CONFEDERATED SALISH AND KOOTENAI TRIBES
NORTH FORK JOCKO RIVER AREA REHABILITATION PROJECT
TABOR FEEDER DIVERSION
LAKE COUNTY, MONTANA

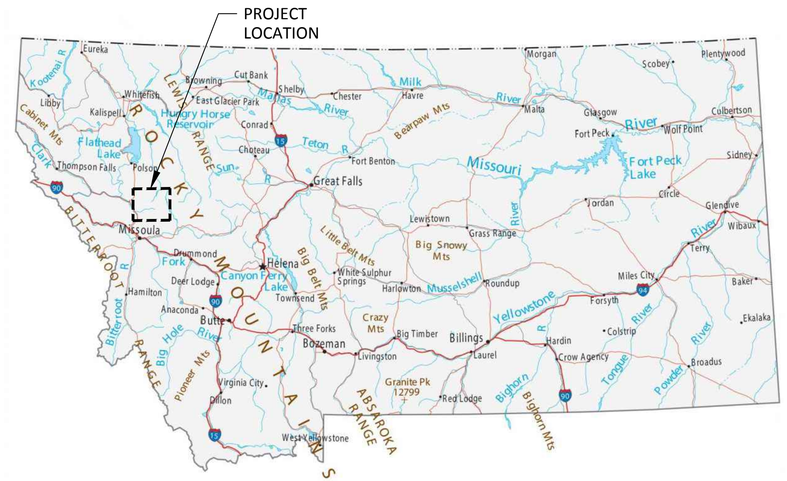
VOLUME 2 - CONSTRUCTION DRAWINGS
FEBRUARY, 2025

DRAFT 100% DESIGN

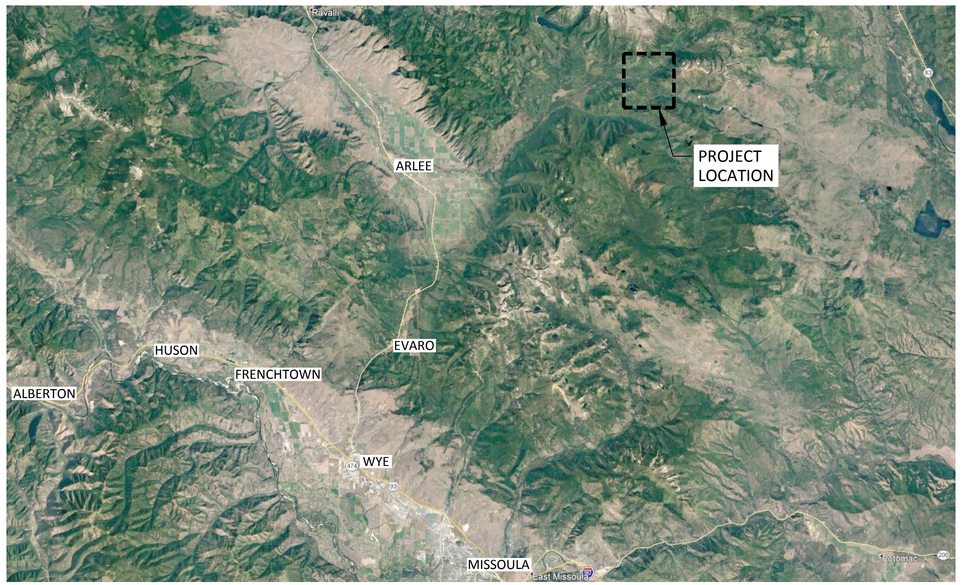
CONFEDERATED SALISH AND KOOTENAI TRIBES

NORTH FORK JOCKO RIVER AREA REHABILITATION PROJECT

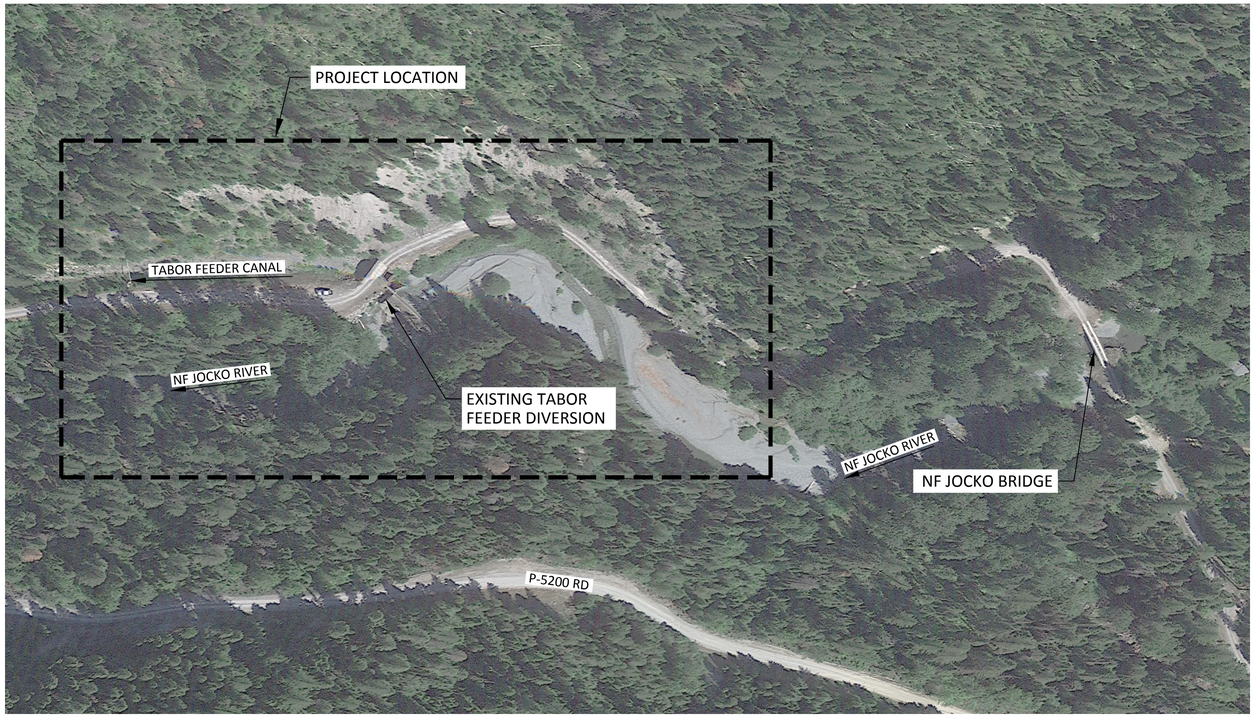
TABOR FEEDER DIVERSION
DRAFT 100% DESIGN



LOCATION MAP
NTS



VICINITY MAP
NTS



PROJECT LIMITS
NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

LOCATION MAP, VICINITY MAP AND PROJECT LIMITS

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
G001

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_G001.dwg Plot date: Feb 11, 2025 12:45pm, CAD User: JoeNeves

DRAWING INDEX

100% SUBMITTAL	DRAWING NO.	DESCRIPTION
GENERAL		
X		COVER SHEET
X	G001	LOCATION MAP, VICINITY MAP, AND PROJECT LIMITS
X	G002	DRAWING INDEX
X	G003	STANDARD ABBREVIATIONS
X	G004	STANDARD SYMBOLS
X	G005	PIPING SCHEDULE
X	G100	EXISTING SITE PLAN AND CONTROL
X	G101	HYDRAULIC PROFILE AND DESIGN CRITERIA - FISH SCREENS
X	G102	HYDRAULIC PROFILE AND DESIGN CRITERIA - FISHWAY AND SLUICEWAY
X	G103	CONTRACTOR STAGING AREA PLAN 1
X	G104	CONTRACTOR STAGING AREA PLAN 2
X	G105	CONTRACTOR STAGING AREA PLAN 3
X	G106	PROJECT BOUNDARIES AND DELINEATED WETLANDS
EROSION AND SEDIMENT CONTROL		
X	EC001	STANDARD EROSION AND SEDIMENT CONTROL DETAILS 1
X	EC002	STANDARD EROSION AND SEDIMENT CONTROL DETAILS 2
X	EC100	EROSION AND SEDIMENT CONTROL PLAN
DEMOLITION		
X	D100	SITE DEMOLITION PLAN
X	D101	DEMOLITION SECTIONS
X	D102	DEMOLITION PHOTOS 1
X	D103	DEMOLITION PHOTOS 2

DRAWING INDEX

100% SUBMITTAL	DRAWING NO.	DESCRIPTION
CIVIL		
X	GC001	CIVIL GENERAL NOTES
X	GC002	STANDARD CIVIL DETAILS 1
X	GC003	STANDARD CIVIL DETAILS 2
X	GC004	STANDARD CIVIL DETAILS 3
X	GC005	STANDARD CIVIL DETAILS 4
X	GC006	STANDARD CIVIL DETAILS 5
X	GC100	SITE COORDINATES
X	C100	OVERALL SITE KEY PLAN
X	C103	SITE LAYOUT PLAN - EAST
X	C104	SITE LAYOUT PLAN - WEST
X	C105	SITE GRADING PLAN - EAST
X	C106	SITE GRADING PLAN - WEST
X	C107	SITE GRADING PLAN & PROFILE - IN-STREAM GRADING
X	C108	FOUNDATION DRAINAGE PLAN - EAST
X	C109	FOUNDATION DRAINAGE PLAN - WEST
X	C110	SURFACE DRAINAGE PLAN - EAST
X	C111	SURFACE DRAINAGE PLAN - WEST
X	C112	SITE GRADING SECTIONS 1
X	C113	SITE GRADING SECTIONS 2
X	C114	SITE GRADING SECTIONS 3
X	C115	SITE GRADING SECTIONS 4
X	C116	SITE GRADING SECTIONS 5
X	C117	SITE GRADING DETAILS 1 - CHANNEL GRADING
X	C118	SITE GRADING DETAILS 2 - ENGINEERED LOG JAM
X	C119	SITE GRADING DETAILS 3 - RIVER GAGING SECTION
X	C120	SITE DRAINAGE DETAILS 1 - SCREENING STRUCTURE IN-FILL
X	C121	SITE DRAINAGE DETAILS 2 - PLUNGE POOL HEADWALL DRAINAGE
X	C130	ROUGHENED CHANNEL SHEET PILE PLAN
X	C131	ROUGHENED CHANNEL FISHWAY PLAN AND PROFILE
X	C132	ROUGHENED CHANNEL SHEET PILE SECTIONS AND DETAILS
X	C133	ROUGHENED CHANNEL FISHWAY SECTIONS 1
X	C134	ROUGHENED CHANNEL FISHWAY SECTIONS 2
X	C140	SITE PIPING PLAN - EAST
X	C141	SITE PIPING PLAN - WEST
X	C142	BOX CULVERT PLAN AND PROFILE
X	C143	SCREEN 1 - FISH RETURN PIPE PLAN AND PROFILE
X	C144	SCREEN 2 - FISH RETURN PIPE PLAN AND PROFILE
X	C145	SCREEN 3 - FISH RETURN PIPE PLAN AND PROFILE
X	C146	SCREEN 4 - FISH RETURN PIPE PLAN AND PROFILE
X	C147	PENSTOCK - PIPE PLAN AND PROFILE
X	C148	SEDIMENT - PIPE PLAN AND PROFILE
X	C150	SITE RESTORATION PLAN - EAST
X	C151	SITE RESTORATION PLAN - WEST
X	C152	SITE RESTORATION - TYPICAL SECTION
X	C153	SITE RESTORATION - FLOODPLAIN AND SLOPE TREATMENT
X	C154	SITE RESTORATION - BRUSH BANK TREATMENT
X	C155	SITE RESTORATION - WILLOW BRUSH TRENCH TREATMENT

DRAWING INDEX

100% SUBMITTAL	DRAWING NO.	DESCRIPTION
STRUCTURAL		
X	GS001	STRUCTURAL GENERAL NOTES
X	GS002	STANDARD STRUCTURAL DETAILS 1
X	GS003	STANDARD STRUCTURAL DETAILS 2
X	GS004	STANDARD STRUCTURAL DETAILS 3
X	GS005	STANDARD STRUCTURAL DETAILS 4
X	GS006	STANDARD STRUCTURAL DETAILS 5
X	GS007	STANDARD STRUCTURAL DETAILS 6
X	S101	HEADWORKS KEY PLAN
X	S102	HEADWORKS FOUNDATION PLAN - EAST
X	S103	HEADWORKS FOUNDATION PLAN - WEST
X	S104	HEADWORKS TOP PLAN - EAST
X	S105	HEADWORKS TOP PLAN - WEST
X	S106	HEADWORKS SECTIONS 1
X	S107	HEADWORKS SECTIONS 2
X	S108	HEADWORKS SECTIONS 3
X	S109	HEADWORKS SECTIONS 4
X	S110	HEADWORKS SECTIONS 5
X	S111	TRASHRACK DETAILS
X	S201	SCREENS KEY PLAN
X	S202	SCREENS FOUNDATION PLAN - EAST
X	S203	SCREENS FOUNDATION PLAN - MIDDLE
X	S204	SCREENS FOUNDATION PLAN - WEST
X	S205	SCREENS TOP PLAN - EAST
X	S206	SCREENS TOP PLAN - MIDDLE
X	S207	SCREENS TOP PLAN - WEST
X	S208	SCREENS SECTIONS 1
X	S209	SCREENS SECTIONS 2
X	S210	SCREENS SECTIONS 3
X	S211	SCREENS SECTIONS 4
X	S212	SCREENS SECTIONS 5
X	S213	SCREENS SECTIONS 6
X	S214	SCREENS SECTIONS 7
X	S215	HEADWALL AND HYDRO VAULT PLANS
X	S216	HEADWALL AND HYDRO VAULT SECTIONS

DRAWING INDEX

100% SUBMITTAL	DRAWING NO.	DESCRIPTION
MECHANICAL		
X	GM001	MECHANICAL SCHEDULES
X	GM002	MECHANICAL STANDARD DETAILS
X	M100	MECHANICAL SITE PLAN - EAST
X	M101	MECHANICAL SITE PLAN - WEST
X	M102	INTAKE AREA PLAN
X	M103	INLET FLUME AREA PLAN
X	M104	FLISH FLUME RETURN AREA
X	M105	OUTFALL STRUCTURE MICRO-HYDRO, FISH RETURN & SEDIMENT FLUSHING
X	M110	INTAKE AREA ELEVATION
X	M300	PENSTOCK INLET
X	M301	FISH RETURN SCREEN 1
X	M302	FISH RETURN SCREEN 2
X	M303	FISH RETURN SCREEN 3
X	M304	FISH RETURN SCREEN 4
X	M500	SLUICE GATE SECTIONS AND DETAILS
X	M501	CONDUIT GATE SECTIONS AND DETAILS
X	M502	LANGEMAN GATES SECTION
X	M503	INLET FLUME GATE SECTION
X	M504	STOP LOG GATE ASSEMBLY
X	M505	STOP LOG GATE ASSEMBLY DETAILS 1
X	M520	18" PIPE THIMBLE DETAILS
X	M521	12" PIPE THIMBLE
X	M530	OUTFALL MICRO-HYDRO VAULT
ELECTRICAL		
X	GE001	ELECTRICAL GENERAL NOTES AND ABBREVIATIONS
X	GE002	ELECTRICAL STANDARD SYMBOLS 1
X	GE003	ELECTRICAL STANDARD SYMBOLS 2
X	GE004	ELECTRICAL STANDARD DETAILS
X	E100	POWER DISTRIBUTION 24VDC
X	E101	ELECTRICAL SITE KEY PLAN
X	E102	ELECTRICAL SITE POWER PLAN - EAST
X	E103	ELECTRICAL SITE POWER PLAN - WEST
X	E104	CONTROL BUILDING LAYOUTS
X	E105	MASTER CONTROL ENCLOSURE LAYOUT
X	E106	REMOTE CONTROL ENCLOSURE LAYOUT
X	E107	CONTROL ENCLOSURE BILL OF MATERIALS
X	E108	DEVICE SCHEDULE
X	E110	NETWORK CONTROL BLOCK DIAGRAM
X	E111	CABLE AND CONDUIT SCHEDULES
INSTRUMENTATION		
X	GI001	PROCESS AND INSTRUMENTATION LEGEND
X	I001	PROCESS AND INSTRUMENTATION DIAGRAM 1
X	I002	PROCESS AND INSTRUMENTATION DIAGRAM 2

REV	DATE	BY	DESCRIPTION
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

DRAWING INDEX

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
G002

JOB NO: 21-094

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A/C	AIR CONDITIONING
A/E	ARCHITECT/ENGINEER
A	ARCHITECTURAL (DWG DISCIPLINE), AMP
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
ABAN	ABANDON
AC	ALTERNATING CURRENT
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
AIC	AMPS INTERRUPTING CAPACITY
ALIG	ALIGNMENT
ALUM	ALUMINUM
ALT	ALTERNATE, ALTITUDE
AMB	AMBIENT
ANC	ANCHOR
AP	ACCESS PANEL
APRX	APPROXIMATE
APVD	APPROVED ARCH ARCHITECTURAL
ASSY	ASSEMBLY
AT	AMP TRIP
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAGE
B/B	BACK TO BACK
BAL	BALANCE
BBD	BULLETIN BOARD
BC	BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE
BD	BOARD
BE	BOTH ENDS, BELL END
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET
BFV	BUTTERFLY VALVE
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
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
BV	BALL VALVE
BW	BOTH WAYS
BYP	BYPASS
C TO C	CENTER TO CENTER
C&G	CURB & GUTTER
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT, CIVIL (DRAWING DISCIPLINE)
CAB	CABINET
CAP	CAPACITY
CAT	CATALOG
CAV	CAVITY
CB	CATCH BASIN
CCB	CONCRETE BLOCK
CCW	COUNTER CLOCKWISE
CF	CUBIC FEET (FOOT)
CHFR	CHAMFER
CHD	CHORD
CHH	COMMUNICATION HANDHOLE
CI	CURB INLET
CIP	CAST-IN-PLACE
CIPB	CONCRETE INTERLOCKING PAVER BALLAST
CIRC	CIRCULATION, CIRCULAR
CJ	CONSTRUCTION JOINT, CONTROL JOINT
CKT	CIRCUIT
CL	CENTERLINE, CLASS, CLOSE
CLR	CLEAR

CMH	COMMUNICATION MANHOLE
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT, CONCRETE OPENING
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE
CONC	CONCENTRIC, CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS, CONTINUED
COORD	COORDINATE
CORR	CORROSIVE, CORRUGATED
CP	CHECKER PLATE, CONTROL POINT
CPLG	COUPLING
CSK	COUNTERSINK
CTR	CENTER
CTRL	CONTROL
CU	COPPER, CUBIC
CW	CLOCKWISE
CY	CUBIC YARD
d	PENNY (NAIL MEASURE)
D	DEEP, DIFFUSER
DB	DUCT BANK, DECIBEL, DRY BULB
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEG C	DEGREE CENTIGRADE
DEG F	DEGREE FAHRENHEIT
DEMO	DEMOLITION
DEP	DEPRESSED
DEPT	DEPARTMENT
DET	DETAIL
DI	DROP INLET, DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL, DIAGRAM
DIFF	DIFFERENTIAL, DIFFERENCE
DIM	DIMENSION
DISCH	DISCHARGE
DIST	DISTANCE, DISTRIBUTION
DIV	DIVISION
DL	DEAD LOAD
DN	DOWN
DP	DEPTH
DS	DOWN SPOUT
DT	DOUBLE TEE, DRIP TRAP ASSEMBLY
DUP	DUPLICATE
DWG	DRAWING
DWL	DOWEL
E	EAST, ELECTRICAL (DWG DISCIPLINE)
EA	EACH, EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EDB	ELECTRICAL DUCT BANK
EDF	ENERGY DISSIPATION FACTOR
EE	EACH END
EF	EACH FACE
EG	EXISTING GRADE
EGL	ENERGY GRADE LINE
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
EOW	EDGE OF WATER
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
EXIST	EXISTING
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR, EXTERNAL, EXTENSION

F TO F	FACE TO FACE
FAB	FABRICATE
FBO	FURNISHED BY OWNER
FC	FLUSHING CONNECTION
FCA	FLANGED COUPLING ADAPTER
FCV	FIXED CONE VALVE
FD	FLOOR DRAIN
FDC	FLEXIBLE DUCT CONNECTION
FDR	FEEDER
FE	FLANGED END
FEC	FIRE EXTINGUISHER CABINET
FEXT	FIRE EXTINGUISHER
FF	FAR FACE, FACTORY FINISH, FLAT FACE
FG	FINISHED GRADE
FIG	FIGURE
FH	FIRE HYDRANT
FIN	FINISH
FL	FLOW, FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLOR	FLUORESCENT
FLR	FLOOR
FLS	FLASHING, FLUSH
FND	FOUNDATION
FNC	FENCE
FO	FINISHED OPENING
FOB	FLAT ON BOTTOM
FOC	FACE OF CONCRETE, FACE OF CURB, FIBER OPTIC CABLE
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
FS	FLOOR SINK, FAR SIDE
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, GENERAL (DWG DISCIPLINE)
GA	GAGE (METAL THICKNESS)
GAL	GALLON
GALV	GALVANIZED
GB	GRADE BREAK
GD	GUARD
GEN	GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GL	GLASS
GP	GUY POLE
GR	GRADE
GRND	GROUND
GRTG	GRATING
GT	GREASE TRAP
GWB	GYPSUM WALLBOARD
GYP	GYPSUM HARDBOARD
H	HIGH
HB	HOSE BIB
HBD	HARDBOARD
HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE
HC	HORIZONTAL CENTERLINE
HDR	HEADER
HDW	HARDWARE
HEX	HEXAGONAL
HH	HANDHOLE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT, HORSEPOWER
HPC	HORIZONTAL POINT OF CURVATURE
HPS	HIGH PRESSURE SODIUM
HPT	HORIZONTAL POINT OF TANGENCY
HR	HOUR
HS	HEADED STUD, HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HWD	HARDWOOD
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC HZ HERTZ, CYCLES PER SECOND

I	INSTRUMENTATION (DWG DISCIPLINE)
ID	INSIDE DIAMETER, INTERIOR DIMENSION
IE	INVERT ELEVATION
IF	INSIDE FACE
IH	INTAKE HOOD
IMP	IMPACT
IN	INCH
INC	INCLUDE, INCANDESCENT
INF	INFLUENT
INSTR	INSTRUMENTATION
INSUL	INSULATION
INT	INTERIOR, INTERSECTION
INTR	INTERMEDIATE, INTERIOR
INV	INVERT
IPS	IRON PIPE SIZE
IPT	INTERNAL PIPE THREAD
IRR	IRRIGATION
ISO	ISOMETRIC
JB	JUNCTION BOX
JCT	JUNCTION
JF	JOINT FILLER
JT	JOINT
K	KIP
KB	KNEE BRACE
KCMIL	THOUSAND CIRCULAR MILS
KD	KNOCK DOWN
KO	KNOCK OUT
KSI	KIPS PER SQUARE INCH
L	ANGLE, LENGTH, LAVATORY
LAM	LAMINATE
LATL	LATERAL
LB	LAG BOLT, POUND
LDR	LEADER
LF	LINEAR FOOT
LG	LONG
LH	LEFT HAND
LIN	LINEAR
LIQ	LIQUID
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMLU	LIQUID MARKER LECTURE UNIT
LNG	LONGITUDINAL
LOC	LOCATION
LP	LOW POINT
LPS	LOW PRESSURE SODIUM
LR	LONG RADIUS
LT	LEFT
LTD	LIMITED
LTG	LIGHTING
LTL	LINTEL
LTNG	LIGHTNING
LV	LOW VOLTAGE
LVR	LOUVER
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LWL	LOW WATER LEVEL
M	MECHANICAL (DWG DISCIPLINE)
MA	MIXED AIR
MAINT	MAINTENANCE
MAN	MANUAL
MAOP	MAXIMUM ALLOWABLE OPERATING PRESSURE
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBER
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE, METAL HALIDE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MMB	MEMBRANE
MO	MASONRY OPENING
MOD	MODULAR, MODIFY
MON	MONUMENT
MPT	MALE PIPE THREAD
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
NC	NORMALLY CLOSED
NEG	NEGATIVE
NF	NEAR FACE, NON-FUSED
NG	NATURAL GAS
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
OH	OVERHEAD
OHWM	ORDINARY HIGH WATER MARK
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OVFL	OVERFLOW
OVHG	OVERHANG
OZ	OUNCE
P	PAINT, PROCESS (DWG DISCIPLINE)
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
PH	PHASE
PI	POINT OF INTERSECTION
PKG	PACKAGE
PL	PLATE, PROPERTY LINE
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
PROP	PROPERTY
PROT	PROTECTION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PT	POINT, POINT OF TANGENCY
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWD	PLYWOOD
PZ	PIEZOMETER
Q	RATE OF FLOW
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
REQD	REQUIRED
RESIL	RESILIENT

RET	RETAINING, RETURN
REV	REVISION, REVERSE
RFL	REFLECTED, REFLECTOR
RGS	RIGID GALVANIZED STEEL
RH	RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY
RL	REQUIRED LAP
RND	ROUND
RNG	RENEWABLE NATURAL GAS
RO	ROUGH OPENING
ROW	RIGHT-OF-WAY
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RT	RIGHT
S	SOUTH, SINK, STRUCTURAL (DWG DISCIPLINE)
SA	SUPPLY AIR
SAN	SANITARY
SC	SOLID CORE
SCH	SCHEDULE
SCHEM	SCHEMATIC
SCRN	SCREEN
SE	STEEL/ALUMINUM EDGE
SEC	SECONDARY, SECONDS
SECT	SECTION
SEP	SEPARATE
SF	SQUARE FOOT
SH	SHOWER
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SL	SLOPE
SLTD	SLOTTED
SLV	SLEEVE
SMLS	SEAMLESS
SOG	SLAB ON GRADE
SP	SOUNDPROOF, STANDPIPE
SPC	SPACING
SPEC	SPECIFICATION
SPLY	SUPPLY
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	TEMPERED AIR
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TEMP	TEMPORARY, TEMPERATURE
THK	THICK
THRD	THREAD
THRU	THROUGH
TOB	TOP OF BOLT, TOP OF BANK, TOP OF BEAM
TOC	TOP OF CURB, TOP OF CONCRETE
TOD	TOP OF DUCT
TOF	TOP OF FOOTING
TOG	TOP OF GRATING
TOL	TOLERANCE, TOP OF LEDGER
TOM	TOP OF MASONRY
TOP	TOP OF PLATE
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB, TOP OF STEEL
TOW	TOP OF WALL
TP	TELEPHONE POLE, TOE PLATE, TRAP PRIMER
TPG	TOPPING
TRANS	TRANSITION
TRD	TRENCH DRAIN
TYP	TYPICAL
U	URINAL
UG	UNDERGROUND
ULT	ULTIMATE
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY

V	VENT, VELOCITY, VOLT
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARNISH, VARIABLE, VOLT AMPERES REACTIVE
VB	VAPOR BARRIER, VINYL BASE, VALVE BOX
VC	VERTICAL CURVE
VCT	VINYL COMPOSITION TILE, VERTICAL CENTERLINE
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VS	VERSES, VAPOR SEAL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W/	WITH
W/O	WITHOUT
W	WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM
WC	WATER CLOSET, WATER COLUMN
WD	WIDTH
WF	WIDE FLANGE, WASH FOUNTAIN
WG	WIRE GLASS, WATER GAGE
WH	WALL HYDRANT, WEEP HOLE
WL	WATER LEVEL
WLD	WELDED
WM	WIRE MESH
WP	WATERPROOF, WORKING POINT
WTHP	WEATHERPROOF
WS	WATERSTOP, WATER SURFACE
WSEL	WATER SURFACE ELEVATION
WT	WEIGHT, WATER TIGHT
WWF	WELDED WIRE FABRIC
XS	EXTRA STRONG
XXS	DOUBLE EXTRA STRONG
XSECT	CROSS SECTION
YH	YARD HYDRANT
YS	YIELD STRENGTH

AGENCY AND PROJECT ABBREVIATIONS:

COR	CONTRACTING OFFICER'S REPRESENTATIVE
CSKT	CONFEDERATED SALISH AND KOOTENAI TRIBES
FIIP	FLATHEAD INDIAN IRRIGATION PROJECT
MDT	MONTANA DEPT. OF TRANSPORTATION
NF JOCKO	NORTH FORK JOCKO RIVER
TFD	TABOR FEEDER DIVERSION
TFC	TABOR FEEDER CANAL

GENERAL NOTES:

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

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

STANDARD ABBREVIATIONS

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
G003

JOB NO: 21-094

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SHEET SYMBOLS

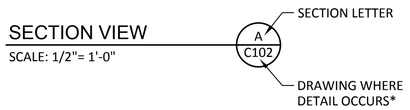
PLAN
SCALE: 1/2"= 1'-0"
0' 2' 4'

SECTION IDENTIFICATION

(1) SECTION CUT ON DRAWING C102:

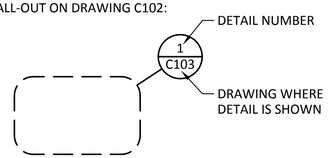


(2) ON DRAWING C103 THIS SECTION IS IDENTIFIED AS:

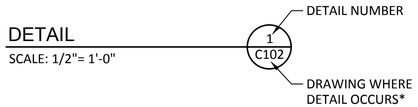


DETAIL IDENTIFICATION

(1) DETAIL CALL-OUT ON DRAWING C102:



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



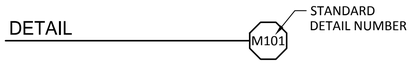
*NOTE: IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON SAME DRAWING. DRAWING NUMBER IS REPLACED BY A LINE.

STANDARD DETAIL IDENTIFICATION

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



(2) ON DETAIL DRAWINGS, IDENTIFIED AS:



ELEVATION/IMAGE IDENTIFICATION



SITE PLAN LINE TYPES

- FENCE LINE
- OVERHEAD POWER
- MAJOR CONTOUR
- MINOR CONTOUR
- EXIST MAJOR CONTOUR
- EXIST MINOR CONTOUR
- EDGE OF WATERLINE
- TOE OF SLOPE
- TOP OF BANK
- SANITARY SEWER
- STORM DRAIN
- EDGE OF PAVEMENT
- EDGE OF GRAVEL
- WATTLE
- SILT FENCE
- CONSTRUCTION FENCE
- GAS LINE
- TURBIDITY CURTAIN
- IRRIGATION LINE
- WATER LINE
- TELEPHONE LINE
- COMMUNICATION LINE
- OVERHEAD ELECTRICAL/POWER
- UNDERGROUND ELECTRICAL
- PROPERTY LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING OVERHEAD POWER & TELEPHONE LINE
- EXISTING OVERHEAD TELEPHONE LINE
- EXISTING BURIED TELEPHONE LINE EVIDENCED BY PEDESTALS & WARNING PADDLES
- EXISTING FENCE LINE
- PROJECT BOUNDARY
- TREE PROTECTION FENCE

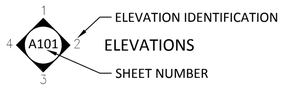
SITE PLAN SYMBOLS

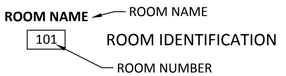
- ARROW INDICATES DIRECTION OF PLAN NORTH
- CONIFER TREE: FIR, SPRUCE, LARCH OR PINE, 8" DIAMETER OR LARGER.
- DECIDUOUS TREE: COTTONWOOD, HAWTHORN, ASPEN, 8" DIAMETER OR LARGER.
- MH — MANHOLE
- EB — ELECTRIC BOX
- STORM DRAIN MANHOLE
- FH — FIRE HYDRANT
- YH-X — YARD HYDRANT
- SURVEY CONTROL POINT, AS NOTED.
- POLE ANCHOR
- POWER POLE
- LIGHT POLE
- SIGN
- SURVEY HUB
- SECTION CORNER
- BENCH MARK
- EXISTING HEADWALL
- EXISTING MONITORING STATION
- EXISTING FENCE
- STATE PLANE COORDINATE MARKER
- EXISTING TREE LINE
- EXISTING BUILDING, STRUCTURES
- EXISTING SECTION CORNER MONUMENT FOUND AS DESCRIBED
- EXISTING 5/8" REBAR CONTROL POINT MONUMENT, BORING LOCATION
- W — EXISTING HOSE BIB
- EXISTING PORTABLE IRRIGATION WATER PUMP
- WELL — EXISTING 6" WATER WELL
- EXISTING ELECTRICAL OUTLET
- P — EXISTING POWER POLE
- T — EXISTING TELEPHONE PEDESTAL
- CONTROL POINT
- PUMP
- PUMP
- TP — TEST PIT LOCATION

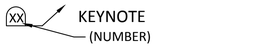
MISCELLANEOUS SYMBOLS

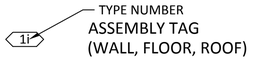
- CHANGE OF PIPE MTL
- OR — END OF PIPE
- ℄ — CENTERLINE
- Ø — DIAMETER
- ∠ — ANGLE
- PL — PLATE
- ± — PLUS/MINUS

ARCHITECTURAL SYMBOLS

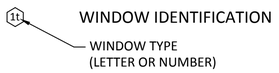














HATCH SYMBOLS

- ROCK, TYPE AS NOTED (PLAN/SECTION)
- BED ROCK
- EXISTING GRADE (SECTION)
- NEW SOIL (SECTION)
- CONCRETE EXISTING (SECTION/PLAN)
- CONCRETE 1ST STAGE (SECTION/PLAN)
- CONCRETE 2ND STAGE (SECTION/PLAN)
- SAND, GROUT (PLAN/SECTION)
- STEEL (SECTION)
- GRATING (PLAN)
- MASONRY (PLAN)
- WOOD, SIZE/TYPE AS NOTED (PLAN)
- WOOD, SIZE/TYPE AS NOTED (SECTION)
- RIP RAP (PLAN/SECTION)
- RIGID INSULATION (SECTION)
- ASPHALT CONCRETE PAVEMENT SURFACE (PLAN/SECTION)
- GRASS/VEGETATION (PLAN)
- BATT INSULATION (SECTION)
- NEW CONSTRUCTION
- EXISTING
- EXISTING TO BE REMOVED OR DEMOLISHED
- CLEARING AND GRUBBING
- ASPHALT
- GRASS/VEGETATION
- GRAVEL

GENERAL NOTES:

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

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PRELIMINARY
NOT FOR CONSTRUCTION

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STANDARD SYMBOLS

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
G004

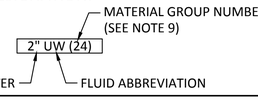
JOB NO: 21-094

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FLUID ABBREVIATION	FUNCTION	ALLOWABLE PIPING MATERIAL GROUP NO. (SEE NOTE 1 AND 4)				FIELD TEST REQUIREMENTS (SEE NOTE 3 AND NOTE 4)		
	THIS LIST MAY INCLUDE FLUIDS NOT USED IN THIS PROJECT	EXPOSED PIPING (SEE NOTE 7)		BURIED PIPING (SEE NOTE 6)		MINIMUM TEST PRESSURE PSI	TEST MEDIUM	LEAKAGE ALLOWANCE (SEE NOTE 2)
	(* SEE NOTE 5)	3" DIA AND SMALLER	4" DIA AND LARGER	3" DIA AND SMALLER	4" DIA AND LARGER			
COMMONLY USED FUNCTIONS								
FD	FOUNDATION DRAIN	--	--	20	20	N/A	N/A	N/A
FR	FISH RETURN (NOTE 8)	--	15, 31	--	31	10	WATER	(A)
RW	RAW WATER	--	--	--	31	70	WATER	(A)
SD	STORMWATER DRAIN	16	16	16, 27	16, 20, 27	10	WATER	(B)
SM	SEDIMENT MANAGEMENT	17	27	17	27	10	WATER	(B) BURIED PIPE ONLY
VT	VENT	--	15	--	15	15 IN Hg	VACUUM	(A) (D)

GROUP NO	PIPE MATERIAL	FITTINGS/JOINTS	LININGS & COATINGS (SEE NOTE 10)
15	STAINLESS STEEL, TYPE 316, ASTM A312, SCHEDULE 10S OR STD.	STAINLESS STEEL, TYPE 316 WELDED SLIP-ON FLG ASME B16.3, OR SOCKET WELDED FITTINGS SCHEDULE 40S, (NO THREADED JOINTS ALLOWED)	NOT APPLICABLE
16	POLYVINYL CHLORIDE, SCHEDULE 80, NORMAL IMPACT. ASTM D1785.	POLYVINYL CHLORIDE, SCHEDULE 80, NORMAL IMPACT, SOCKET SOLVENT WELD JOINTS, ASTM D2467. (SOLVENT & GLUE SHALL BE COMPATIBLE WITH FLUID SERVICE)	SEE SPECIFICATIONS AND NOTE 4
17	POLYVINYL CHLORIDE, SCHEDULE 40, NORMAL IMPACT. ASTM D1785.	POLYVINYL CHLORIDE, SCHEDULE 80, NORMAL IMPACT, SOCKET SOLVENT WELD JOINTS, ASTM D2467. (SOLVENT & GLUE SHALL BE COMPATIBLE WITH FLUID SERVICE)	SEE SPECIFICATIONS AND NOTE 12
20	HIGH DENSITY POLYETHYLENE CORRUGATED NON-PERFORATED, ASTM F2648 (ADS N-12 "WATER-TIGHT" PIPE OR EQUAL; PERFORATE WHERE INDICATED. (TYP SERVICE - DRAINAGE & UC)	HIGH DENSITY POLYETHYLENE CORRUGATED. GASKETED BELL AND SPIGOT CONNECTIONS; FOR WATER-TIGHT SERVICE.	NOT APPLICABLE
27	POLYVINYL CHLORIDE (PVC), ASTM D3034, STANDARD DIAMETER RATIO (SDR) 35	BELL AND SPIGOT OR SOLVENT CEMENT FITTINGS	NOT APPLICABLE
31	HIGH DENSITY POLYETHYLENE (HDPE) ASTM D3350 - DR 17 (NOTE 11)	HDPE THERMAL BUTT WELD; FLANGE CONNECTIONS AT ALL VALVES AND TRANSITIONS.	NOT APPLICABLE

TYPICAL PIPE DESIGNATION:



NOTES:

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

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

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

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

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

NOTE 6
FOR FULL PIPE LINING AND COATING REQUIREMENTS, SEE SPECIFICATIONS.

NOTE 7
EXPOSED OUTDOOR PIPING SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATIONS. COLORS TO BE SELECTED BY OWNER.

NOTE 8
ALL FISH BYPASS PIPE BENDS SHALL HAVE A MINIMUM RADIUS OF 5 TIMES THE PIPE DIAMETER. FITTINGS FOR FISH BYPASS PIPE SHALL BE OF THE SAME MATERIAL AS THE PIPING. ALL FISH BYPASS PIPING SHALL BE FREE OF BURRS AND ROUGH SURFACES. ALL PIPING JOINTS SHALL BE SMOOTH AND FREE OF SURFACE BLEMISHES.

NOTE 9
CHANGE IN PIPING MATERIAL GROUP NUMBER IS INDICATED BY THE SYMBOL: ——◆

NOTE 10
FOR FULL PIPE LINING AND COATING SEE SPECIFICATIONS.

NOTE 11
FOR HDPE PIPING THE SIZE OF PIPE SHOWN ON DRAWING CALL-OUTS SHALL BE THE NOMINAL OUTSIDE DIAMETER (IRON PIPE SIZE, IPS), WITH THE PIPE WALL THICKNESS DETERMINED BY THE PIPE DR RATING.

NOTE 12
EXPOSED OUTDOOR PIPING SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATIONS. COLORS TO BE SELECTED BY OWNER.

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

PIPING SCHEDULE

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
G005

JOB NO: 21-094

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EXISTING SITE PLAN AND CONTROL

SCALE: 1"= 30'

0" 30' 60'

SURVEY NOTES:

1. GROUND SURVEY WAS COMPLETED BY THE WGM GROUP, SEPTEMBER 2021.

   HORIZONTAL DATUM:
   MONTANA STATE PLANE COORDINATE SYSTEM
   (FIPS:2500) NAD83 (2011) (EPOCH:2010.0000)
   @ GROUND

   VERTICAL DATUM:
   NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
   INTL. FT.

2. OUTSIDE OF GROUND SURVEY LIMITS TOPOGRAPHY FROM AERIAL LIDAR FLOWN BY TETRA TECH, INC., OCTOBER 2022 WITH THE RIVER BED EXPOSED. AERIAL LIDAR TIED TO GROUND SURVEY HORIZONTAL AND VERTICAL DATUM VIA LIDAR CHECK POINTS (SEE SURVEY CONTROL POINTS TABLE BELOW).

SHEET KEY NOTES:

A. EXISTING DIVERSION DAM WITH APPROX 85' LONG OGEE OVERFLOW CREST WITH CONC ABUTMENTS AND CONCRETE SPILLWAY APRON. CREST ELEVATION SET AT 4159.80 BY ANGLE IRON INSTALLED ON THE OGEE CREST.

B. APPROX 10' WIDE CONCRETE SLUICEWAY WITH RADIAL GATE (DIMENSIONS UNCONFIRMED).

C. EXISTING CANAL HEADWORKS WITH AN APPROX 10' WIDE CONCRETE CHANNEL AT INVERT ELEV 4151.60. FLOW CONTROL PERFORMED VIA RADIAL GATE (DIMENSIONS UNCONFIRMED). CANAL INVERT IS APPROXIMATELY 2.0' HIGHER THAN HEADWORKS CONC INVERT.

D. EXISTING CANAL CROSSING WITH 16' WIDE BRIDGE DECK ON CONCRETE ABUTMENTS. BRIDGE SPAN VARIES FROM APPROX 15' TO 36'. BRIDGE DECK AT ELEV 4164.50.

E. TABOR FEEDER CANAL IN THE PROJECT VICINITY IS AN UNLINED EARTHEN CHANNEL, TRAPEZOIDAL/PARABOLIC IN SHAPE, APPROX. 10' DEEP AND 50' TOP WIDTH. PROJECT DESIGN ASSUMES SUBSEQUENT MODIFICATIONS TO THE EXISTING CHANNEL WILL NOT ADVERSELY IMPACT THE CHANNEL CAPACITY.

F. EXISTING ACCESS ROAD, ROAD WIDTH VARIES. IN VICINITY OF THE EXISTING DIVERSION ACCESS ROAD IS APPROXIMATELY 12' WIDE WITH A 4' LIGHTLY VEGETATED SHOULDER.

SURVEY CONTROL POINTS TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
7	1113454.81	893549.45	4164.08	WGM OPC
8	1113448.57	893280.75	4162.59	WGM OPC
113	1113497.96	893604.25	4162.99	HUB & MAG
114	1113387.86	893513.91	4143.31	WGM OPC
115	1113483.93	893489.28	4153.62	H & T
7136	1113439.42	893510.76	4164.07	LIDAR-CONC
7137	1113471.75	893548.16	4164.54	LIDAR-GRAVEL
7138	1113495.62	893583.42	4163.16	LIDAR-GRAVEL
7139	1113522.50	893642.59	4162.50	LIDAR-GRAVEL
7140	1113539.45	893715.27	4162.94	LIDAR-GRAVEL

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

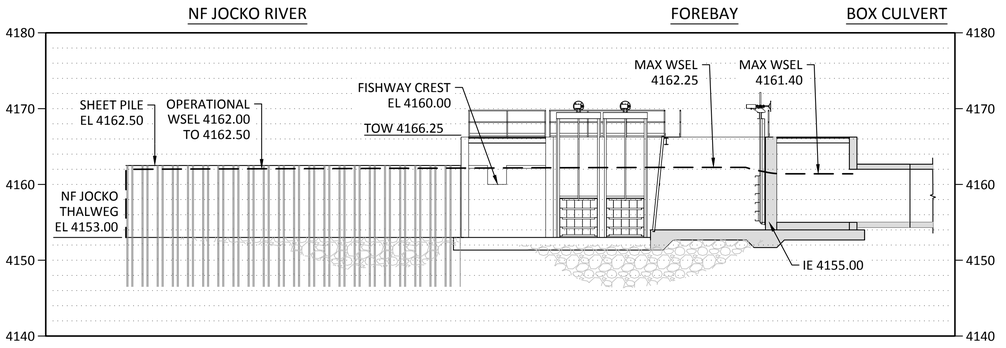
EXISTING SITE PLAN AND CONTROL

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
G100

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_G100.dwg Plot date: Feb 11, 2025 12:46pm, CAD User: JoeNeves



HYDRAULIC DESIGN CRITERIA - NF JOCKO	
95% EXCEEDANCE FLOW	2.7 CFS**
MINIMUM ENFORCEABLE FLOW	22 CFS
FISH PASSAGE AVERAGE FLOW	68 CFS
5% EXCEEDANCE FLOW	409 CFS
100-YEAR FLOW	1,664 CFS
MINIMUM ENFORCEABLE FLOW TW	4142.60
FISH PASSAGE AVERAGE FLOW TW	4142.80
5% EXCEEDANCE FLOW TW	4143.90
100-YR FLOW TW	4145.69

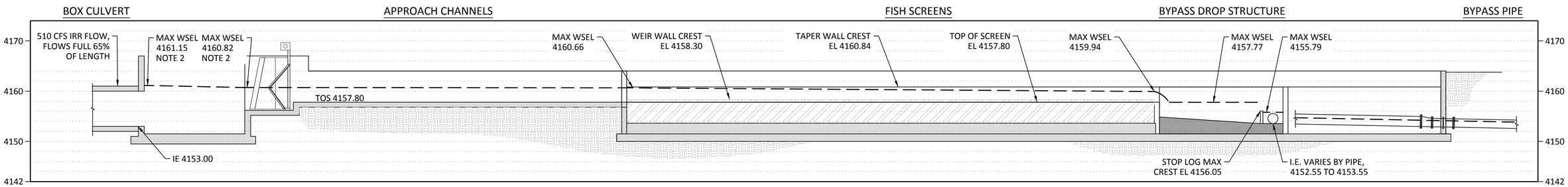
* BYPASS DEPTH OF 40% PIPE DIAMETER NOT ACHIEVABLE FOR THE BROAD FLOW RANGE. MINIMUM DEPTH OF BODY DEPTH OF LARGEST FISH TO BE PASSED WAS ADOPTED FOR THE MINIMUM FLOW CONDITION.

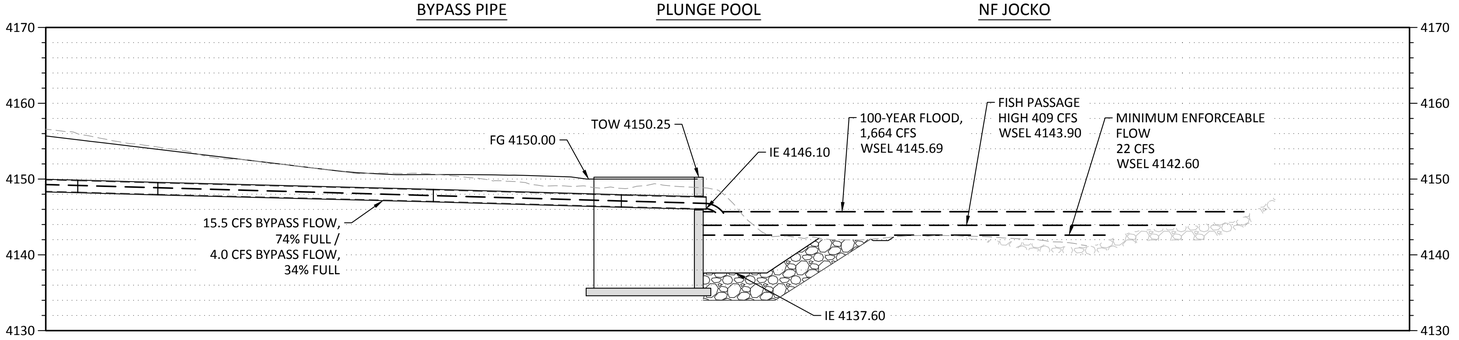
** 95% EXCEEDANCE FLOW IS WELL BELOW THE MINIMUM ENFORCEABLE FLOW, AND THEREFORE NO IRRIGATION WATER/BYPASS WILL BE ALLOWED. THIS CONDITION WAS THEREFORE NEGLECTED.

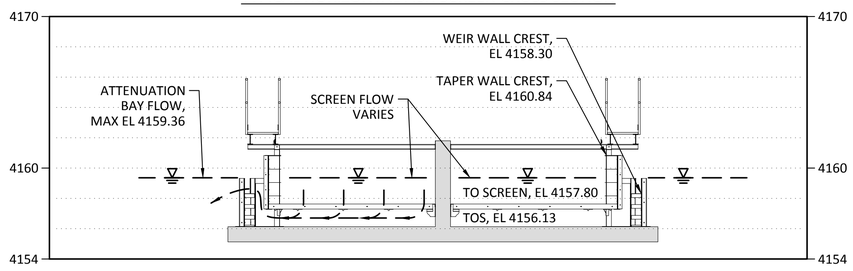
HYDRAULIC DESIGN CRITERIA - SCREENS			
	SCREEN 1	SCREEN 2	SCREENS 3/4
MAX APPROACH VELOCITY	0.25 FT/S	0.25 FT/S	0.25 FT/S
MIN SWEEPING VELOCITY	2.50 FT/S	2.50 FT/S	2.50 FT/S
FLOW RANGE PER SCREEN	25 - 50 CFS	55 - 110 CFS	70 - 145 CFS
MIN WATER DEPTH	1.0'	1.0'	1.0'
TAPER RATIO	14:1	14:1	14:1

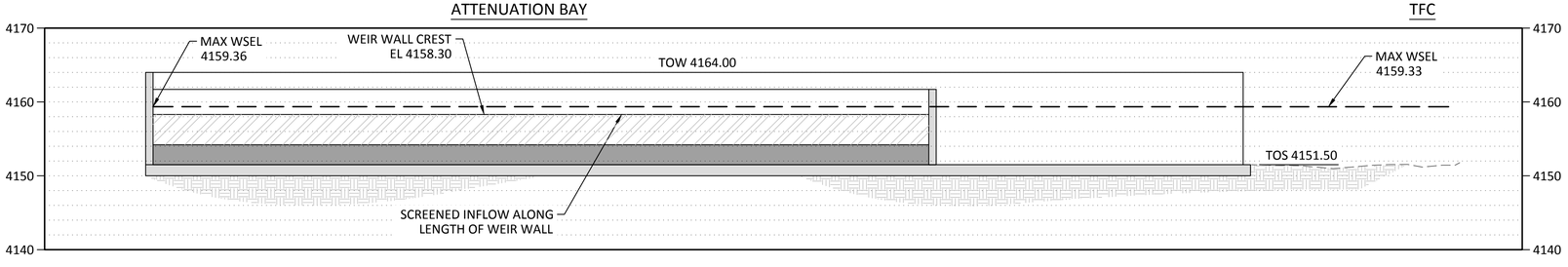
HYDRAULIC DESIGN CRITERIA - BYPASS			
	SCREEN 1	SCREEN 2	SCREENS 3/4
MIN BYPASS FLOW DEPTH (FLUME)	3.1"	3.1"	3.1"
BYPASS FLOW RANGE PER SCREEN	3.25 - 12.0 CFS	4.0 - 15.5 CFS	4.0 - 15.5 CFS
BYPASS VELOCITY	6 - 12 FT/S	6 - 12 FT/S	6 - 12 FT/S
BYPASS PIPE MIN DEPTH*	3.1"	3.1"	3.1"
MINIMUM PLUNGE POOL DEPTH	5.0'	5.0'	5.0'
MAXIMUM IMPACT VELOCITY	25 FT/S	25 FT/S	25 FT/S

HYDRAULIC DESIGN CRITERIA - CANAL	
MIN CANAL FLOW	25 CFS
MAX CANAL FLOW	450 CFS
MIN CANAL TW ELEVATION	4153.87
MAX CANAL TW ELEVATION	4159.33
DAM FOREBAY WSEL	4162.00 - 4162.50









SHEET NOTES:

1. HYDRAULIC PROFILES SHOWN ON THIS DRAWING DEPICT A SCHEMATIC RENDERING OF PROJECT FEATURES AND ARE PROVIDED FOR INFORMATION PURPOSES ONLY. THE SCHEMATICS SHOWN ARE SKEWED FOR PRESENTATION OF HYDRAULIC PROFILES AND SHOULD NOT BE USED FOR CONSTRUCTION.
2. MAX WSEL DEPICTS A TOTAL IRRIGATION FLOW OF 450 CFS AND AN ASSUMED BYPASS FLOW PER THE DESIGN CRITERIA. MAX WSEL SHOWN REPRESENTS THE ENERGY GRADE LINE AS AN UPPER BOUND WATER SURFACE ELEVATION. WATER LEVEL UPSTREAM OF THE IRRIGATION GATES MAY EXCEED THESE LEVELS, DEPENDING ON THE GATE OPERATIONS.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HYDRAULIC PROFILE AND DESIGN CRITERIA - FISH SCREENS

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
G101

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_G101.dwg Plot date: Feb 11, 2025 12:47pm, CAD User: JoeNeves

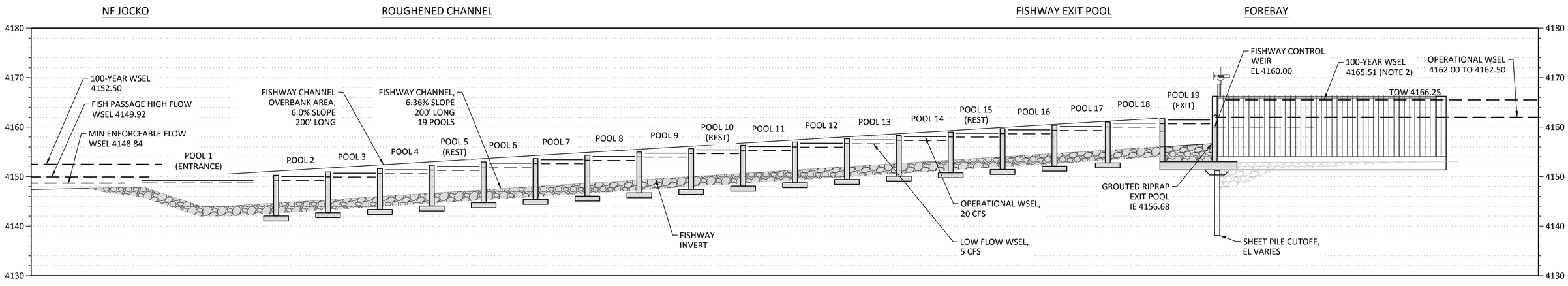
HYDRAULIC DESIGN CRITERIA - NF JOCKO	
95% EXCEEDANCE FLOW	2.7 CFS
MINIMUM ENFORCEABLE FLOW	22 CFS
FISH PASSAGE AVERAGE FLOW	68 CFS
5% EXCEEDANCE FLOW	409 CFS
100-YEAR FLOW	1,664 CFS
MINIMUM ENFORCEABLE FLOW TW	4148.84
FISH PASSAGE AVERAGE FLOW TW	4149.16
5% EXCEEDANCE FLOW TW	4149.92
100-YR FLOW TW	4152.50
100-YR FLOW HW (ALL GATES CLOSED)	4165.51
100-YR FLOW HW (SLUICE GATES OPEN)	4164.63

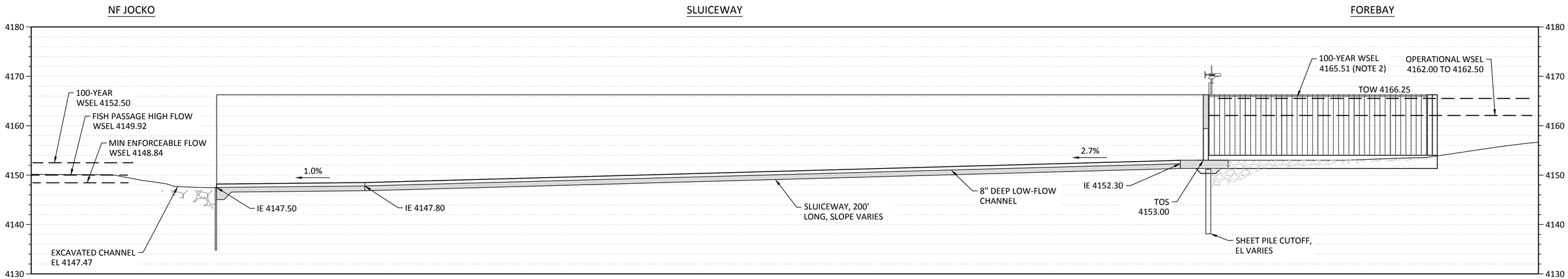
HYDRAULIC DESIGN CRITERIA - FISHWAY	
FISHWAY ATTRACTION FLOW	20 CFS
ATTRACTION AS PERCENT FISH PASSAGE HI	5.0%
MINIMUM POOL DEPTH	4.0'
MAX HYDRAULIC DROP	0.75'
MAX POOL EDF	4 FT-LB/FT^3-S
WESTSLOPE CUTTHROAT BURST SPEED	13.5 FT/S
WESTSLOPE CUTTHROAT CRUISING SPEED	6.0 FT/S
BULL TROUT BURST SPEED	7.6 FT/S
BULL TROUT CRUISING SPEED	2.4 FT/S

HYDRAULIC DESIGN CRITERIA - SLUICEWAY	
SLUICEWAY CAPACITY	~600 CFS
MINIMUM GATE OPENING	3"
MINIMUM FLOW	5 CFS
DOWNSTREAM PASSAGE MIN DEPTH	3.1"

SHEET NOTES:

1. HYDRAULIC PROFILES SHOWN ON THIS DRAWING DEPICT A SCHEMATIC RENDERING OF PROJECT FEATURES AND ARE PROVIDED FOR INFORMATION PURPOSES ONLY. THE SCHEMATICS SHOWN ARE SKEWED FOR PRESENTATION OF HYDRAULIC PROFILES AND SHOULD NOT BE USED FOR CONSTRUCTION.
2. 100-YEAR WSEL BASED ON ASSUMPTION OF ALL GATES CLOSED (IRRIGATION AND SLUICEWAY) AND REPRESENTS ONLY PASSIVE OVERFLOW OVER SHEET PILE CREST AND FISHWAY. FOR SLUICE GATES FULL OPEN, THE CALCULATED FOREBAY ELEVATIONS IS 4164.63.





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D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
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0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HYDRAULIC PROFILE AND DESIGN CRITERIA - FISHWAY AND SLUICEWAY

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
G102

JOB NO: 21-094

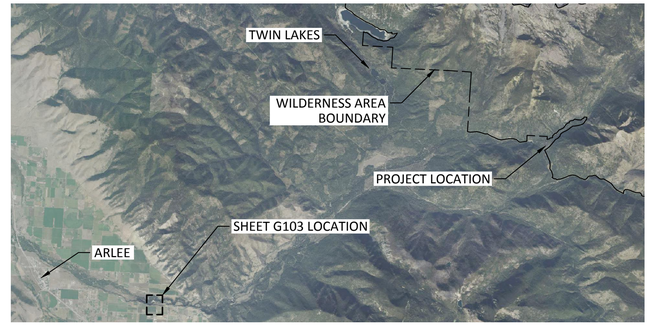
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CONTRACTOR STAGING AREA PLAN 1

SCALE: 1"= 150'

0" 150' 300'



CONTRACTOR STAGING AREA PLAN

SCALE: 1"= 10000'

0" 10000' 20000'

SHEET NOTES:

1. CONTRACTOR SHALL COORDINATE WITH OWNER FOR DESIGNATED LOCATIONS OF ALL OFF-SITE STAGING, LAYDOWN, AND MOBILE BATCH PLANT AREAS. CONTRACTOR SHALL STAKE ALL AREAS AND PROVIDE CONSTRUCTION FENCING (SEE SHEET EC102) TO MAINTAIN COMPLIANCE WITH OWNER DESIGNATIONS. ALL OFF-SITE AREAS ARE SUBJECT TO THE REQUIREMENTS NOTED IN THIS DRAWING AND IN THE PROJECT SPECIFICATIONS.
2. CONTRACTOR SHALL DEVELOP A DETAILED ACCESS PLAN AND SUBMIT FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO INITIATING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL MAKE ITS OWN INVESTIGATION OF THE CONDITION OF AVAILABLE PUBLIC AND PRIVATE ROADS AND OF CLEARANCES, RESTRICTIONS, BRIDGE LOAD LIMITS, AND OTHER LIMITATIONS AFFECTING THE TRANSPORTATION, INGRESS, AND EGRESS TO THE SITE OF THE WORK. IT IS PRELIMINARILY ASSUMED THAT ACCESS WILL BE GAINED VIA JOCKO CANYON ROAD FROM THE SOUTH.
3. NOT USED.
4. NO REMOVAL OF LARGE VEGETATION OR RIPARIAN VEGETATION WILL BE PERMITTED FOR DEVELOPMENT OF A CONTRACTOR STAGING AREA WITHOUT THE EXPRESS, WRITTEN PERMISSION OF THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL RIPARIAN AND MATURE VEGETATION OUTSIDE OF THE WORK LIMITS.
5. PUBLIC AND OWNER ACCESS THROUGH THE WORK SITE SHALL BE COORDINATED WITH THE OWNER. SEE SPECIFICATION 01 55 00 FOR ROAD CLOSURE AND TRAFFIC CONTROL REQUIREMENTS.
6. THE CONTRACTOR SHALL MAKE ITS OWN ARRANGEMENTS FOR ANY OFF-SITE STORAGE OR SHOP AREAS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.
7. THE CONTRACTOR SHALL CONSTRUCT AND USE A SEPARATE STORAGE AREA FOR HAZARDOUS MATERIALS (INCLUDING DIESEL FUEL) USED IN CONSTRUCTING THE WORK. HAZARDOUS MATERIALS TO BE STORED IN THE SEPARATE AREA ARE PRODUCTS LABELED WITH ANY OF THE FOLLOWING TERMS: WARNING, CAUTION, POISONOUS, TOXIC, FLAMMABLE, CORROSIVE, REACTIVE, OR EXPLOSIVE. IN ADDITION, WHETHER OR NOT SO LABELED, THE FOLLOWING MATERIALS SHALL BE STORED IN THE SEPARATE AREA: DIESEL FUEL, GASOLINE, NEW AND USED MOTOR OIL, HYDRAULIC FLUID, CEMENT, PAINS, AND PAINT THINNERS, 2 PART EPOXY COATINGS, SEALANTS, GLUES, SOLVENTS, AND SPILL ABSORBENT. THE CONTRACTOR SHALL STORE HAZARDOUS MATERIALS IN GROUPINGS ACCORDING TO THE MATERIAL SAFETY DATA SHEETS, AND THE SEPARATE STORAGE AREA SHALL MEET THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION OVER THE STORAGE OF HAZARDOUS MATERIALS.
8. TRAFFIC AND PARKING AREAS SHALL BE MAINTAINED IN A SOUND CONDITION, FREE OF EXCAVATED MATERIAL, CONSTRUCTION EQUIPMENT, MUD, AND CONSTRUCTION MATERIALS. THE CONTRACTOR SHALL REPAIR BREAKS, POTHOLES, LOW AREAS WHICH COLLECT STANDING WATER, AND OTHER DEFICIENCIES.
9. THE CONTRACTOR SHALL RESTORE THE STAGING AREA, HAZARDOUS MATERIALS STORAGE AREA, AND PARKING AREAS AT PROJECT COMPLETION TO THEIR ORIGINAL STATE.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
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A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

CONTRACTOR STAGING AREA PLAN 1

DESIGNED A. LEMAN

DRAWN J. NEVES

CHECKED V. AUTIER

PROJECT DATE 02/14/25

DRAWING

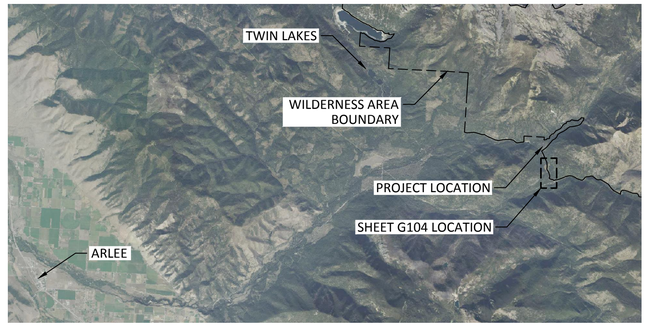
G103

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_G103.dwg Plot date: Feb 11, 2025 12:48pm, CAD User: JoeNeves

JOB NO: 21-094

SHEET NOTES:

1. CONTRACTOR SHALL COORDINATE WITH OWNER FOR DESIGNATED LOCATIONS OF ALL OFF-SITE STAGING, LAYDOWN, AND MOBILE BATCH PLANT AREAS. CONTRACTOR SHALL STAKE ALL AREAS AND PROVIDE CONSTRUCTION FENCING (SEE SHEET EC102) TO MAINTAIN COMPLIANCE WITH OWNER DESIGNATIONS. ALL OFF-SITE AREAS ARE SUBJECT TO THE REQUIREMENTS NOTED IN THIS DRAWING AND IN THE PROJECT SPECIFICATIONS.
2. CONTRACTOR SHALL DEVELOP A DETAILED ACCESS PLAN AND SUBMIT FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO INITIATING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL MAKE ITS OWN INVESTIGATION OF THE CONDITION OF AVAILABLE PUBLIC AND PRIVATE ROADS AND OF CLEARANCES, RESTRICTIONS, BRIDGE LOAD LIMITS, AND OTHER LIMITATIONS AFFECTING THE TRANSPORTATION, INGRESS, AND EGRESS TO THE SITE OF THE WORK. IT IS PRELIMINARILY ASSUMED THAT ACCESS WILL BE GAINED VIA THE P-1000 ROAD FROM THE SOUTH.
3. NOT USED.
4. NO REMOVAL OF LARGE VEGETATION OR RIPARIAN VEGETATION WILL BE PERMITTED FOR DEVELOPMENT OF A CONTRACTOR STAGING AREA WITHOUT THE EXPRESS, WRITTEN PERMISSION OF THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL RIPARIAN AND MATURE VEGETATION OUTSIDE OF THE WORK LIMITS.
5. PUBLIC AND OWNER ACCESS THROUGH THE WORK SITE SHALL BE COORDINATED WITH THE OWNER. SEE SPECIFICATION 01 55 00 FOR ROAD CLOSURE AND TRAFFIC CONTROL REQUIREMENTS.
6. THE CONTRACTOR SHALL MAKE ITS OWN ARRANGEMENTS FOR ANY OFF-SITE STORAGE OR SHOP AREAS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.
7. THE CONTRACTOR SHALL CONSTRUCT AND USE A SEPARATE STORAGE AREA FOR HAZARDOUS MATERIALS (INCLUDING DIESEL FUEL) USED IN CONSTRUCTING THE WORK. HAZARDOUS MATERIALS TO BE STORED IN THE SEPARATE AREA ARE PRODUCTS LABELED WITH ANY OF THE FOLLOWING TERMS: WARNING, CAUTION, POISONOUS, TOXIC, FLAMMABLE, CORROSIVE, REACTIVE, OR EXPLOSIVE. IN ADDITION, WHETHER OR NOT SO LABELED, THE FOLLOWING MATERIALS SHALL BE STORED IN THE SEPARATE AREA: DIESEL FUEL, GASOLINE, NEW AND USED MOTOR OIL, HYDRAULIC FLUID, CEMENT, PAINS, AND PAINT THINNERS, 2 PART EPOXY COATINGS, SEALANTS, GLUES, SOLVENTS, AND SPILL ABSORBENT. THE CONTRACTOR SHALL STORE HAZARDOUS MATERIALS IN GROUPINGS ACCORDING TO THE MATERIAL SAFETY DATA SHEETS, AND THE SEPARATE STORAGE AREA SHALL MEET THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION OVER THE STORAGE OF HAZARDOUS MATERIALS. CONTRACTOR SHALL MAINTAIN A SPILL KIT AT ALL HAZARDOUS MATERIAL STORAGE AREAS.
8. TRAFFIC AND PARKING AREAS SHALL BE MAINTAINED IN A SOUND CONDITION, FREE OF EXCAVATED MATERIAL, CONSTRUCTION EQUIPMENT, MUD, AND CONSTRUCTION MATERIALS. THE CONTRACTOR SHALL REPAIR BREAKS, POTHOLES, LOW AREAS WHICH COLLECT STANDING WATER, AND OTHER DEFICIENCIES.
9. THE CONTRACTOR SHALL RESTORE THE STAGING AREA, HAZARDOUS MATERIALS STORAGE AREA, AND PARKING AREAS AT PROJECT COMPLETION TO THEIR ORIGINAL STATE.
10. ALL PROJECT ACTIVITIES, INCLUDING STAGING AND ROAD WIDENING, ARE PROHIBITED ALONG THE TFC ACCESS ROAD BETWEEN NF JOCKO BRIDGE (SEE SHEET G105) AND THE ROAD AREA STAGING SITES, FOR PROTECTION OF CULTURAL RESOURCES.



CONTRACTOR STAGING AREA PLAN

SCALE: 1"= 10000'



CONTRACTOR STAGING AREA PLAN 2

SCALE: 1"= 250'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
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WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

CONTRACTOR STAGING AREA PLAN 2

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

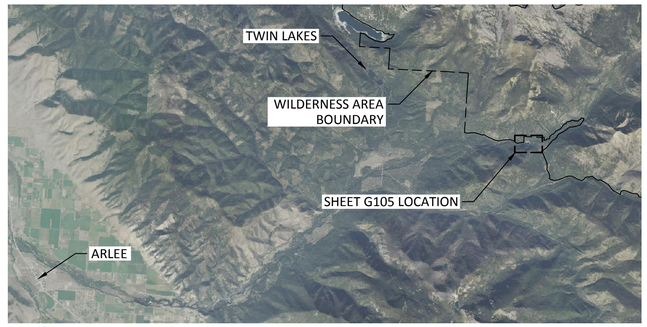
DRAWING
G104

JOB NO: 21-094

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SHEET NOTES:

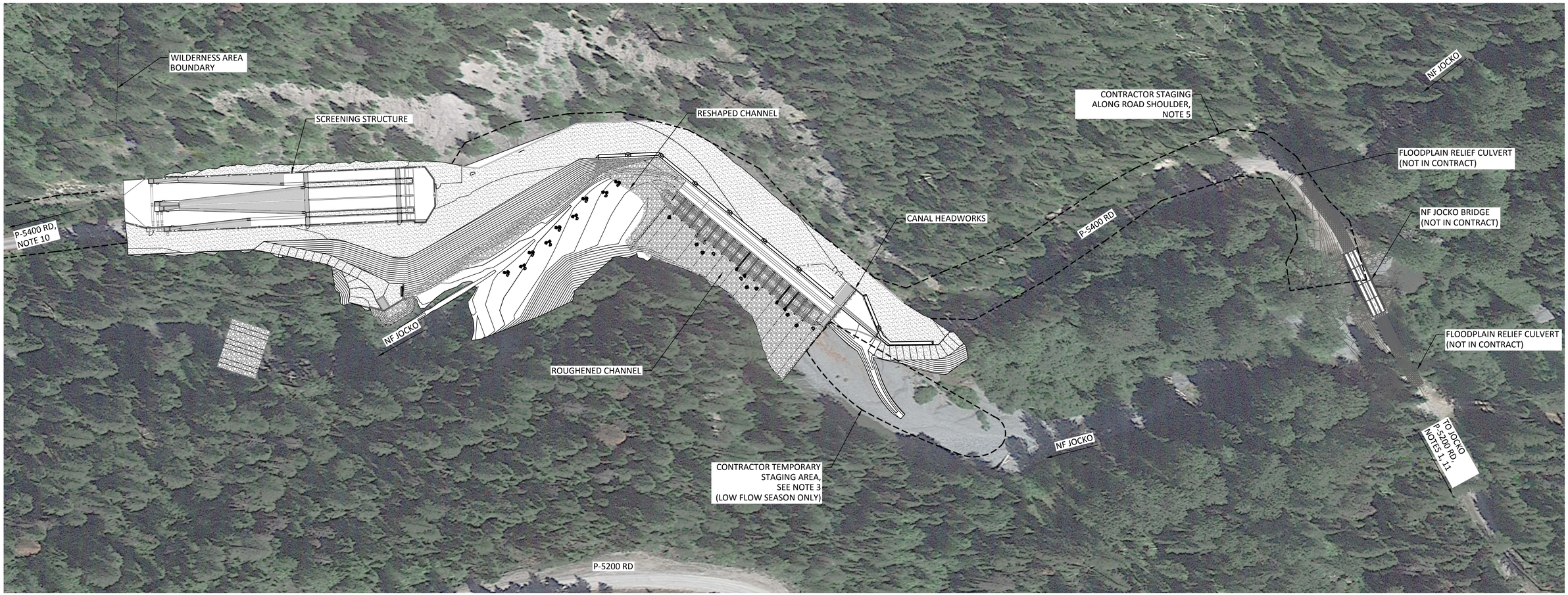
1. CONTRACTOR SHALL COORDINATE WITH OWNER FOR DESIGNATED LOCATIONS OF ALL OFF-SITE STAGING, LAYDOWN, AND MOBILE BATCH PLANT AREAS. CONTRACTOR SHALL STAKE ALL AREAS AND PROVIDE CONSTRUCTION FENCING (SEE SHEET EC102) TO MAINTAIN COMPLIANCE WITH OWNER DESIGNATIONS. ALL OFF-SITE AREAS ARE SUBJECT TO THE REQUIREMENTS NOTED IN THIS DRAWING AND IN THE PROJECT SPECIFICATIONS.
2. CONTRACTOR SHALL DEVELOP A DETAILED ACCESS PLAN AND SUBMIT FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO INITIATING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL MAKE ITS OWN INVESTIGATION OF THE CONDITION OF AVAILABLE PUBLIC AND PRIVATE ROADS AND OF CLEARANCES, RESTRICTIONS, BRIDGE LOAD LIMITS, AND OTHER LIMITATIONS AFFECTING THE TRANSPORTATION, INGRESS, AND EGRESS TO THE SITE OF THE WORK. IT IS PRELIMINARILY ASSUMED THAT ACCESS WILL BE GAINED VIA JOCKO CANYON ROAD FROM THE SOUTH.
3. THE CONTRACTOR IS ADVISED THAT PORTIONS OF THE STAGING AREAS AND AREAS OF WORK ARE LOCATED WITHIN THE FLOODPLAIN FOR THE NF JOCKO RIVER. THE CONTRACTOR IS REFERRED TO SPECIFICATION 31 03 10 FOR DETAILS OF THE SITE HYDROLOGY. CONTRACTOR STAGING AREA IS SUGGESTED ONLY, AND WILL BE AT THE DISCRETION OF THE CONTRACTOR, SUBJECT TO APPROVAL BY THE OWNER AND ENGINEER.
4. NO REMOVAL OF LARGE VEGETATION OR RIPARIAN VEGETATION WILL BE PERMITTED FOR DEVELOPMENT OF A CONTRACTOR STAGING AREA WITHOUT THE EXPRESS, WRITTEN PERMISSION OF THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL RIPARIAN AND MATURE VEGETATION OUTSIDE OF THE WORK LIMITS.
5. PUBLIC AND OWNER ACCESS THROUGH THE WORK SITE SHALL BE COORDINATED WITH THE OWNER. SEE SPECIFICATION 01 55 00 FOR ROAD CLOSURE AND TRAFFIC CONTROL REQUIREMENTS.
6. THE CONTRACTOR SHALL MAKE ITS OWN ARRANGEMENTS FOR ANY OFF-SITE STORAGE OR SHOP AREAS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.
7. THE CONTRACTOR SHALL CONSTRUCT AND USE A SEPARATE STORAGE AREA FOR HAZARDOUS MATERIALS (INCLUDING DIESEL FUEL) USED IN CONSTRUCTING THE WORK. HAZARDOUS MATERIALS TO BE STORED IN THE SEPARATE AREA ARE PRODUCTS LABELED WITH ANY OF THE FOLLOWING TERMS: WARNING, CAUTION, POISONOUS, TOXIC, FLAMMABLE, CORROSIVE, REACTIVE, OR EXPLOSIVE. IN ADDITION, WHETHER OR NOT SO LABELED, THE FOLLOWING MATERIALS SHALL BE STORED IN THE SEPARATE AREA: DIESEL FUEL, GASOLINE, NEW AND USED MOTOR OIL, HYDRAULIC FLUID, CEMENT, PAINS, AND PAINT THINNERS, 2 PART EPOXY COATINGS, SEALANTS, GLUES, SOLVENTS, AND SPILL ABSORBENT. THE CONTRACTOR SHALL STORE HAZARDOUS MATERIALS IN GROUPINGS ACCORDING TO THE MATERIAL SAFETY DATA SHEETS, AND THE SEPARATE STORAGE AREA SHALL MEET THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION OVER THE STORAGE OF HAZARDOUS MATERIALS. CONTRACTOR SHALL MAINTAIN A SPILL KIT AT ALL HAZARDOUS MATERIAL STORAGE AREAS.
8. TRAFFIC AND PARKING AREAS SHALL BE MAINTAINED IN A SOUND CONDITION, FREE OF EXCAVATED MATERIAL, CONSTRUCTION EQUIPMENT, MUD, AND CONSTRUCTION MATERIALS. THE CONTRACTOR SHALL REPAIR BREAKS, POTHOLES, LOW AREAS WHICH COLLECT STANDING WATER, AND OTHER DEFICIENCIES.
9. THE CONTRACTOR SHALL RESTORE THE STAGING AREA, HAZARDOUS MATERIALS STORAGE AREA, AND PARKING AREAS AT PROJECT COMPLETION TO THEIR ORIGINAL STATE, AS APPROVED BY OWNER.
10. CONTRACTOR MAY STAGE ALONG THE TFC ACCESS ROAD AND IN THE BOTTOM OF THE TFC FOR APPROXIMATELY 1.75 MILE DOWNSTREAM, SUBJECT TO THE REQUIREMENTS OF THIS SHEET AND THE PROJECT SPECIFICATIONS. STAGING IN THE BOTTOM OF THE TFC MAY ONLY BE PERFORMED OUTSIDE OF THE IRRIGATION DIVERSION SEASON (AS DIRECTED BY OWNER, APPROX APRIL THRU MID-JULY), AND THE CANAL SHALL BE RESTORED TO EXISTING CONDITIONS FOLLOWING ANY STAGING IN THE CANAL.
11. ALL PROJECT ACTIVITIES, INCLUDING STAGING AND ROAD WIDENING, ARE PROHIBITED ALONG THE TFC ACCESS ROAD BETWEEN NF JOCKO BRIDGE AND THE ROAD AREA STAGING SITES IDENTIFIED ON SHEET G104, FOR PROTECTION OF CULTURAL RESOURCES.
12. CONTRACTOR SHALL PROTECT THE EXISTING FLOODPLAIN RELIEF CULVERTS AND THE NEW ACCESS BRIDGE.



CONTRACTOR STAGING AREA PLAN

SCALE: 1"= 10000'

0" 10000' 20000'



CONTRACTOR STAGING AREA PLAN 3

SCALE: 1"= 50'

0" 50' 100'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

CONTRACTOR STAGING AREA PLAN 3

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
G105

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_G105.dwg Plot date: Feb 11, 2025 04:16pm, CAD User: JoeNeves

PROJECT WORK LIMITS			
POINT #	NORTHING	EASTING	DESCRIPTION
001	1113508.41	893095.69	WORK LIMITS, PI
002	1113405.53	893107.17	WORK LIMITS, PI
003	1113410.97	893274.88	WORK LIMITS, PI
004	1113284.26	893271.65	WORK LIMITS, PI
005	1113277.89	893385.00	WORK LIMITS, PI
006	1113359.51	893529.61	WORK LIMITS, PI
007	1113318.33	893555.90	WORK LIMITS, PI
008	1113359.54	893663.73	WORK LIMITS, PI
009	1113395.98	893705.80	WORK LIMITS, PI

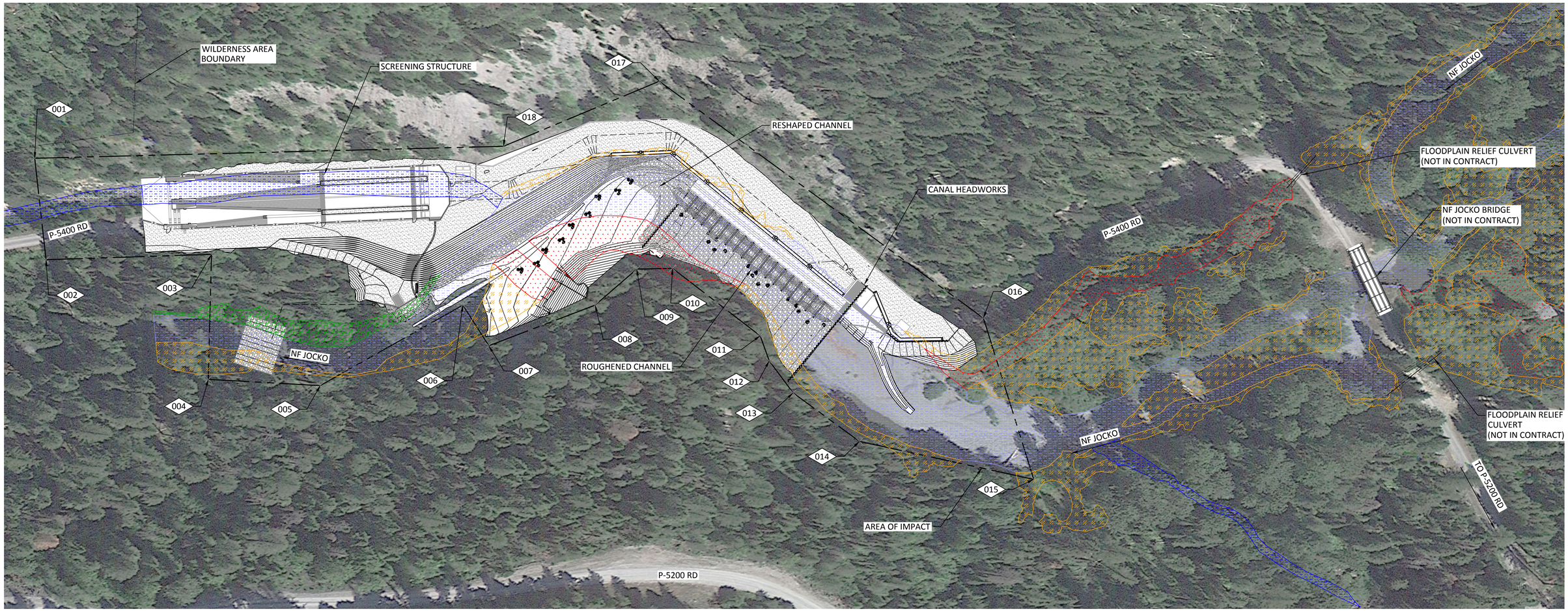
PROJECT WORK LIMITS			
POINT #	NORTHING	EASTING	DESCRIPTION
010	1113396.80	893742.10	WORK LIMITS, PI
011	1113328.36	893830.97	WORK LIMITS, PI
012	1113303.06	893840.06	WORK LIMITS, PI
013	1113270.48	893864.33	WORK LIMITS, PI
014	1113221.32	893931.50	WORK LIMITS, PI
015	1113182.80	894108.20	WORK LIMITS, PI
016	1113346.33	894057.19	WORK LIMITS, PI
017	1113586.55	893728.66	WORK LIMITS, PI
018	1113520.58	893570.79	WORK LIMITS, PI

SHEET NOTES:

1. WETLAND BOUNDARIES BASED ON SURVEY PERFORMED BY GEUM ENVIRONMENTAL, JULY 2022.
2. CONTRACTORS SHALL KEEP ALL CONSTRUCTION WITHIN THE WORK BOUNDARIES DEFINED FOR THIS PROJECT, AS SHOWN. THIS INCLUDES, BUT IS NOT LIMITED TO, VEHICLES AND EQUIPMENT, LIMITS OF EXCAVATION, STOCKPILED EXCAVATED MATERIAL, AND PIPE MATERIAL.
3. WHERE PRACTICAL, CONTRACTOR SHALL PROVIDE CONSTRUCTION FENCING (SEE EC SHEETS) TO MAINTAIN THESE WORK BOUNDARIES.
4. CONTRACTOR SHALL PROVIDE 2 LAYERS OF SILT FENCE (SEE EC SHEETS) WHERE WETLANDS ARE LOCATED DOWNGRADIENT FROM THE PROJECT WORK BOUNDARIES.

