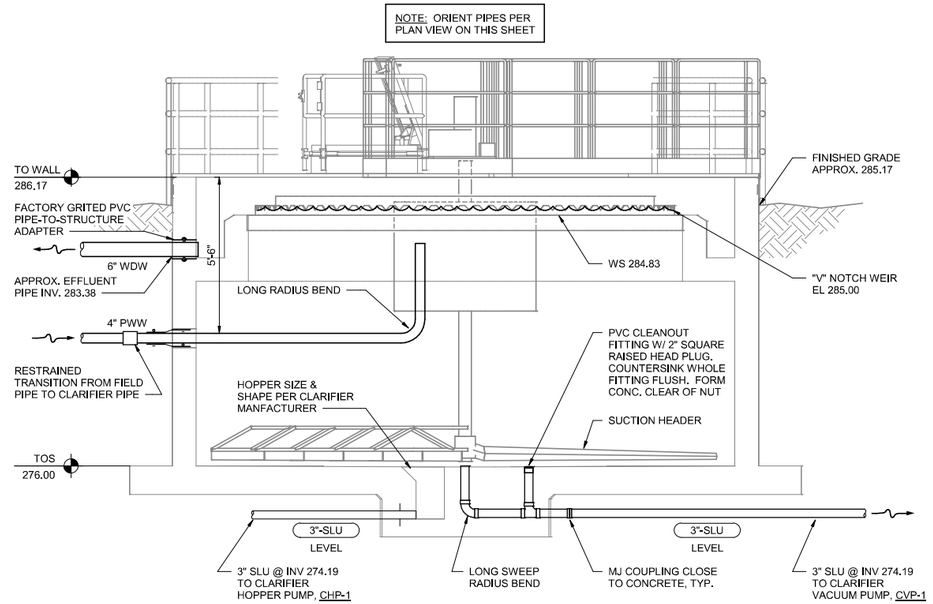
BACKWASH PUMP STATION PROCESS PIPING PLAN & SECTION

0 1" 2"

FILENAME	10353741-04-D.rvt
SCALE	1/2" = 1'-0"

SHEET **04D-402**





TRUE NORTH

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Jeffrey K. Chandler
PE17167
LICENSED
PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:09:03-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

CLARIFIER PROCESS PIPING PLAN & SECTION

0 1" 2"

FILENAME 10353741-04-D.rvt

SCALE 3/8" = 1'-0"

SHEET 04D-403

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-D.rvt
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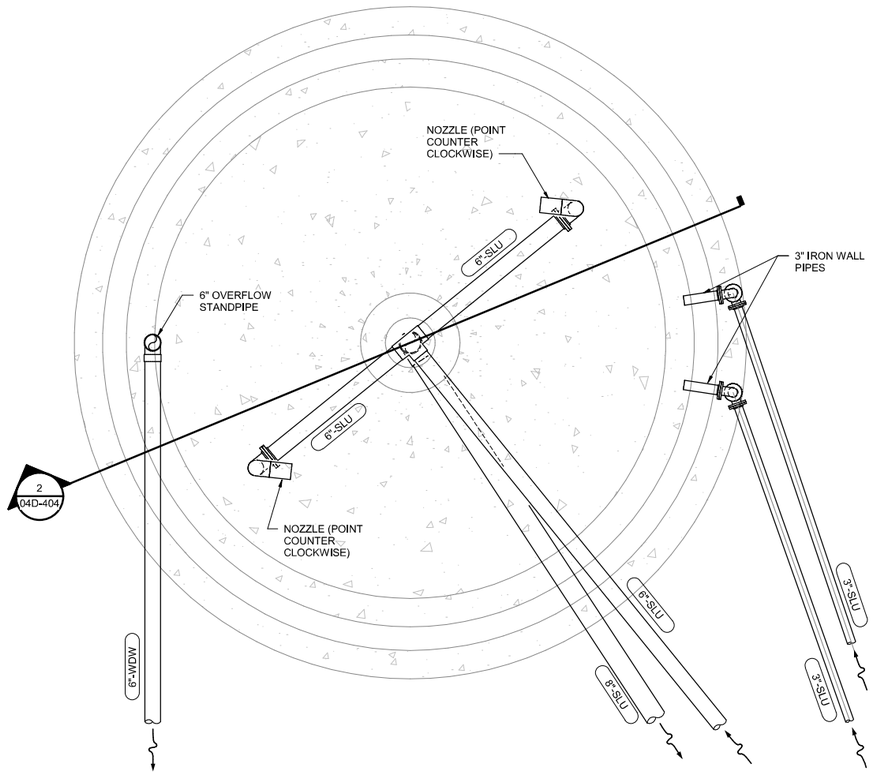
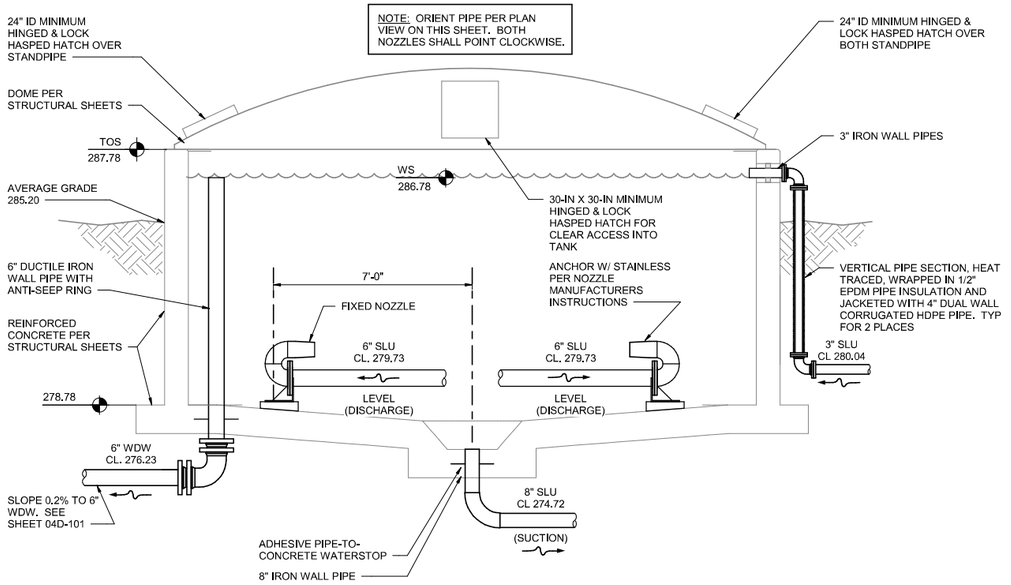


0 1' 2' 4'

1 04D-404 SLUDGE STORAGE PROCESS PIPING PLAN

3/8" = 1'-0"



0 1' 2' 4'

2 04D-404 SLUDGE STORAGE PROCESS PIPING SECTION

3/8" = 1'-0"

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:09:34-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

SLUDGE STORAGE PROCESS PIPING PLAN & DETAILS

0 1" 2"

FILENAME 10353741-04-D.rvt

SCALE 3/8" = 1'-0"

SHEET **04D-404**

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-D.rvt
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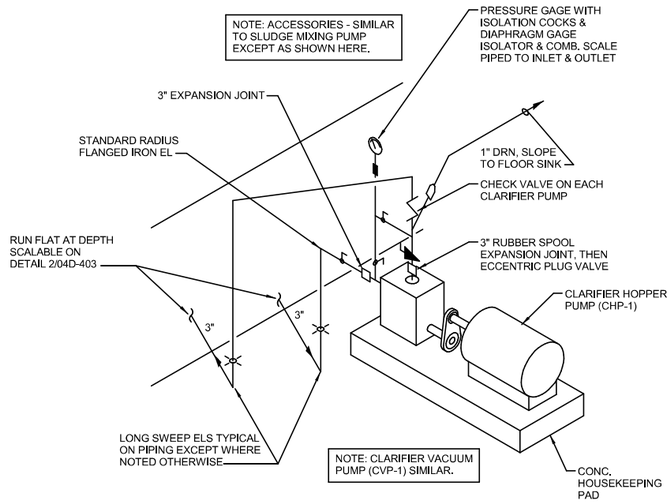
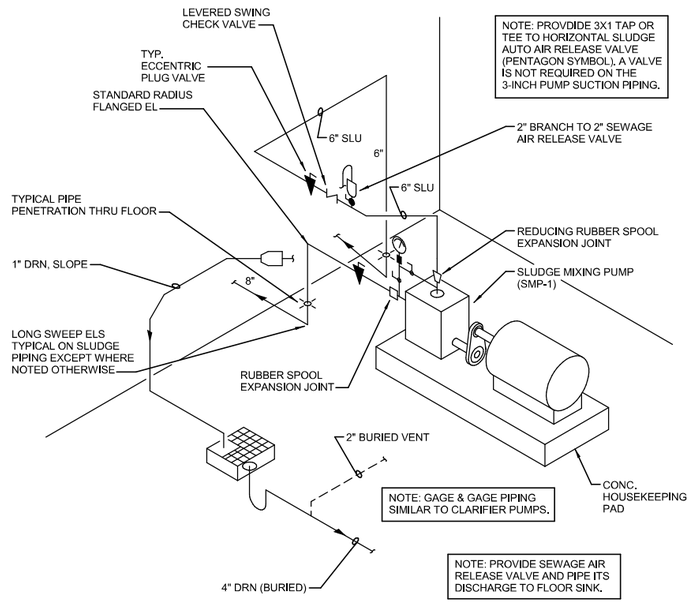


1 04D-501 CLARIFIER HOPPER PUMP (CHP-1)
NOT TO SCALE



2 04D-501 SLUDGE MIXING PUMP DIAGRAM (SMP-1)
NOT TO SCALE

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-D.rvt
9/6/2024 3:13:30 PM

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:09:53-05'00'

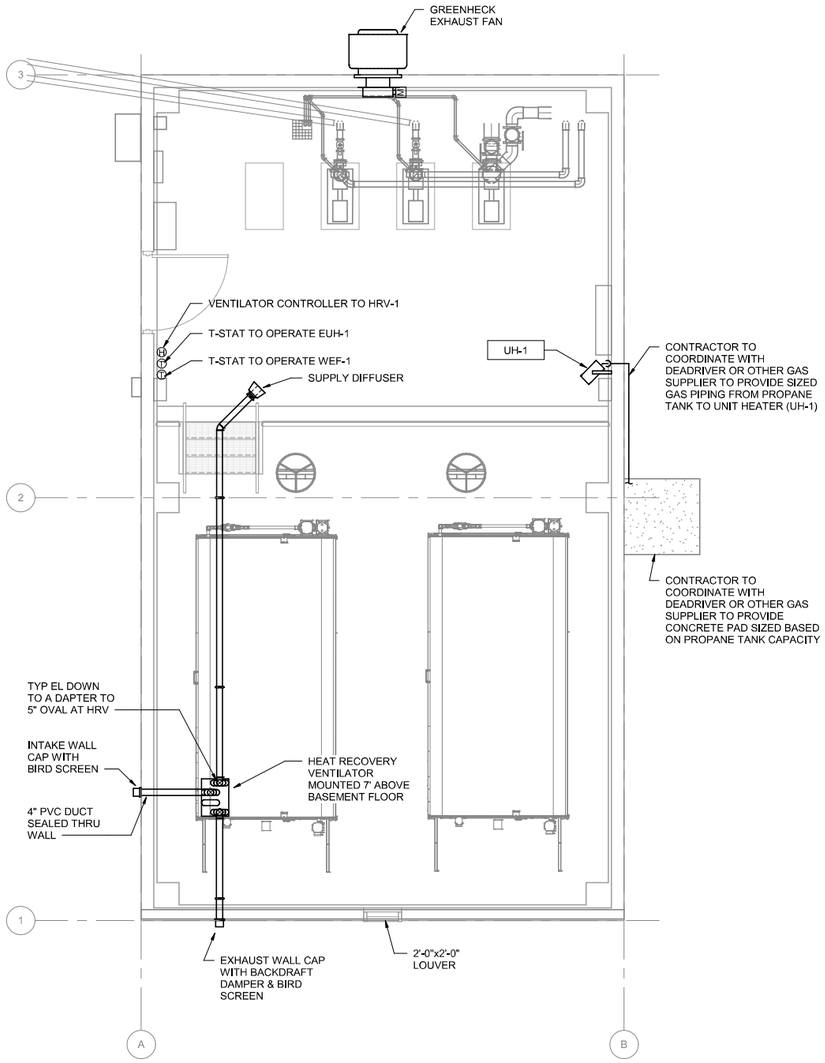
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

DRUMFILTER BLDG DETAILS

0 1" 2"

FILENAME	10353741-04-D.rvt
SCALE	3/8" = 1'-0"

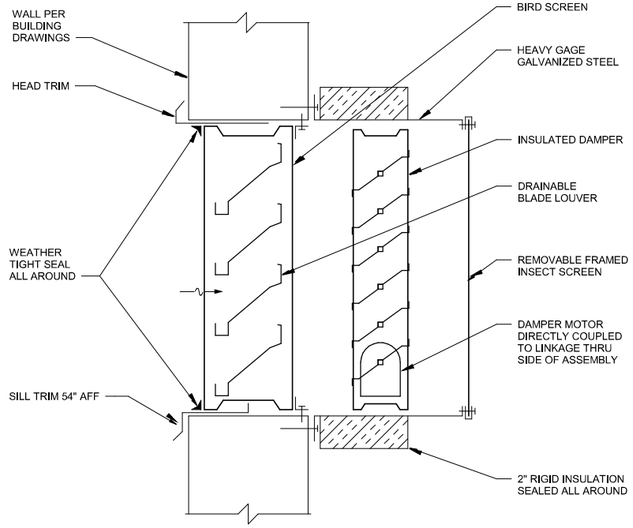
SHEET **04D-501**



0 2' 4' 8'

MECHANICAL PLAN

1/4" = 1'-0"



1 / -

LOUVER & DAMPER DETAIL

NOT TO SCALE

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	C. SMEE
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10457686

STATE OF MAINE
Jeffrey K. Chandler PE17167
LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:10:56-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