LEGEND:

- DELINEATED WETLANDS - RIVERINE
- DELINEATED WETLANDS - PALUSTRINE EMERGENT
- DELINEATED WETLANDS - PALUSTRINE FORESTED
- DELINEATED WETLANDS - PALUSTRINE SCRUB/SHRUB
- LIMITS OF CONSTRUCTION AREA OF IMPACT = 4.09 ACRES



PROJECT BOUNDARIES AND DELINEATED WETLANDS PLAN

SCALE: 1"= 50'

0" 50' 100'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
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B	01/19/24	JPB	DRAFT 60% DESIGN
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PRELIMINARY
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

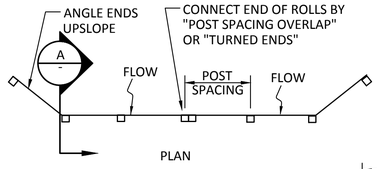
PROJECT BOUNDARIES AND DELINEATED WETLANDS

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

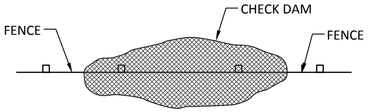
DRAWING
G106

JOB NO: 21-094

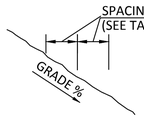
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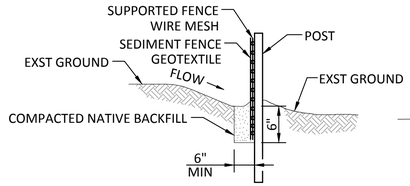


PLAN

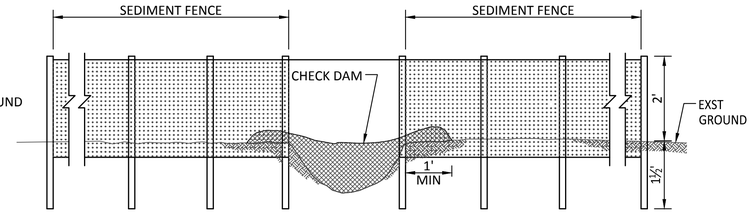


PLAN VIEW AT DITCH SECTION

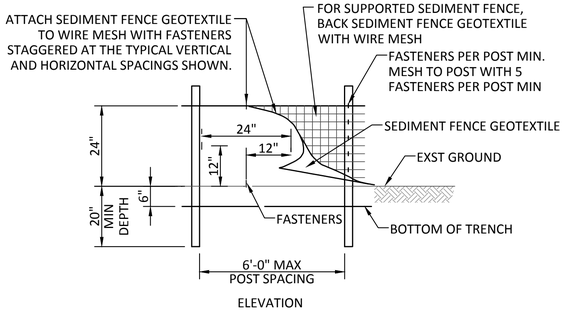




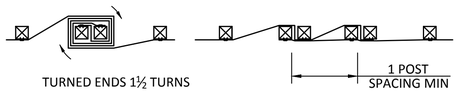
SECTION A



ELEVATION VIEW AT DITCH SECTION OR LOW AREAS



ELEVATION



GEOTEXTILE END CONNECTIONS

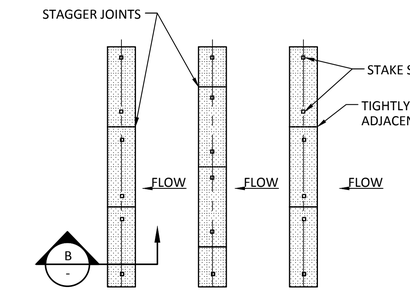
BARRIER SPACING FOR GENERAL APPLICATION

INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS		
% SLOPE	1V:xH	MAXIMUM SPACING ON SLOPE
10% FLATTER	1:10 OR FLATTER	300'
10 >% ≥ 15	10 > X ≥ 7.5	150'
15 >% ≥ 20	7.5 > X ≥ 5	100'
20 >% ≥ 30	5 > X ≥ 3	50'
STEEPER THAN 30%	STEEPER THAN 1:3	25'

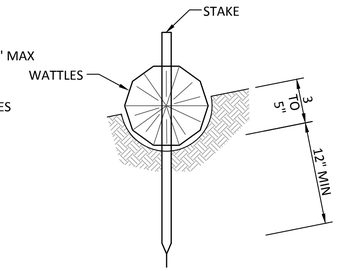
SILT FENCE DETAIL

SCALE: NTS

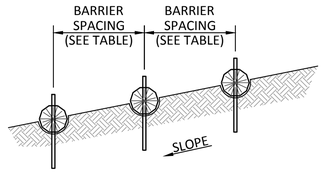
EC101



PLAN



SECTION B



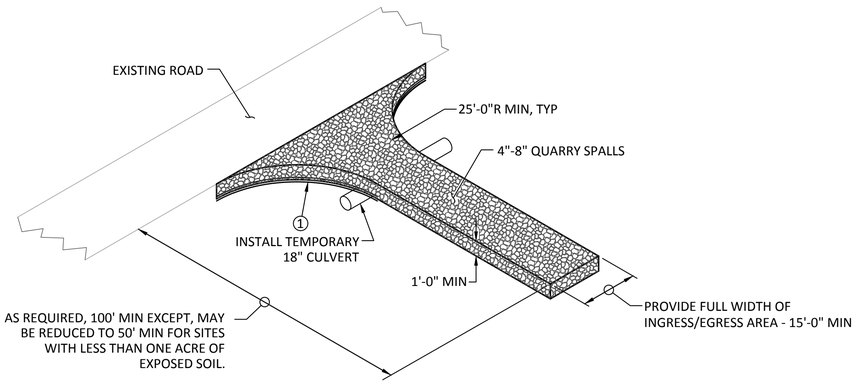
PROFILE

PLACE WATTLES ALONG SLOPE CONTOURS.

SEDIMENT BARRIER

SCALE: NTS

EC102



① PLACE CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION AND A MINIMUM OF 0.15' CRUSHED ROCK UNDER THE SPALLS, FROM THE EDGE OF THE EXISTING ROADWAY TO THE RADIUS RETURNS, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

TEMPORARY ENTRANCE

SCALE: NTS

EC103

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

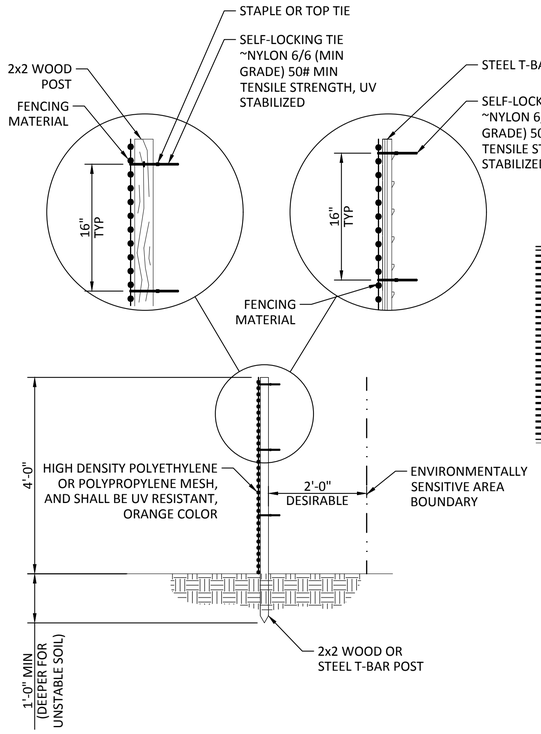
STANDARD EROSION AND SEDIMENT CONTROL DETAILS 1

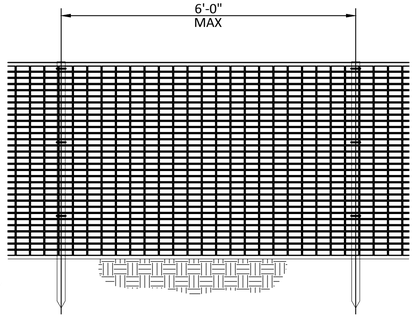
DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
EC001

JOB NO: 21-094

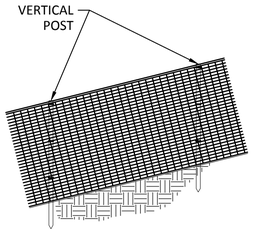
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_EC001.dwg Plot date: Feb 11, 2025 04:17pm, CAD User: JoeNeves

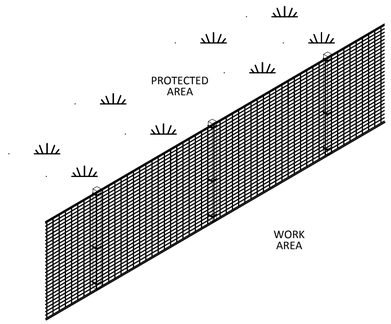


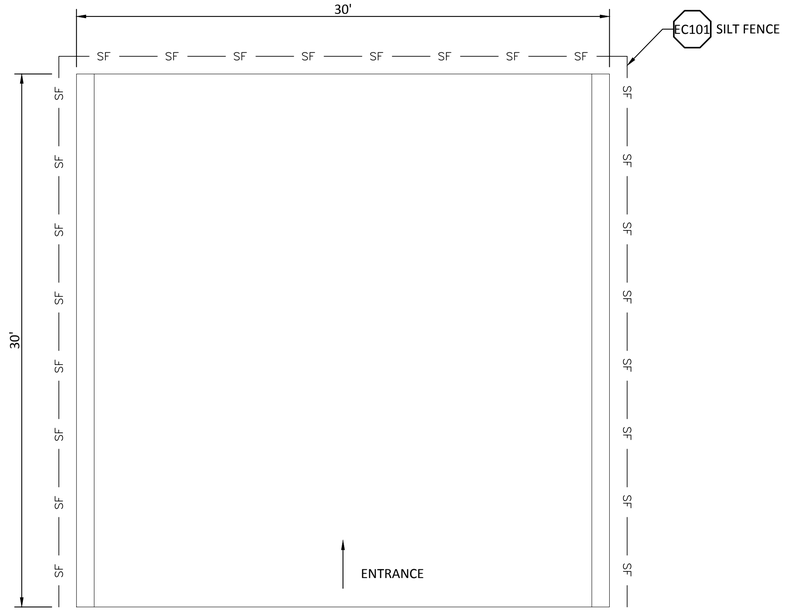


NOTE:

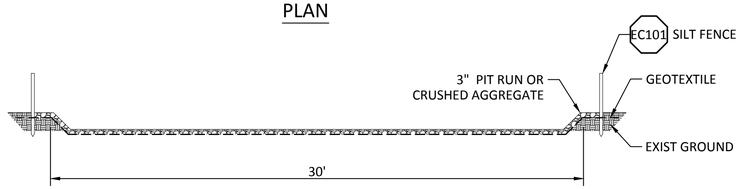
POST SHALL HAVE SUFFICIENT STRENGTH AND DURABILITY TO SUPPORT THE FENCE THROUGH THE LIFE OF THE PROJECT.







PLAN



ELEVATION

CONSTRUCTION FENCING DETAIL
SCALE: NTS
EC105

CONCRETE WASHOUT DETAIL
SCALE: NTS
EC110

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
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WARNING
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STANDARD EROSION AND SEDIMENT CONTROL DETAILS 2

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
EC002

JOB NO: 21-094

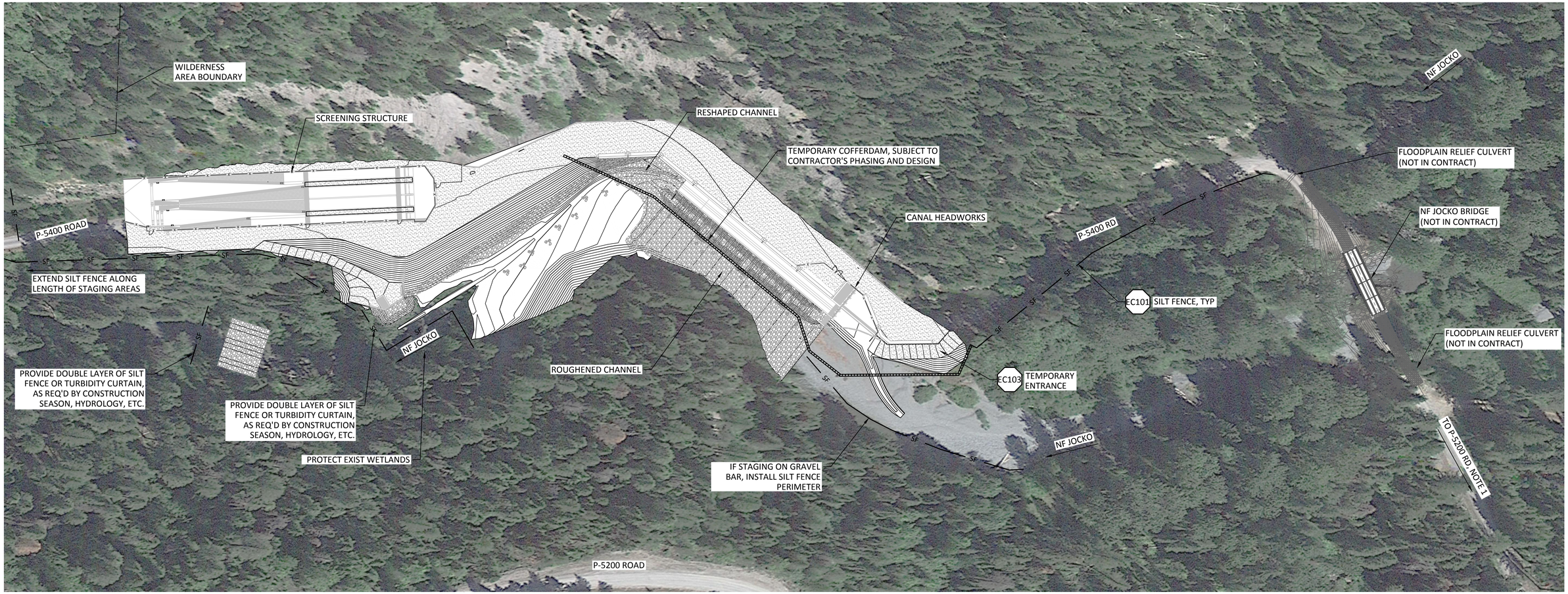
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EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN FOR WORK DURING CONSTRUCTION, SIGNED AND STAMPED BY A REGISTERED CIVIL ENGINEER PRIOR TO THE START OF CONSTRUCTION, THAT MEETS ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.
   - A. ALL SLOPES SHALL BE PROTECTED FROM EROSION DURING ROUGH GRADING OPERATIONS AND THEREAFTER, UNTIL INSTALLATION OF FINAL GROUNDCOVER.
   - B. ALL SLOPE PROTECTION SWALES SHALL BE CONSTRUCTED AT THE SAME TIME AS BANKS ARE GRADED.
   - C. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES CONTAINED WITHIN THE CONTRACT SPECIFICATIONS. THE CONTRACTOR SHALL ALSO PROVIDE ANY ADDITIONAL EROSION CONTROL MEASURES (HYDROSEEDING, MULCHING OF STRAW, SAND DIVERSION DITCHES, ETC) DICTATED BY FIELD CONDITIONS TO PREVENT EROSION OR THE INTRODUCTION OF DIRT, MUD, OR DEBRIS TO EXISTING PUBLIC OR PRIVATE ROADWAY OR ONTO ADJACENT PROPERTIES DURING ANY PHASE OF CONSTRUCTION OPERATIONS. SPECIAL ATTENTION SHALL BE GIVEN TO ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NOTED ABOVE.
   - D. THE GENERAL EROSION AND SEDIMENT CONTROL PLAN ON THIS DRAWING IS PROVIDED TO AID THE CONTRACTOR IN DEVELOPING THE EROSION AND SEDIMENT CONTROL PLAN ACCORDING TO CONTRACTOR SCHEDULE AND PHASING OF THE PROJECT. FINAL ESC MEASURES WILL BE SUBJECT TO THE CONTRACTOR'S SCHEDULE, PHASING OF THE PROJECT, AND DEWATERING MEASURES FOR THE PROJECT.
2. ALL BMP'S SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES.
3. CONTRACTOR SHALL PROVIDE DUST ABATEMENT OVER ALL DISTURBED AREAS BY EITHER WATER SPRAY OR AN APPROVED TACKIFIER.
4. CONTRACTOR SHALL INSTALL SILT FENCE AS INDICATED AND IN ANY ADDITIONAL LOCATIONS WHERE MATERIAL COULD LEAVE THE CONSTRUCTION SITE, AT CONTRACTORS EXPENSE.
5. STOCKPILED EXCAVATION MATERIALS SHALL BE PROTECTED FROM WATER AND WIND EROSION.
6. ALL FINISHED CONSTRUCTION SLOPES SHALL BE STABILIZED WITHIN 30 DAYS OF CONSTRUCTION (DRY SEASON) BEING TEMPORARILY OR PERMANENTLY COMPLETED ON THAT AREA OF THE SITE.
7. THE CONTRACTOR IS RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT.
8. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL FACILITIES, FENCING, AND STAGING AREA MATERIALS WHEN CONSTRUCTION IS COMPLETE. NO CONSTRUCTION DEBRIS, DEMOLITION MATERIALS OR EXCESS EQUIPMENT SHALL BE LEFT ON SITE.
9. CONTRACTOR SHALL REGRADE AND VEGETATE DISTURBED SLOPES TO NEAR EXISTING CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.
10. ALL RUNOFF FROM SITE CONSTRUCTION ACTIVITIES AND FROM RAINFALL EVENTS SHALL BE RETAINED ON SITE.
11. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PREVENT:
    - A. TRACKING OF MUD AND DIRT ONTO ROADS. ROAD SWEEPING IS REQUIRED IF TRACKING OCCURS.
    - B. ACCUMULATION OF CONSTRUCTION WASTE AND LITTER ON SITE.
    - C. NO GRADING OR CONSTRUCTION ACTIVITIES SHALL OCCUR OUTSIDE OF THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS FOR THE PROJECT.
12. MINIMIZE DISTURBANCES TO EXISTING VEGETATION - UTILIZE AS NATURAL BUFFER STRIPS.
13. MONTANA DEPT OF ENVIRONMENTAL QUALITY BMP'S SHALL BE FOLLOWED AS MUCH AS IS PRACTICAL.
14. CONTRACTOR TO INSTALL A CONC WASHOUT NEAR CONSTRUCTION ENTRANCE OR AT NEARBY STAGING AREAS.
15. CONTRACTOR SHALL PROVIDE PERIMETER PROTECTION (IE SILT FENCE) AND TEMPORARY CONSTRUCTION ENTRANCES AT ALL OFF-SITE STAGING AREAS.
16. FOR THE DURATION OF CONSTRUCTION, CONTRACTOR SHALL PROVIDE SEEDING OR EROSION CONTROL BLANKET IN ACCORDANCE WITH SPECIFICATION 31 25 20 TO ALL AREAS THAT WILL BE EXPOSED FOR ONE GROWING SEASON OR MORE.

LEGEND:

TEMPORARY COFFERDAM



EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1"= 50'

0" 50' 100'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
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PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

EROSION AND SEDIMENT CONTROL PLAN

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

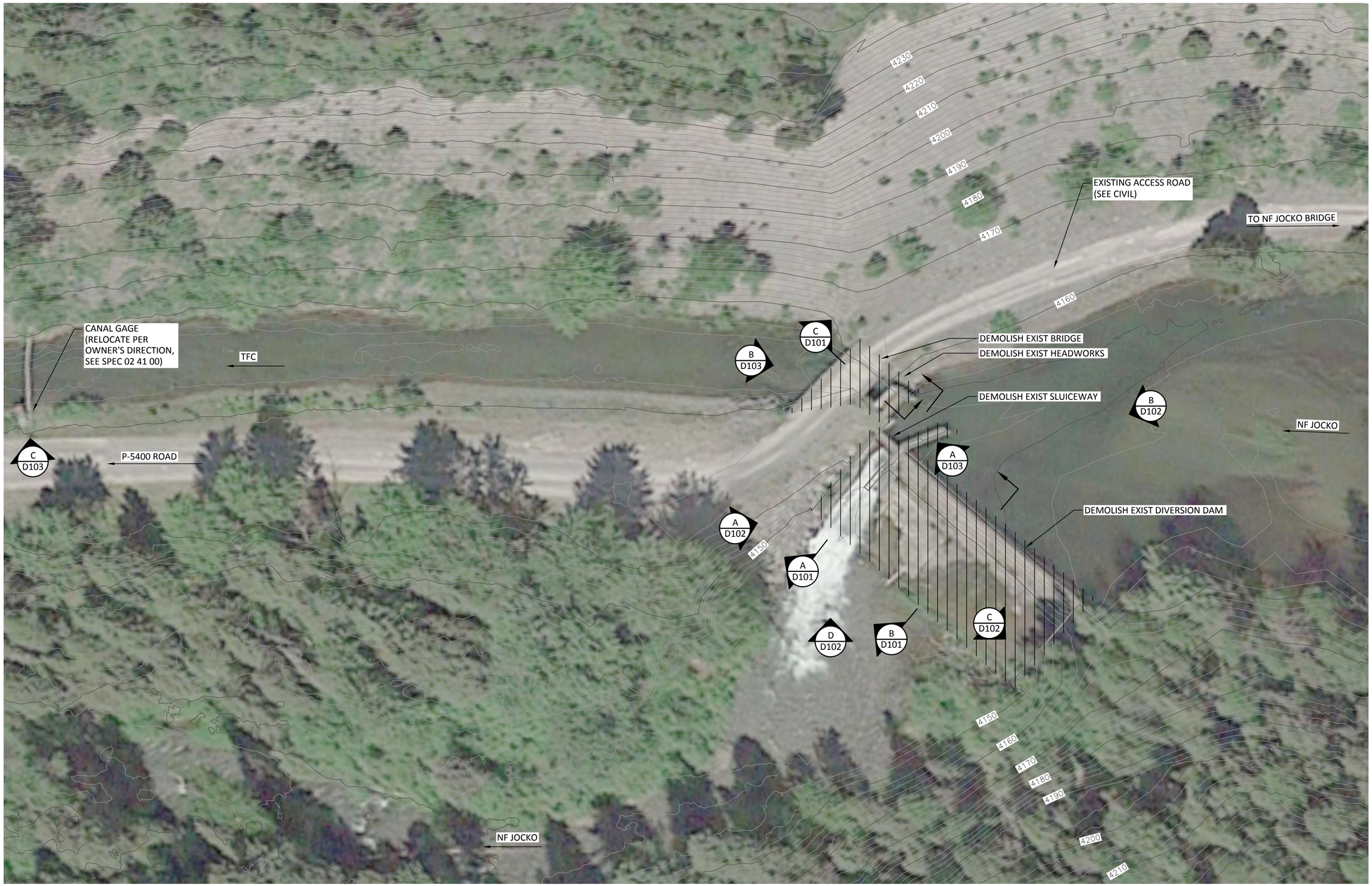
DRAWING
EC100

JOB NO: 21-094

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SHEET NOTES:

1. ALL DEMOLITION SHALL CONFORM TO SPECIFICATION SECTION 02 41 00 - DEMOLITION.
2. EXISTING BASE MAP MAY CONTAIN ERRORS. CONTRACTOR TO VERIFY LOCATION OF STRUCTURES PRIOR TO DEMOLITION.
3. CONTRACTOR SHALL FIELD VERIFY EXACT EXTENT OF DEMOLITION PRIOR TO CONSTRUCTION.
4. NO DEMOLITION SHALL BE PERFORMED UNTIL A DEMOLITION PLAN, COFFERDAM PLAN, DEWATERING PLAN, AND SWPPP HAS BEEN SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE OWNER. A COPY OF THE APPROVED DEMOLITION PLAN SHALL BE RETAINED ON-SITE FOR THE DURATION OF CONSTRUCTION.
5. SEE SECTIONS AND PHOTOS FOR CLARIFICATION OF THE EXTENT OF DEMOLITION.



N

SITE DEMOLITION PLAN

SCALE: 1"= 20'

0" 20' 40'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
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McMillen

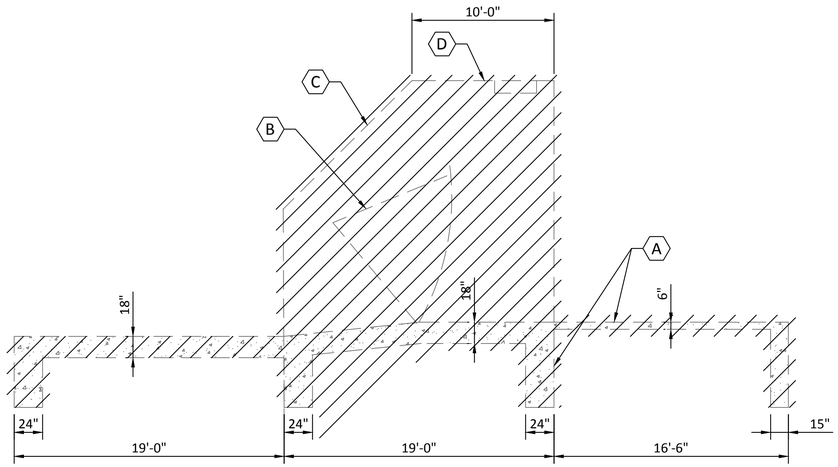
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
SITE DEMOLITION PLAN

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
D100

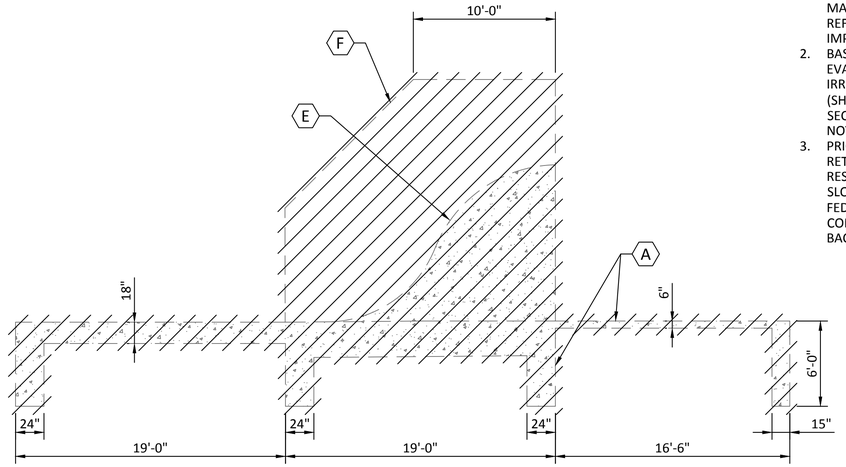
JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_D100.dwg Plot date: Feb 11, 2025 04:18pm, CAD User: JoeNeves



SLUICEWAY DEMOLITION SECTION (A / D100)

SCALE: NTS

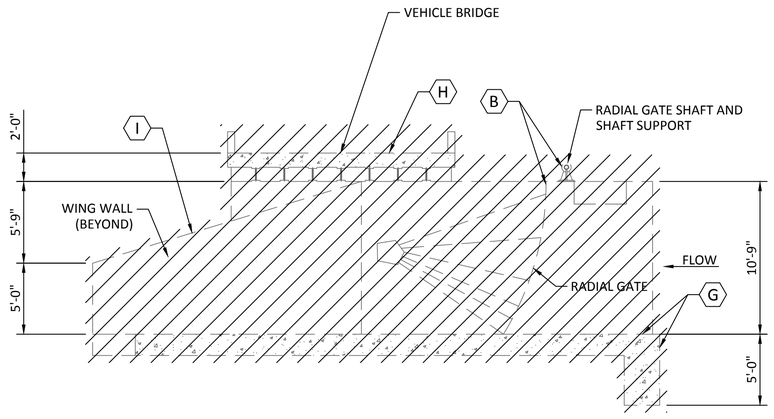


DAM AND APRON DEMOLITION SECTION (B / D100)

SCALE: NTS

SHEET NOTES:

1. BASIS OF SECTIONS "A" AND "B" ARE DEPARTMENT OF THE INTERIOR, UNITED STATES RECLAMATION SERVICE, FLATHEAD PROJECT - MONTANA, TABOR FEED CANAL DIVERSION DAM AND HEADWORKS NORTH FORK OF THE JOCKO RIVER, DRAWING F-4438, DATED FEB. 4, 1924. FILE SUPPLIED BY OWNER. SOME MINOR MODIFICATIONS TO THE DAM ARE KNOWN TO HAVE BEEN MADE TO THE DAM SINCE THAT TIME. SECTION ARE SHOWN FOR REFERENCE, AND DEMOLITION SHALL INCLUDE ALL SUBSEQUENT IMPROVEMENTS TO THE DAM.
2. BASIS OF SECTION "C" IS HKM ENGINEERING, ENGINEERING EVALUATIONS OF EXISTING CONDITIONS, FLATHEAD AGENCY IRRIGATION DIVISION, TABER FEEDER CANAL STRUCTURE DD-10 (SHEET 2 OF 2), DATED MAY 2005. FILE SUPPLIED BY OWNER. SECTION BASED ON SURFACE MEASUREMENTS ONLY AND MAY NOT BE REPRESENTATIVE OF SUBSURFACE CONDITIONS.
3. PRIOR TO DEMOLITION OF WALL, CONTRACTOR SHALL EXCAVATE RETAINED SOIL FROM BEHIND THE WALL. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TEMPORARY CONSTRUCTION SLOPES IN ACCORDANCE WITH ALL LOCAL, TRIBAL, STATE, AND FEDERAL (OSHA) REQUIREMENTS. WHERE REQUIRED, CONTRACTOR SHALL PROVIDE TEMPORARY SHORING UNTIL FINAL BACKFILL IS PLACED.



HEADWORKS DEMOLITION SECTION (C / D100)

SCALE: NTS

SHEET KEY NOTES:

A DEMOLISH CONCRETE SLAB/APRON AND KEYWAYS TO A MINIMUM OF 2.0' BELOW FINISHED GRADE OF THE IN-STREAM GRADING (SEE CIVIL). CONTRACTOR SHALL CUT OR BURN BACK REBAR 2" MIN. FROM EXPOSED SURFACE.

B DEMOLISH EXISTING RADIAL GATE, INCLUDING HOIST, OPERATOR, AND ALL APPURTENANCES.

C DEMOLISH EXISTING ABUTMENT WALL. SEE NOTE 3.

D DEMOLISH ALL METAL WALKWAYS, HANDRAIL AND APPURTENANCES.

E DEMOLISH EXISTING DAM OVERFLOW STRUCTURE. THE CONTRACTOR IS ADVISED THAT THERE IS A 2'-3" CONCRETE DAM CREST RAISE AND 8x8x1/2 STEEL ANGLE CREST THAT ARE NOT DEPICTED IN THESE DRAWINGS.

F DEMOLISH EXISTING TRAINING WALL.

G DEMOLISH EXISTING CONCRETE CHANNEL LINING IN TABOR FEEDER CANAL, AND CONCRETE HEADWALL.

H DEMOLISH EXISTING VEHICLE BRIDGE AND CONCRETE ABUTMENTS.

I DEMOLISH EXISTING CANAL WALLS, WING WALLS, AND TIMBER LAGGING RETAINING WALLS. SEE NOTE 3.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

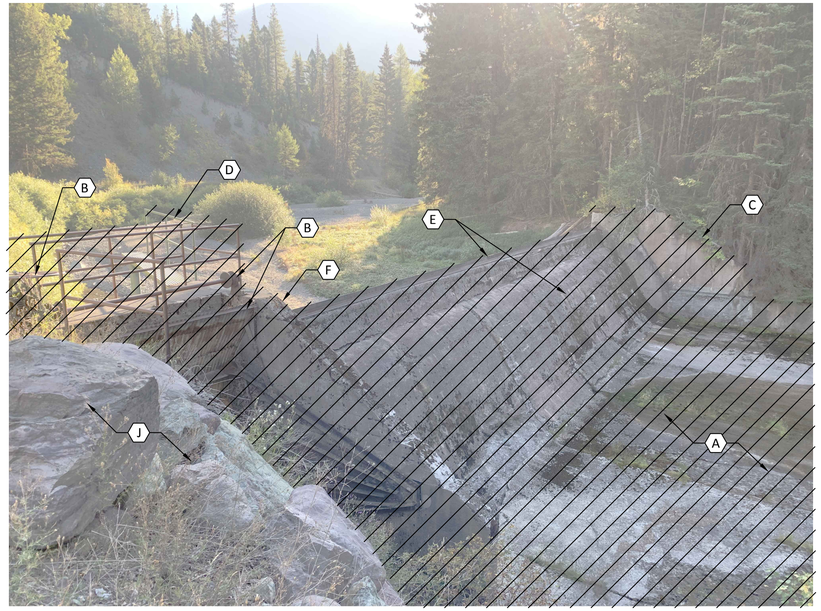
DEMOLITION SECTIONS

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
D101

JOB NO: 21-094

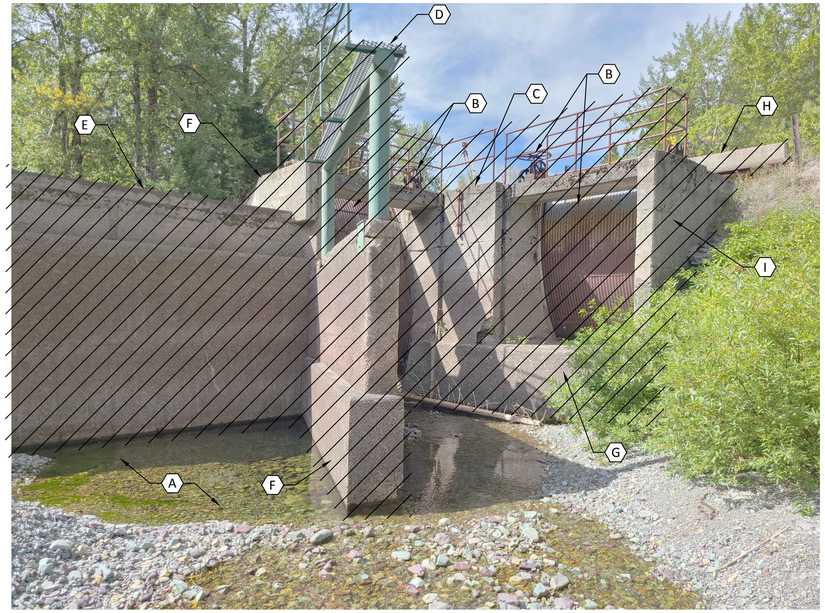
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TABOR FEEDER DIVERSION DEMOLITION PHOTO

SCALE: NTS

A D100



UPSTREAM DEMOLITION PHOTO

SCALE: NTS

B D100

SHEET NOTES:

1. PRIOR TO DEMOLITION OF WALL, CONTRACTOR SHALL EXCAVATE RETAINED SOIL FROM BEHIND THE WALL. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TEMPORARY CONSTRUCTION SLOPES IN ACCORDANCE WITH ALL LOCAL, TRIBAL, STATE, AND FEDERAL (OSHA) REQUIREMENTS. WHERE REQUIRED, CONTRACTOR SHALL PROVIDE TEMPORARY SHORING UNTIL FINAL BACKFILL IS PLACED.
2. AS DIRECTED BY THE COR, METALS INCLUDING WALKWAYS, GATES, AND OTHER MISCELLANEOUS METALS SHALL BE SALVAGED AND DELIVERED BY THE CONTRACTOR TO THE FIIP JOCKO YARD.

SHEET KEY NOTES:

A DEMOLISH CONCRETE SLAB/APRON AND KEYWAYS TO A MINIMUM OF 2.0' BELOW FINISHED GRADE OF THE IN-STREAM GRADING (SEE CIVIL).

B DEMOLISH EXISTING RADIAL GATE, INCLUDING HOIST, OPERATOR, AND ALL APPURTENANCES.

C DEMOLISH EXISTING ABUTMENT WALL. SEE NOTE 1.

D DEMOLISH ALL METAL WALKWAYS, HANDRAIL AND APPURTENANCES.

E DEMOLISH EXISTING DAM OVERFLOW STRUCTURE.

F DEMOLISH EXISTING TRAINING WALL.

G DEMOLISH EXISTING CONCRETE CHANNEL LINING IN TABOR FEEDER CANAL, AND CONCRETE HEADWALL.

H DEMOLISH EXISTING VEHICLE BRIDGE AND CONCRETE ABUTMENTS.

I DEMOLISH EXISTING CANAL WALLS, WING WALLS, AND TIMBER LAGGING RETAINING WALLS. SEE NOTE 1.

J REUSE EXISTING ROCK FILL AS EITHER BOULDER CLUSTERS OR IN NEW RIPRAP LINING IN ACCORDANCE WITH THE SPECIFICATIONS. SEE CIVIL FOR RIPRAP AND BOULDER CLUSTER LOCATIONS.

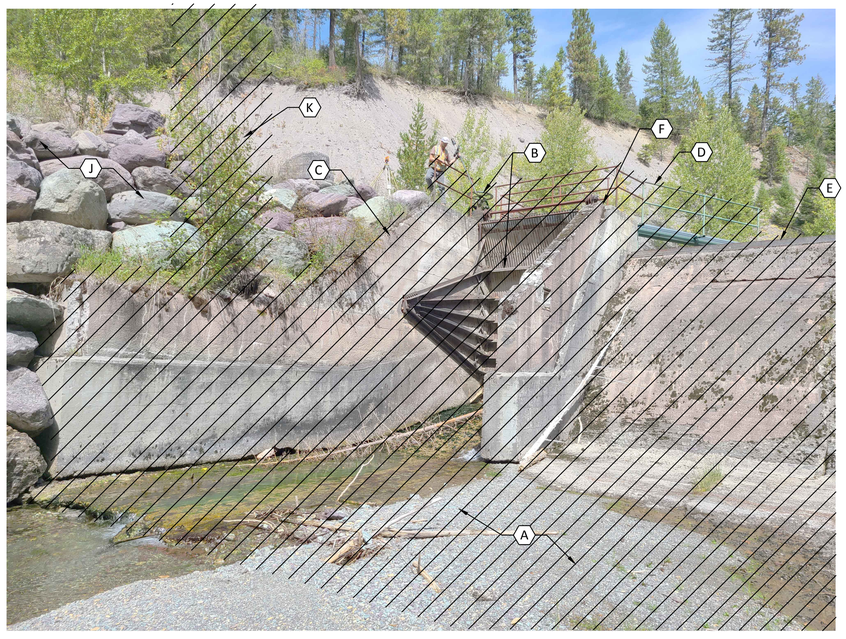
K CLEAR TREES AS REQUIRED BY FINISHED GRADING. SEE CIVIL.



DOWNSTREAM DEMOLITION PHOTO 1

SCALE: NTS

C D100



DOWNSTREAM DEMOLITION PHOTO 2

SCALE: NTS

D D100

REV	DATE	BY	DESCRIPTION
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C	08/14/24	JPB	DRAFT 90% DESIGN
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WARNING

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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

DEMOLITION PHOTOS 1

DESIGNED A. LEMAN

DRAWN J. NEVES

CHECKED V. AUTIER

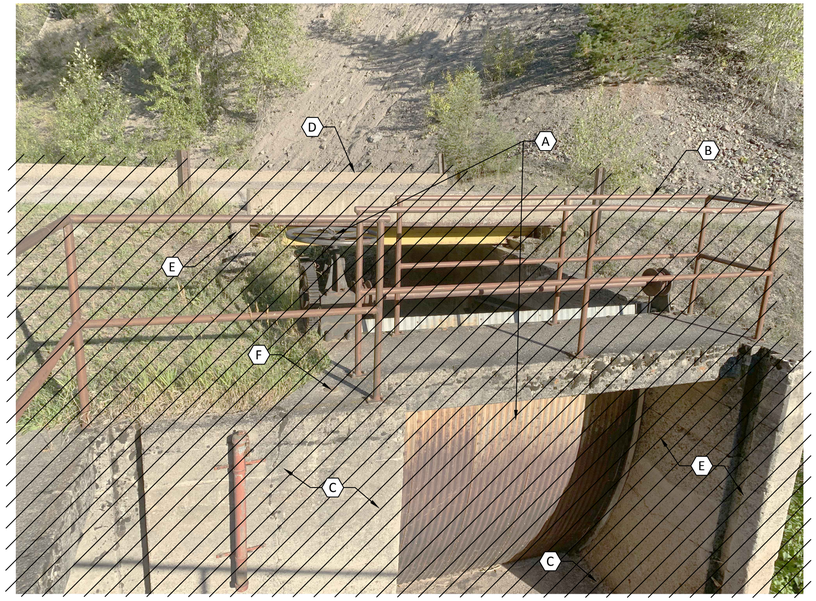
PROJECT DATE 02/14/25

DRAWING

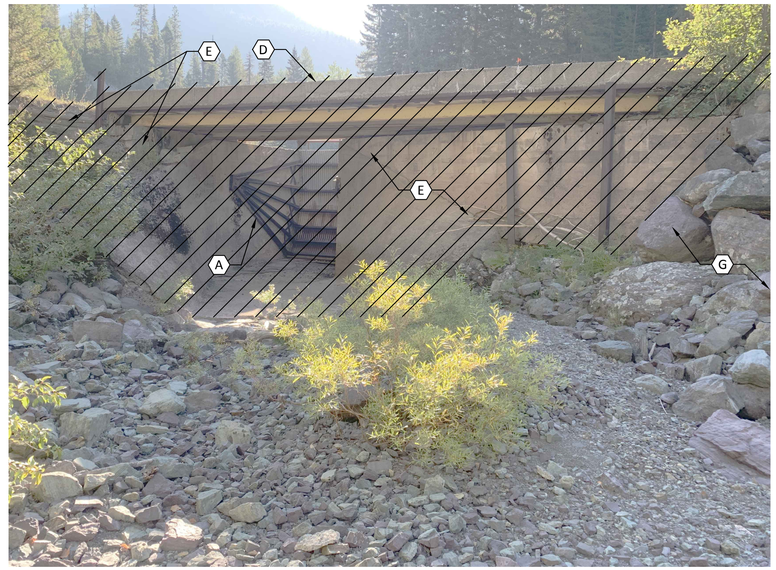
D102

JOB NO: 21-094

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HEADWORKS AND BRIDGE DEMOLITION PHOTO 1
SCALE: NTS
A D100



HEADWORKS AND BRIDGE DEMOLITION PHOTO 2
SCALE: NTS
B D100



EXISTING GAGE DEMOLITION PHOTO
SCALE: NTS
C D100

SHEET NOTES:

1. PRIOR TO DEMOLITION OF WALL, CONTRACTOR SHALL EXCAVATE RETAINED SOIL FROM BEHIND THE WALL. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TEMPORARY CONSTRUCTION SLOPES IN ACCORDANCE WITH ALL LOCAL, TRIBAL, STATE, AND FEDERAL (OSHA) REQUIREMENTS. WHERE REQUIRED, CONTRACTOR SHALL PROVIDE TEMPORARY SHORING UNTIL FINAL BACKFILL IS PLACED.
2. AS DIRECTED BY THE COR, METALS INCLUDING WALKWAYS, GATES, AND OTHER MISCELLANEOUS METALS SHALL BE SALVAGED AND DELIVERED BY THE CONTRACTOR TO THE FIIP JOCKO YARD.

SHEET KEY NOTES:

A DEMOLISH EXISTING RADIAL GATE, INCLUDING HOIST, OPERATOR, AND ALL APPURTENANCES.

B DEMOLISH ALL METAL WALKWAYS, HANDRAIL AND APPURTENANCES.

C DEMOLISH EXISTING CONCRETE CHANNEL LINING IN TABOR FEEDER CANAL, AND CONCRETE HEADWALL.

D DEMOLISH EXISTING VEHICLE BRIDGE AND CONCRETE ABUTMENTS.

E DEMOLISH EXISTING CANAL WALLS, WING WALLS, AND TIMBER LAGGING RETAINING WALLS. SEE NOTE 1.

F PRIOR TO ANY DEMOLITION WORK, CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE AGENCY FOR REMOVAL AND/OR REMEDIATION OF THE EXISTING SURVEY MONUMENT.

G REUSE EXISTING ROCK FILL AS EITHER BOULDER CLUSTERS OR IN NEW RIPRAP LINING IN ACCORDANCE WITH THE SPECIFICATIONS. SEE CIVIL FOR RIPRAP AND BOULDER CLUSTER LOCATIONS.

H RELOCATE EXISTING GAGING STATION OUTSIDE OF THE WORK LIMITS, INCLUDING STILLING WELL, LOCK BOX, POWER SUPPLY, AND CANAL CROSSING. CONTRACTOR TO COORDINATE WITH THE OWNER ON THE FINAL LOCATION OF GAGING STATION. SEE SPECIFICATION 02 41 00 FOR DETAILS.

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CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
DEMOLITION PHOTOS 2

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
D103

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_D103.dwg Plot date: Feb 11, 2025 04:19pm, CAD User: JoeNeves

CIVIL GENERAL NOTES:

1. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT FROM DAMAGE EXISTING FEATURES WHICH ARE TO REMAIN IN PLACE. ALL FEATURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE EXPEDITIOUSLY REPAIRED OR RECONSTRUCTED AT THE CONTRACTOR'S EXPENSE WITHOUT ADDITIONAL COMPENSATION.
2. ALL TRENCHING AND BACKFILL SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. A DIG ALERT IDENTIFICATION NUMBER MUST BE ISSUED VIA MONTANA811 BEFORE A PERMIT TO EXCAVATE WILL BE VALID. FOR THE DIG ALERT ID NUMBER, CONTRACTOR SHALL CALL THE LOCAL UTILITY AT LEAST 48 HOURS BEFORE ANY EXCAVATION IN THE VICINITY OF ANY EXISTING UNDERGROUND FACILITIES PER THE CONTRACT DOCUMENTS.
4. EXISTING SURFACE FEATURES SHOWN ON ALL SHEETS HEREIN ARE BASED ON AERIAL AND FIELD SURVEYS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL EXISTING SURFACE FEATURES WHETHER SHOWN OR NOT ON CIVIL SHEETS.
5. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL AND TRIBAL PERMITS OBTAINED FOR THE PROJECT.
6. ALL CONTRACTORS WORKING WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS.
7. CONTRACTOR SHALL FURNISH PROOF THAT ALL MATERIALS INSTALLED ON THIS PROJECT MEET THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS.
8. ONLY PLAN SETS STAMPED "ISSUED FOR CONSTRUCTION" SHALL BE USED BY THE PROJECT CONTRACTOR(S).
9. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES A COPY OF THE APPROVED CONSTRUCTION PLANS AND RECORD THE ACTUAL LOCATIONS OF THE CONSTRUCTED WORK AND ANY UTILITIES ENCOUNTERED. THE CONTRACTOR SHALL PROVIDE THESE LOCATIONS TO BE SUBMITTED BY THE CONTRACTOR AS PER THE CONTRACT SPECIFICATIONS IN THE PRODUCTION OF RECORD DRAWINGS.
10. UNLESS NOTED OTHERWISE, THE CONTRACTOR(S) SHALL REMOVE ALL OBSTRUCTIONS, BOTH ABOVE AND BELOW GROUND, AS REQUIRED FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. THIS SHALL INCLUDE CLEARING AND GRUBBING WHICH CONSISTS OF CLEARING THE GROUND SURFACE OF ALL TREES, STUMPS, BRUSH, UNDERGROWTH, HEDGES, HEAVY GROWTH OF GRASS OR WEEDS, FENCES, STRUCTURES, DEBRIS, RUBBISH, AND SUCH MATERIAL WHICH, IN THE OPINION OF CONTRACTING OFFICER, IS UNSUITABLE FOR THE FOUNDATION OF CONSTRUCTED WORKS. ALL MATERIAL NOT SUITABLE FOR FUTURE USE ON SITE SHALL BE DISPOSED OF AT A COMMERCIAL DISPOSAL FACILITY.
11. ONLY TREES AND SHRUBS THAT ARE IN DIRECT CONFLICT WITH THE WORK MAY BE DISTURBED. CLEARING, GRUBBING, AND CONSTRUCTION LIMITS WILL BE VERIFIED ON-SITE WITH CONTRACTOR AND OWNER REPRESENTATIVES.
12. CONTRACTOR SHALL COMPLY WITH AND SUPPLY PROTECTION MEASURES FOR ALL WETLAND EXCLUSION AREAS EITHER INDICATED IN THE DRAWINGS OR BY THE OWNER'S REPRESENTATIVE IN THE FIELD.
13. THE CONTRACTOR IS ADVISED THAT THE PROJECT IS LOCATED WITHIN GRIZZLY BEAR HABITAT. CONTRACTOR SHALL ACT IN ACCORDANCE WITH ALL FEDERAL, STATE, LOCAL, AND TRIBAL LAWS AND REGULATIONS WITH RESPECT TO WILDLIFE. SEE SPECIFICATION 01 57 20.

GRADING AND EARTHWORKS NOTES:

1. ELEVATIONS GIVEN ARE TO FINISHED GRADE UNLESS OTHERWISE SHOWN.
2. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
3. SUBSURFACE CONDITIONS ARE ESTIMATED BASED ON FIVE (5) LOCAL BORINGS PERFORMED FOR THE PROJECT. ACTUAL CONDITIONS MAY VARY FROM THOSE SHOWN. IF CONTRACTOR IDENTIFIES SUBSTANTIVE VARIANCE BETWEEN FIELD CONDITIONS AND THOSE DEPICTED IN THE PLANS, CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER IMMEDIATELY.
4. AGGREGATE MATERIAL TYPES AND PLACEMENT/COMPACTION METHODS ARE DETAILED IN SPECIFICATION 31 00 00.
5. CONTRACTOR SHALL KEEP ALL CONSTRUCTION WITHIN THE WORK LIMITS DEFINED FOR THIS PROJECT, AS SHOWN. THIS INCLUDES BUT IS NOT LIMITED TO VEHICLES AND EQUIPMENT, LIMITS OF TRENCH EXCAVATION, STOCKPILED EXCAVATED MATERIAL, BACKFILL MATERIAL, AND PIPE MATERIAL.

GENERAL PIPING AND UTILITY NOTES:

1. SHADING, SCREENING, OR LIGHT-LINING OF PIPING AND/OR EQUIPMENT IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS FOR WHICH INFORMATION IS PRESENTED ELSEWHERE IN THE DRAWINGS. REFER TO CONTENT OF EACH SHEET FOR USAGE.
2. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 24" COVER ON TOP OF ALL PIPELINES UNLESS OTHERWISE INDICATED OR DIRECTED.
3. ELEVATIONS SHOWN FOR PIPING AND BOX CULVERTS ARE TO THE INVERT (FLOWLINE) OF PIPES, UNLESS OTHERWISE NOTED.
4. STRAIGHT SLOPES SHALL BE MAINTAINED BETWEEN INVERTS SHOWN OR SPECIFIED.
5. THE CONTRACTOR SHALL REFER TO MECHANICAL AND STRUCTURAL DETAILS FOR ALL CONNECTIONS AND PIPE PENETRATIONS THROUGH CONCRETE STRUCTURES.

REV	DATE	BY	DESCRIPTION
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C	08/14/24	JPB	DRAFT 90% DESIGN
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PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

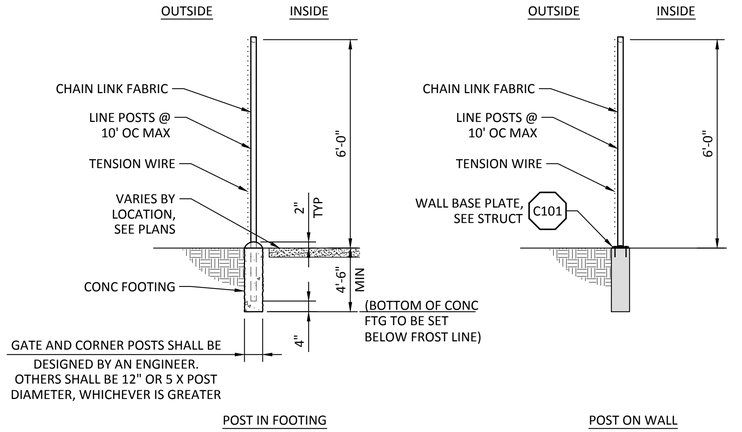
CIVIL GENERAL NOTES

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
GC001

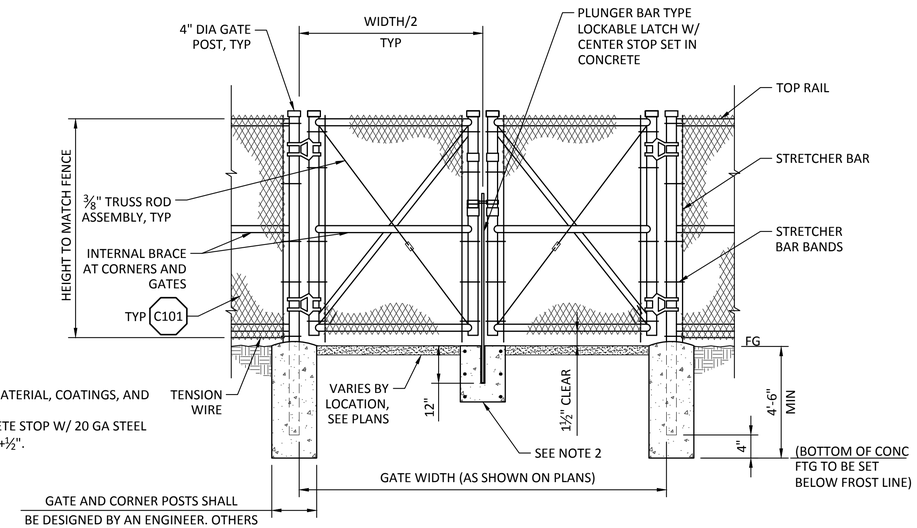
JOB NO: 21-094

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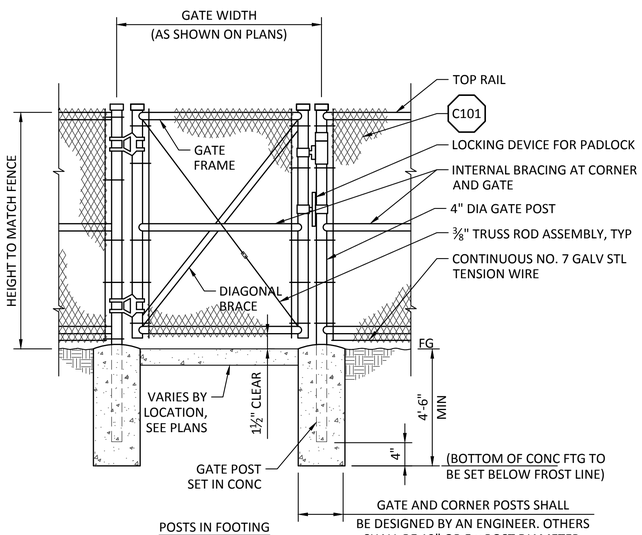
NOTES:
1. SEE SPECIFICATIONS FOR FENCE MATERIAL, COATINGS, AND INSTALLATION REQUIREMENTS.
2. WHERE LINE FOOTING IS LOCATED ABOVE BOX CULVERT, A 3'-0" DIAMETER FOOTING MAY BE USED TO THE TOP OF THE BOX CULVERT.

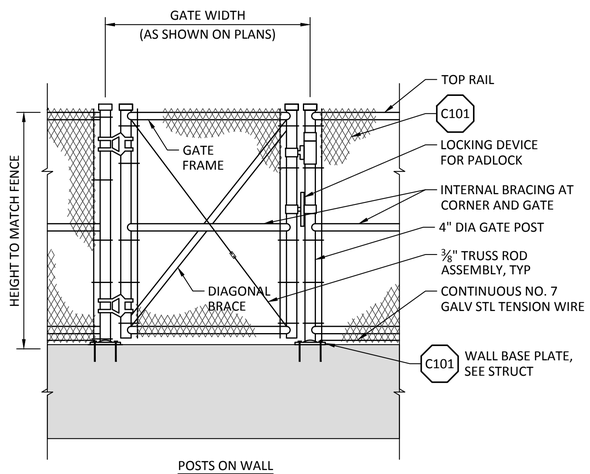
C101 CHAIN LINK FENCE
SCALE: NTS



NOTES:
1. SEE SPECIFICATIONS FOR FENCE MATERIAL, COATINGS, AND INSTALLATION REQUIREMENTS.
2. 12" DIAMETER x 18" DEEP CONCRETE STOP W/ 20 GA STEEL PLUNGER SLEEVE, DIA = ROD O.D. +½".

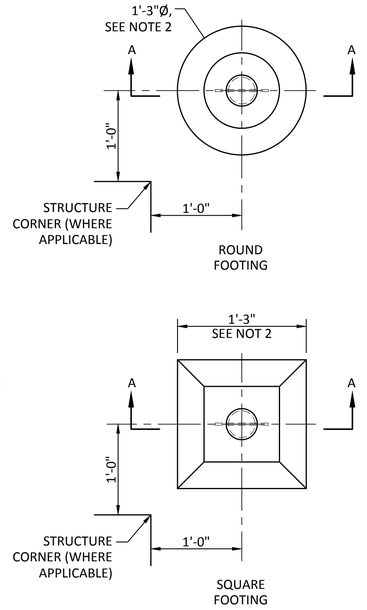
C102 DOUBLE LEAF GATE
SCALE: NTS

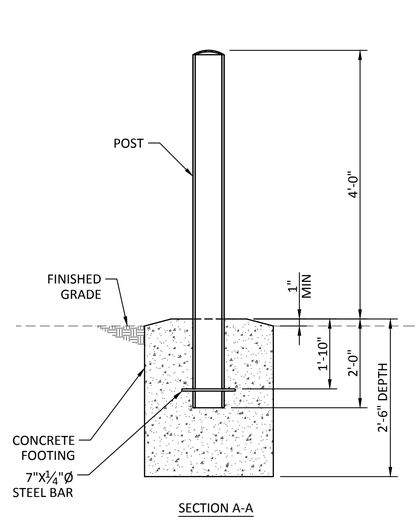


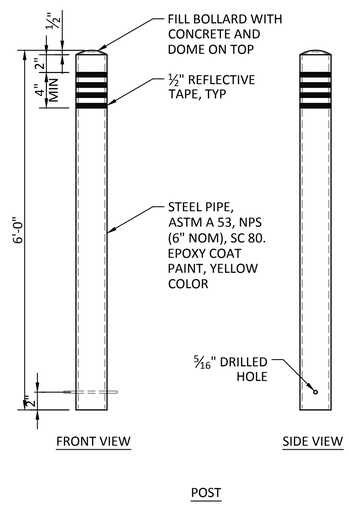


NOTES:
1. SEE SPECS FOR FENCE MATERIAL, COATINGS, AND INSTALLATION REQUIREMENTS.
2. GATE TO BE INSTALLED WITH KEEPER TO SECURE IN OPEN POSITION.
3. GATES LESS THAN 8'-0" IN WIDTH SHALL BE SINGLE LEAF.

C103 SINGLE LEAF PEDESTRIAN GATE
SCALE: NTS







C114 NON-REMOVABLE BOLLARD
SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
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PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
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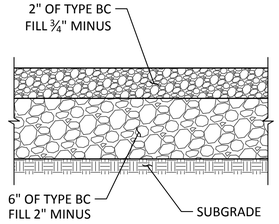
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STANDARD CIVIL DETAILS 1

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

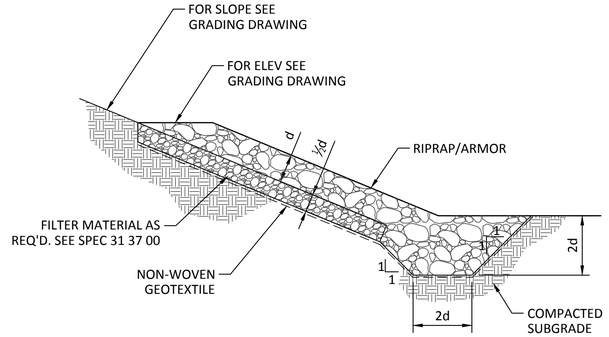
DRAWING
GC002

JOB NO: 21-094

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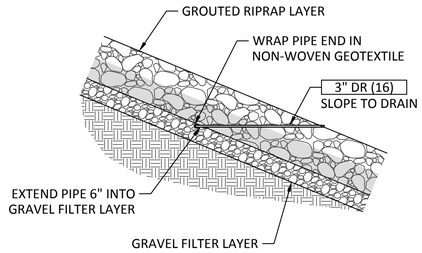


C135 GRAVEL SURFACING
SCALE: NTS



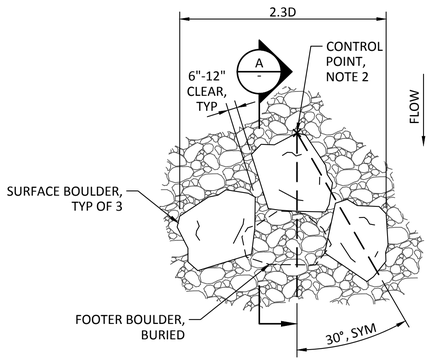
NOTES:
1. RIPRAP LAYER THICKNESS, d, TO BE THE LARGER OF (A) 2X THE MEDIAN ROCK DIAMETER AND (B) THE MAXIMUM ROCK DIAMETER.
2. FOR RIPRAP ARMOR AND BEDDING SIZE, SEE INDICATED RIPRAP TYPE ON PLANS AND DEFINITIONS IN SPECIFICATION 31 37 00.

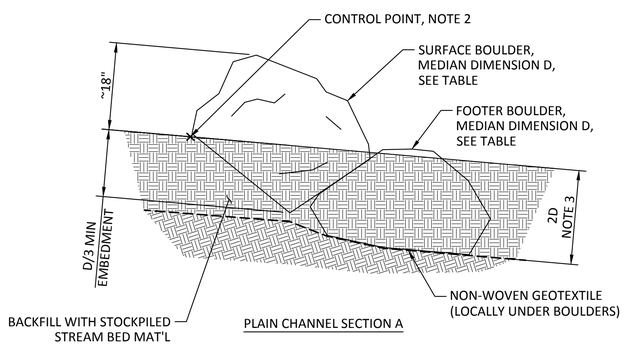
C202 RIPRAP & ARMOR PROTECTION
SCALE: NTS



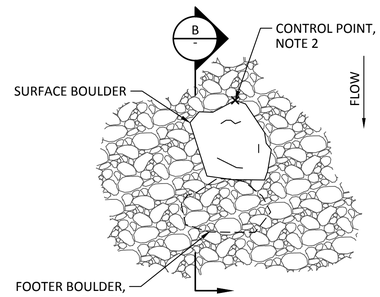
NOTES:
1. LOCATE WEEP HOLES AT 10' GRID SPACING, WHERE INDICATED ON PLANS.

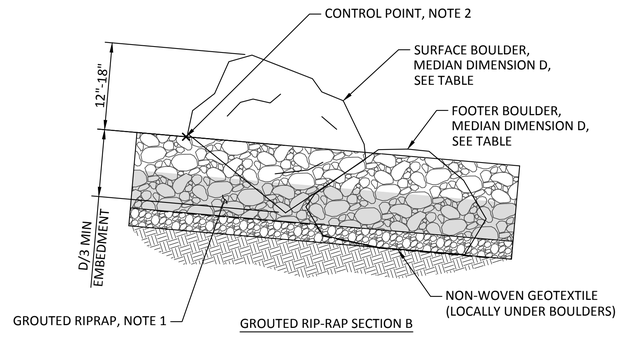
C290 GROUTED RIPRAP WEEP HOLES
SCALE: NTS





PLAIN CHANNEL SECTION A





GROUTED RIP-RAP SECTION B

BOULDER CLUSTER CONTROL PIONTS				
ID NO	NORTHING	EASTING	SECTION	SIZE (D)
BC-101	1113397.13	893589.94	PLAIN	30"
BC-102	1113403.97	893606.25	PLAIN	30"
BC-103	1113417.10	893614.84	PLAIN	30"
BC-104	1113427.80	893631.82	PLAIN	30"
BC-105	1113442.19	893641.87	PLAIN	30"
BC-106	1113453.45	893659.09	PLAIN	30"
BC-107	1113471.44	893668.77	PLAIN	30"
BC-108	1113476.11	893689.44	PLAIN	30"
BC-109	1113486.83	893702.04	PLAIN	30"
BC-601	1113338.82	893896.85	GROUTED	36"
BC-602	1113339.25	893887.91	GROUTED	36"
BC-603	1113340.88	893878.61	GROUTED	36"
BC-604	1113351.82	893870.31	GROUTED	36"
BC-605	1113378.69	893839.73	GROUTED	36"
BC-606	1113379.39	893828.96	GROUTED	36"
BC-607	1113388.83	893824.13	GROUTED	36"
BC-608	1113413.87	893796.86	GROUTED	36"
BC-609	1113413.87	893784.73	GROUTED	36"
BC-610	1113422.75	893779.83	GROUTED	36"
BC-611	1113449.54	893752.66	GROUTED	36"

NOTES:
1. AFTER PLACEMENT OF BOULDERS, FILL AROUND BOULDERS WITH FILTER LAYER AND RIPRAP PER ROUGHENED CHANNEL DETAILS AND SPEC 31 37 00. LASTLY, INFILL WITH GROUT PER SPEC 31 37 00.
2. FOR CONTROL POINT LOCATIONS, SEE TABLE ABOVE. CONTROL POINT IS IN THE APPROXIMATE LATERAL CENTER OF THE SURFACE BOULDERS.
3. USE MULTIPLE BURIED BOULDERS OR LARGER BOULDER SIZE FOR FOOTER BOULDER AS REQUIRED TO ATTAIN SPECIFIED DEPTH.

C292 BOULDER CLUSTER
SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

STANDARD CIVIL DETAILS 2

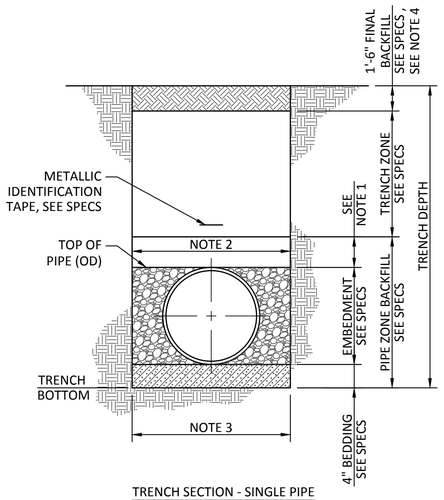
DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED J. BURGI
PROJECT DATE 02/14/25

DRAWING
GC003

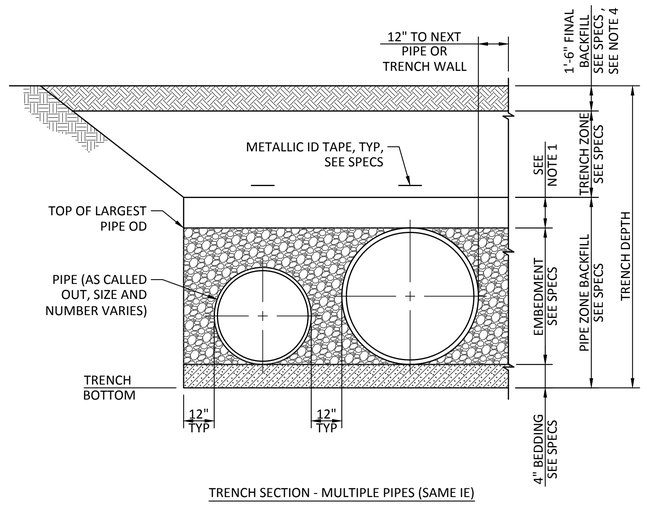
JOB NO: 21-094

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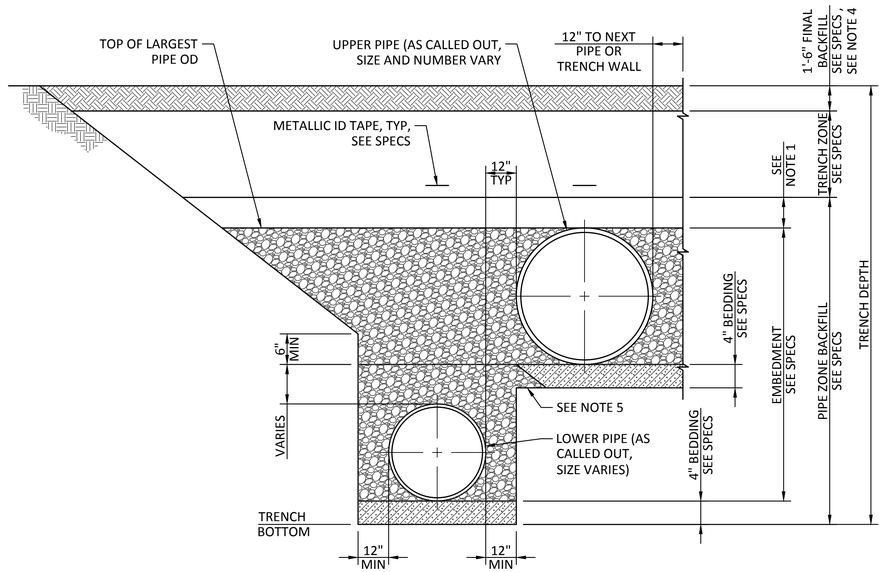
A. FLEXIBLE PIPE REFERS TO ALL STEEL, DUCTILE-IRON, AND PLASTIC PIPES.
B. TYPICAL TRENCH SECTIONS ARE TO BE USED ONLY WHERE STABLE, COMPACT SOIL CONDITIONS EXIST. IF BOULDERS OR LARGE OBSTRUCTIONS ARE ENCOUNTERED, TRENCH SECTIONS MAY BE DEEPER OR WIDER THAN SHOWN. THE ENGINEER SHALL BE ADVISED SHOULD THIS OCCUR.
C. THE NEED FOR PROTECTIVE SYSTEMS AND EXCAVATION SLOPES SHALL BE DETERMINED CONSIDERING APPLICABLE LOCAL, STATE AND FEDERAL (OSHA) SAFETY STANDARDS AND REGULATIONS, AND GEOTECHNICAL CONSULTANTS' RECOMMENDATIONS.
D. PROTECTIVE SYSTEMS SHALL BE DESIGNED AND BUILT IN ACCORDANCE WITH THE APPLICABLE LOCAL, STATE AND FEDERAL (OSHA) SAFETY STANDARDS AND REGULATIONS.
E. SUPPORTING DOCUMENTATION SHALL BE SUBMITTED TO THE ENGINEER REGARDING PIPE DESIGN AND COMPLIANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL (OSHA) SAFETY STANDARDS.
F. UNSUPPORTED VERTICAL AND/OR SLOPING TRENCH WALL SLOPES SHALL NOT BE STEEPER THAN ALLOWED BY APPLICABLE LOCAL, STATE AND FEDERAL (OSHA) SAFETY STANDARDS AND REGULATIONS, UNLESS SUPPORTING DOCUMENTATION IS SUBMITTED, ACCORDING TO AFOREMENTIONED SAFETY STANDARDS.
G. TRENCH SECTIONS OTHER THAN THE TYPICAL SECTIONS SHOWN MAY BE UTILIZED PROVIDED THEY COMPLY WITH APPLICABLE LOCAL, STATE AND FEDERAL (OSHA) SAFETY STANDARDS AND REGULATIONS. DOCUMENTATION SUPPORTING THIS COMPLIANCE AND PIPE DESIGN CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER.
H. IF OVER-EXCAVATION DUE TO POOR FOUNDATION MATERIAL IS ORDERED BY THE ENGINEER, THE BACKFILL MATERIAL SHALL BE ACCORDING TO EARTHWORK SPECIFICATION 31 00 00.
I. IF DURING CONSTRUCTION, THE WATER TABLE IS DISCOVERED TO BE ABOVE THE TRENCH BOTTOM, THE ENGINEER SHALL BE NOTIFIED, AND APPROPRIATE DEWATERING SHALL BE IMPLEMENTED TO LOWER THE WATER LEVEL BELOW THE TRENCH BOTTOM. THE BACKFILL MATERIAL SHALL BE ACCORDING TO THE EARTHWORK SECTIONS OF THE SPECIFICATIONS, OR AS ORDERED BY THE ENGINEER.
J. ALL PIPE BEDDING, PIPE ZONE BACKFILL, AND TRENCH ZONE BACKFILL MATERIAL TYPES AND COMPACTION REQUIREMENTS ARE INDICATED IN SPECIFICATION 31 00 00.



TRENCH SECTION - SINGLE PIPE



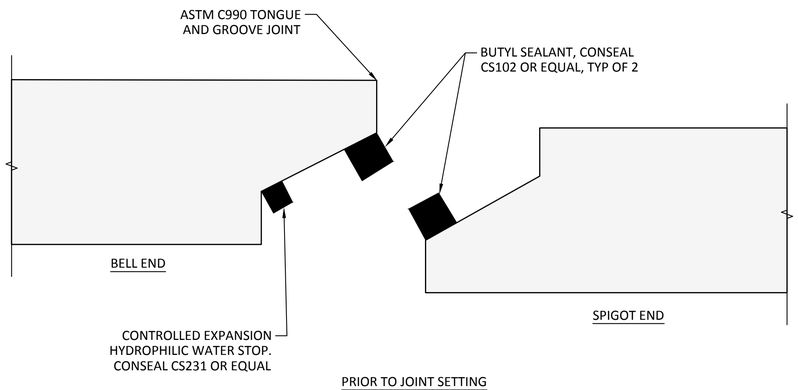
TRENCH SECTION - MULTIPLE PIPES (SAME IE)



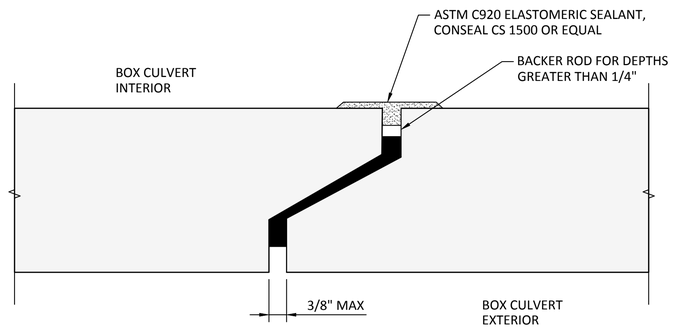
TRENCH SECTION - MULTIPLE PIPES (BENCHED)

NOTES:
1. 6" MIN FOR PIPE DIAMETER < 24" LESS THAN OR EQUAL TO 24".
2. MAX TRENCH WIDTH @ TOP OF PIPE:
   O.D. + 36" FOR 18" & LARGER PIPE O.D.
   O.D. + 24" FOR LESS THAN 18" PIPE O.D.
3. MIN TRENCH BOTTOM WIDTH =
   O.D. + 24" FOR MECHANICAL COMPACTION
4. WHERE PIPES ARE UNDER GRAVEL ROAD SURFACING OR ASPHALT REPAIR, FINAL BACKFILL SHALL BE TO 18" BELOW THE ROAD SUBGRADE. PLACE FILL PER SPECIFICATIONS AND TOP WITH ROAD SURFACING PER DETAIL C135.
5. CONSTRUCT LOWER PIPE TRENCH TO 12" MIN. EITHER SIDE OF LOWER PIPE AND UP TO INVERT ELEVATION OF UPPER PIPE. THEN PLACE BEDDING FOR UPPER PIPE, AND CONSTRUCT UPPER PIPE TRENCH. UPPER PIPE TRENCH BEDDING NOT TO INFRINGE UPON EMBEDMENT OF LOWER PIPE TO 12" EITHER SIDE.

C601 TRENCH SECTION FLEXIBLE PIPE
SCALE: NTS



PRIOR TO JOINT SETTING



AFTER JOINT SETTING

C910 BOX CULVERT JOINT
SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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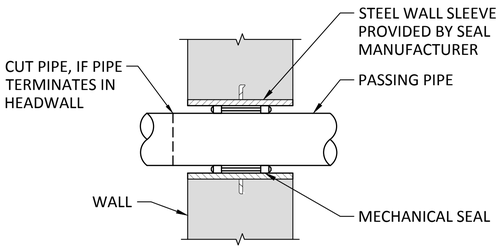
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STANDARD CIVIL DETAILS 3

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

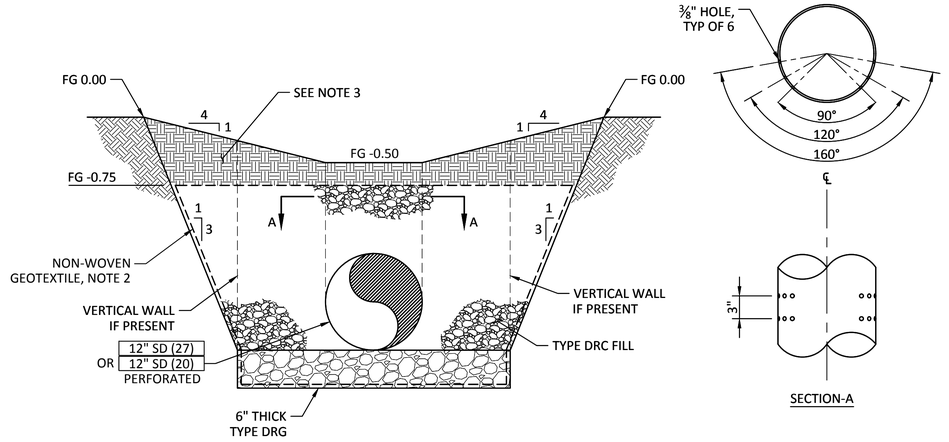
DRAWING
GC004

JOB NO: 21-094

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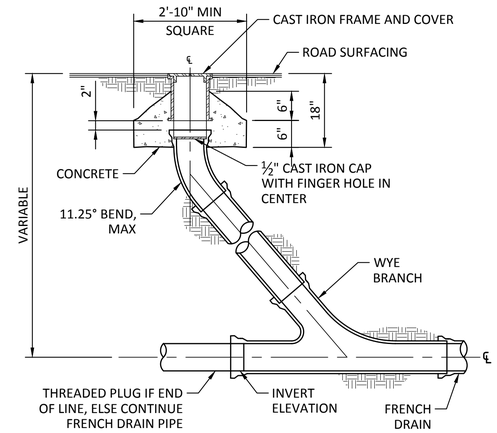


C911 WALL SLEEVE
SCALE: NTS



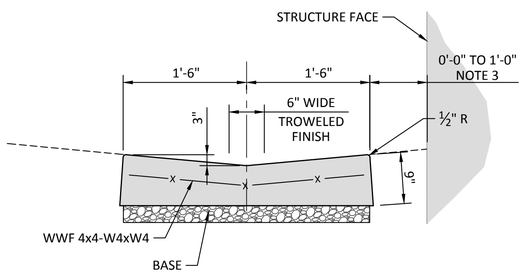
NOTES:
1. PIPE PERFORATIONS TO BE ACCORDING TO AASHTO M278/ASTM F758 PATTERN WITH ⅜" HOLES AT A SPACING OF 3" (+/-¼").
2. OVERLAP GEOTEXTILE 12" MIN AT SEAM. SEE SPEC 31 05 19 FOR DETAILS.
3. UNLESS NOTED OTHERWISE, PROVIDE TYPE T TOPSOIL PER SPECIFICATION 31 00 00 AND REVEGETATE AT PROJECT COMPLETION.

C921 FRENCH DRAIN
SCALE: NTS



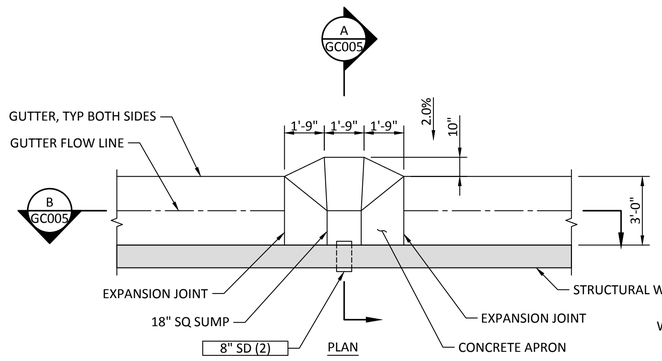
NOTES:
1. IF IN UNIMPROVED AREA TOP SHALL BE 6" ABOVE GRADE.
2. SEE PLAN FOR CLEANOUT LOCATIONS. PIPE SHALL BE SAME MATERIAL AS FRENCH DRAIN PIPE, BUT SOLID WALL (I.E. NOT PERFORATED).

C922 CLEANOUT TO GRADE (COTG) - FRENCH DRAIN
SCALE: NTS

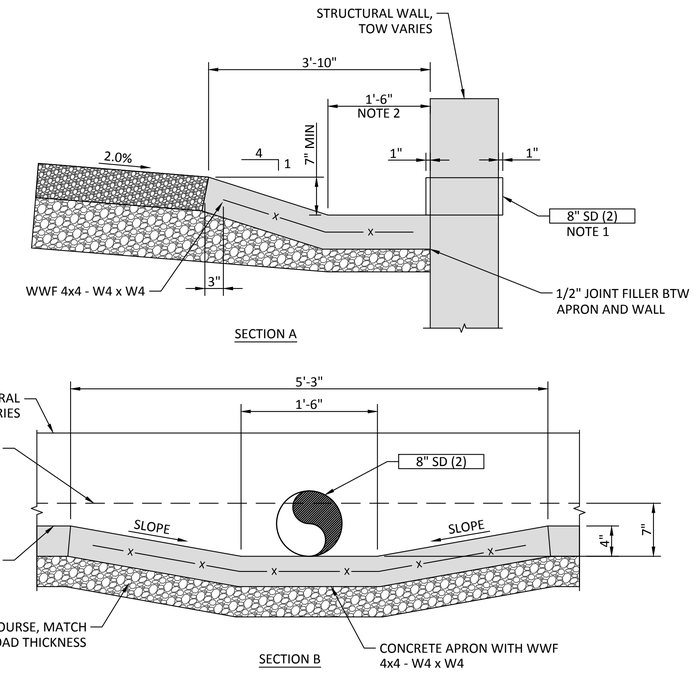


NOTES:
1. EXPANSION JOINTS OF ½" PREMOLDED JOINT FILLER SHALL BE PLACED 50 FOOT SPACING AND WHERE GUTTER BUTTS OTHER CONCRETE STRUCTURES.
2. BASE AND SUBGRADE PREPARATION SHALL MATCH ADJACENT PAVING.
3. LOCATE GUTTER 0.0 TO 1.0 FEET OFF OF WALL, PER PLANS. WHERE GUTTER IS LOCATED ADJACENT TO WALL, USE BOND BREAKER BETWEEN THE STRUCTURAL FACE AND GUTTER CONCRETE.

C923 GUTTER AT STRUCTURE
SCALE: NTS



NOTES:
1. STEEL PIPE CAST INTO STRUCTURAL WALL. SEE STRUCTURAL FOR STRUCTURAL WALL REBAR AROUND PIPE OPENING.
2. EXTEND OUT BEYOND 1'-6" IF GUTTER IS LOCATED OFF THE FACE OF THE WALL, PER PLANS.



C924 DRAINAGE PIPE INLET AND APRON
SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
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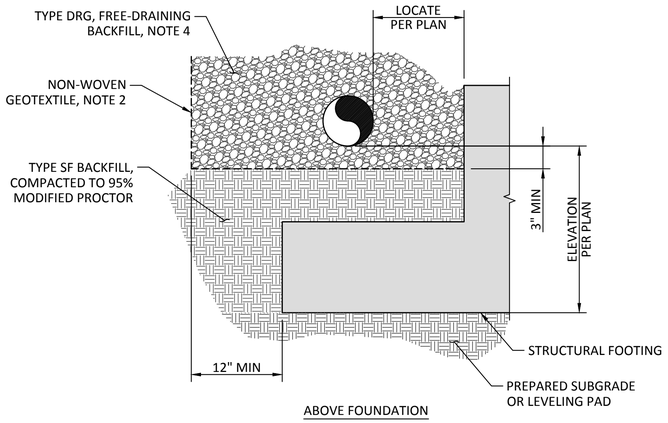
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STANDARD CIVIL DETAILS 4

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
GC005

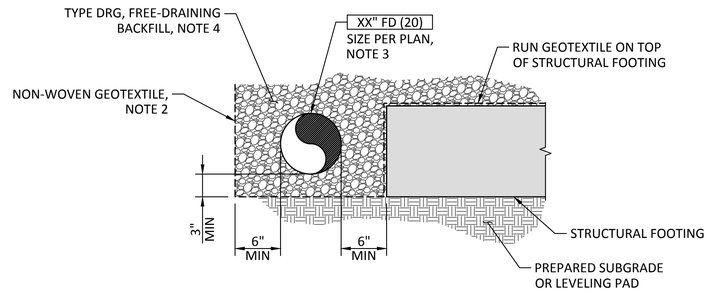
JOB NO: 21-094

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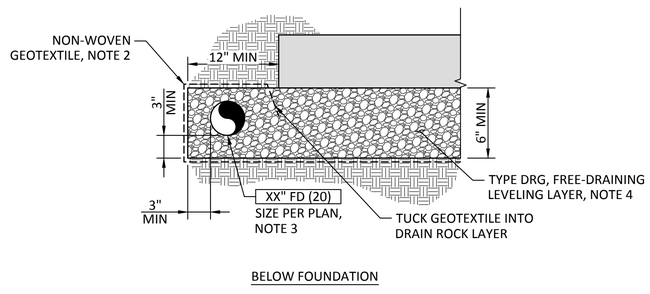


ABOVE FOUNDATION

NOTES:
1. DETAIL TO BE SELECTED PER PLAN ELEVATION OF THE FOUNDATION DRAIN INVERT, IN RELATION TO THE STRUCTURAL FOUNDATION.
2. OVERLAP ALL GEOTEXTILE SEAMS A MINIMUM OF 12" OR AS DIRECTED IN SPECIFICATION 31 05 19. AT ALL JUNCTURES WHERE PLACEMENT OF OVERLYING MATERIAL COULD EXPOSE THE DRAINAGE LAYER, THE GEOTEXTILE SHALL BE SECURED IN THE DRAINAGE LAYER TO ENSURE THE DRAINAGE LAYER IS NOT EXPOSED.
3. PIPE SHALL HAVE EITHER CIRCULAR OPENINGS OR SLOTTED OPENINGS. PIPE PERFORATIONS SHALL BE AASHTO CLASS 2 ACCORDING TO M252 (3-10 INCH) AND M294 (12-60 INCH).
4. FREE-DRAINING BACKFILL SHALL BE STOCKPILED SEPARATELY AND PROTECTED DURING CONSTRUCTION FROM MIXING WITH FINE GRAINED MATERIALS THAT COULD IMPEDE THE PERFORMANCE OF THE DRAINAGE LAYER.



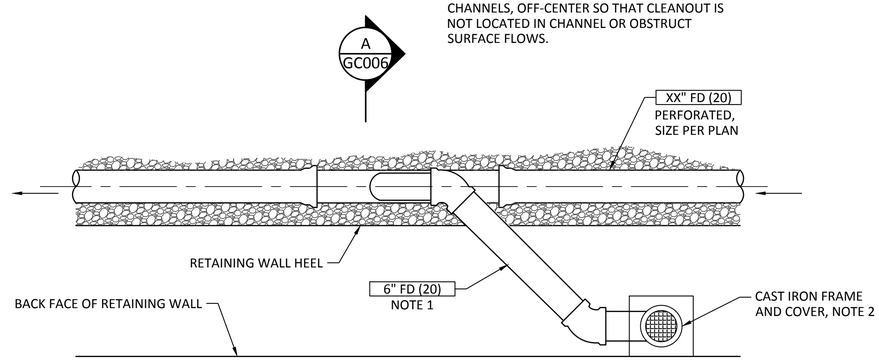
AT FOUNDATION



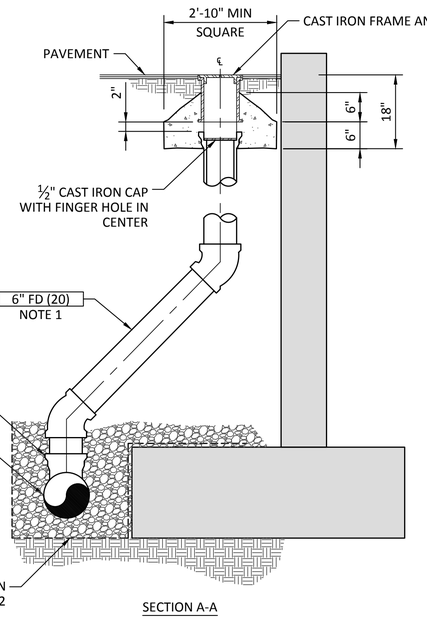
BELOW FOUNDATION

C930 FOUNDATION DRAIN
SCALE: NTS

NOTES:
1. ROUTE CLEANOUT TO AN ACCESSIBLE LOCATION. BENDS IN CLEANOUT PIPING SHALL NOT BE GREATER THAN 45° AND CONNECTIONS TO THE FOUNDATION DRAIN SHALL UTILIZE A WYE BRANCH. CLEANOUT PIPING SHOP DRAWINGS, INCLUDING CLEARANCES TO ALL OBSTRUCTIONS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PROCUREMENT.
2. WHERE CAST IRON FRAME AND COVER ARE LOCATED WITHIN THE SURFACE DRAINAGE CHANNELS, OFF-CENTER SO THAT CLEANOUT IS NOT LOCATED IN CHANNEL OR OBSTRUCT SURFACE FLOWS.



PLAN



SECTION A-A

C931 FOUNDATION DRAIN CLEANOUT
SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STANDARD CIVIL DETAILS 5

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
GC006

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_GC006.dwg Plot date: Feb 13, 2025 10:19am, CAD User: JoeNeves

STRUCTURE CONTROL COORDINATES
(SEE SHEETS C103-C104)

POINT #	NORTHING	EASTING	DESCRIPTION
201	1113386.31	893929.29	FOREBAY STRUCTURE, N CORNER
202	1113368.52	893914.58	FOREBAY STRUCTURE, W CORNER
203	1113513.16	893739.75	RETAINING WALL, N CORNER
204	1113404.37	893906.70	FENCE, PI
205	1113401.27	893873.91	FENCE, END
211	1113502.23	893505.98	SCREENING STUCTURE, NE CORNER
212	1113489.06	893203.19	SCREENING STRUCTURE, NW CORNER
221	1113367.79	893483.97	FISH BYPASS HEADWALL, N CORNER
222	1113356.62	893465.23	FISH BYPASS HEADWALL, S CORNER
231	1113345.25	893973.87	CONTROLS HOUSE - HEADWORKS, NW CORNER
232	1113337.59	893983.10	CONTROLS HOUSE - HEADWORKS, NE CORNER
241	1113489.56	893522.32	CONTROLS HOUSE - SCREENS, SW CORNER
242	1113489.56	893537.32	CONTROLS HOUSE - SCREENS, SE CORNER

* ALL STRUCTURAL CORNERS ARE OUTSIDE CORNERS OF WALL, UNLESS OTHERWISE SPECIFIED.

SITE GRADING COORDINATES
(SEE SHEETS C103-C104)

POINT #	NORTHING	EASTING	DESCRIPTION
301	1113322.70	894021.24	SHEET PILE WALL EXT FACE, BEGIN
302	1113321.96	893970.24	SHEET PILE WALL EXT FACE, PI
303	1113331.52	893958.69	SHEET PILE WALL EXT FACE, END
304	1113509.57	893661.10	EDGE OF GRAVEL PI
305	1113413.32	893494.46	EDGE OF GRAVEL PC
306	1113411.28	893472.26	EDGE OF GRAVEL PT
307	1113426.28	893427.06	EDGE OF GRAVEL PC
308	1113428.89	893408.71	EDGE OF GRAVEL PT
309	1113426.65	893344.35	EDGE OF GRAVEL PI
310	1113418.60	893333.91	EDGE OF GRAVEL PI
311	1113413.21	893207.95	EDGE OF GRAVEL END
321	1113422.43	893306.87	RIVER ACCESS ROAD CL, BEGIN
322	1113422.99	893332.43	RIVER ACCESS ROAD CL, PC
323	1113422.00	893343.51	RIVER ACCESS ROAD CL, PT
324	1113409.76	893403.54	RIVER ACCESS ROAD CL, PC
325	1113406.09	893414.69	RIVER ACCESS ROAD CL, PT
326	1113394.28	893440.01	RIVER ACCESS ROAD CL, PC
327	1113377.29	893458.81	RIVER ACCESS ROAD CL, PT
328	1113360.22	893468.98	RIVER ACCESS ROAD CL, END (HEADWALL)
329	1113397.07	893422.19	EDGE OF GRAVEL, PI
330	1113378.88	893430.17	EDGE OF GRAVEL, PC
331	1113365.83	893428.97	EDGE OF GRAVEL, PT
341	1113333.89	894045.75	FOREBAY ACCESS ROAD CL, BEGIN
342	1113321.68	894031.56	FOREBAY ACCESS ROAD CL, PC
343	1113315.64	894015.65	FOREBAY ACCESS ROAD CL, PT
344	1113315.00	893974.30	FOREBAY ACCESS ROAD CL, PC
345	1113320.73	893957.97	FOREBAY ACCESS ROAD CL, PT
346	1113338.17	893936.88	FOREBAY ACCESS ROAD CL, END

RETAINING STRUCTURE COORDINATES
(SEE SHEETS C103-C104)

POINT #	NORTHING	EASTING	DESCRIPTION
401	1113365.12	893986.28	RETAINING STRUCTURE, BEGIN
402	1113388.07	893958.54	RETAINING STRUCTURE, PI
403	1113419.64	893922.34	RETAINING STRUCTURE, END
404	1113538.62	893770.87	RETAINING STRUCTURE, BEGIN
405	1113548.19	893742.11	RETAINING STRUCTURE, PI
406	1113544.95	893658.47	RETAINING STRUCTURE, PI
407	1113499.92	893559.94	RETAINING STRUCTURE, PI
408	1113501.29	893542.89	RETAINING STRUCTURE, END

IN-STREAM GRADING COORDINATES
(SEE SHEET C107)

POINT #	NORTHING	EASTING	DESCRIPTION
501	1113337.39	893478.00	IN-STREAM GRADING ALIGN, BEGIN
502	1113387.12	893560.73	IN-STREAM GRADING ALIGN, PC
503	1113433.61	893621.76	IN-STREAM GRADING ALIGN, PT
504	1113473.53	893663.68	IN-STREAM GRADING ALIGN, PC
505	1113477.37	893769.67	IN-STREAM GRADING ALIGN, PT
506	1113362.47	893909.32	IN-STREAM GRADING ALIGN, PC
507	1113296.87	893955.36	IN-STREAM GRADING ALIGN, PT
508	1113291.02	893957.44	IN-STREAM GRADING ALIGN, PC
509	1113226.54	894031.68	IN-STREAM GRADING ALIGN, PT
510	1113224.17	894043.25	IN-STREAM GRADING ALIGN, END
521	1113349.25	893469.29	PLUNGE POOL, BOTTOM CORNER
522	1113360.78	893488.65	PLUNGE POOL, BOTTOM CORNER
523	1113350.21	893598.25	IN-STREAM GRADING BREAKLINE
524	1113389.83	893572.64	IN-STREAM GRADING BREAKLINE
525	1113429.04	893716.36	PLUNGE POOL, BOTTOM CORNER
526	1113431.38	893713.86	PLUNGE POOL, BOTTOM CORNER
530	1113312.95	893343.17	RIVER GAGING SECTION, U/S THALWEG

SHEET PILE/ROUGHENED CHANNEL COORDINATES
(SEE SHEETS C120-C121)

POINT #	NORTHING	EASTING	DESCRIPTION
601	1113417.62	893711.83	SHEET PILE WALL, U/S FACE, PI
602	1113461.54	893748.16	SHEET PILE WALL, U/S FACE, PI
603	1113281.98	893859.31	SHEET PILE WALL, U/S FACE, PI
604	1113379.06	893939.63	SHEET PILE WALL, U/S FACE, PI
605	1113491.12	893692.52	FISHWAY, BEGIN ALIGN
606	1113491.93	893695.12	FISHWAY, PC
607	1113492.81	893701.47	FISHWAY, PT
608	1113492.45	893717.72	FISHWAY, PC
609	1113487.87	893730.03	FISHWAY, PT
610	1113357.79	893887.36	FISHWAY, PI
611	1113353.49	893899.85	FISHWAY, PI
612	1113344.90	893910.72	FISHWAY, END ALIGN

PIPING COORDINATES
(SEE SHEETS C142-C148)

POINT #	NORTHING	EASTING	DESCRIPTION
701	1113377.83	893922.28	BOX CULVERT, START
702	1113525.75	893743.45	BOX CULVERT, PI
703	1113522.24	893659.78	BOX CULVERT, PI
704	1113476.83	893581.35	BOX CULVERT, PI
705	1113473.99	893516.25	BOX CULVERT, END
711	1113432.68	893247.73	BYPASS 1, START
712	1113432.15	893247.76	BYPASS 1, PC
713	1113424.13	893256.51	BYPASS 1, PT
714	1113427.58	893335.79	BYPASS 1, PC
715	1113426.61	893347.96	BYPASS 1, PT
716	1113414.08	893409.36	BYPASS 1, PC
717	1113410.31	893420.80	BYPASS 1, PT
718	1113394.68	893454.33	BYPASS 1, PC
719	1113375.49	893475.01	BYPASS 1, PT
721	1113442.37	893233.19	BYPASS 2, START
722	1113430.56	893233.71	BYPASS 2, PC
723	1113416.23	893249.35	BYPASS 2, PT
724	1113419.89	893333.55	BYPASS 2, PC
725	1113418.93	893345.72	BYPASS 2, PT
726	1113406.42	893407.01	BYPASS 2, PC
727	1113402.75	893418.12	BYPASS 2, PT
728	1113389.41	893446.75	BYPASS 2, PC
729	1113369.69	893468.58	BYPASS 2, PT
731	1113442.59	893238.19	BYPASS 3, START
732	1113430.03	893238.74	BYPASS 3, PC
733	1113418.56	893251.25	BYPASS 3, PT
734	1113422.22	893335.42	BYPASS 3, PC
735	1113421.26	893347.59	BYPASS 3, PT
736	1113408.96	893407.85	BYPASS 3, PC
737	1113405.29	893418.97	BYPASS 3, PT
738	1113391.34	893448.89	BYPASS 3, PC
739	1113371.62	893470.72	BYPASS 3, PT
741	1113442.76	893242.19	BYPASS 4, START
742	1113430.87	893242.70	BYPASS 4, PC
743	1113421.31	893253.13	BYPASS 4, PT
744	1113424.90	893335.60	BYPASS 4, PC
745	1113423.94	893347.77	BYPASS 4, PT
746	1113411.51	893408.68	BYPASS 4, PC
747	1113407.83	893419.81	BYPASS 4, PT
748	1113393.28	893451.04	BYPASS 4, PC
749	1113373.56	893472.86	BYPASS 4, PT

PIPING COORDINATES
(SEE SHEETS C142-C148)

POINT #	NORTHING	EASTING	DESCRIPTION
751	1113442.23	893230.03	PENSTOCK, START
752	1113428.17	893230.64	PENSTOCK, PC
753	1113413.84	893246.28	PENSTOCK, PT
754	1113417.63	893333.37	PENSTOCK, PC
755	1113416.67	893345.54	PENSTOCK, PT
756	1113404.07	893407.22	PENSTOCK, PC
757	1113400.60	893417.42	PENSTOCK, PT
758	1113386.69	893447.26	PENSTOCK, PC
759	1113376.08	893459.63	PENSTOCK, PT
761	1113444.06	893501.36	SEDIMENT, START
762	1113440.23	893501.55	SEDIMENT, PC
763	1113422.59	893496.88	SEDIMENT, PT
764	1113399.22	893481.98	SEDIMENT, PC
765	1113370.46	893481.01	SEDIMENT, PT

ABBREVIATIONS:

PC POINT OF CURVATURE
PT POINT OF TANGENCY
PI POINT OF INFLECTION

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

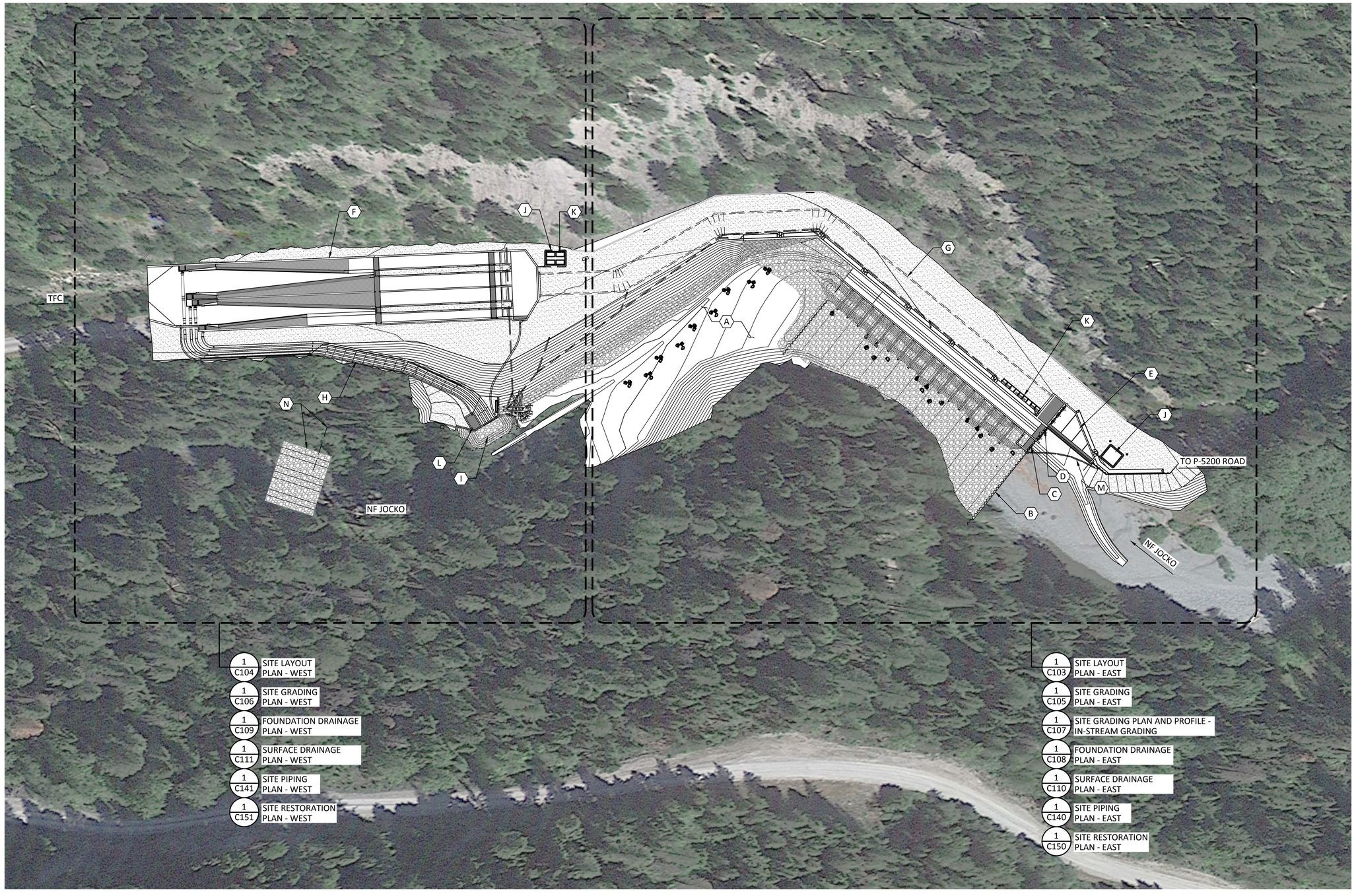
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
SITE COORDINATES

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED J. BURGI
PROJECT DATE 02/14/25

DRAWING
GC100

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_GC100.dwg Plot date: Feb 11, 2025 04:20pm, CAD User: joeNeves



MAJOR WORK ITEMS:

A. GRADE ACCUMULATED SEDIMENT BEHIND EXISTING DIVERSION STRUCTURE AND REGRADE CHANNEL BOTTOM. PROVIDE RIPRAP LINING AND STREAM RESTORATION FEATURES AS INDICATED.

B. CONSTRUCT ROUGHENED CHANNEL FISHWAY WITH UPSTREAM SHEET PILE CREST AND DOWNSTREAM SHEET PILE CUTOFF WALL. ROUGHENED CHANNEL INCLUDES LOW-FLOW FISHWAY CHANNEL.

C. CONSTRUCT CONCRETE FISHWAY EXIT BOX.

D. CONSTRUCT CONCRETE SLUICEWAY WITH TWO (2) 5' X 5' SLUICEWAY GATES.

E. CONSTRUCT CONCRETE FOREBAY WITH COARSE TRASH RACK, AND BOX CULVERT ISOLATION GATES.

F. CONSTRUCT CIP CONC FISH SCREENING STRUCTURE, INCLUDING APPROACH CHANNEL, FARMERS SCREEN, AND ATTENUATION BASIN.

G. INSTALL PRECAST CONC BOX CULVERT FROM HEADWORKS STRUCTURE TO SCREENING STRUCTURE.

H. INSTALL HDPE BYPASS PIPES TO CONVEY FISH AND DEBRIS BACK TO THE NF JOCKO RIVER.

I. CONSTRUCT PLUNGE POOL AND HEADWALL FOR BYPASS PIPE OUTLET. BYPASS PIPES TO DISCHARGE ABOVE THE 100-YEAR FLOOD ELEVATION.

J. CONSTRUCT CONTROLS STRUCTURE TO HOUSE PLC CABINET, BATTERY BACKUP AND OTHER ELECTRICAL INFRASTRUCTURE.

K. INSTALL 5.2 KW (TOTAL) SOLAR ARRAY AT TWO LOCATIONS IDENTIFIED.

L. CONSTRUCT MECHANICAL VAULT AND INSTALL 500 W MICRO-HYDRO UNIT. INSTALL HDPE PENSTOCK PIPE FROM SCREENING STRUCTURE TO THE MECHANICAL VAULT.

M. INSTALL HDPE DEFLECTOR BOOM ACROSS HEADWORKS AREA TO DIRECT LARGE DEBRIS TO SHEET PILE OVERFLOW WALL.

N. GRADE AND ARMOR RATED SECTION OF RIVER, APPROXIMATELY 50' x 40' AND INSTALL BUBBLE GAUGE PER OWNER DIRECTION.

N

OVERALL SITE KEY PLAN

SCALE: 1"= 40'

0" 40' 80'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

OVERALL SITE KEY PLAN

DESIGNED A. LEMAN

DRAWN J. NEVES

CHECKED V. AUTIER

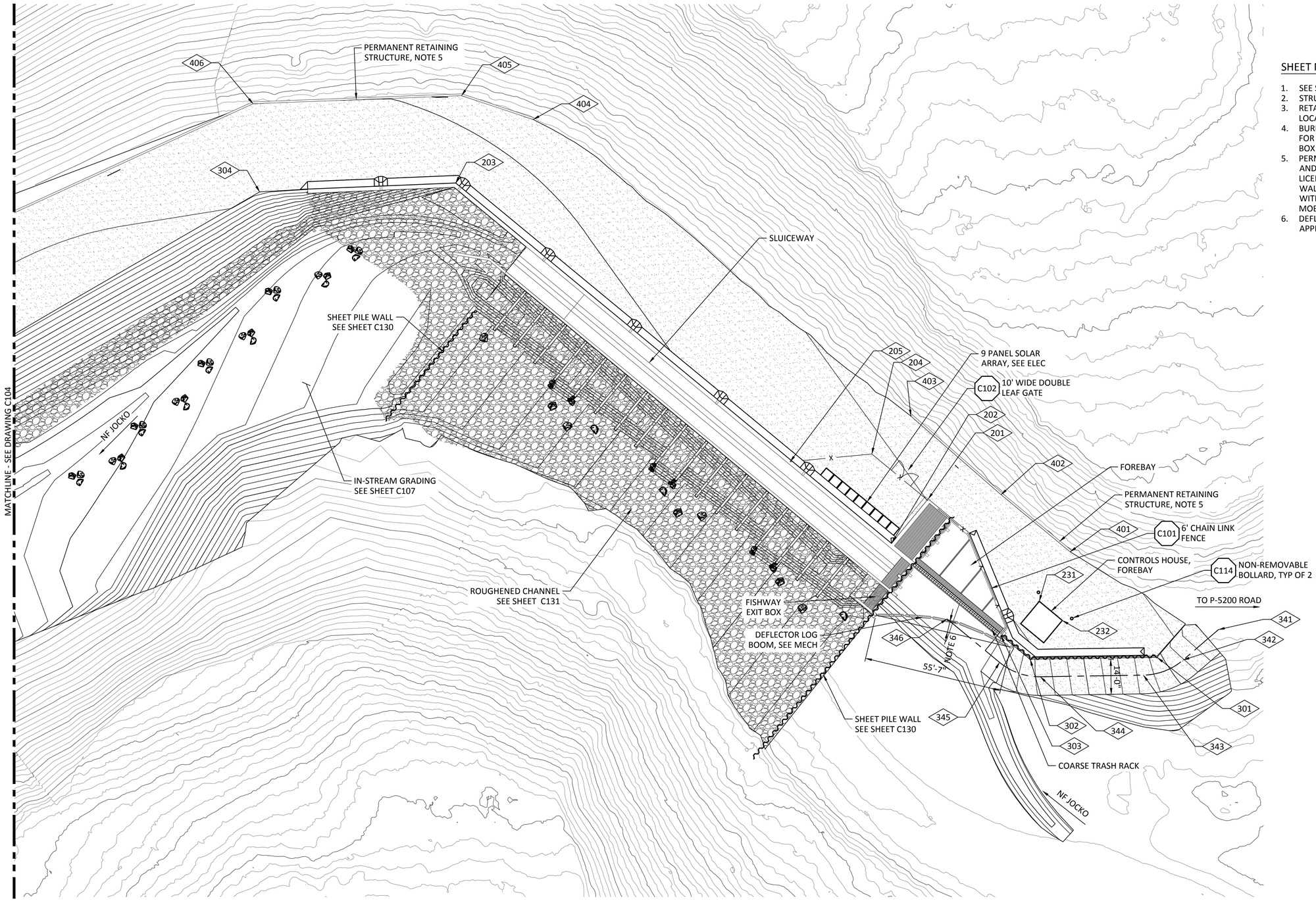
PROJECT DATE 02/14/25

DRAWING

C100

JOB NO: 21-094

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1 / C100 SITE LAYOUT PLAN - EAST
SCALE: 1"= 20'

0" 20' 40'

N

SHEET NOTES:

1. SEE SHEET GC100 FOR SITE COORDINATES.
2. STRUCTURAL CORNERS INDICATE OUTSIDE CORNER OF WALL.
3. RETAINING STRUCTURE CONTROL POINTS INDICATE LOCATION OF WALL AT FINISHED GRADE.
4. BURIED PIPES AND BOX CULVERT NOT SHOWN ON THIS SHEET FOR CLARITY. SEE C140 SERIES SHEETS FOR BURIED PIPE AND BOX CULVERT LAYOUT.
5. PERMANENT RETAINING STRUCTURE SHALL BE DESIGNED AND STAMPED BY THE SHORING SUBCONTRACTOR'S LICENSED, QUALIFIED ENGINEER IN THE STATE OF MONTANA. WALL TYPE, HEIGHT, AND FINISHES SHALL BE COORDINATED WITH AND APPROVED BY THE COR AND ENGINEER PRIOR TO MOBILIZATION BY THE SHORING SUBCONTRACTOR.
6. DEFLECTOR BOOM TO HAVE MAX 10% SAG ALLOWANCE, OR APPROXIMATELY 5'-6" IN THE DIMENSION SHOWN.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

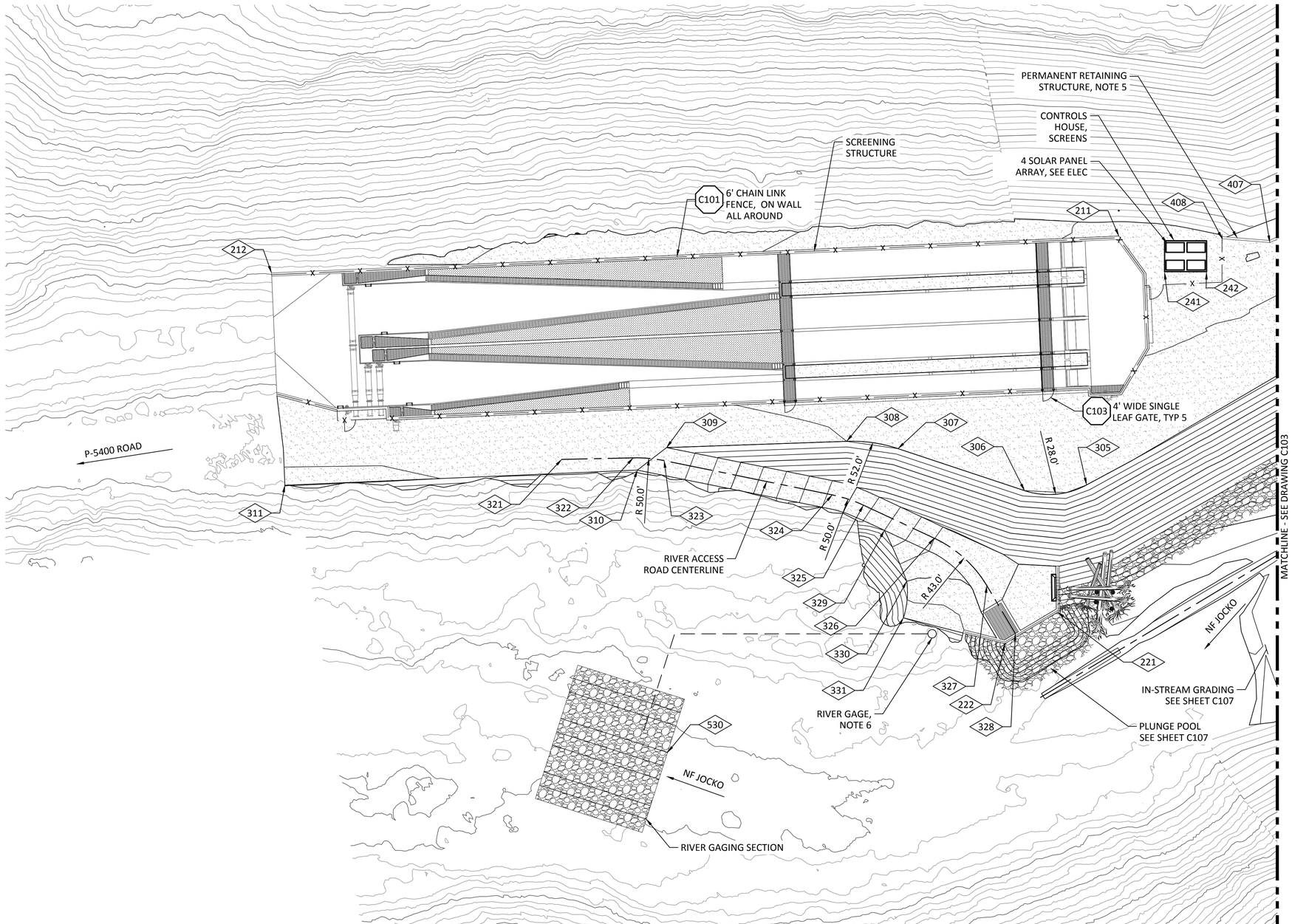
SITE LAYOUT PLAN - EAST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C103

JOB NO: 21-094

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SHEET NOTES:

1. SEE SHEET GC100 FOR SITE COORDINATES.
2. STRUCTURAL CORNERS INDICATE OUTSIDE CORNER OF WALL.
3. RETAINING STRUCTURE CONTROL POINTS INDICATE LOCATION OF WALL AT FINISHED GRADE.
4. BURIED PIPES AND BOX CULVERT NOT SHOWN ON THIS SHEET FOR CLARITY. SEE C140 SERIES SHEETS FOR BURIED PIPE AND BOX CULVERT LAYOUT.
5. PERMANENT RETAINING STRUCTURE SHALL BE DESIGNED AND STAMPED BY THE SHORING SUBCONTRACTOR'S LICENSED, QUALIFIED ENGINEER IN THE STATE OF MONTANA. WALL TYPE, HEIGHT, AND FINISHES SHALL BE COORDINATED WITH AND APPROVED BY THE COR AND ENGINEER PRIOR TO MOBILIZATION BY THE SHORING SUBCONTRACTOR.
6. CONTRACTOR SHALL INSTALL RIVER GAUGE PER OWNER DIRECTION, INCLUDING ALL APPURTENANT PIPING AND EQUIPMENT. CONTRACTOR MAY ASSUME A BUBBLER TYPE GAUGE INSTALLED AT THE APPROXIMATE LOCATION SHOWN. FINAL LOCATION AND DETAILS SHALL BE COORDINATED WITH THE OWNER.

1 / C100 SITE LAYOUT PLAN - WEST
SCALE: 1"= 20'

0' 20' 40'

N

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

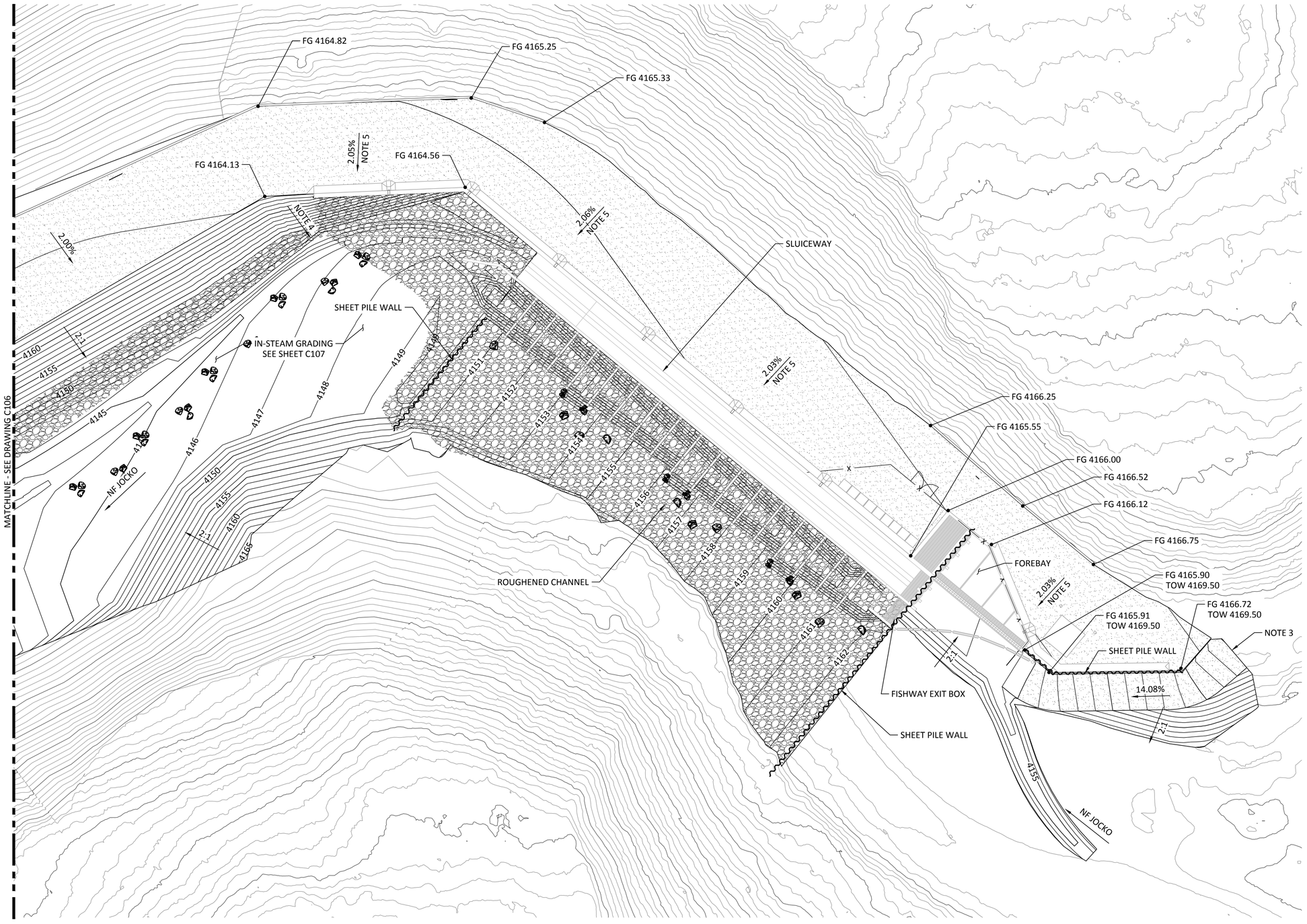
SITE LAYOUT PLAN - WEST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C104

JOB NO: 21-094

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SHEET NOTES:

1. CUT AND FILL SLOPES SHALL TYPICALLY BE 2H:1V UNO.
2. PROVIDE SMOOTH UNIFORM SLOPES BETWEEN FINISH GRADING POINTS INDICATED.
3. MATCH EXISTING GRADE AND PROVIDE SMOOTH TRANSITION BETWEEN ALL NEW ROAD SURFACING AND EXISTING ROADS.
4. SLOPE RIPRAP AS REQUIRED AGAINST WALL FOR TIE-IN TO ADJACENT FILL MATERIALS.
5. SLOPE TO PROVIDE POSITIVE DRAINAGE TOWARD SURFACE DRAINAGE SYSTEM. SEE SHEET C110 FOR STORM DRAIN SYSTEM.

1 C100 SITE GRADING PLAN - EAST
SCALE: 1"= 20'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
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WARNING
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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

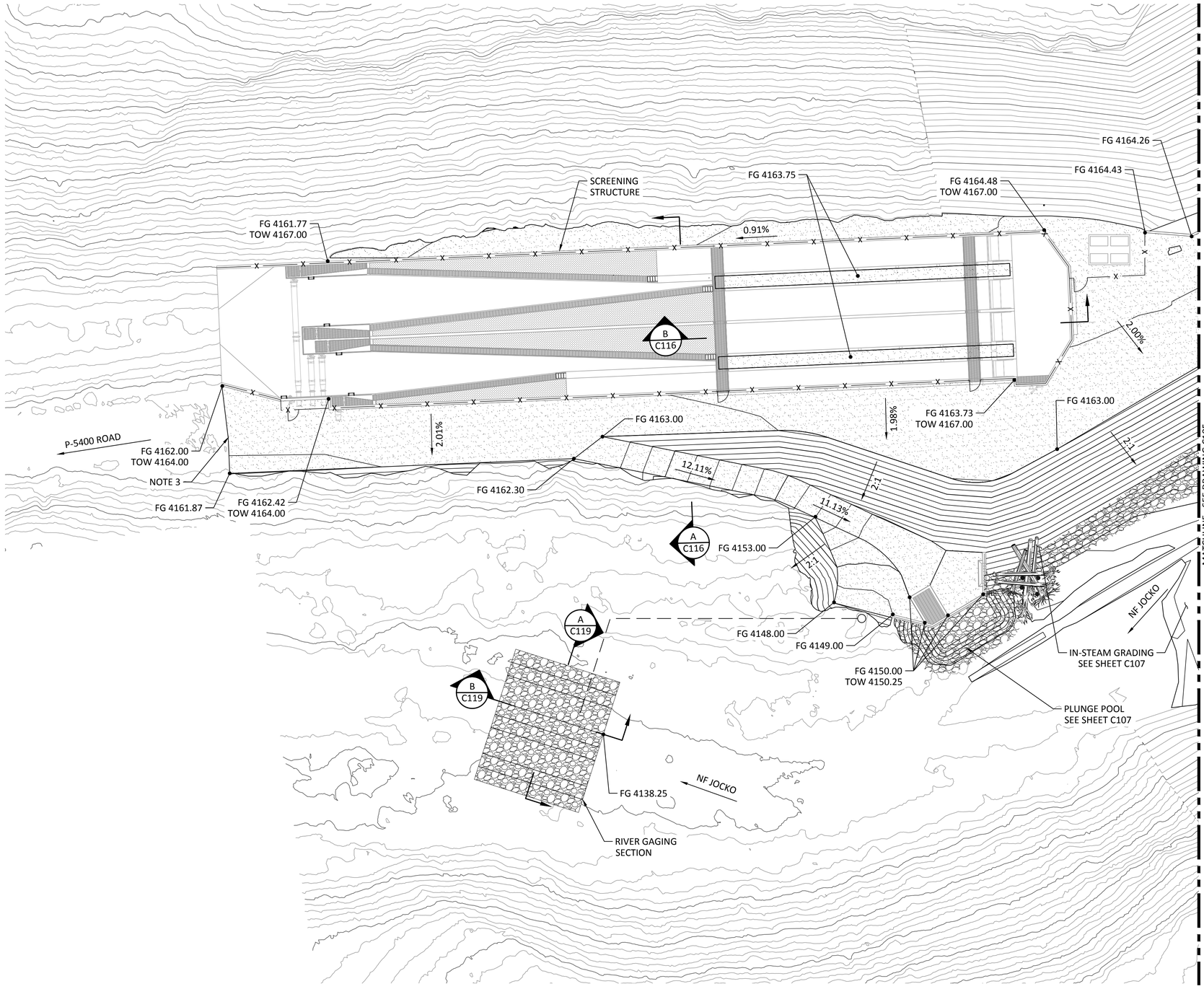
SITE GRADING PLAN - EAST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C105

JOB NO: 21-094

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1 C100 SITE GRADING PLAN - WEST
SCALE: 1"= 20'
0" 20' 40'

N

SHEET NOTES:

1. CUT AND FILL SLOPES SHALL TYPICALLY BE 2H:1V UNO.
2. PROVIDE SMOOTH UNIFORM SLOPES BETWEEN FINISH GRADING POINTS INDICATED.
3. MATCH EXISTING GRADE AND PROVIDE SMOOTH TRANSITION BETWEEN ALL NEW ROAD SURFACING AND EXISTING ROADS.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
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WARNING
0 1/2 1
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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SITE GRADING PLAN - WEST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

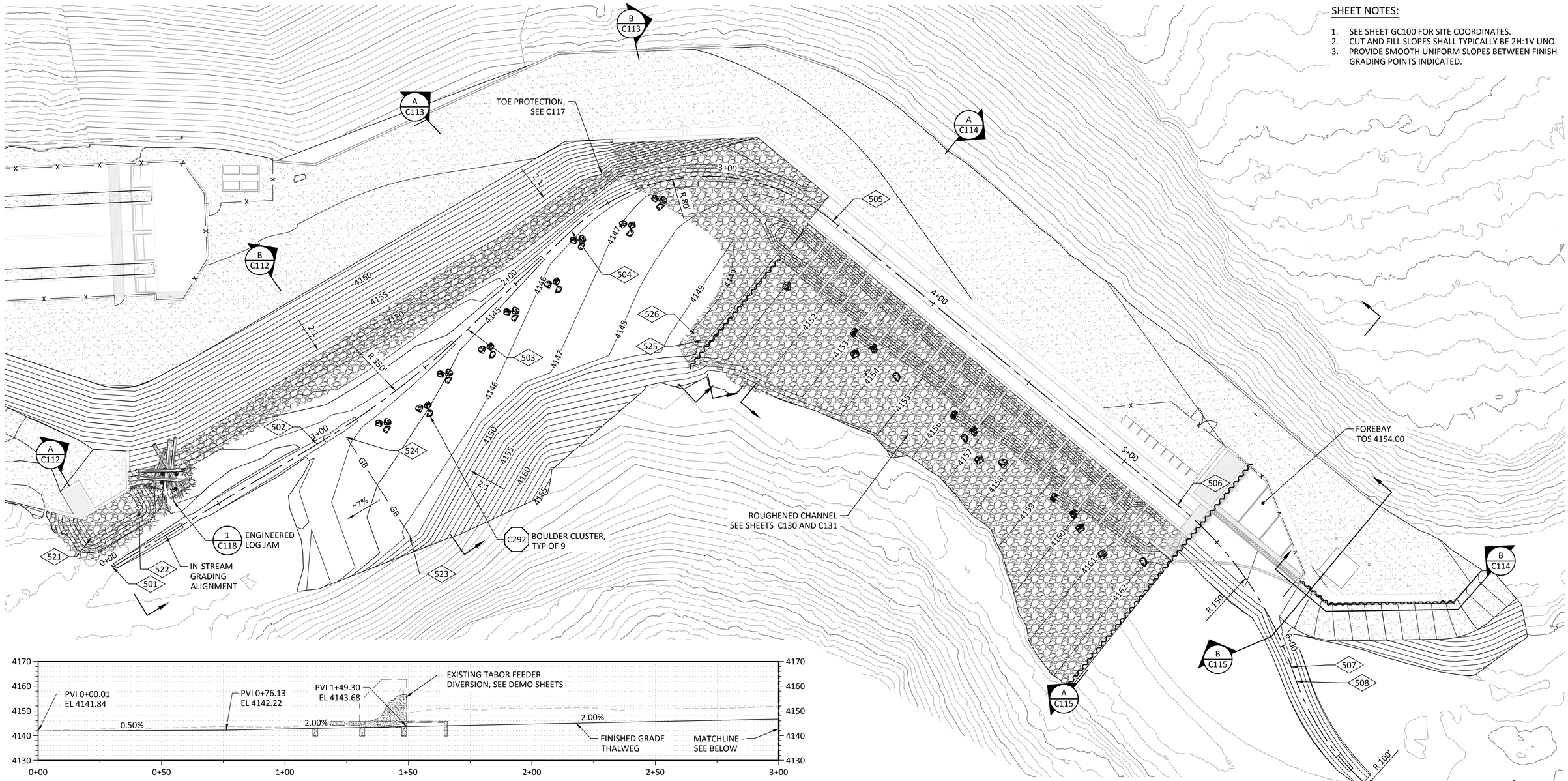
DRAWING
C106

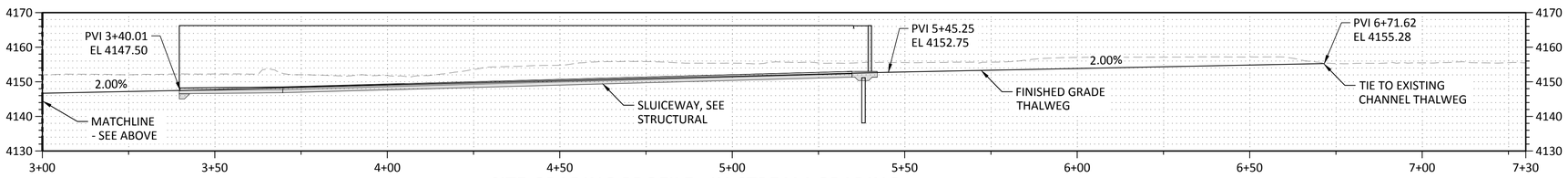
JOB NO: 21-094

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SHEET NOTES:

1. SEE SHEET GC100 FOR SITE COORDINATES.
2. CUT AND FILL SLOPES SHALL TYPICALLY BE 2H:1V UNO.
3. PROVIDE SMOOTH UNIFORM SLOPES BETWEEN FINISH GRADING POINTS INDICATED.





SITE GRADING PROFILE - IN-STREAM GRADING

SCALE: 1"= 20'

1 C100 SITE GRADING PLAN - IN-STREAM GRADING

SCALE: 1"= 20'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

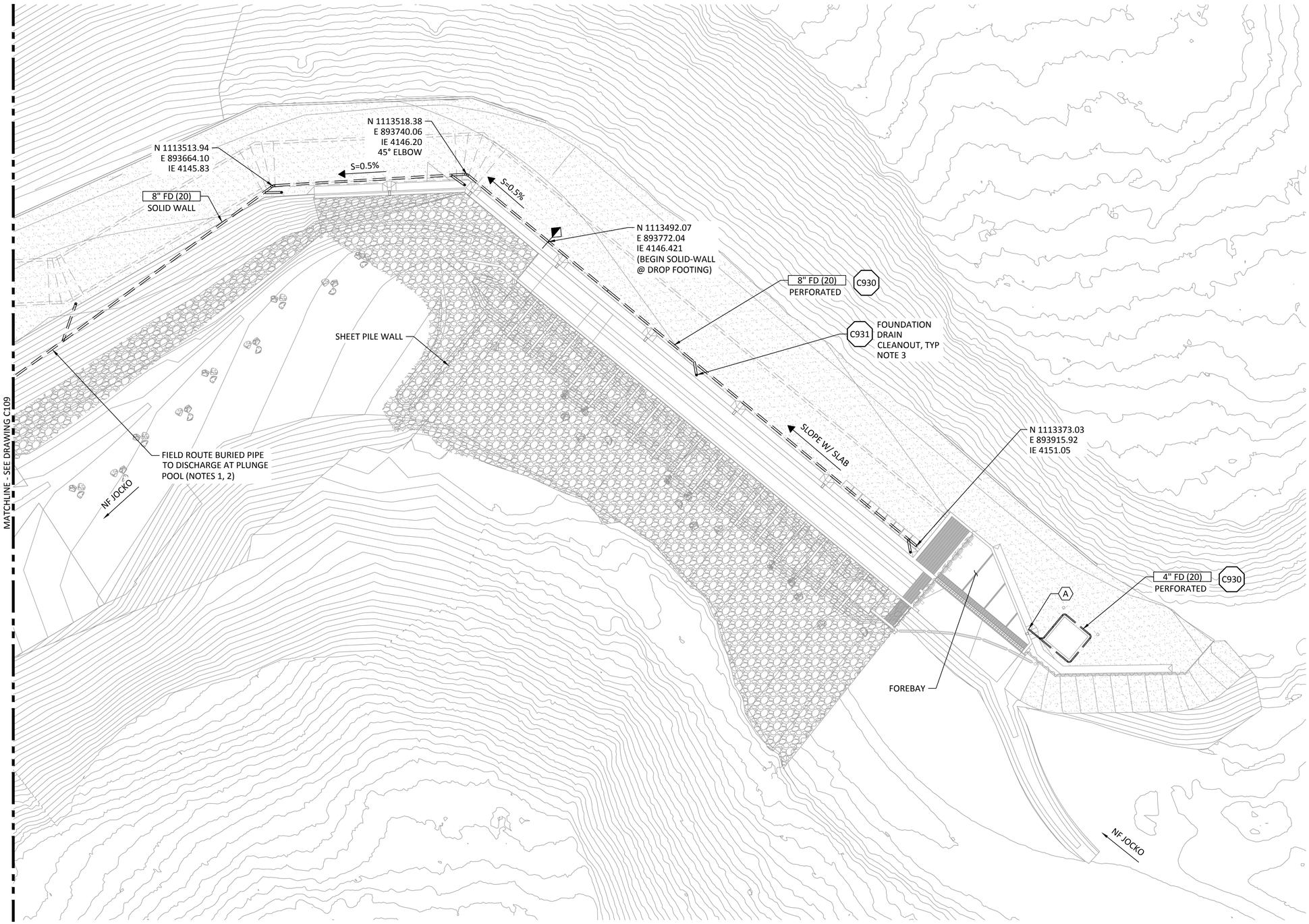
SITE GRADING PLAN AND PROFILE - IN-STREAM GRADING

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C107

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C107.dwg Plot date: Feb 11, 2025 05:42pm, CAD User: JoeNeves



SHEET NOTES:

1. PIPE SHALL MAINTAIN 0.5% MIN. SLOPE TO OUTLET AT PLUNGE POOL.
2. PIPE BENDS SHALL BE NO GREATER THAN 45° FOR FUTURE MONITORING AND MAINTENANCE.
3. CLEANOUTS REQUIRED AT ALL BENDS AND EVERY 100' OF STRAIGHT RUN OF PIPE.
4. FOUNDATION DRAIN SHOP DRAWINGS, INCLUDING CLEANOUTS AND CLEARANCES TO ALL OBSTRUCTIONS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PROCUREMENT.

SHEET KEY NOTES:

A. DISCHARGE BLDG SLAB FOUNDATION DRAINS TO WALL TYPE DRG BACKFILL.

1 / C100 FOUNDATION DRAINAGE PLAN - EAST

SCALE: 1"= 20'

0" 20' 40'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

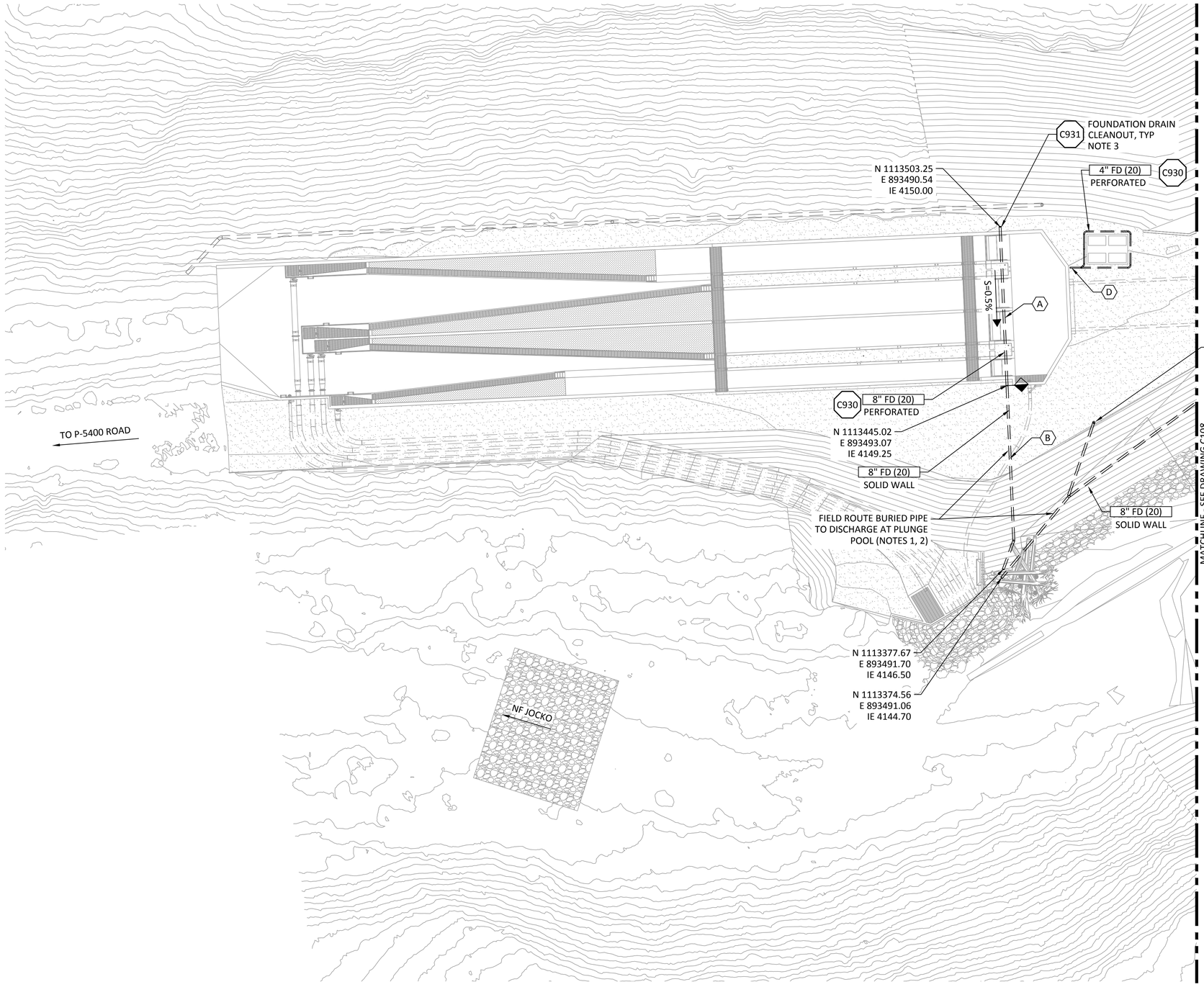
FOUNDATION DRAINAGE PLAN - EAST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C108

JOB NO: 21-094

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1 C100 FOUNDATION DRAINAGE PLAN - WEST

SCALE: 1"= 20'

0" 20' 40'

SHEET NOTES:

1. PIPE SHALL MAINTAIN 0.5% MIN. SLOPE TO OUTLET AT PLUNGE POOL.
2. PIPE BENDS SHALL BE NO GREATER THAN 45° FOR FUTURE MONITORING AND MAINTENANCE.
3. CLEANOUTS REQUIRED AT ALL BENDS AND EVERY 100' OF STRAIGHT RUN OF PIPE.
4. FOUNDATION DRAIN SHOP DRAWINGS, INCLUDING CLEANOUTS AND CLEARANCES TO ALL OBSTRUCTIONS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PROCUREMENT.

SHEET KEY NOTES:

A. ROUTE PIPE IN DRAINAGE LAYER BELOW SLAB. THICKEN 6" DRAINAGE LAYER AS REQUIRED TO ACCOMMODATE THE PIPE SLOPE / INVERT ELEVATIONS.

B. PIPE CROSSES UNDER SEDIMENT DRAIN, WITH APPROXIMATELY 2.5' OF CLEARANCE. CONTRACTOR SHALL CONFIRM. IF CLEARANCE IS LESS THAN 1.0', CLSM SHALL BE USED LOCALLY FOR PIPE TRENCH BACKFILL.

C. FOUNDATION DRAINS DISCHARGE TO RIPRAP LINED SLOPE ABOVE THE PLUNGE POOL AT ELEVATION 4146.50.

D. DISCHARGE BLDG SLAB FOUNDATION DRAINS TO DRAINAGE LAYER UNDER SCREENING STRUCTURE.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
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WARNING
0 1/2 1
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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

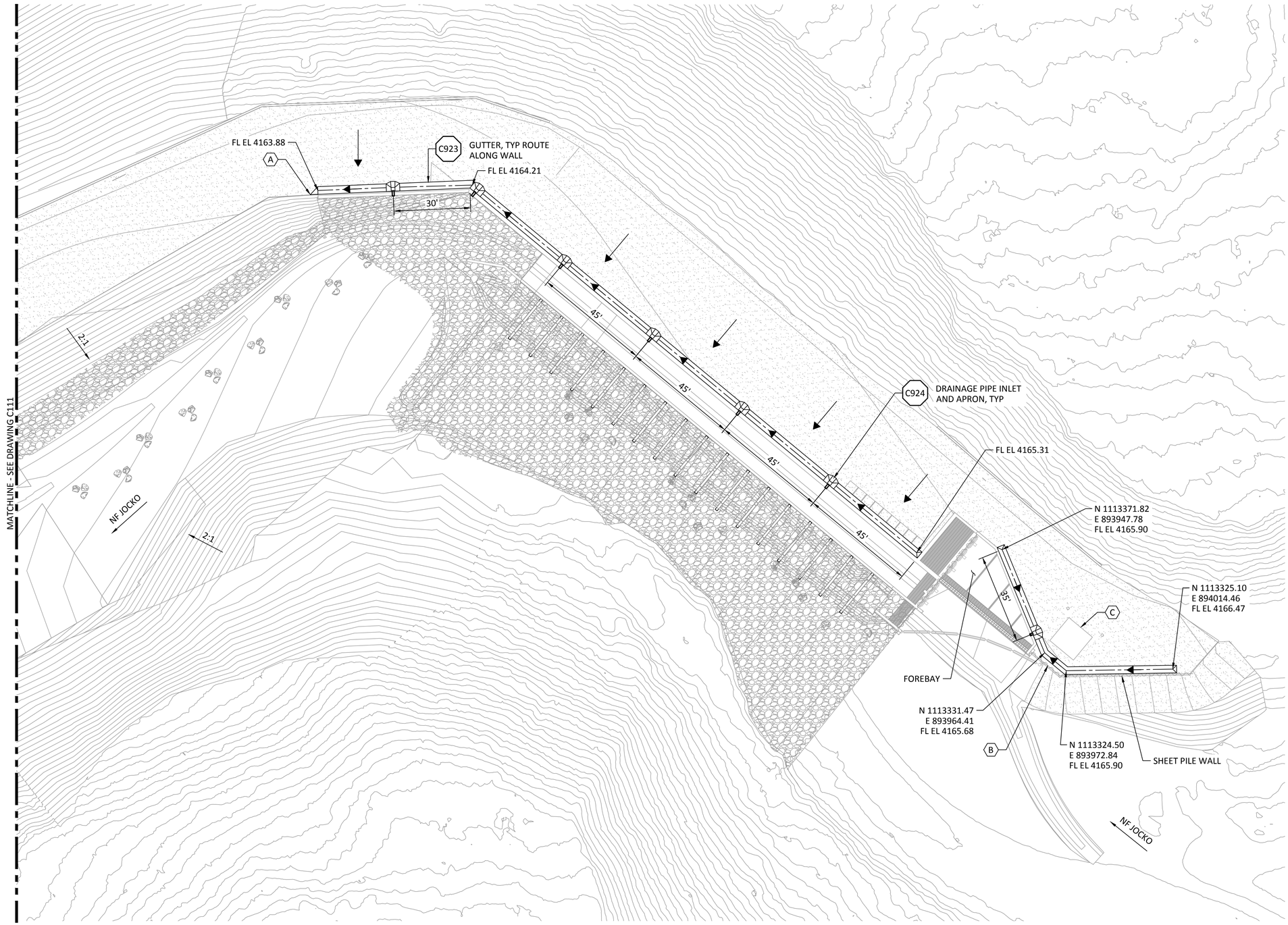
FOUNDATON DRAINAGE PLAN - WEST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C109

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C109.dwg Plot date: Feb 11, 2025 05:42pm, CAD User: JoeNeves



SHEET NOTES:

1. SLOPE UNIFORMLY BETWEEN FLOW LINES, EXCEPT AT DRAINAGE PIPE INLETS AND APRONS.

SHEET KEY NOTES:

A. ROUTE 3" DEEP GUTTER AROUND EDGE OF WALL, AND DISCHARGE TO RIPRAP LINED SLOPE.

B. GRADE AWAY FROM SHEET PILE WALL TOWARD GUTTER. NO AREAS OF STANDING WATER WILL BE ACCEPTABLE.

C. GRADE AWAY FROM CONTROLS STRUCTURE AT 5% GRADE FOR 10' ALL-AROUND, OR TO DRAINAGE GUTTER AS ELEV PERMIT.

LEGEND:

DRAINAGE PATH

FLOW LINE

1 / C100 SURFACE DRAINAGE PLAN - EAST

SCALE: 1"= 20'

0" 20' 40'

N

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

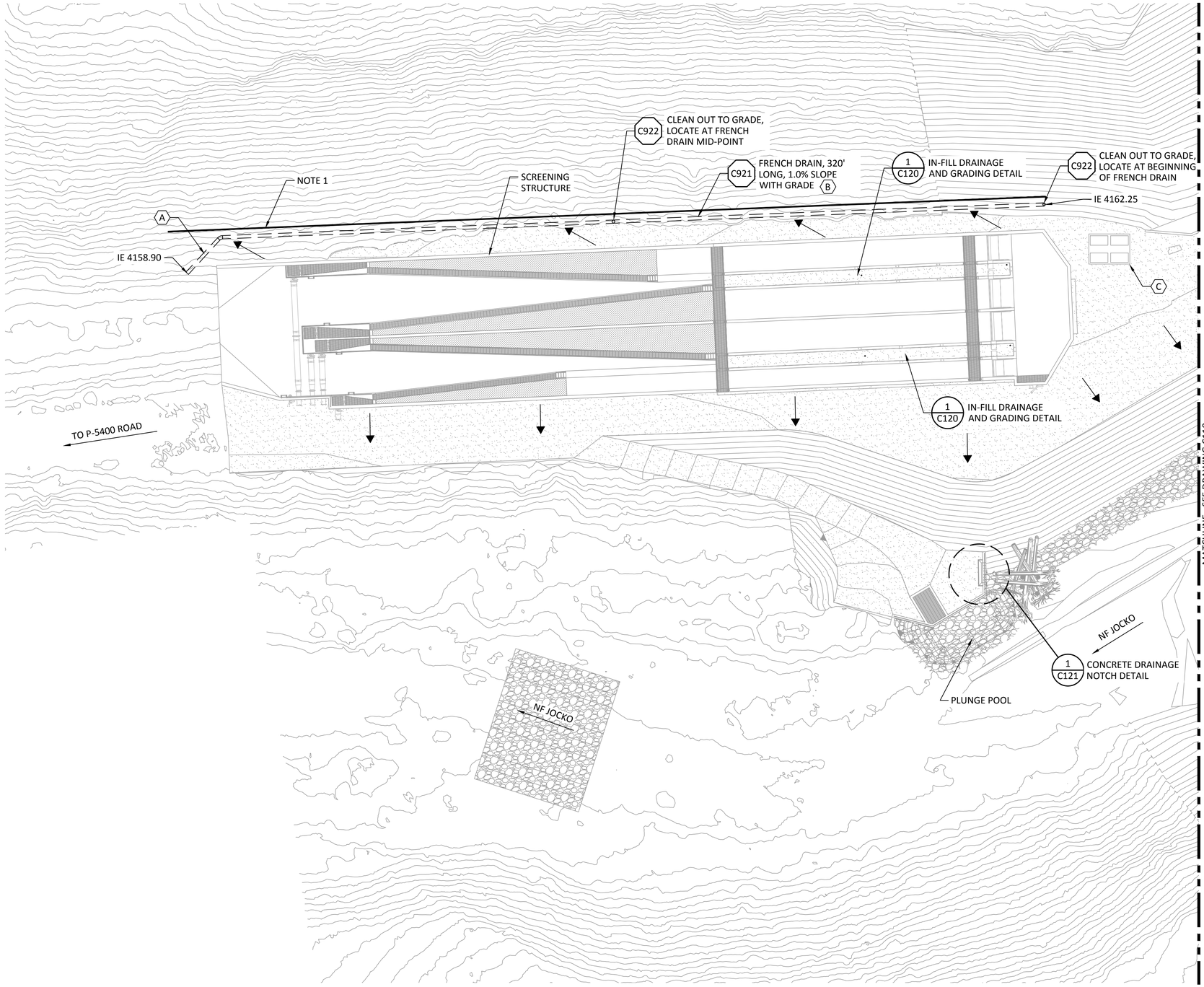
SURFACE DRAINAGE PLAN - EAST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C110

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C110.dwg Plot date: Feb 11, 2025 04:26pm, CAD User: JoeNeves



1 C100 SURFACE DRAINAGE PLAN - WEST

SCALE: 1"= 20'

0" 20' 40'

N

SHEET NOTES:

1. TEMPORARY SHORING TO REMAIN IN PLACE SUBJECT TO CONTRACTOR'S DESIGN. ESTIMATED SHORING LOCATION SHOWN 10' FROM STRUCTURE FOOTING.

SHEET KEY NOTES:

A. DISCHARGE FROM FRENCH DRAIN TO RIPRAP LINED SLOPE IN THE CANAL.

B. LOCATE FRENCH DRAIN ADJACENT TO SHORING USED FOR CONSTRUCTION OF SCREENING STRUCTURE. SEE SECTION ON C116 FOR DETAILS.

C. GRADE AWAY FROM CONTROLS STRUCTURE AT 5% GRADE FOR 10' ALL-AROUND.

LEGEND:

DRAINAGE PATH

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

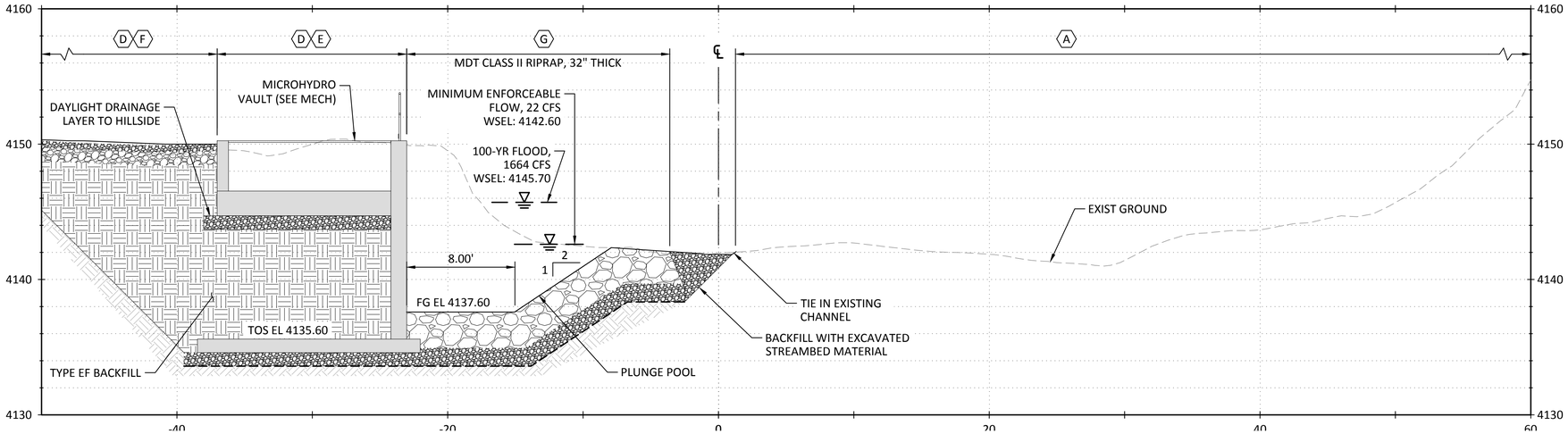
SURFACE DRAINAGE PLAN - WEST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C111

JOB NO: 21-094

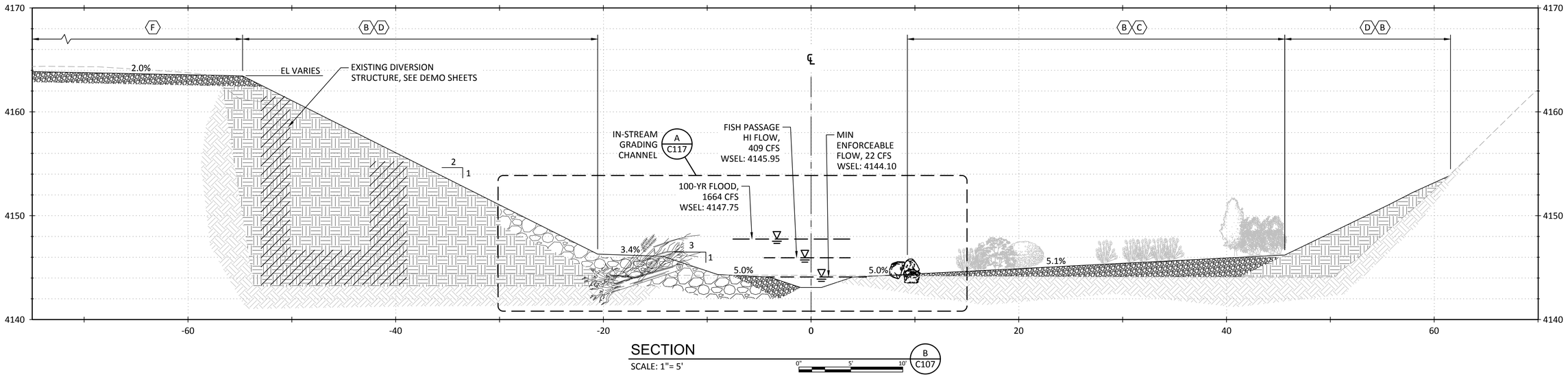
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SECTION

SCALE: 1"= 5'

A C107



SECTION

SCALE: 1"= 5'

B C107

SHEET NOTES:

1. EARTHWORK MATERIALS AND PLACEMENT/ COMPACTION REQUIREMENTS ARE DEFINED IN SPECIFICATION 31 00 00.

SHEET KEY NOTES:

A. PROTECT EXISTING WETLANDS

B. SEE RESTORATION DRAWINGS.

C. EXCAVATED STREAMBED MATERIAL.

D. TYPE EF EMBANKMENT FILL.

E. 6" THICK TYPE DRG LEVELING LAYER WITH GEOTEXTILE UNDERLAY UNDER HYDRAULIC STRUCTURES. EXTEND 1' BEYOND, ALL SIDES

F. GRAVEL SURFACING PER STANDARD DETAIL C135.

G. RIPRAP LAYER PER STANDARD DETAIL C202 (SIZE INDICATED ON SECTION).

H. PIPE TRENCH PER STANDARD DETAIL C601.

I. GROUTED RIPRAP AND FILTER LAYER. SEE SHEETS C123- C124.

J. REVEGETATE / HYDROSEED WITH NATIVE PLANT MIX.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

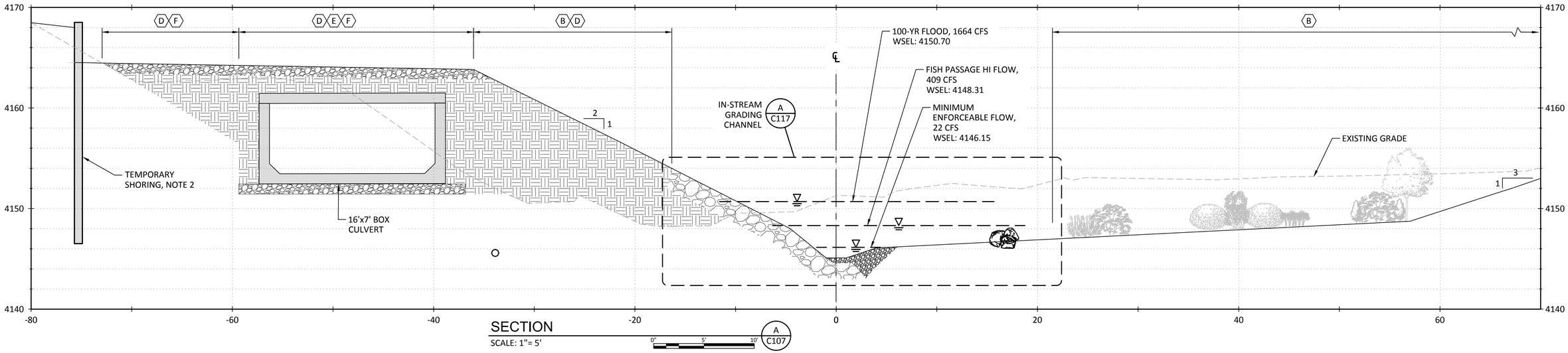
SITE GRADING SECTIONS 1

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C112

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C112.dwg Plot date: Feb 11, 2025 04:27pm, CAD User: JoeNeves

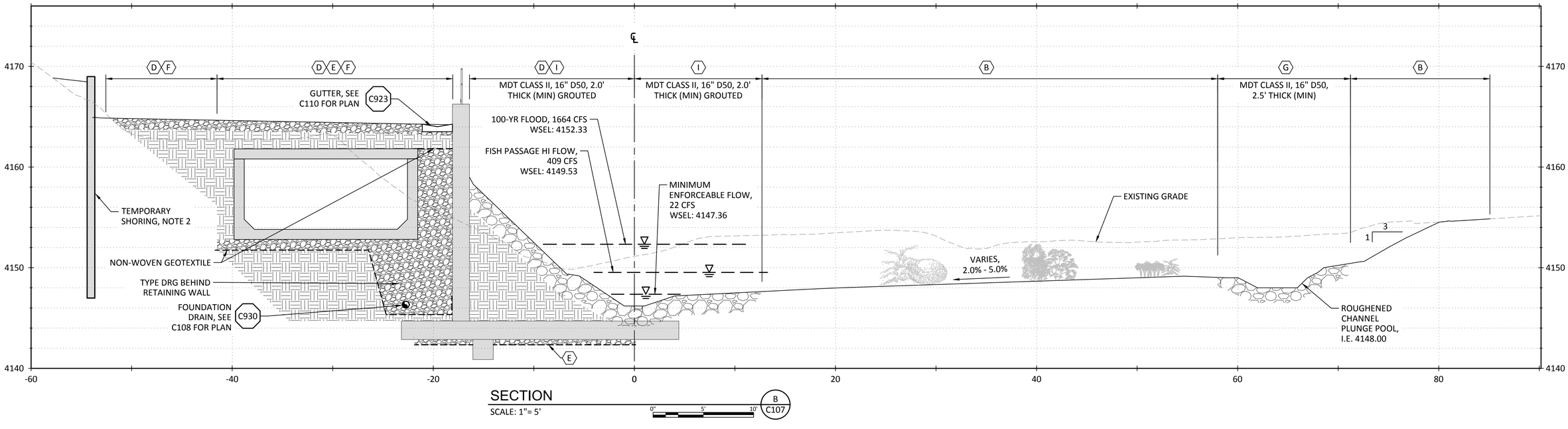


SECTION

SCALE: 1"= 5'

0" 5' 10'

A C107



SECTION

SCALE: 1"= 5'

0" 5' 10'

B C107

SHEET NOTES:

1. EARTHWORK MATERIALS AND PLACEMENT/ COMPACTION REQUIREMENTS ARE DEFINED IN SPECIFICATION 31 00 00.
2. TEMPORARY SHORING SHOWN AS CONCEPTUAL, AND IS NOT REPRESENTATIVE OF SHORING WALL DESIGN (E.G., DEPTHS, WALL TYPE, ETC.). TEMPORARY SHORING SHALL BE DESIGNED AND STAMPED BY THE SHORING SUBCONTRACTOR'S LICENSED, QUALIFIED ENGINEER IN THE STATE OF MONTANA. IN SOME LOCATIONS A PERMANENT WALL SHALL EXTEND ABOVE GRADE. WALL TYPE, HEIGHT, AND FINISHES SHALL BE COORDINATED WITH AND APPROVED BY THE COR AND ENGINEER PRIOR TO MOBILIZATION BY THE SHORING SUBCONTRACTOR.

SHEET KEY NOTES:

A. PROTECT EXISTING WETLANDS

B. SEE RESTORATION DRAWINGS.

C. EXCAVATED STREAMBED MATERIAL.

D. TYPE EF EMBANKMENT FILL

E. 6" THICK TYPE DRG LEVELING LAYER WITH GEOTEXTILE UNDERLAY UNDER HYDRAULIC STRUCTURES. EXTEND 1' BEYOND, ALL SIDES

F. GRAVEL SURFACING PER STANDARD DETAIL C135.

G. RIPRAP LAYER PER STANDARD DETAIL C202 (SIZE INDICATED ON SECTION).

H. PIPE TRENCH PER STANDARD DETAIL C601.

I. GROUTED RIPRAP AND FILTER LAYER. SEE SHEETS C123-C124

J. REVEGETATE / HYDROSEED WITH NATIVE PLANT MIX.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SITE GRADING SECTIONS 2

DESIGNED A. LEMAN

DRAWN J. NEVES

CHECKED V. AUTIER

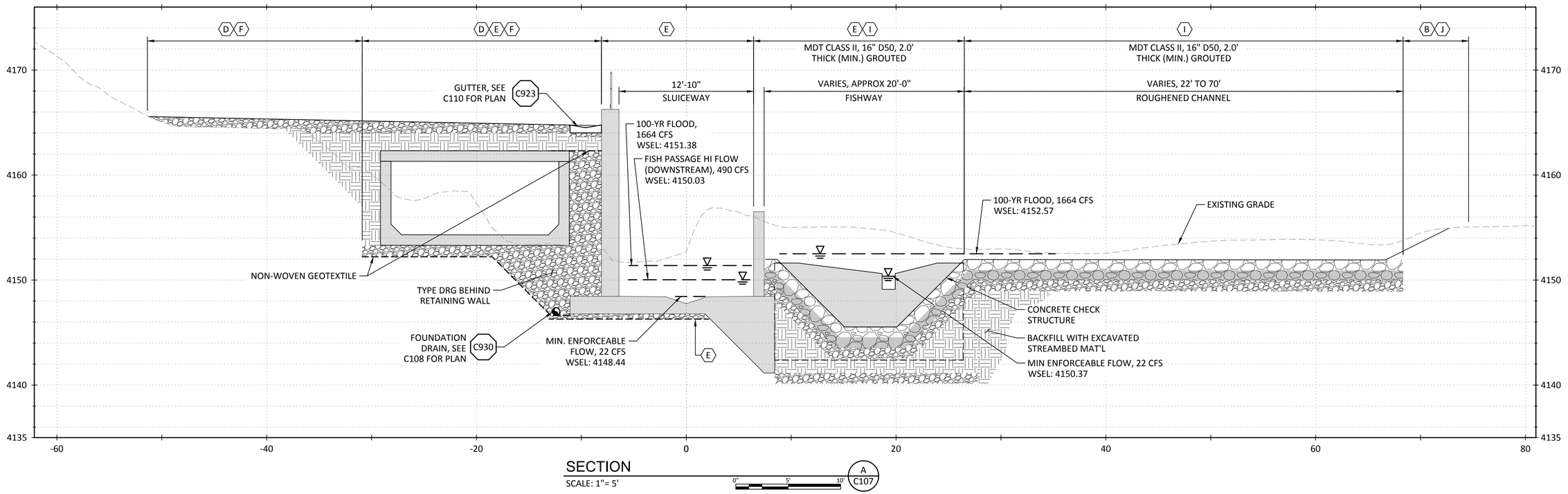
PROJECT DATE 02/14/25

DRAWING

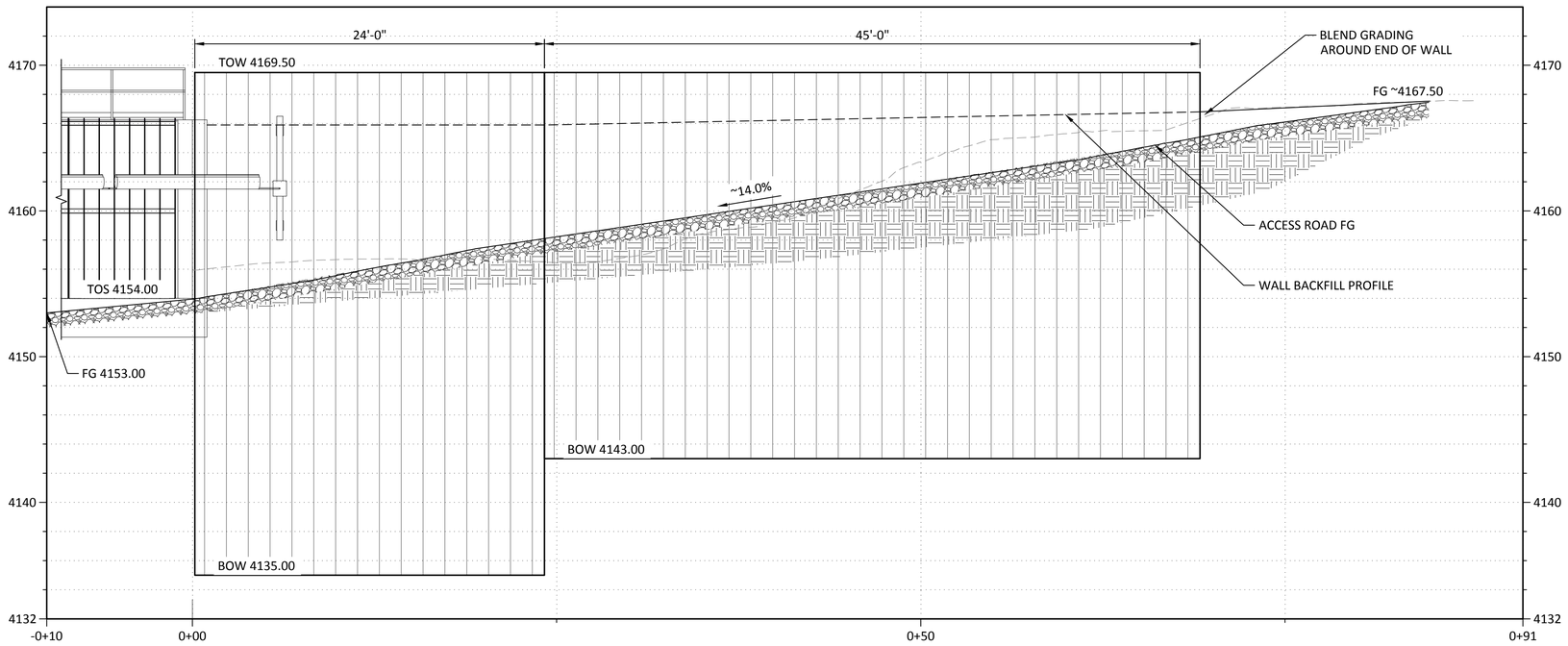
C113

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C113.dwg Plot date: Feb 11, 2025 04:28pm, CAD User: JoeNeves



SECTION
SCALE: 1"= 5'
0" 5' 10'
A C107



SECTION
SCALE: 1"= 5'
0" 5' 10'
B C107

SHEET NOTES:

1. EARTHWORK MATERIALS AND PLACEMENT/ COMPACTION REQUIREMENTS ARE DEFINED IN SPECIFICATION 31 00 00.
2. TEMPORARY SHORING, TRENCH SHIELD, OR OTHER MEANS REQUIRED FOR SAFE INSTALLATION OF BOX CULVERT.