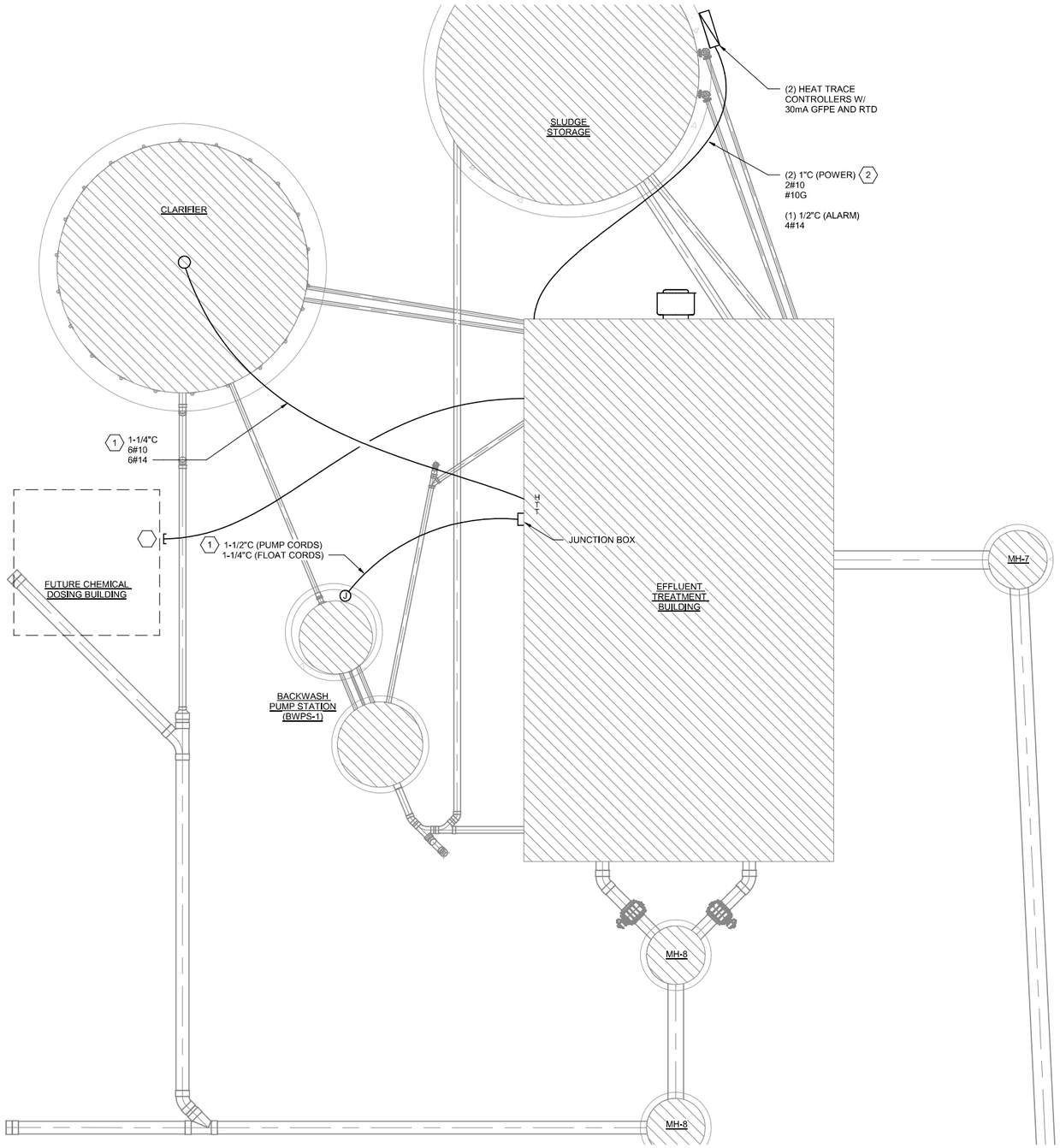
EFFLUENT TREATMENT BUILDING MECHANICAL PLAN

0 1" 2"

FILENAME	10358676-04-E.rvt
SCALE	As indicated

SHEET 04M-101

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-04-E.rvt
9/6/2024 3:17:05 PM



OVERALL EFFLUENT ELECTRICAL PLAN

3/16" = 1'-0"

PLAN NORTH

TRUE NORTH

GENERAL NOTES:

1. REFER TO 01E-101 FOR SITE POWER AND COMM. CONDUIT ROUTING.

KEYNOTES (#)

1 CONDUIT AND WIRE IS SHOWN FOR BIDDING PURPOSES ONLY. CONFIRM REQUIREMENTS WITH MANUFACTURER SHOP DRAWINGS.

2 PROVE (2) 30A CIRCUITS FOR TWO HEAT TRACES ON SLUDGE TANK STAND-PIPES. PROVIDE 2#14 LOW TEMP. ALARM CONTACT FROM EACH HEAT TRACE PANEL TO ALARM JUNCTION BOX. REFER TO DETAIL 2 / 04D-404 AND SPECIFICATION 40 41 13 FOR DETAILS. COORDINATE WITH MFG. REQUIREMENTS FOR EXACT LOADING AND NUMBER OF CONNECTIONS.

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	C. SMEE
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10457686

STATE OF MAINE Andrew D. Kaner PE18016 LICENSED PROFESSIONAL ENGINEER

Kaner, Andrew D

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

OVERALL EFFLUENT ELECTRICAL PLAN

0 1" 2"

FILENAME 10358676-04-E.rvt

SCALE 3/16" = 1'-0"

SHEET 04E-101

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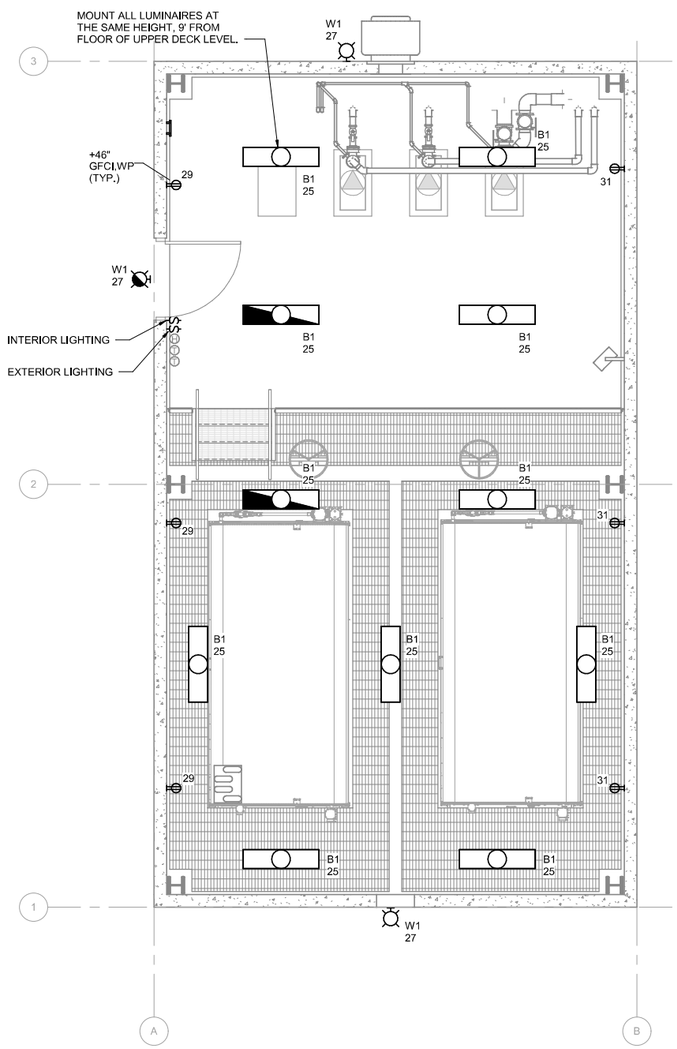
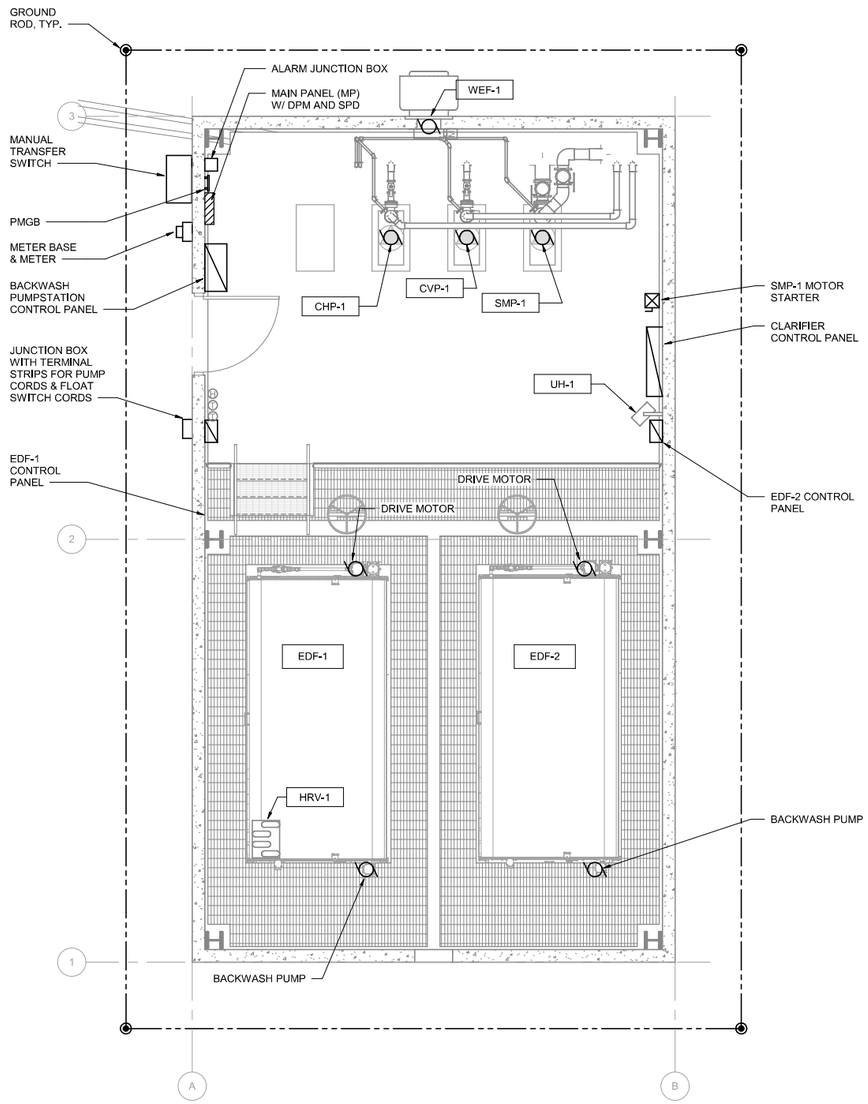


0 2' 4' 8'

1 - EFFLUENT TREATMENT BUILDING - LIGHTING PLAN

1/4" = 1'-0"



0 2' 4' 8'

2 - EFFLUENT TREATMENT BUILDING - POWER PLAN

1/4" = 1'-0"

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	C. SMEE
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10457686

STATE OF MAINE
Andrew D. Kaner
PE18016
LICENSED
PROFESSIONAL ENGINEER

Kaner, Andrew D

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

EFFLUENT TREATMENT BUILDING ELECTRICAL PLANS

0 1" 2"

FILENAME 10358676-04-E.rvt

SCALE 1/4" = 1'-0"

SHEET 04E-401

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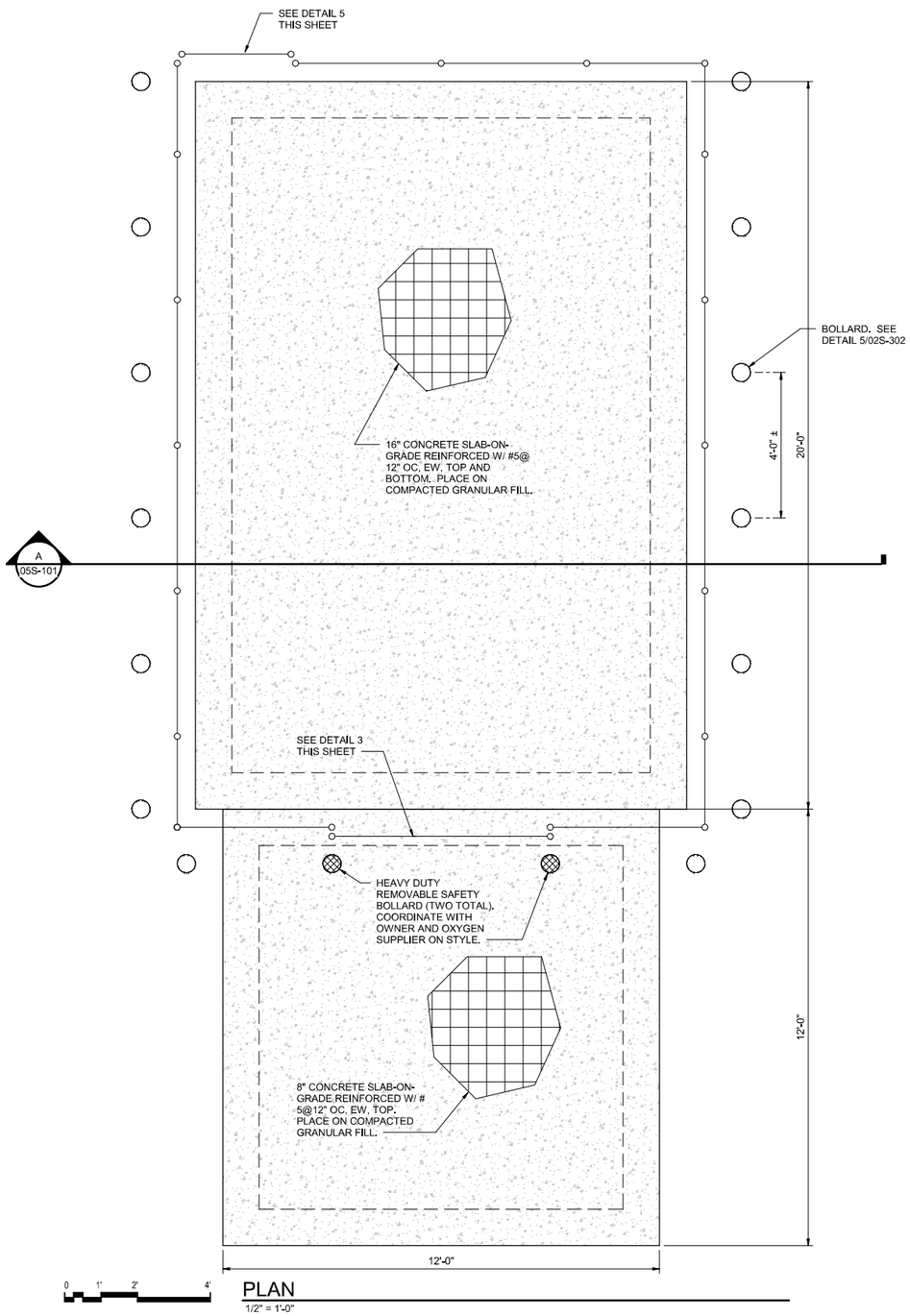
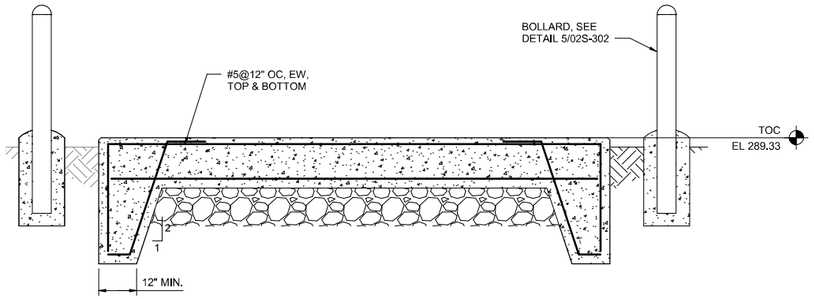
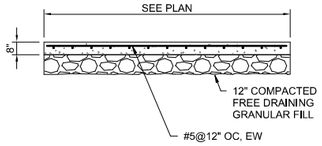


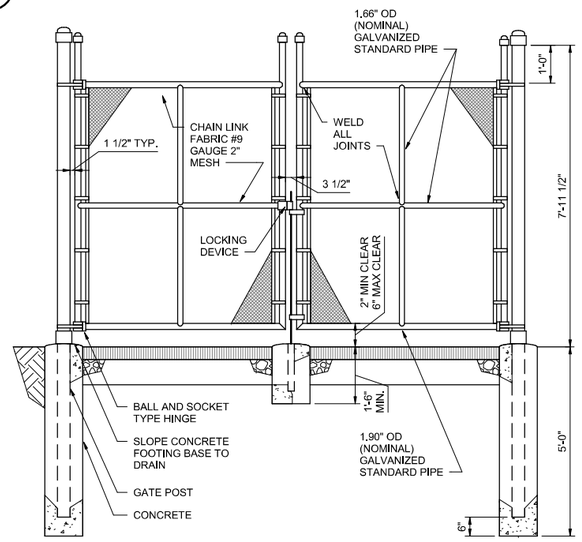
PLAN
1/2" = 1'-0"



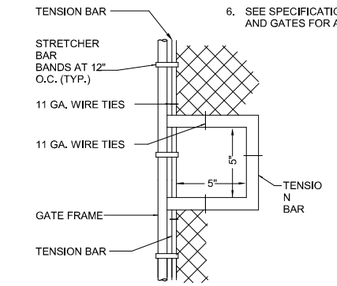
A
-
SECTION
1/2" = 1'-0"



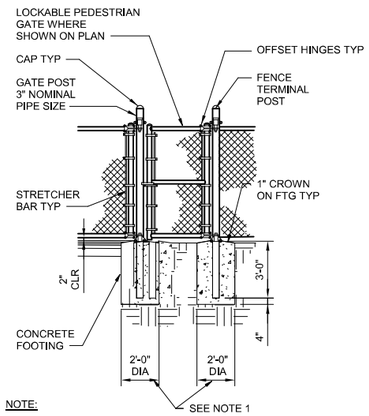
2
-
DRIP PAD SECTION
1/4" = 1'-0"



3
-
SWING GATE DETAIL
1/2" = 1'-0"



4
-
CUT OUT DETAIL FOR CHAIN & LOCK
NOT TO SCALE



NOTE:

1. USE 3'-0" DIA CONCRETE FOOTING HOLE FOR POST DIAMETERS GREATER THAN 5" AND USE 4'-0" DIA CONCRETE FOOTING HOLE FOR POST DIAMETERS GREATER THAN 6".