SHEET KEY NOTES:

A. PROTECT EXISTING WETLANDS

B. SEE RESTORATION DRAWINGS.

C. EXCAVATED STREAMBED MATERIAL.

D. TYPE EF EMBANKMENT FILL

E. 6" THICK TYPE DRG LEVELING LAYER WITH GEOTEXTILE UNDERLAY UNDER HYDRAULIC STRUCTURES. EXTEND 1' BEYOND, ALL SIDES

F. GRAVEL SURFACING PER STANDARD DETAIL C135.

G. RIPRAP LAYER PER STANDARD DETAIL C202 (SIZE INDICATED ON SECTION).

H. PIPE TRENCH PER STANDARD DETAIL C601.

I. GROUTED RIPRAP AND FILTER LAYER. SEE SHEETS C123 - C124.

J. REVEGETATE / HYDROSEED WITH NATIVE PLANT MIX.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

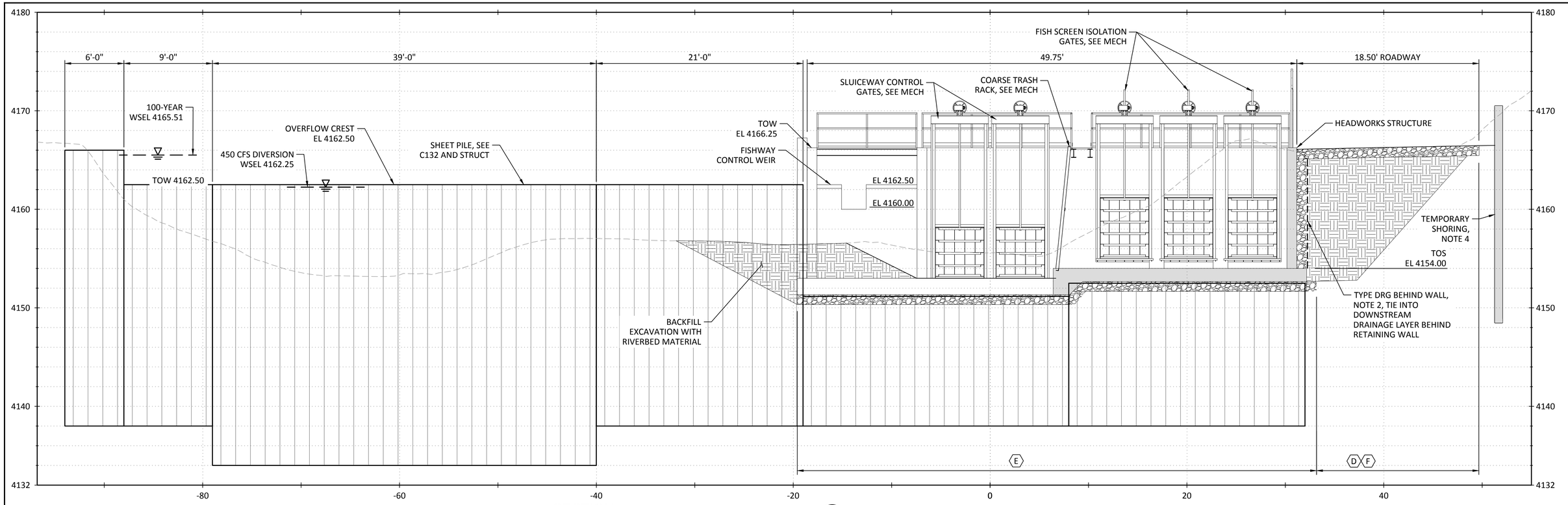
SITE GRADING SECTIONS 3

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C114

JOB NO: 21-094

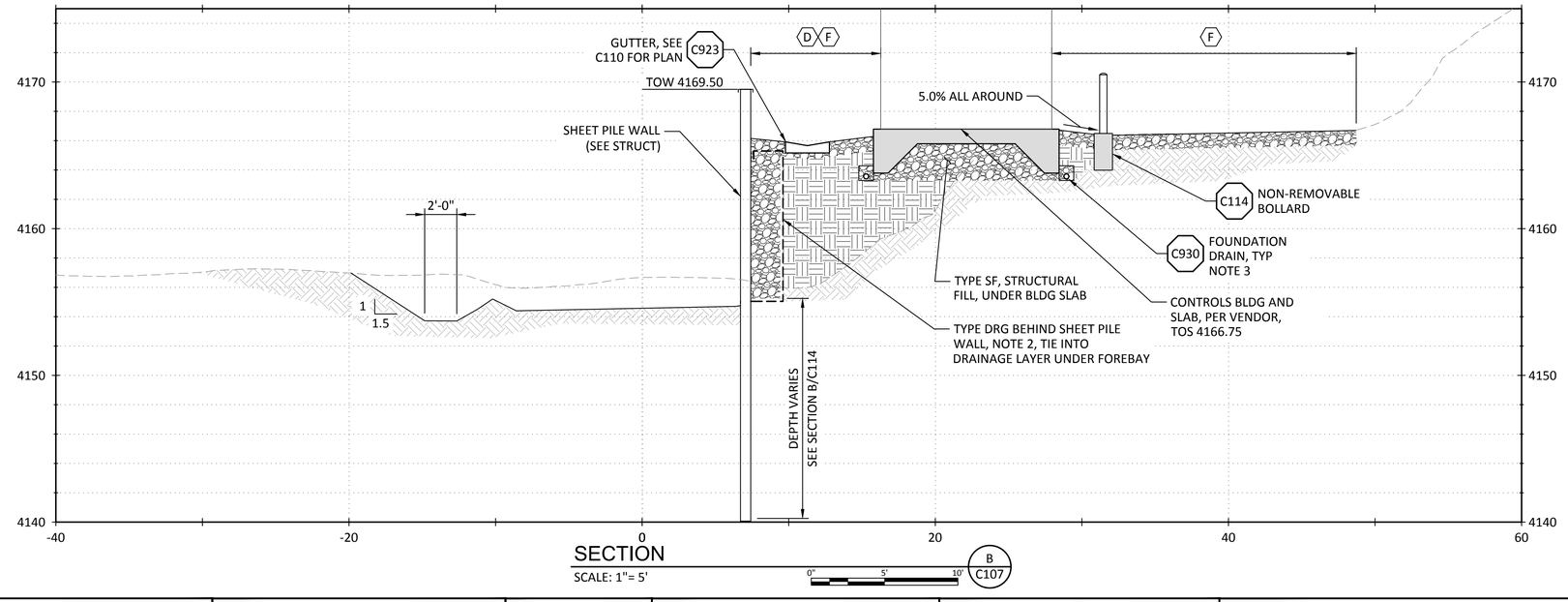
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C114.dwg Plot date: Feb 11, 2025 04:29pm, CAD User: JoeNeves



SECTION

SCALE: 1"= 5'

A C107



SECTION

SCALE: 1"= 5'

B C107

SHEET NOTES:

1. EARTWORK MATERIALS AND PLACEMENT/ COMPACTION REQUIREMENTS ARE DEFINED IN SPECIFICATION 31 00 00.
2. WRAP 1.0' THICK SECTION OF TYPE DRG IN NON-WOVEN GEOTEXTILE. TIE-IN TO ADJACENT DRAINAGE LAYERS AS INDICATED.
3. PIPE 4" FOUNDATION DRAINS TO WALL TYPE DRG BACKFILL.
4. TEMPORARY SHORING SHOWN AS CONCEPTUAL, AND IS NOT REPRESENTATIVE OF SHORING WALL DESIGN (E.G., DEPTHS, WALL TYPE, ETC.). TEMPORARY SHORING SHALL BE DESIGNED AND STAMPED BY THE SHORING SUBCONTRACTOR'S LICENSED, QUALIFIED ENGINEER IN THE STATE OF MONTANA. IN SOME LOCATIONS A PERMANENT WALL SHALL EXTEND ABOVE GRADE. WALL TYPE, HEIGHT, AND FINISHES SHALL BE COORDINATED WITH AND APPROVED BY THE COR AND ENGINEER PRIOR TO MOBILIZATION BY THE SHORING SUBCONTRACTOR.

SHEET KEY NOTES:

A. PROTECT EXISTING WETLANDS.

B. SEE RESTORATION DRAWINGS.

C. EXCAVATED STREAMBED MATERIAL.

D. TYPE EF EMBANKMENT FILL.

E. 6" THICK TYPE DRG LEVELING LAYER WITH GEOTEXTILE UNDERLAY UNDER HYDRAULIC STRUCTURES. EXTEND 1' BEYOND, ALL SIDES

F. GRAVEL SURFACING PER DETAIL C135.

G. RIPRAP LAYER PER DETAIL C202 (SIZE INDICATED ON SECTION).

H. PIPE TRENCH PER DETAIL C601.

I. GROUTED RIPRAP AND FILTER LAYER. SEE SHEETS C123-C124.

J. REVEGETATE / HYDROSEED WITH NATIVE PLANT MIX.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SITE GRADING SECTIONS 4

DESIGNED A. LEMAN

DRAWN J. NEVES

CHECKED V. AUTIER

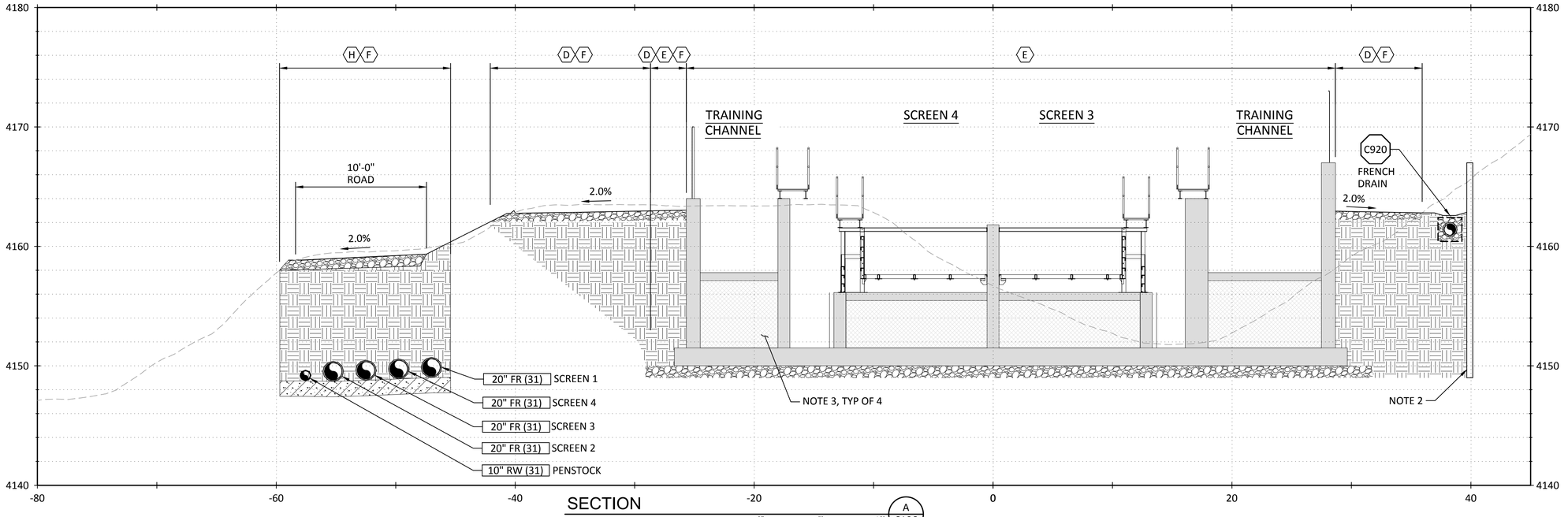
PROJECT DATE 02/14/25

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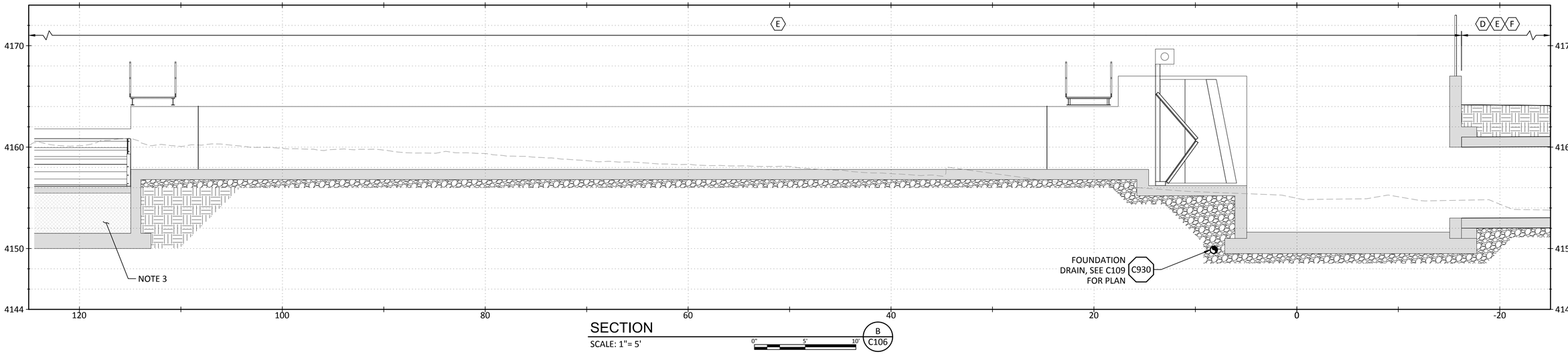
C115

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C115.dwg Plot date: Feb 11, 2025 04:30pm, CAD User: JoeNeves



SECTION
SCALE: 1"= 5'
0" 5' 10'
A C106



SECTION
SCALE: 1"= 5'
0" 5' 10'
B C106

SHEET NOTES:

1. EARTHWORK MATERIALS AND PLACEMENT/ COMPACTION REQUIREMENTS ARE DEFINED IN SPECIFICATION 31 00 00.
2. TEMPORARY SHORING AS REQUIRED FOR CONSTRUCTION OF SCREENING STRUCTURE. TEMPORARY SHORING SHALL BE A CONTRACTOR DESIGN STAMPED AND SIGNED BY A LICENSED ENGINEER AND SUBMITTED AS PART OF THE EXCAVATION PLAN.
3. AT THE CONTRACTOR'S OPTION, BACKFILL ON TOP OF LOWER SLAB WITH COMPACTED GRANULAR FILL (TYPE BC OR TYPE SF), CLSM, OR GEOFOAM PER SPECIFICATIONS.

SHEET KEY NOTES:

A. PROTECT EXISTING WETLANDS
B. SEE RESTORATION DRAWINGS.
C. EXCAVATED STREAMBED MATERIAL.
D. TYPE EF EMBANKMENT FILL.
E. 6" THICK TYPE DRG LEVELING LAYER WITH GEOTEXTILE UNDERLAY UNDER HYDRAULIC STRUCTURES. EXTEND 1' BEYOND, ALL SIDES.
F. GRAVEL SURFACING PER STANDARD DETAIL C135.
G. RIPRAP LAYER PER STANDARD DETAIL C202 (SIZE INDICATED ON SECTION).
H. PIPE TRENCH PER STANDARD DETAIL C601.
I. GROUTED RIPRAP, SEE SHEET C124.
J. REVEGETATE / HYDROSEED WITH NATIVE PLANT MIX.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

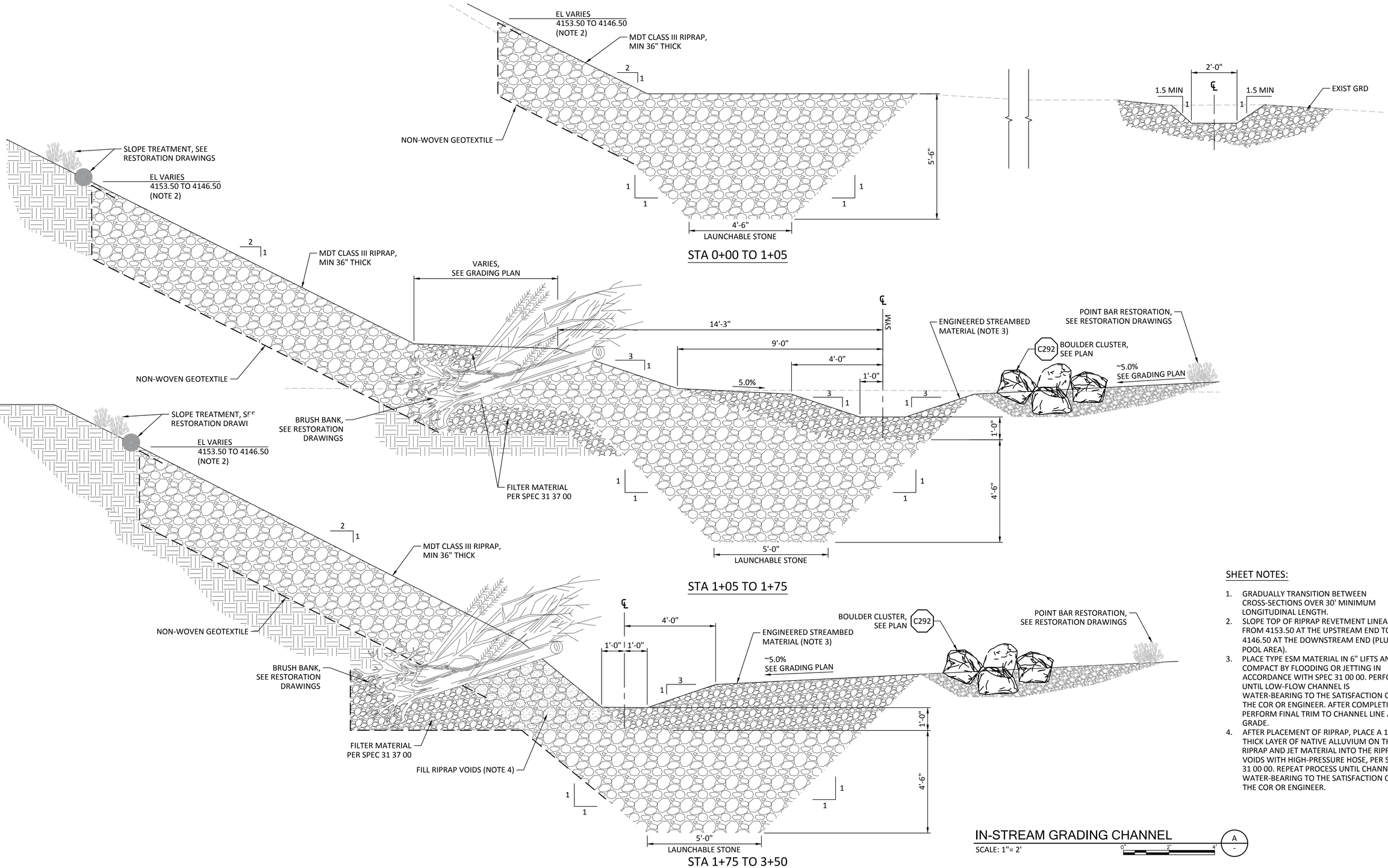
McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
SITE GRADING SECTIONS 5

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C116

JOB NO: 21-094
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C116.dwg Plot date: Feb 11, 2025 04:30pm, CAD User: JoeNeves



IN-STREAM GRADING CHANNEL

SCALE: 1"= 2'

A

SHEET NOTES:

1. GRADUALLY TRANSITION BETWEEN CROSS-SECTIONS OVER 30' MINIMUM LONGITUDINAL LENGTH.
2. SLOPE TOP OF RIPRAP REVETMENT LINEARLY FROM 4153.50 AT THE UPSTREAM END TO 4146.50 AT THE DOWNSTREAM END (PLUNGE POOL AREA).
3. PLACE TYPE ESM MATERIAL IN 6" LIFTS AND COMPACT BY FLOODING OR JETTING IN ACCORDANCE WITH SPEC 31 00 00. PERFORM UNTIL LOW-FLOW CHANNEL IS WATER-BEARING TO THE SATISFACTION OF THE COR OR ENGINEER. AFTER COMPLETION, PERFORM FINAL TRIM TO CHANNEL LINE AND GRADE.
4. AFTER PLACEMENT OF RIPRAP, PLACE A 12" THICK LAYER OF NATIVE ALLUVIUM ON THE RIPRAP AND JET MATERIAL INTO THE RIPRAP VOIDS WITH HIGH-PRESSURE HOSE, PER SPEC 31 00 00. REPEAT PROCESS UNTIL CHANNEL IS WATER-BEARING TO THE SATISFACTION OF THE COR OR ENGINEER.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

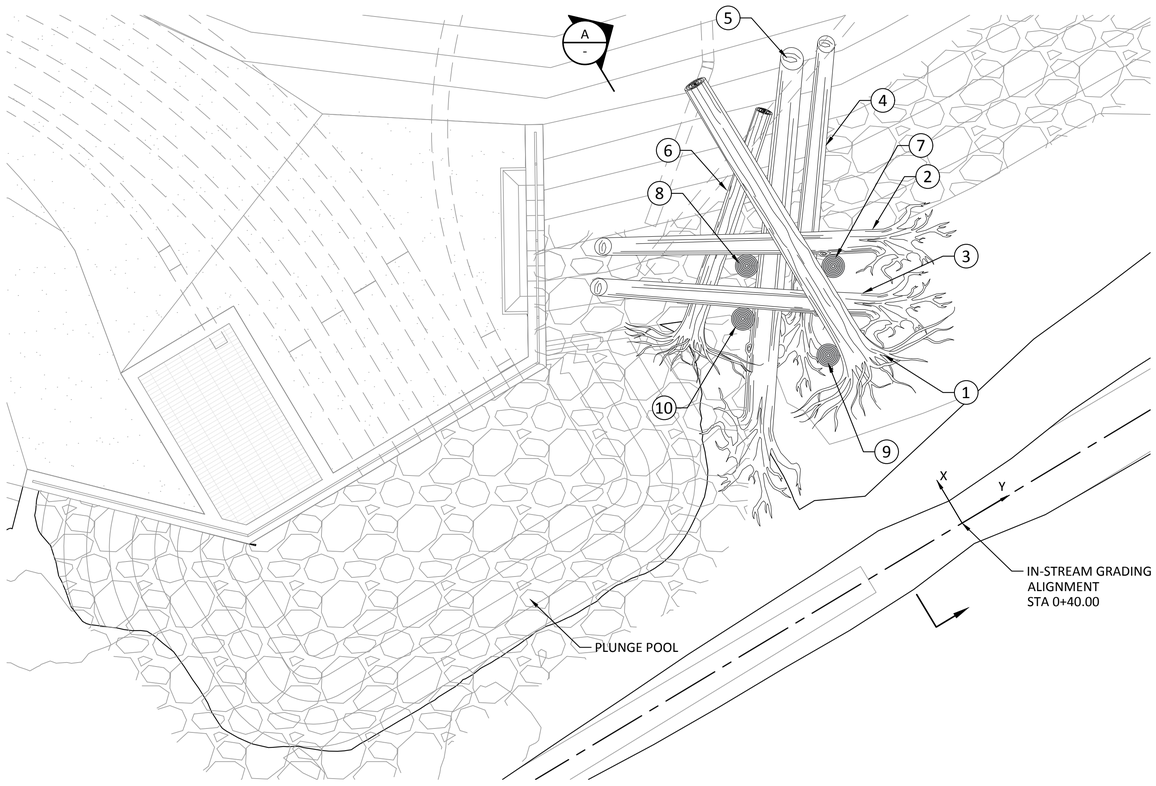
SITE GRADING DETAILS 1 - CHANNEL GRADING

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

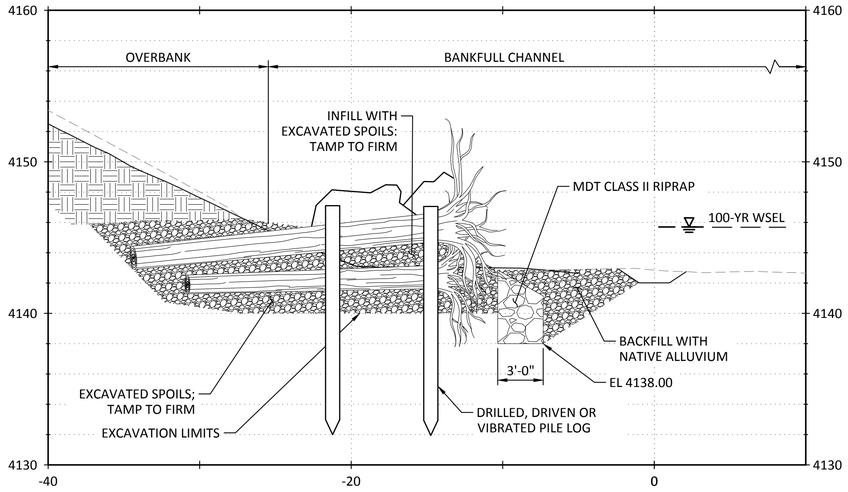
DRAWING
C117

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C117.dwg Plot date: Feb 11, 2025 04:31pm, CAD User: JoeNeves



1 C107 ENGINEERED LOG JAM DETAIL
SCALE: 1"= 5'



A - SECTION
SCALE: 1"= 5'

SHEET NOTES:

1. DIAMETER AT BREAST HEIGHT (DBH) MEASURED APPROXIMATELY 4.5 FEET UP FROM BASE OF STEM.
2. LENGTHS MEASURED DO NOT INCLUDE ROOTWAD.
3. ANGLE α INDICATES ROOTWAD ORIENTATION TO CHANNEL. ZERO (0 OR 360) DEG = ROOTWAD POINTED UPSTREAM PARALLEL WITH CHANNEL; 90 DEG = ROOTWAD POINTED TOWARDS RIGHT BANK, PERPENDICULAR TO CHANNEL; 180 DEG = ROOTWAD POINTED DOWNSTREAM, PARALLEL TO CHANNEL; 270 DEG = ROOTWAD POINTED TOWARDS LEFT BANK, PERPENDICULAR TO CHANNEL.
4. ANGLE β INDICATES ANGLE (TILT) OF LOG TO VERTICAL. ZERO (0) DEG = STEM LAYING FLAT; (+) DEG = STEM TILTED UP FROM HORIZONTAL AND ROOTWAD TILTED DOWN; (-) DEG = STEM TILTED DOWN FROM HORIZONTAL AND ROOTWAD TILTED UP.
5. FOR HORIZONTAL AND SLOPING LOGS, X,Y COORDINATES INDICATES THE LOCATION OF THE INVERT OF THE HORIZONTAL/SLOPING LOG AT THE TIP OF THE STEM. FOR VERTICAL PILE LOGS, X,Y COORDINATES INDICATE THE CENTER OF LOG. X,Y COORDINATES BEGINS AT ORIGIN OF X = 0, Y = 0 AT STA 0+40.00 FT FOR THE IN-STREAM GRADING ALIGNMENT, AS INDICATED.
6. BEGINNING ELEVATION FOR HORIZONTAL LOGS REFERS TO INVERT OF THE LOG AT THE TIP OF THE STEM AT THE X,Y COORDINATE LOCATION. FOR VERTICAL PILE LOG, BEGINNING ELEVATION REFERS TO THE TOP OF THE VERTICAL PILE.
7. PLACEMENT OF LOGS TO BE FIELD-VERIFIED BY COR AND/OR FIELD ENGINEER.

ENGINEERED LOG JAM SCHEDULE

LOG	LAYER	SPECIES	MIN DBH (FT)	LENGTH (FT)	α (DEG)	β (DEG)	X (FT)	Y (FT)	BEG ELEV (FT)
1	1 (TOP)	DOUG FIR	2.00	22	270	-3.25	35.00	0.00	4143.50
2	2	DOUG FIR	1.50	20	330	-0.50	28.00	-11.21	4142.60
3	2	DOUG FIR	1.50	20	325	-0.50	25.00	-12.74	4142.60
4	3	DOUG FIR	2.00	18	216	0	31.00	8.63	4140.70
5	3	DOUG FIR	2.00	26	216	0	32.00	6.14	4140.70
6	3	DOUG FIR	1.50	14	229	0	30.00	2.77	4140.70
7	PILE	DOUG FIR	1.50	15	NA	VERT	18.90	1.39	4147.00
8	PILE	DOUG FIR	1.50	15	NA	VERT	21.87	-3.49	4147.00
9	PILE	DOUG FIR	1.50	15	NA	VERT	14.00	-1.92	4147.00
10	PILE	DOUG FIR	1.50	15	NA	VERT	19.00	-5.52	4147.00

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

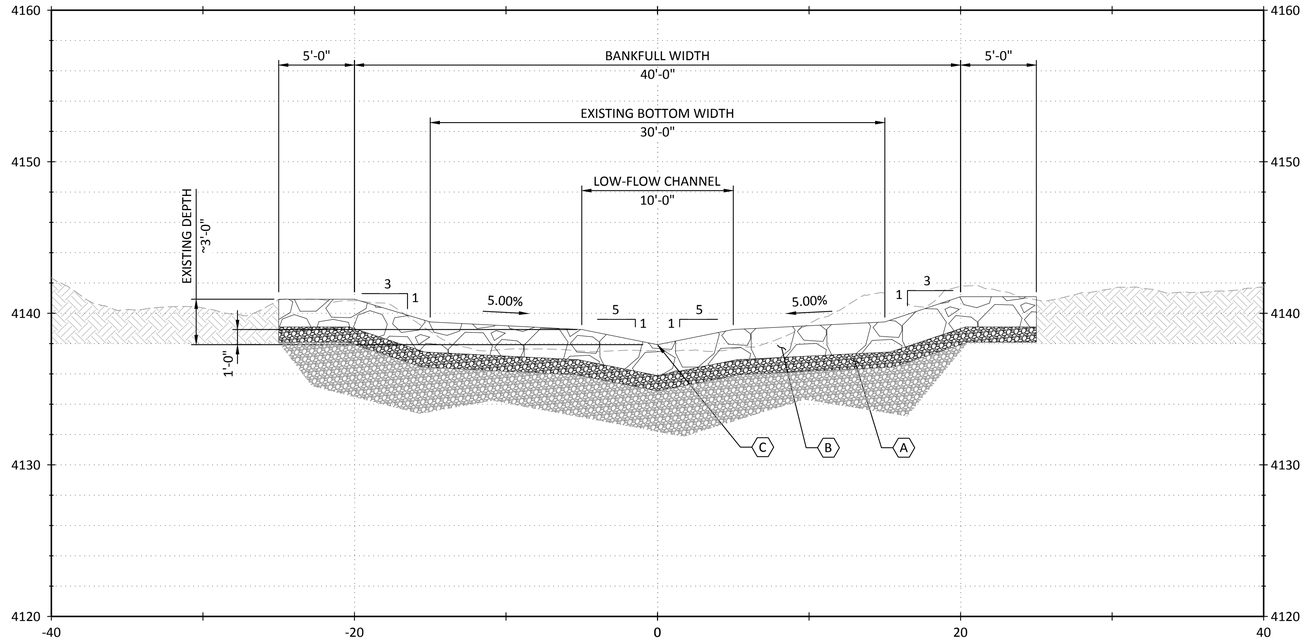
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
SITE GRADING DETAILS 2 - ENGINEERED LOG JAM

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C118

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C118.dwg Plot date: Feb 13, 2025 09:27am, CAD User: JoeNeves

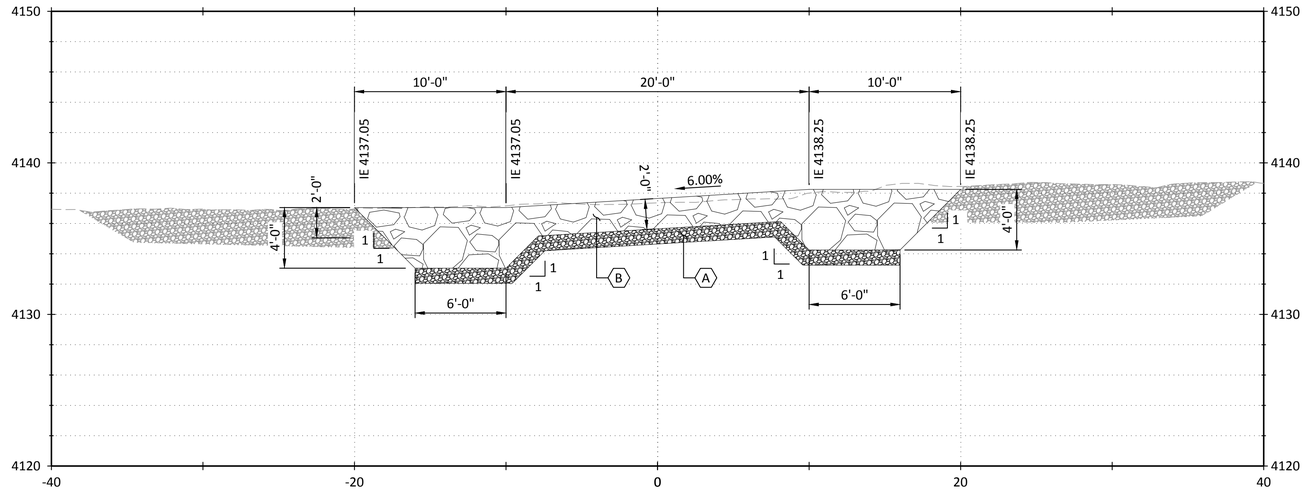


RIVER GAGING SECTION - LATERAL SECTION

SCALE: 1"= 5'

0" 5' 10'

A C106



RIVER GAGING SECTION - LONGITUDINAL SECTION

SCALE: 1"= 5'

0" 5' 10'

B C106

SHEET KEY NOTES:

A. PLACE FILTER MATERIAL PER SPEC 31 37 00.

B. PLACE MDT CLASS II RIPRAP A MINIMUM OF 2.0' THICK. AFTER PLACEMENT OF RIPRAP, PLACE A 12" THICK LAYER OF TYPE BC MATERIAL ON THE RIPRAP AND JET MATERIAL INTO THE RIPRAP VOIDS WITH HIGH PRESSURE HOSE, PER SPEC 31 00 00. REPEAT PROCESS UNTIL CHANNEL IS WATER-BEARING TO THE SATISFACTION OF THE COR OR ENGINEER.

C. TIE LOW-FLOW CHANNEL THALWEG INTO EXISTING THALWEG AT UPSTREAM AND DOWNSTREAM OF THE RIVER GAGING SECTION.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

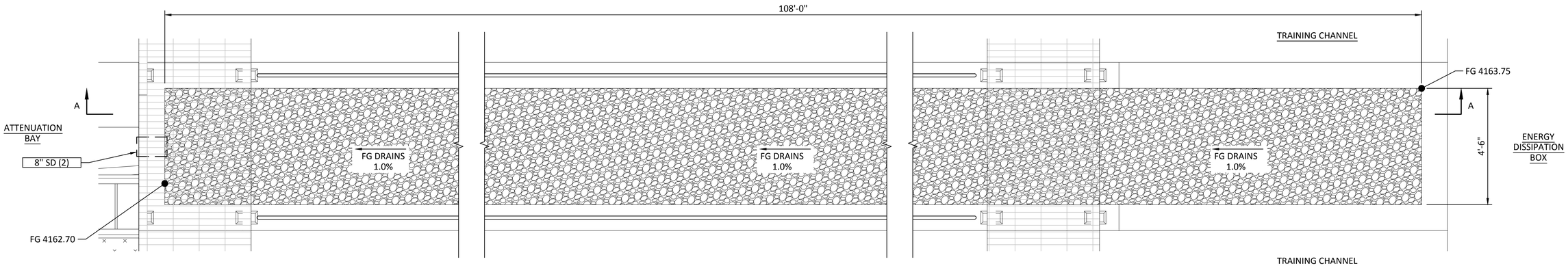
SITE GRADING DETAILS 3 - RIVER GAGING SECTION

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

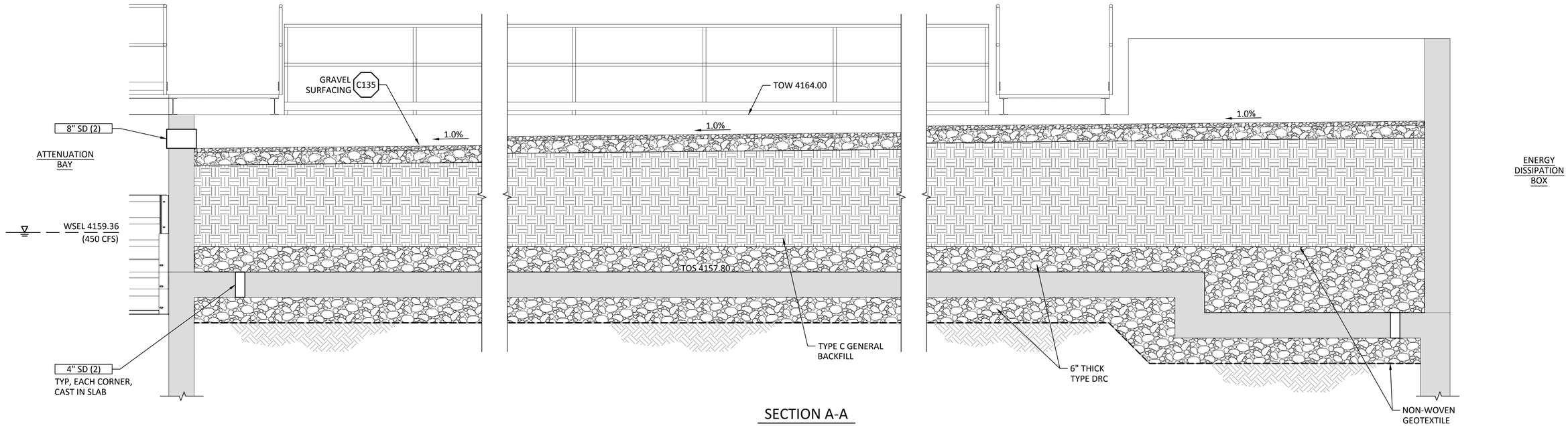
DRAWING
C119

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C119.dwg Plot date: Feb 11, 2025 04:32pm, CAD User: JoeNeves



PLAN VIEW



SECTION A-A

1 / C111 IN-FILL DRAINAGE AND GRADING DETAIL

SCALE: 1"= 2'

0" 2' 4'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SITE DRAINAGE DETAILS 1 - SCREENING STRUCTURE IN-FILL

DESIGNED A. LEMAN

DRAWN J. NEVES

CHECKED V. AUTIER

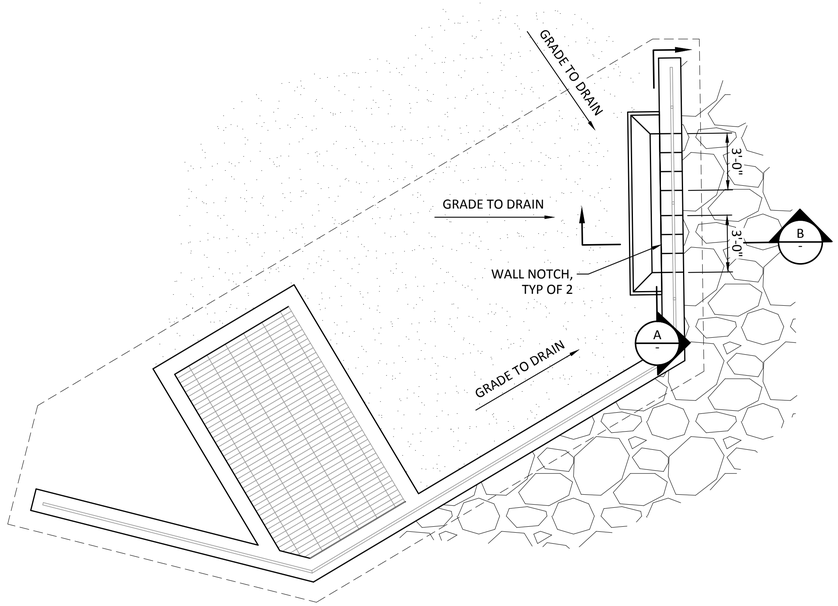
PROJECT DATE 02/14/25

DRAWING

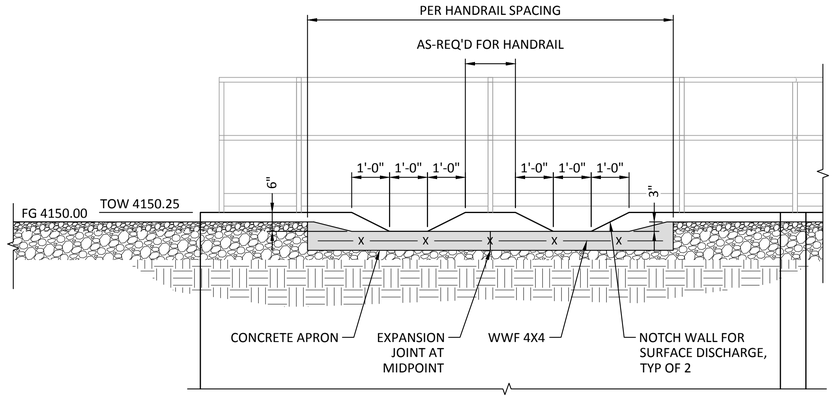
C120

JOB NO: 21-094

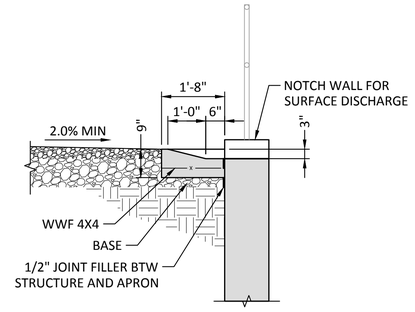
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1 / C111 CONCRETE DRAINAGE NOTCH DETAIL
SCALE: 1"= 4'
0' 4' 8'



A / - SECTION
SCALE: 1"= 2'
0" 2" 4"



B / - SECTION
SCALE: 1"= 2'
0" 2" 4"

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SITE DRAINAGE DETAILS 2 - PLUNGE POOL HEADWALL DRAINAGE

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

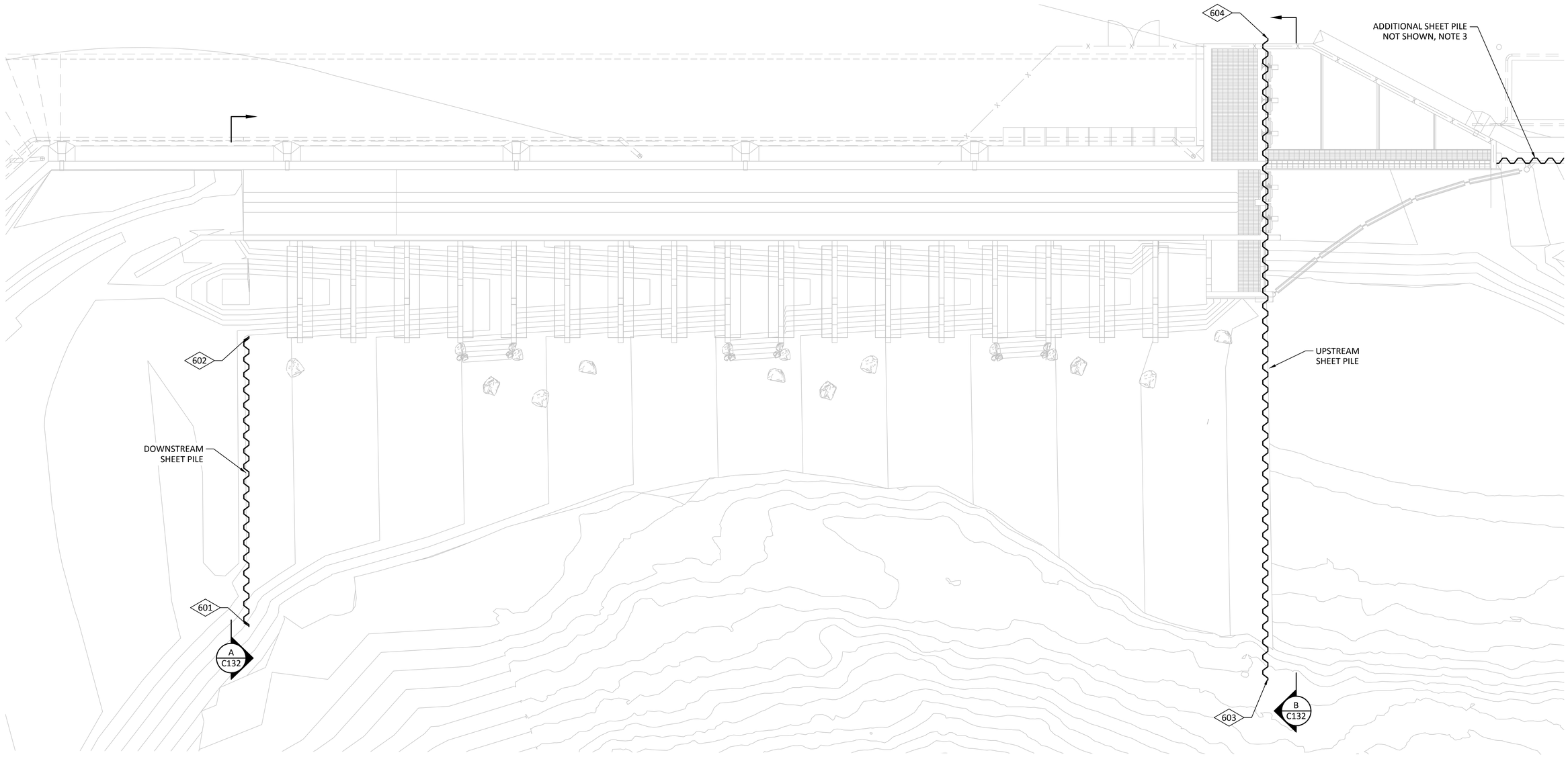
DRAWING
C121

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C121.dwg Plot date: Feb 13, 2025 09:33am, CAD User: JoeNeves

SHEET NOTES:

1. SEE STRUCTURAL FOR ALL SHEET PILE STEEL SECTIONS, CONNECTIONS, AND DETAILS.
2. SHEET PILE WALLS ARE DESIGNED TO THE FINAL CONSTRUCTED CONDITION. CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY SHORE OR BRACE TO ACCOMMODATE CONSTRUCTION SURCHARGES.
3. ADDITIONAL SHEET PILE UPSTREAM OF ROUGHENED CHANNEL, NOT SHOWN. SEE C103 AND C114 FOR LAYOUT AND ELEVATION VIEW.



ROUGHENED CHANNEL SHEET PILE PLAN

SCALE: 1"= 10'

0" 10' 20'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

ROUGHENED CHANNEL
SHEET PILE PLAN

DESIGNED A. LEMAN

DRAWN J. NEVES

CHECKED V. AUTIER

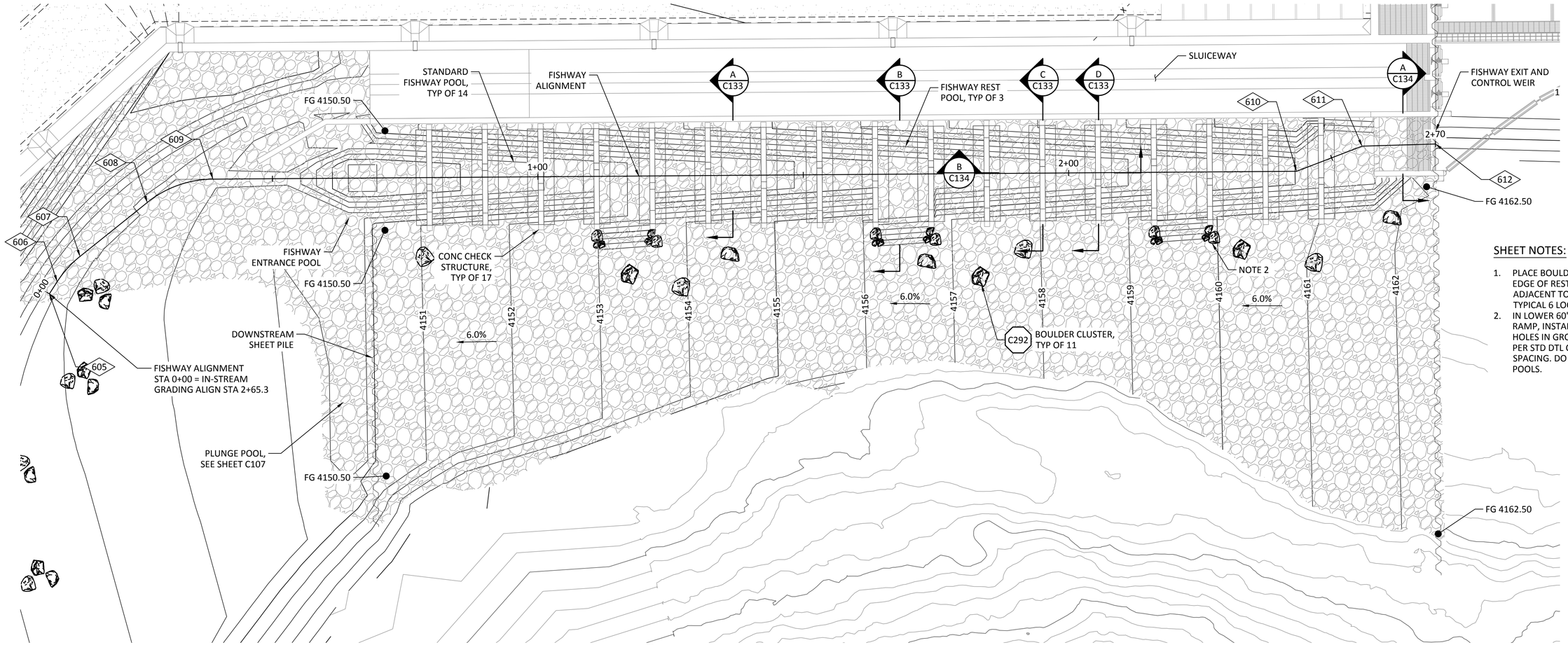
PROJECT DATE 02/14/25

DRAWING

C130

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C130.dwg Plot date: Feb 11, 2025 05:44pm, CAD User: JoeNeves

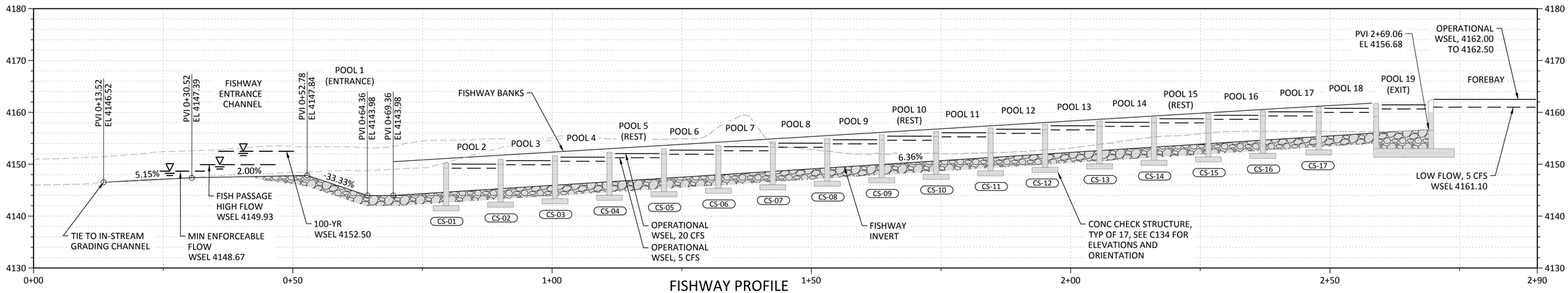


SHEET NOTES:

1. PLACE BOULDERS OR LARGE ROCK AT EDGE OF REST POOLS AS GRADE BREAK ADJACENT TO THE CHECK STRUCTURE. TYPICAL 6 LOCATIONS.
2. IN LOWER 60' OF ROUGHENED ROCK RAMP, INSTALL PRESSURE RELIEF WEEP HOLES IN GROUTED RIPRAP SECTION PER STD DTL C290 AT 10' GRID SPACING. DO NOT INSTALL IN FISHWAY POOLS.

FISHWAY PLAN

SCALE: 1"= 10'



FISHWAY PROFILE

SCALE: 1"= 10'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

ROUGHENED CHANNEL FISHWAY PLAN AND PROFILE

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C131

JOB NO: 21-094

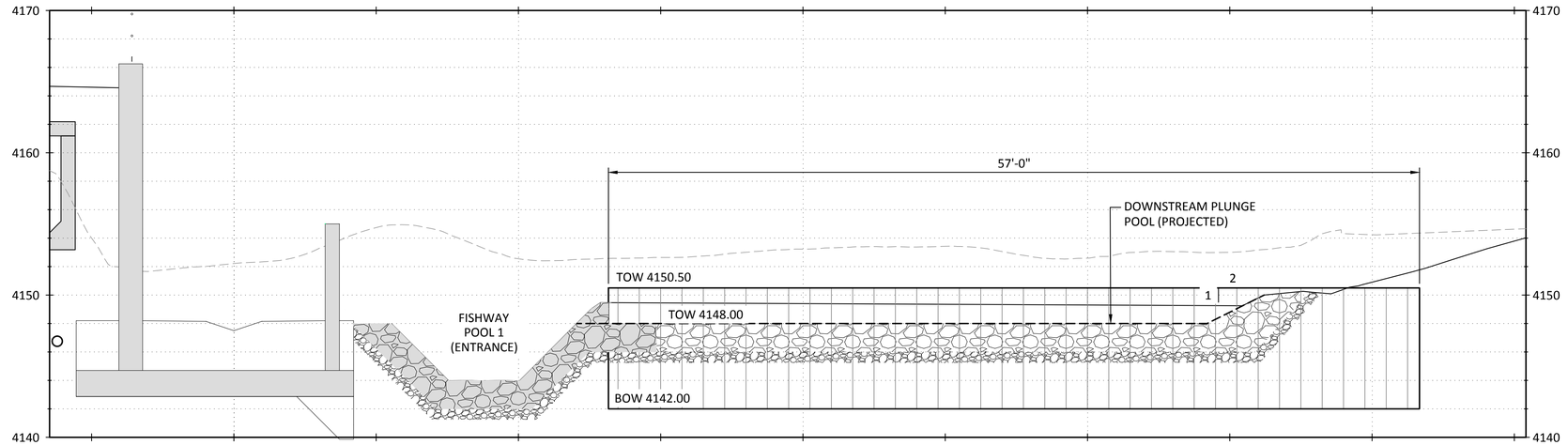
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C131.dwg Plot date: Feb 13, 2025 09:45am, CAD User: JoeNeves

SHEET NOTES:

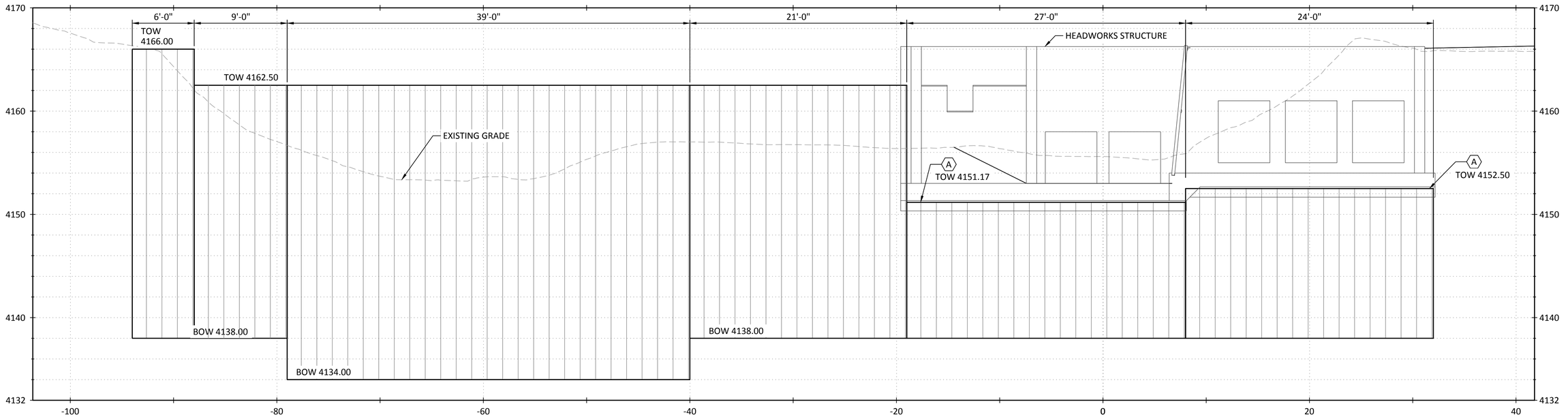
1. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS PRIOR TO MOBILIZATION OF THE SHEET PILE INSTALLER. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS IMMEDIATELY.
2. BOTTOM OF WALL ELEVATION IS A MAXIMUM. CONTRACTOR MAY DRIVE DEEPER AS REQUIRED BY THE SHEET PILE LENGTH TO AVOID CUTTING THE TOP OF WALL.
3. SEE STRUCTURAL FOR ALL CONNECTIONS, SECTIONS, AND DETAILS.
4. SHEET PILE WALLS ARE DESIGNED TO THE FINAL CONSTRUCTED CONDITION. CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY SHORE OR BRACE TO ACCOMMODATE CONSTRUCTION SURCHARGES.

SHEET KEY NOTES:

A. CUT SHEET PILE AS REQUIRED FOR TIE IN TO BOTTOM OF FOREBAY CONCRETE.



DOWNSTREAM SHEET PILE WALL
SCALE: 1"= 5'
A C130



UPSTREAM SHEET PILE WALL
SCALE: 1"= 5'
B C130

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

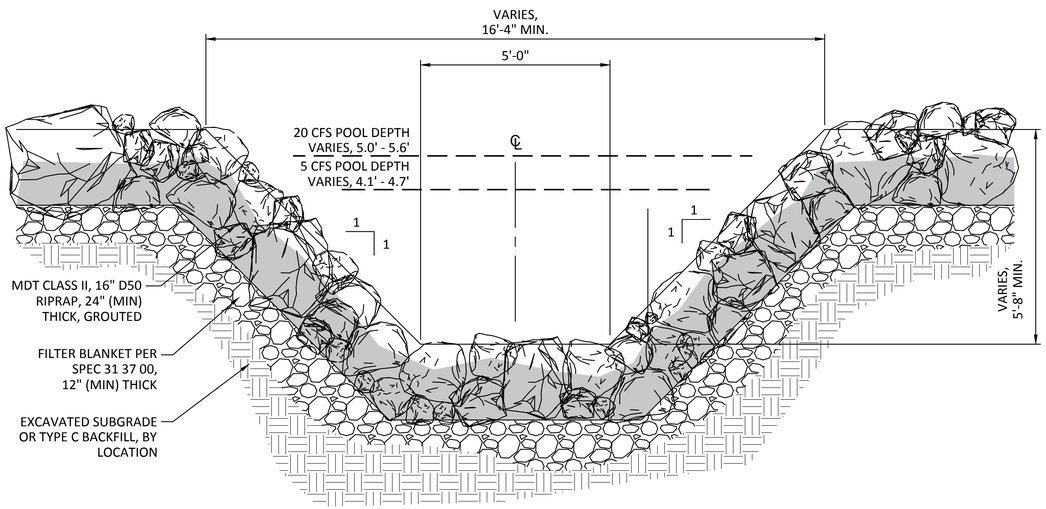
ROUGHENED CHANNEL SHEET PILE SECTIONS AND DETAILS

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C132

JOB NO: 21-094

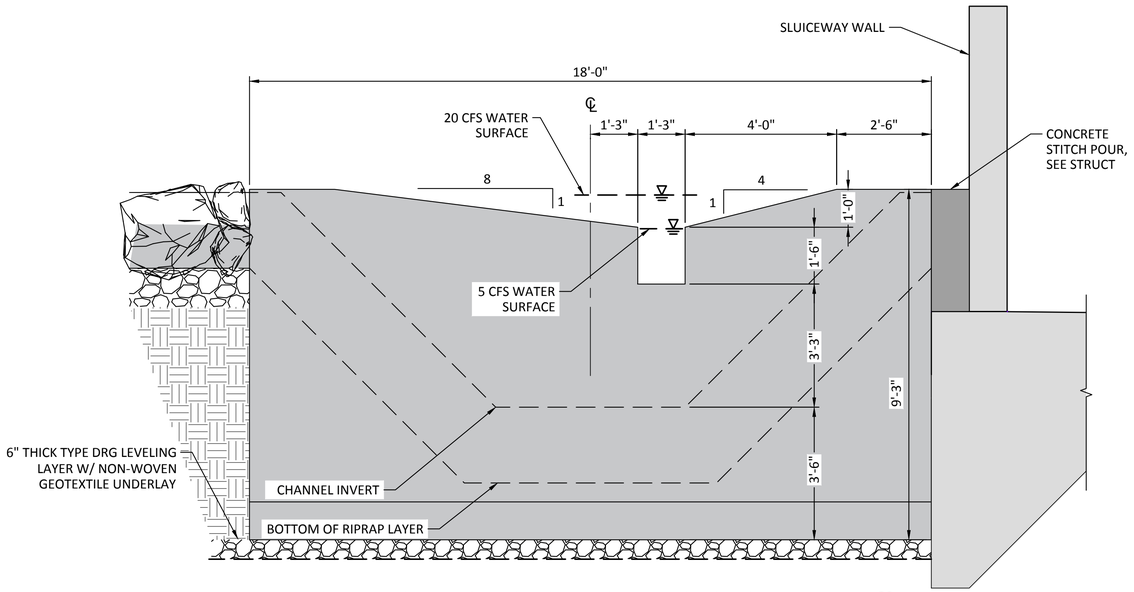
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C132.dwg Plot date: Feb 11, 2025 04:35pm, CAD User: JoeNeves



POOL TYPICAL SECTION

SCALE: NTS

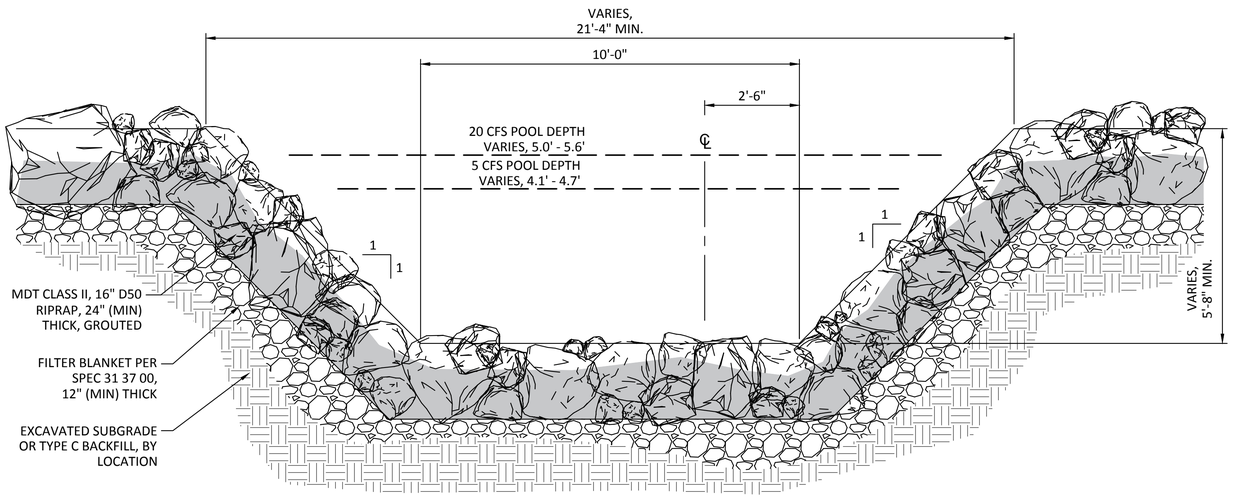
A C131



RIGHT ALIGNED CHECK STRUCTURE SECTION

SCALE: NTS

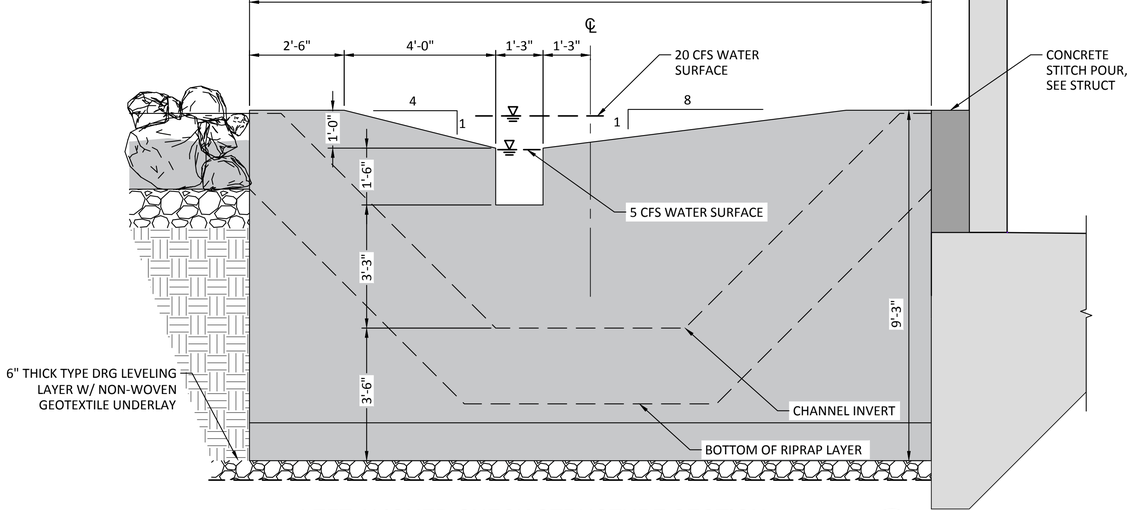
C C131



REST POOL TYPICAL SECTION

SCALE: NTS

B C131



LEFT ALIGNED CHECK STRUCTURE SECTION

SCALE: NTS

D C131

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

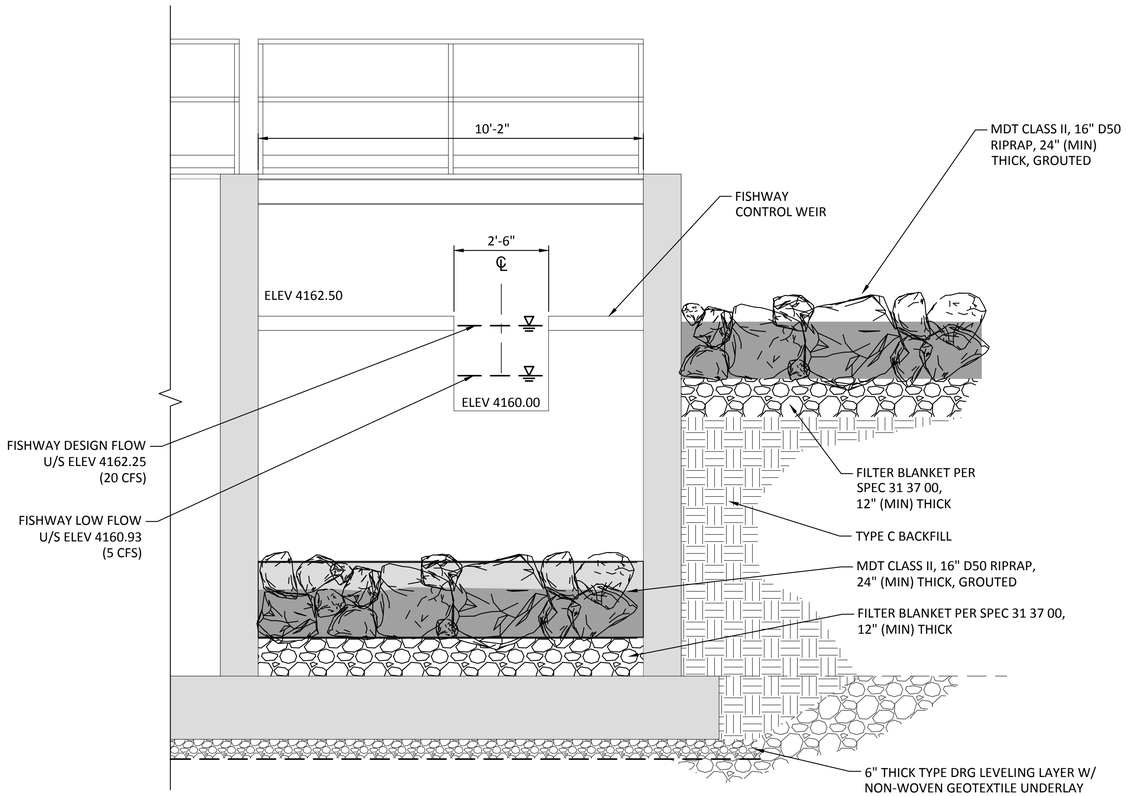
ROUGHENED CHANNEL FISHWAY SECTIONS 1

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C133

JOB NO: 21-094

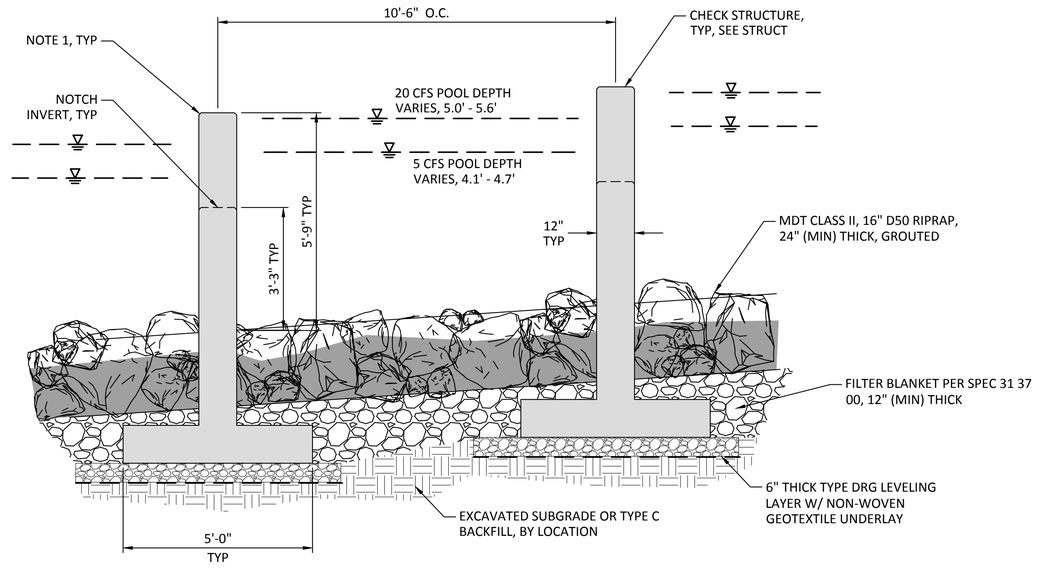
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C133.dwg Plot date: Feb 11, 2025 04:35pm, CAD User: JoeNeves



FISHWAY CONTROL WEIR SECTION (A, C131)
SCALE: NTS

SHEET NOTES:

1. PROVIDE 1", 45-DEG CHAMFER FOR FISH PROTECTION.



FISHWAY POOL TYPICAL SECTION (B, C131)
SCALE: NTS

CHECK STRUCTURE SCHEDULE				
STRUCT ID	SUBGRADE ELEV	SLOT ELEV	TOP ELEV	ORIENTATION
CS-01	4141.03	4147.78	4150.28	LEFT
CS-02	4141.70	4148.45	4150.95	RIGHT
CS-03	4142.37	4149.12	4151.62	LEFT
CS-04	4143.05	4149.80	4152.30	RIGHT
CS-05	4143.72	4150.47	4152.97	LEFT
CS-06	4144.39	4151.14	4153.64	RIGHT
CS-07	4145.06	4151.81	4154.31	LEFT
CS-08	4145.73	4152.48	4154.98	RIGHT
CS-09	4146.41	4153.16	4155.66	LEFT
CS-10	4147.08	4153.83	4156.33	RIGHT
CS-11	4147.75	4154.50	4157.00	LEFT
CS-12	4148.42	4155.17	4157.67	RIGHT
CS-13	4149.09	4155.84	4158.34	LEFT
CS-14	4149.77	4156.52	4159.02	RIGHT
CS-15	4150.44	4157.19	4159.69	LEFT
CS-16	4151.11	4157.86	4160.36	RIGHT
CS-17	4151.78	4158.53	4161.03	LEFT

* ORIENTATION DEFINED BASED ON NOTCH POSITION LOOKING DOWNSTREAM. SEE C133 FOR DETAILS.
* ELEVATIONS BASED ON STRUCTURE DIMENSIONS SHOWN ON C133. THREE CHECKPOINTS PROVIDED FOR CONTRACTOR'S FIELD CONFIRMATION.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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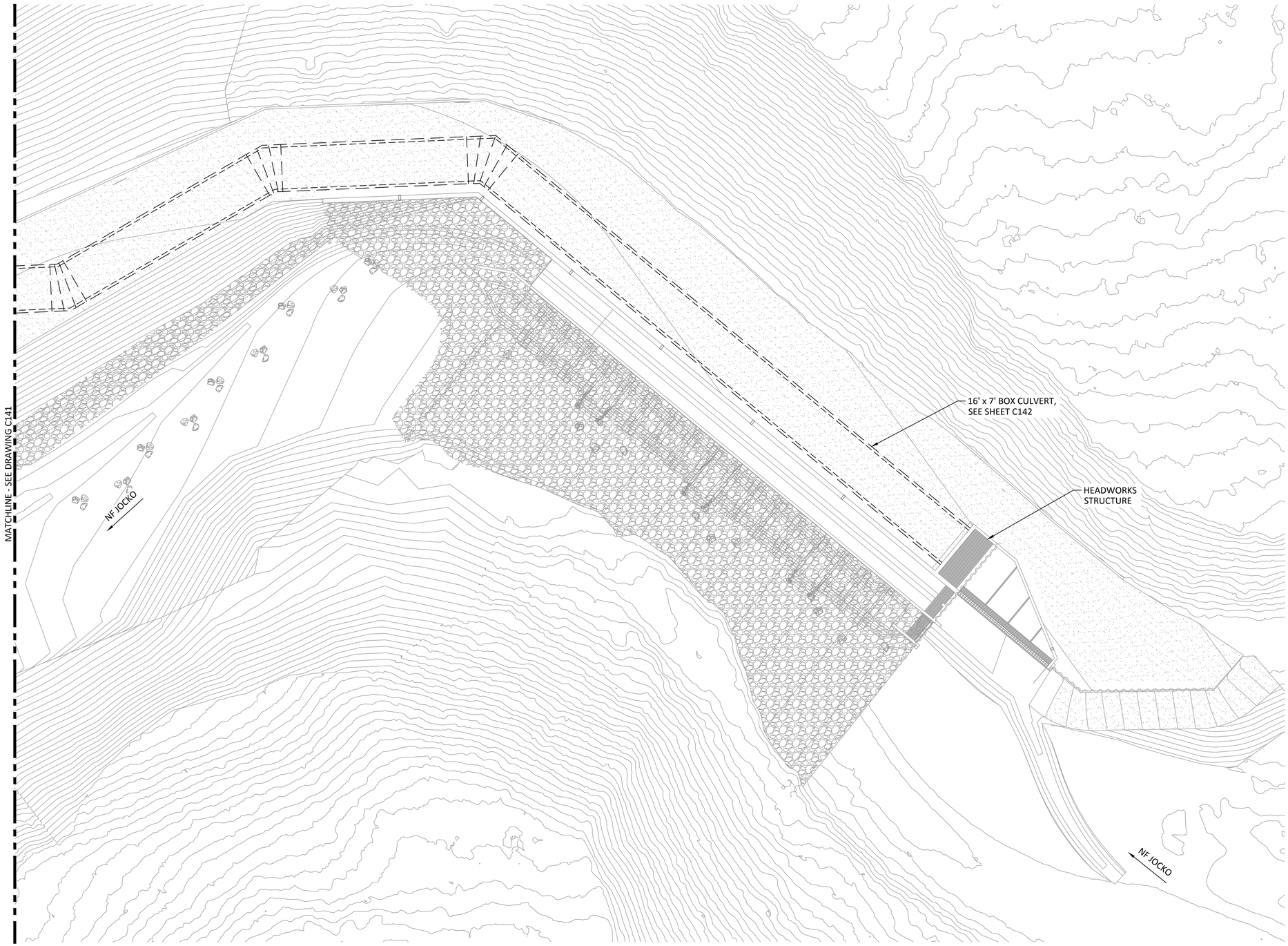
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
ROUGHENED CHANNEL FISHWAY SECTIONS 2

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C134

JOB NO: 21-094

Path: C:\Users\JoeNeves\DCVACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C134.dwg Plot date: Feb 13, 2025 09:46am, CAD User: JoeNeves



SHEET KEY NOTES:

A. FOUNDATION DRAIN AND SURFACE DRAIN PIPING NOT SHOWN ON THIS SHEET FOR CLARITY. SEE SHEET C108 FOR FOUNDATION DRAINS AND C110 FOR SURFACE DRAINS.

1 / C100 SITE PIPING PLAN - EAST
SCALE: 1"= 20'

0' 20' 40'

N

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

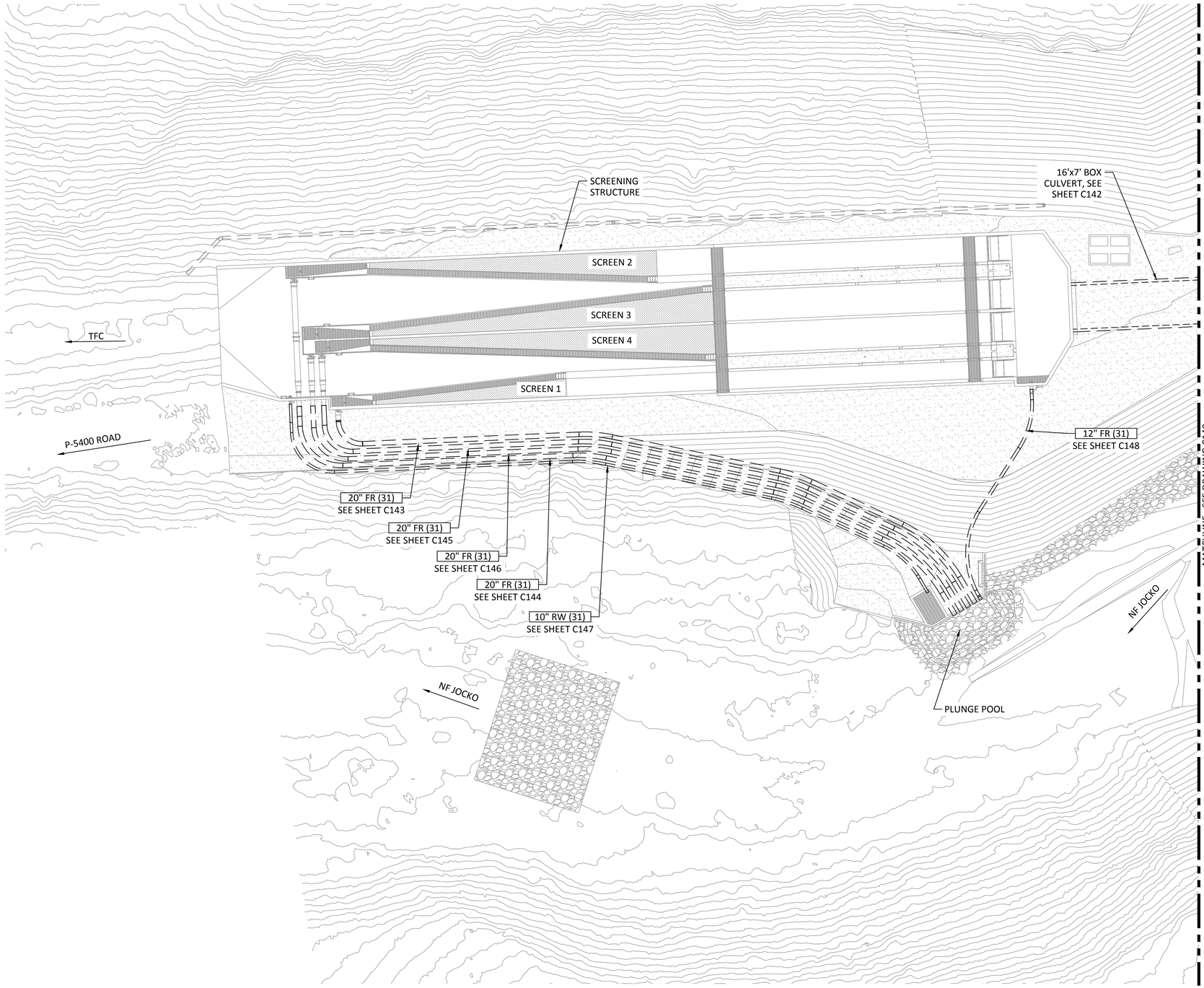
SITE PIPING PLAN - EAST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C140

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C140.dwg Plot date: Feb 11, 2025 04:36pm, CAD User: JoeNeves



1 C100 SITE PIPING PLAN - WEST

SCALE: 1"= 20'

0" 20' 40'

N

SHEET NOTES:

1. FOUNDATION DRAIN AND SURFACE DRAIN PIPING NOT SHOWN ON THIS SHEET FOR CLARITY. SEE SHEET C109 FOR FOUNDATION DRAINS AND C111 FOR SURFACE DRAINS.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

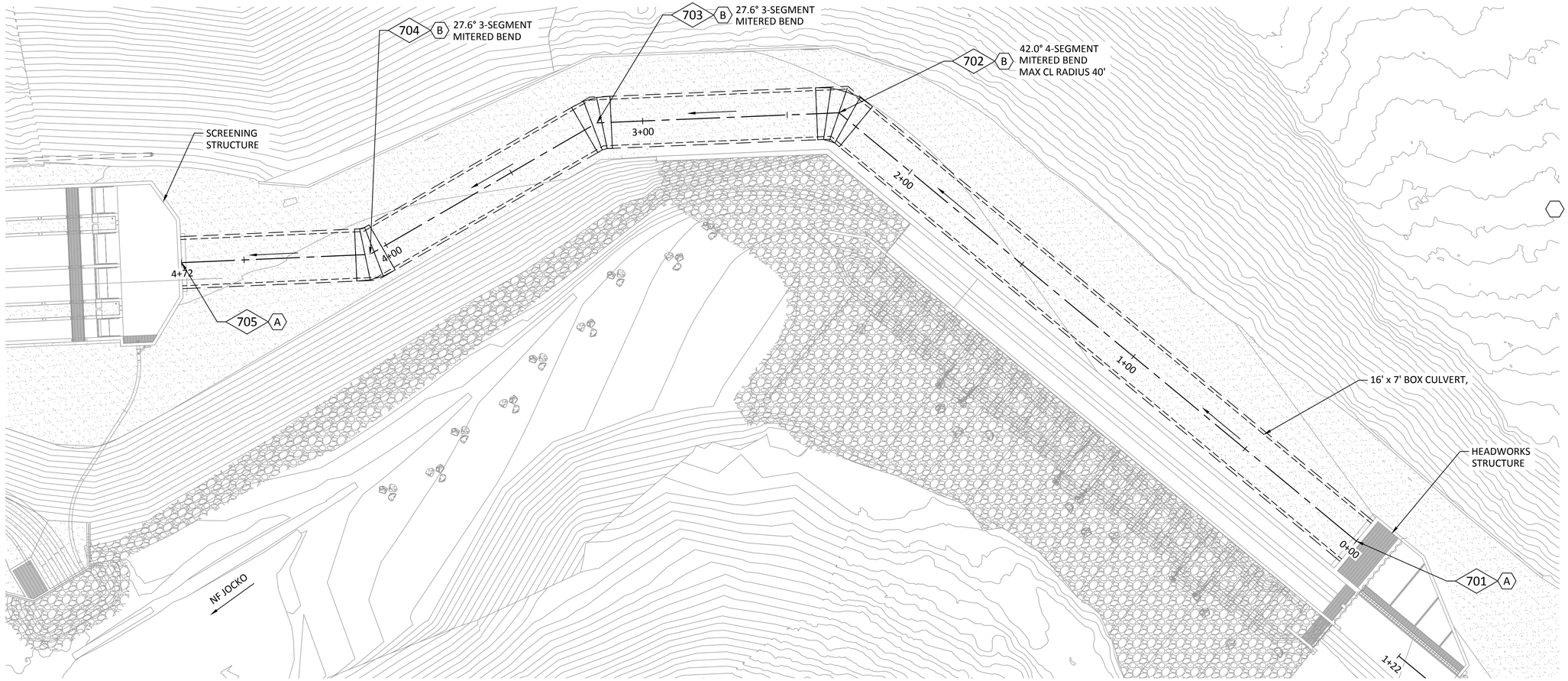
SITE PIPING PLAN - WEST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C141

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C141.dwg Plot date: Feb 11, 2025 05:45pm, CAD User: JoeNeves

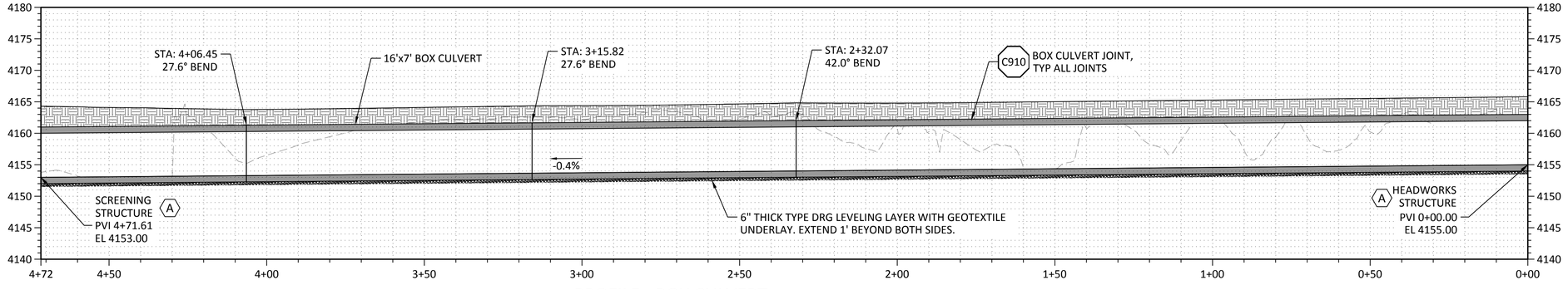


BOX CULVERT PLAN

SCALE: 1"= 20'

0" 20' 40'

N



PROFILE - BOX CULVERT

SCALE: HORIZ 1"= 20'

VERT 1"= 10'

0" 20' 40'

0" 10' 20'

SHEET NOTES:

1. BOX CULVERT SHALL MAINTAIN MINIMUM 2.0' COVER ALONG ENTIRE ALIGNMENT IN FINAL BACKFILLED CONDITION. DURING CONSTRUCTION CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY COVER TO ATTENUATE EQUIPMENT LOADS TO HL-93 TRAFFIC LOADING ON THE BOX CULVERT.
2. ALL ELEVATIONS SHOWN ON THIS SHEET ARE INVERT (FLOWLINE) ELEVATIONS FOR THE BOX CULVERT, UNLESS OTHERWISE INDICATED.
3. STATIONS INDICATED FOR BENDS REPRESENT THE MIDPOINT OF THE BEND.