5
-
CHAIN LINK GATE
NOT TO SCALE

GENERAL NOTES:

1. SEE SHEET 00S-001 FOR GENERAL STRUCTURAL NOTES.
2. SEE 00S-500 SERIES SHEETS FOR TYPICAL STRUCTURAL DETAILS.
3. REFER TO ARCHITECTURAL, PROCESS, MECHANICAL, PLUMBING, ELECTRICAL, AND DRAWINGS OF OTHER TRADES FOR LOCATIONS OF OPENINGS, DEPRESSIONS, FLOOR SLOPES AND DRAINS.
4. CONTRACTORS SHALL MARK WHERE THE REBARS ARE LOCATED.
5. SLEEVE ALL PIPE PENETRATIONS THROUGH SLAB WITH PVC PIPE SIZED TO ALLOW PIPE TO FREELY PASS THROUGH SLAB.
6. SEE SPECIFICATION 32 31 13 - CHAIN LINK FENCE AND GATES FOR ADDITIONAL INFORMATION.

PLAN NORTH TRUE NORTH

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Bruce A. Bradley PE15026
LICENSED PROFESSIONAL ENGINEER
Digitally signed by Bruce Bradley
Date: 2024.09.09 14:09:37-04'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

OXYGEN PAD
STRUCTURAL PLAN AND SECTION

0 1" 2"

FILENAME	10357686-05-U
SCALE	As indicated
SHEET	05S-101

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-05-U-OXYGEN_PAD.rvt
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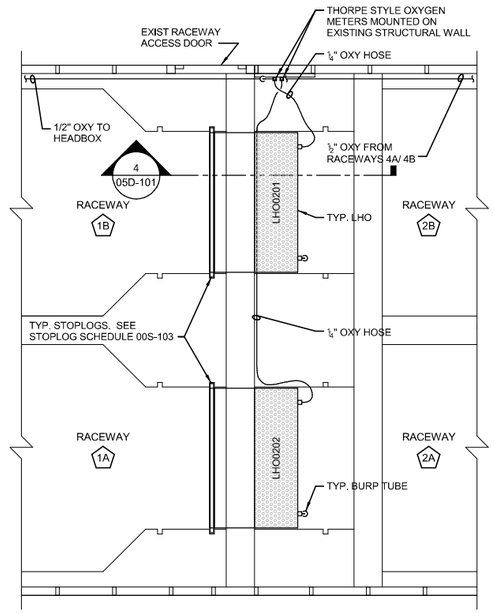
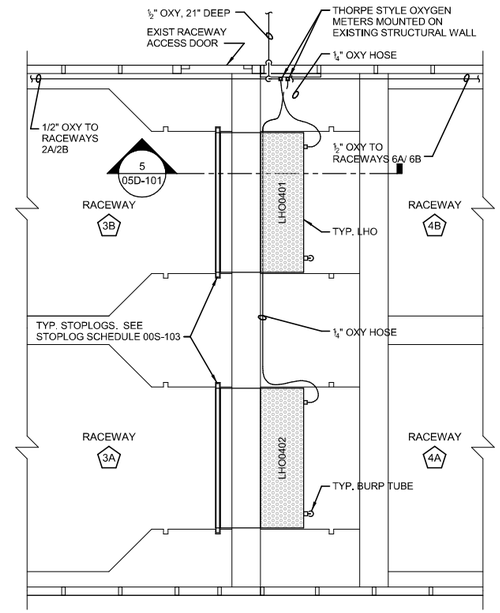


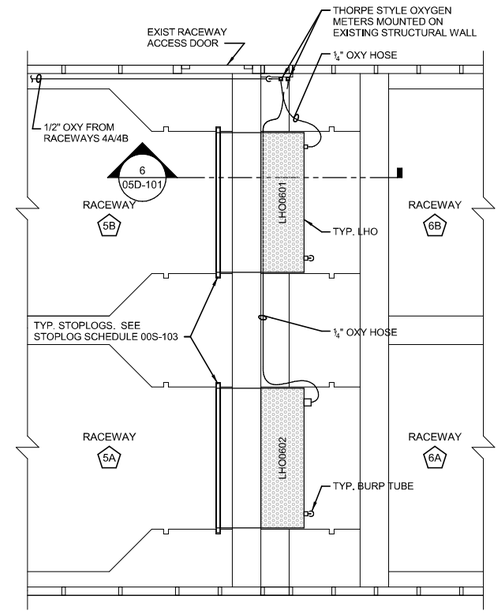
1 05D-101 RACEWAYS 1A,1B, 2A & 2B LHO PLAN

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



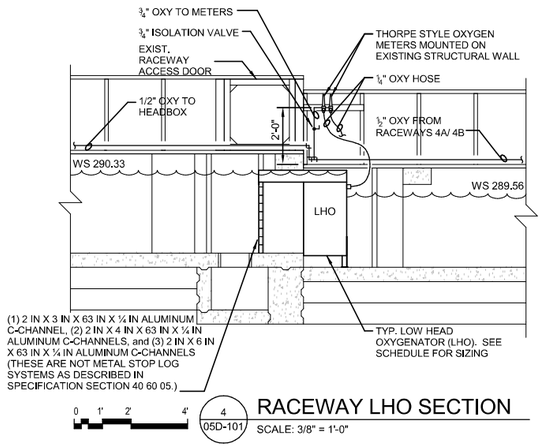
2 05D-101 RACEWAYS 3A,3B, 4A & 4B LHO PLAN

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



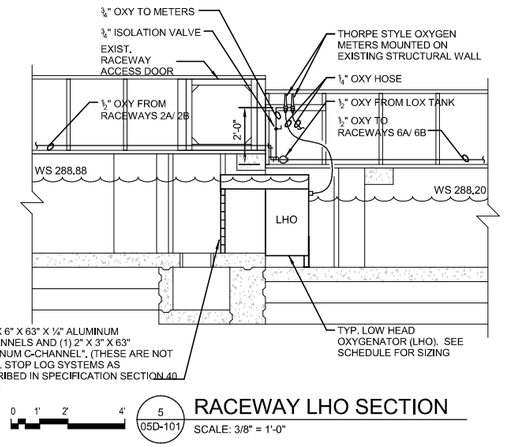
3 05D-101 RACEWAYS 5A,5B, 6A & 6B LHO PLAN

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



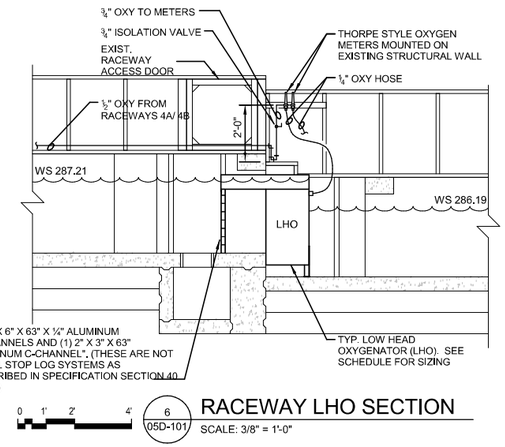
4 05D-101 RACEWAY LHO SECTION

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



5 05D-101 RACEWAY LHO SECTION

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



6 05D-101 RACEWAY LHO SECTION

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

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Jeffrey K. Chandler PE17167
LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:11:30-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

EXISTING RACEWAYS LHO PIPING PLAN AND SECTIONS

FILENAME 103537686-00-G.rvt

SCALE 3/8" = 1'-0"

SHEET 05D-101

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-00-G.rvt
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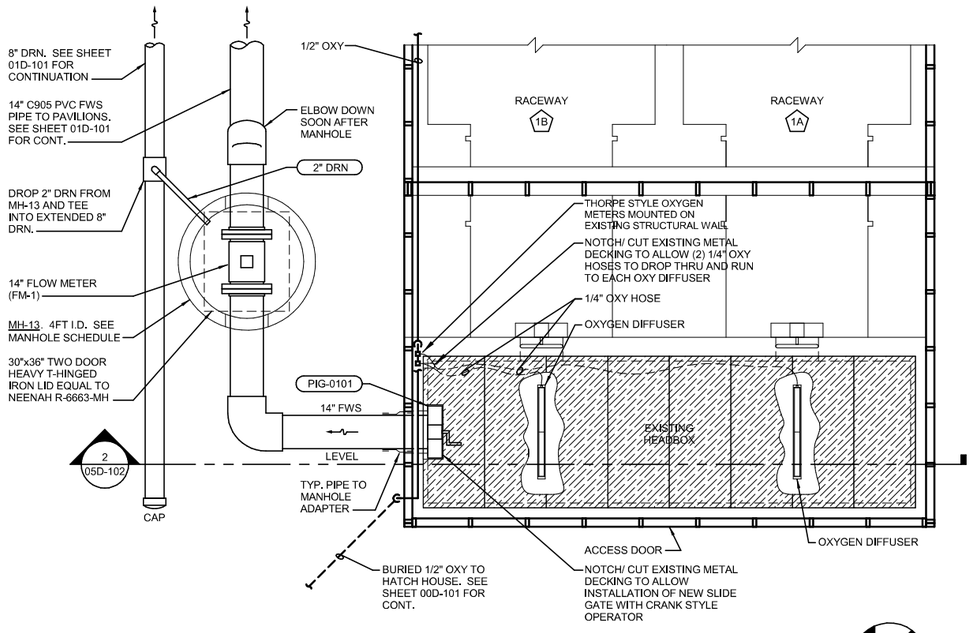
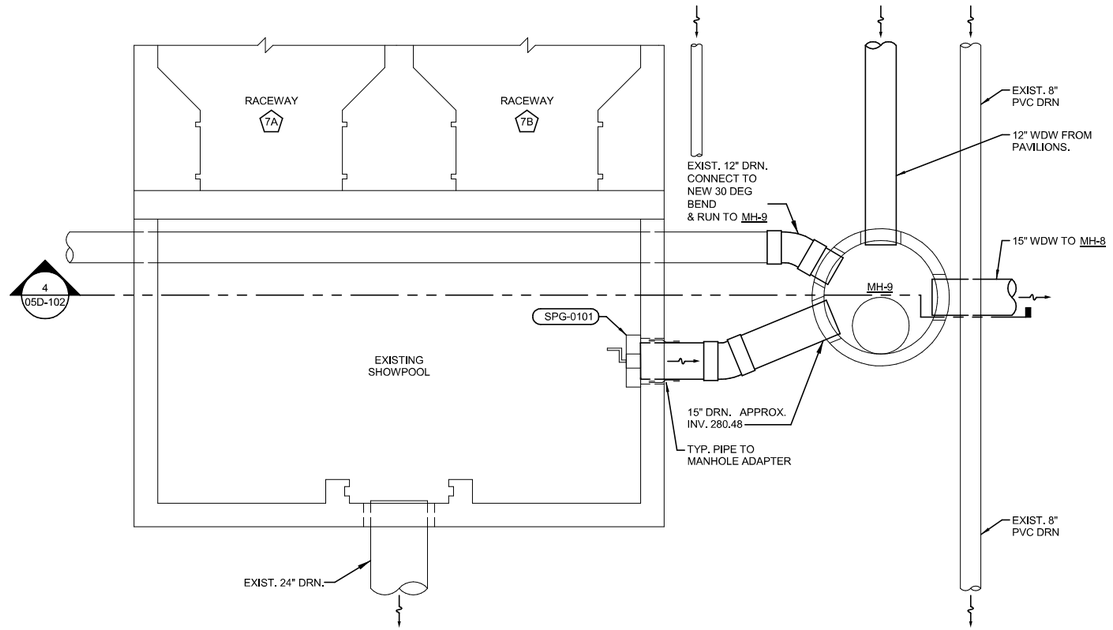
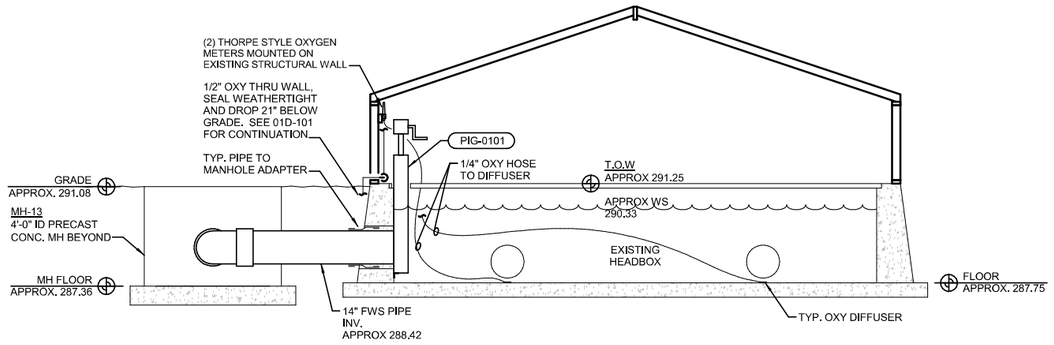


0 2' 4' 8' 1 05D-102 EXISTING HEADBOX PROCESS PIPING PLAN
SCALE: 3/8" = 1'-0"



0 2' 4' 8' 3 05D-102 EXISTING SHOWPOOL PIPING PLAN
SCALE: 3/8" = 1'-0"



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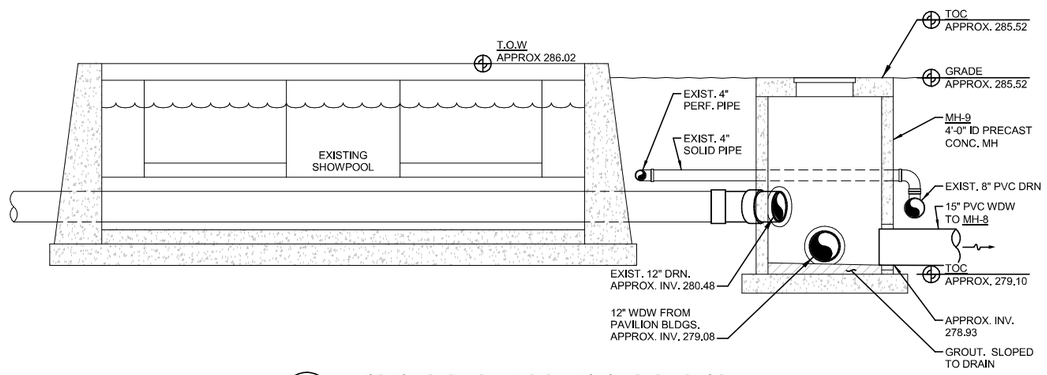
SCALE: 3/8" = 1'-0"



0 2' 4' 8' 4 05D-102 EXISTING SHOWPOOL PIPING SECTION
SCALE: 3/8" = 1'-0"

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:11:47-05'00'

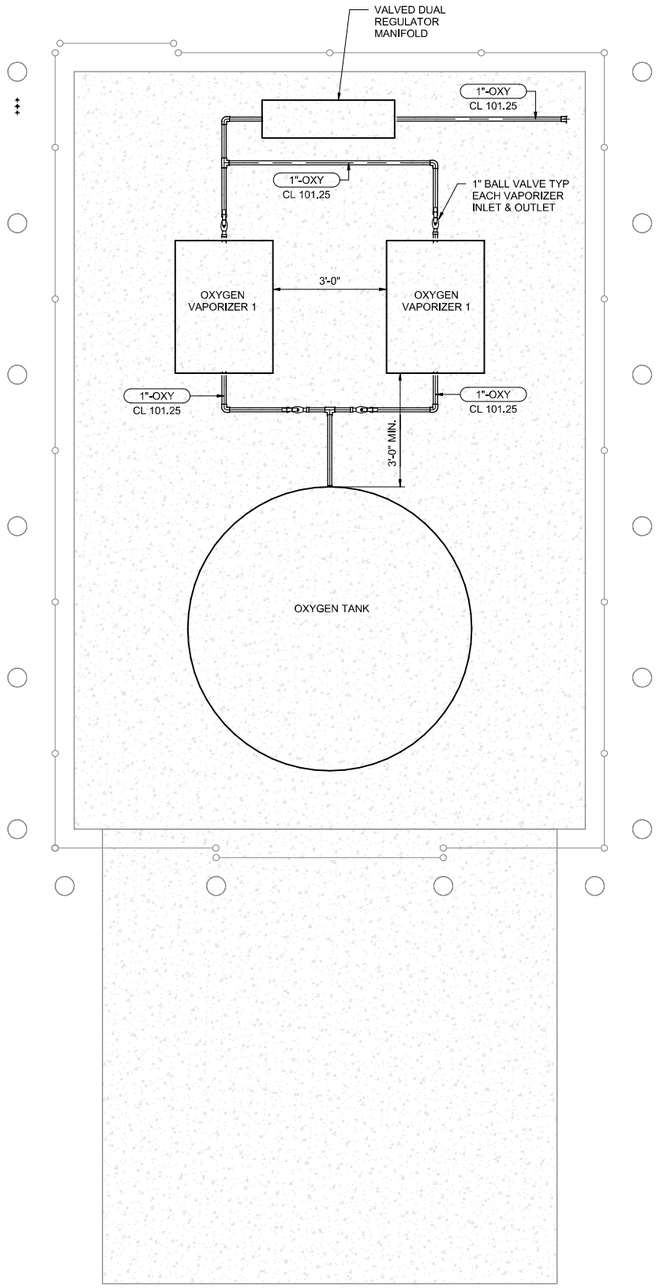
IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

EXISTING RACEWAY DETAILS

0 1" 2"

FILENAME	103537686-00-G.rvt
SCALE	3/8" = 1'-0"

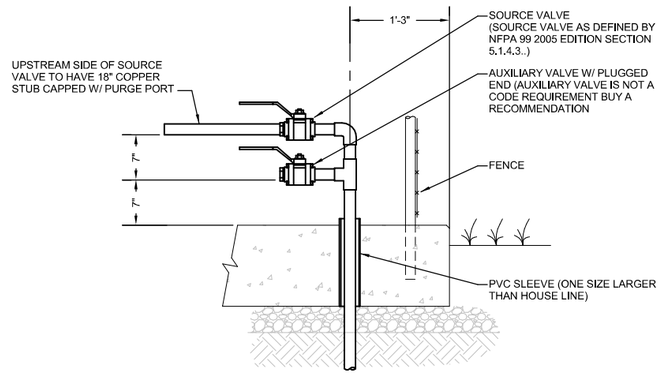
SHEET **05D-102**



0 1' 2' 4'

PROCESS PLAN

1/2" = 1'-0"



2 HOUSE LINE DETAIL

NOT TO SCALE

PLAN NORTH

TRUE NORTH

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE Jeffrey K. Chandler PE17167 LICENSED PROFESSIONAL ENGINEER

Digitally signed by Jeffrey K. Chandler, Jr.
Date: 2024.09.09 12:12:21-05'00'

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

OXYGEN PAD PROCESS PLAN

0 1" 2"

FILENAME 10357686-05-U

SCALE As indicated

SHEET **05D-103**

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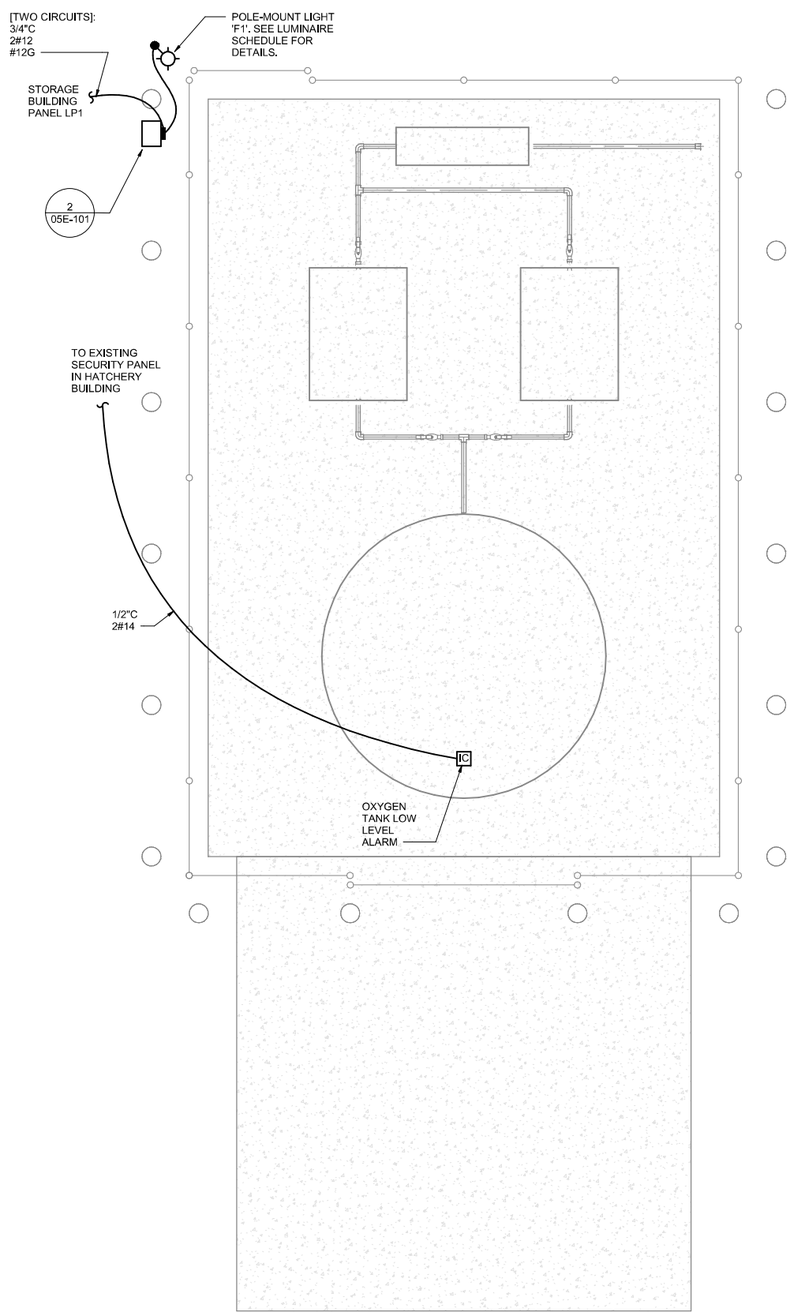
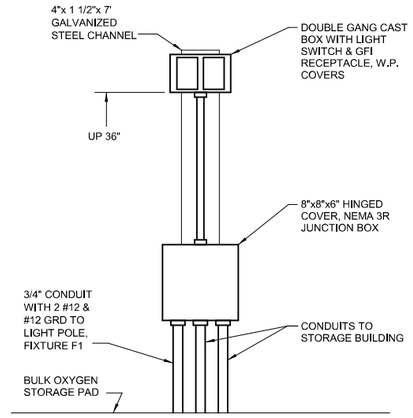


0 1' 2' 4'

1 - ELECTRICAL PLAN
1/2" = 1'-0"



2 - OXYGEN PAD JUNCTION BOX RECEPTACLE DETAIL
NOT TO SCALE

PLAN NORTH

TRUE NORTH

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER	ANDREW GURSKI
CIVIL	J. GAGNON
STRUCTURAL	B. BRADLEY
ARCHITECTURAL	M. BASKIN
PROCESS	J. CHANDLER
MECHANICAL	J. CHANDLER
ELECTRICAL	A. KANER
PROJECT NUMBER	10357686

STATE OF MAINE
Andrew D. Kaner
PE18016
LICENSED
PROFESSIONAL ENGINEER

Kaner, Andrew D.

IMPROVEMENTS AT GRAND LAKE STREAM STATE FISH HATCHERY

OXYGEN PAD ELECTRICAL PLAN

0 1" 2"

FILENAME	10357686-05-U
SCALE	As indicated

SHEET 05E-101

Autodesk Docs://10357686_MaineDIF_GrandLake Stream Exp_2022/10357686-05-U-OXYGEN_PAD.rvt
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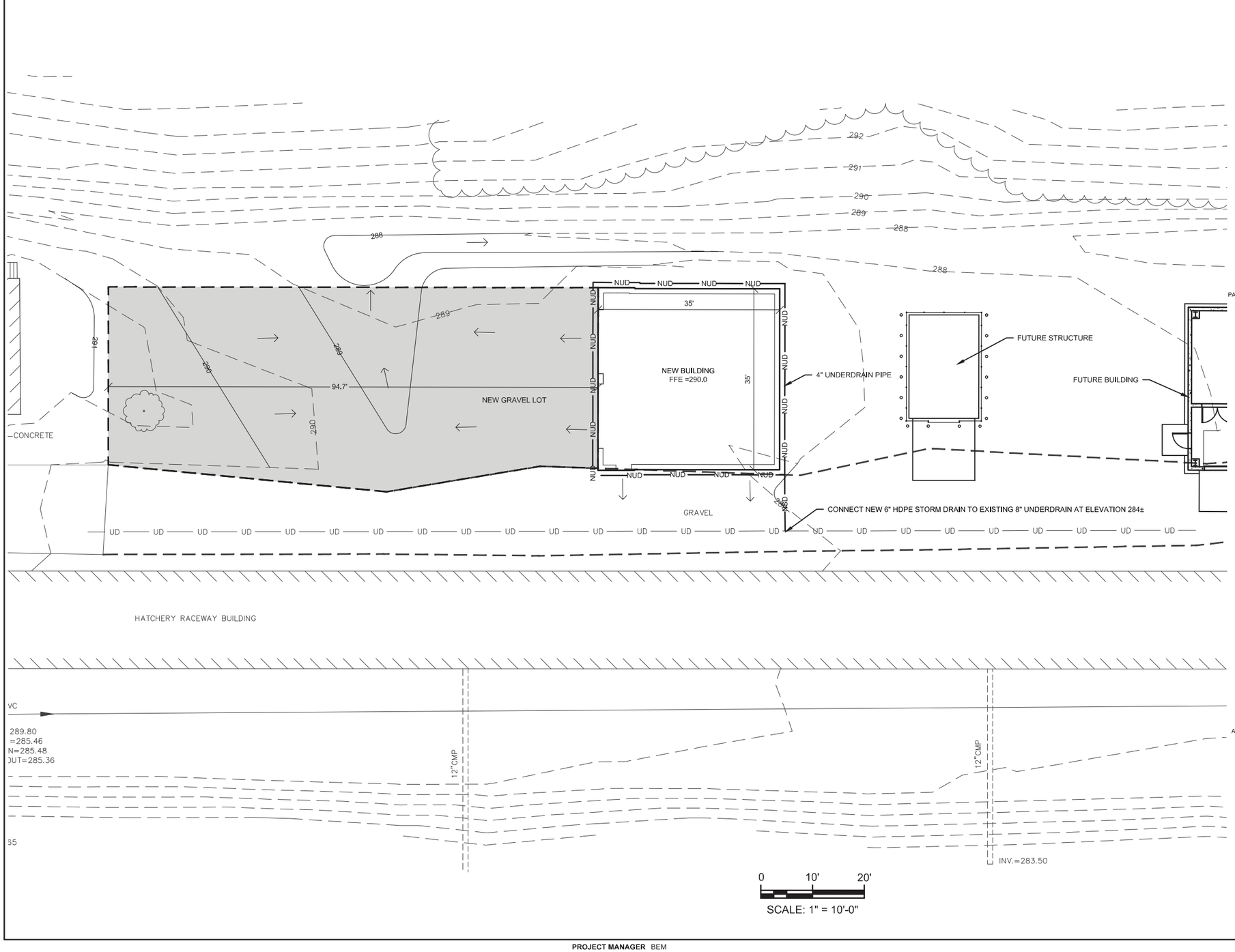
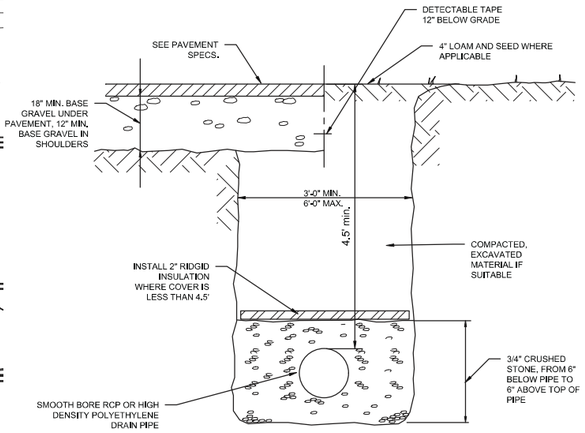
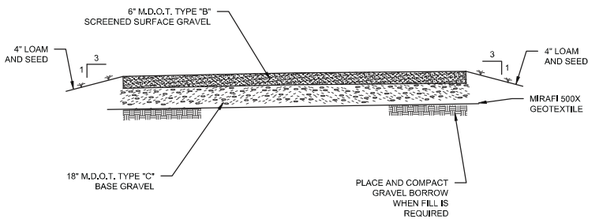




TYPICAL PIPE TRENCH

NOT TO SCALE



TYPICAL GRAVEL PARKING LOT

Not To Scale

© AEHodsdon CONSULTING ENGINEERS
10 Common Street Waterville, Maine 04901
(207) 873-5164
(207) 872-0645

HDR

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER BEM

PROJECT NUMBER 10357686

STATE OF MAINE
BENJAMIN E. MURRAY
NO. 10128
LICENSED PROFESSIONAL ENGINEER

Digitally signed by Benjamin Murray, P.E.
Date: 2024.09.11 09:06:13 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM

GRAND LAKE STREAM, MAINE

STORAGE BUILDING SITE PLAN

FILENAME 17-23
SCALE 1"=10'

SHEET 06C-101

GENERAL NOTES:

PART 1 GENERAL

1.01 GENERAL

A. NO PROVISIONS HAVE BEEN MADE FOR ANY TEMPORARY CONDITIONS THAT MAY ARISE DURING CONSTRUCTION PRIOR TO THE COMPLETION OF THE STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS, SHORING AND TEMPORARY BRACING DURING THE PROGRESS OF THE PROJECT.

B. PRINCIPAL OPENINGS THROUGH THE FOUNDATION ARE NOT SHOWN ON THESE DRAWINGS. THE GENERAL CONTRACTOR SHALL EXAMINE THE DRAWINGS TO DETERMINE THE REQUIRED OPENINGS, AS HE SHALL PROVIDE FOR ALL OPENINGS AND SHALL VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH OTHER PROJECT REQUIREMENTS. ANY DEVIATION FROM THE OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL.

C. ALTERNATE CONNECTION DETAILS MAY BE USED IF SUCH DETAILS ARE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND ACCEPTANCE IS GRANTED. HOWEVER, THE STRUCTURAL ENGINEER SHALL BE THE SOLE JUDGE OF ACCEPTABILITY AND THE CONTRACTOR'S BID SHALL ANTICIPATE THE USE OF THOSE SPECIFIC DETAILS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ANY ALTERNATE DETAILS, WHICH HE PROPOSES.