SHEET KEY NOTES:

A. SEE STRUCTURAL FOR TIE-IN OF PRECAST CONCRETE BOX CULVERT TO CAST-IN-PLACE CONCRETE STRUCTURES.

B. BEND DESIGN OF PRECAST CONCRETE BOX CULVERT SHALL BE PER THE PRECASTER BASED ON THE CONTRACTOR'S MAXIMUM EQUIPMENT LOADS. CONTRACTOR SHALL SUBMIT TO THE COR AND ENGINEER SHOP DRAWINGS FOR APPROVAL IN ACCORDANCE WITH SPECIFICATIONS 01 33 00 AND 33 11 17 BEFORE FABRICATION OF BOX CULVERT SEGMENTS AND BENDS.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

BOX CULVERT PLAN AND PROFILE

DESIGNED A. LEMAN

DRAWN J. NEVES

CHECKED V. AUTIER

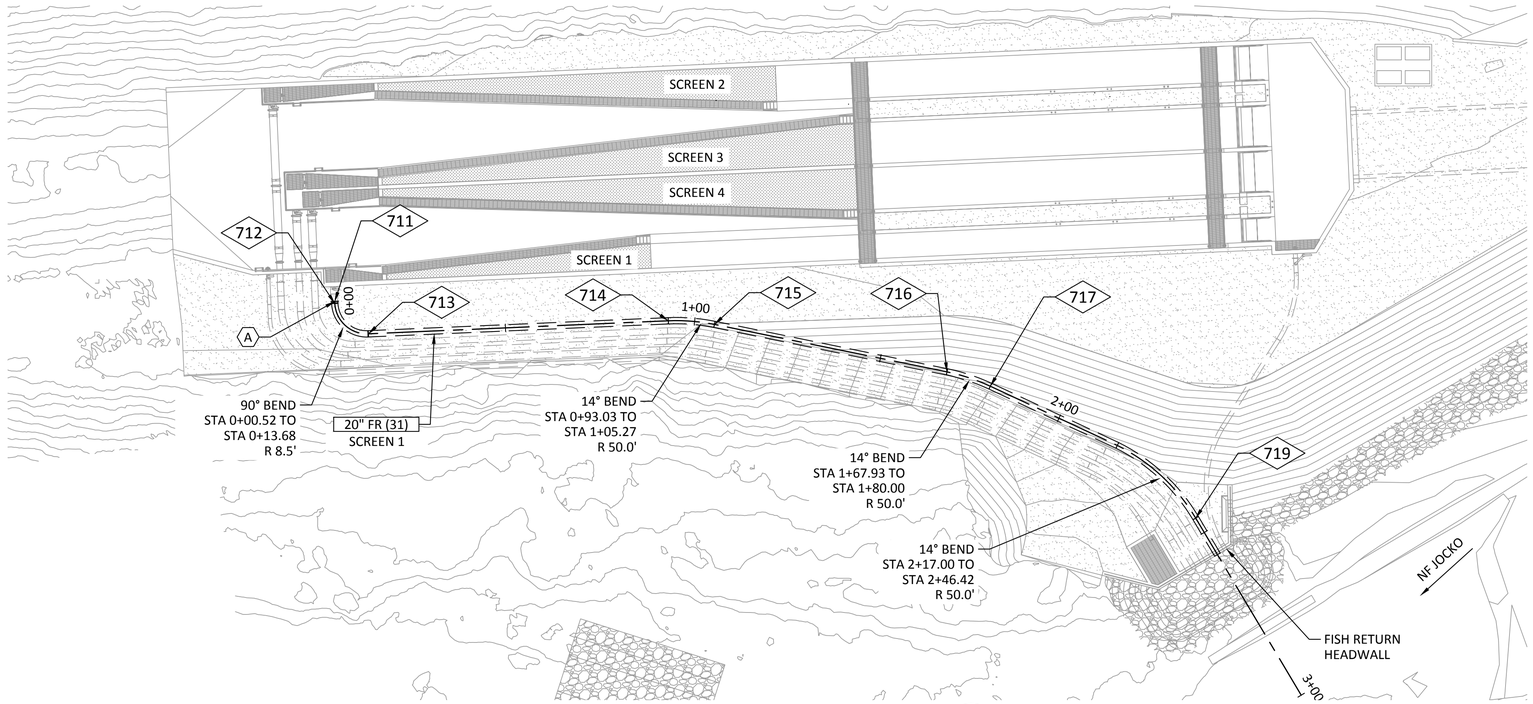
PROJECT DATE 02/14/25

DRAWING

C142

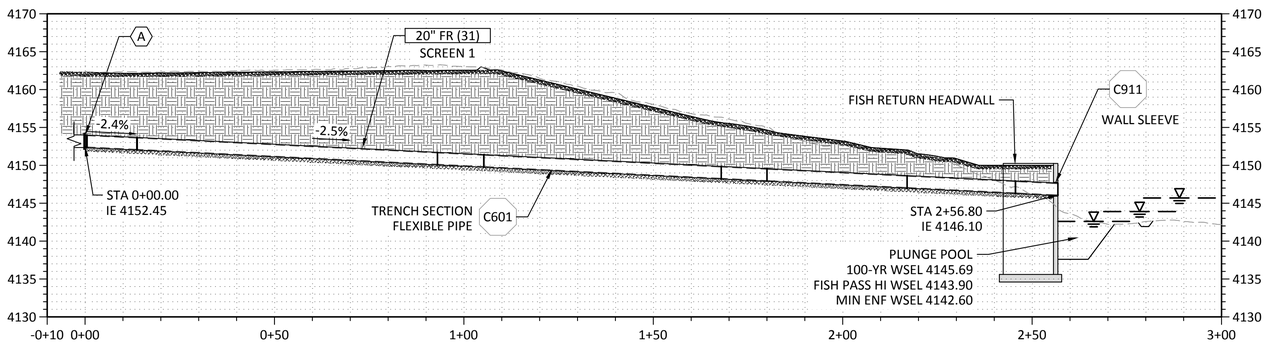
JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C142.dwg Plot date: Feb 13, 2025 09:51am, CAD User: JoeNeves



SCREEN 1 - FISH RETURN PIPE PLAN

SCALE: 1"= 20'



SCREEN 1 - FISH RETURN PIPE PROFILE

SCALE: HORIZ 1"= 20'
VERT 1"= 10'

SHEET NOTES:

1. PIPES SHALL MAINTAIN MINIMUM 2.0' COVER ALONG ENTIRE ALIGNMENT IN FINAL BACKFILLED CONDITION. DURING CONSTRUCTION CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY COVER TO ATTENUATE EQUIPMENT LOADS TO HS-20 TRAFFIC LOADING 2.0' ABOVE THE PIPE CROWN.
2. ALL ELEVATIONS SHOWN ON THIS SHEET ARE INVERT (FLOWLINE) ELEVATIONS FOR THE PIPES, UNLESS OTHERWISE INDICATED.
3. ALL BEND RADII INDICATED ARE TO THE PIPE CENTERLINE. PIPE BENDS SHALL MAINTAIN A MIN 5X THE OUTER PIPE DIAMETER FOR FISH PROTECTION. PIPE BENDS SHALL BE MITERED WHERE RADIUS IS LESS THAN THE LONG TERM COLD BENDING RADIUS OF HDPE, 27X PIPE OD (SDR 17). MAX MITER ANGLES NOT TO EXCEED 15 DEGREES.
4. FISH BYPASS PIPING SHALL BE FREE OF BURRS AND ROUGH SURFACES. SEE SPEC 40 23 20 FOR DETAILS OF DEBURRING.

SHEET KEY NOTES:

A. FLANGED CONNECTION TO BYPASS FLUME PIPE THIMBLE. SEE MECH.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
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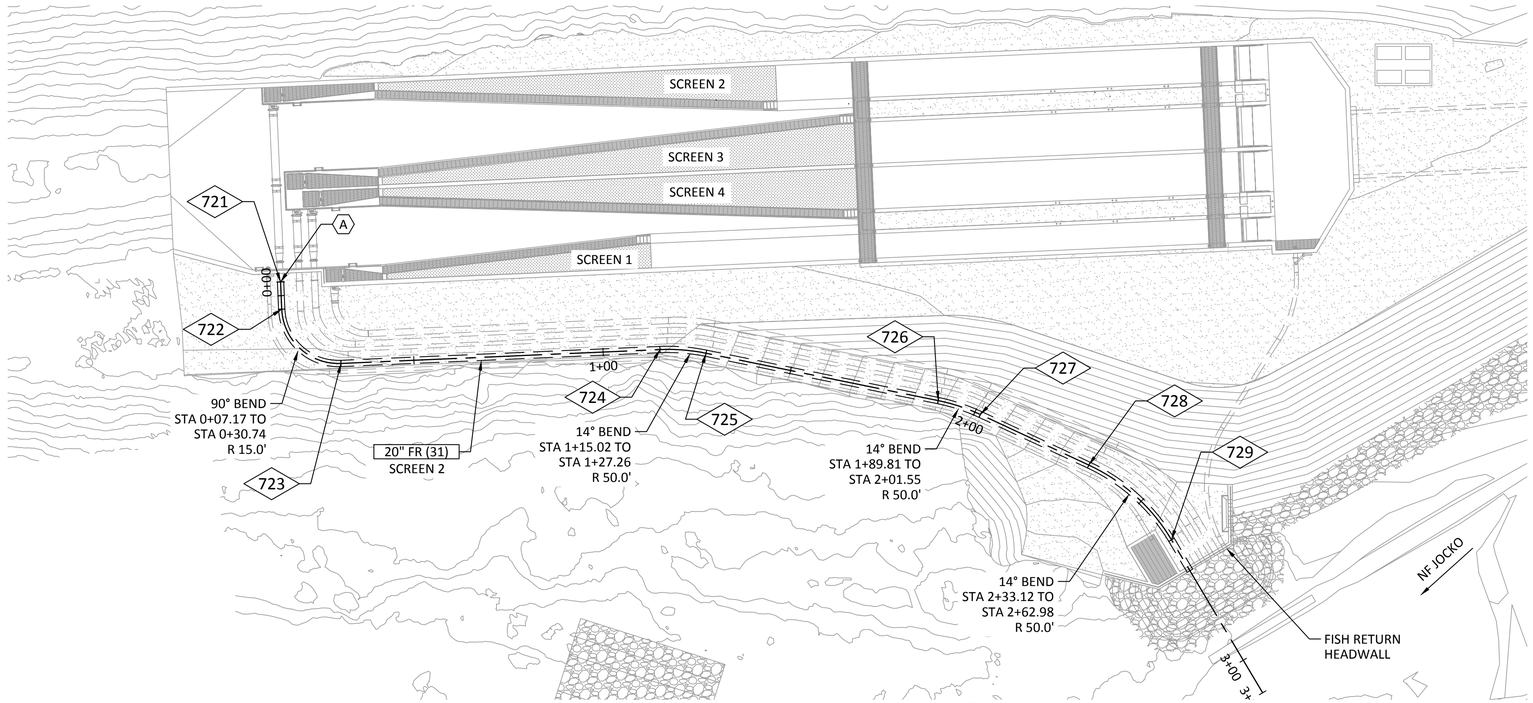
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
SCREEN 1 - FISH RETURN PIPE PLAN AND PROFILE

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C143

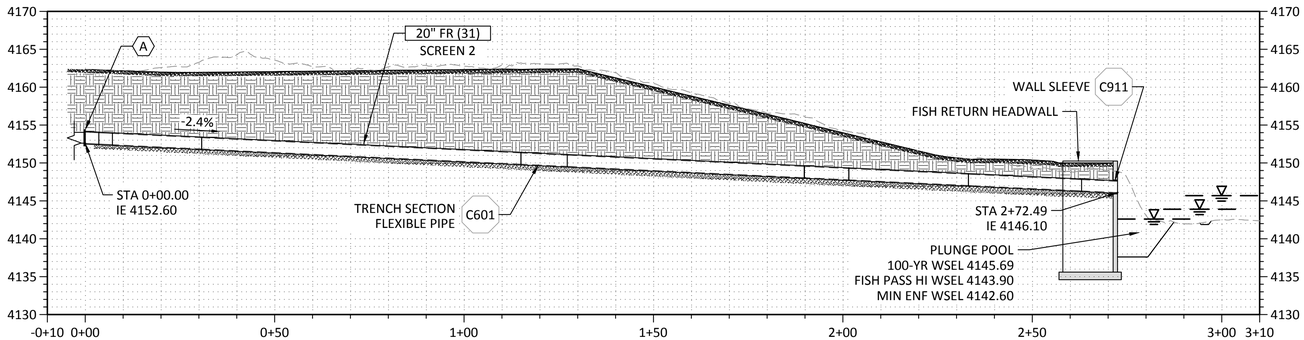
JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C143.dwg Plot date: Feb 11, 2025 05:49pm, CAD User: JoeNeves



SCREEN 2 - FISH RETURN PIPE PLAN

SCALE: 1"= 20'



SCREEN 2 - FISH RETURN PIPE PROFILE

SCALE: HORIZ 1"= 20'

VERT 1"= 10'

SHEET NOTES:

1. PIPES SHALL MAINTAIN MINIMUM 2.0' COVER ALONG ENTIRE ALIGNMENT IN FINAL BACKFILLED CONDITION. DURING CONSTRUCTION CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY COVER TO ATTENUATE EQUIPMENT LOADS TO HS-20 TRAFFIC LOADING 2.0' ABOVE THE PIPE CROWN.
2. ALL ELEVATIONS SHOWN ON THIS SHEET ARE INVERT (FLOWLINE) ELEVATIONS FOR THE PIPES, UNLESS OTHERWISE INDICATED.
3. ALL BEND RADII INDICATED ARE TO THE PIPE CENTERLINE. PIPE BENDS SHALL MAINTAIN A MIN 5X THE OUTER PIPE DIAMETER FOR FISH PROTECTION. PIPE BENDS SHALL BE MITERED WHERE RADIUS IS LESS THAN THE LONG TERM COLD BENDING RADIUS OF HDPE, 27X PIPE OD (SDR 17). MAX MITER ANGLES NOT TO EXCEED 15 DEGREES.
4. FISH BYPASS PIPING SHALL BE FREE OF BURRS AND ROUGH SURFACES. SEE SPEC 40 23 20 FOR DETAILS OF DEBURRING.

SHEET KEY NOTES:

A. FLANGED CONNECTION TO BYPASS FLUME PIPE THIMBLE. SEE MECH.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

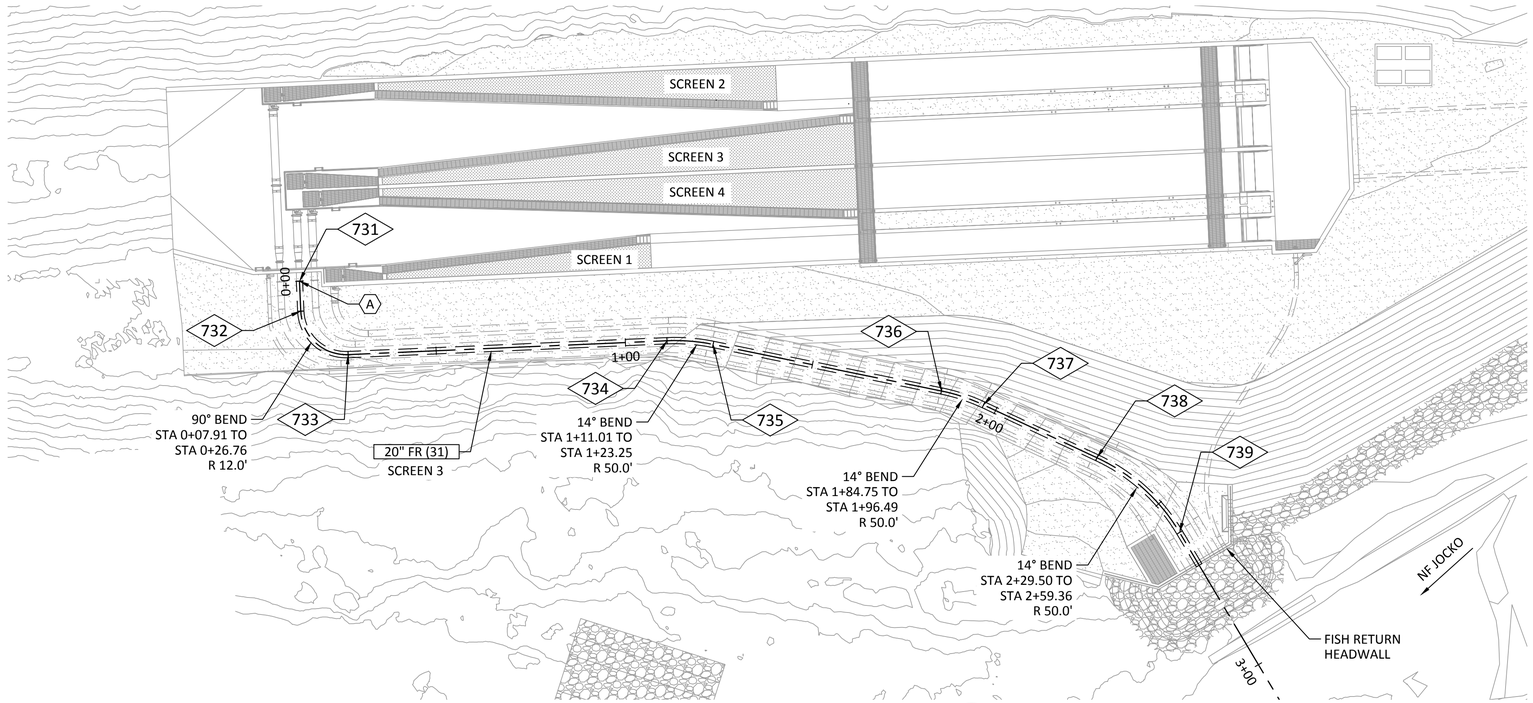
SCREEN 2 - FISH RETURN PIPE PLAN AND PROFILE

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C144

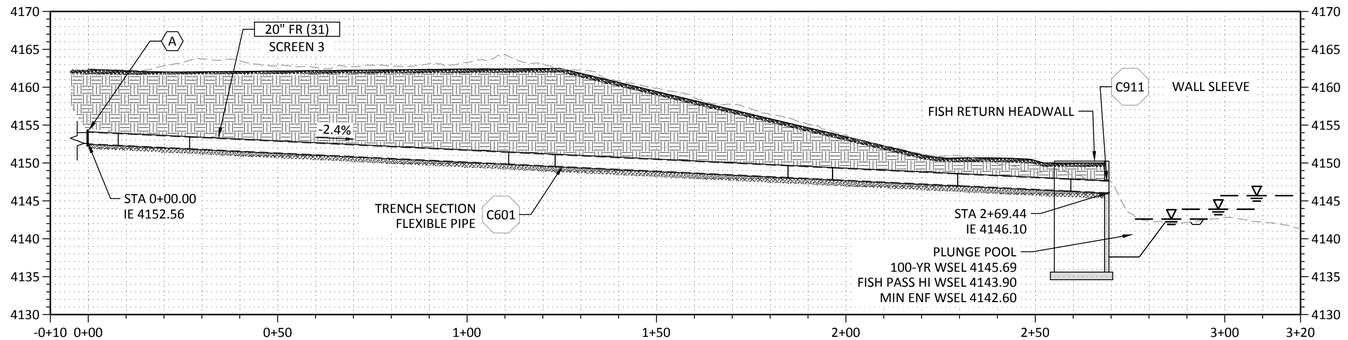
JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C144.dwg Plot date: Feb 13, 2025 09:53am, CAD User: JoeNeves



SCREEN 3 - FISH RETURN PIPE PLAN

SCALE: 1"= 20'



SCREEN 3 - FISH RETURN PIPE PROFILE

SCALE: HORIZ 1"= 20'
VERT 1"= 10'

SHEET NOTES:

1. PIPES SHALL MAINTAIN MINIMUM 2.0' COVER ALONG ENTIRE ALIGNMENT IN FINAL BACKFILLED CONDITION. DURING CONSTRUCTION CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY COVER TO ATTENUATE EQUIPMENT LOADS TO HS-20 TRAFFIC LOADING 2.0' ABOVE THE PIPE CROWN.
2. ALL ELEVATIONS SHOWN ON THIS SHEET ARE INVERT (FLOWLINE) ELEVATIONS FOR THE PIPES, UNLESS OTHERWISE INDICATED.
3. ALL BEND RADII INDICATED ARE TO THE PIPE CENTERLINE. PIPE BENDS SHALL MAINTAIN A MIN 5X THE OUTER PIPE DIAMETER FOR FISH PROTECTION. PIPE BENDS SHALL BE MITERED WHERE RADIUS IS LESS THAN THE LONG TERM COLD BENDING RADIUS OF HDPE, 27X PIPE OD (SDR 17). MAX MITER ANGLES NOT TO EXCEED 15 DEGREES.
4. FISH BYPASS PIPING SHALL BE FREE OF BURRS AND ROUGH SURFACES. SEE SPEC 40 23 20 FOR DETAILS OF DEBURRING.

SHEET KEY NOTES:

A. FLANGED CONNECTION TO BYPASS FLUME PIPE THIMBLE. SEE MECH.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

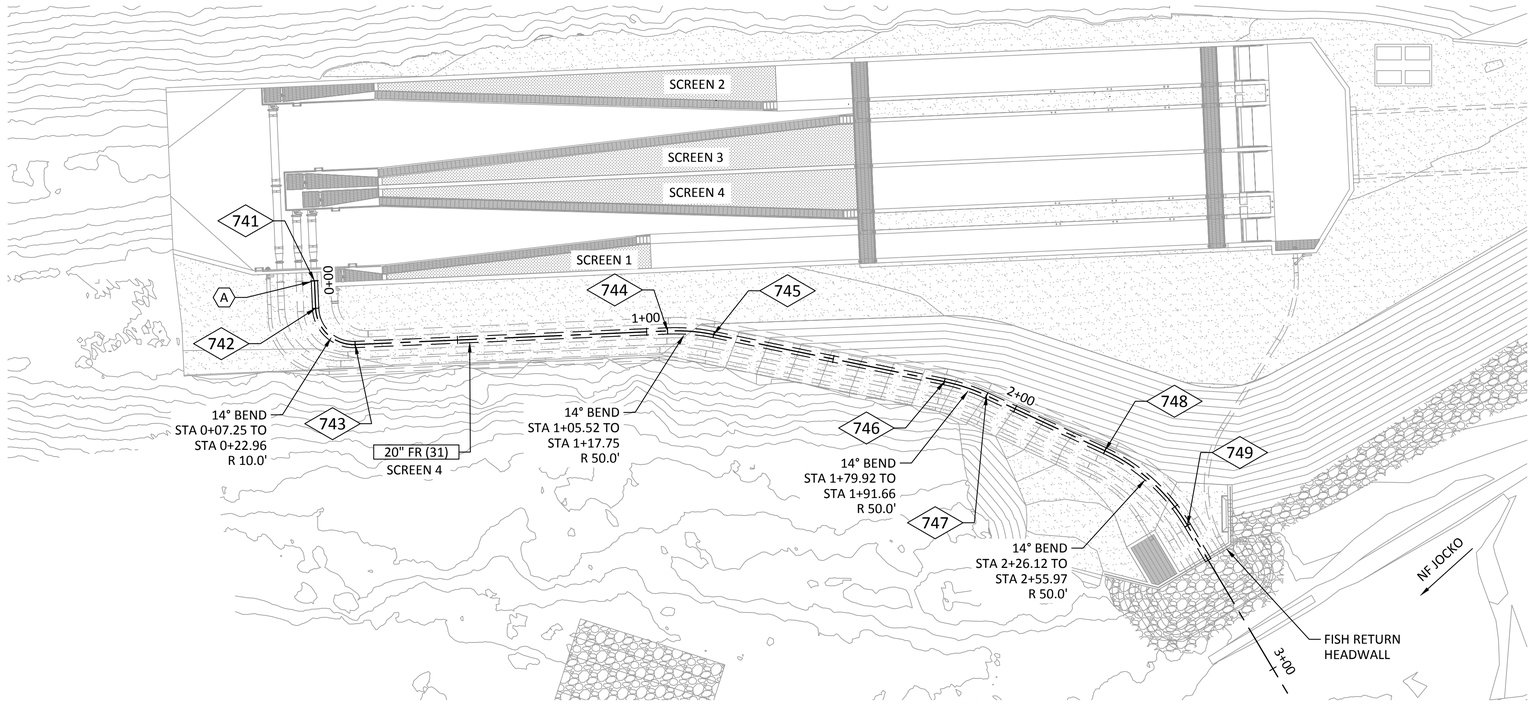
SCREEN 3 - FISH RETURN PIPE PLAN AND PROFILE

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C145

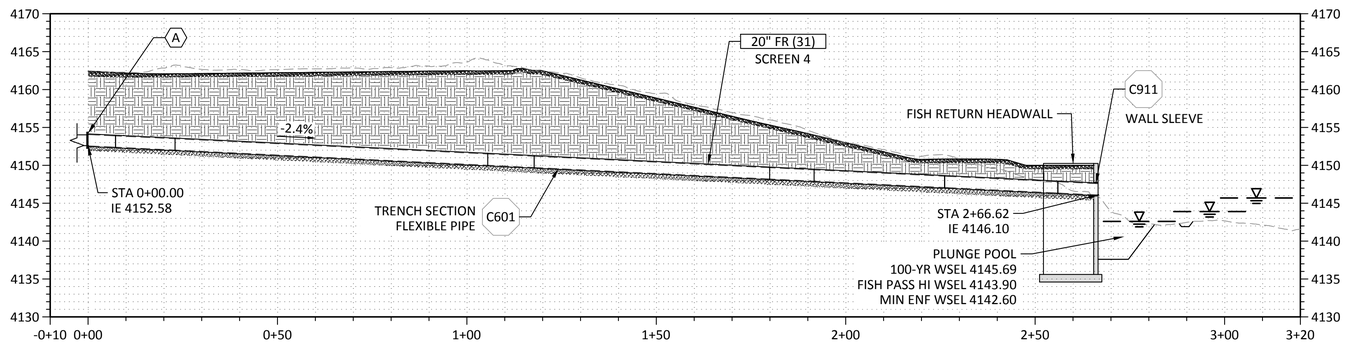
JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C145.dwg Plot date: Feb 13, 2025 10:11am, CAD User: JoeNeves



SCREEN 4 - FISH RETURN PIPE PLAN

SCALE: 1"= 20'



SCREEN 4 - FISH RETURN PIPE PROFILE

SCALE: HORIZ 1"= 20'
VERT 1"= 10'

SHEET NOTES:

1. PIPES SHALL MAINTAIN MINIMUM 2.0' COVER ALONG ENTIRE ALIGNMENT IN FINAL BACKFILLED CONDITION. DURING CONSTRUCTION CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY COVER TO ATTENUATE EQUIPMENT LOADS TO HS-20 TRAFFIC LOADING 2.0' ABOVE THE PIPE CROWN.
2. ALL ELEVATIONS SHOWN ON THIS SHEET ARE INVERT (FLOWLINE) ELEVATIONS FOR THE PIPES, UNLESS OTHERWISE INDICATED.
3. ALL BEND RADII INDICATED ARE TO THE PIPE CENTERLINE. PIPE BENDS SHALL MAINTAIN A MIN 5X THE OUTER PIPE DIAMETER FOR FISH PROTECTION. PIPE BENDS SHALL BE MITERED WHERE RADIUS IS LESS THAN THE LONG TERM COLD BENDING RADIUS OF HDPE, 27X PIPE OD (SDR 17). MAX MITER ANGLES NOT TO EXCEED 15 DEGREES.
4. FISH BYPASS PIPING SHALL BE FREE OF BURRS AND ROUGH SURFACES. SEE SPEC 40 23 20 FOR DETAILS OF DEBURRING.

SHEET KEY NOTES:

A. FLANGED CONNECTION TO BYPASS FLUME PIPE THIMBLE. SEE MECH.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
SCREEN 4 - FISH RETURN PIPE PLAN AND PROFILE

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C146

JOB NO: 21-094

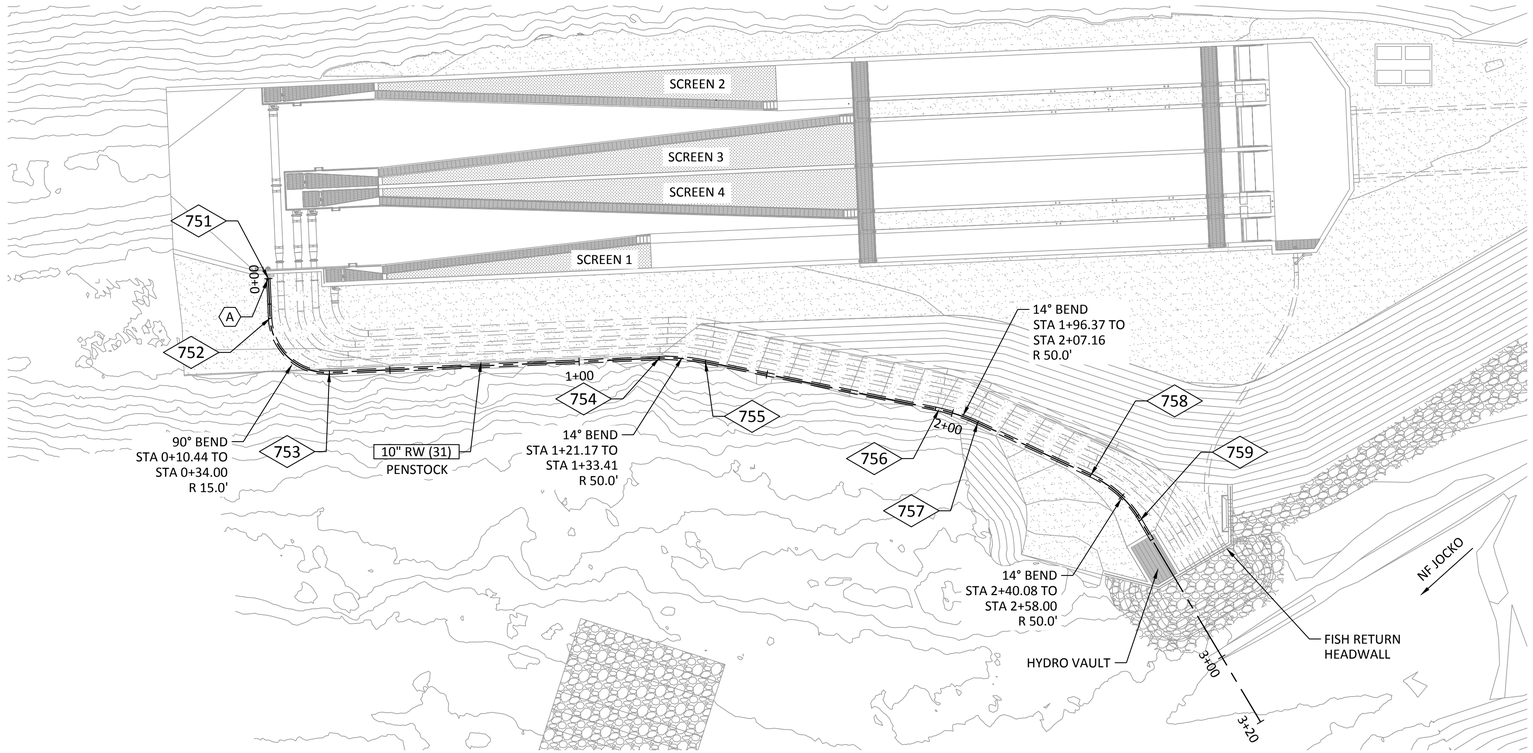
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SHEET NOTES:

1. PIPES SHALL MAINTAIN MINIMUM 2.0' COVER ALONG ENTIRE ALIGNMENT IN FINAL BACKFILLED CONDITION. DURING CONSTRUCTION CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY COVER TO ATTENUATE EQUIPMENT LOADS TO HS-20 TRAFFIC LOADING 2.0' ABOVE THE PIPE CROWN.
2. ALL ELEVATIONS SHOWN ON THIS SHEET ARE INVERT (FLOWLINE) ELEVATIONS FOR THE PIPES, UNLESS OTHERWISE INDICATED.

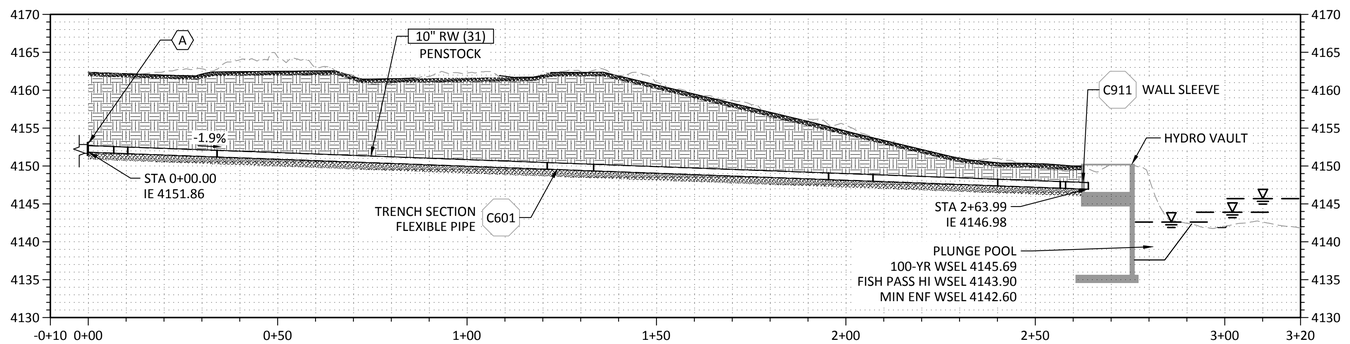
SHEET KEY NOTES:

A. FLANGED CONNECTION TO PIPE THIMBLE. SEE MECH.



PENSTOCK - PIPE PLAN

SCALE: 1"= 20'



PENSTOCK - PIPE PROFILE

SCALE: HORIZ 1"= 20'
VERT 1"= 10'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

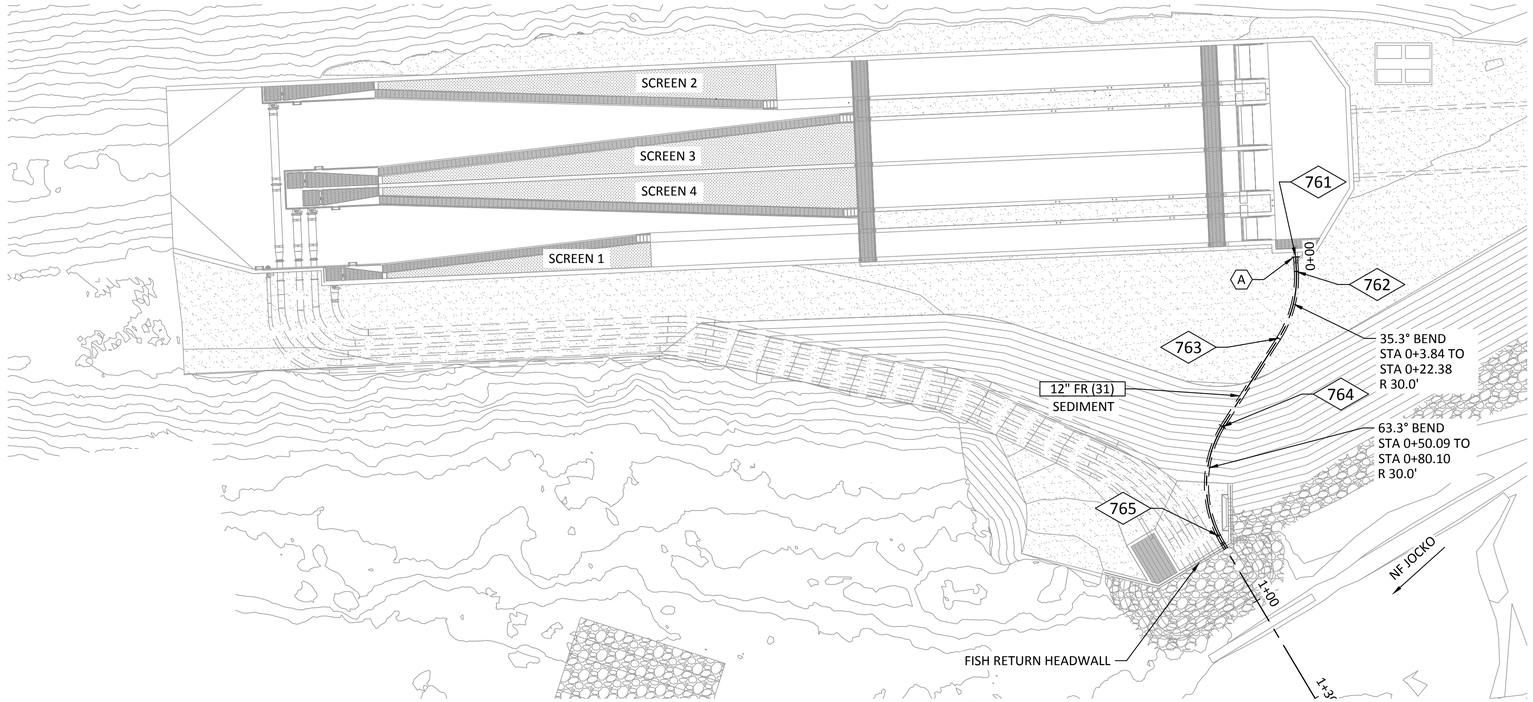
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
PENSTOCK - PIPE PLAN AND PROFILE

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C147

JOB NO: 21-094

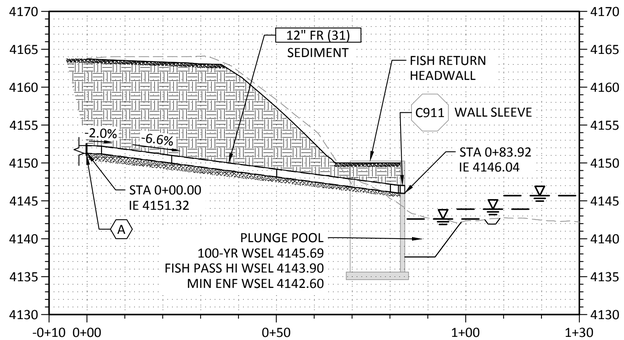
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C147.dwg
Plot date: Feb 13, 2025 10:01am, CAD User: JoeNeves



SEDIMENT - PIPE PLAN

SCALE: 1"= 20'

0" 20' 40'



SEDIMENT - PIPE PROFILE

SCALE: HORIZ 1"= 20'

VERT 1"= 10'

0" 20' 40'

0" 10' 20'

SHEET NOTES:

1. PIPES SHALL MAINTAIN MINIMUM 2.0' COVER ALONG ENTIRE ALIGNMENT IN FINAL BACKFILLED CONDITION. DURING CONSTRUCTION CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY COVER TO ATTENUATE EQUIPMENT LOADS TO HS-20 TRAFFIC LOADING 2.0' ABOVE THE PIPE CROWN.
2. ALL ELEVATIONS SHOWN ON THIS SHEET ARE INVERT (FLOWLINE) ELEVATIONS FOR THE PIPES, UNLESS OTHERWISE INDICATED.
3. ALL BEND RADII INDICATED ARE TO THE PIPE CENTERLINE. PIPE BENDS SHALL MAINTAIN A MIN 5X THE OUTER PIPE DIAMETER FOR FISH PROTECTION. PIPE BENDS SHALL BE MITERED WHERE RADIUS IS LESS THAN THE LONG TERM COLD BENDING RADIUS OF HDPE, 27X PIPE OD (SDR 17). MAX MITER ANGLES NOT TO EXCEED 15 DEGREES.
4. FISH BYPASS PIPING SHALL BE FREE OF BURRS AND ROUGH SURFACES. SEE SPEC 40 23 20 FOR DETAILS OF DEBURRING.

SHEET KEY NOTES:

A. FLANGED CONNECTION TO PIPE THIMBLE. SEE MECH.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SEDIMENT - PIPE PLAN AND PROFILE

DESIGNED A. LEMAN

DRAWN J. NEVES

CHECKED V. AUTIER

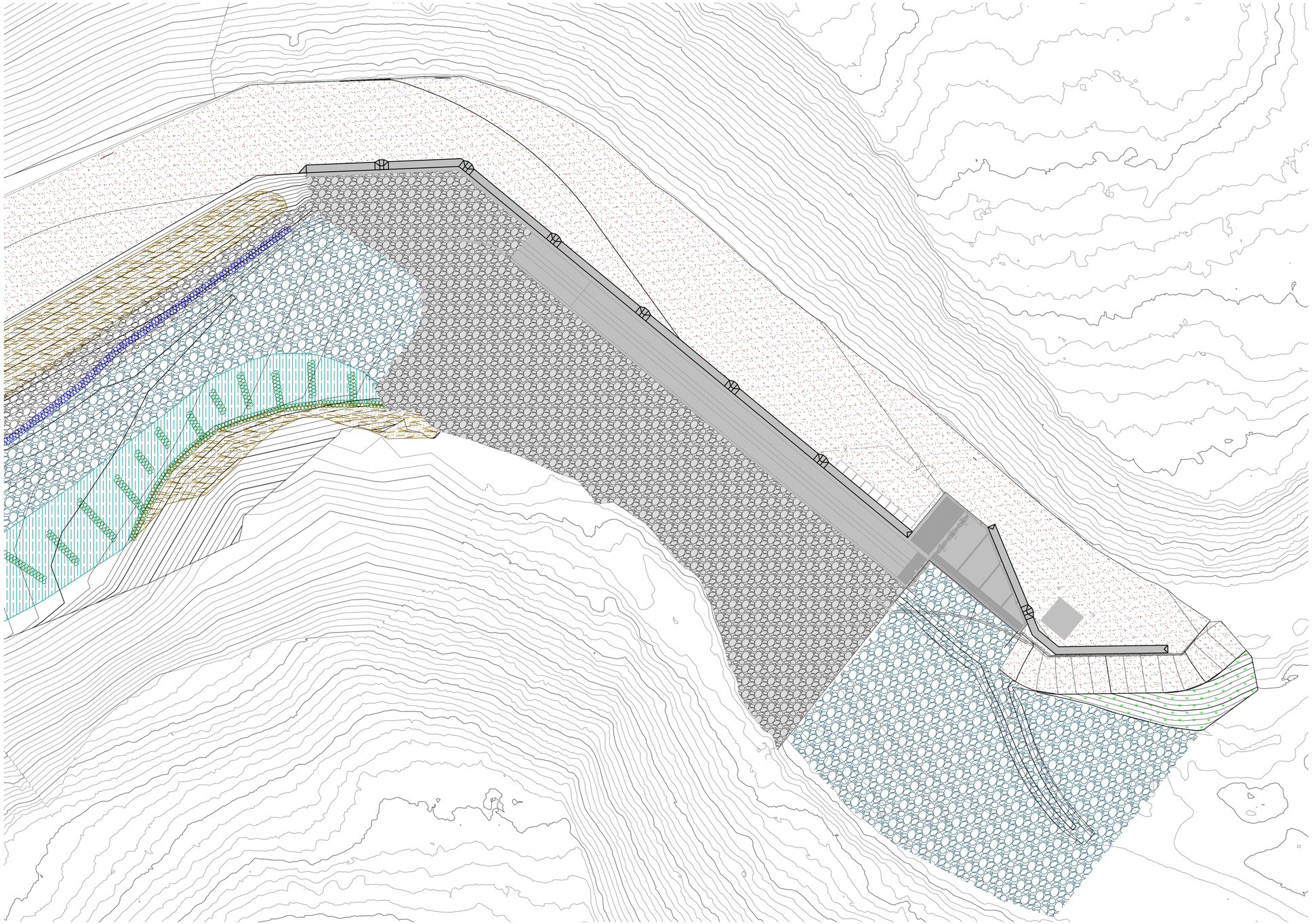
PROJECT DATE 02/14/25

DRAWING

C148

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C148.dwg Plot date: Feb 13, 2025 10:02am, CAD User: JoeNeves



SHEET NOTES:

1. ALL DISTURBED AREAS THAT WILL NOT BE RECEIVING A FINISH COURSE PER THIS PLAN, WILL NEED TO BE REVEGETATED AT PROJECT COMPLETION. CONTRACTOR TO MINIMIZE DISTURBANCES TO THE EXISTING VEGETATION TO THE EXTENT PRACTICAL WITHIN THE PROJECT NATURAL VEGETATION BUFFERS AROUND THE PROJECT LIMITS IN ADDITION TO THE EROSION AND SEDIMENT CONTROL MEASURES.
2. ANY DISTURBED STREAM BED OR BANK SHALL BE RESTORED WITH IN-KIND MATERIAL AT PROJECT COMPLETION. CONTRACTOR TO RECEIVE FINAL ACCEPTANCE OF STREAM RESTORATION MATERIALS FROM BOTH THE OWNER AND THE ENGINEER PRIOR TO DEMOBILIZATION FROM THE SITE.
3. FOR RIPRAP SIZE, SEE AREA-SPECIFIC SECTIONS AND DETAILS AND SPECIFICATION 31 37 00.

LEGEND:

- ROAD SURFACING (C135)
- CONCRETE, SEE STRUCT
- RESTORE STREAM BED MAT'L
- RIPRAP, SEE NOTE 3
- GROUTED RIPRAP, SEE NOTE 3
- REVEGETATE / HYDROSEED
- SLOPE ROUGHNESS AND REVEGETATION, SEE C153
- POINT BAR ROUGHNESS, SEE C153
- VEGETATED BRUSH BANK, SEE C154
- WILLOW BRUSH TRENCH, SEE C155

1 / C100 SITE RESTORATION PLAN - EAST

SCALE: 1"= 20'

0" 20' 40'

N

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

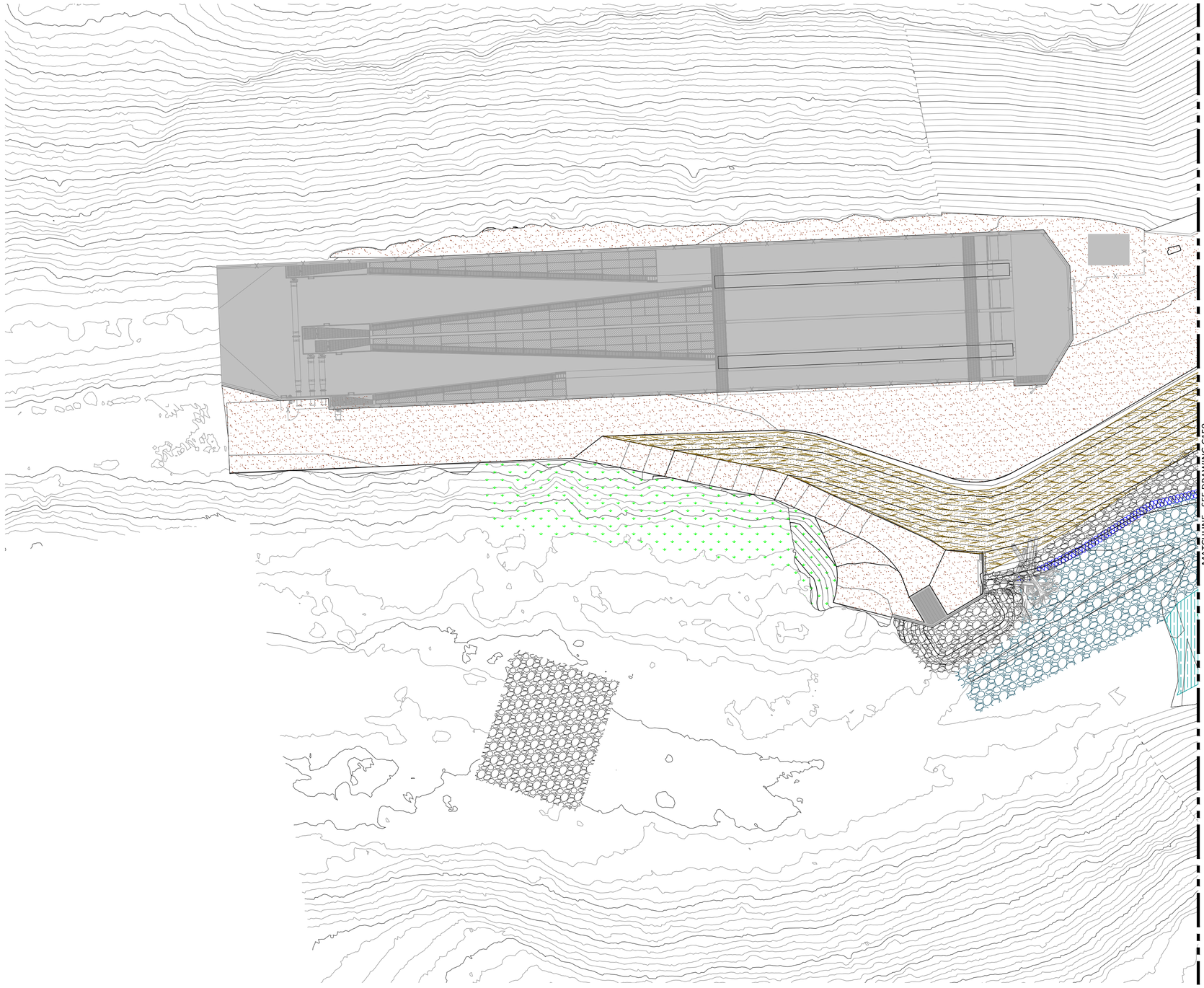
SITE RESTORATION PLAN - EAST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C150

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C150.dwg Plot date: Feb 11, 2025 04:42pm, CAD User: JoeNeves



SHEET NOTES:

1. ALL DISTURBED AREAS THAT WILL NOT BE RECEIVING A FINISH COURSE PER THIS PLAN, WILL NEED TO BE REVEGETATED AT PROJECT COMPLETION. CONTRACTOR TO MINIMIZE DISTURBANCES TO THE EXISTING VEGETATION TO THE EXTENT PRACTICAL WITHIN THE PROJECT NATURAL VEGETATION BUFFERS AROUND THE PROJECT LIMITS IN ADDITION TO THE EROSION AND SEDIMENT CONTROL MEASURES.
2. ANY DISTURBED STREAM BED OR BANK SHALL BE RESTORED WITH IN-KIND MATERIAL AT PROJECT COMPLETION. CONTRACTOR TO RECEIVE FINAL ACCEPTANCE OF STREAM RESTORATION MATERIALS FROM BOTH THE OWNER AND THE ENGINEER PRIOR TO DEMOBILIZATION FROM THE SITE.
3. FOR RIPRAP SIZE, SEE AREA-SPECIFIC SECTIONS AND DETAILS AND SPECIFICATION 31 37 00.

LEGEND:

- ROAD SURFACING (C135)
- CONCRETE, SEE STRUCT
- RESTORE STREAM BED MAT'L
- RIPRAP, SEE NOTE 3
- GROUTED RIPRAP, SEE NOTE 3
- REVEGETATE / HYDROSEED
- SLOPE ROUGHNESS AND REVEGETATION, SEE C153
- POINT BAR ROUGHNESS, SEE C153
- VEGETATED BRUSH BANK, SEE C154
- WILLOW BRUSH TRENCH, SEE C155

1 / C100 SITE RESTORATION PLAN - WEST
SCALE: 1"= 20'

0" 20' 40'

N

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
SITE RESTORATION PLAN - WEST

DESIGNED A. LEMAN
DRAWN J. NEVES
CHECKED V. AUTIER
PROJECT DATE 02/14/25

DRAWING
C151

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_C150.dwg Plot date: Feb 13, 2025 10:07am, CAD User: JoeNeves

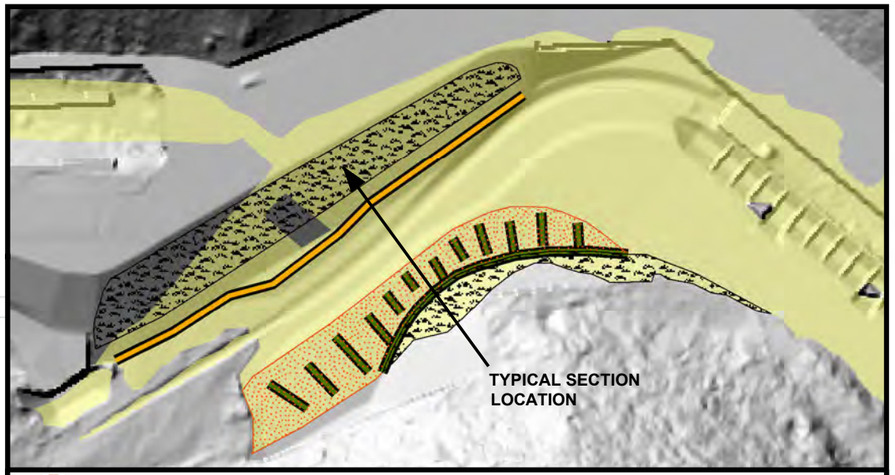
RESTORATION TREATMENTS AT THE NORTH FORK JOCKO TABOR DIVERSION SITE ARE INTENDED TO PROMOTE POINT BAR AND SLOPE VEGETATION DEVELOPMENT ON SURFACES DOWNSTREAM OF NEW DIVERSION & FISH PASSAGE INFRASTRUCTURE.

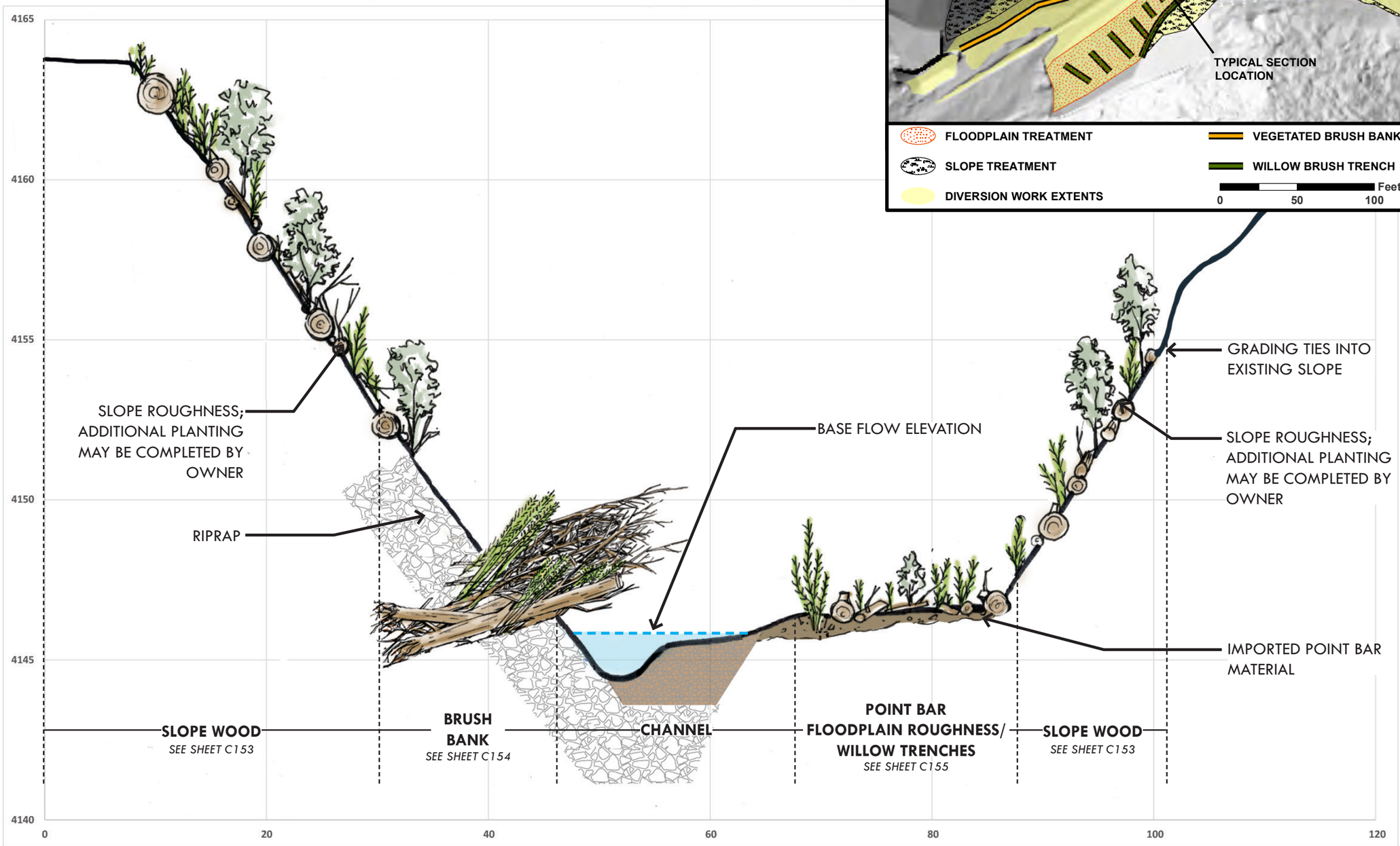
POINT BAR RESTORATION WILL CONSIST OF FLOODPLAIN ROUGHNESS AND WILLOW TRENCHES ON THE LEFT BANK WHERE A DEPOSITIONAL SURFACE HAS BEEN INCORPORATED INTO THE GRADING DESIGN. ROUGHNESS ELEMENTS AND WILLOW TRENCHES WILL HELP TO TRAP SEDIMENTS, JUMP-START REVEGETATION OF THE SITE, AND CREATE MICROTOPOGRAPHY FOR SURFACE DIVERSITY AND NATIVE SEED CAPTURE.

A VEGETATED BRUSH BANK WILL BE CONSTRUCTED ALONG THE RIGHT BANK. IN CONJUNCTION WITH RIP RAP, THE BRUSH BANK WILL HELP PROVIDE BANK STABILIZATION & HABITAT COMPLEXITY WHILE ALSO PROMOTING VEGETATION ESTABLISHMENT THROUGH THE INCORPORATION OF LIVE WILLOW CUTTINGS.

SLOPE ROUGHNESS TREATMENTS WILL BE APPLIED TO TIE-IN SLOPES ALONG BOTH BANKS TO PREVENT EROSION AND SEDIMENT RUNOFF.

DETAIL DRAWINGS AND ADDITIONAL TREATMENT DESCRIPTIONS ARE INCLUDED ON SHEETS C153 THROUGH C155 OF THIS PACKAGE.





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DATUM: NAD 83

PROJECTION: MONTANA STATE PLANE

UNIT: INTL FEET

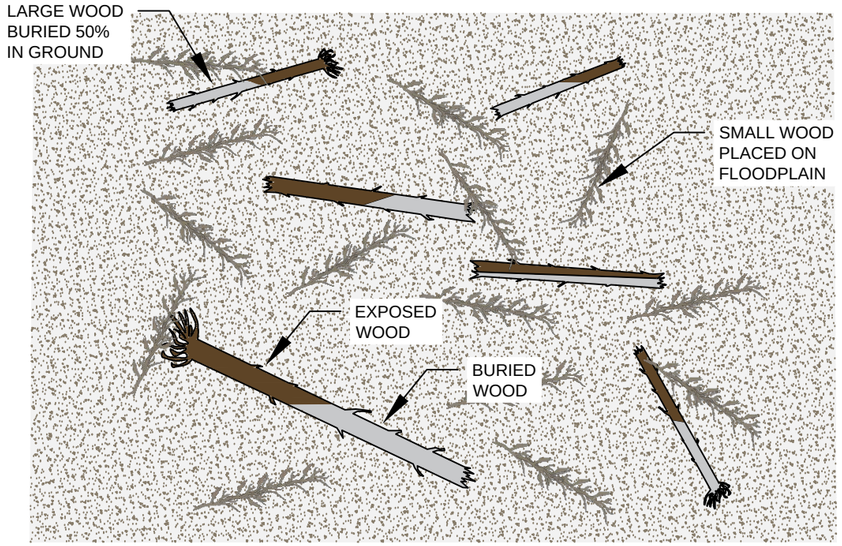
SITE RESTORATION - TYPICAL SECTION

NF JOCKO RIVER REHABILITATION - TABOR DIVERSION MITIGATION

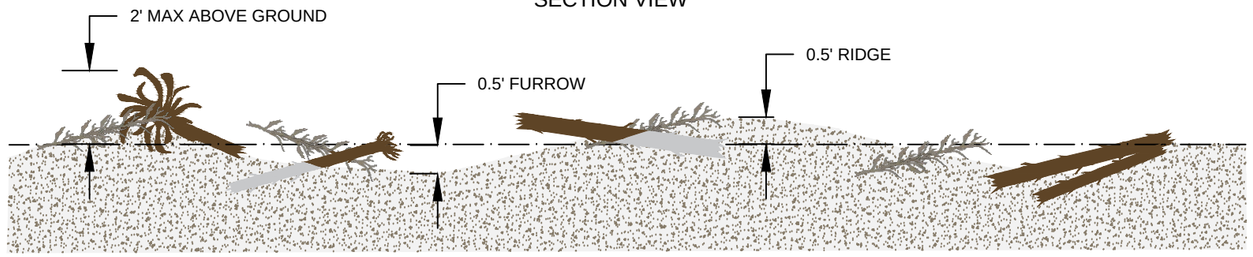
DRAWN BY: J. WALLACE; G. MOORE

SHEET
C152

FLOODPLAIN TREATMENT PLAN VIEW NTS



FLOODPLAIN TREATMENT SECTION VIEW NTS





EXAMPLE OF FLOODPLAIN TREATMENT

FLOODPLAIN TREATMENT CONSTRUCTION NOTES

THIS WORK INCLUDES INSTALLATION OF MICRO-TOPOGRAPHY ROUGHNESS AND WOODY MATERIAL WITHIN THE FLOODPLAIN. THE SURFACE WILL BE ROUGHENED WITH NO DISCERNABLE PATTERN TO CREATE HIGH AND LOW FEATURES WHILE LOOSENING THE SURFACE OF THE SOIL PROFILE. WOODY MATERIAL WILL BE INCORPORATED INTO THE SURFACE AND PARTIALLY BURIED INTO THE FLOODPLAIN. THIS TREATMENT CREATES AREAS WITHIN THE FLOODPLAIN TO TRAP SEED, PROVIDE PROTECTION TO SEEDLINGS, SLOW AND SPREAD SURFACE WATER, AND CONTRIBUTE ORGANIC MATTER FOR NEW PLANT GROWTH AND RE-ESTABLISHMENT OF A RIPARIAN VEGETATION COMMUNITY.

1. FLOODPLAIN TREATMENT LOCATIONS WILL BE STAKED PRIOR TO CONSTRUCTION.
2. CONSTRUCT THE FLOODPLAIN ROUGHNESS BY CREATING MICRO-TOPOGRAPHY CONSISTING OF LOW AND HIGH FEATURES (RIDGES AND FURROWS), WITH NO DISCERNABLE PATTERN (I.E NO ROWS), OVER THE ENTIRE TREATMENT AREA. MAXIMUM DEVIATION FROM THE DESIGNED FINISHED GRADE WILL BE NO MORE THAN 0.5 FEET.
3. PLACE WOODY MATERIAL TO CREATE ADDITIONAL ROUGHNESS IN THE FLOODPLAIN SURFACE. BURY THE LARGE WOOD PARTIALLY IN THE FLOODPLAIN WITH ONE HALF OF THE LENGTH BURIED TO A DEPTH OF TWO FEET. PLACE WOOD AT THE RATE SPECIFIED IN THE MATERIAL SCHEDULE. SMALL WOOD CAN BE PLACED ON THE FLOODPLAIN.
4. UTILIZE WOOD MEETING THE DIMENSIONS SHOWN IN THE MATERIAL SCHEDULE. CUT THE WOOD INTO APPROPRIATE SIZE LENGTHS TO FIT SPECIFIED DIMENSIONS.
5. LOAD AND HAUL WOOD FROM THE STAGING AREAS TO THE TREATMENT LOCATIONS. HAUL AND STAGE THE WOOD AT THE INSTALLATION LOCATIONS IN A MANNER THAT PRESERVES THE SIZE, TYPE, AND INTEGRITY OF EACH PIECE TO BE INCORPORATED INTO THE WORK. HANDLE MATERIALS IN A MANNER THAT MINIMIZES DAMAGE TO BARK, LIMBS, AND ROOTWADS IF PRESENT (NO ROLLING, CRUNCHING, CRUSHING, ETC.).

FLOODPLAIN TREATMENT MATERIAL SCHEDULE (PER ACRE)

ITEM	DIMENSIONS	QUANTITY
LARGE WOOD	6"-12" D, 6'-8' MIN. L	100
SMALL WOOD	<3" D, 4'-8' L	400

SLOPE TREATMENT CONSTRUCTION NOTES

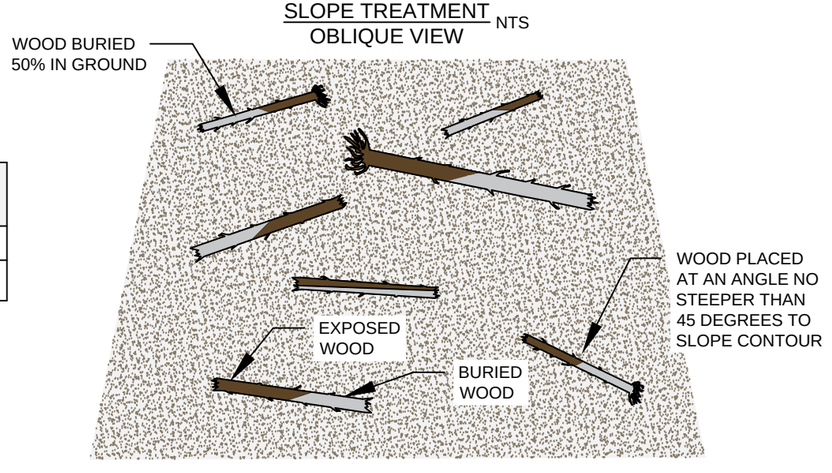
THIS WORK INCLUDES PARTIALLY BURYING LARGE WOOD INTO THE SLOPE TO PREVENT EROSION, SLOW AND SPREAD RUNOFF WATER AND SUPPORT REVEGETATION BY CREATING MICRO-SITES WHERE SEEDLINGS CAN ESTABLISH.

1. LARGE WOOD WILL BE PLACED ON SLOPES AT THE RATE SPECIFIED IN THE MATERIAL SCHEDULE.
2. APPROXIMATELY 50% OF THE LENGTH IS TO BE BURIED IN SLOPE SURFACE.

SLOPE TREATMENT MATERIAL SCHEDULE (PER ACRE)

ITEM	DIMENSIONS	QUANTITY
LARGE WOOD	6"-12" D, 10' MIN. L	150

SLOPE TREATMENT OBLIQUE VIEW NTS



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DATUM:

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UNITS: FEET

DATA SOURCES:

SITE RESTORATION - FLOODPLAIN AND SLOPE TREATMENT

NF JOCKO RIVER REHABILITATION
TABOR FEEDER DIVERSION

DRAWN BY: GEUM

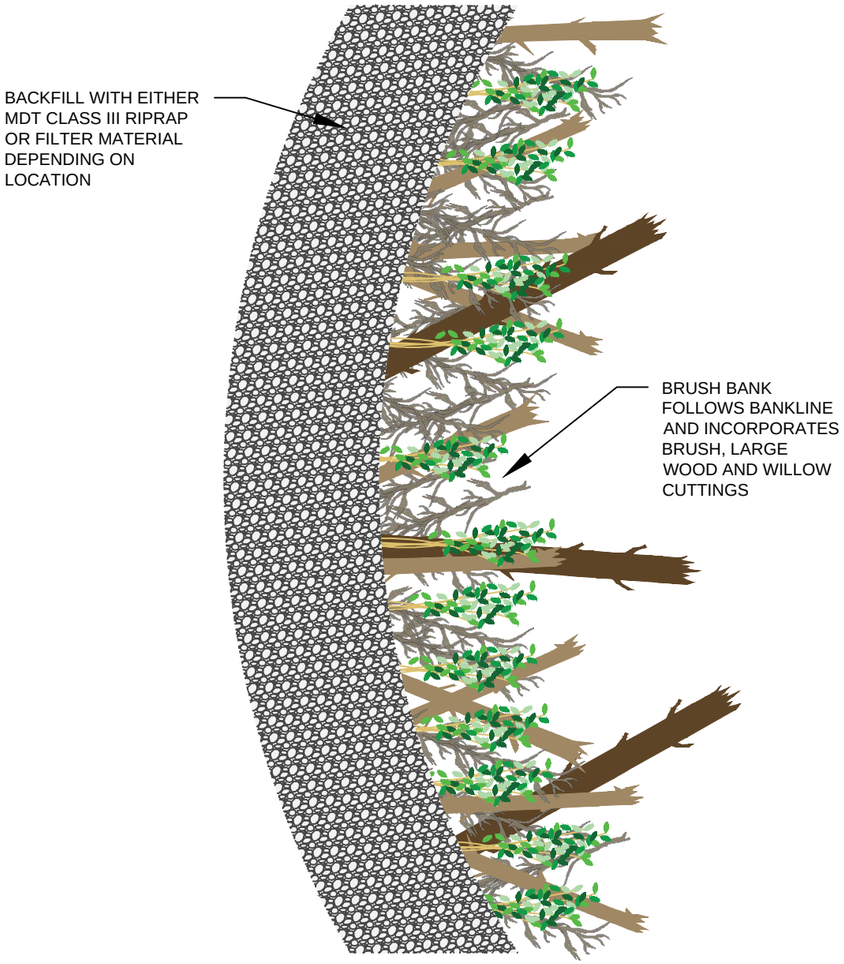
DESIGNED BY: GEUM

DATE: AUGUST 2024

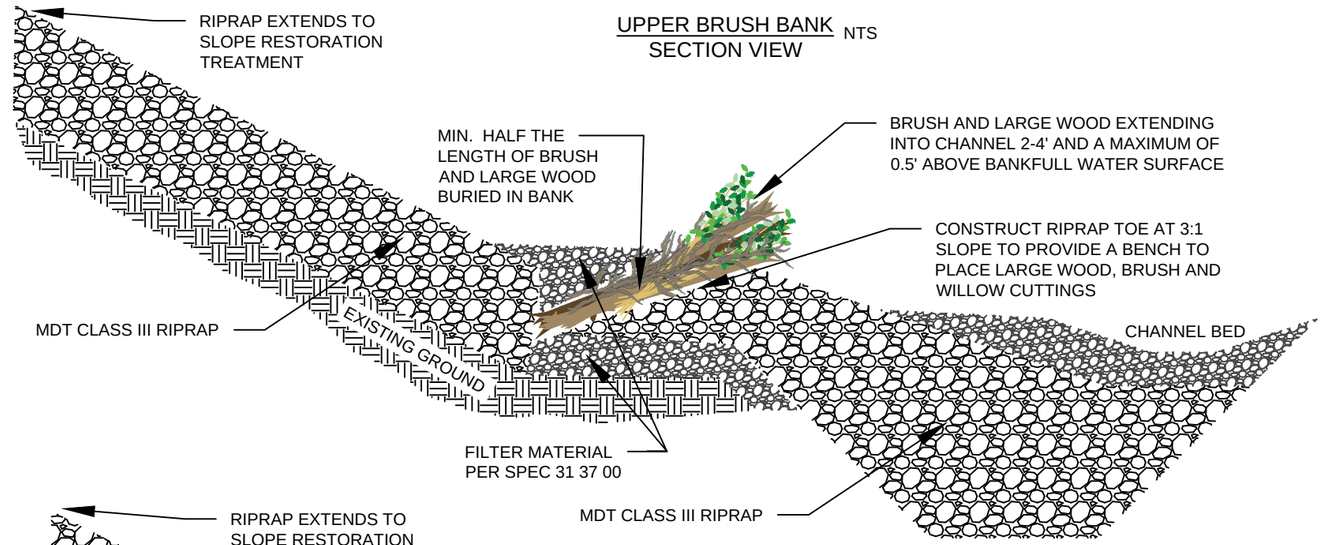
SHEET

C153

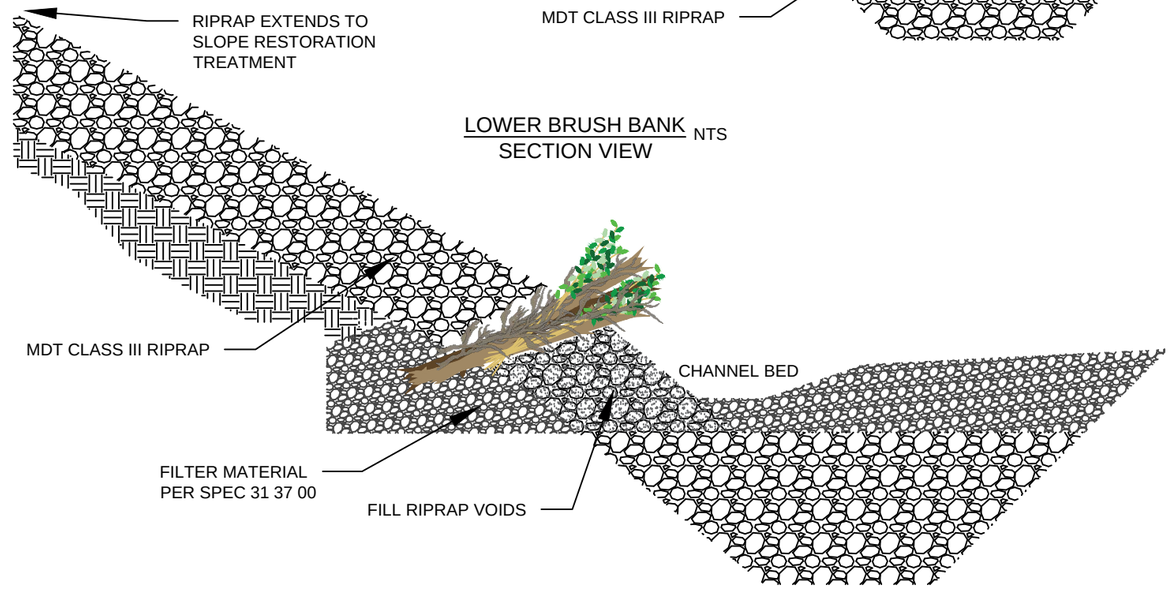
BRUSH BANK
PLAN VIEW
NTS



UPPER BRUSH BANK
SECTION VIEW
NTS



LOWER BRUSH BANK
SECTION VIEW
NTS



BRUSH BANK CONSTRUCTION NOTES

BRUSH BANKS WILL BE CONSTRUCTED ALONG THE BANK IN SELECT LOCATIONS. THE INTENT OF THIS STRUCTURE IS TO CREATE A COMPLEX, VEGETATED BANK MARGIN TO DISSIPATE FLOW ENERGY AND PROVIDE HABITAT.

1. BRUSH BANK TREATMENT LOCATIONS WILL BE STAKED PRIOR TO CONSTRUCTION.
2. BRUSH BANK TREATMENTS WILL VARY FROM UPSTREAM TO DOWNSTREAM IN DISTANCE TO CHANNEL CENTERLINE AND BACKFILL MATERIAL.
   - 2.1. IN THE UPPER SECTION THE BRUSH BANK TREATMENT WILL BE OFFSET FROM THE CHANNEL WITH A RIPRAP TOE AND BACKFILLED WITH FILTER MATERIAL ON TOP OF THE LOGS AND BRUSH.
   - 2.2. IN THE LOWER SECTION THE BRUSH BANK TREATMENT WILL BE ADJACENT TO THE CHANNEL WITH A RIPRAP TOE THAT IS FILLED TO SEAL VOIDS AND BACKFILLED WITH RIPRAP ON TOP OF THE LOGS AND BRUSH.
3. PRIOR TO CONSTRUCTION SALVAGE ANY GRUBBED TREES OR SHRUBS AND PROPERLY STORE THEM FOR TRANSPLANT OR OTHER USE. TO THE EXTENT POSSIBLE LIMIT DISTURBANCE TO NATIVE VEGETATION.
4. EXCAVATE STREAMBANK TO SUBGRADE ELEVATIONS AND CONSTRUCT RIPRAP TOE WHERE NEEDED AND ACCORDING TO SPECIFIED DIMENSIONS. IN SELECT LOCATIONS THE RIPRAP TOE WILL BE FILLED TO SEAL VOIDS.
5. INSTALL MATRIX OF LOGS AND BRUSH. LOGS CAN OVERLAP AND CAN BE ORIENTED FACING UPSTREAM OR DOWNSTREAM, BUT SHOULD BE PLACED BELOW THE BANKFULL ELEVATION. PLACE WILLOW CUTTINGS INTO THE MATRIX AS SHOWN IN THE DRAWING WITH THE STEMS IN CONTACT WITH THE BASEFLOW WATER TABLE AND TOPS AT OR ABOVE THE BANKFULL ELEVATION.
6. BACKFILL TREATMENT WITH RIPRAP OR FILTER MATERIAL AS SPECIFIED TO DESIGN ELEVATIONS.

BRUSH BANK MATERIAL SCHEDULE (PER LINEAR FOOT)

ITEM	DIMENSIONS	QUANTITY
BRUSH	1"-4" D, 6'-8' L	2 PIECES
LARGE WOOD	6"-12" D, 8' L	0.5 PIECES
WILLOW CUTTINGS	0.5"-1" D, 6'-8' L	3 PIECES
COBBLE	6" MINUS	1-3 CUBIC YARD



EXAMPLE OF BRUSH BANK

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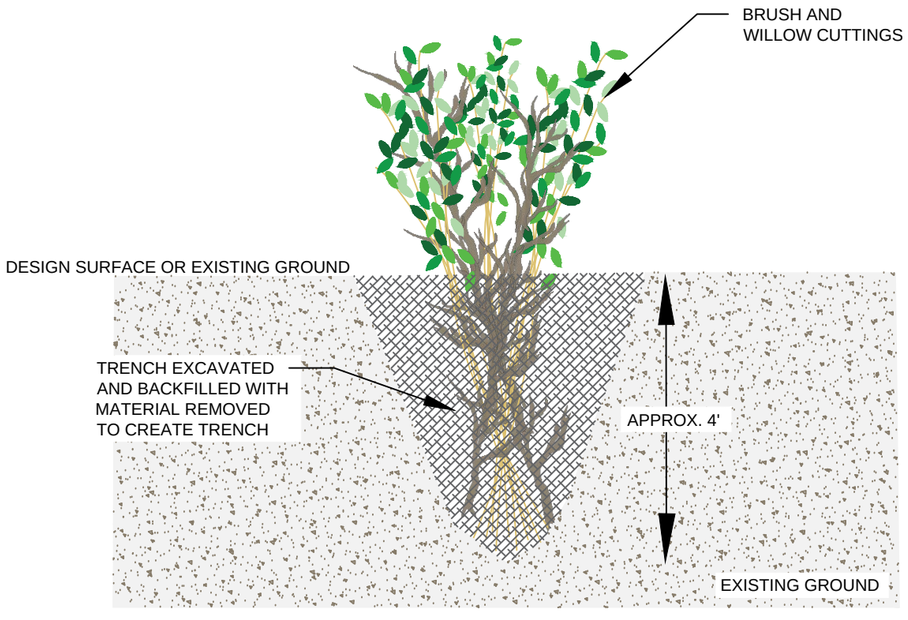
SITE RESTORATION - BRUSH BANK TREATMENT

NF JOCKO RIVER REHABILITATION
TABOR FEEDER DIVERSION

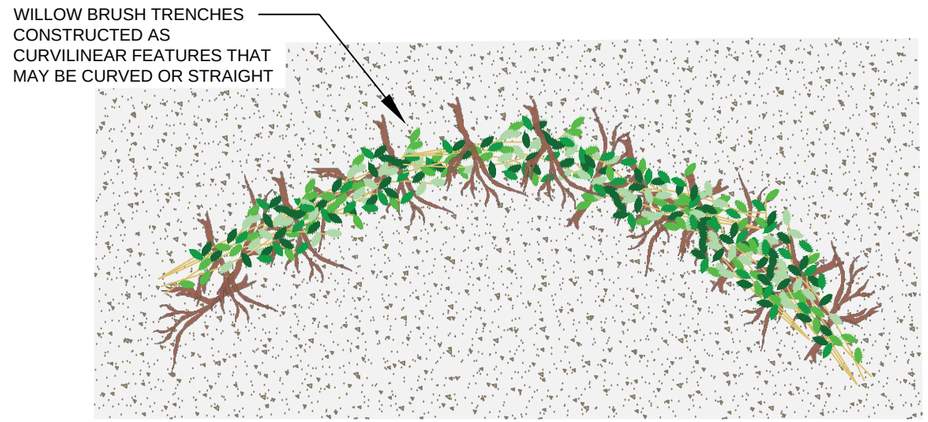
DRAWN BY: GEUM
DESIGNED BY: GEUM
DATE: AUGUST 2024

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C154

WILLOW BRUSH TRENCH SECTION VIEW NTS



WILLOW BRUSH TRENCH PLAN VIEW NTS







EXAMPLES OF WILLOW BRUSH TRENCH TREATMENTS

WILLOW BRUSH TRENCH MATERIAL SCHEDULE (PER LINEAR FOOT)		
ITEM	DIMENSIONS	QUANTITY
BRUSH	<3" D, 6'-10' L (BRANCHES AND MULTIPLE STEMS PREFERRED)	1 PIECE
WILLOW CUTTINGS	0.5"-1" D, 6'-8' L	5 PIECES

WILLOW BRUSH TRENCH CONSTRUCTION NOTES

WILLOW BRUSH TRENCHES WILL BE CONSTRUCTED WITHIN THE FLOODPLAIN TO SUPPORT RAPID ESTABLISHMENT OF RIPARIAN VEGETATION, STABILIZE SOILS TO PREVENT EROSION AND PROVIDE HABITAT.