D. WORK NOT INDICATED ON A PART OF THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE INCLUDED.

E. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ADJACENT STRUCTURES, PROPERTY, AND THE PUBLIC. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.

F. ANY MODIFICATION OR ALTERATION OF THESE CONSTRUCTION DOCUMENTS OR CHANGES IN CONSTRUCTION FROM THE INTENT OF THESE DOCUMENTS BY THE CONTRACTOR WITHOUT WRITTEN APPROVAL OF THE ENGINEER SHALL REMOVE ALL PROFESSIONAL AND LIABLE RESPONSIBILITY ON THE PART OF THE ENGINEER.

G. ALL CONTRACTORS ARE REQUIRED TO EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY, VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO SUBMITTING THE PROPOSAL. FAILURE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE THE SUCCESSFUL BIDDER FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.

H. DO NOT SCALE FROM DRAWINGS.

I. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

J. CONTRACTOR TO VERIFY BUILDING DRAWING DIMENSIONS WITH MANUFACTURER BUILDING DRAWING DIMENSIONS AND/OR ARCHITECTURAL DRAWINGS.

K. INTERIOR FLOOR DRAIN LOCATIONS AND OUTFALL TO BE DETERMINED BY OTHERS.

WOOD TRUSS NOTES

PART 1 – GENERAL

1.01 STANDARD SPECIFICATION

A. THE LATEST ADDITION OF WTCA SHALL APPLY.

B. TRUSS MANUFACTURER TO DESIGN LATERAL LONGITUDINAL BRACING. FINAL TRUSS PLANS TO BE STAMPED BY MANUFACTURERS ENGINEER.

C. TRUSSES TO BE DESIGNED BASED ON DESIGN LOADING.

1.02 DESIGN CODES

A. NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION BE THE NATIONAL FOREST PRODUCTS ASSOCIATION.

B. DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES (TPI–85)

C. TRUSS MEMBERS NO. 2 OR BETTER, 15% MAXIMUM MOISTURE CONTENT.

PART 2 – PRODUCTS

2.01 MATERIAL

A. ALL METAL TIMBER CONNECTORS SHALL BE HOT–DIPPED GALVANIZED.

B. ALL BOLTS, NUTS, AND WASHERS ARE TO BE ASTM A307, HOT–DIPPED GALVANIZED.

C. ALL NAILS ARE COMMON WIRE, EXCEPT FOR PLYWOOD SHEATHING (BARBED), GALVANIZED FOR EXPOSED FRAMING. STAINLESS STEEL NAILS REQUIRED FOR SIDING AND TRIM.

PART 3 – ERECTION

3.01 PRODUCT STORAGE:

A. STORE TRUSSES AT THE PROJECT SITE ABOVE GROUND ON PLATFORMS, SKIDS, OR OTHER SUPPORTS.

B. PROTECT FROM CORROSION.

3.02 FABRICATION:

A. FABRICATE TRUSSES IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS.

3.03 ERECTION:

A. THE TRUSSES SHALL BE ERECTED PLUMB AND TRUE TO THE LINES AND ELEVATIONS INDICATED ON THE DRAWINGS.

C. TEMPORARY CONNECTIONS SHALL BE ADEQUATE TO SAFELY SUPPORT ALL DEAD LOAD AND ERECTION IMPOSED STRESSES.

D. TEMPORARY BRACING SHALL BE PROVIDED, WHEREVER NECESSARY TO HOLD THE TRUSSES IN A HORIZONTAL AND VERTICAL PLANE UNTIL PERMANENT ATTACHMENT AND BRACING HAS BEEN COMPLETED.

E. INSTALL PERMANENT BRACING PER MANUFACTURES DRAWINGS.

F. TRUSS PERMANENT BRACING: COMPLY WITH "COMMENTARY AND RECOMMENDATIONS –HANDLING, INSTALLING AND BRACING METAL PLATE CONNECTED WOOD TRUSSES" (HIB–91). TRUSSES ARE NOT STABLE AND REQUIRED TEMPORARY SUPPORT UNTIL TOP CHORD PLYWOOD AND PERMANENT BRACING ARE INSTALLED.

G. TRUSS PERMANENT BRACING: INSTALL PERMANENT BRACING IN ACCORDANCE WITH BCSI 2008, MAY EDITION, "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" AND AS FOLLOWS:

1. PERMANENT BRACING REQUIRED BY TRUSS DESIGN & SPECIFIED BY BCSI: PROVED 2x4 CONTINUOUS LATERAL BRACING AND DIAGONAL BRACING AT ALL CONTINUOUS LATERAL BRACE LOCATIONS REQUIRED BY THE TRUSS FABRICATOR. PROVIDE DIAGONAL BRACING AS SHOWN IN DIAGRAMS INCLUDED IN BCSI–B3 AT EACH END OF EACH WING OF THE BUILDING AND AT INTERVALS NOT TO EXCEED 20 FEET.
2. PERMANENT BOTTOM CHORD BRACING. PROVIDE 2x4 CONTINUOUS LATERAL BRACING AT 8–10 FOOT (MAXIMUM) INTERVALS (AT ALL PANEL POINTS) ALONG LENGTH OF TRUSS, PROVIDE DIAGONAL BRACING AS SHOWN IN DIAGRAMS INCLUDED IN BCSI–B3 AT EACH END OF EACH WING OF THE BUILDING AND AT INTERVALS NOT TO EXCEED 20 FEET.

H. PERMANENT WEB MEMBER BRACING: PROVIDE 2x4 CONTINUOUS LATERAL BRACING AT TOP AND BOTTOM OF TRUSSES AND DIAGONAL BRACING AT INTERIOR LINES OF SUPPORT AND AT 16 FOOT (MAXIMUM) INTERVALS ALONG THE LENGTH OF THE TRUSS AS SHOWN IN DIAGRAMS INCLUDED IN BCSI–B3. PROVIDE DIAGONAL BRACING AT EACH END OF WING OF THE BUILDING AND AT INTERVALS NOT TO EXCEED 20 FEET.

I. PERMANENT TOP CHORD BRACING IS NOT REQUIRED FOR FULLY SHEATHED ROOFS ONLY. ROOF SYSTEMS WITH PURLINS REQUIRE DIAGONAL BRACING AS INDICATED IN BCSI. ADEQUATE BRACING IN PROVIDED BY ROOF PLYWOOD.

J. PROVED CONSTRUCTION GRADE OR BETTER GRADE 2x4's, NO. 2 OR BETTER 2x6's FOR BRACING. CONNECT BRACING TO TRUSS WITH AT LEAST 2–16d NAILS. LAP SPLICE CONTINUOUS MEMBERS OVER AT LEAST 2 TRUSSES.

K. PERMANENT SYSTEM BRACING

1. PROVIDE PERMANENT BRACING SYSTEM AND TEMPORARY INSTALLATION BRACING SYSTEM, IN COMPLIANCE WITH DSB–89 AND TPI BCSI WHEN TABULATED SPACINGS AND LOCATIONS ARE PROVIDED. FOR ALL OTHER SYSTEMS PROVIDE A STAMPED ENGINEERS PLAN SHOWING ALL BRACING DESIGN REQUIREMENTS.
2. DESIGN BRACING FOR TRUSSES IN EXCESS OF 60' SPANS AND/OR TRUSSES THAT REQUIRED ENGINEERS DESIGN IN ACCORDANCE WITH DSB–89. SUBMIT BRACING DESIGN CALCULATIONS WITH SHOP DRAWING SUBMITTAL.

WOOD NOTES:

PART 1 – GENERAL

1.01 STANDARD SPECIFICATIONS

A. THE CURRENT AITC SPECIFICATION SHALL APPLY.

PART 2 – PRODUCTS

2.01 MATERIAL

A. ALL TIMBER IN CONTACT WITH MASONRY AND CONCRETE OR FRAMING LABELED "P.T." SHALL BE PRESSURE TREATED SOUTHERN PINE GRADE #1 WITH A MINIMUM Fb OF 1,350 PSI AND E OF 1,500 KSI OR BETTER.

B. CUT ENDS OF PRESSURE TREATED (P.T.) LUMBER AND TIMBER POSTS AND SILLS SHALL BE DIPPED IN A PRESERVATIVE TO COMPLY WITH AWPA M4.

C. ALL TYPICAL FRAMING TIMBER IS TO BE SPRUCE–PINE–FIR GRADE #2 WITH A MINIMUM Fb OF 750 PSI AND E OF 1,100 KSI OR BETTER.

D. ALL FRAMING TIMBER LABELED "LVL" SHALL BE BOISE CASCADE LAMINATED VENEER LUMBER WITH A Fb OF 2800 PSI AND E OF 2,000 KSI OR BETTER.

E. ALL FRAMING LABELED "BCI" SHALL BE BOISE CASCADE "EASTERN ENGINEERED WOOD PRODUCTS" WITH DESIGN PROPERTIES EQUAL OR BETTER THEN THE SPECIFIED MODEL PROPERTIES.

F. ALL FRAMING LABELED "WP PSL" SHALL BE WOLMANIZED PARALLAM PSL SERVICE LEVEL 2 BY TRUSJOIST WITH A Fb OF 2088 PSI AND E OF 1740 KSI OR BETTER.

G. ALL METAL TIMBER CONNECTORS INDICATED ON THE DRAWINGS SHALL BE HOT–DIPPED GALVANIZED.

H. ALL BOLTS, NUTS, AND WASHERS ARE TO BE ASTM A307, HOT–DIPPED GALVANIZED.

I. ALL NAILS ARE COMMON WIRE, EXCEPT FOR PLYWOOD SHEATHING (BARBED), GALVANIZED FOR EXPOSED FRAMING. STAINLESS STEEL NAILS REQUIRED FOR SIDING AND TRIM.

J. REFERENCE TO "SIMPSON" ON DRAWINGS INDICATES METAL CONNECTORS MANUFACTURED BY SIMPSON STRONG–TIE.

K. FASTENERS: COMPLY WITH RECOMMENDED FASTENING SCHEDULE OF THE IBC 2015 BUILDING CODE, UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

L. FASTENER REQUIREMENTS FOR ROOF AND FLOOR SHEATHING. PROVIDE 8d RINGSHANKG NAILS AS FOLLOWS, UNLESS SHOWN OTHERWISE: 6" O.C. ALONG ALL PANEL EDGES, 12" O.C. ALONG INTERMEDIATE MEMBERS.

M. FASTENER REQUIREMENTS FOR EXTERIOR WOOD SHEARWALLS. PROVIDE 8D RINGSHANKG NAILS AS FOLLOWS, UNLESS SHOWN OTHERWISE: 4" O.C. ALONG ALL PANEL EDGES, 12" O.C. ALONG INTERMEDIATE MEMBERS.

N. ALL NAILS TO SIMPSON PRODUCTS AND P.T. LUMBER TOT BE G90 HOT DIP GALVANIZED 0.162@ COMMON BOX NAILS, OR AS RECOMMENDED BY SIMPSON.

O. ALL SIMPSON PRODUCTS IN CONTACT WITH P.T. LUMBER TO BE "ZMAX" (G185 GALVANIZED) COATED

P. TRIPLE LVLS TO BE CONNECTED WITH (2) ROWS SIMPSON 1/4x4 1/2 SDS SCREWS 8" O.C. STAGGERED, EACH FACE

Q. QUAD LVLS TO BE CONNECTED WITH (2) ROWS 1/2"ø THROUGH BOLTS @ 8" O.C. STAGGERED, EACH FACE

PART 3 – EXECUTION

3.01 ERECTION

A. PROVIDE SAME SIZE SOLID BRIDGING/BLOCKING AT MID SPAN FOR ALL JOISTS.

B. FOR EXTERIOR WALLS PROVIDE:

1. 3–2x's AT CORNERS
2. DOUBLE PLATE WITH 4' MIN. SPLICE SEPARATION. ALL SPLICES SHALL OCCUR OVER STUDS.

C. AT LOCATIONS WHERE PORTIONS OF WOOD FLOOR OR ROOF DECK ARE ADDED OR REPLACED, THE FINISH FLOOR ELEVATION OF THE NEW WOOD DECK SHALL MATCH THE ADJACENT EXISTING WOOD DECK.

D. PLYWOOD FOR FLOORS AND ROOF SHALL BE INSTALLED WITH BOTH ADHESIVE AND 10D NAILS AT 6" O.C. AT SUPPORTED EDGES AND 12" O.C. ELSEWHERE.

E. FLOOR FRAMING AROUND CHASE OPENINGS FOR MECHANICAL DUCTS SHALL CONSIST OF THE FOLLOWING:

A. DOUBLE FLOOR–LENGTH JOISTS EACH SIDE OF OPENING WITH JOIST DEPTH SAME AS ADJACENT FLOOR FRAMING.
B. MEMBERS CONNECTED WITH SIMPSON DOUBLE JOIST HANGERS.

CONCRETE NOTES

PART 1 – GENERAL

1.01 GENERAL

A. ADHERE TO ACI COLD WEATHER CONCRETE SPECIFICATIONS, WHEN APPLICABLE.

B. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK

C. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO MAINTAIN STABILITY AND PREVENT UNDERMINING OF EXISTING FOUNDATIONS AT ALL TIMES.

D. NO FOUNDATIONS SHALL BE PLACED IN WATER OR ON FROZEN GROUND.

E. ALL FOOTINGS ARE TO BE EXCAVATED USING A BUCKET WITH A SMOOTH TOOTHLESS CUTTING EDGE. FOOTING EXCAVATIONS ARE TO BE FINISHED BY HAND FOR NOT LESS THAN THE LAST SIX INCHES.

F. ALL FINISHED FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE STRUCTURAL ENGINEER OR HIS DESIGNATE BEFORE ANY CONCRETE IS PLACED.

G. THE OWNER, THE STRUCTURAL ENGINEER AND THEIR CONSULTANTS ASSUME NO RESPONSIBILITY FOR THE VALIDITY OF THE SUBSURFACE CONDITIONS DESCRIBED ON THE DRAWINGS, SPECIFICATIONS, TEST BORINGS OR TEST PITS.

H. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI 315 – "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," LATEST EDITION.

PART 2 – PRODUCTS

2.01 MATERIAL

A. REINFORCING:

1. SHALL BE GRADE 60, NEW DEFORMED BARS AND SHALL CONFORM TO ASTM A615. ALL REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706.
2. REINFORCING BARS MAY NOT BE WELDED EXCEPT WHERE DESIGNATED BY THE STRUCTURAL ENGINEER.
3. ALL WELDED WIRE FABRIC (W.W.F.) SHALL CONFORM TO ASTM 185. W.W.F. SHALL BE PROVIDED IN FLAT SHEETS.
4. ALL LAPS IN W.W.F. SHALL BE ONE MESH PLUS TWO INCHES AT SPLICES. W.W.F. SHALL BE 6X6/W1.4XW1.4 (TYP., UNO)
5. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS:
   A. SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH – 3 INCHES (CLEAR)
   B. FORMED SURFACES EXPOSED TO EARTH OR WEATHER
      1. #6 THROUGH #18 BARS – 2 INCHES
      2. #5 BARS & SMALLER 1 ½ INCHES
   C. FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER SLABS, WALLS, JOISTS –2 INCHES
   D. BEAMS, COLUMNS – 2 INCHES
6. ALL HOOKS SHOWN ON DRAWNGS SHALL BE STANDARD HOOKS UNLESS NOTED OTHERWISE.
7. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES, OR HOOKED AT DISCONTINUOUS ENDS. LAP LENGTHS SHALL BE AS GIVEN IN THE SPLICE AND DEVELOPMENT TABLE. LAP BEAM TOP BARS AT MID–SPAN AND BEAM BOTTOM BARS AT SUPPORTS, UNLESS NOTED OTHERWISE.

B. FOUNDATION WALLS & FOOTING MIX DESIGN:

1. 4000 PSI
2. 3/4" STONE
3. SLUMP 4" +/– 1"
4. 6 % AIR ENTRAINMENT
5. SEE DETAILS FOR REINFORCING

C. INTERIOR SLAB MIX DESIGN:

1. 5000 PSI
2. 3/4" STONE
3. SLUMP 5" +/– 1"
4. NO AIR
5. SEE DETAILS FOR REINFORCING
6. TROWEL FINISH

PART 3 – EARTHWORK

3.01 EARTHWORK

A. SITE WORK AND CONCRETE CONTRACTORS ARE REQUIRED TO REVIEW THE ONSITE SUBSURFACE SOIL CONDITIONS WITH THE OWNER AT THE START OF INITIAL CONSTRUCTION. SITE CONTRACTOR WILL NOTIFY ENGINEER AFTER EXCAVATION HAS STARTED AND PRIOR TO THE PLACEMENT OF ANY STRUCTURAL FOUNDATIONS.

B. REMOVE ALL TOPSOIL AND UNCONTROLLED FILL FOR THE AREAS RECEIVING BUILDING FOUNDATIONS.

C. BACK FILL TO THE NECESSARY SUBGRADES REQUIRED ON THE STRUCTURAL FOUNDATION PLANS WITH CONTROLLED STRUCTURAL FILL MATERIAL MEETING THE FOLLOWING GRADATION:

PERCENT PASSING	SCREEN OR SIEVE SIZE
6	100
3	90–100
NO. 4	35–70
NO. 40	5–35
NO. 200	0–5

D. PLACE CONTROLLED STRUCTURAL FILL IN UNIFORM LIFTS AND COMPACT TO A MINIMUM DENSITY IN ACCORDANCE WITH ASTM D1557 "MODIFIED PROCTOR DENSITY".

E. PROVIDE SITE GRADING AROUND THE PERIMETER OF THE BUILDING TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE FOUNDATION DURING AND AFTER CONSTRUCTION.

F. MAINTAIN THE INTEGRITY OF NATURAL SOLIDS AND CONTROLLED STRUCTURAL FILLS DURING CONSTRUCTION. PROTECT FOOTING AND STRUCTURE SUBGRADES AGAINST FREEZING AND EXCESSIVE WETTING. REMOVE AND REFILL FROZEN SUBGRADES, MOISTURE CONDITION, OR REPLACE EXCESSIVELY WET SUBGRADE MATERIALS.

G. NOTIFY ENGINEER TO OBSERVE SUBGRADES PRIOR TO PLACING FOOTINGS. FOOTINGS ARE DESIGNED FOR A MIN. SOIL BEARING CAPACITY OF 2500PSF, OR FOR BEARING ON SOUND LEDGE.

H. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER IF LEDGE IS ENCOUNTERED TO DETERMINE PINNING REQUIREMENTS.

I. ALL FOOTINGS SHALL EXTEND A MINIMUM OF 4'–6" BELOW EXTERIOR FINISHED GRADE, OR BE DOWELED TO LEDGE.

J. PROOF ROLL SUBGRADE PRIOR TO SLAB CONSTRUCTION. PROVIDE STRUCTURAL FILL MEETING THE GRADATION SPECIFIED HEREIN FOR FILL MATERIALS BELOW THE SLAB, MAXIMUM PERCENT PASSING 200 SIEVE = 7%

K. COMPACT CONTROLLED STRUCTURAL FILLS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND ASTM D1557. USE ONLY HAND–OPERATED EQUIPMENT ADJACENT TO WALLS. FILL BOTH SIDES OF WALLS TO EQUAL ELEVATIONS BEFORE COMPACTING.

DEGREE OF COMPACTION: COMPACT TO THE FOLLOWING MINIMUM DENSITIES:

FILL AND BACK FILL LOCATION	DENSITY
UNDER STRUCTURE FOUNDATIONS	95% OF MAX
TOP 2 FEET UNDER PAVEMENT	95% OF MAX
TRENCHES THROUGH UNPAVED AREAS	90% OF MAX
EMBANKMENTS	90% OF MAX
PIPE BEDDING	92% OF MAX
BESIDE STRUCTURE FOUNDATION WALLS, TANK WALLS AND RETAINING WALLS	90% OF MAX
UNDER DRAIN FILTER SAND	92% OF MAX

MAXIMUM DENSITY: ASTMD 1557, MODIFIED.

FIELD DENSITY TESTS: ASTMD 1556 (SAND CONE), ASTMD2167 (RUBBER BALLOON), OR ASTMD2922 (NUCLEAR METHODS).

L. CONTRACTOR IS REQUIRED TO CONFORM TO OSHA (29 PART 1926.650–652) SUBPART P "CONSTRUCTION STANDARD FOR EXCAVATIONS".

K. COMPACT CONTROLLED STRUCTURAL FILLS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND ASTM D1557. USE ONLY HAND–OPERATED EQUIPMENT ADJACENT TO WALLS. FILL BOTH SIDES OF WALLS TO EQUAL ELEVATIONS BEFORE COMPACTING.

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TOP 2 FEET UNDER PAVEMENT	95%
TRENCHES THROUGH UNPAVED AREAS	90%
EMBANKMENTS	90%
PIPE BEDDING	92%
BESIDE STRUCTURE FOUNDATION WALLS, TANK WALLS AND RETAINING WALLS	90%
UNDER DRAIN FILTER SAND	92%

MAXIMUM DENSITY: ASTMD 1557, MODIFIED.

FIELD DENSITY TESTS: ASTMD 1556 (SAND CONE), ASTMD2167 (RUBBER BALLOON), OR ASTMD2922 (NUCLEAR METHODS).

L. CONTRACTOR IS REQUIRED TO CONFORM TO OSHA (29 PART 1926.650–652) SUBPART P "CONSTRUCTION STANDARD FOR EXCAVATIONS".

M. CONTRACTOR IS REQUIRED TO COORDINATE AND PAY FOR THIRD PARTY COMPACTION TESTING.

PART 4 – EXECUTION

4.01 SUBGRADE

A. ALL GRADING SHALL BE ACHIEVED AT SUBGRADE TO PROVIDE A CONSTANT THICKNESS OF CONCRETE.

B. STRUCTURAL FILL SHALL BE COMPACTED IN 6" LIFTS TO 95% OF ITS MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557.

C. SUBGRADE TO CONSIST OF AT LEAST 12" OF COMPACTED SAND OR GRAVEL. THIS MATERIAL SHALL BE"

SCREEN OR SIEVE SIZE	PERCENT FINER BY WEIGHT
4"	100%
½"	35% – 75%
¼"	25% – 60%
NO. 40	0–25%
NO. 200	0–5%

D. DRAINAGE STONE SHALL CONSIST OF CLEAN ANGULAR FRAGMENTS OF QUARRIED ROCK WITH UNIFORM QUALITY AND BE GRADED AS FOLLOWS:

SCREEN OR SIEVE SIZE	PERCENT FINER BY WEIGHT
2 ½"	100%
2"	95% – 100%
1"	0 – 30%
½"	0 – 5%

4.02 PLACEMENT

A. CONCRETE SLAB ON GRADE SHALL BE PLACED IN ONE CONTINUOUS PLACEMENT, WITH NO COLD JOINTS. IF COLD JOINTS ARE DESIRED, CONTRACTOR MUST PROVIDE PLACEMENT SEQUENCE AND JOINT DETAIL FOR ENGINEERS APPROVAL, PRIOR TO PLACEMENT.

B. APPLY CONCRETE SEALER, IF SPECIFIED AFTER THE SLAB HAS CURED FOR 30 DAYS.

C. VAPOR BARRIERS WILL BE USED UNDER SLAB TO PREVENT MOISTURE MIGRATION INTO THE SLAB, AND TO PROVIDE A BARRIER TO RADON PENETRATION.

D. VAPOR BARRIER:

1. 15 MIL POLYETHYLENE
2. PERMEANCE LESS THAN 0.3 PERMS DETERMINED IN ACCORDANCE WITH ASTM E 96.
3. BARRIER SHOULD NOT BE PUNCTURED DURING CONSTRUCTION ACTIVITIES.
4. EDGES SHOULD BE LAPPED A MINIMUM OF 6", TAPPED, AND SHOULD BE CAREFULLY FITTED AROUND OPENINGS.

E. ALL CONCRETE EXPOSED TO THE WEATHER SHALL CONTAIN 5% – 7% AIR ENTRAINMENT ADMIXTURE.

F. ALL FOOTINGS SHALL BE PLACED MONOLITHICALLY.

G. PIPES OR CONDUITS PLACED IN SLABS ON GRADE SHALL NOT BE PLACED CLOSER THAN 3 DIAMETERS ON CENTER AND SHALL HAVE AN OUTSIDE DIAMETER LESS THAN 1/3 OF THE SLAB THICKNESS. ALUMINUM COMPONENTS SHALL NOT BE PLACED IN CONCRETE. NO CONDUITS SHALL BE PLACED IN SLABS ON METAL DECK.

H. AT LOCATIONS WHERE ANY PART OF FOOTING BEARS DIRECTLY ON LEDGE, SUFFICIENT LEDGE SHALL BE REMOVED TO PROVIDE A LEVEL–BEARING SURFACE IN ALL DIRECTIONS. THOROUGHLY CLEAN LEDGE SURFACE PRIOR TO PLACING CONCRETE.

I. WHERE FOUNDATION ELEMENTS ARE TO HAVE FILL ON BOTH SIDES, EACH SIDE SHALL BE FILLED SIMULTANEOUSLY, MAINTAINING A COMMON ELEVATION.

J. CONTRACTOR SHALL PROVIDE CONTINUOUS DRAINAGE BY MECHANICAL METHODS TO CONTROL SURFACE AND UNDERGROUND WATER AS REQUIRED. DURING CONSTRUCTION, SO THAT ALL EXCAVATIONS ARE DRY.TE:I

K. ALL LOCATIONS WHERE BEDROCK IS REMOVED SHALL BE FREE DRAINING SO THAT NO POCKETS OF UNDERGROUND WATER COLLECT.

L. ALL EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE CHAMFERED 3/4" UNLESS SHOWN OTHERWISE ON DRAWINGS.

M. INTERIOR CONCRETE SLABS SHALL BE MOIST CURED CONTINUOUSLY FOR 7 DAYS BY PLACING WATER OVER SLAB AFTER FREE WATER HAS DISAPPEARED FROM EXPOSED SURFACES. PLACE MOISTURE RETAINING COVER OVER THE ENTIRE SLAB. PROVIDE PROTECTION AS REQUIRED TO PREVENT DAMAGE TO EXPOSED SURFACES.

N. CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F, AND IN MOIST CONDITION FOR AT LEAST THE FIRST SEVEN DAYS AFTER PLACEMENT.

O. ALL EMBEDMENTS IN CONCRETE, INCLUDING ANCHOR BOLTS, SHALL BE FIRMLY SECURED BY TIE WIRE TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.

P. CONSOLIDATE ALL CONCRETE WITH A VIBRATOR OR OTHER MEANS RECOMMENDED BY ACI 301. HONEYCOMBED SURFACES WILL NOT BE PERMITTED.

Q. SEE ARCHITECTURAL DRAWINGS FOR DOOR AND WINDOW OPENINGS, DRIPS, WASHES, REGLETS, CONCRETE FINISHES, MASONRY ANCHORS, AND FOR MISCELLANEOUS EMBEDDED PLATES, BOLTS, ANCHORS, ANGLES, ETC. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF DRAINS. SLOPE SLABS UNIFORMLY TO DRAINS.

R. LIGHTWEIGHT GYPCRETE IS TO BE INSTALLED AFTER THE INSTALLATION OF THE INTERIOR WALL FRAMING AND RADIANT HEATING. THE GYPCRETE DOES NEED TO BE INSTALLED BEFORE THE INSTALLATION OF THE GYPSUM SHEATHING ON THE WALLS IN ORDER TO ELIMINATE MOLD DEVELOPMENT IN SHEATHING. FOLLOW THE MANUFACTURERS RECOMMENDATIONS FOR FURTHER INSTALLATION REQUIREMENTS.

4.03 CONTROL JOINTS

A. PLACE CONTROL JOINTS WHERE SHOWN ON THE PLANS. SLAB SECTIONS FORMED WITH CONTROL JOINTS SHOULD BE SQUARE OR NEARLY SQUARE.

B. SAW CUT JOINTS IN CONCRETE, AT EACH CONTROL JOINT LOCATION, AS SOON AS SLAB WILL SUPPORT THE WEIGHT OF THE SOFF–CUT SAW AND OPERATOR. (NORMALLY WITHIN 2 HOURS AFTER FINISHING AT CONTROL JOINT LOCATION). THE DEPTH OF CUT SHALL BE 1" TO 1 1/4". USE 3/8" DIAMETER SONOFOAM CLOSED CELL BACKER–ROD AND SONOLASTIC SL 2 SEALANT.

C. SEAL CONTROL JOINTS TO PREVENT SPALLING OF THE CONCRETE.

4.04 CONCRETE TESTING

A. FOUR CONCRETE TEST CYLINDERS TO BE SET ASIDE FOR LABORATORY TESTING EITHER EVERY 50 CUBIC YARDS FOR ONE CONTINUOUS PLACEMENT OR EACH NEW DAY PLACEMENT, WHICH EVER PRODUCES THE MOST CYLINDERS.

B. THE TESTING FOR THE FOUR CONCRETE CYLINDERS ARE TO CONSIST OF A (1) 7–DAY TEST, (2) 28–DAY TESTS, AND (1) HOLD CYLINDER. THE TESTS SHALL INCLUDE TESTING OF THE WET AND DRY DENSITY OF THE CONCRETE AND THE COMPRESSIVE STRENGTH OF EACH SPECIMEN.