1. WILLOW BRUSH TRENCHES WILL BE CONSTRUCTED WITHIN THE FLOODPLAIN AND ACROSS FLOW PATHS. FINAL LOCATIONS WILL BE STAKED PRIOR TO CONSTRUCTION.
2. A TRENCH WILL BE CONSTRUCTED APPROXIMATELY 4' DEEP AND EXTEND THE LENGTH OF THE STAKED TREATMENT LOCATION. WILLOW CUTTINGS AND BRUSH WILL BE PLACED IN THE TRENCH SUCH THAT THEY ARE INTERMIXED AND ORIENTED AT A NEAR VERTICAL ANGLE.
3. THE TRENCH WILL THEN BE BACKFILLED WITH THE SAME MATERIAL REMOVED TO CREATE THE TRENCH AND SHOULD MATCH THE ELEVATION OF THE SURROUNDING FLOODPLAIN GRADE.

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DATUM:
PROJECTION:
UNITS: FEET
DATA SOURCES:

SITE RESTORATION - WILLOW BRUSH TRENCH TREATMENT

NF JOCKO RIVER REHABILITATION
TABOR FEEDER DIVERSION

DRAWN BY: GEUM
DESIGNED BY: GEUM
DATE: AUGUST 2024

SHEET
C155

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA:

1) APPLICABLE CODES:
   a) 2021 INTERNATIONAL BUILDING CODE (IBC).
   b) MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE-7
   c) US BUREAU OF RECLAMATION DESIGN STANDARD NO. 3, WATER CONVEYANCE SYSTEMS, GENERAL STRUCTURAL CONSIDERATIONS.
   d) US BUREAU OF RECLAMATION DESIGN STANDARD NO. 14, CHAPTER 3. APPURTENANT STRUCTURES FOR DAMS (SPILLWAYS AND OUTLET WORKS) DESIGN STANDARDS, 2022 EDITION
   e) CODE REQUIREMENTS FOR ENVIRONMENTAL STRUCTURES, ACI 350
   f) BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318
   g) SPECIFICATIONS FOR STRUCTURAL STAINLESS STEEL BUILDINGS, AISC 370
   h) AISC DESIGN GUIDE 27, second edition, STRUCTURAL STAINLESS STEEL
   i) OSHA OCCUPATIONAL HEALTH AND SAFETY STANDARDS, OSHA CFR 29 PART 1910
2) REFER TO THE DRAWINGS FOR ADDITIONAL AND SPECIFIC STRUCTURE LOADINGS AND REQUIREMENTS.
3) ALL LOADS SHOWN ARE SERVICE LEVEL (UNFACTORED) UNLESS SPECIFICALLY NOTED OTHERWISE.
4) DEAD LOADS:
   a) SELF WEIGHT
5) WIND LOADS:
   BASIC WIND SPEED RISK CATEGORY II = 105 MPH (ULT)
6) LIVE LOADS:
   WALKWAYS 100 PSF
7) SEISMIC LOADS:
   MAPPED SPECTRAL RESPONSE ACCELERATIONS
   PGA = 0.33G
   SS = 0.640G
   S1 = 0.180G
   DESIGN SPECTRAL RESPONSE ACCELERATIONS
   SDS = 0.560G
   SD1 = 0.320G
   SITE CLASS = D
   SEISMIC RISK CATAGORY = II
   SEISMIC DESIGN CATEGORY= D
   IMPORTANCE FACTOR, IE = 1.0
8) HYDRAULIC LOADS: SEE PLANS FOR STRUCTURE SPECIFIC LOADS
9) SOIL DESIGN PARAMETERS:
   a) NET ALLOWABLE SOIL BEARING PRESSURES: 3000 PSF
   b) EQUIVALENT FLUID PRESSURES:

	DRAINED	UNDRAINED
ACTIVE:	38 PCF	85 PCF
AT REST:	59 PCF	100 PCF
PASSIVE:	407 PCF	299 PCF

   c) VERTICAL SURCHARGE: 2 FT OF SOIL WEIGHT
   d) COEFFICIENT OF FRICTION: 0.35
   e) NATIVE SOIL UNIT WEIGHT 125 PCF
   f) DESIGN GROUNDWATER BASED ON 100 YEAR FLOOD EVENT WITH GROUNDWATER AT ELEVATION 4165.70. FOREBAY SHALL BE FLOODED AT GROUNDWATER OR FLOOD EVENTS ABOVE THIS LEVEL
10) FROST DEPTH: 42 IN

GENERAL INFORMATION:

1. FOR ABBREVIATIONS NOT LISTED, SEE ASME Y14.38 "ABBREVIATIONS AND ACRONYMS: PUBLICATION AS DISTRIBUTED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.
3. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTOR OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.
4. INFORMATION (DETAILING, DIMENSIONS, CONFIGURATIONS, AND ELEVATIONS, ETC.) OF EXISTING CONSTRUCTION SHOWN REFLECTS AVAILABLE EXISTING DESIGN DOCUMENTS, AND DOES NOT NECESSARILY REPRESENT THE AS-CONSTRUCTED CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS, ELEVATIONS AND DETAILING OF THE EXISTING STRUCTURES PRIOR TO UNDERTAKING ANY WORK THAT IS AFFECTED BY THE EXISTING STRUCTURE.
5. VERIFY FINAL OPENING DIMENSIONS IN WALLS, SLABS, AND DECKS WITH OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION OF THESE ELEMENTS.
6. DO NOT CUT OR MODIFY STRUCTURAL MEMBERS FOR PIPES, DUCTS, ETC, UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.

FOUNDATIONS:

1. REFER TO REPORT OF GEOTECHNICAL INVESTIGATION JOCKO K CANAL HEADWORKS ARELEE, MONTANA BY TETRA TECH DATED JANUARY, 2021.
2. EXCAVATIONS SHALL BE SHORED TO PREVENT SUBSIDENCE OR DAMAGE TO ADJACENT EXISTING STRUCTURES, STREETS, UTILITIES, ETC.
3. FOUNDATION BEARING SURFACES SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER OR QUALIFIED DESIGNEE PRIOR TO PLACEMENT OF FORMWORK OR REINFORCING STEEL.
4. NO BACKFILL SHALL BE PLACED BEHIND WALLS UNTIL THE WALLS HAVE ATTAINED 100 PERCENT AND TOP SUPPORTING SLAB'S CONCRETE HAS ATTAINED 80 PERCENT OF THEIR SPECIFIED 28 DAY COMPRESSIVE STRENGTH, OR UNTIL TOP-OF-WALL FRAMING SYSTEMS, INCLUDING STEEL OR WOOD DIAPHRAGMS, HAVE BEEN COMPLETED.
5. NO BACKFILL SHALL BE PLACED BEHIND CANTILEVERED, FREE TOP WALLS UNTIL THE CONCRETE HAS ATTAINED 100 PERCENT OF ITS SPECIFIED 28 DAY COMPRESSIVE STRENGTH.

FORMWORK, SHORING AND BRACING:

1. STRUCTURES SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED FOR STABILITY UNDER FINAL CONDITIONS ONLY. DESIGN SHOWN DOES NOT INCLUDE NECESSARY COMPONENTS OR EQUIPMENT FOR STABILITY OF THE STRUCTURES DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR WORK RELATING TO CONSTRUCTION ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, AND OTHER WORK AIDS REQUIRED TO SAFELY PERFORM THE WORK SHOWN.
2. "BURY" BARS OR "CARRIER" BARS ARE NOT ALLOWED FOR THE BOTTOM MATS OF REINFORCING IN ALL ELEVATED SLABS AND ARE NOT ALLOWED FOR THE TOP MATS OF REINFORCING IN ELEVATED SLABS LESS THAN 12 INCHES THICK.
3. TEMPORARY SHORING SHALL REMAIN IN PLACE UNTIL ELEVATED CONCRETE FLOOR OR SLABS HAVE REACHED 80 PERCENT OF THE 28 DAY COMPRESSIVE STRENGTH AS DETERMINED BY FIELD CYLINDER BREAKS.

CONCRETE REINFORCING:

1. REINFORCING STEEL:
   TYPICAL: ASTM A615, GRADE 60
   WELDED: ASTM A706, GRADE 60 (WELDING IS ONLY PERMITTED WITH WRITTEN PERMISSION FROM ENGINEER)
2. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 "MANUAL OF STANDARD PRACTICE" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
3. MINIMUM REINFORCING FOR CONCRETE WALLS AND SLABS SHALL BE AS FOLLOWS:

THICKNESS	REINF EACH WAY	LOCATION
6"	#4@12"	CENTERED
8"	#5@12"	CENTERED
10"	#4@12"	EACH FACE
12"	#5@12"	EACH FACE

   PROVIDE LARGER SIZES AND MORE REINFORCING IN SECTIONS OF CONCRETE WHERE REQUIRED BY THE DETAILS ON THE DRAWINGS OR BY THE SPECIFICATIONS.
4. CLEARANCE FOR REINFORCEMENT BARS, UNLESS SHOWN OTHERWISE, SHALL BE:
   WHEN PLACED ON GROUND: 3"
   OTHER CONCRETE SURFACES 2"
5. REFER TO WALL CORNER AND WALL INTERSECTION REINFORCING DETAIL S141. WALL CORNER REINFORCING SIZES AND SPACINGS SHALL BE AS SHOWN ON THE DRAWINGS AND REFERENCED TO THIS DETAIL. TYPICAL HORIZONTAL WALL REINFORCING SHALL LAP WITH THE CORNER HORIZONTAL REINFORCING.
6. 90 DEGREE BENDS, UNLESS OTHERWISE SHOWN, SHALL BE ACI 318 STANDARD HOOKS.
7. WALL CORNER AND WALL INTERSECTION REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH COLUMNS OR PILASTERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALLS, AS INDICATED IN DETAIL S141.
8. WALL FOOTING CORNER AND INTERSECTION REINFORCEMENT BARS SHALL BE EXTENDED INTO CONNECTING FOOTINGS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING FOOTING. OUTSIDE FACE WALL FOOTING REINFORCEMENT SHALL BE LAPPED WITH CORNER BARS. ALL WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMNS OR PILASTERS FOOTINGS.
9. LAP VERTICAL WALL BARS WITH DOWELS FROM BASE SLABS AND EXTEND INTO TOP FACE OF ROOF SLABS AND LAP WITH TOP SLAB REINFORCEMENT. PROVIDE A MINIMUM OF FOUR FULL HEIGHT VERTICAL BARS WITH MATCHING DOWELS AT WALL ENDS, CORNERS AND INTERSECTIONS WITH SIZE TO MATCH TYPICAL VERTICAL REINFORCING STEEL SHOWN OR REQUIRED BY NOTES ABOVE.
10. LOCATE ELEVATED SLAB AND BEAM TOP BAR SPLICES AT MIDSPAN AND BOTTOM BAR SPLICES AT SUPPORTS.
11. REINFORCING STEEL FOR FOOTINGS AND SLABS ON GRADE SHALL BE ADEQUATELY SUPPORTED ON BAR SUPPORTS WITH SPACERS TO KEEP REINFORCING ABOVE THE PREPARED GRADE. LIFTING REINFORCING OFF GRADE DURING CONCRETE PLACEMENT IS NOT PERMITTED.
12. REFER TO OPENING REINFORCING DETAILS S142 AND S144.
13. REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

1. LAP LENGTHS ARE BASED ON MINIMUM CONCRETE COVER OF 2.5". LONGER LENGTHS ARE REQUIRED FOR CONCRETE COVER LESS THAN 2".
2. TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.
3. WHERE 3000 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 16 PERCENT. WHERE 3500 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 7 PERCENT.

FINISHING:

1. ALL METAL EDGES IN THE FLOW PATH USED FOR FISH MIGRATION SHALL BE GROUND SMOOTH TO MINIMIZE RISK OF LACERATIONS.
2. CONCRETE SURFACES MUST BE FINISHED TO ENSURE SMOOTH SURFACES, WITH ONE-INCH WIDE, 45° CHAMFERS.

CAST IN PLACE CONCRETE:

1. 28-DAY COMPRESSIVE STRENGTHS:
   STRUCTURES: 4500 PSI
2. CONTINUOUS WATERSTOP AS SPECIFIED SHALL BE INSTALLED IN CONSTRUCTION JOINTS OF WATER HOLDING BASINS, CHANNELS, AND BELOW GRADE STRUCTURES, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
3. CONSTRUCTION JOINTS INDICATED ARE SUGGESTED LOCATIONS. CONTRACTOR MAY REVISE LOCATION OF JOINTS, SUBJECT TO SPECIFIED REQUIREMENTS. LAYOUT SHOWING ALL CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED FOR REVIEW BY ENGINEER.
4. ROUGHEN AND CLEAN CONSTRUCTION JOINTS IN WALLS AND SLABS AS SPECIFIED PRIOR TO PLACING ADJACENT CONCRETE.
5. COORDINATE PLACEMENT OF OPENINGS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND INSERTS PRIOR TO PLACEMENT OF CONCRETE.
6. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.
7. DO NOT PLACE CONDUIT PARALLEL TO BEAM OR COLUMN REINFORCEMENT UNLESS SPECIFICALLY INDICATED IN DRAWINGS.

WELDING:

1. WELDS SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS):
   D1.1, STRUCTURAL WELDING CODE - STEEL
   D1.6, STRUCTURAL WELDING CODE - STAINLESS STEEL
2. REPAIR WELDS FOUND DEFECTIVE IN ACCORDANCE WITH AWS D1.1 SECTION 5.26.
3. USE INTERMITTENT WELDS AT FIELD WELDS OF EMBED PLATES AND ANGLES TO AVOID SPALLING OR CRACKING OF THE EXISTING CONCRETE.
4. BUTT JOINT WELDS SHALL BE COMPLETE JOINT PENETRATION (CJP) UNLESS INDICATED OTHERWISE.

STRUCTURAL STEEL AND METAL FABRICATIONS:

1. STRUCTURAL STAINLESS STEEL
   SHAPES A276, AISI 304, 304L FOR WELDING
   STEEL PLATE A240, AISI 304, 304L FOR WELDING
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:
   W-SHAPES A992
   MISCELLANEOUS SHAPES INCLUDING
   ANGLES, CHANNELS, PLATES, ETC. A572, GRADE 50
3. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN CONFORMANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION, CURRENT EDITION, AND CURRENT OSHA STANDARDS.
4. FASTENERS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO THE FOLLOWING ASTM STANDARDS EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE:
   ANCHOR BOLTS (AB)
   STAINLESS STEEL F593, AISI TYPE 304, CONDITION CW
   BOLTS
   STEEL A325-N
   STAINLESS STEEL F593, AISI TYPE 304, CONDITION CW
5. ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE CLEAN AND FREE OF OIL, DIRT AND PAINT.
6. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. NO CUTTING OR BURNING OF STRUCTURAL STEEL IS PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

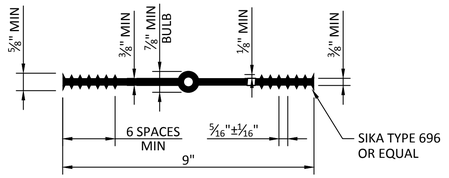
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STRUCTURAL GENERAL NOTES

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
PROJECT DATE 02/14/25

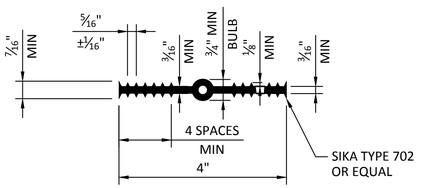
DRAWING
GS001

JOB NO: 21-094

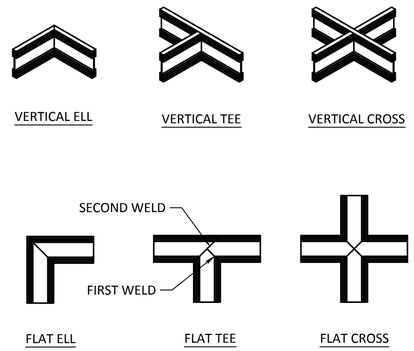
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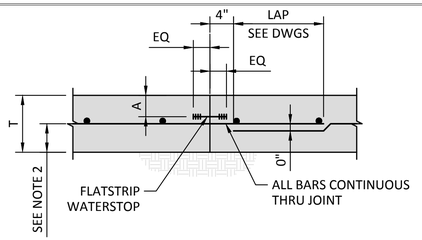


S103 9" CENTER-BULB WATERSTOP
SCALE: NTS



S107 4" CENTER-BULB WATERSTOP
SCALE: NTS

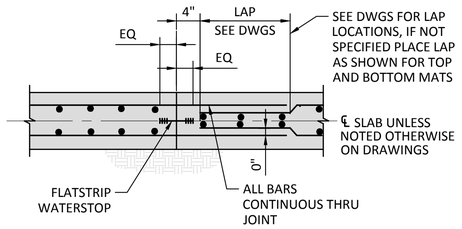




SINGLE MAT REINF - CONTINUOUS THRU JOINT
(ONLY WHEN SPECIFIED ON DRAWINGS)

S110 WITH WATERSTOP
SCALE: NTS

S111 NO WATERSTOP
SCALE: NTS



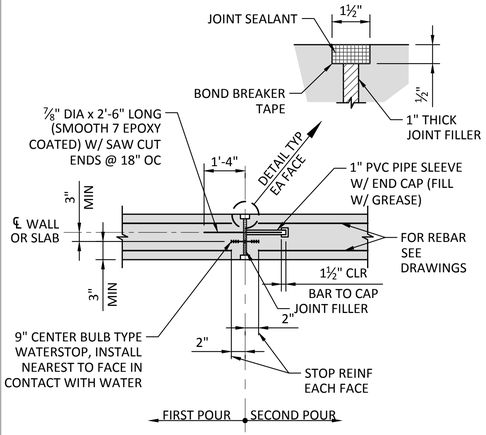
DOUBLE MAT REINF

S112 WITH WATERSTOP
SCALE: NTS

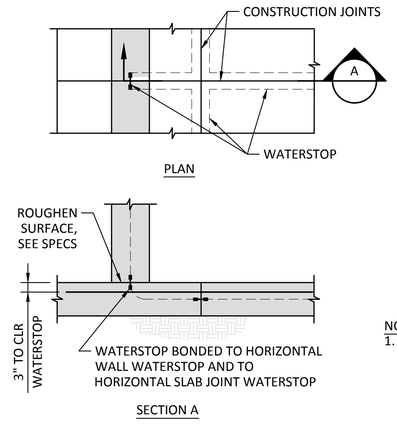
S113 NO WATERSTOP
SCALE: NTS

NOTES:
1. WATERSTOPS AND SEALANT GROOVES TO BE PROVIDED IN ALL WATER RETAINING SLABS, SEE DRAWINGS, FOR OTHER LOCATIONS WHERE THEY MAY BE REQUIRED.
2. DIMENSIONS INDICATED ON DETAIL CONTROL MINIMUM COVER. FOR THIN SLABS, THE BOTTOM COVER MAY BE LESS THAN 3".
3. STAGGER SPLICES UNLESS NOTED OTHERWISE.

T	A
6"	2"
7"	2½"
8"	2½"



S117 EXPANSION JOINT
SCALE: NTS



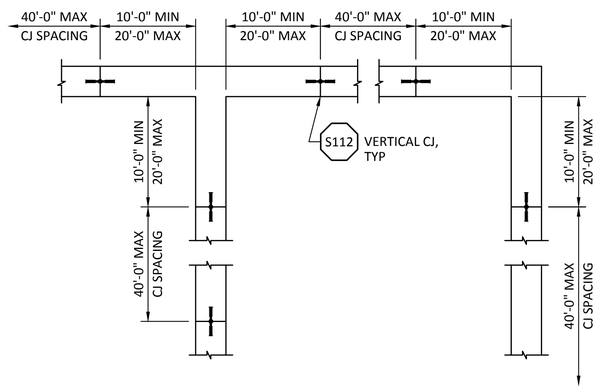
NOTES:
1. CONSTRUCTION JOINTS PASSING THROUGH VARIOUS MEMBERS OF A WATER RETAINING STRUCTURE SHALL BE SEALED WITH WATERSTOPS BONDED TOGETHER, SO AS TO PROVIDE A CONTINUOUS WATERTIGHT JOINT.

S108 PREFABRICATED WATERSTOP JOINTS
SCALE: NTS

S118 CONSTRUCTION JOINT (WALL TO SLAB)
SCALE: NTS

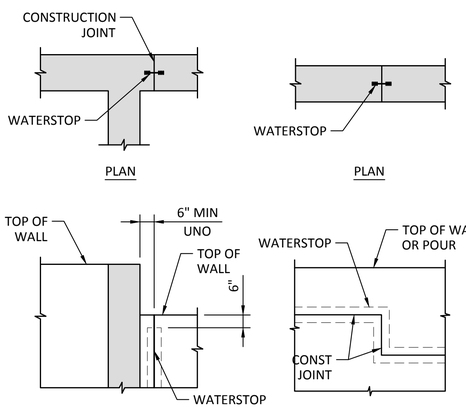
SLAB-ON-GRADE CONSTRUCTION JOINTS

SCALE: NTS

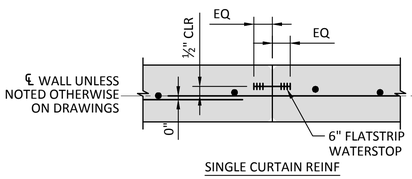


NOTE:
1. LOCATE WALL CONSTRUCTION JOINTS AS SHOWN, UNLESS INDICATED OTHERWISE.

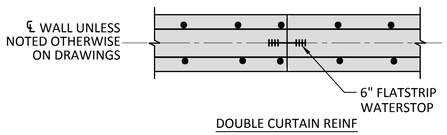
S119 WALL CONSTRUCTION JOINT SPACING
SCALE: NTS



S120 WATERSTOP DETAILS FOR WALL JOINTS
SCALE: NTS



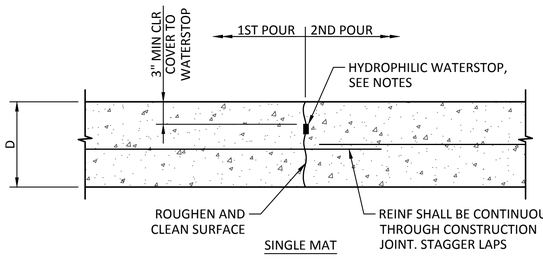
S121 WITH WATERSTOP
SCALE: NTS

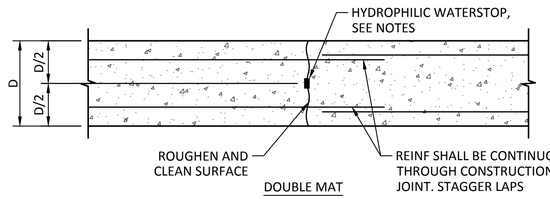


S123 WITH WATERSTOP
SCALE: NTS

NOTES:
1. WHERE WATERSTOP IS REQUIRED IN SINGLE CURTAIN WALL REINFORCEMENT, PLACE WATERSTOP ON WATER SIDE OF WALL.
2. STAGGER SPLICES UNLESS NOTED OTHERWISE.

VERTICAL WALL CONSTRUCTION JOINT
SCALE: NTS





NOTES:
1. SURFACE FOR ADHERING HYDROPHILIC WATERSTOP SHALL BE GROUND SMOOTH AND CLEANED. DO NOT INSTALL IN KEYWAY.
2. USE MANUFACTURER'S ADHESIVE TO APPLY AND SECURE HYDROPHILIC WATERSTOP IN PLACE.
3. USE SEALANT TO SMOOTH CONTACT AREA ON CONC OF HYDROPHILIC WATERSTOP TO ENSURE ADHESIVE CONTACT.

S121 HYDROPHILIC WATERSTOP
SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
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WARNING
0 1/2 1
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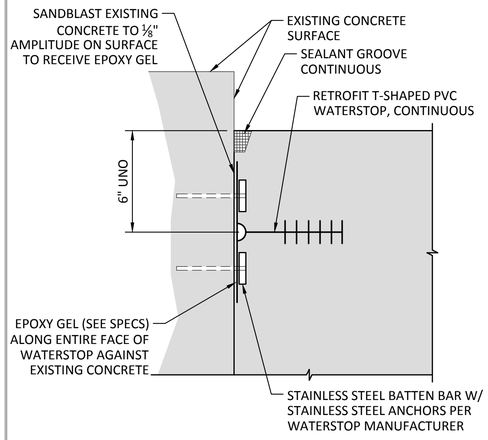
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STRUCTURAL DETAILS 1

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
PROJECT DATE 02/14/25

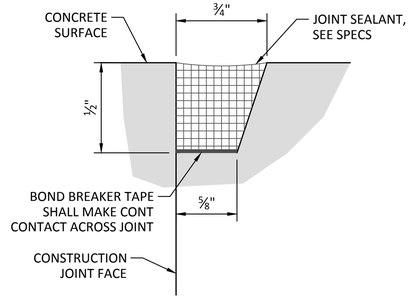
DRAWING
GS002

JOB NO: 21-094

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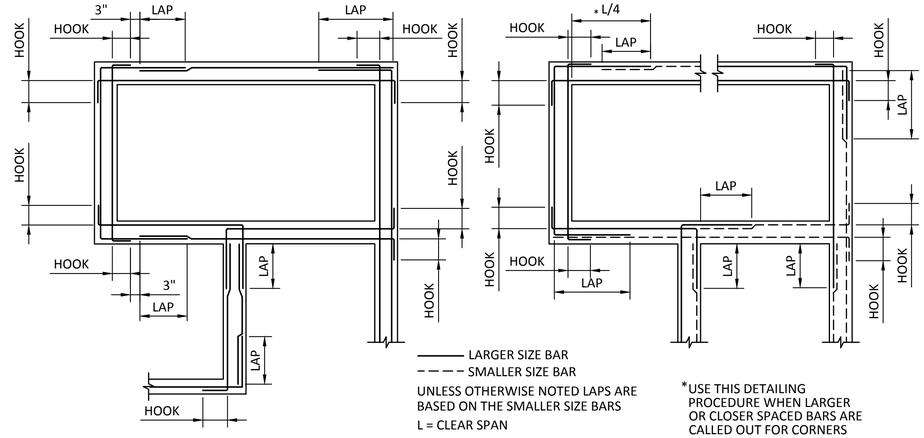


S130 WATERSTOP AT EXISTING SURFACE
SCALE: NTS

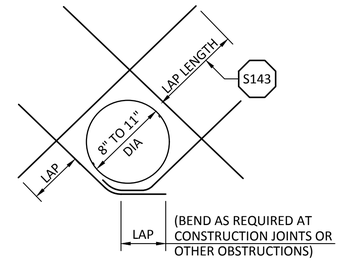


NOTES:
1. ALL FLOOR JOINTS OF HYDRAULIC STRUCTURES (MEMBERS COVERED WITH WATER) SHALL HAVE A SEALANT GROOVE.
2. SANDBLASTING REQUIRED PRIOR TO APPLICATION OF PRIMER.

S131 SEALANT GROOVE
SCALE: NTS



S141 HORIZONTAL REINFORCEMENT AT WALL INTERSECTIONS
SCALE: NTS



NOTES:
1. CUT NORMAL REINFORCEMENT 2" CLEAR OF OPENING.
2. DIAGONAL BARS TO BE PLACED;
   A. AT CENTERLINE OF WALL OR SLAB WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED.
   B. AT EACH FACE OF WALL OR SLAB WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED.
3. UNLESS OTHERWISE NOTED, SIZE OF DIAGONAL BARS SHALL BE THE SIZE OF THE LARGEST NORMAL REINFORCING BAR CUT.
4. THIS DETAIL TO BE USED WHEN CALLED FOR ON THE DRAWINGS OR WHEN NO OTHER DETAIL IS SPECIFIED.

S142 DIAGONAL REINF AT CIRCULAR OPENINGS
SCALE: NTS

NOTES:
1. USE LAP LENGTHS AS DETERMINED FROM THESE TABLES UNLESS SHOWN OTHERWISE.
2. THE TABLES SHOWN ARE FOR f'c=4000psi, fy=60,000psi, 1.5" MIN CONCRETE COVER AND 3" MIN BAR SPACING.
3. MULTIPLY THE LAP AND E SHOWN IN THESE TABLES BY 1.5 FOR EPOXY COATED REINFORCING.
4. WHEN BARS OF DIFFERENT SIZES ARE LAP SPLICED, LAP LENGTH SHALL BE THE LARGER OF: EMBEDMENT LENGTH OF LARGER BAR LAP OR LENGTH OF SMALLER BAR.
5. UNLESS NOTED OTHERWISE USE REBAR COUPLERS FOR SPLICES OF #11 AND LARGER BARS.
6. ALL DOWEL BARS SHALL EXTEND AN EMBEDMENT LENGTH E INTO ANOTHER MEMBER OR ACROSS A CONSTRUCTION JOINT UNLESS SHOWN TO SPLICE WITH OTHER BARS OR TO EXTEND TO THE FAR FACE OF THE MEMBER AND END WITH A STANDARD HOOK.

	LENGTH (*)		
BAR SIZE	HOOK X	LAP	EMBEDMENT E
#3	6"	16" (21")	12" (16")
#4	8"	16" (21")	12" (16")
#5	10"	20" (26")	15" (20")
#6	12"	28" (37")	22" (28")
#7	14"	48" (62")	37" (48")
#8	16"	62" (81")	48" (62")
#9	19"	79" (102")	61" (79")
#10	22"	100" (130")	77" (100")
#11	24"	123" (160")	95" (123")

* USE LENGTH IN PARENTHESIS FOR WALL HORIZONTAL REBARS AND SLAB BARS WITH 12" OR MORE OF FRESH CONCRETE UNDERNEATH

S143 STANDARD 90° BAR HOOKS, EMBEDMENT LENGTHS AND LAP LENGTHS
SCALE: NTS

NOTES:
1. CUT NORMAL REINFORCEMENT AT OPENINGS: As_1 AND As_2 = ½ AREA OF CUT BARS TO BE ADDED ON EACH SIDE OF OPENING.
2. ADDITIONAL BARS As_1 AND As_2 TO BE PLACED:
   A. AT CENTERLINE OF WALLS OR SLABS WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED.
   B. AT EACH FACE OF WALLS OR SLABS WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED.
3. INCREASE SIZE OF ADDITIONAL BARS AS NEEDED TO FIT WITHIN A DISTANCE OF 2 X WALL/SLAB THICKNESS FROM OPENING, PROVIDE 2" MIN CLEAR BETWEEN BARS.
4. THIS DETAIL TO BE USED ONLY WHEN NO OTHER DETAIL IS INDICATED ON THE DRAWINGS.
5. WHERE A SLAB OR INTERSECTING WALL CONNECTS WITHIN ONE WALL THICKNESS OF THE OPENINGS, ADDITIONAL BARS ON THAT SIDE MAY BE OMITTED.

S144 ADDITIONAL REINFORCEMENT AT CIRCULAR OPENINGS (12" DIA OR LARGER)
SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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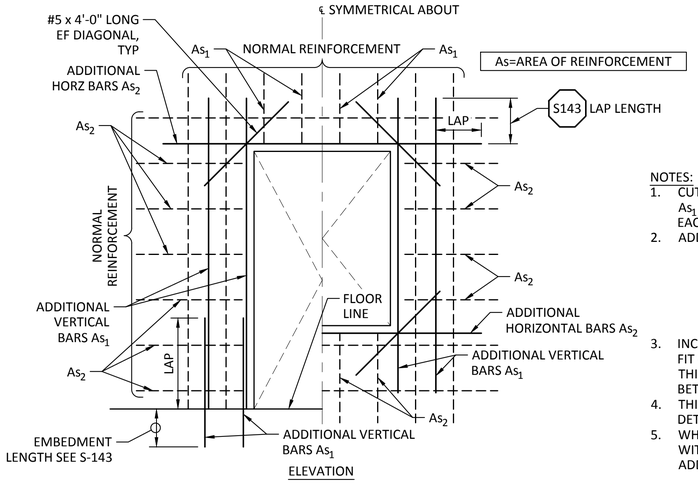
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STRUCTURAL DETAILS 2

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
PROJECT DATE 02/14/25

DRAWING
GS003

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_GS003.dwg Plot date: Feb 11, 2025 04:43pm, CAD User: JoeNeves

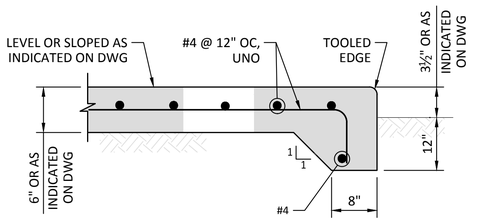


ELEVATION

NOTES:
1. CUT NORMAL REINFORCEMENT AT OPENING: As_1 AND As_2 AREA OF CUT BARS TO BE ADDED ON EACH SIDE OF OPENING.
2. ADDITIONAL BARS As_1 AND AS_2 TO BE PLACED:
   A) AT CENTERLINE OF WALLS OR SLABS WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED.
   B) AT EACH FACE OF WALLS OR SLABS WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED.
3. INCREASE SIZE OF ADDITIONAL BARS AS NEEDED TO FIT WITHIN A DISTANCE OF 2x WALL/SLAB THICKNESS FROM OPENING. PROVIDE 2" MIN CLEAR BETWEEN BARS.
4. THIS DETAIL TO BE USED ONLY WHEN NO OTHER DETAILS IS INDICATED ON THE DRAWINGS.
5. WHERE A SLAB OR INTERSECTING WALL CONNECTS WITHIN ONE WALL THICKNESS OF THE OPENINGS, ADDITIONAL BARS ON THAT SIDE MAY BE OMITTED.

S148 ADDITIONAL REINFORCEMENT AROUND RECTANGULAR OPENINGS

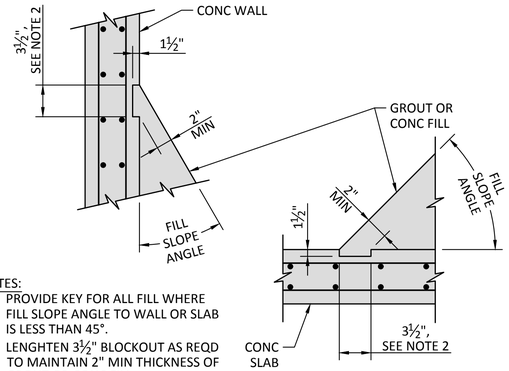
SCALE: NTS



NOTE:
1. USE 2 MATS OF #5 @ 12" OC, EW, EF FOR SLABS 10" AND THICKER.

S190 SLAB-ON-GRADE

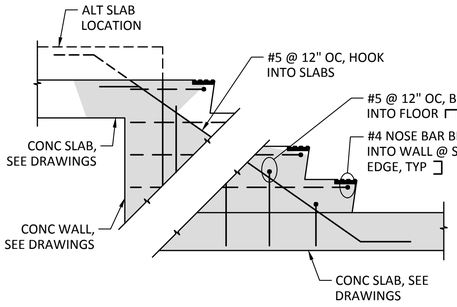
SCALE: NTS



NOTES:
1. PROVIDE KEY FOR ALL FILL WHERE FILL SLOPE ANGLE TO WALL OR SLAB IS LESS THAN 45°.
2. LENGHTEN 3½" BLOCKOUT AS REQD TO MAINTAIN 2" MIN THICKNESS OF GROUT OR CONC FILL

S194 CONCRETE FILL KEY

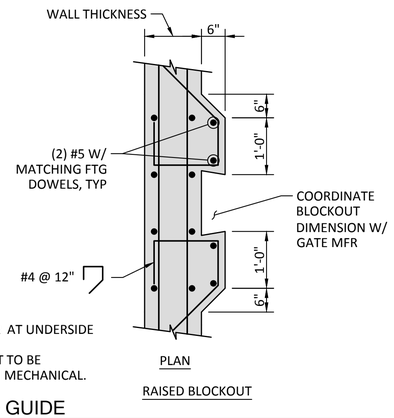
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NOTE:
1. FOR ADDITIONAL INFORMATION ON STAIRS, SEE DETAIL S-153 AND THE DRAWINGS.

S154 SOLID CONCRETE STAIRS

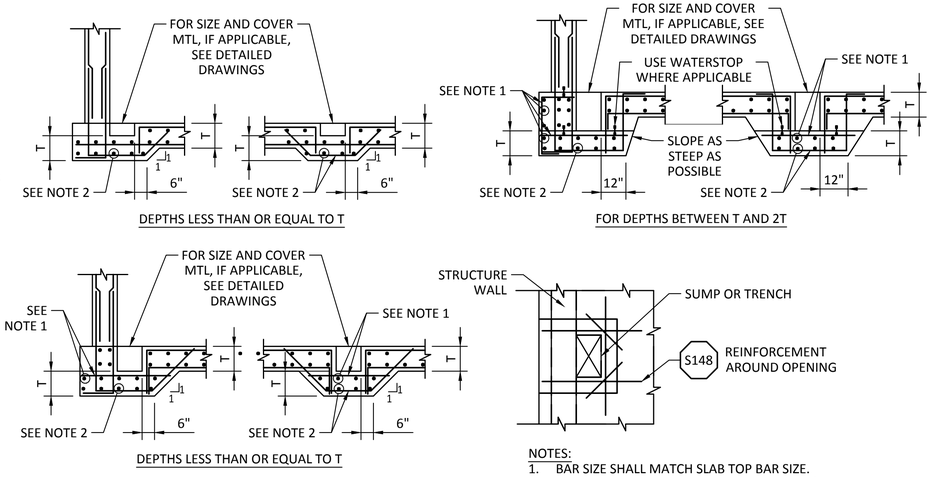
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NOTES:
1. STOP PIERS 1" CLEAR AT UNDERSIDE OF GRATING.
2. DEPTH OF BLOCKOUT TO BE COORDINATED WITH MECHANICAL.

S199 STOPLOG/GATE GUIDE

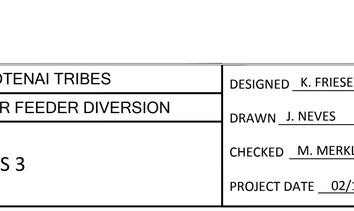
SCALE: NTS



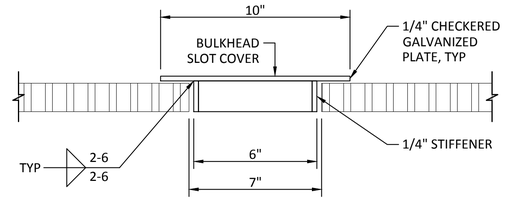
NOTES:
1. BAR SIZE SHALL MATCH SLAB TOP BAR SIZE.
2. BAR SIZE SHALL MATCH SLAB BOTTOM BAR SIZE.

S177 REINFORCING AT SUMPS AND TRENCHES

SCALE: NTS



INVERTED PLAN



SECTION

S502 BULKHEAD SLOT COVER

SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

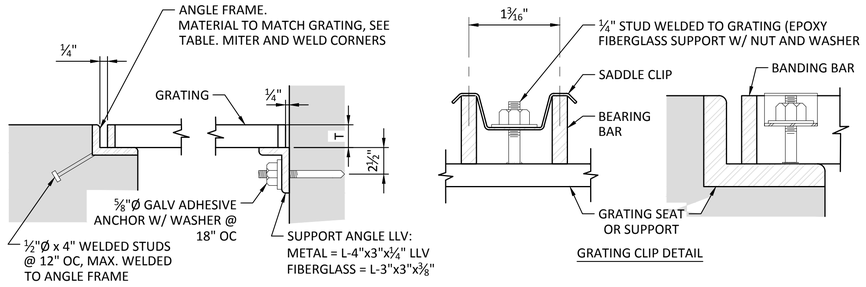
STRUCTURAL DETAILS 3

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
PROJECT DATE 02/14/25

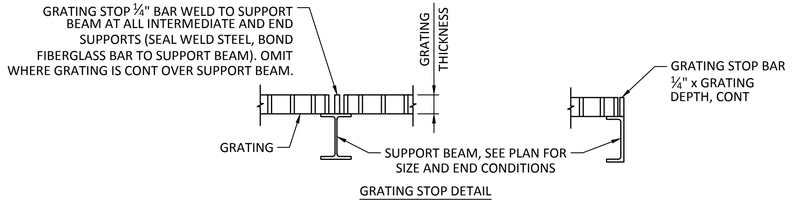
DRAWING
GS004

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_GS004.dwg Plot date: Feb 11, 2025 04:43pm, CAD User: JoeNeves



GRATING CLIP DETAIL



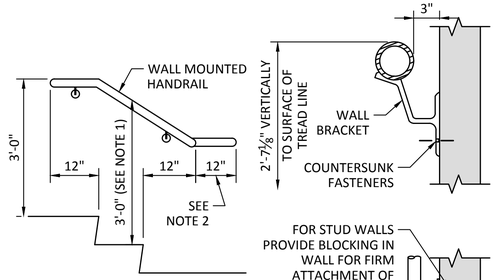
GRATING STOP DETAIL

NOTES:
1. UNLESS INDICATED OTHERWISE, ALL GRATING SHALL BE GALVANIZED.
2. GRATING DEPTH TO BE DETERMINED BY MANUFACTURER AND APPROVED BY ENGINEER, UNO.
3. ALL ENDS AND OPENINGS SHALL BE BANDED.
4. WEIGHT OF GRATING SECTION SHALL NOT EXCEED 80 LBS.
5. METAL BEARING BARS SHALL BE DEPTH T x 3⁄16" @ 1 3⁄16" OC.. CROSS BARS SHALL BE @ 4" OC.
6. PROVIDE A MINIMUM OF 4 CLIPS PER GRATING PANEL, APPROX 4" FROM PANEL CORNERS. MAXIMUM CLIP SPACING AT 36" OC.
7. MATERIALS:
   - A. ALUM GRATING - USE ALUM ANGLE SUPPORTS AND SST BOLTS AND CLIPS. IF SUPPORTED BY STEEL BEAMS, USE STEEL STOP BARS. ALUM IN CONTACT WITH CONC OR STEEL SHALL BE COATED PER THE PROTECTIVE COATING SPECS.
   - B. GALV STEEL GRATING - USE STEEL ANGLE SUPPORTS, BOLTS AND CLIPS. GALV AFTER FABRICATION.
   - C. SST GRATING - USE SST ANGLE SUPPORTS, BOLTS AND CLIPS
   - D. FIBERGLASS GRATING - USE FIBERGLASS FOR ALL COMPONENTS EXCEPT DRILLED ANCHORS; ALL CUT EDGES SHALL BE SEALED WITH RESIN; BONDING: USE EPOXY ADHESIVE BONDING AGENT

GRATING FRAME TABLE SIZED TO MATCH GRATING (FOR FIBERGLASS USE CONTINUOUS PROTRUDED FIBERGLASS SEAT & ANCHOR)			
GRATING DEPTH (T)	STEEL ANGLE (STEEL)	GRATING DEPTH (T)	STEEL ANGLE (STEEL)
1"	1¼ x 1¼ x ¼ (1¼ x 1¼ x ¼)	2"	*2½ x 2½ x ½
1¼"	2 x 1½ x ¼ (1½ x 1½ x ¼)	2¼"	2½ x 2½ x ¼
1½"	1¾ x 1¾ x ¼	2½"	3 x 3 x ½
1¾"	2 x 2 x ¼		

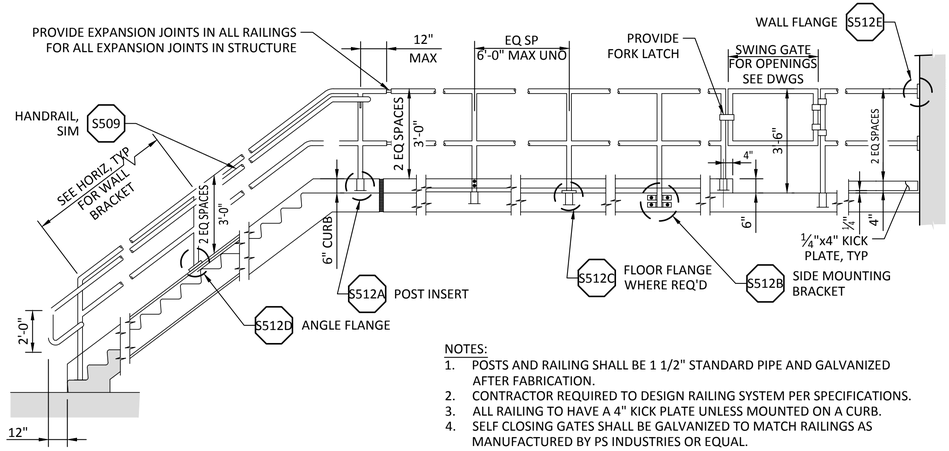
* OR USE 2½"x2½"x¼" W/ ¼" SHIM PLATE WELDED TO BOTTOM

S501 GRATING
SCALE: NTS



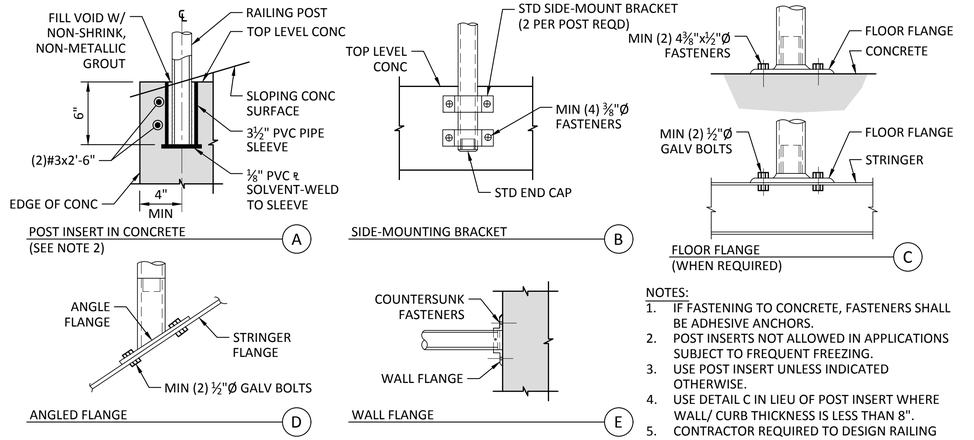
NOTES:
1. VERTICAL DIMENSIONS ARE FROM LEADING EDGE OF TREAD TO TOP OF RAIL (PARALLEL TO STAIR SLOPE)
2. ADDITIONAL 1'-0" HORIZONTAL LENGTH (ONLY REQUIRED AT HANDICAP ACCESSIBLE STAIR).

S509 STAIR HANDRAIL
SCALE: NTS



NOTES:
1. POSTS AND RAILING SHALL BE 1 1/2" STANDARD PIPE AND GALVANIZED AFTER FABRICATION.
2. CONTRACTOR REQUIRED TO DESIGN RAILING SYSTEM PER SPECIFICATIONS.
3. ALL RAILING TO HAVE A 4" KICK PLATE UNLESS MOUNTED ON A CURB.
4. SELF CLOSING GATES SHALL BE GALVANIZED TO MATCH RAILINGS AS MANUFACTURED BY PS INDUSTRIES OR EQUAL.

S510 TWO-RAIL RAILING GUARDRAIL DETAIL
SCALE: NTS



NOTES:
1. IF FASTENING TO CONCRETE, FASTENERS SHALL BE ADHESIVE ANCHORS.
2. POST INSERTS NOT ALLOWED IN APPLICATIONS SUBJECT TO FREQUENT FREEZING.
3. USE POST INSERT UNLESS INDICATED OTHERWISE.
4. USE DETAIL C IN LIEU OF POST INSERT WHERE WALL/ CURB THICKNESS IS LESS THAN 8".
5. CONTRACTOR REQUIRED TO DESIGN RAILING SYSTEM PER SPECIFICATIONS.

S512 RAILING, GUARDRAIL AND HANDRAIL SUPPORT DETAIL
SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

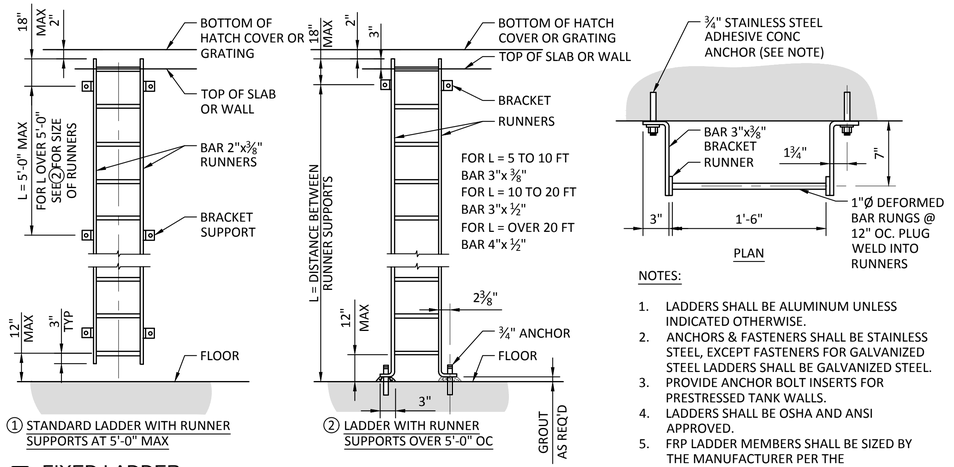
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STRUCTURAL DETAILS 4

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
PROJECT DATE 02/14/25

DRAWING
GS005

JOB NO: 21-094

Path: C:\Users\JoeNeves\DCVACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_GS005.dwg Plot date: Feb 11, 2025 04:43pm, CAD User: JoeNeves

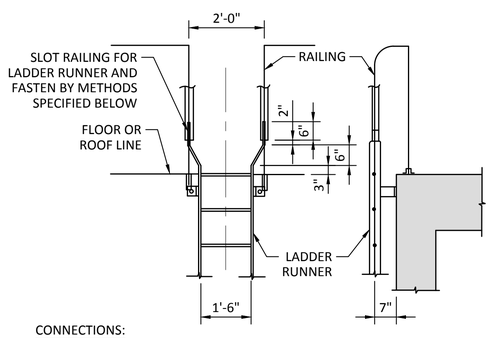


NOTES:

1. LADDERS SHALL BE ALUMINUM UNLESS INDICATED OTHERWISE.
2. ANCHORS & FASTENERS SHALL BE STAINLESS STEEL, EXCEPT FASTENERS FOR GALVANIZED STEEL LADDERS SHALL BE GALVANIZED STEEL.
3. PROVIDE ANCHOR BOLT INSERTS FOR PRESTRESSED TANK WALLS.
4. LADDERS SHALL BE OSHA AND ANSI APPROVED.
5. FRP LADDER MEMBERS SHALL BE SIZED BY THE MANUFACTURER PER THE SPECIFICATIONS.

S531 FIXED LADDER

SCALE: NTS

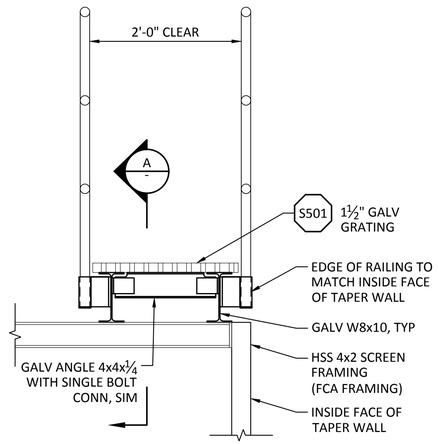


CONNECTIONS:

1. STL TO STL OR ALUM TO ALUM: WELDED CONNECTION, GRIND SMOOTH
2. STL TO ALUM: DRILL HOLE THRU LADDER RUNNER AND RAILING FOR ½" PIN. INSERT PING AND WELD BOTH ENDS AND GRIND SMOOTH. PIN SHALL BE THE SAME MATL AS RAILING.

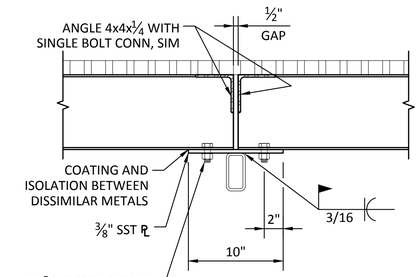
S534 LADDER TO RAILING CONNECTIONS

SCALE: NTS

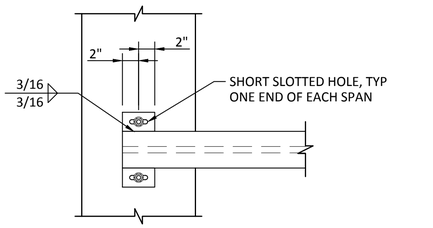


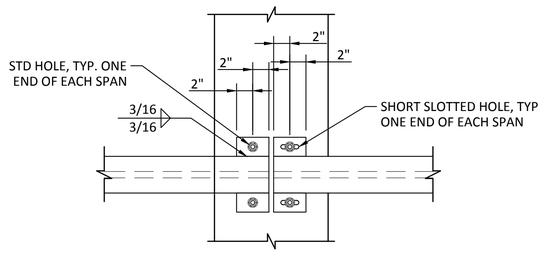
S535 WALKWAY FRAMING DETAIL

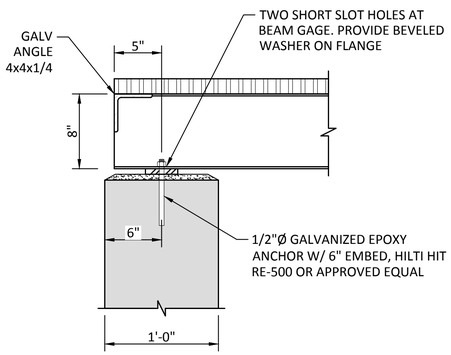
SCALE: NTS



SECTION A

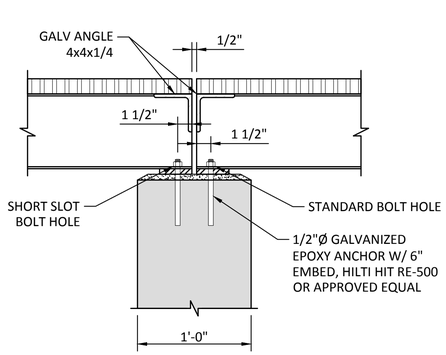






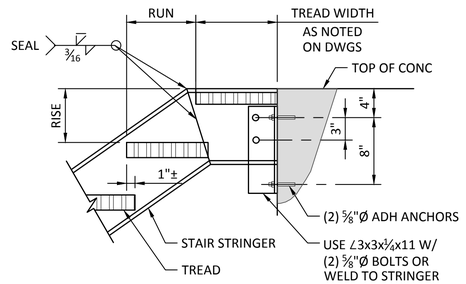
WALKWAY BEARING ON CONCRETE AT END OF SPAN

S536 SCALE: NTS



WALKWAY BEARING ON CONCRETE AT MID SPAN

S537 SCALE: NTS

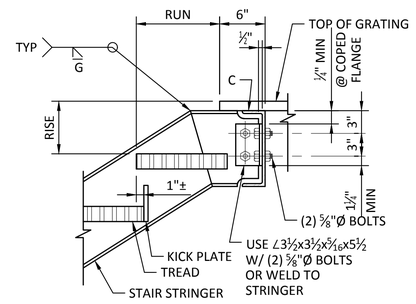


NOTE:

1. HANDRAIL NOT SHOWN.

S541 STAIR TOP CONNECTION TO CONC

SCALE: NTS



NOTES:

1. FOR CHANNEL SIZES, SEE PLAN.
2. HANDRAIL NOT SHOWN.
3. COPE STRINGER MIN AS REQD.

S542 STAIR TOP TO CHANNEL CONNECTION

SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

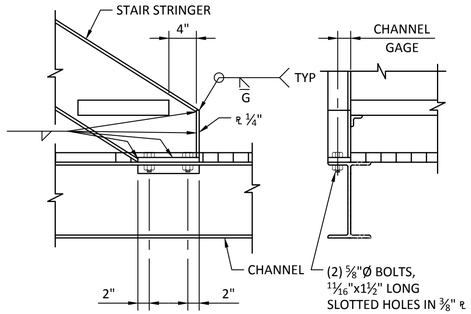
STRUCTURAL DETAILS 5

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
PROJECT DATE 02/14/25

DRAWING
GS006

JOB NO: 21-094

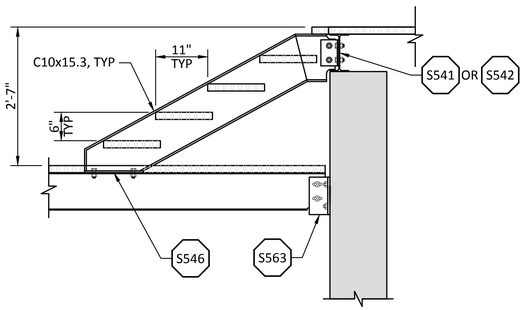
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_GS006.dwg Plot date: Feb 11, 2025 04:44pm, CAD User: JoeNeves



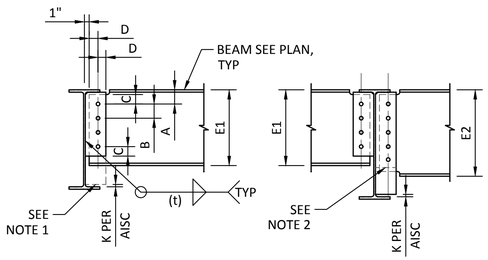
NOTES:

1. FOR CHANNEL SIZES, SEE PLAN.
2. HANDRAIL NOT SHOWN.
3. USE PLATES OF SAME MTL AS STRINGER.
4. CHANNEL CONN NOT SHOWN FOR CLARITY.

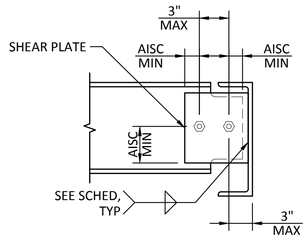
S546 STAIR BOTTOM TO W-BEAM CONNECTION
SCALE: NTS



S547 WALKWAY STAIRS
SCALE: NTS



BEAM: ONE SIDE ONLY BEAM: BOTH SIDES



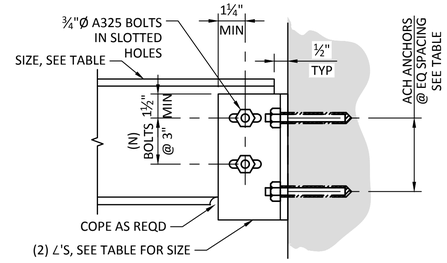
6" OR LESS CONNECTION

BEAM TO BEAM CONNECTION SCHEDULE								
BEAM SIZE	NO OF A325N BOLTS REQ'D		CONN PLATE THICKNESS (IN)	WELD SIZE (t)	A (IN)	B (IN)	C (IN)	D (IN)
	¾" Ø	1" Ø						
W8	2		5/16	3/16	2½"	2½"	1½"	1½"
W10	2		5/16	3/16	3	3	1½"	1½"

NOTES:

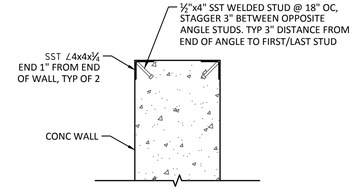
1. EXTEND CONN PLATE WHEN E1 IS GREATER THAN OR EQUAL TO W12 BM.
2. LIMIT OF CONN PLATE WHEN E2-E1 IS LESS THAN OR EQUAL TO 6 INCHES.

S562 BEAM TO BEAM CONNECTION - PLATE CONNECTION
SCALE: NTS

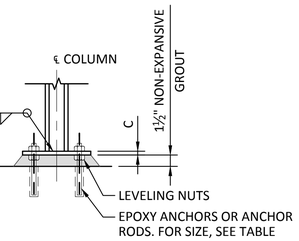


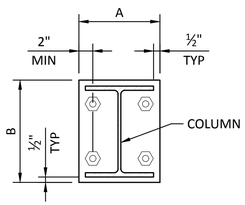
BEAM TO CONC CONNECTION SCHEDULE			
BEAM SIZE	DOUBLE ANGLE SIZE	# OF BOLTS (N)	ADHESIVE ANCHORS NUMBER AND SIZE
8 - 10	5 x 3 ½ x 5/16	2	(2) ¾" DIA

S563 BEAM TO CONC CONNECTION
SCALE: NTS



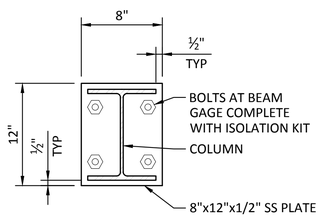
S900 CONC WALL END GUARD ANGLE
SCALE: NTS



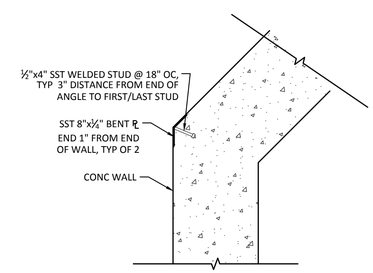


BASE PLATE A x B x C	ANCHORS				COMMENTS
	MATL	QTY	DIA	EMBED	
10"x7"x½"	SST 316	4	¾"	8"	HILTI RE-500 SD EPOXY OR APPROVED EQUAL

S567 COLUMN BASE PLATE
SCALE: NTS



S568 CAP PLATE
SCALE: NTS



S901 CONC WALL BEND GUARD ANGLE
SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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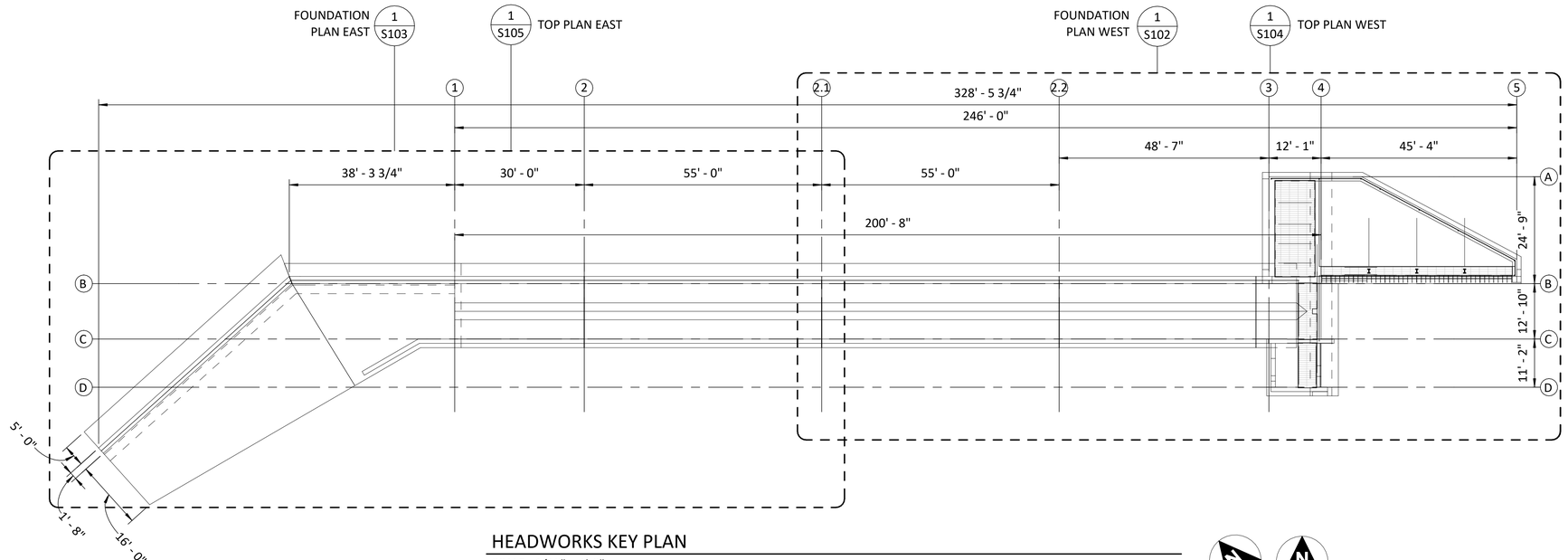
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
STRUCTURAL DETAILS 6

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
PROJECT DATE 02/14/25

DRAWING
GS007

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_GS007.dwg Plot date: Feb 11, 2025 04:44pm, CAD User: JoeNeves



HEADWORKS KEY PLAN

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

0 16' 32'

TRUE NORTH

PROJECT NORTH

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
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PRELIMINARY
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WARNING

0 1/2 1

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HEADWORKS KEY PLAN

DESIGNED K. FRIESEN

DRAWN J. NEVES

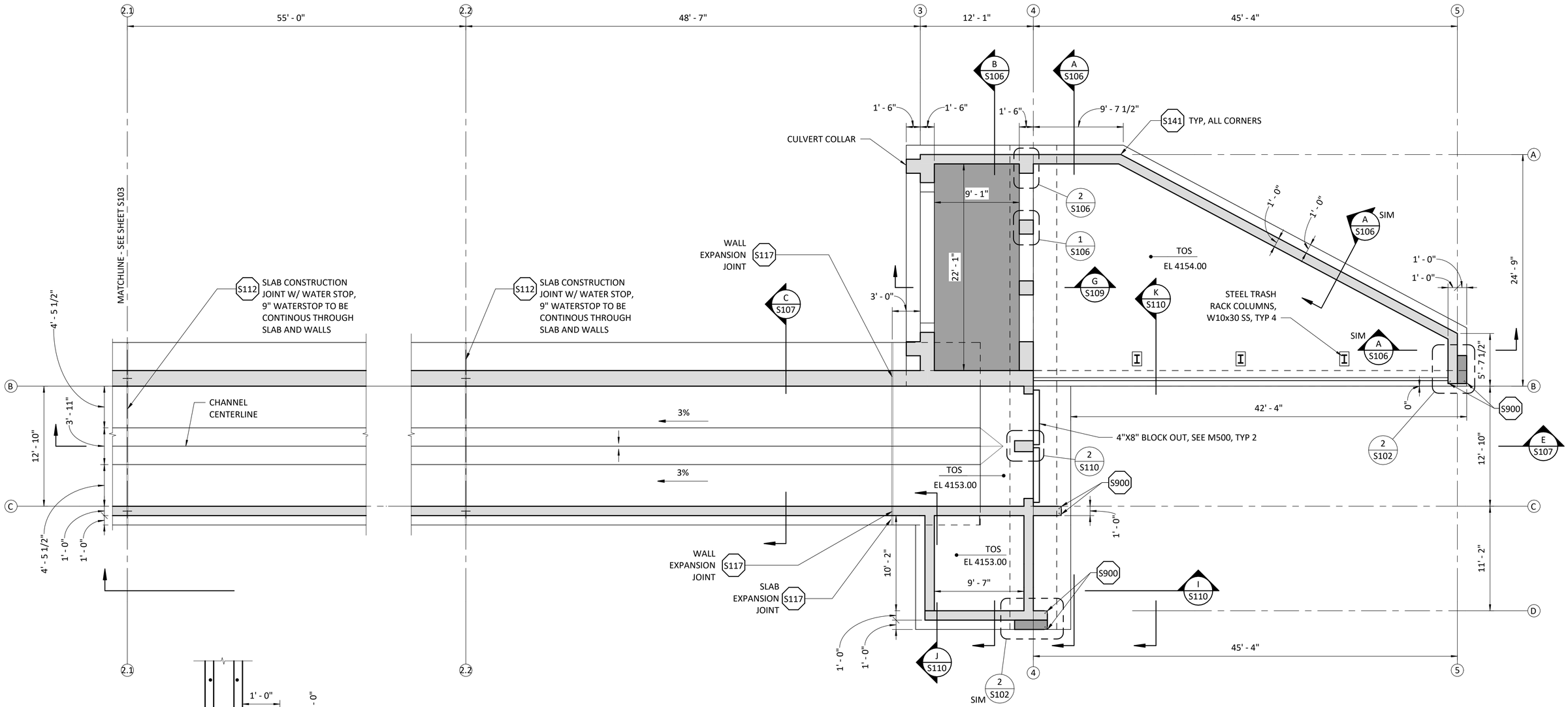
CHECKED M. MERKLEIN

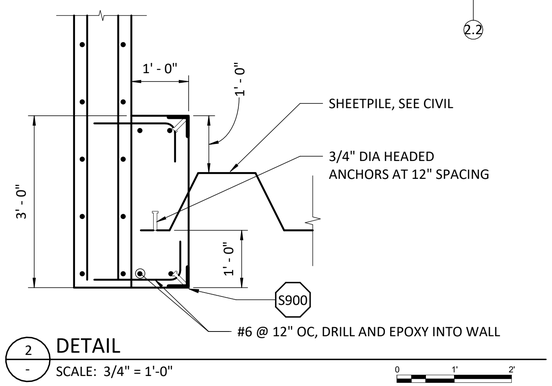
ISSUED DATE 02/14/25

DRAWING

S101

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt





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

1 / S101 HEADWORKS FOUNDATION PLAN EAST
SCALE: 3/16" = 1'-0"

TRUE NORTH
PROJECT NORTH

SHEET NOTES:

1. SHEET PILE CLOSURE POUR SHALL BE MADE AFTER BACKFILL IS PLACED BEHIND SHEET PILE.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

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

McMillen

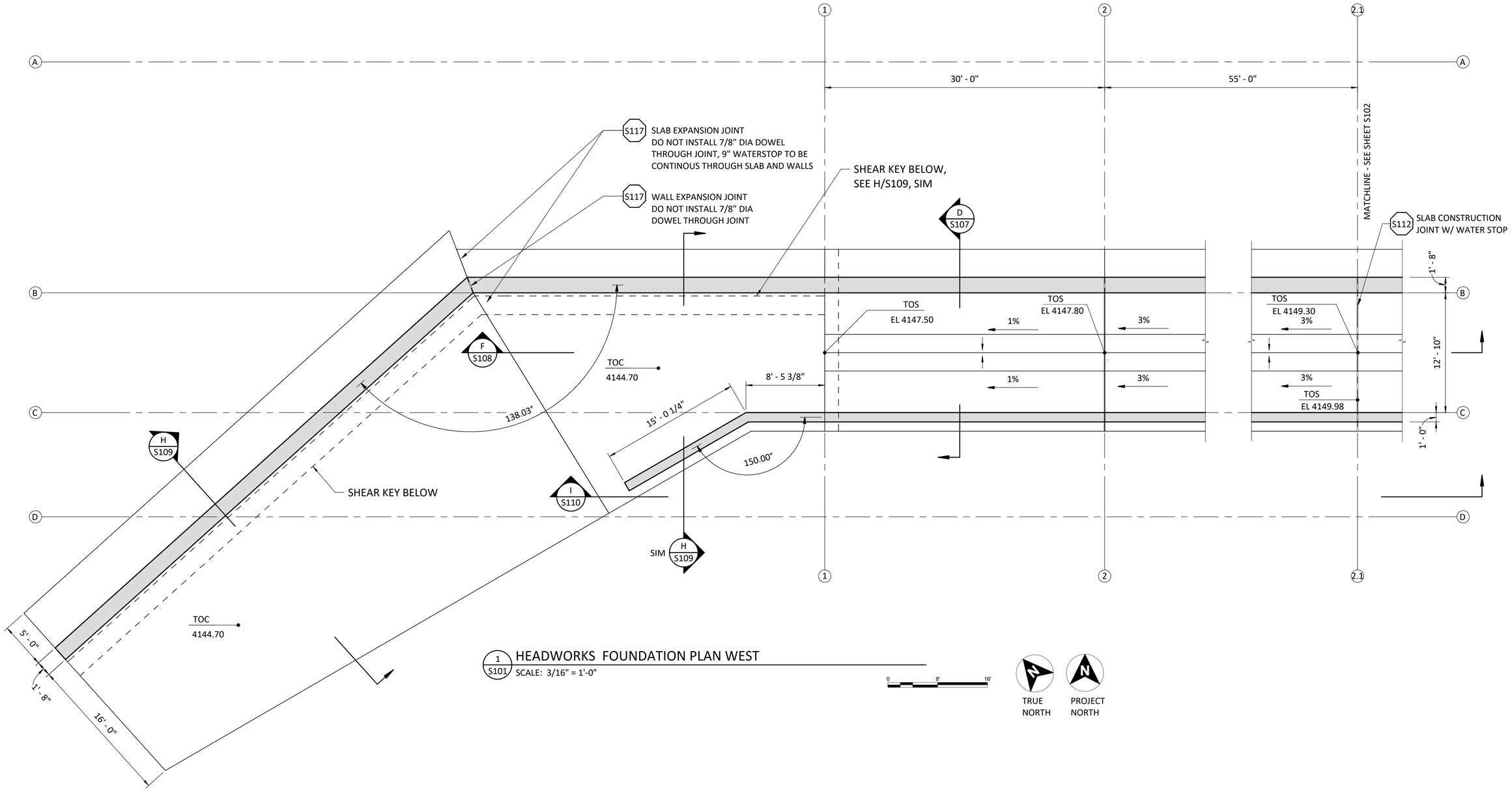
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HEADWORKS FOUNDATION PLAN EAST

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE 02/14/25

DRAWING
S102

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt



1 S101 HEADWORKS FOUNDATION PLAN WEST

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

0 8' 16'

TRUE NORTH

PROJECT NORTH

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HEADWORKS FOUNDATION PLAN WEST

DESIGNED K. FRIESEN

DRAWN J. NEVES

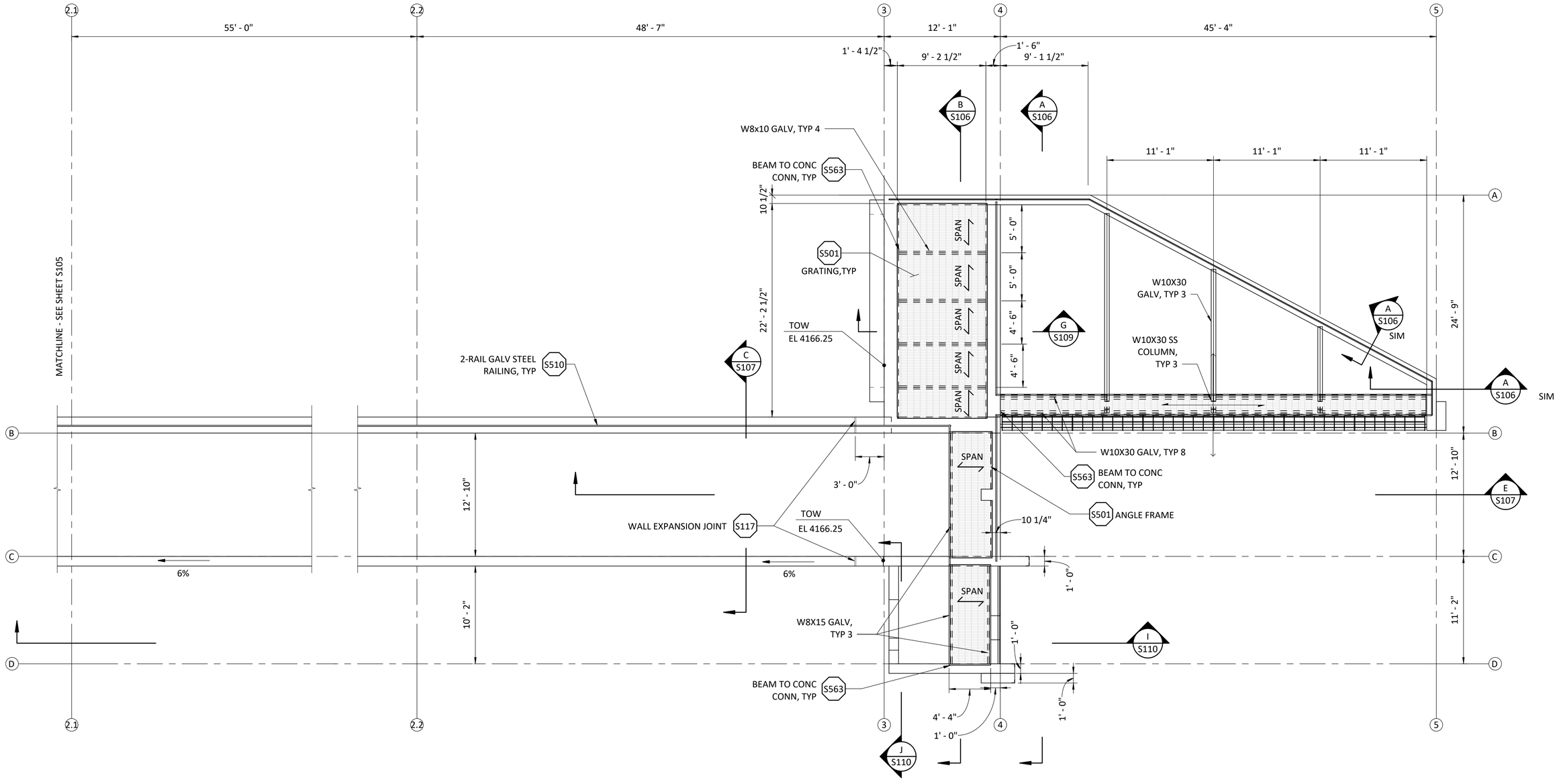
CHECKED M. MERKLEIN

ISSUED DATE 02/14/25

DRAWING

S103

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt



1 S101 HEADWORKS TOP PLAN EAST

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

0 8" 16"

TRUE NORTH

PROJECT NORTH

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HEADWORKS TOP PLAN EAST

DESIGNED K. FRIESEN

DRAWN J. NEVES

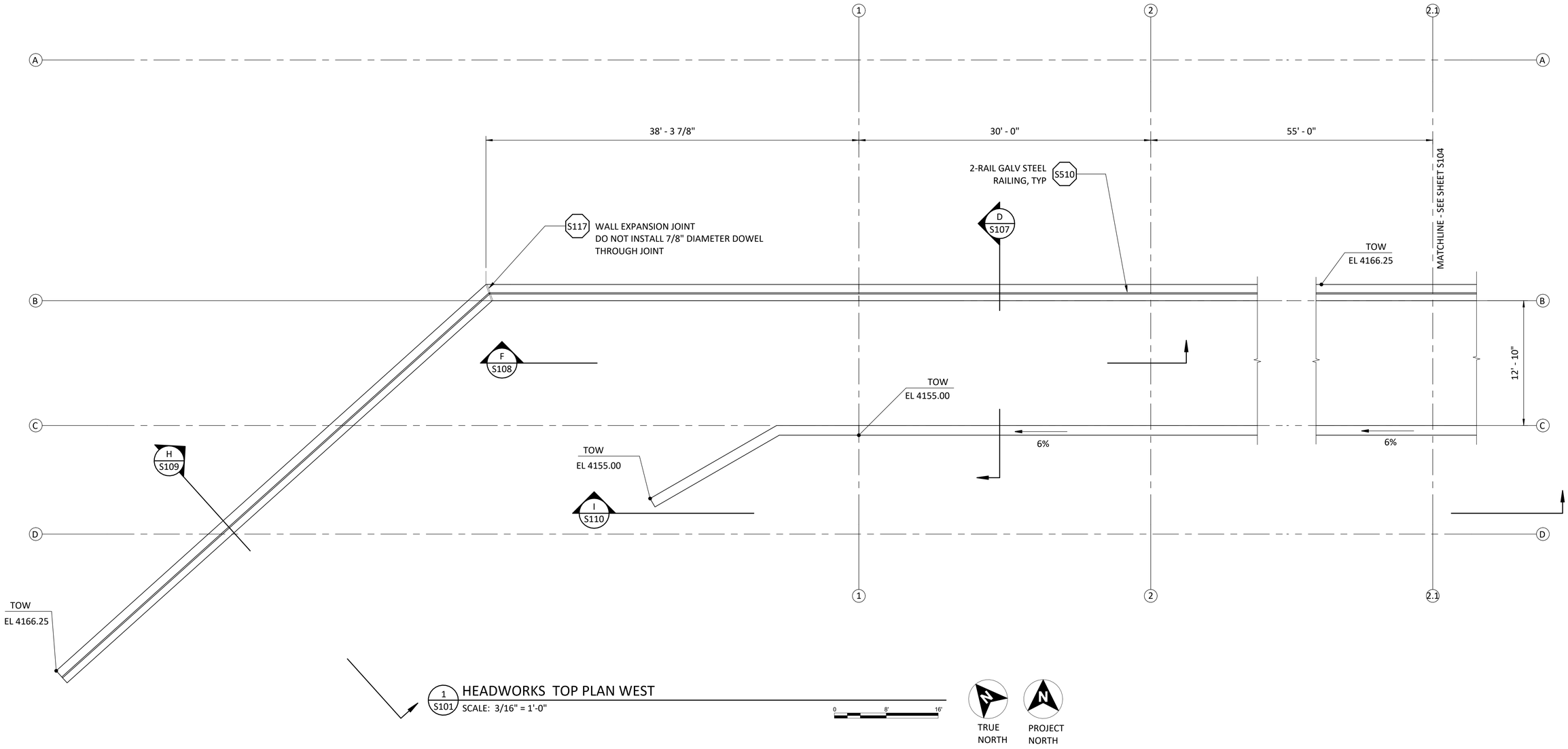
CHECKED M. MERKLEIN

ISSUED DATE 02/14/25

DRAWING

S104

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt



REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HEADWORKS TOP PLAN WEST

DESIGNED K. FRIESEN

DRAWN J. NEVES

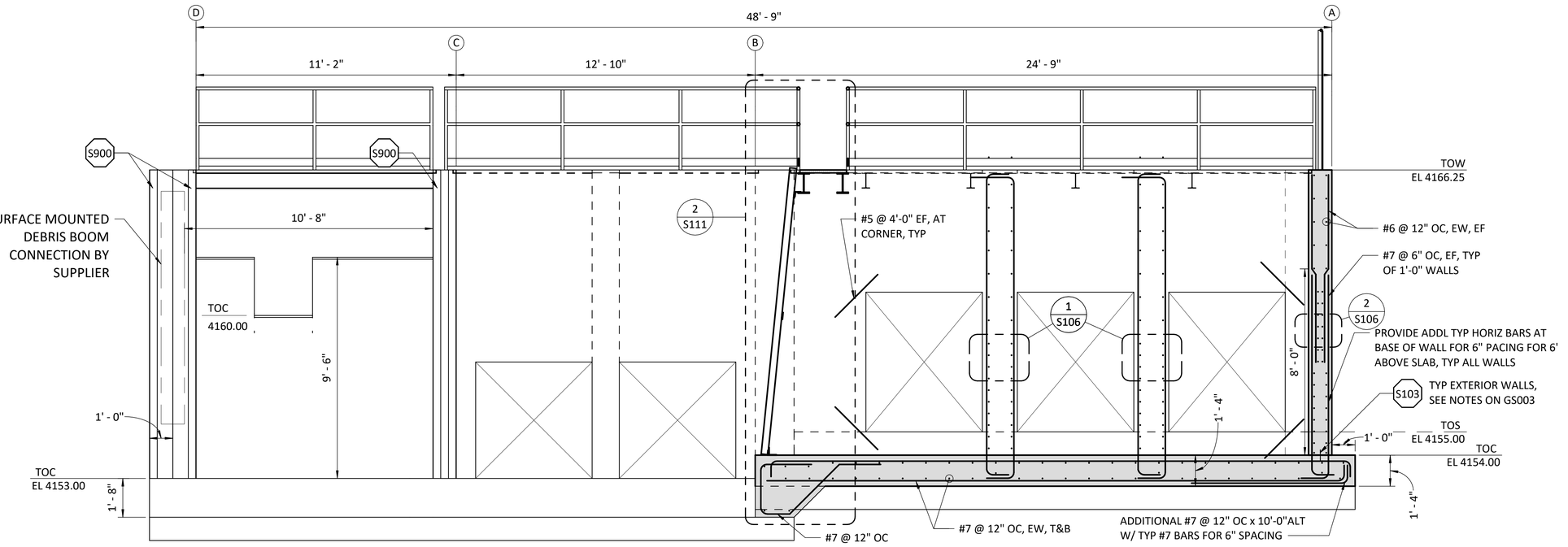
CHECKED M. MERKLEIN

ISSUED DATE 02/14/25

DRAWING

S105

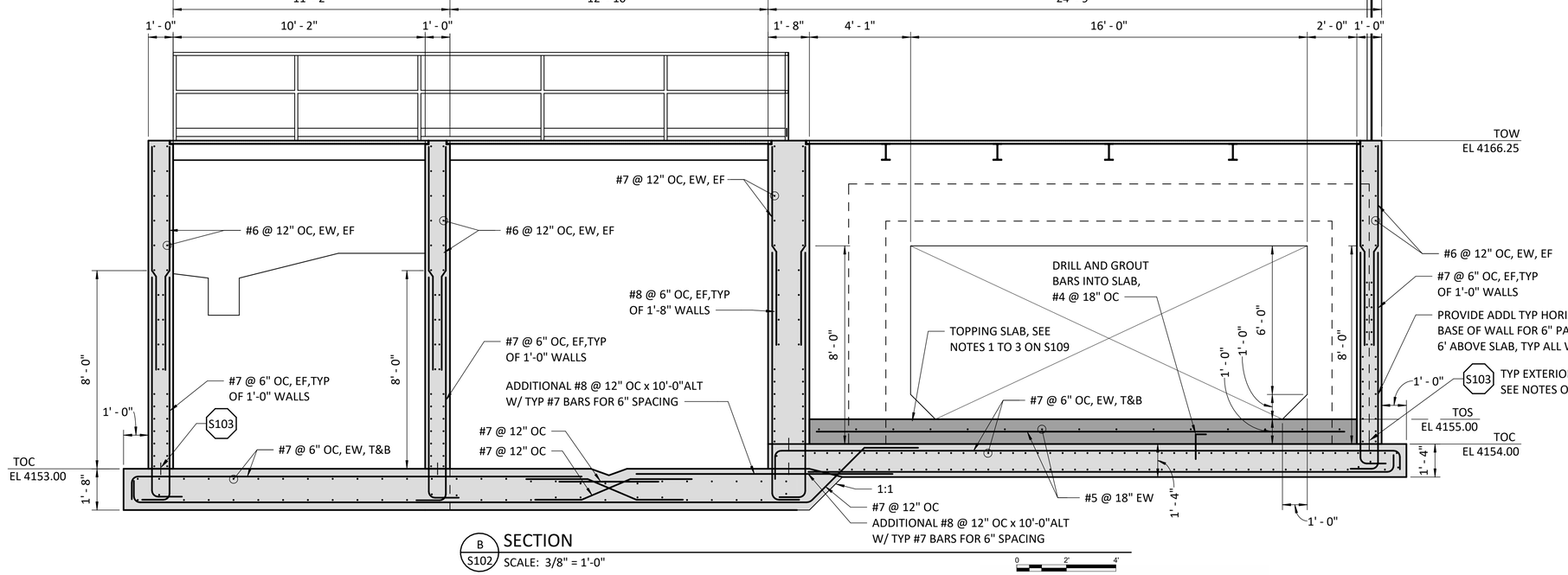
Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt



A S102 SECTION

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

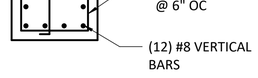
0 2' 4'



B S102 SECTION

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

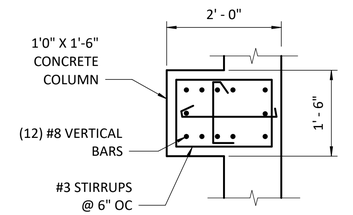
0 2' 4'



1 - WALL COLUMN DETAIL

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

0 1' 2'



2 - END WALL COLUMN DETAIL

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

0 1' 2'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

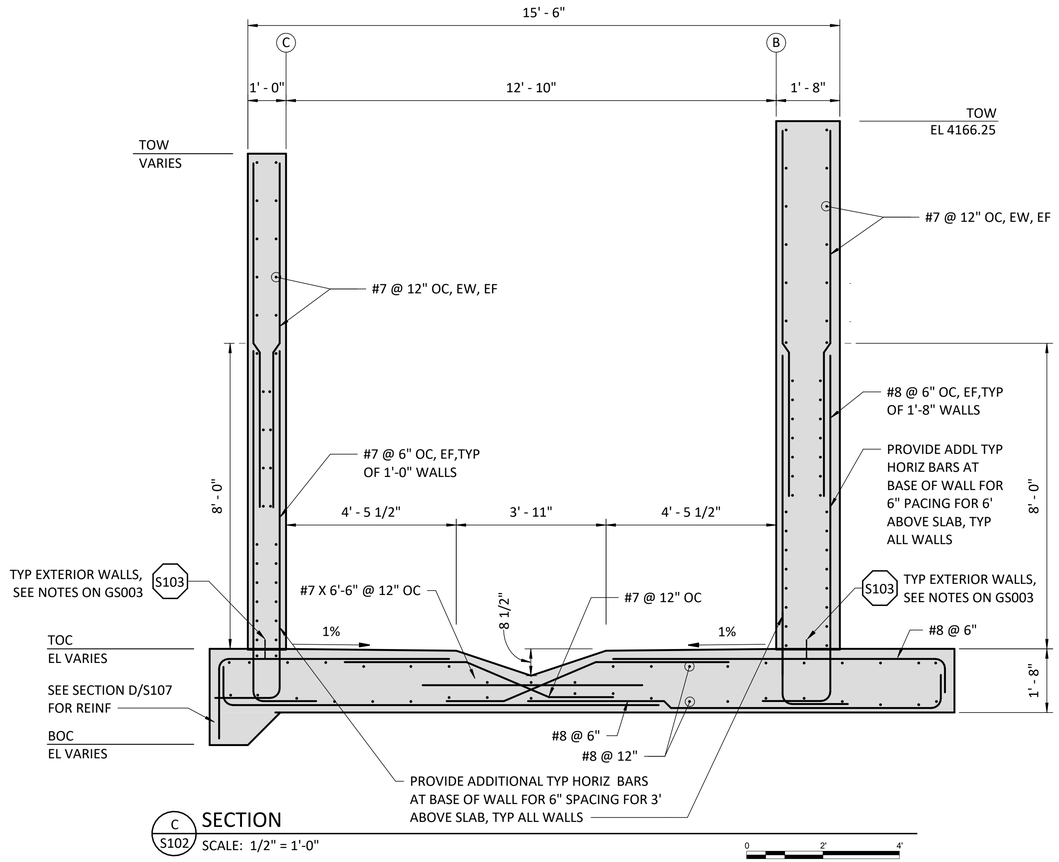
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HEADWORKS SECTIONS 1

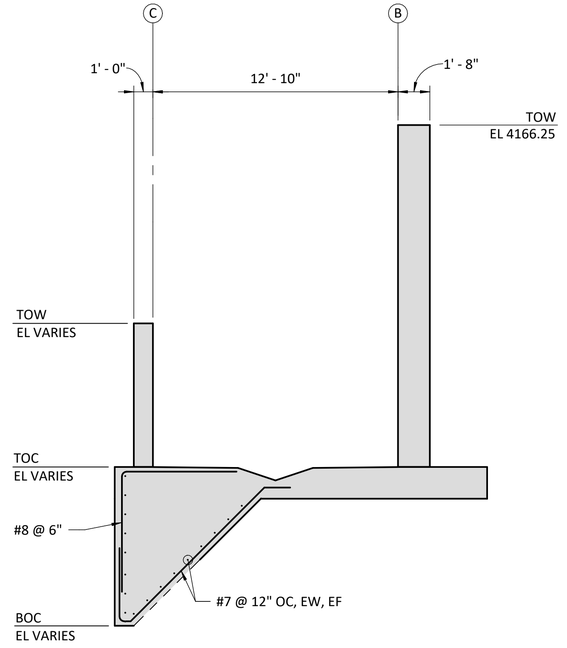
DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE 02/14/25

DRAWING
S106

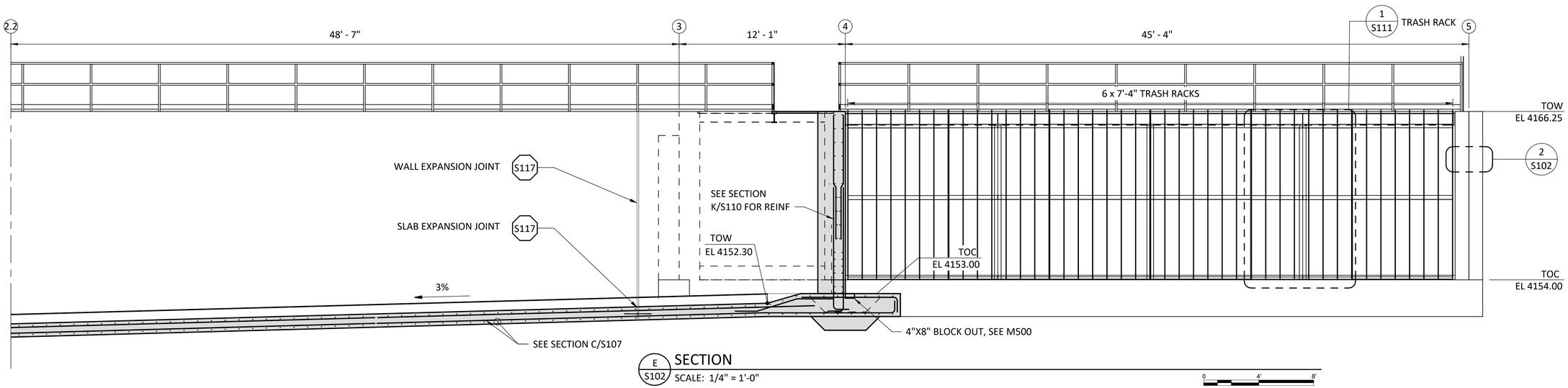
Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt



C S102 SECTION
SCALE: 1/2" = 1'-0"



D S103 SECTION
SCALE: 1/4" = 1'-0"



E S102 SECTION
SCALE: 1/4" = 1'-0"

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

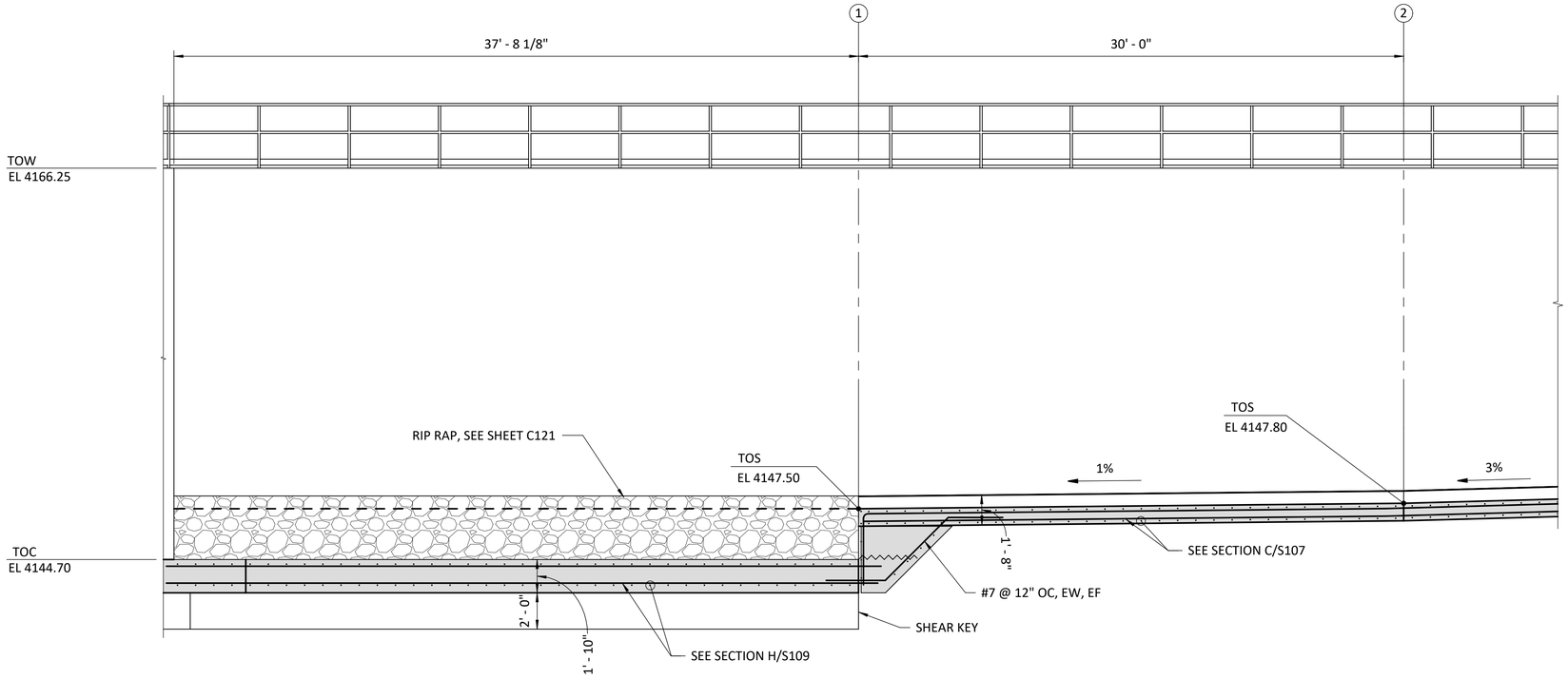
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HEADWORKS SECTIONS 2

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE 02/14/25

DRAWING
S107

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt



F / S103 SECTION

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

0 4' 8'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HEADWORKS SECTIONS 3

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE 02/14/25

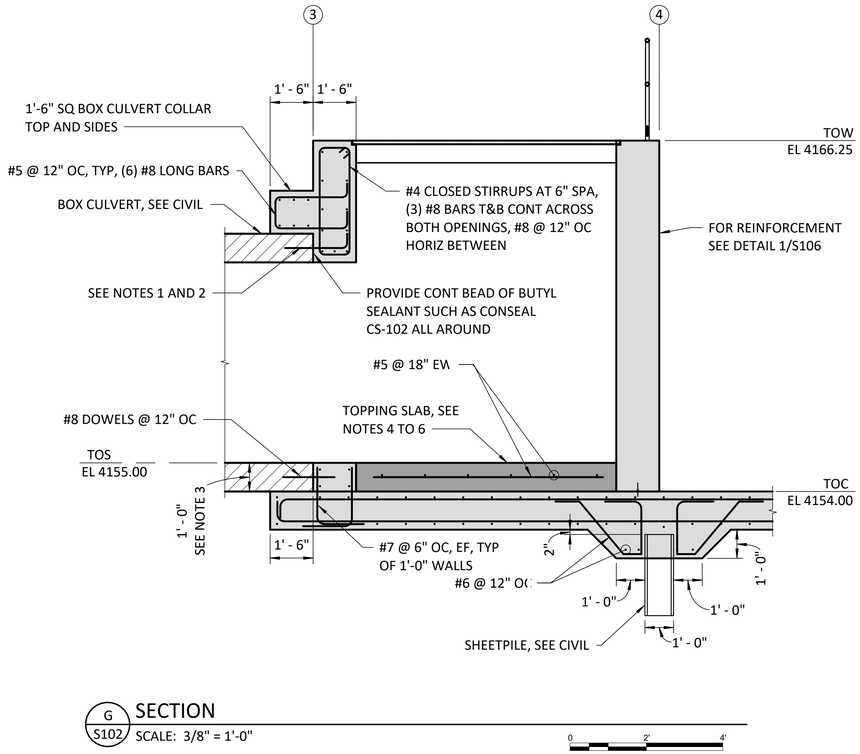
DRAWING

S108

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt

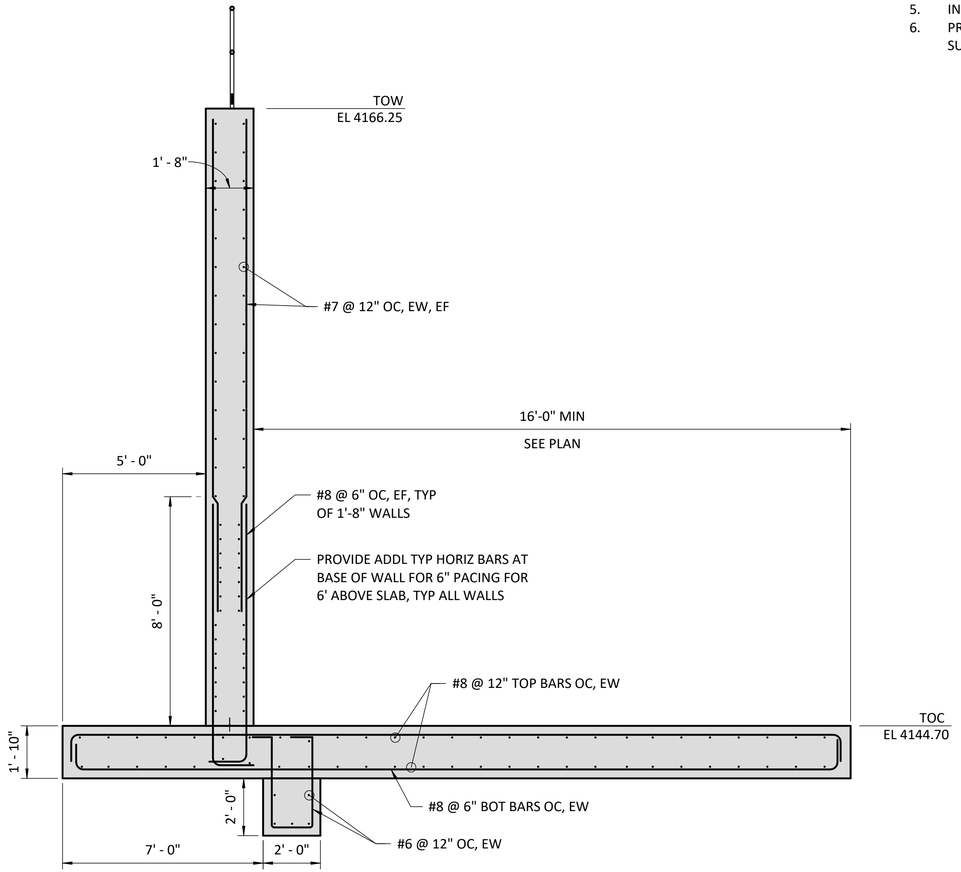
SHEET NOTES:

1. PRECASTER TO PROVIDE #4 EPOXY COATED DOWELS AT 16" OC, EXTENDING 16" FROM FACE OF CULVERT.
2. FIELD BEND BARS WITH 90° HOOK AT CENTERLINE OF WALL. ROTATE HOOKS AS REQUIRED TO MAINTAIN CONCRETE COVER.
3. BLOCKOUT TO BE MIN 9" OR MATCH THICKNESS OF CULVERT SLAB.
4. ROUGHEN EXISTING CONCRETE SURFACE TO 1/4" AMPLITUDE.
5. INSTALL #5 @ 18" EW TOP BAR MAT.
6. PRIOR TO PLACING TOPPING SLAB ENSURE EXISTING SURFACE IT SATURATED SURFACE DRY.



G S102 SECTION
SCALE: 3/8" = 1'-0"

0 2' 4'



H S103 SECTION
SCALE: 3/8" = 1'-0"

0 2' 4'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

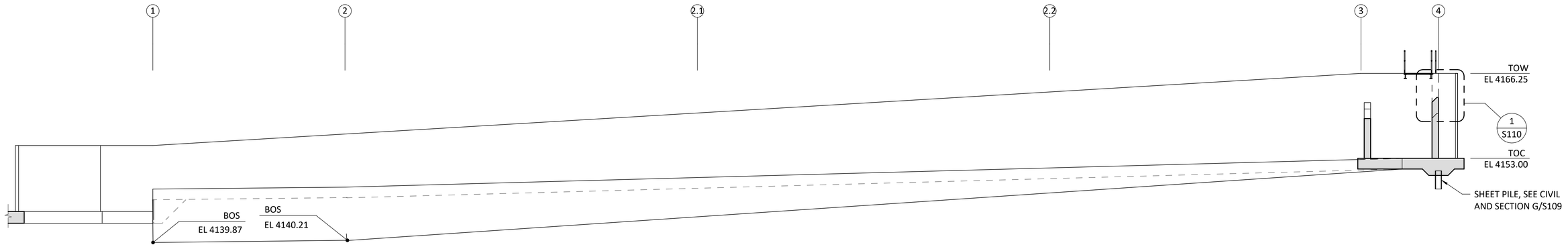
McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
HEADWORKS SECTIONS 4

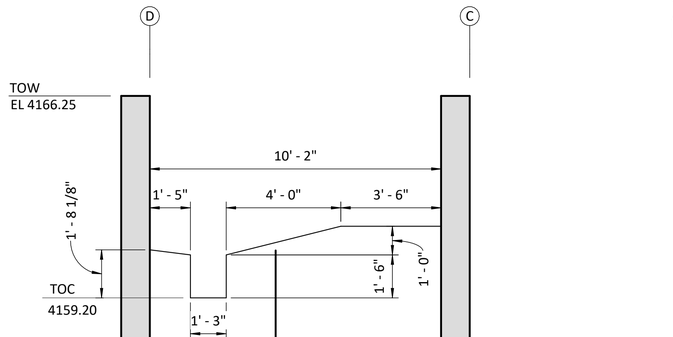
DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE 02/14/25

DRAWING
S109

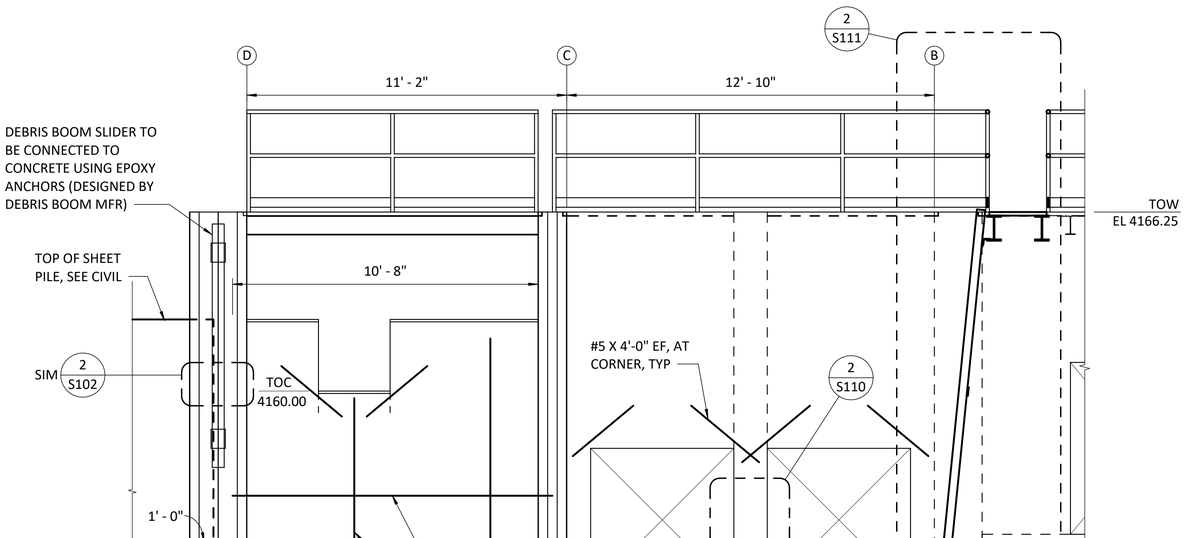
Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt



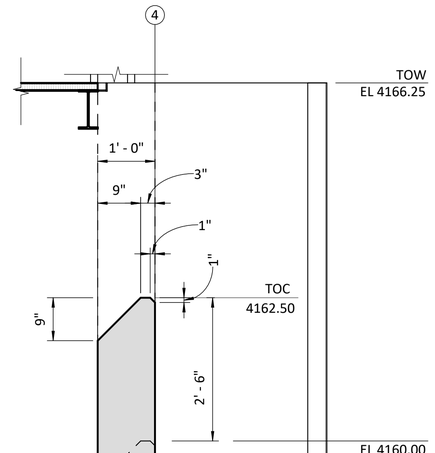
I S102 SECTION
SCALE: 1/8" = 1'-0"



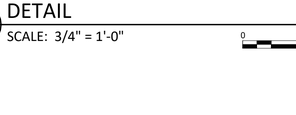
J S102 SECTION
SCALE: 3/8" = 1'-0"



K S102 SECTION
SCALE: 3/8" = 1'-0"



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



NOTE: EXTEND STIRRUPS AND
REINFORCING FULL HEIGHT

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

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

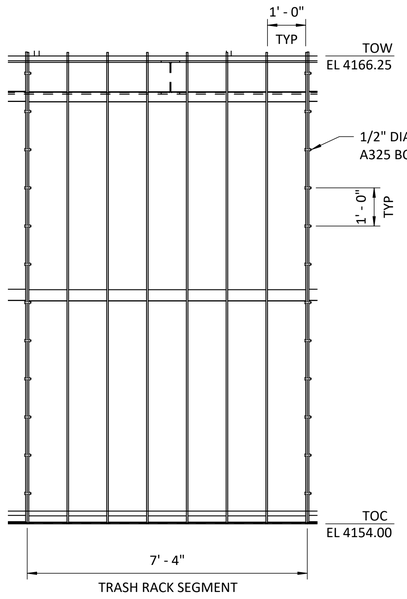
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HEADWORKS SECTIONS 5

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE 02/14/25

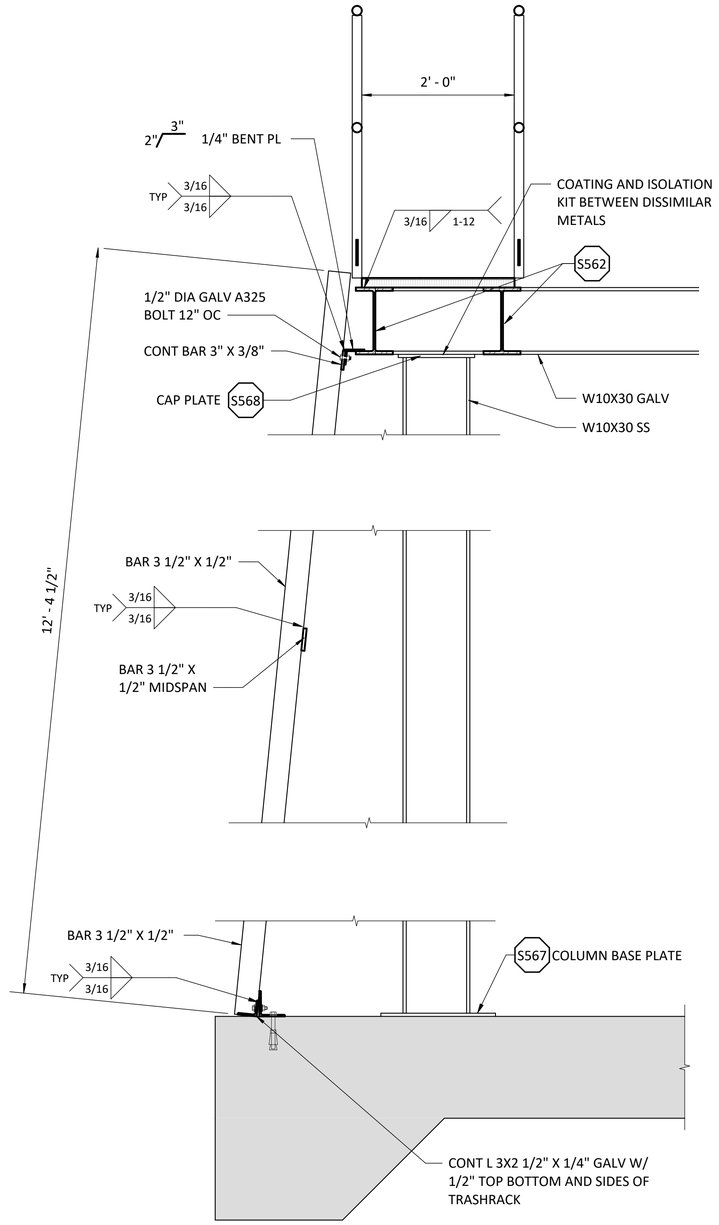
DRAWING
S110

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt



1 S107 TRASH RACK DETAIL

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

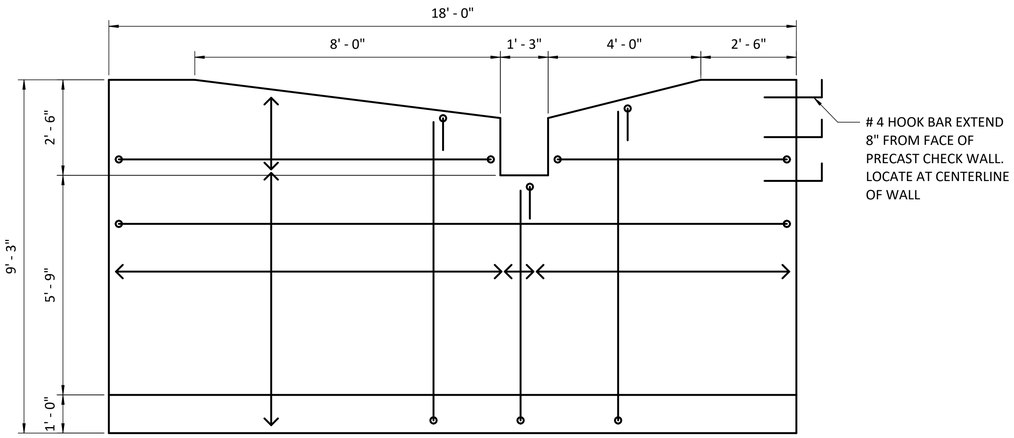


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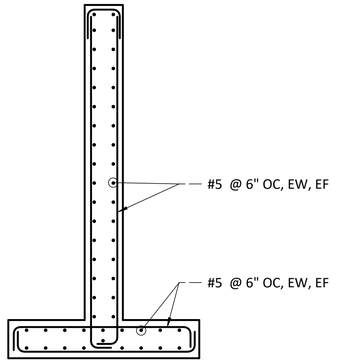
1. ALL BARS, PLATES AND ANGLES TO BE GALVANIZED

2 - TRASH RACK DETAIL

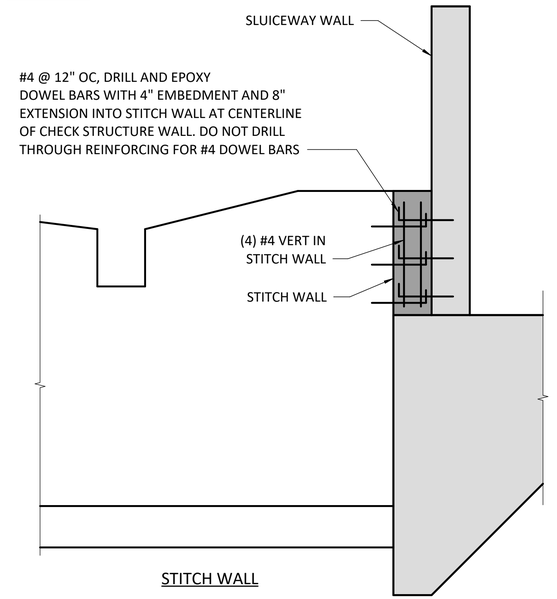
SCALE: 1" = 1'-0"



ELEVATION



SECTION



STITCH WALL

3 - CHECK STRUCTURE DETAIL (SEE CIVIL)

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

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

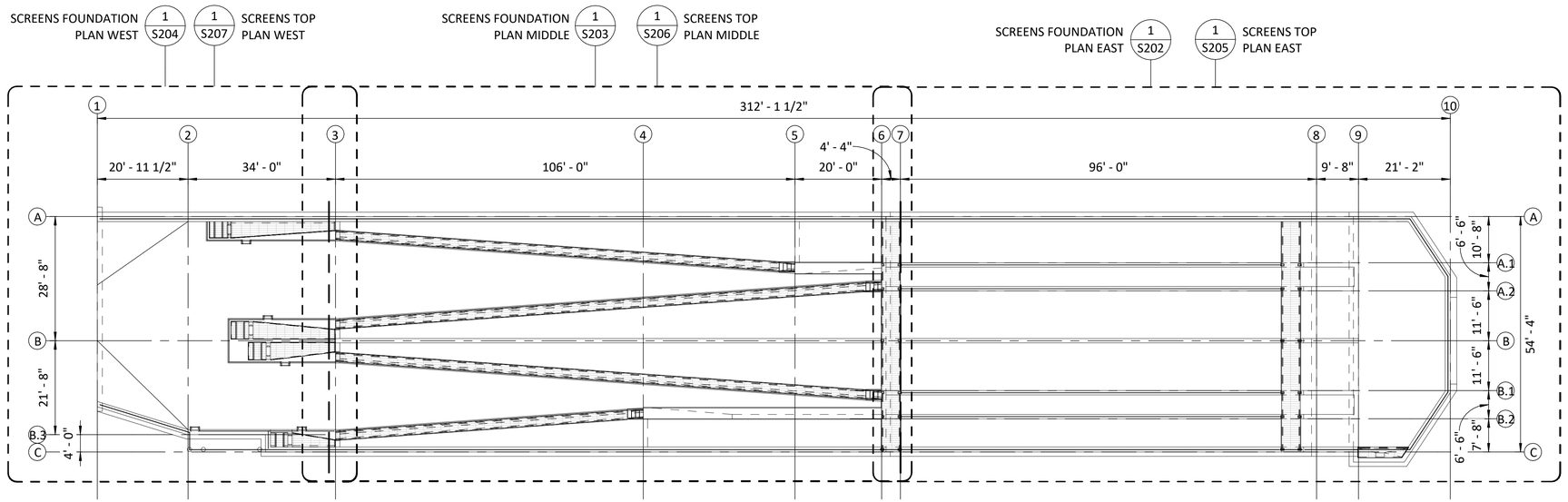
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

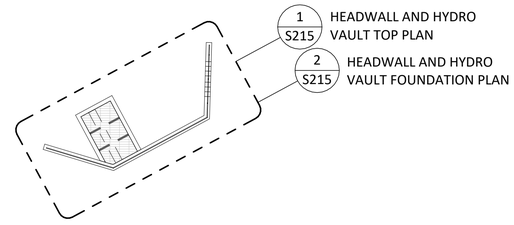
TRASHRACK DETAILS

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE 02/14/25

DRAWING
S111

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_HEADWORKS.rvt





SCREENS KEY PLAN

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

0 16' 32'

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

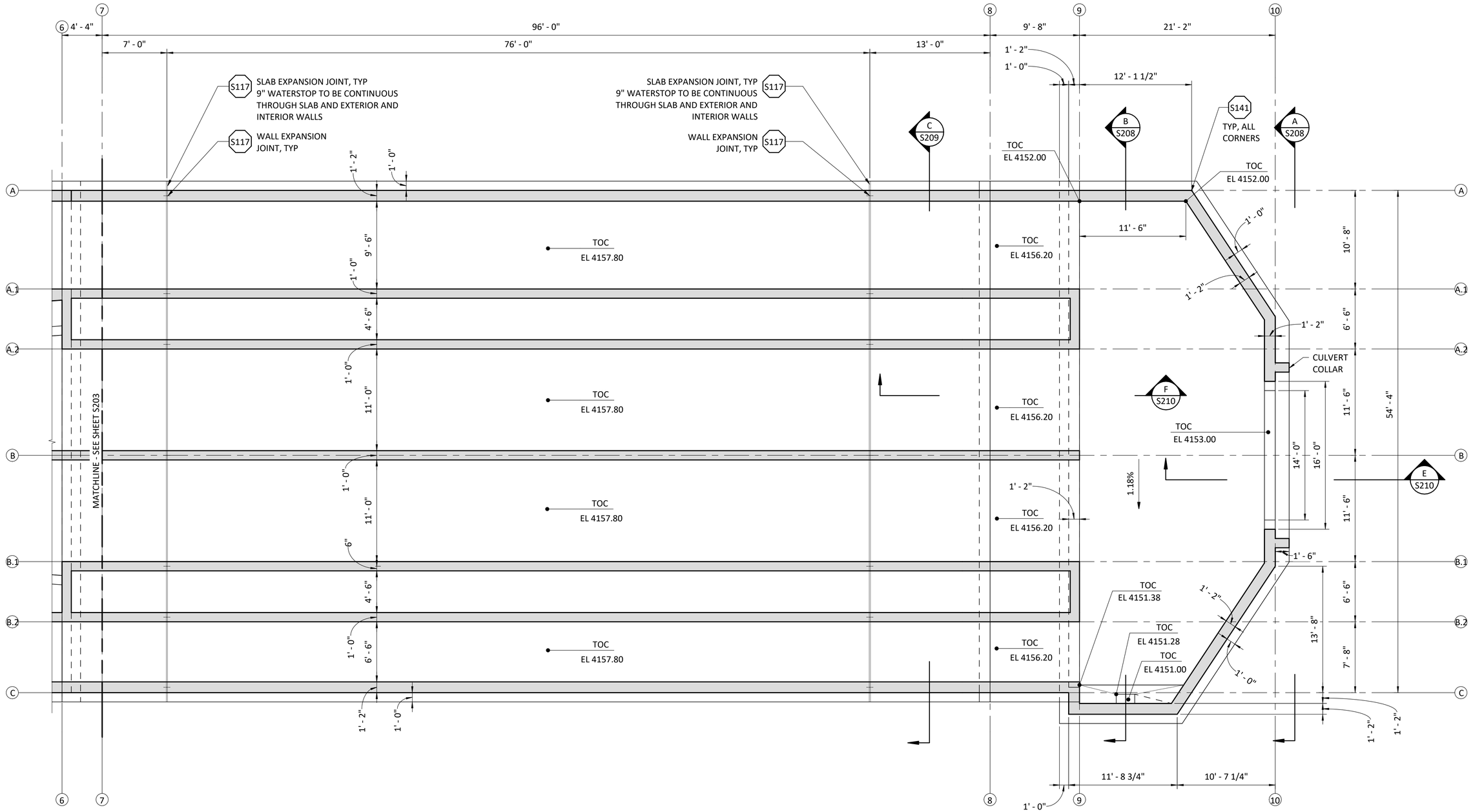
SCREENS KEY PLAN

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING

S201

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



1 / S201 SCREENS FOUNDATION PLAN EAST (CUT AT EL 4158.00)

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

0 4' 8'

N

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

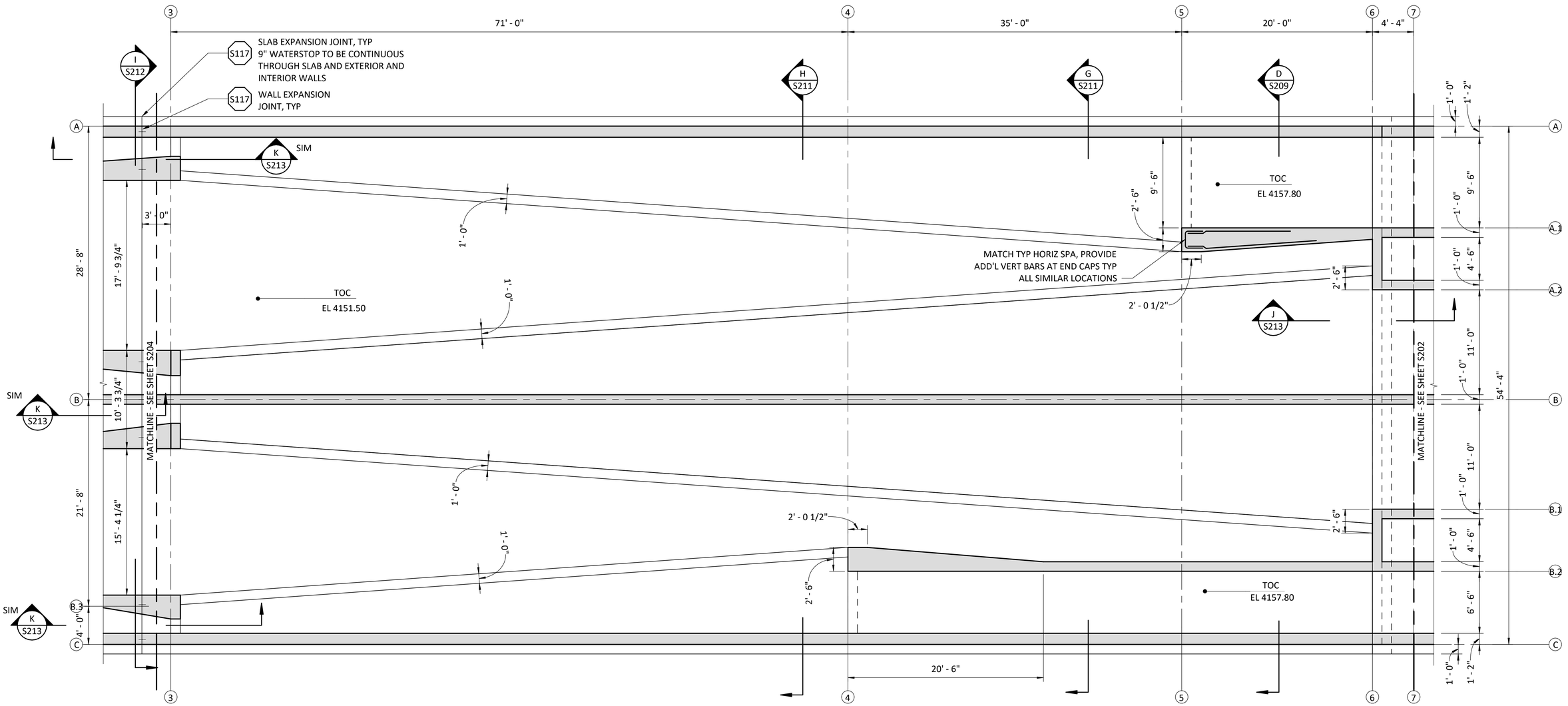
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SCREENS FOUNDATION PLAN EAST

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING
S202

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



1 / S201 SCREENS FOUNDATION PLAN MIDDLE (CUT AT EL 4161.00)

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

0 4' 8'

N

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

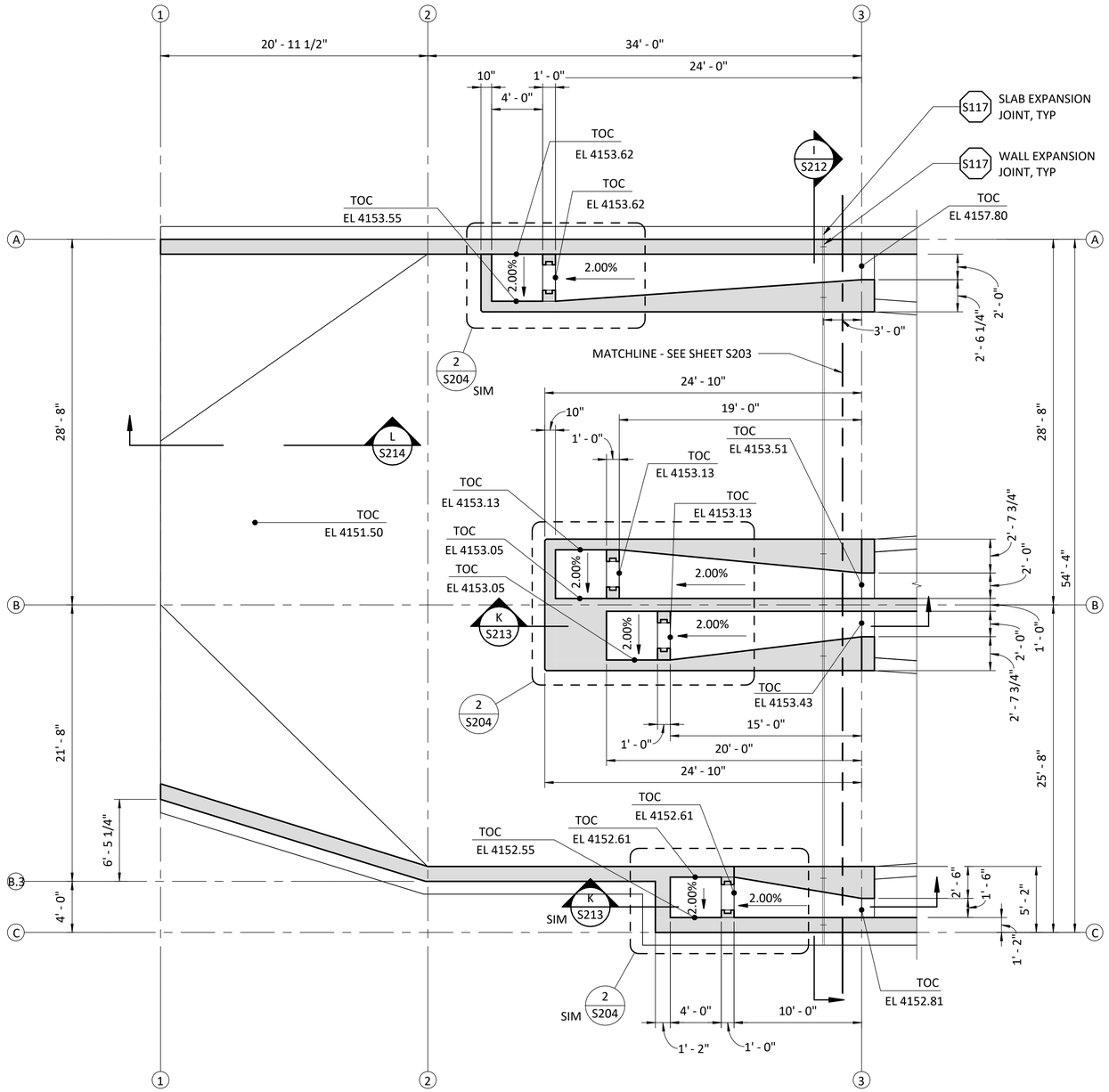
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SCREENS FOUNDATION PLAN MIDDLE

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING
S203

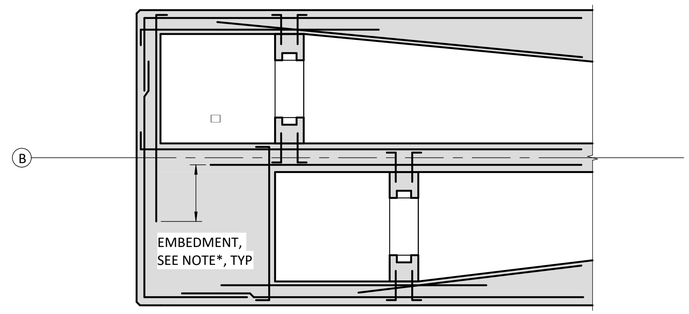
Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



1 S201 SCREENS FOUNDATION PLAN WEST (CUT AT EL 4161.00)

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

0 4' 8'



*FOR EMBEDMENTS, REFER TO S143

2 - DETAIL

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

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

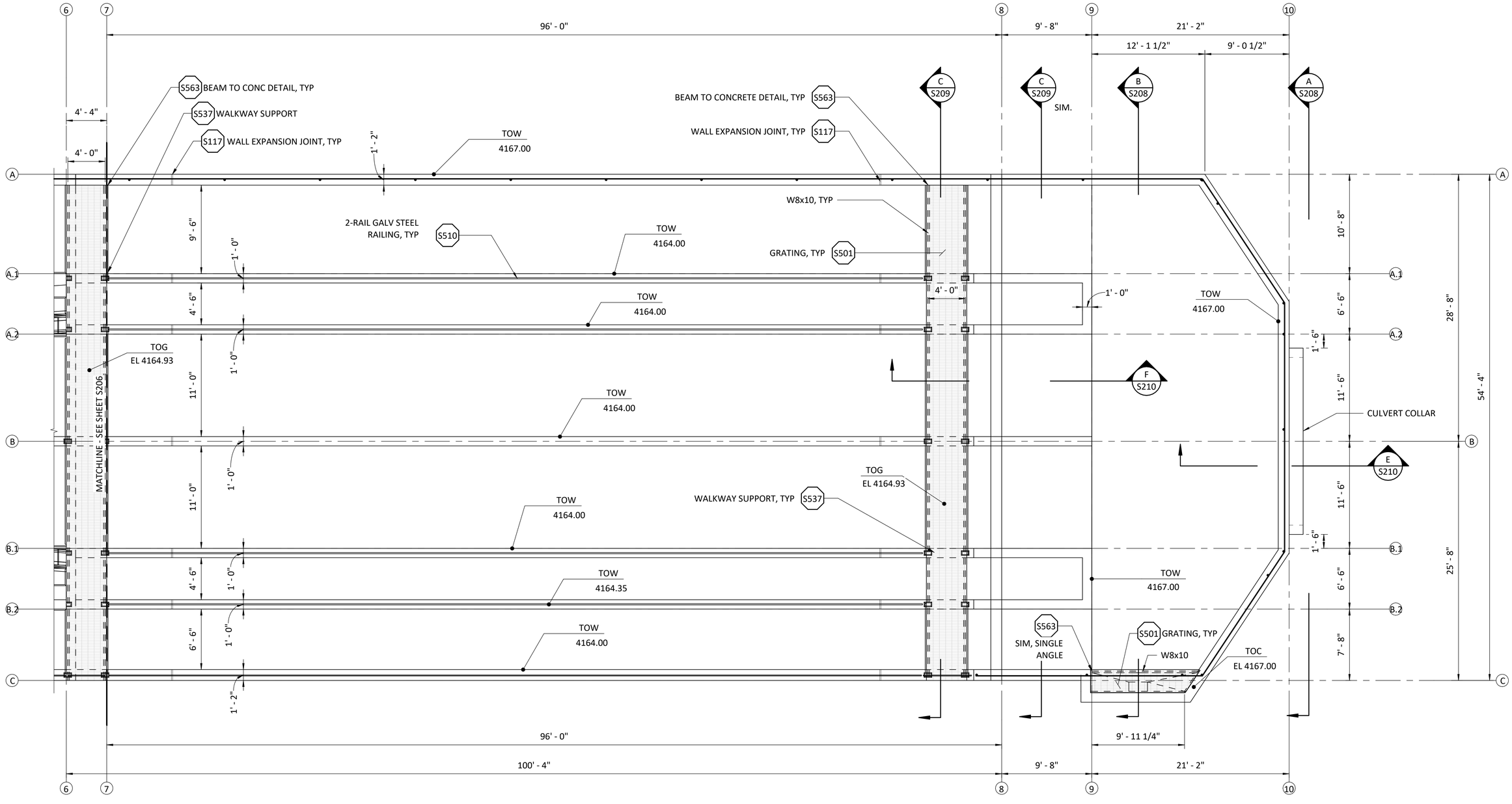
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SCREENS FOUNDATION PLAN WEST

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING
S204

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



1 S201 SCREENS TOP PLAN EAST

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

0 4' 8'

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

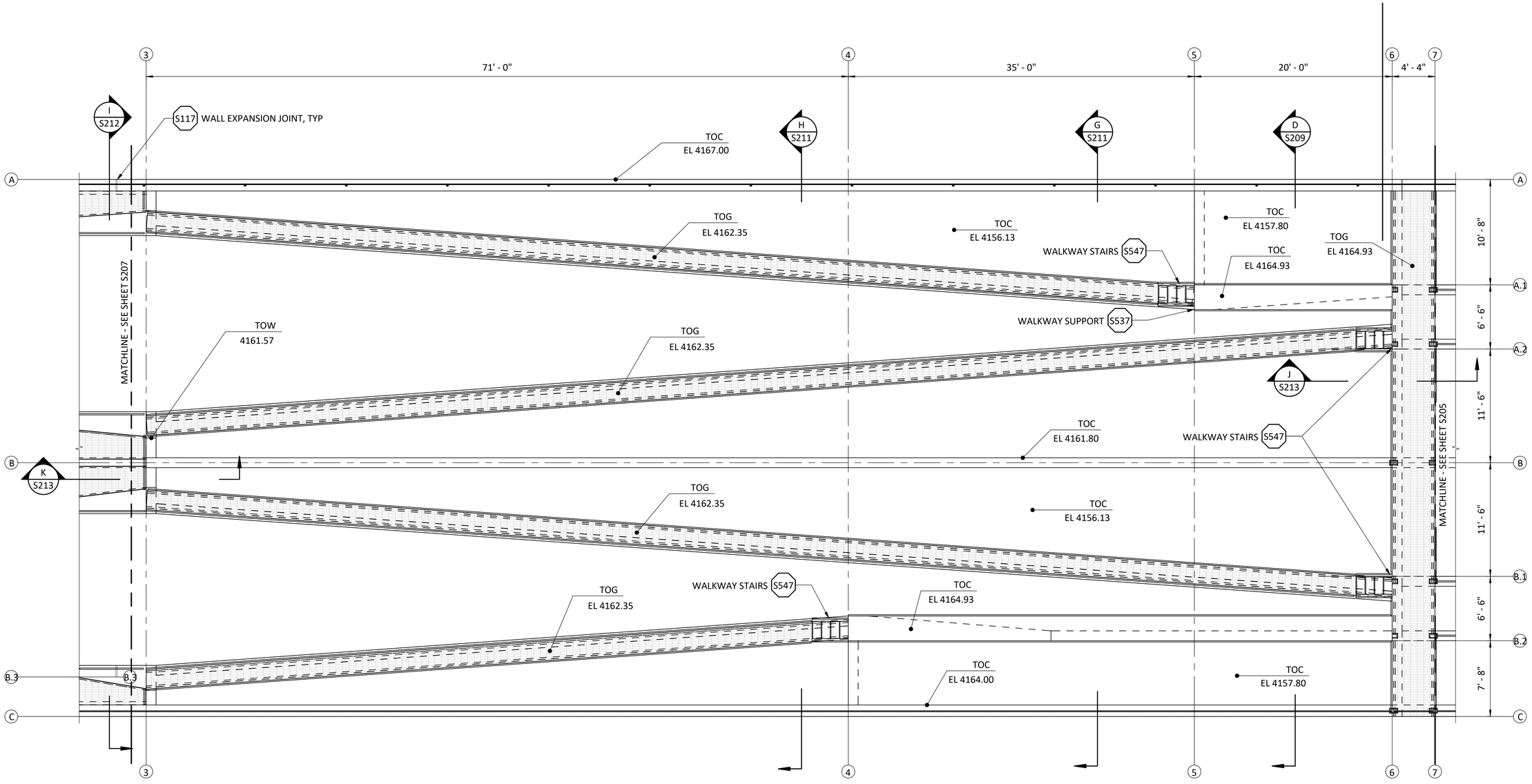
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SCREENS TOP PLAN EAST

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING
S205

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



1 S201 SCREENS TOP PLAN MIDDLE

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

0 4' 8'

N

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SCREENS TOP PLAN MIDDLE

DESIGNED K. FRIESEN

DRAWN J. NEVES

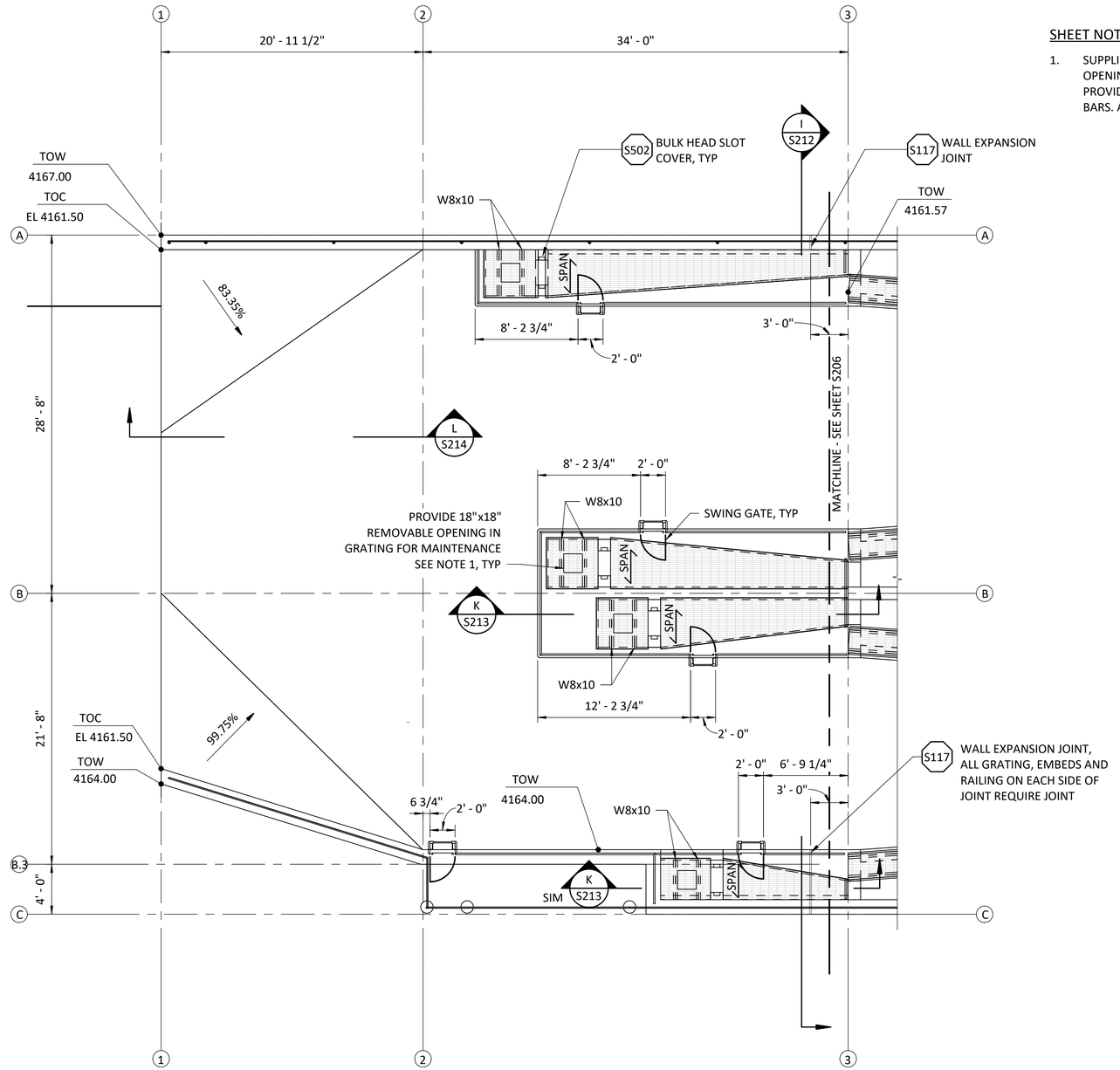
CHECKED M. MERKLEIN

ISSUED DATE XX/XX/25

DRAWING

S206

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



1 S201 SCREENS TOP PLAN WEST

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

0 4' 8'

N

SHEET NOTES

1. SUPPLIER TO DESIGN GRATING SECTION CONSIDERING OPENING SIZE IN GRATING. BANDING BARS SHALL BE PROVIDED AROUND THE PERIMETER OF ALL CUT GRATING BARS. AROUND THE PERIMETER OF ALL CUT GRATING BARS

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

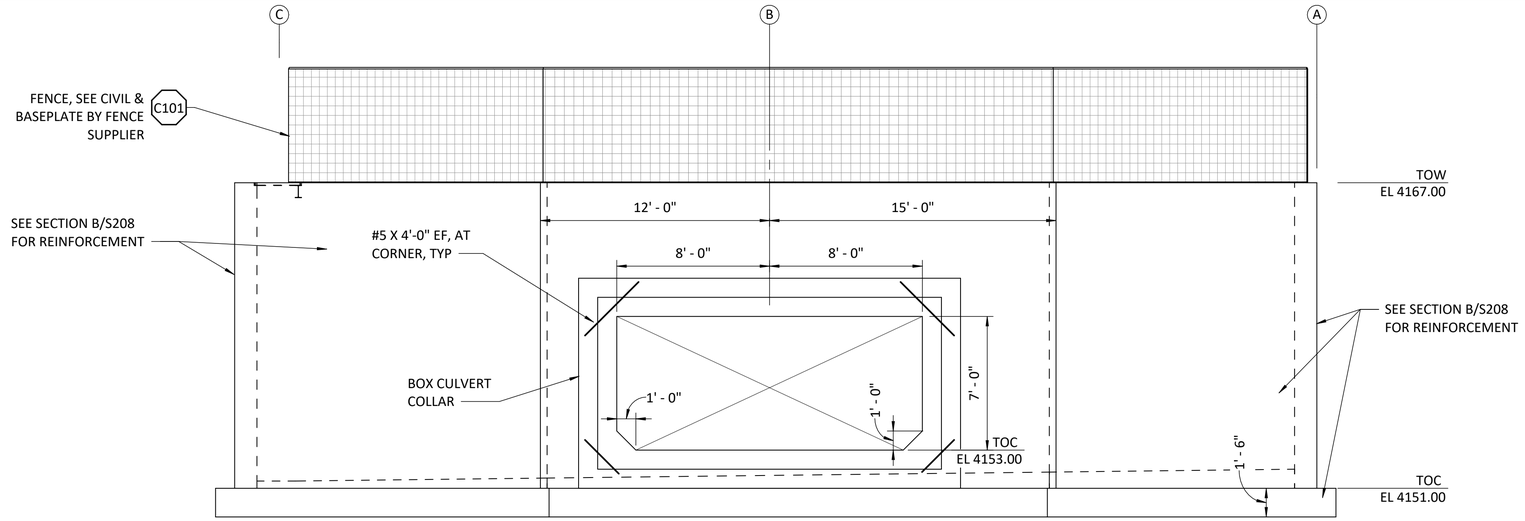
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SCREENS TOP PLAN WEST

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING
S207

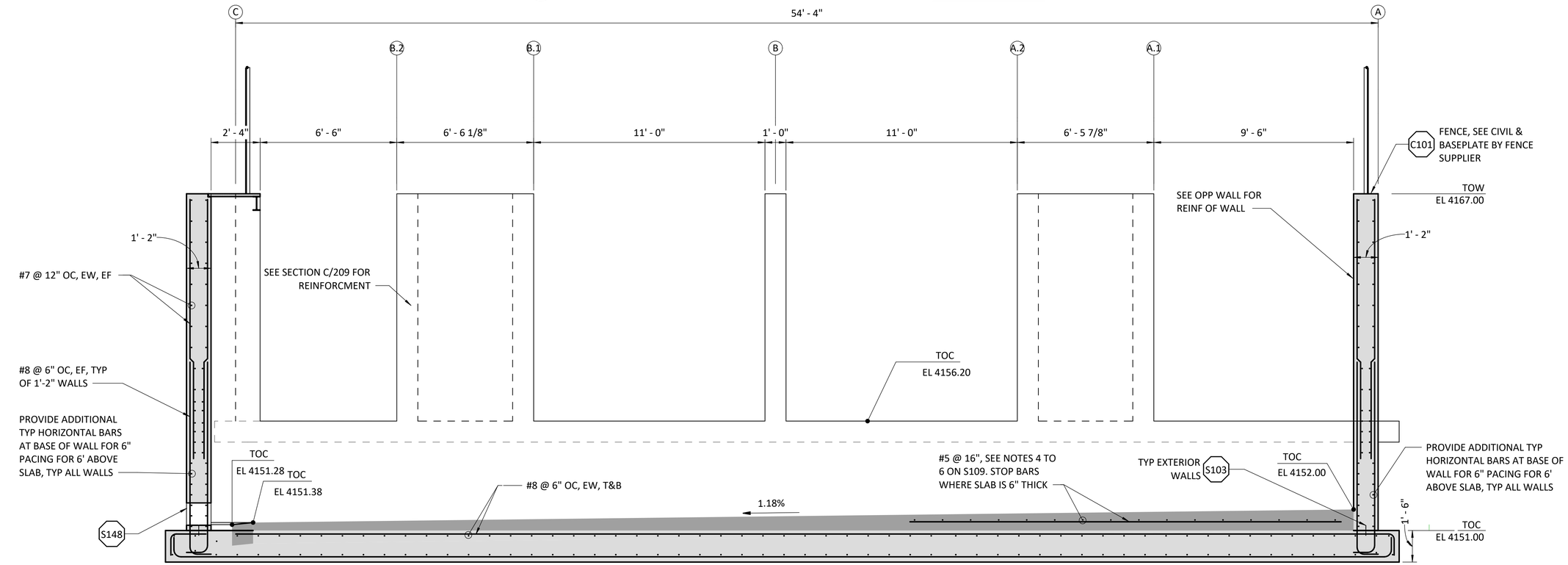
Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



A S202 SECTION

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

0 4' 8'



B S202 SECTION

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

0 2' 4'

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

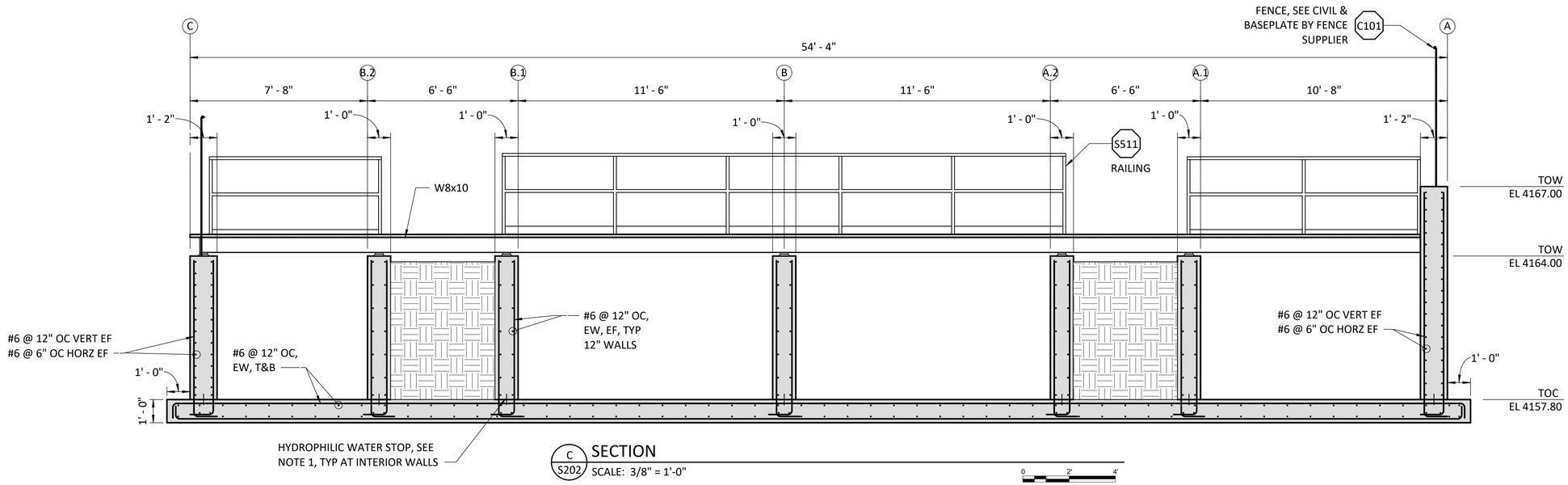
SCREENS SECTIONS 1

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING

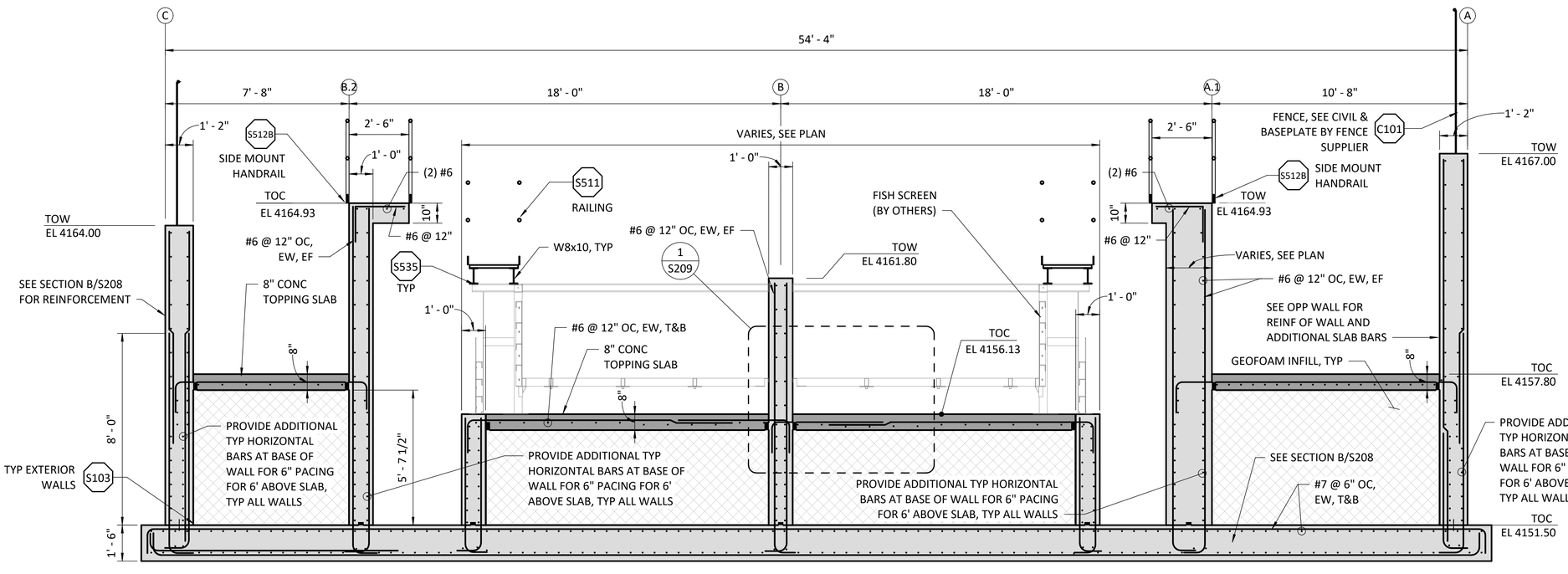
S208

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



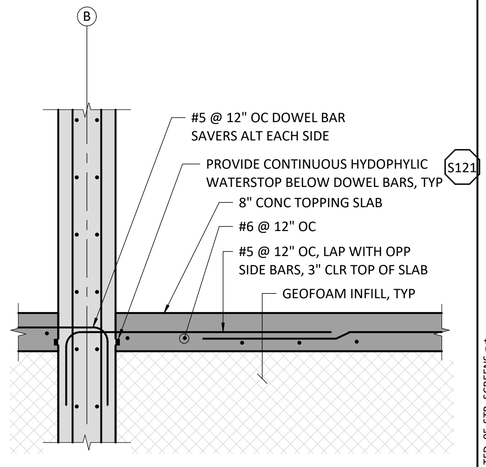
C / S202 SECTION
SCALE: 3/8" = 1'-0"

0 2' 4'



D / S203 SECTION
SCALE: 3/8" = 1'-0"

0 2' 4'



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

0 1' 2'

SHEET NOTES

1. ALL INTERIOR WALLS WILL HAVE CONTINUOUS HYDROPHILIC WATERSTOPS. WHERE HYDROPHILIC WATERSTOP ABUTS PVC WATERSTOP, THE HYDROPHILIC WATERSTOP SHALL OVERLAP THE PVC BULB FOR A LENGTH OF 12", SEE NOTES ON DWG.

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SCREENS SECTIONS 2

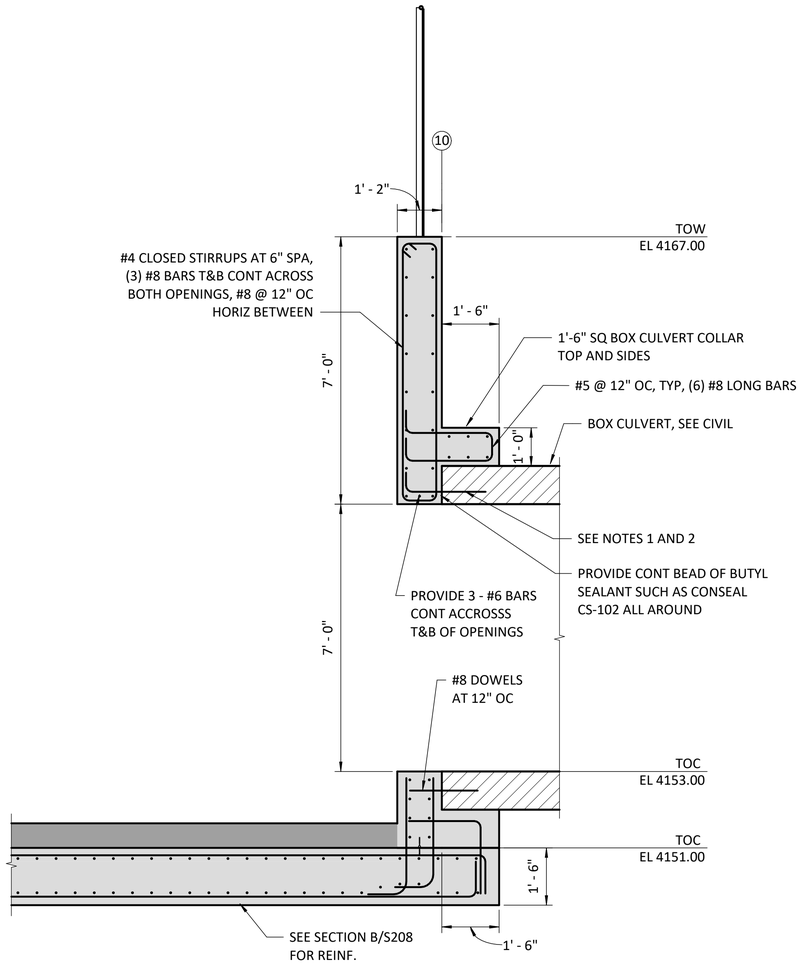
DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING
S209

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt

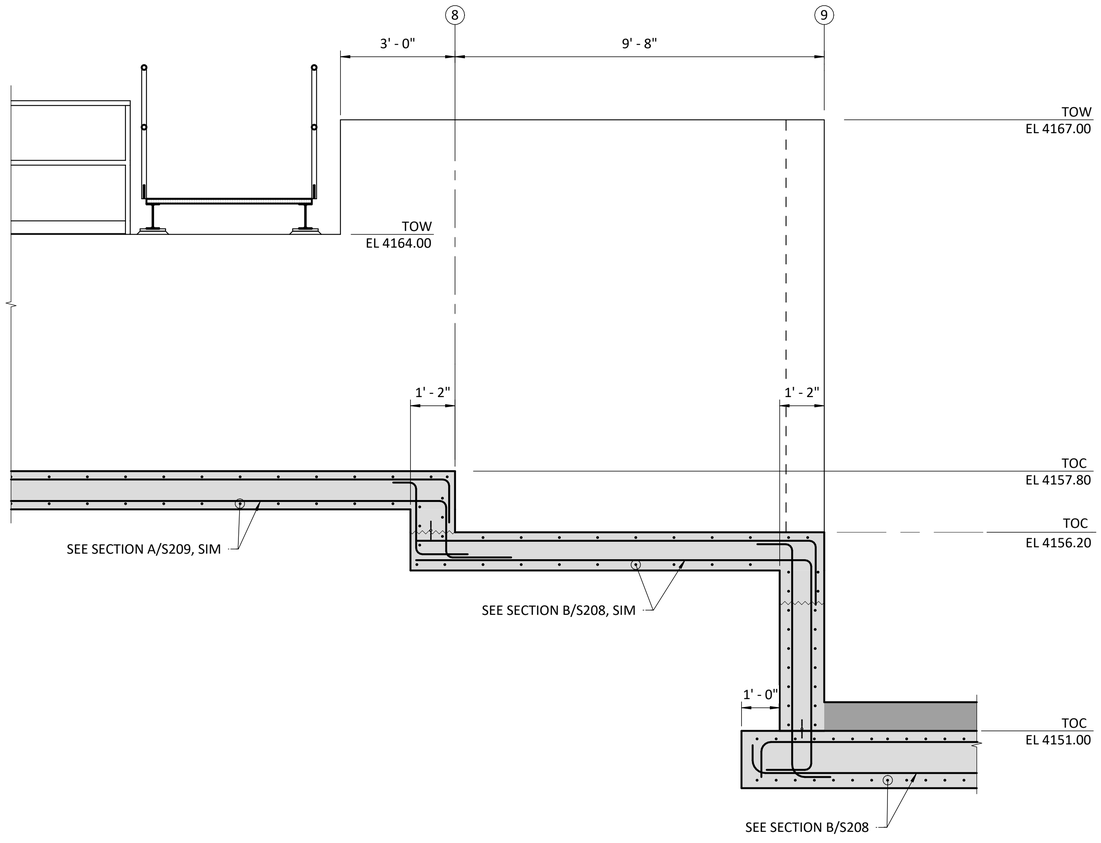
SHEET NOTES:

1. PRECASTER TO PROVIDE #4 EPOXY COATED DOWELS AT 16" OC, EXTENDING 16" FROM FACE OF CULVERT.
2. FIELD VEND BARS WITH 90° HOOK AT CENTERLINE OF WALL. ROTATE HOOKS AS REQUIRED TO MAINTAIN CONCRETE COVER.
3. BLOCKOUT TO BE MIN 9" OR MATCH THICKNESS OF CULVERT SLAB.