C. ALL TESTING SHALL BE PERFORMED BY A LABORATORY IN COMPLIANCE WITH ASTM C495.

D. CONTRACTOR IS REQUIRED TO COORDINATE AND PAY FOR THIRD PARTY TESTING.

DESIGN LOADING

PART 1 – LOADING

1.01 DESIGN SOIL BEARING PRESSURE

A. THE DESIGN SOIL BEARING PRESSURE IS ASSUMED TO BE 2,000 PSF.

1.02 DEAD LOAD

A. ROOF TOP CHORD=10 PSF

B. ROOF BOTTOM CHORD=7 PSF

1.03 LIVE LOAD

A. ROOF SNOW LOAD(Pg)=80 PSF
(Pf)=67 PSF

1.04 WIND LOAD

A. DESIGN WIND SPEED=115 MPH

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HDR

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER BEM

PROJECT NUMBER 10357686

STATE OF MAINE BENJAMIN E. MURRAY NO. 10128 LICENSED PROFESSIONAL ENGINEER

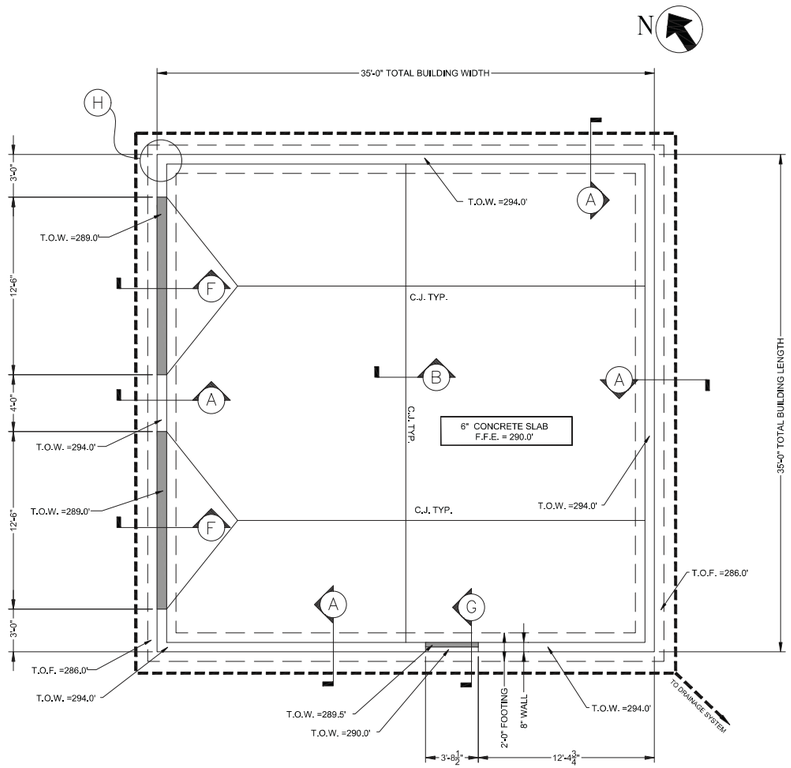
Digitally signed by Benjamin Murray, P.E.
Date: 2024.09.11 09:10:43 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM

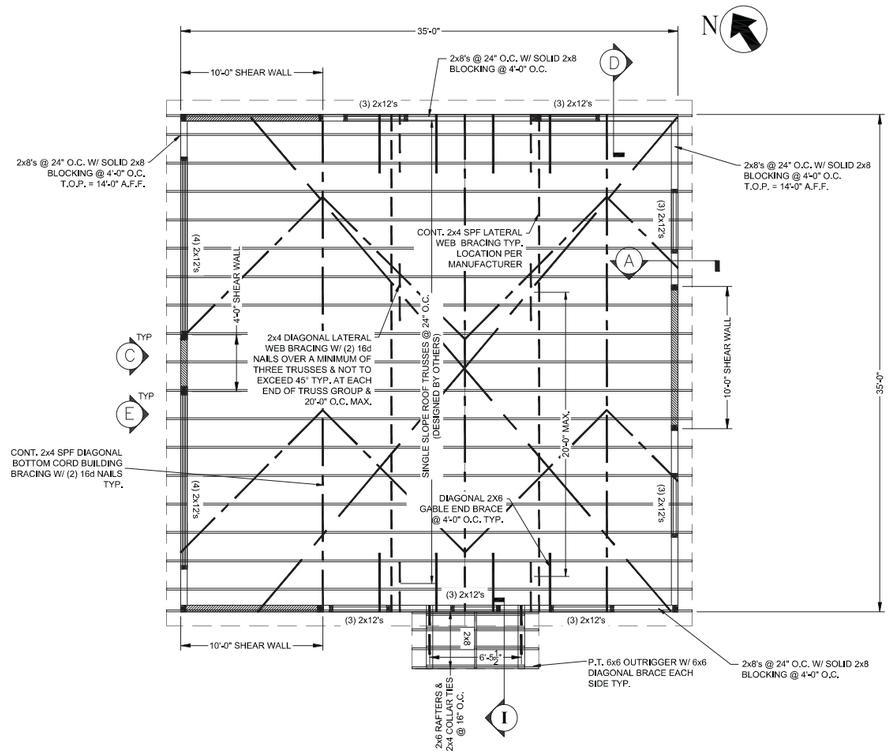
GRAND LAKE STREAM, MAINE

STORAGE BUILDING
GENERAL STRUCTURAL NOTES

FILENAME 17-23
SCALE N.T.S.
SHEET 06S-001



FOUNDATION PLAN
SCALE 3/16" = 1'-0"



ROOF FRAMING PLAN
SCALE 3/16" = 1'-0"

BRACING LEGEND

- GABLE END BRACE
- LATERAL WEB BRACE
- LATERAL DIAGONAL WEB BRACE
- BOTTOM CHORD BRACE

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10 Common Street Waterville, Maine 04901
(207) 873-5164
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HDR

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER BEM
PROJECT NUMBER 10357686

STATE OF MAINE · BENJAMIN E. MURRAY NO. 10128 · LICENSED PROFESSIONAL ENGINEER

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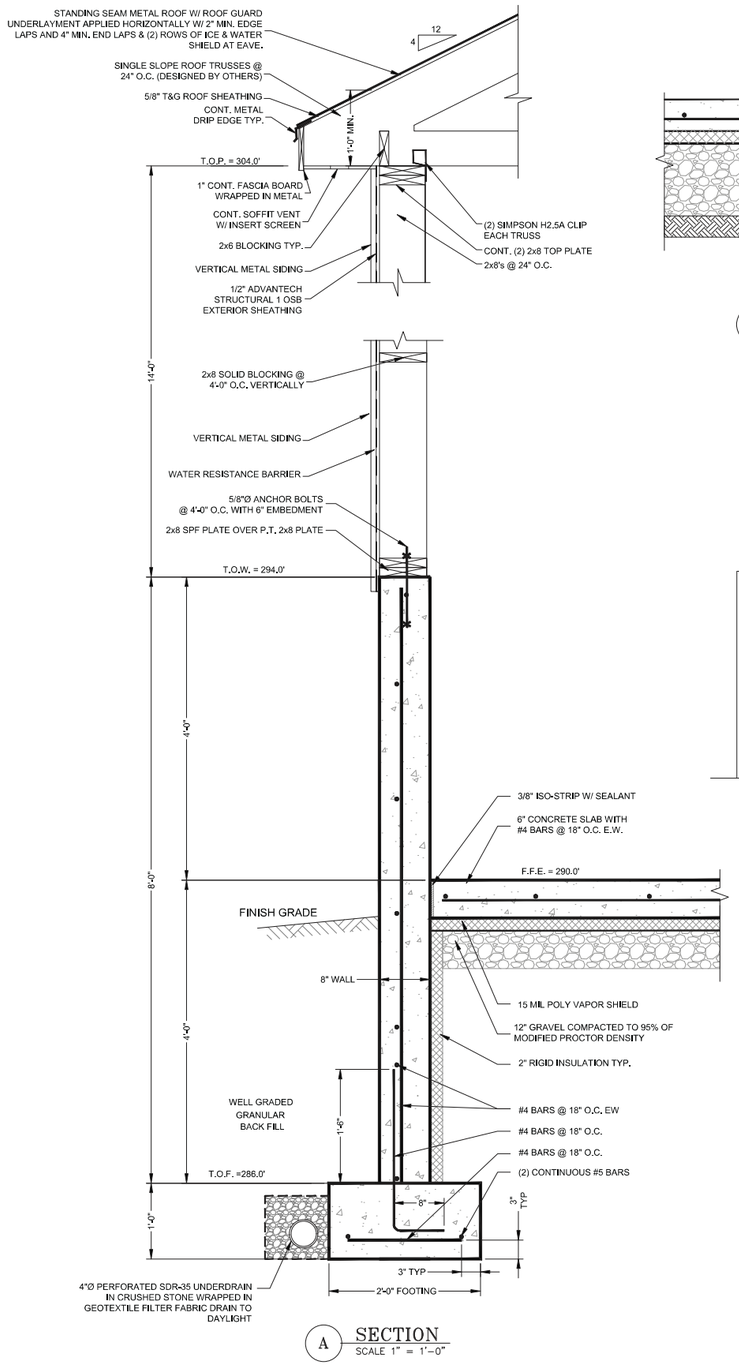
Date: 2024.09.11 09:14:32 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM

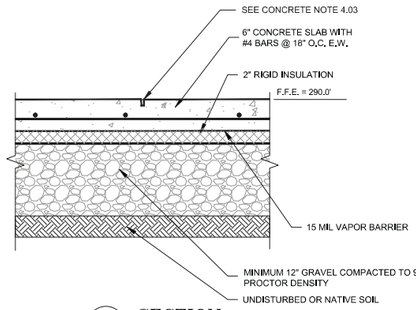
GRAND LAKE STREAM, MAINE

STORAGE BUILDING FOUNDATION & ROOF FRAMING PLAN

FILENAME 17-23
SCALE 3/16"=1'-0"
SHEET **06S-101**



A SECTION
SCALE 1" = 1'-0"



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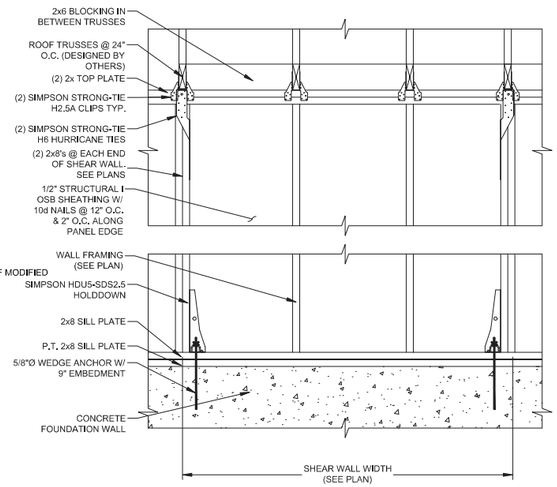

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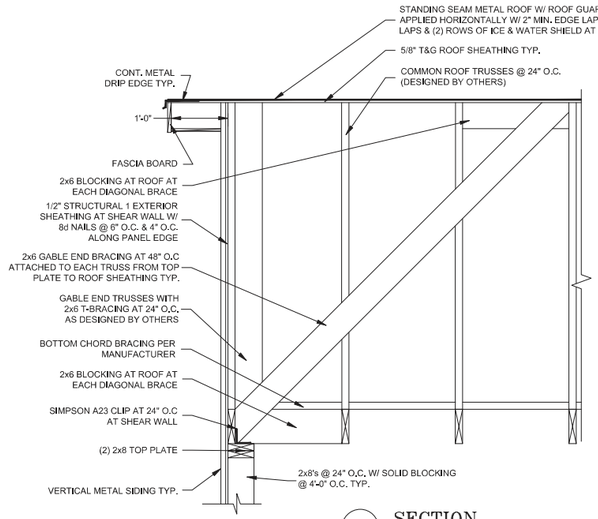
SCALE 3/4" = 1'-0"



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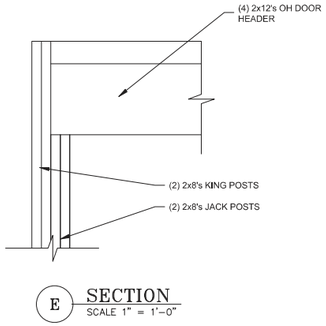
SCALE 3/4" = 1'-0"



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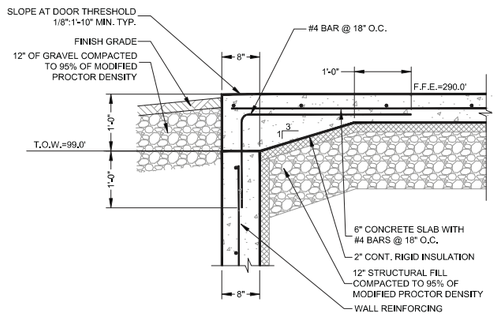

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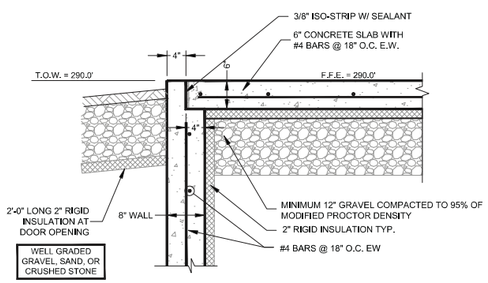
SCALE 3/4" = 1'-0"



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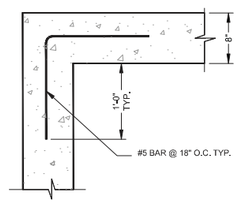
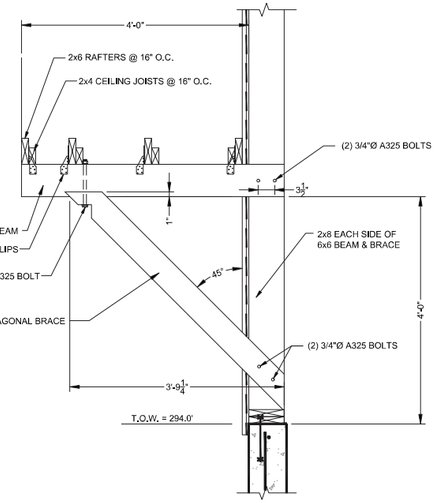
SCALE 3/4" = 1'-0"



H SECTION
SCALE 1" = 1'-0"



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

ISSUE	DATE	DESCRIPTION
	09/11/2024	ISSUED FOR BID

PROJECT MANAGER BEM
PROJECT NUMBER 10357686

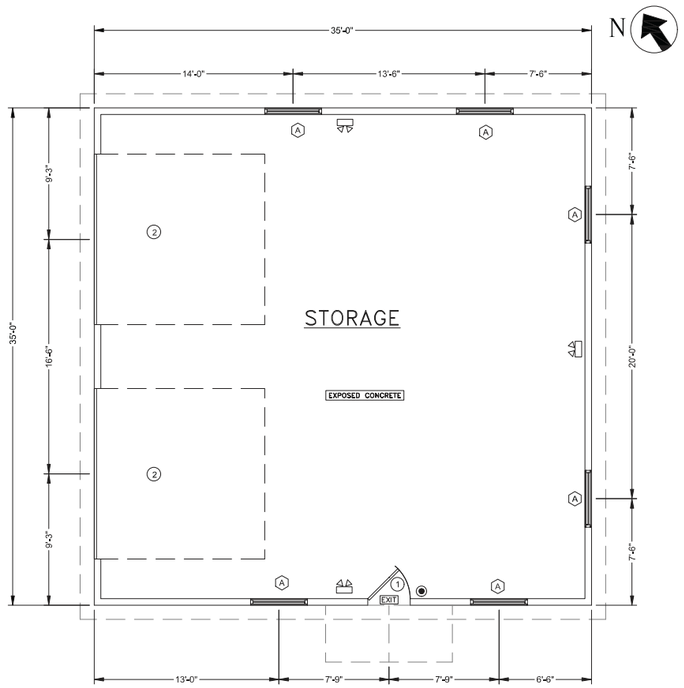
STATE OF MAINE
BENJAMIN E. MURRAY
NO. 10128
LICENSED PROFESSIONAL ENGINEER
Digitally signed by Benjamin Murray, P.E.
Date: 2024.09.11 09:19:53 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM

GRAND LAKE STREAM, MAINE

STORAGE BUILDING STRUCTURAL DETAILS

FILENAME 17-23
SCALE N.T.S.
SHEET 06S-501



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

LEGEND

- PROPOSED WALL
- EXIT SIGN
- EMERGENCY LIGHTING
- FIRE EXTINGUISHER

NOTE:
1. FIRE EXTINGUISHER, BRACKET MOUNTED EQUAL TO 2A:10B:C, 5LB CAPACITY

CODE ANALYSIS

MAINE UNIFORM BUILDING CODE AND ENERGY CODE (MUBEC)
A 2015 IBC
B 2015 IECC

BUILDING DATA:
A. OCCUPANCY: S-1 MODERATE HAZARD STORAGE

B. CONSTRUCTION TYPE (602): VB

C. ALLOWABLE AREA: 9,000 SF

D. ACTUAL FLOOR AREA: 1,225 SF

E. MAX. ALLOWABLE HEIGHT (STORIES): 40' (1)

F. ACTUAL HEIGHT (STORY): < 40' (1)

G. OCCUPANT LOAD: 1,225 SF / 300SF PER PERSON = 5 OCCUPANTS

H. EGRESS REQUIREMENTS: 2 EXITS

I. MAXIMUM ALLOWABLE TRAVEL DISTANCE: 200 FT

J. ACTUAL TRAVEL DISTANCE: 35'

ENERGY ANALYSIS:
1. BUILDING IS NOT HEATED OR COOLED THUS MEETS EXEMPTION C402.2 IN 2015 IECC FOR NOT HAVING TO MEET THERMAL REQUIREMENTS OF ENERGY CODE.

PLUMBING FIXTURES:
1. EXISTING FACILITIES ONSITE HAVE ADEQUATE RESTROOM, MOP SINK, AND DRINKING FOUNTAINS. THE NEW ADDITION STORAGE BUILDING SHALL NOT REQUIRE A RESTROOM, MOP SINK, AND DRINKING FOUNTAIN BECAUSE EXISTING FACILITIES ARE AVAILABLE ONSITE.

WINDOW SCHEDULE

NO.	QUANTITY	SIZE	TYPE	FRAME	REMARKS
(A)	6	4'-0" x 3'-0"	AWNING	ALUMINUM	ANDERSEN AXW41 UNIT 400 SERIES

DOOR SCHEDULE

NO.	QUANTITY	SIZE	TYPE	FRAME	REMARKS
(1)	1	3'-0" x 6'-8"	METAL INSULATED	METAL	HINGES, LEVER HARDWARE, ADA THRESHOLD, CLOSER,DEAD BOLT, ENTRY LOCKSET
(2)	2	12'-0" x 12'-0"	OVERHEAD	N/A	TRACK, AUTOMATIC OPENER, REMOTE

NOTES:
1. DOOR LEVER HARDWARE SHALL RETRACT DEADBOLT TO ALLOW FOR FREE EGRESS.
2. DOORS SHALL HAVE WEATHERSTRIPPING, BOTTOM DOOR SWEEP, AND WALL GUARD.

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STATE OF MAINE · BENJAMIN E. MURRAY NO. 10128 · LICENSED PROFESSIONAL ENGINEER

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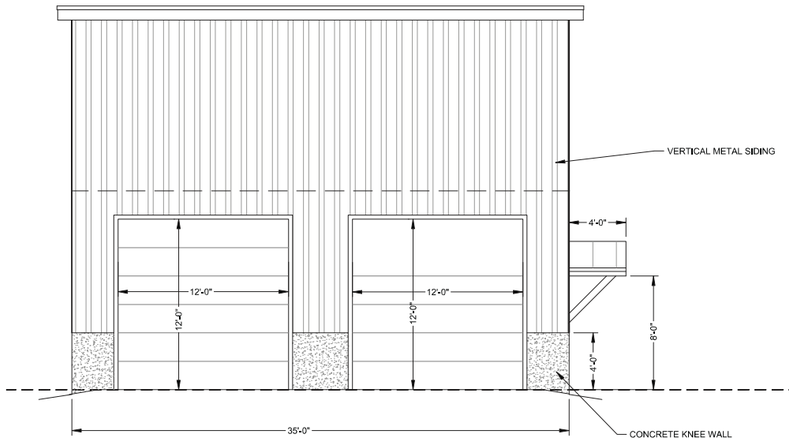
Date: 2024.09.11 09:24:50 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM

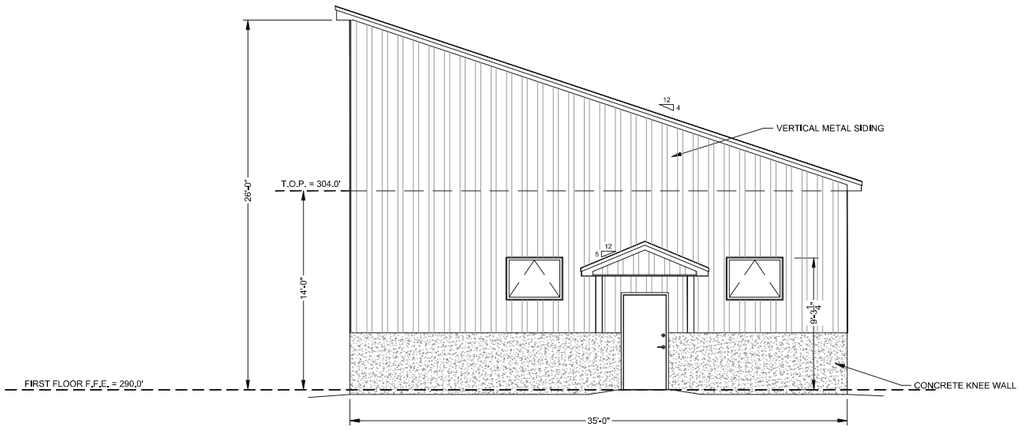
GRAND LAKE STREAM, MAINE

STORAGE BUILDING FLOOR PLAN

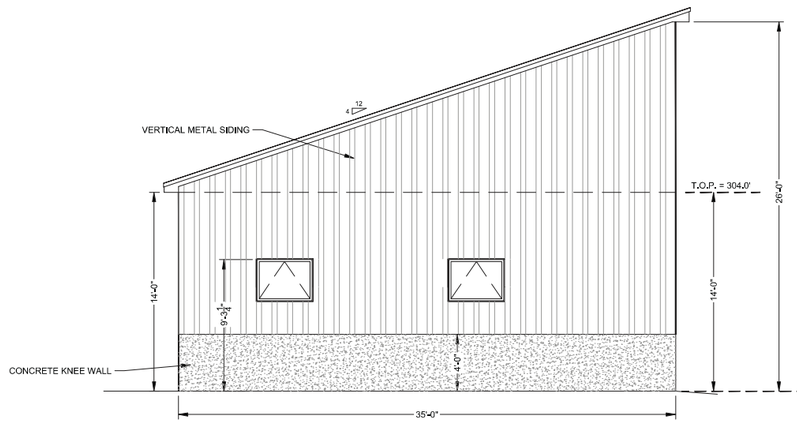
FILENAME 17-23
SCALE 3/16"=1'-0"
SHEET 06A-101



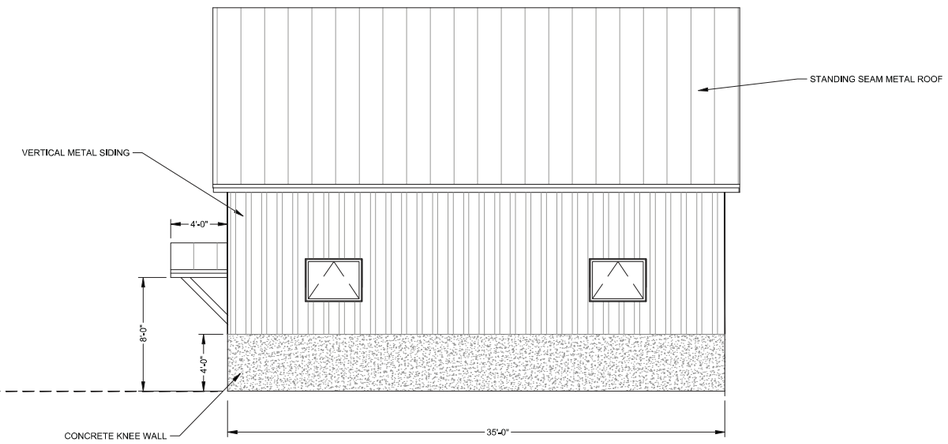
WEST ELEVATION
SCALE 3/16" = 1'-0"



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



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



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

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PROJECT NUMBER 10357686

STATE OF MAINE
BENJAMIN E. MURRAY
NO. 10128
LICENSED PROFESSIONAL ENGINEER

Digitally signed by Benjamin Murray, P.E.
Date: 2024.09.11 09:28:55 -04'00'

IMPROVEMENTS AT GRAND LAKE STREAM

GRAND LAKE STREAM, MAINE

STORAGE BUILDING ELEVATION PLAN - OPTION A

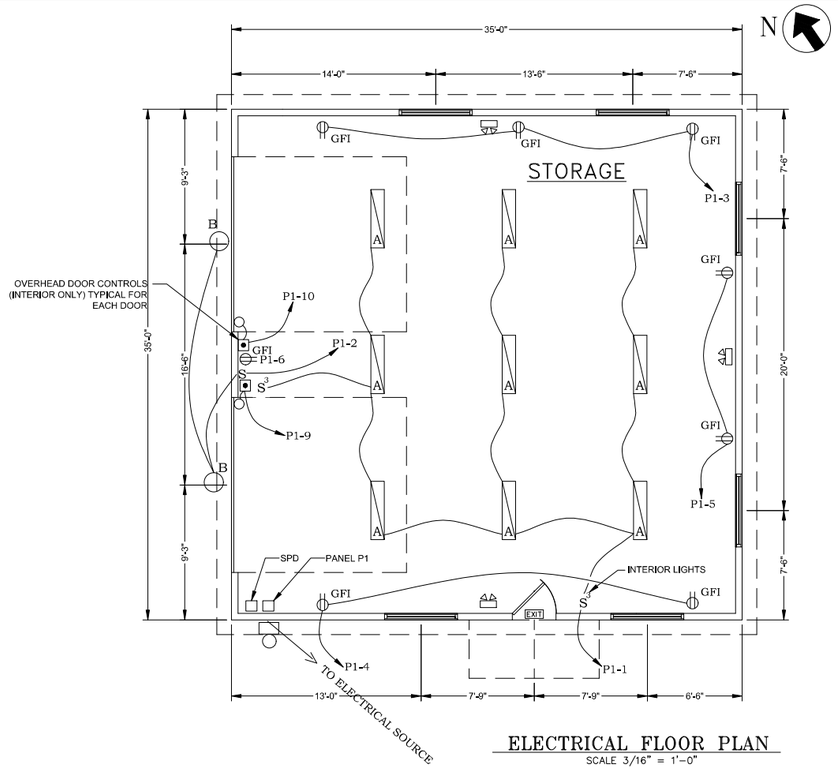
FILENAME 17-23
SCALE 3/16"=1'-0"
SHEET 06A-201

LEGEND

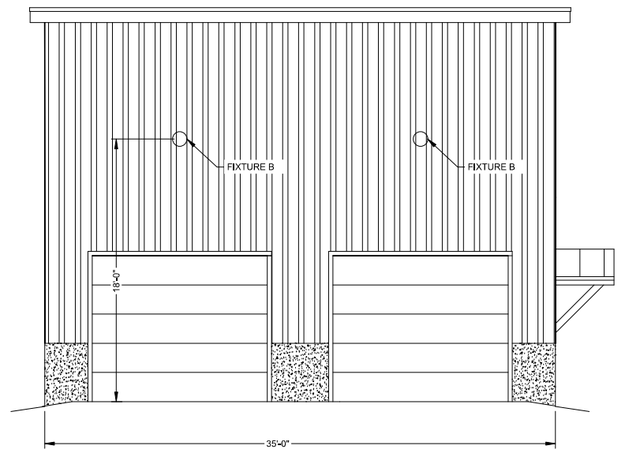
	LED LIGHTING FIXTURE; LETTER INDICATES TYPE
	DUPLEX 20A RECEPTACLE 48"AFF
S	SINGLE POLE SWITCH 48" AFF
S3	3 WAY SWITCH 48" AFF
	UTILITY METER
OHE	OVERHEAD ELECTRICAL WIRES
	OVERHEAD DOOR OPERATOR CONTROL
	PANEL OR AS LABELED
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
GFI	GROUND FAULT CIRCUIT PROTECTOR
SPD	SURGE PROTECTIVE DEVICE
OHD	OVERHEAD DOOR

A FIELD COORDINATE MOUNTING FOR POWER TO OVERHEAD DOOR

NOTE:
CONTRACTOR SHALL PERFORM VOLTAGE DROP CALCULATIONS FOR INTERIOR LIGHTING CIRCUIT AND RECEPTACLE CIRCUITS AND PROVIDE CONDUCTORS THAT LIMIT THE VOLTAGE DROP TO A MAXIMUM OF 3%. CALCULATIONS SHALL BE SUBMITTED WITH SHOP DRAWINGS FOR ENGINEERS APPROVAL.



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



ELECTRICAL ELEVATION
SCALE 3/16" = 1'-0"

FIXTURE SCHEDULE

TYPE	FIXTURE MAKE	FIXTURE MODEL	MOUNTING	LAMPING
A	LITHONIA	ZL1N L48 5000LM FST MVOLT 50K 80 CRI WH	SURFACE ON BOTTOM OF TRUSS	21.7W/LED
B	RAB	WPLED 4T 78 N WITH SMS 500 MOTION CONTROLLER	WALL 18 FT AFG	78W/LED
EXIT	LITHONIA	LV S W I R 120 UM CW	WALL ABOVE DOOR	2.3W/LED
EMRG	LITHONIA	EU2L	WALL 10 FT AFG	LED

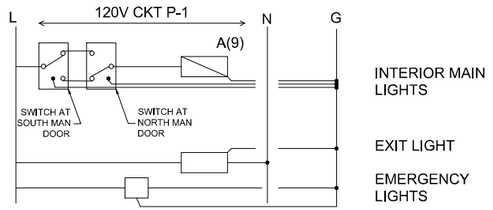
PANEL P1 SCHEDULE - A SURFACE MOUNTED

100 AMP MCB,240/120 VOLT, 1 PHASE, 3 WIRE, 60 HZ

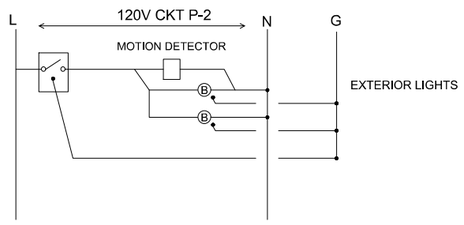
CIRCUIT NO.	DESCRIPTION	NO. POLES	RATING	LOAD
1	INTERIOR LIGHTS	1	20*	1.6A
2	EXTERIOR LIGHTS	1	20*	1.3A
3	RECEPT - N	1	20	4.5A
4	RECEPT - S	1	20	3.0A
5	RECEPT - E	1	20	3.0A
6	RECEPT - W	1	20	1.5A
7	SPACE	1	20	
8	SPACE	1	20	
9	OH DOOR S	1	20	9.8A
10	OH DOOR N	1	20	9.8A
11,13	SPD	2	**	
12-14	SPARE	2	20	
15,16	SPACE	1	20	
17-24	SPACE	–	20	

* PROVIDE HANDLE LOCK ON CIRCUITS

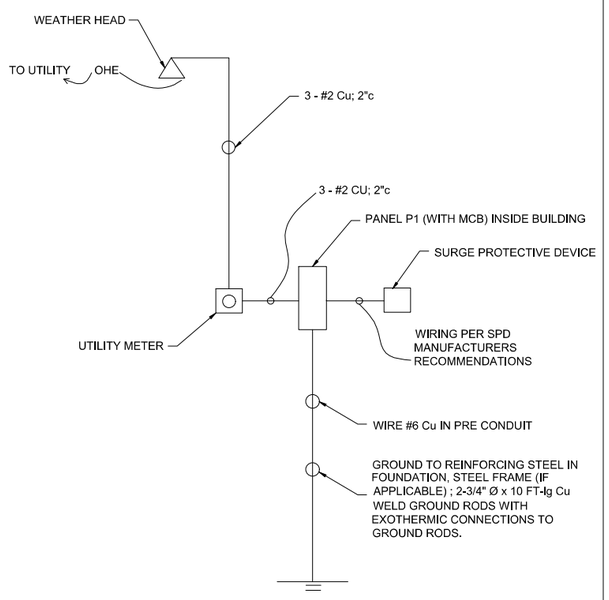
** RATING PER SPD MANUFACTURER RECOMMENDATION



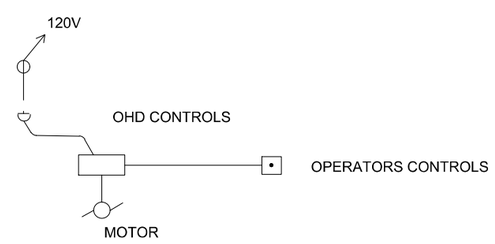
MAIN INTERIOR LIGHT WIRING DIAGRAM



WORK AND EXTERIOR LIGHTING WIRING DIAGRAM



ELECTRIC SERVICE INTERCONNECTION DIAGRAM



TYPICAL OHD INTERCONNECTION DIAGRAM

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Steven A. Jonason — Digitally signed by Steven A. Jonason. Date: 2024.09.11 11:27:02 -04'00'

IMPORVEMENTS AT GRAND LAKE STREAM

GRAND LAKE STREAM, MAINE

ELECTRICAL FLOOR PLAN

FILENAME 17-23
SCALE 3/16"=1'-0"
SHEET 06E-101