E S202 SECTION
SCALE: 1/2" = 1'-0"

0 2' 4'



F S202 SECTION
SCALE: 1/2" = 1'-0"

0 2' 4'

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

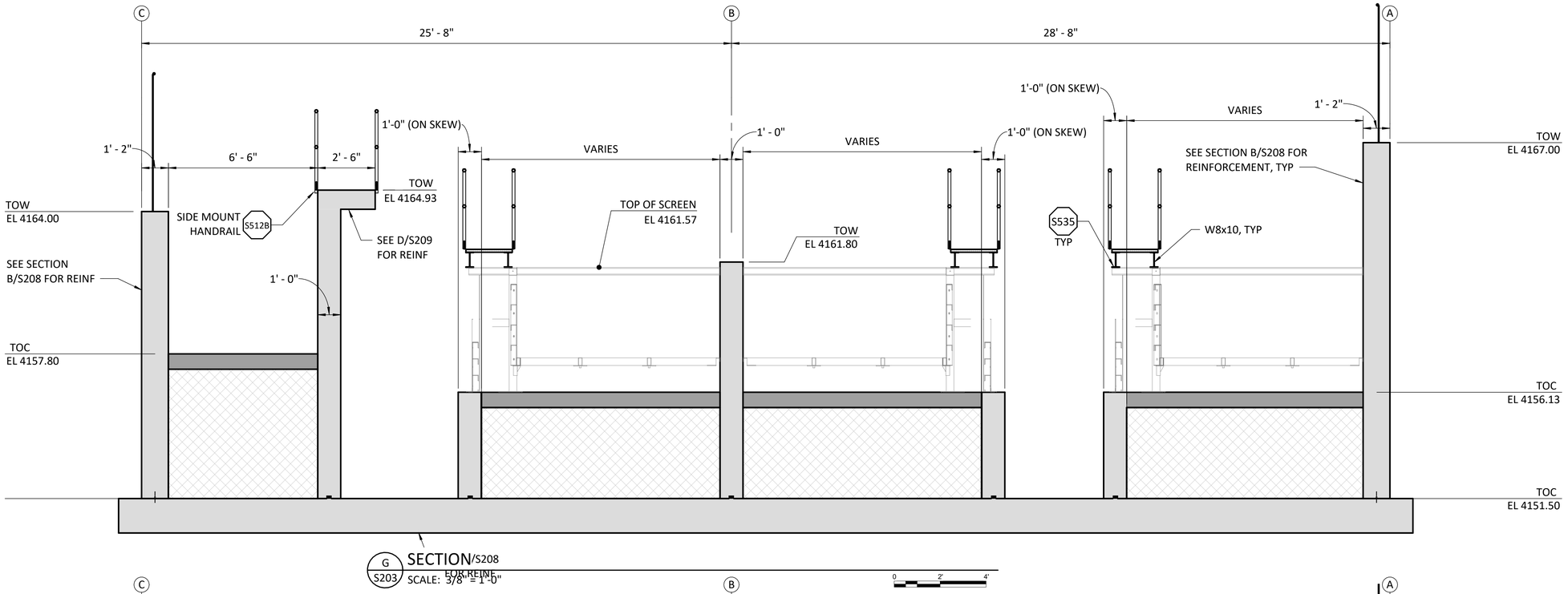
McMillen

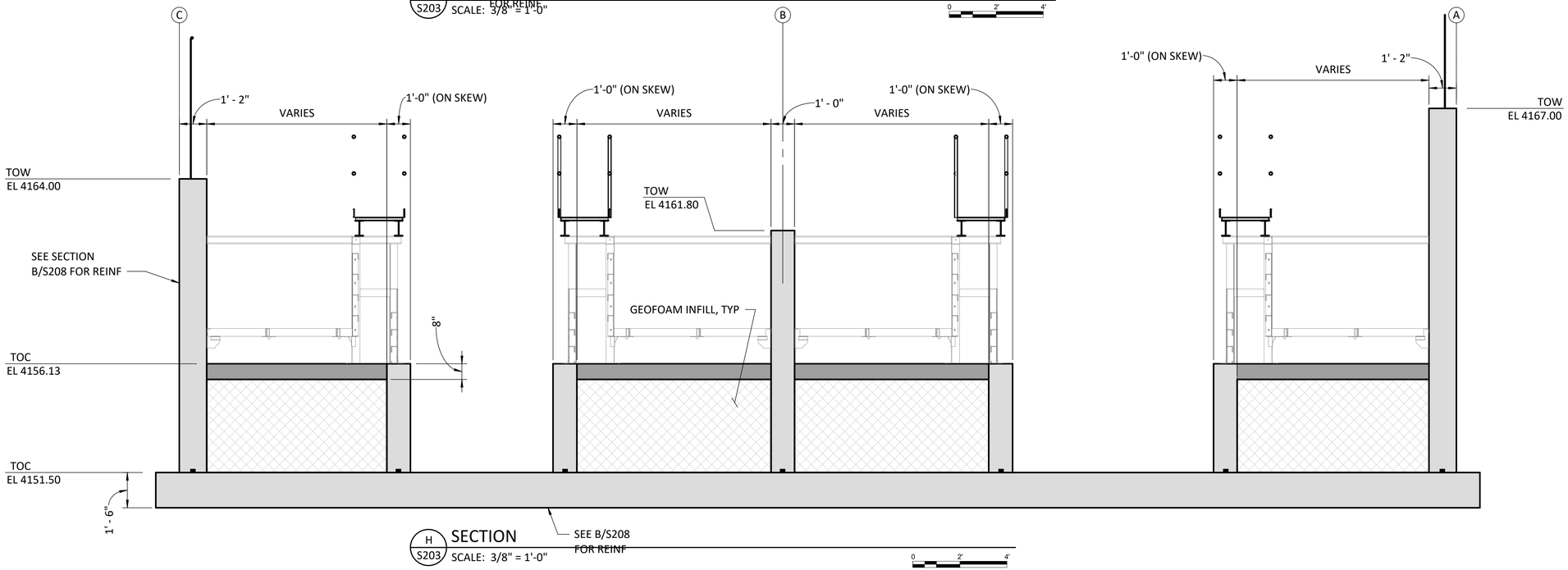
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
SCREENS SECTIONS 3

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING
S210

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt





REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

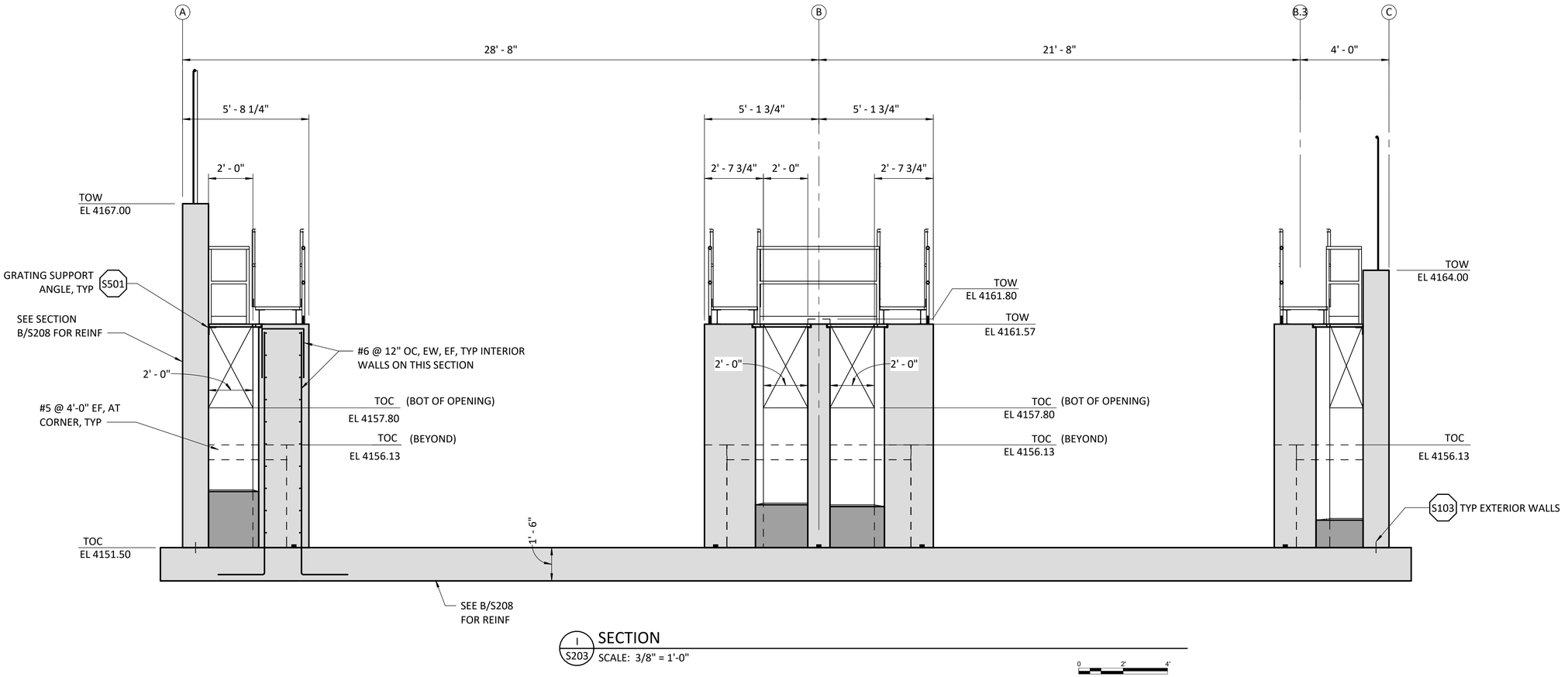
SCREENS SECTIONS 4

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING

S211

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



1 / S203 SECTION

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

0 2' 4'

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

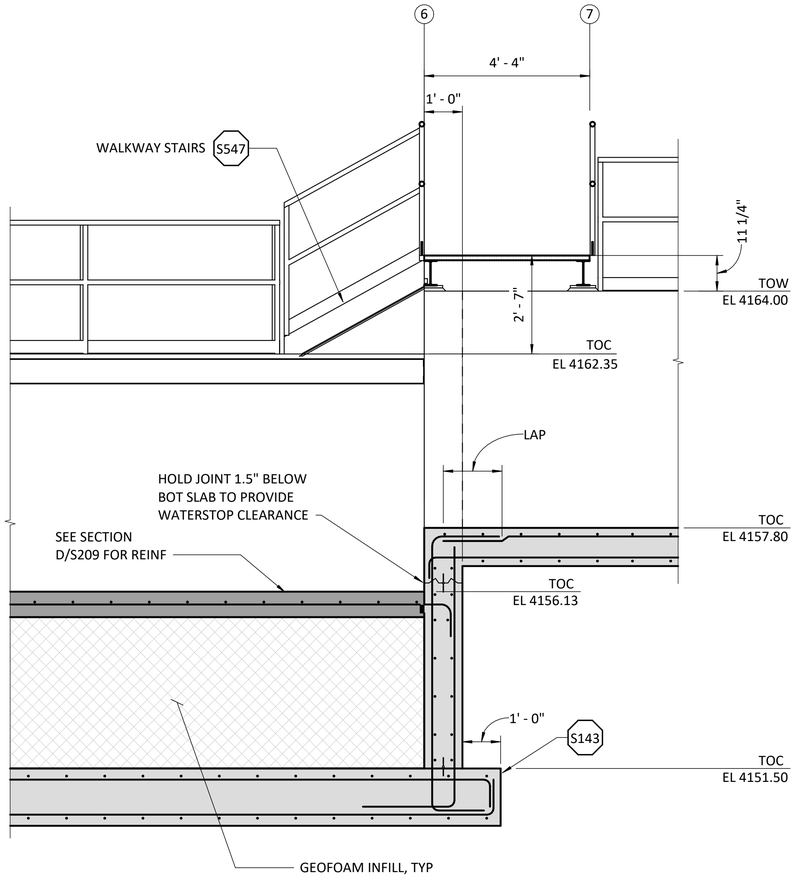
SCREENS SECTIONS 5

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING

S212

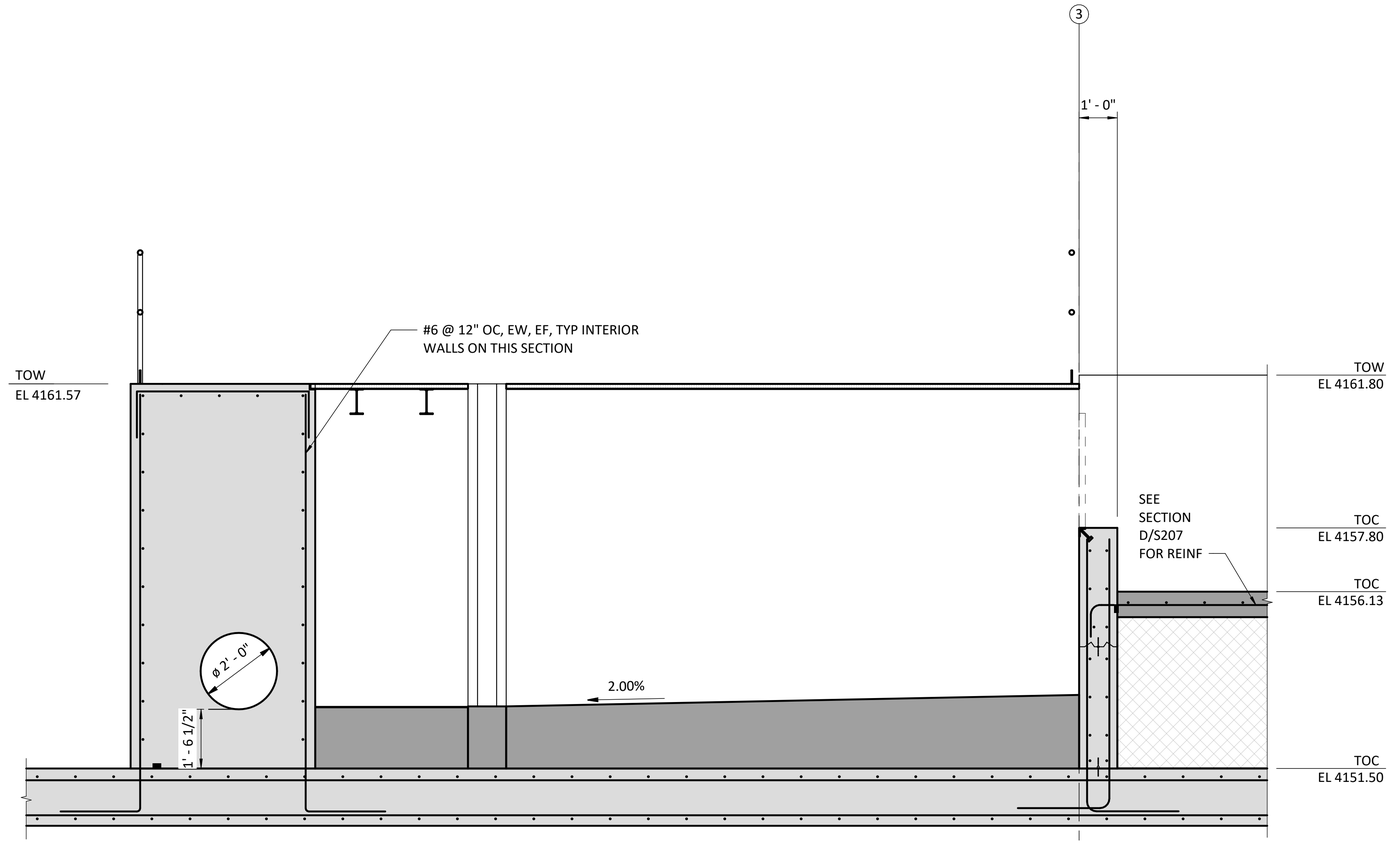
Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



J S203 SECTION

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

0 2' 4'



K S203 SECTION

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

0 2' 4'

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SCREENS SECTIONS 6

DESIGNED K. FRIESEN

DRAWN J. NEVES

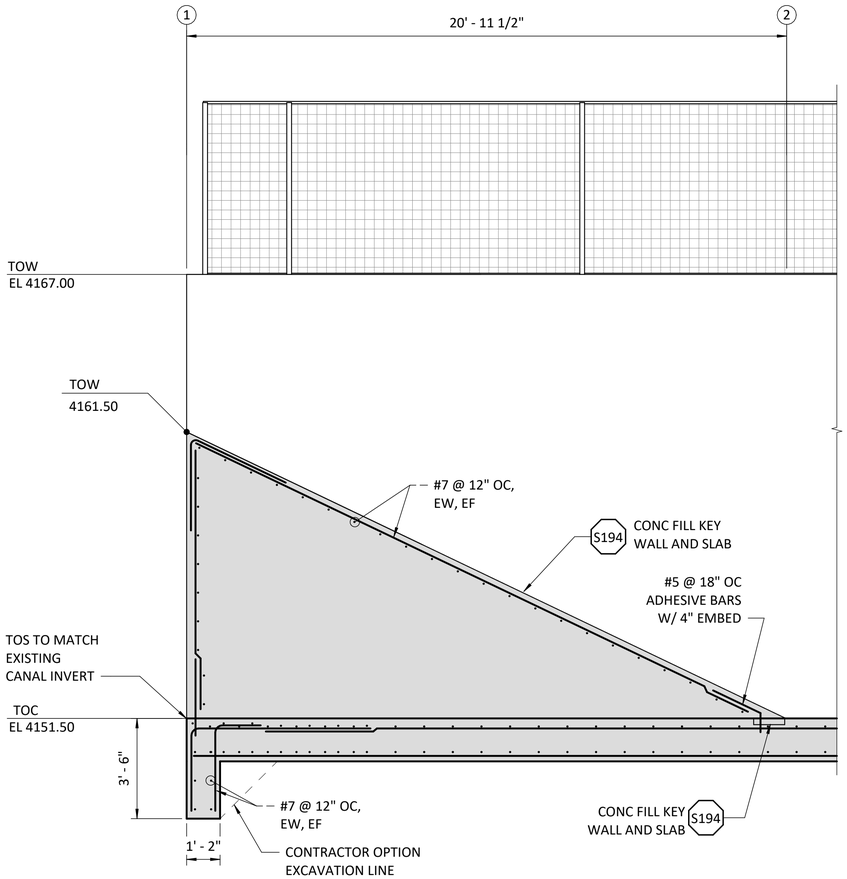
CHECKED M. MERKLEIN

ISSUED DATE XX/XX/25

DRAWING

S213

Autodesk Docs://CSKT Jocko Diversion/21-094_Jocko TFD_05-STR_SCREENS.rvt



L
S204 SECTION

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

0 2' 4'

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

SCREENS SECTIONS 7

DESIGNED K. FRIESEN

DRAWN J. NEVES

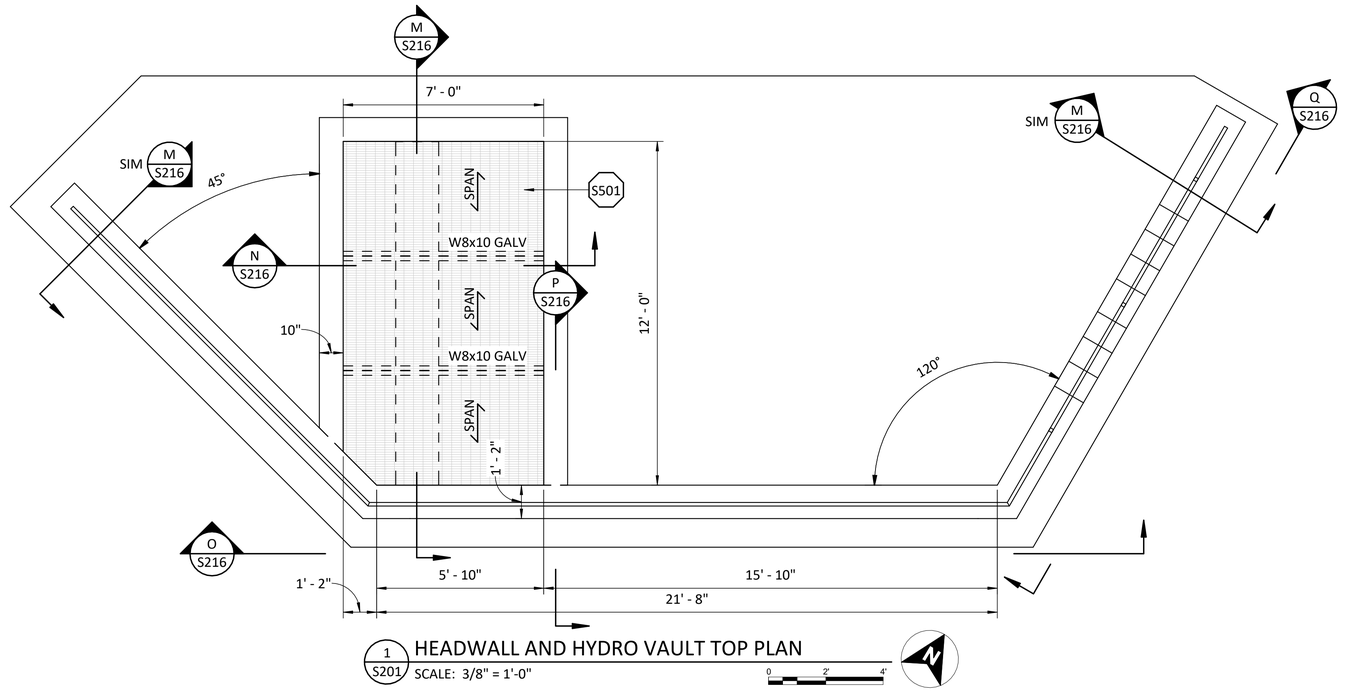
CHECKED M. MERKLEIN

ISSUED DATE XX/XX/25

DRAWING

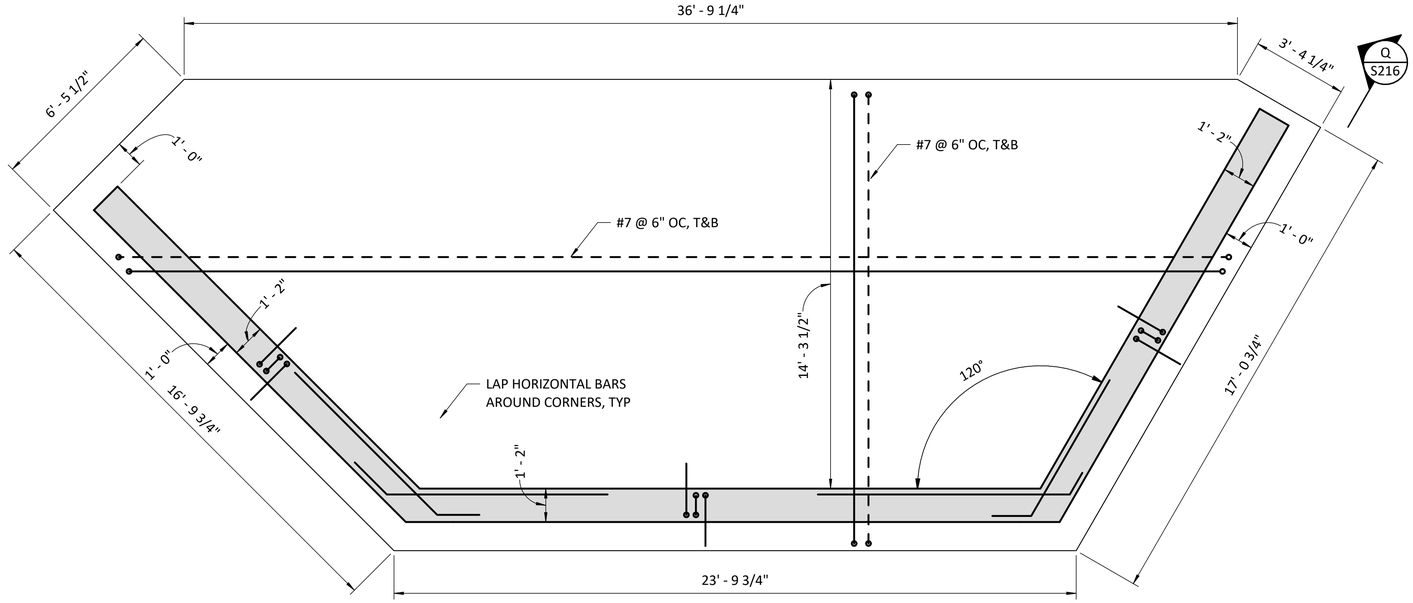
S214

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1 S201 HEADWALL AND HYDRO VAULT TOP PLAN

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



2 S201 HEADWALL AND HYDRO VAULT FOUNDATION PLAN

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

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

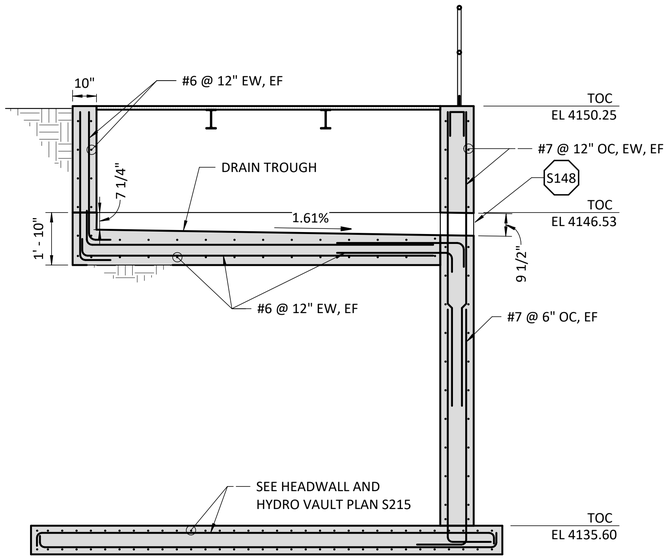
HEADWALL AND HYDRO VAULT PLANS

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

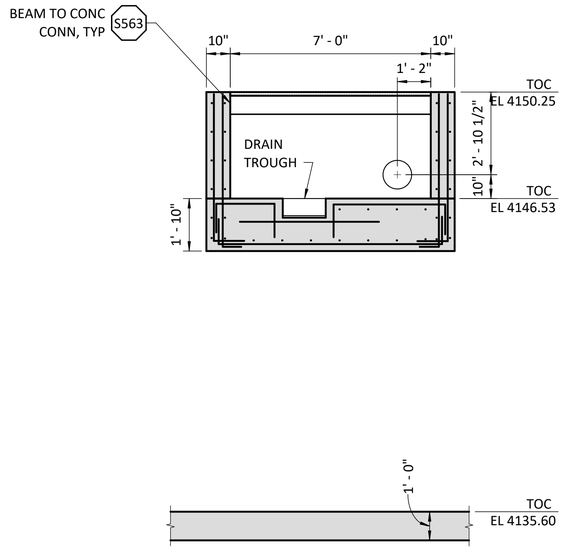
DRAWING

S215

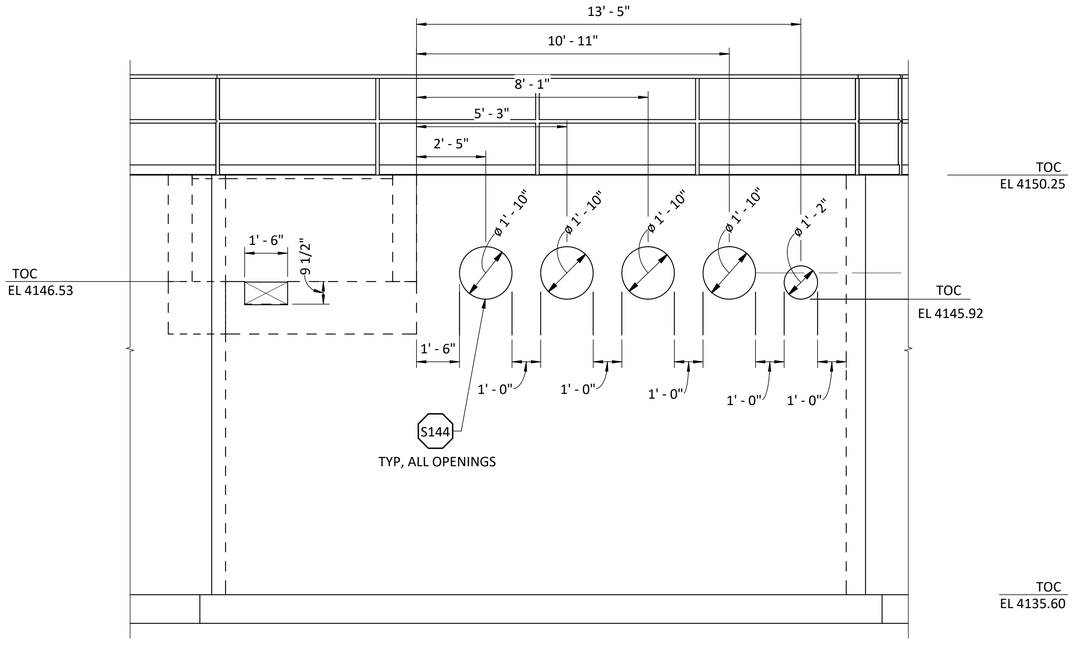
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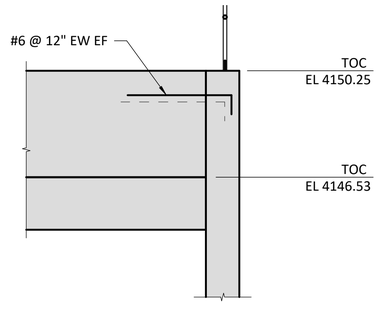
M S215 SECTION
SCALE: 3/8" = 1'-0"



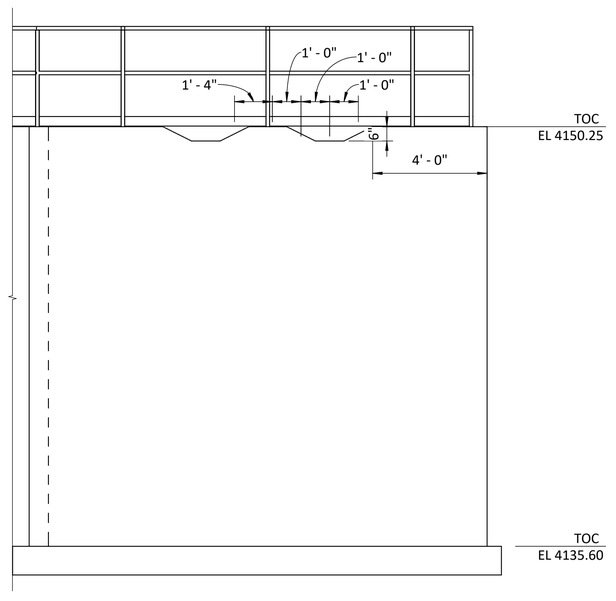
N S215 SECTION
SCALE: 3/8" = 1'-0"



O S215 SECTION
SCALE: 3/8" = 1'-0"



P S215 SECTION
SCALE: 3/8" = 1'-0"



Q S215 SECTION
SCALE: 3/8" = 1'-0"

REV	DATE	BY	DESCRIPTION
D	XX/XX/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

HEADWALL AND HYDRO VAULT SECTIONS

DESIGNED K. FRIESEN
DRAWN J. NEVES
CHECKED M. MERKLEIN
ISSUED DATE XX/XX/25

DRAWING
S216

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GENERAL MECHANICAL NOTES:

1. SEE M101-M103 FOR PHYSICAL GATE LOCATIONS.
2. GASKETS SHALL BE ⅛", 60A DUROMETER EPDM RUBBER GASKETS SUITABLE FOR RAISED FACE FLANGES.
3. LEAK TEST ALL PIPING PRIOR TO COVERING UP.
4. UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE AS SHOWN: FRACTIONAL: 1/16", 1 DECIMAL PLACE (.X): ±0.2", 2 DECIMAL PLACES (.0X): ±0.01", 3 DECIMAL PLACES (.00X): ± 0.005"

GATE SCHEDULE

EQUIPMENT NUMBER	LOCATION/SERVICE	EQUIPMENT DESCRIPTION	OPENING SIZE (W x H) (IN)	"GUIDE AND SEAL MOUNTING STYLE (NORTH/SOUTH/BOTTOM/TOP)"	INVERT EL	TOP OF WALL EL.	OPERATOR	SEATING / UNSEATING HEAD	COMMENTS
SWG-01	SLUICE WAY/MODULATING	SLIDE GATE	60 X 60	FACE/FACE/EMBED/FACE	4153.00	4166.25	ELECTRIC-DC MOTOR	15 / 15 FT	UP TO 60 START/STOPS HOUR
SWG-02	SLUICE WAY/MODULATING	SLIDE GATE	60 X 60	FACE/FACE/EMBED/FACE	4153.00	4166.25	ELECTRIC-DC MOTOR	15 / 15 FT	UP TO 60 START/STOPS HOUR
CG-01	CONDUIT/ ISOLATION	SLIDE GATE	60 X 72	FACE/FACE/FACE/FACE	4155.00	4166.25	ELECTRIC-DC MOTOR	12 / 12 FT	
CG-02	CONDUIT/ ISOLATION	SLIDE GATE	60 X 72	FACE/FACE/FACE/FACE	4155.00	4166.25	ELECTRIC-DC MOTOR	12 / 12 FT	
CG-03	CONDUIT/ ISOLATION	SLIDE GATE	60 X 72	FACE/FACE/FACE/FACE	4155.00	4166.25	ELECTRIC-DC MOTOR	12 / 12 FT	
IG-01	INLET CHANNEL #1/ MODULATING	WEIR GATE	78 X 106.5	FACE/FACE/FACE/NONE	4157.80	4167.00	ELECTRIC-DC MOTOR	12 / 6 FT	LANGEMANN STYLE GATES CHOSEN FOR THE VERY LOW POWER REQUIREMENT.
IG-02	INLET CHANNEL #2/ MODULATING	WEIR GATE	114 X 106.5	FACE/FACE/FACE/NONE	4157.80	4167.00	ELECTRIC-DC MOTOR	12 / 6 FT	LANGEMANN STYLE GATES CHOSEN FOR THE VERY LOW POWER REQUIREMENT.
IG-03	INLET CHANNEL #3/ MODULATING	WEIR GATE	132 X 106.5	FACE/FACE/FACE/NONE	4157.80	4167.00	ELECTRIC-DC MOTOR	12 / 6 FT	LANGEMANN STYLE GATES CHOSEN FOR THE VERY LOW POWER REQUIREMENT.
IG-04	INLET CHANNEL #4/ MODULATING	WEIR GATE	132 X 106.5	FACE/FACE/FACE/NONE	4157.80	4167.00	ELECTRIC-DC MOTOR	12 / 6 FT	LANGEMANN STYLE GATES CHOSEN FOR THE VERY LOW POWER REQUIREMENT.
V-01	SCREEN PLENUM / FISH SALVAGE	SLUICE GATE	12" DIA	MOUNT DIRECTLY TO FLANGE OF HDPE WALL THIMBLE	4151.27	4167.00	HANDWHEEL	12 / 6 FT	
V-02	ATTENUATION BAY / PENSTOCK	SLUICE GATE	10" DIA	MOUNT DIRECTLY TO FLANGE OF HDPE WALL THIMBLE	4151.83	4164.00	HANDWHEEL	16 / 0 FT	10" DIAMETER FLAT BACK WITH F. 125# FLANGE DRILLING, 174" TALL GALVANIZED FRAME HEIGHT, CAST IRON SEATING FACES, HAND WHEEL LIFT, CARBON STEEL STEM, GALVANIZED ASSEMBLY FASTENERS.FRESNO VALVE AND CASTINGS, SERIES 6400 MODEL 2010C SLUICE GATE OR EQUAL.

EQUIPMENT SCHEDULE

	LOCATION/SERVICE	EQUIPMENT DESCRIPTION	HEAD (FT) NORMAL / HIGH	FLOW GPM LIMIT COMBINED, NORMAL / HIGH	PENSTOCK SIZE / LENGTH	WIRE RUN DIST / SIZE	WATTS / DCV	NUMBER OF JETS	HOSE SIZE	NOZZLE DIA	COMMENTS
MH-1	OUTFALL STRUCTURE / GENERATION	MICRO HYDRO TURGO GENERATOR	11.6 FT / 12.6 FT	476 GPM / 490 GPM	10" HDPE DR17 / 280 FT	120 FT / 12 AWG MIN	550 W TOTAL (183 W EA) / 80 VDC	4	2" DIA	~0.85 IN, TBD BY MFR	BOD-POWERSPOUT TRG 80V, LOCAL VENDOR - AURORA POWER & DESIGN
MH-2	OUTFALL STRUCTURE / GENERATION	MICRO HYDRO TURGO GENERATOR	11.6 FT / 12.6 FT	476 GPM / 490 GPM	10" HDPE DR17 / 280 FT	120 FT / 12 AWG MIN	550 W TOTAL (183 W EA) / 80 VDC	4	2" DIA	~0.85 IN, TBD BY MFR	BOD-POWERSPOUT TRG 80V, LOCAL VENDOR - AURORA POWER & DESIGN
MH-3	OUTFALL STRUCTURE / GENERATION	MICRO HYDRO TURGO GENERATOR	11.6 FT / 12.6 FT	476 GPM / 490 GPM	10" HDPE DR17 / 280 FT	120 FT / 12 AWG MIN	550 W TOTAL (183 W EA) / 80 VDC	4	2" DIA	~0.85 IN, TBD BY MFR	BOD-POWERSPOUT TRG 80V, LOCAL VENDOR - AURORA POWER & DESIGN

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

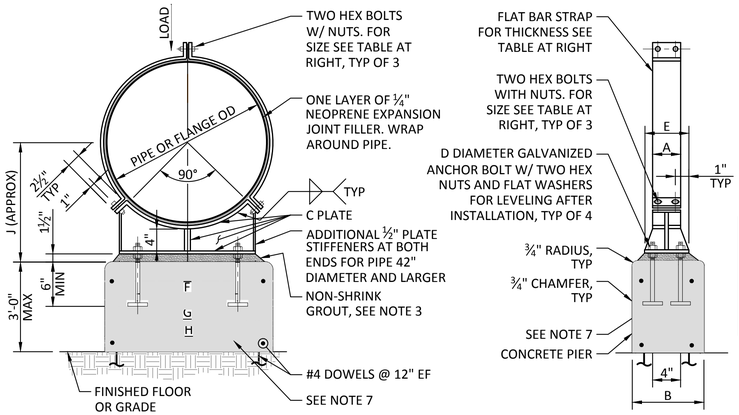
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
MECHANICAL SCHEDULES

DESIGNED B. WELTON
DRAWN J. NEVES
CHECKED J. BOAG
PROJECT DATE 02/14/25

DRAWING
GM001

JOB NO: 21-094

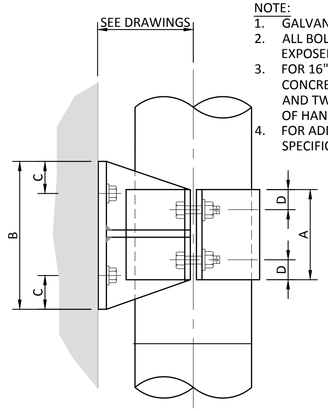
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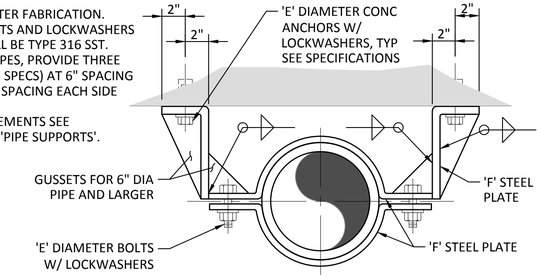
DIMENSIONS IN INCHES															
NOMINAL PIPE SIZE	A	B	C	D	E	STRAP		SUPPORTING							
						BOLT SIZE	FLAT BAR	PIPE				FLANGE			
								F	G	H	J	F	G	H	J
24	5	12	⅜	⅝	6	⅝	⅜	13	21	26	19	16	26	32	23

NOTES:
1. WHEN SUPPORTING PIPE AND FLANGE ALTERNATELY ON THE SAME LINE, CONCRETE PIERS FOR PIPE SUPPORTS SHALL ALL HAVE THE SAME DIMENSION 'H' FOR FLANGE SUPPORT
2. PIPE SUPPORTS SHALL BE LOCATED IN PLAN AT POINTS MARKED THUS: (X)
3. WHERE DIFFERENTIAL SETTLEMENT IS LIKELY TO OCCUR, OMIT GROUT AS DIRECTED BY THE ENGINEER.
4. GALVANIZE ALL PARTS AFTER FABRICATION.
5. WHERE DIRECTED BY THE STRUCTURAL ENGINEER, BOTTOM OF PIERS SHALL EXTEND BELOW BOTTOM OF SLAB
6. WHERE PIPE SUPPORT OCCURS ON GRADE REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
7. GALVANIZED ANCHOR BOLT OR CONCRETE ANCHOR WITH TWO NUTS AND ONE LOCKWASHER. PROVIDE BAR 4x½x4" WELDED TO BOLT, TYP OF 4. SEE SPECIFICATIONS.

M110 PIPE SUPPORT WITH STRAP
SCALE: NTS

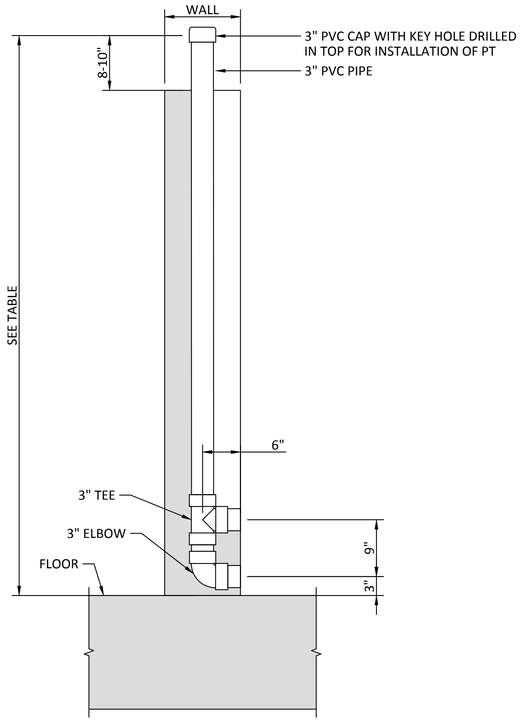


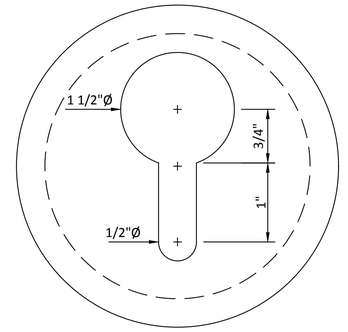
NOTE:
1. GALVANIZE ALL PARTS AFTER FABRICATION.
2. ALL BOLTS, ANCHORS, NUTS AND LOCKWASHERS EXPOSED TO WATER SHALL BE TYPE 316 SST.
3. FOR 16"-24" DIAMETER PIPES, PROVIDE THREE CONCRETE ANCHORS (SEE SPECS) AT 6" SPACING AND TWO GUSSETS AT 4" SPACING EACH SIDE OF HANGER.
4. FOR ADDITIONAL REQUIREMENTS SEE SPECIFICATIONS SECTION 'PIPE SUPPORTS'.



DIMENSIONS IN INCHES						
PIPE DIAMETER	"A"	"B"	"C"	"D"	"E"	"F"
3 TO 8	6	10	1½"	1	⅝	¼

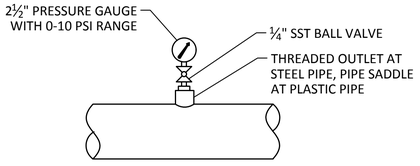
M134 PIPE HANGER FOR INDIVIDUAL PIPE
SCALE: NTS





3" CAP WITH KEY HOLE - TYP

QUANTITY	HEIGHT	LOCATION
4X	135"	ENERGY DISIPATION BAY
24X	80"	INLET FLUMES
4X	144"	INTAKE AREA



M713 PRESSURE GAUGE
SCALE: NTS

M740 WET WELL TYP
SCALE: NTS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

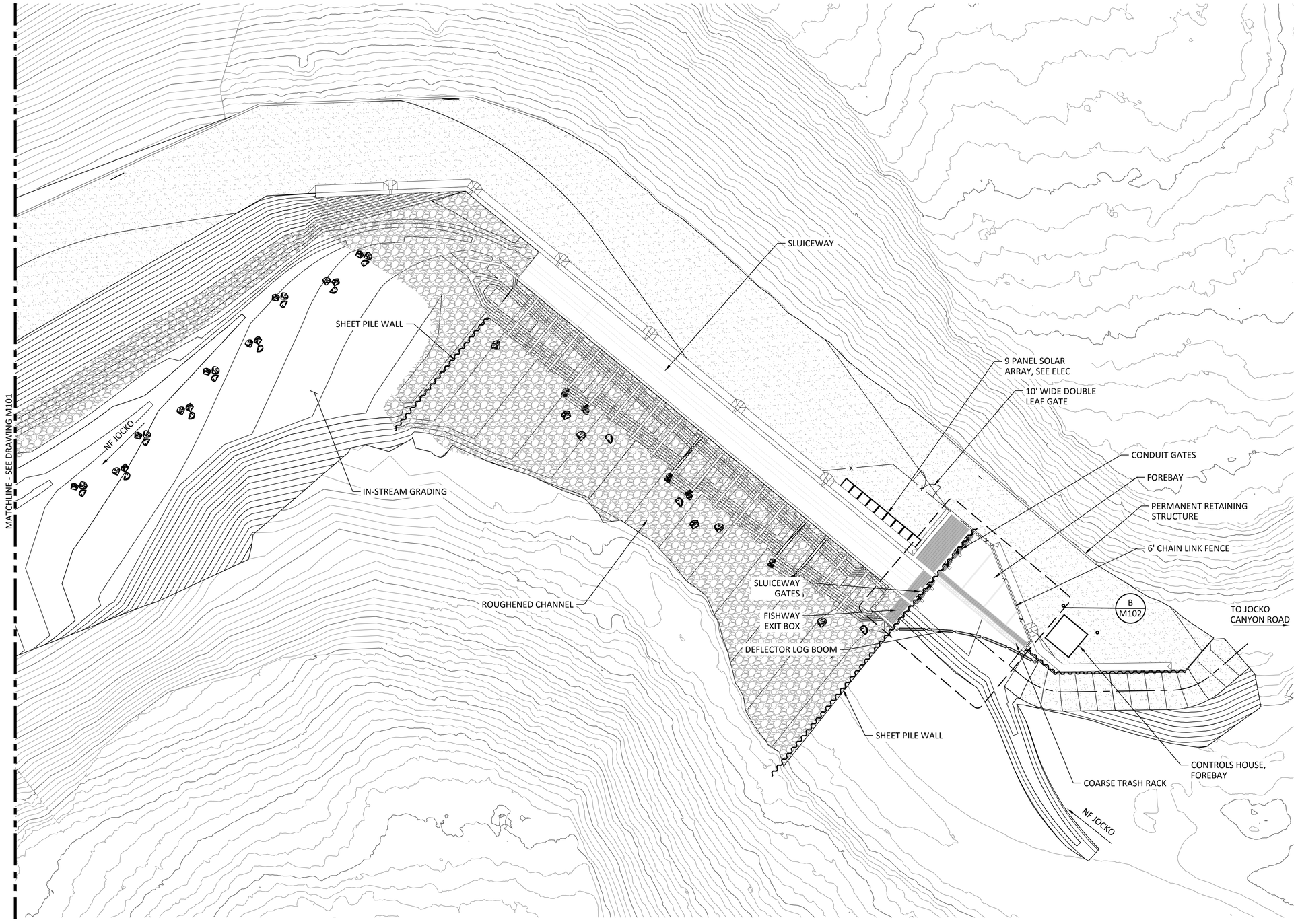
MECHANICAL STANDARD DETAILS

DESIGNED B. WELTON
DRAWN J. NEVES
CHECKED J. BOAG
PROJECT DATE 02/14/25

DRAWING
GM002

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_GM002.dwg Plot date: Feb 11, 2025 04:44pm, CAD User: JoeNeves



MECHANICAL SITE PLAN - EAST

SCALE: 1"= 20'

0" 20' 40'

N

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

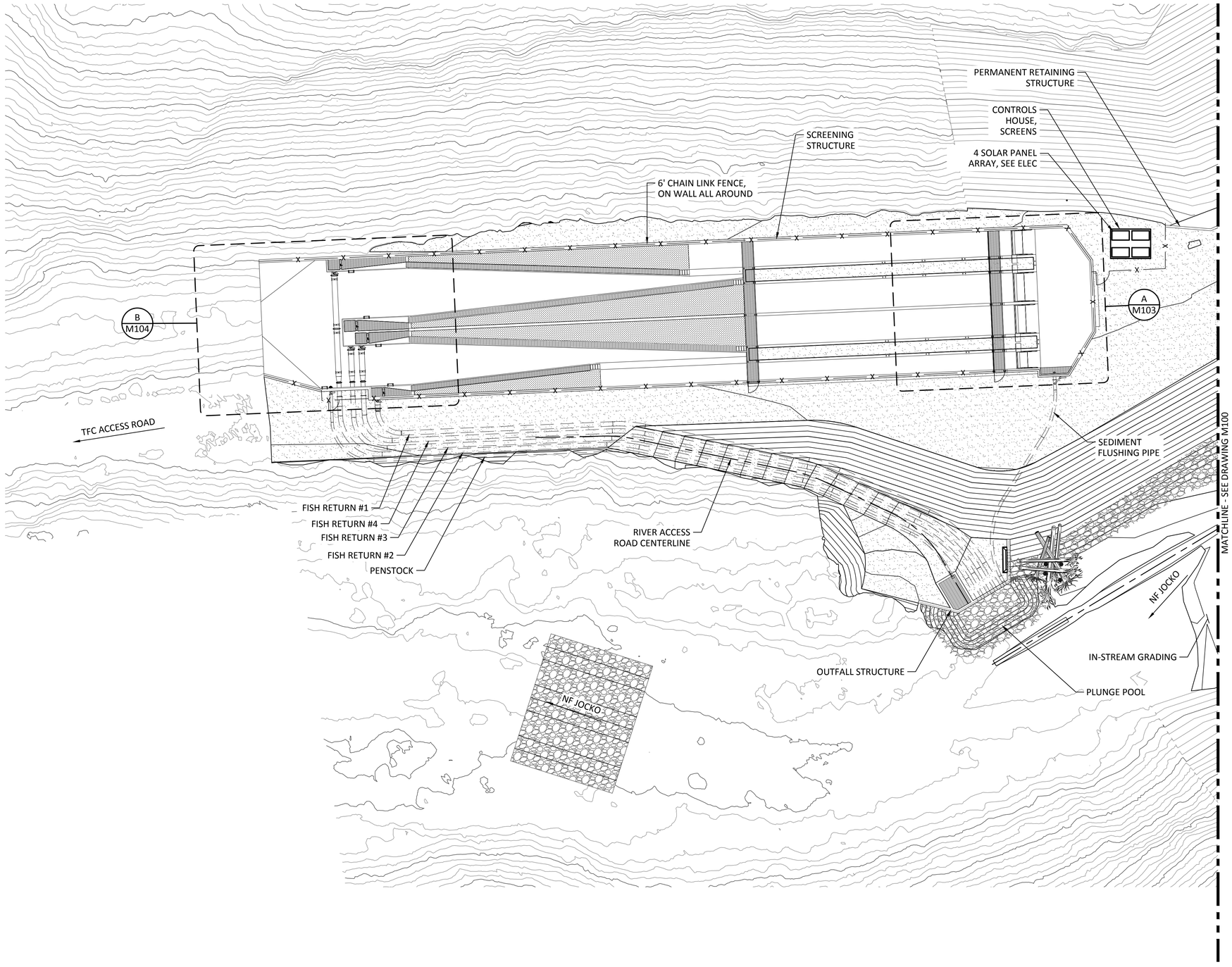
MECHANICAL SITE PLAN - EAST

DESIGNED B. WELTON
DRAWN J. NEVES
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING
M100

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_M100.dwg Plot date: Feb 11, 2025 04:45pm, CAD User: JoeNeves



MECHANICAL SITE PLAN - WEST

SCALE: 1"= 20'

0" 20' 40'

N

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

MECHANICAL SITE PLAN - WEST

DESIGNED B. WELTON

DRAWN J. NEVES

CHECKED J. DALLAS

PROJECT DATE 02/14/25

DRAWING

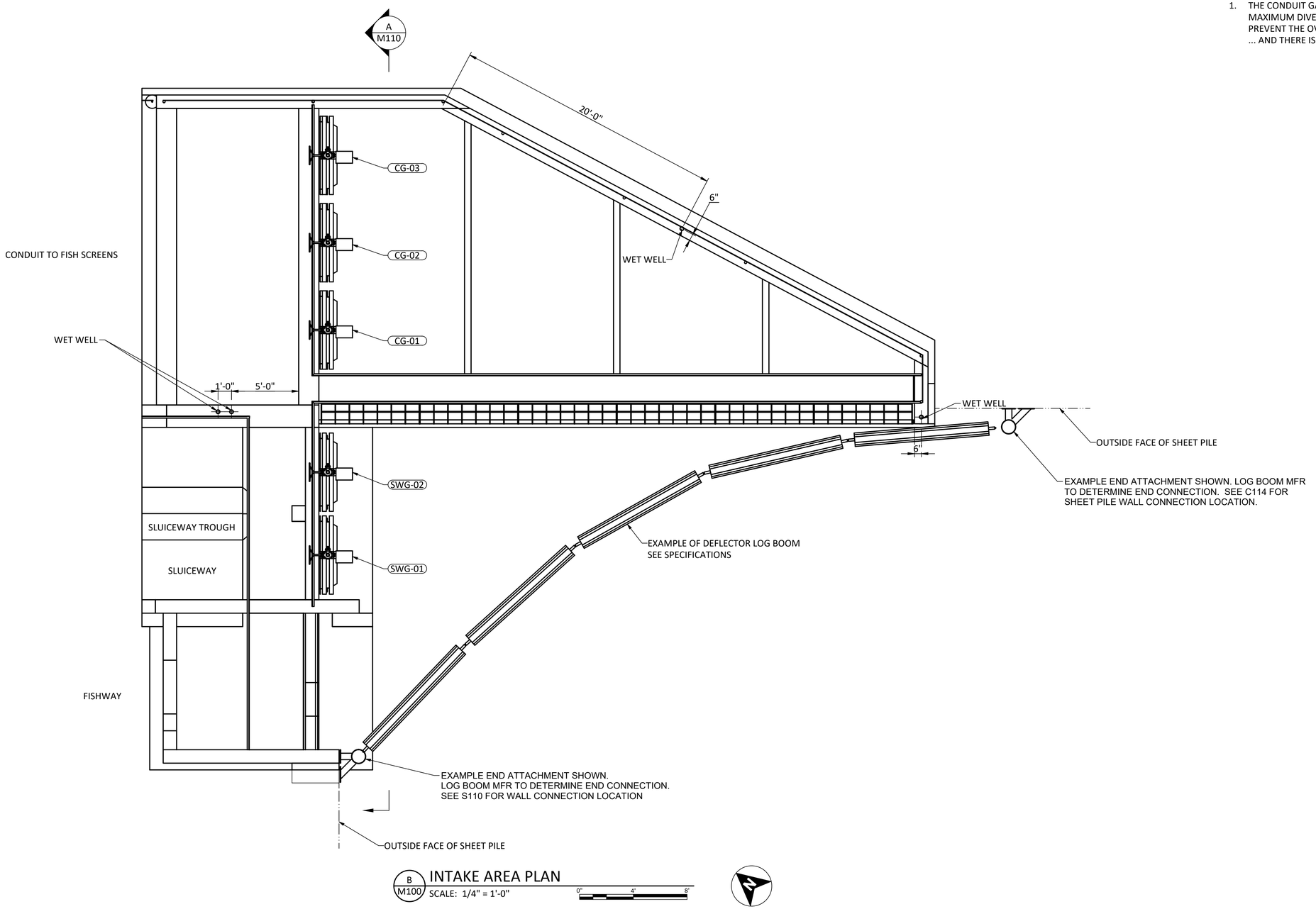
M101

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_M101.dwg Plot date: Feb 11, 2025 04:45pm, CAD User: JoeNeves

SHEET NOTES:

1. THE CONDUIT GATES WILL BE SET DURING COMISSIONING TO SET ALLOW THE MAXIMUM DIVERSION FLOW TO THE SCREENS. THE PURPOSE IS TO LIMIT FLOWS AND PREVENT THE OVERTOPPING OF THE CANAL IN THE SCENARIO OF A HIGH WATER EVENT ... AND THERE IS AN EQUIPMENT FAILURE, AT THE SAME TIME.



B M100 INTAKE AREA PLAN
SCALE: 1/4" = 1'-0"
0" 4' 8'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

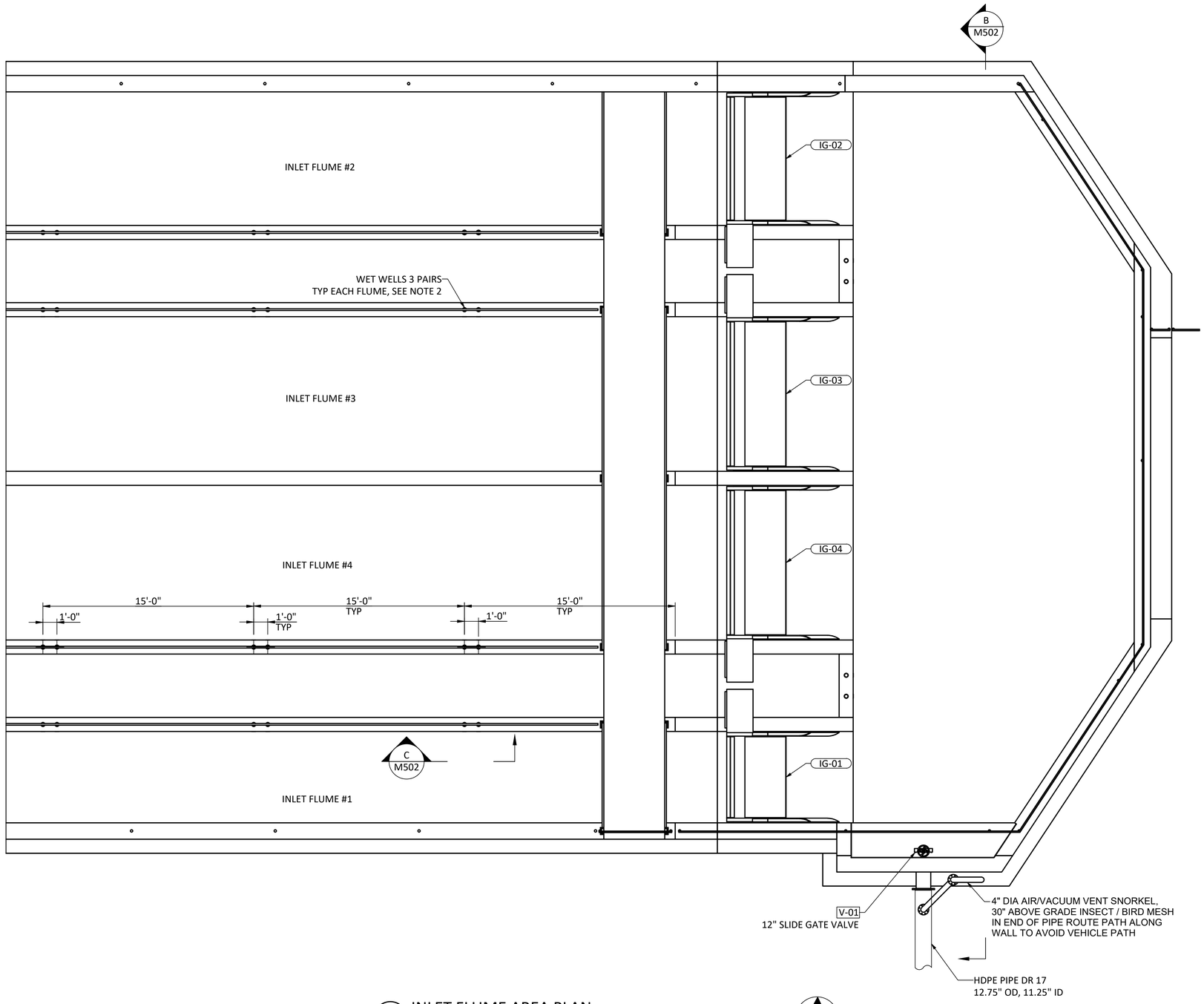
CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

INTAKE AREA PLAN

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING
M102



A M101 INLET FLUME AREA PLAN

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

0" 4' 8'

N

SHEET NOTES:

1. LANGEMANN STYLE GATES HAVE BEEN CHOSEN FOR THE POWER REQUIREMENTS TO OPERATE THE GATES. DUE TO THE BALANCED HYDROSTATIC LOADING ON THE GATE THE HP REQUIREMENTS CAN BE FRACTIONAL.
2. 3 PAIRS OF WET WELLS ARE TO BE INSTALLED IN EACH INLET FLUME. INITIALLY INSTALL PRESSURE TRANSDUCERS IN THE MOST DOWNSTREAM PAIR OF WET WELLS. DEPENDENT ON HYDRAULIC PERFORMANCE OF THE INLET FLUME THE SENSORS MAY BE MOVED UPSTREAM AT THE DIRECTION OF THE ENGINEER.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

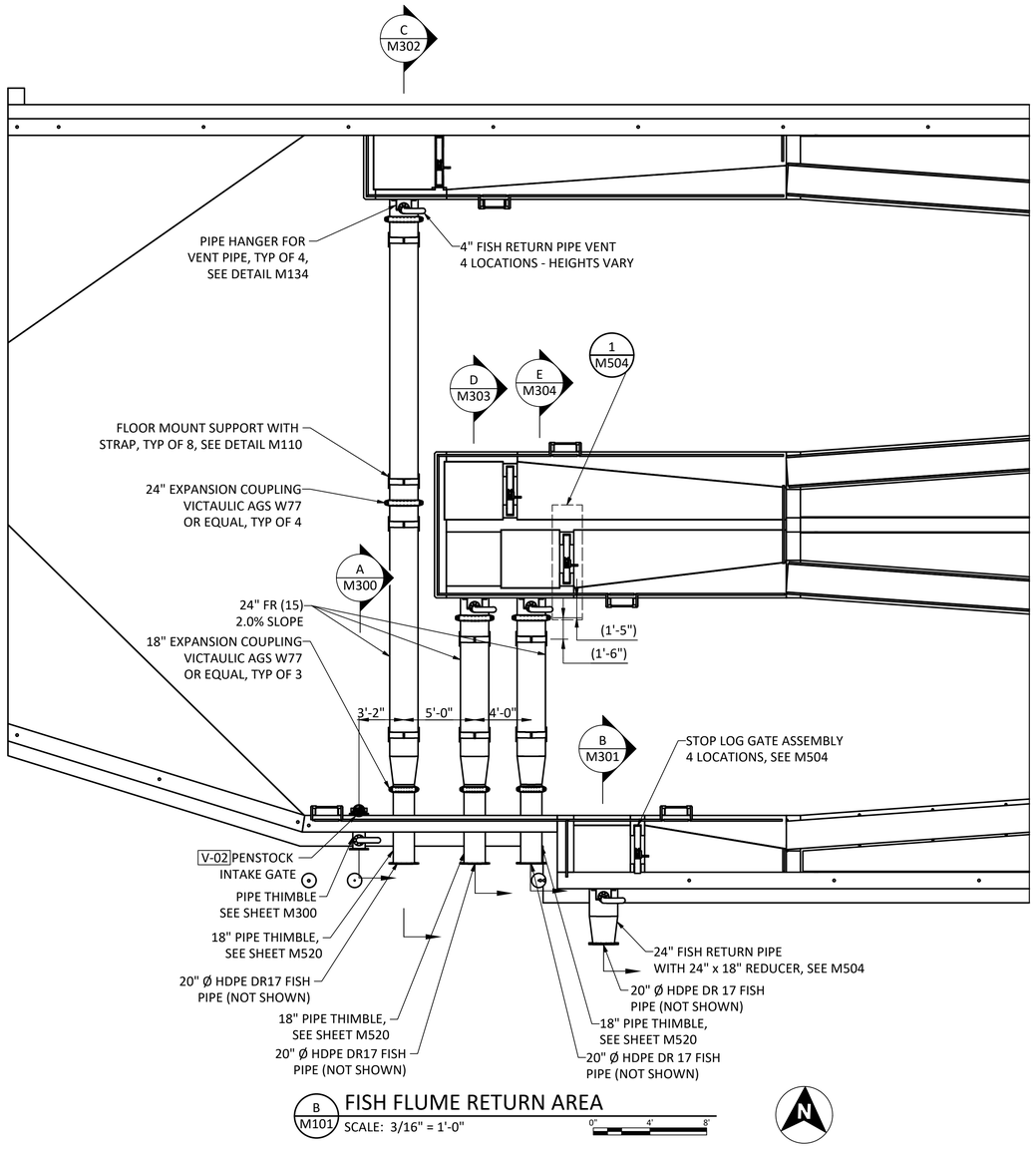
INLET FLUME AREA PLAN

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING
M103

SHEET NOTES:

1. STRAIGHT SECTIONS OF FLUME ARE SLOPED AT 1/4" PER FOOT.
2. MITERED BEND SECTIONS OF FLUME ARE NOT SLOPED FOR EASE OF FABRICATION.
3. ALTERNATE CONFIGURATION OF FR PIPING MAY BE ACCEPTABLE, SUBJECT TO ENGINEERS REVIEW OF MODIFICATIONS.



REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

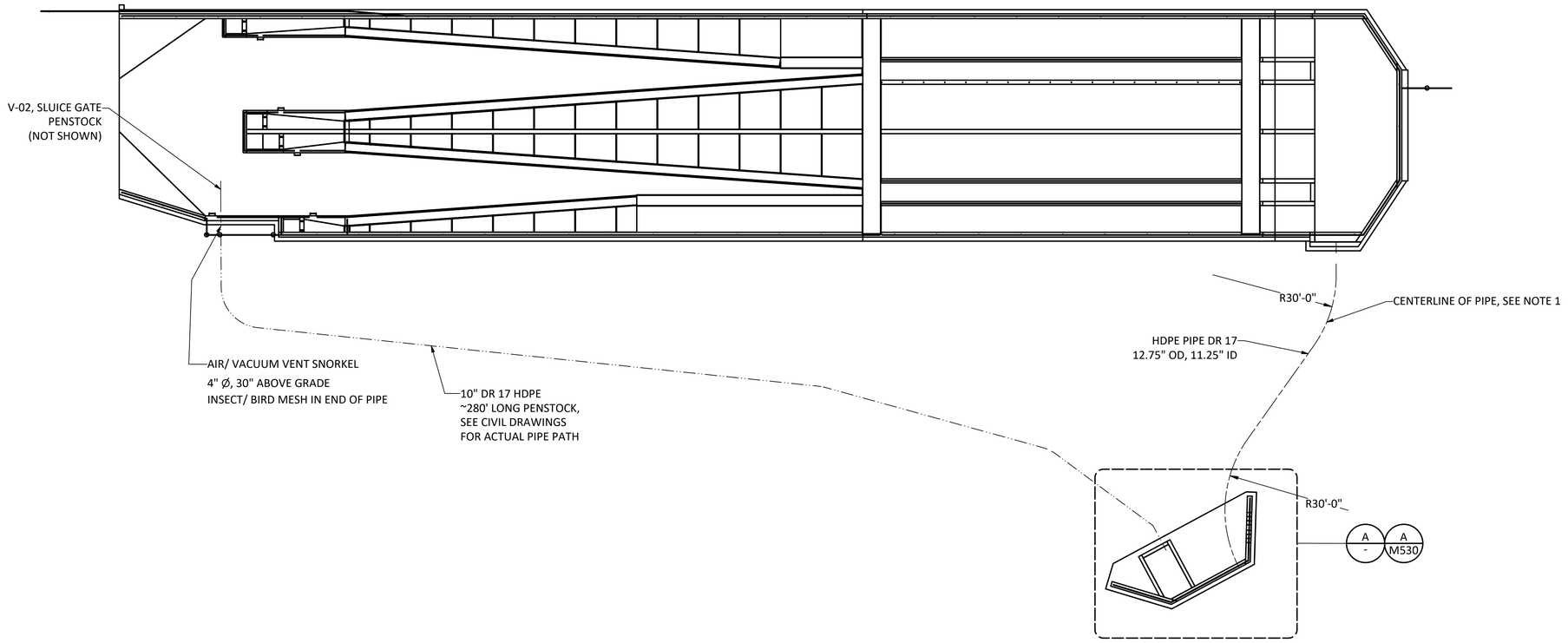
FISH FLUME RETURN AREA

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING
M104

SHEET NOTE:

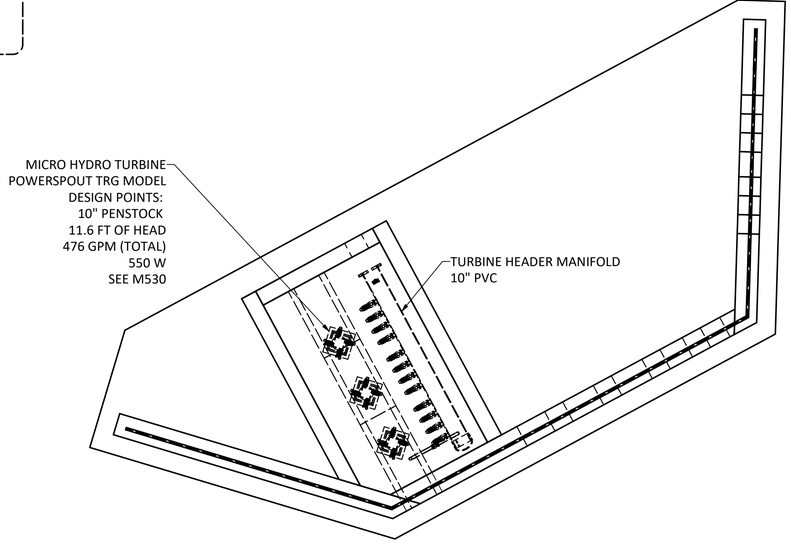
1. PIPE SERVES AS A SEDIMENT FLUSHING FEATURE & ALLOWS FOR FISH SALVAGE OPERATIONS.



OUTFALL STRUCTURE

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

0" 16' 32'



A DETAIL

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

0" 4' 8'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

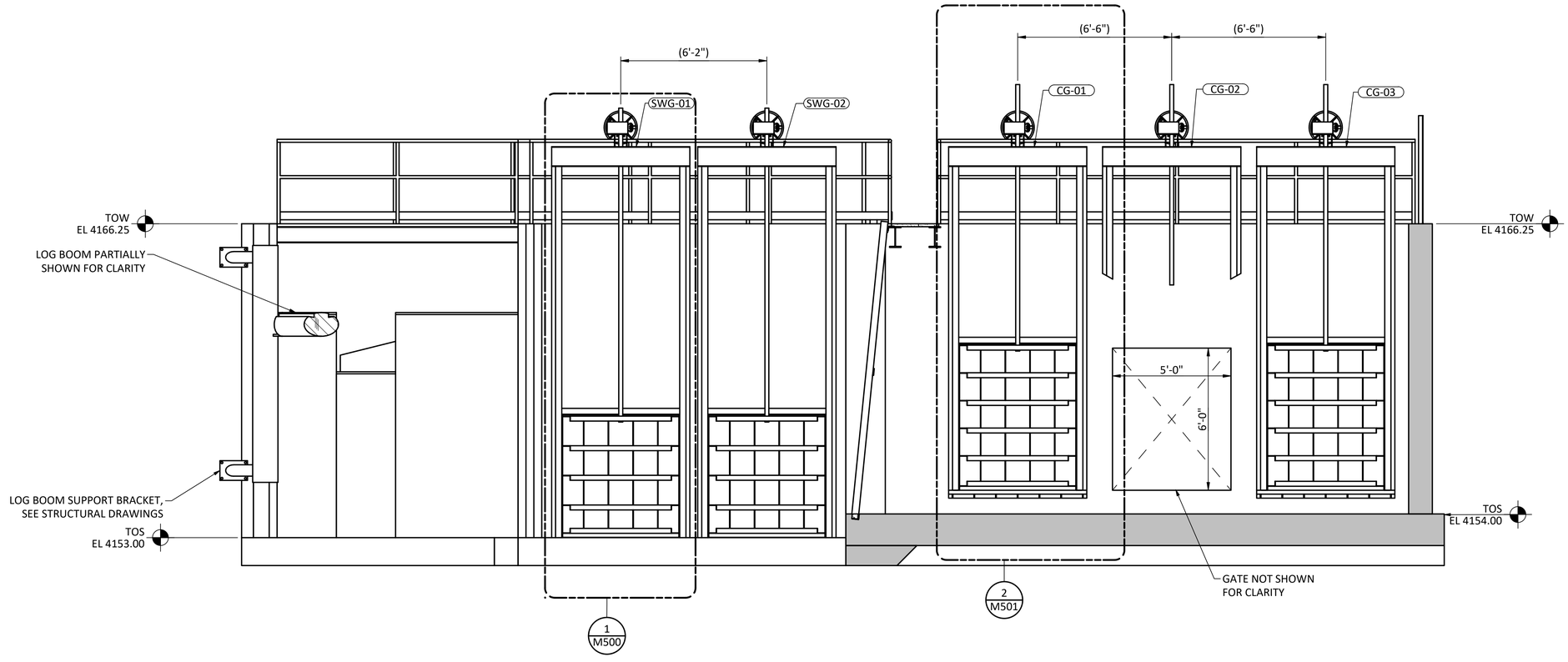
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

OUTFALL STRUCTURE MICRO HYDRO,
FISH RETURN & SEDIMENT FLUSHING

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING

M105



A / M102 SECTION - INTAKE AREA

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

0" 2' 4'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

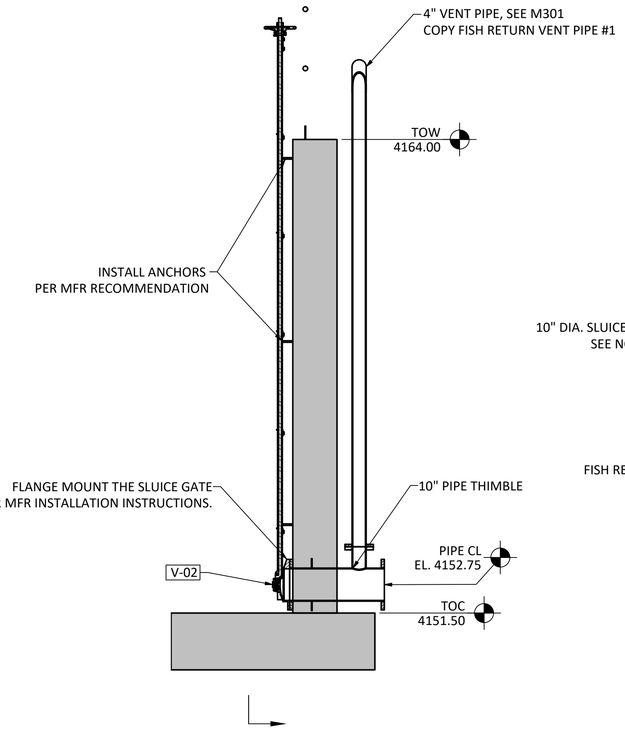
INTAKE AREA
ELEVATION

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

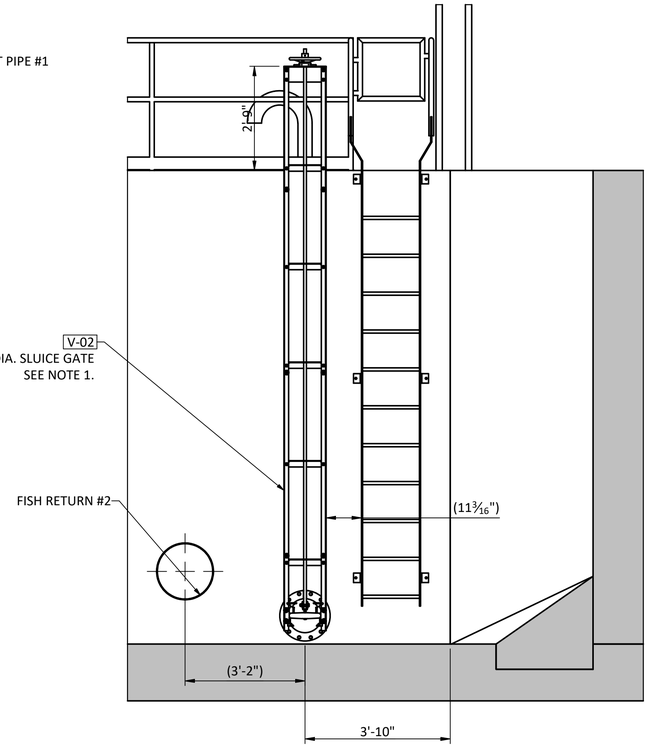
DRAWING
M110

SHEET NOTES:

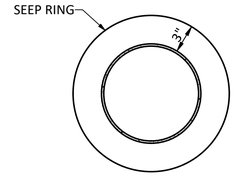
1. 10" DIAMETER FLAT BACK WITH F. 125# FLANGE DRILLING, 174" TALL GALVANIZED FRAME HEIGHT, CAST IRON SEATING FACES, HAND WHEEL LIFT, CARBON STEEL STEM, GALVANIZED ASSEMBLY FASTENERS.
FRESNO VALVE AND CASTINGS, SERIES 6400 MODEL 2010C SLUICE GATE OR EQUAL.



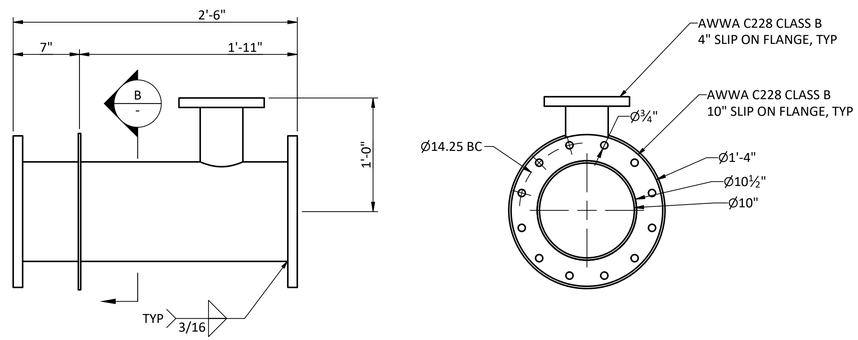
A M104 SECTION
SCALE: 1/2"=1'-0"



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



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



10" PIPE THIMBLE- MICRO HYDRO
SCALE: 1 1/2"=1'-0"

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

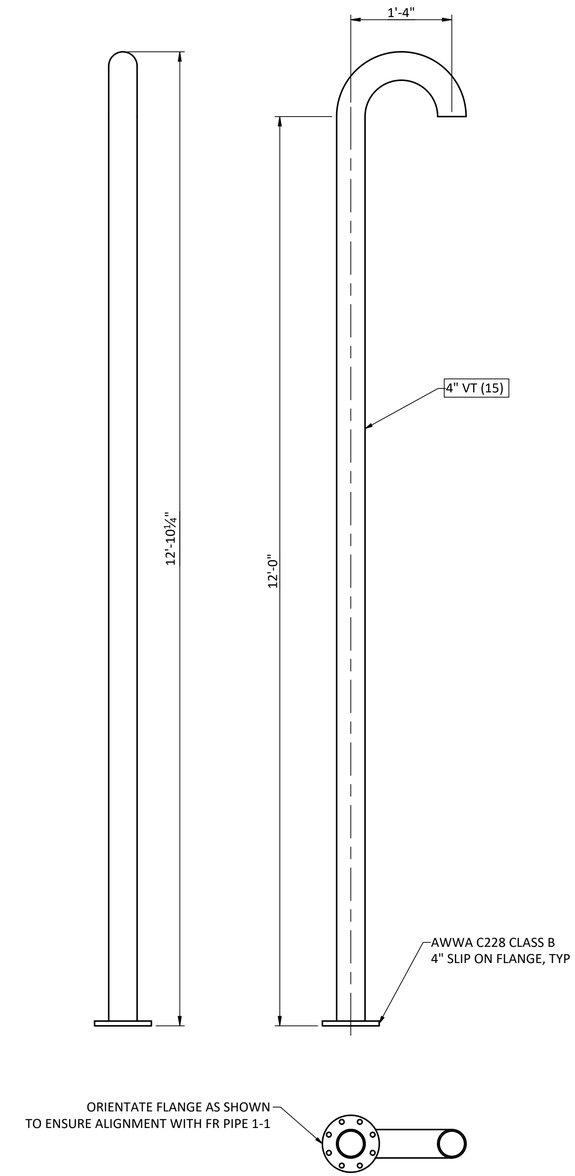
WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
PENSTOCK INLET

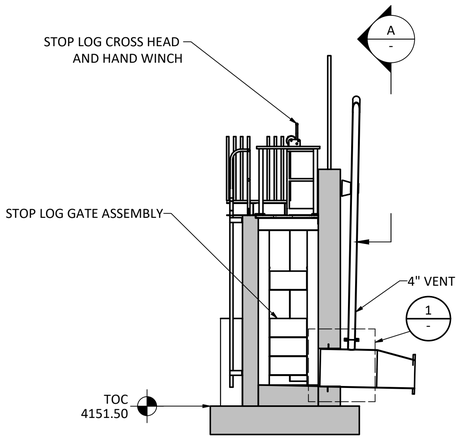
DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING
M300



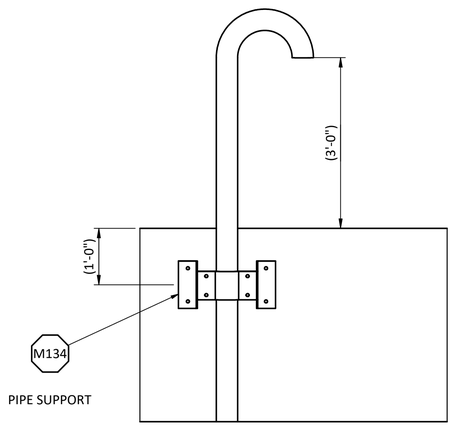
FISH RETURN VENT PIPE #1

SCALE: 1"=1'-0"



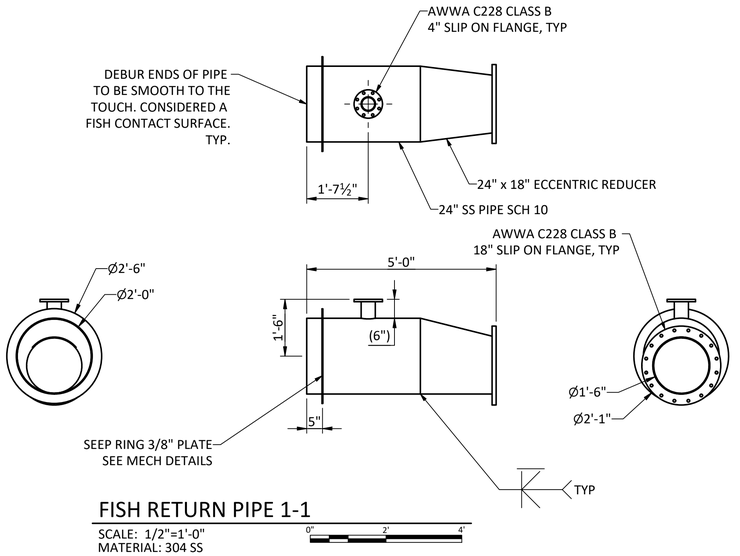
B / M104 SECTION

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



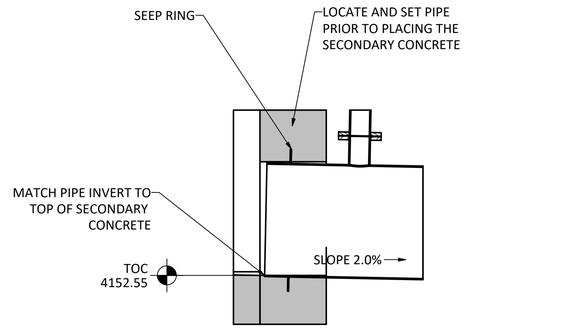
A / - SECTION

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



FISH RETURN PIPE 1-1

SCALE: 1/2"=1'-0"
MATERIAL: 304 SS



1 / - DETAIL

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

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

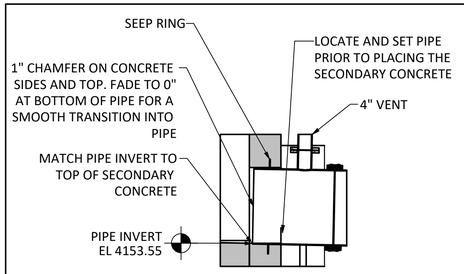
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

FISH RETURN
SCREEN 1

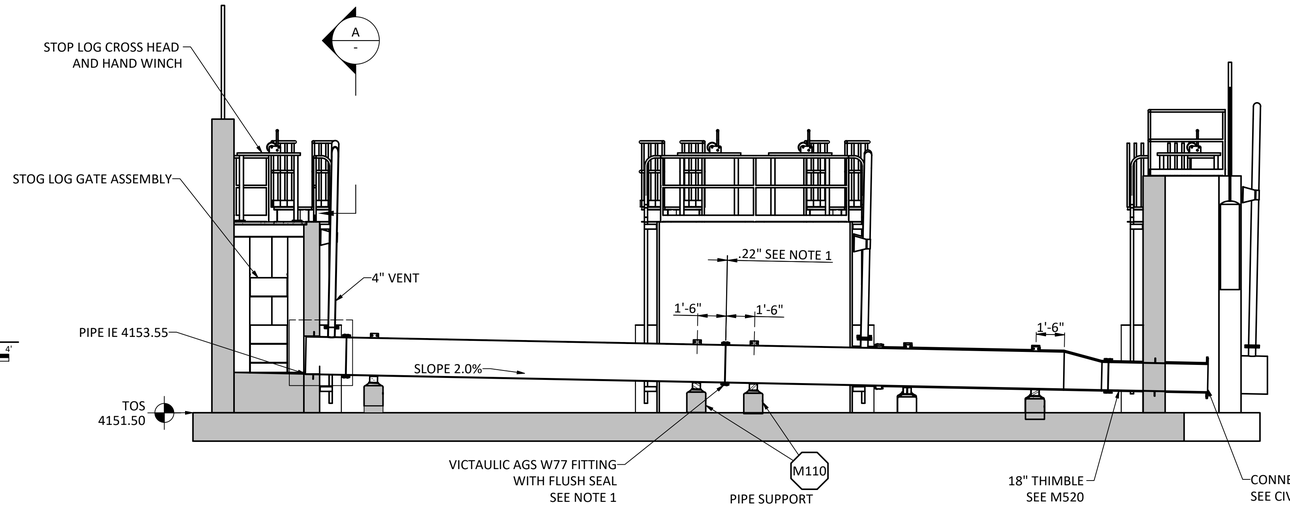
DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING

M301



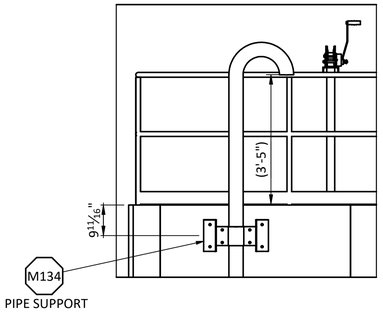
1 DETAIL
SCALE: 1/2"=1'-0"



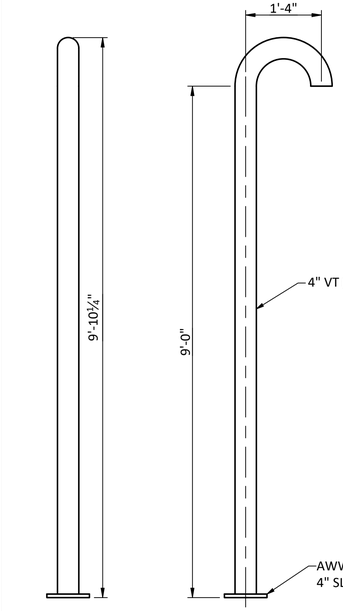
C M104 SECTION
SCALE: 1/4"=1'-0"

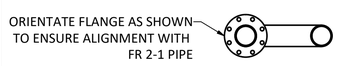
SHEET NOTES:

1. ADJUST GAP DIMENSION FOR INSTALLATION TEMPERATURE BASED ON MANUFACTURERS INSTALLATION GUIDE.

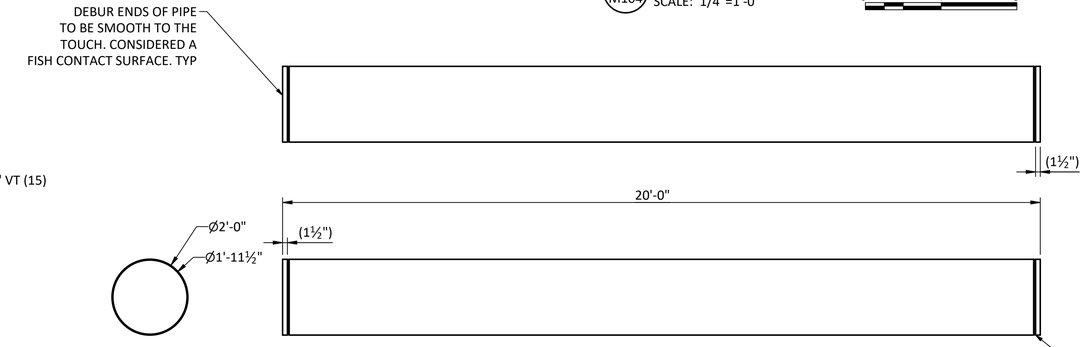


A SECTION
SCALE: 1/2"=1'-0"

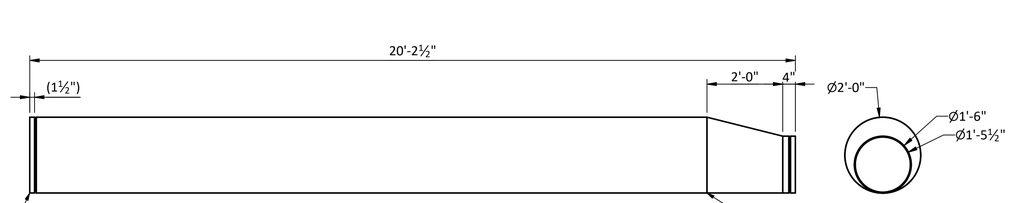




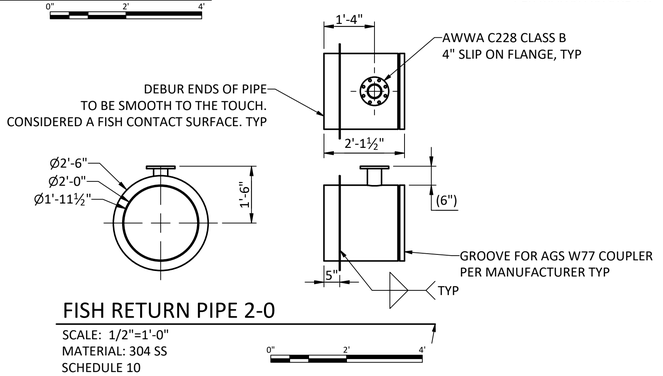
FISH RETURN VENT PIPE #2
SCALE: 1"=1'-0"



FISH RETURN PIPE 2-1
SCALE: 1/2"=1'-0"
MATERIAL: 304 SS
SCHEDULE 10



FISH RETURN PIPE 2-1
SCALE: 1/2"=1'-0"
MATERIAL: 304 SS
SCHEDULE 10



FISH RETURN PIPE 2-0
SCALE: 1/2"=1'-0"
MATERIAL: 304 SS
SCHEDULE 10

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

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

McMillen

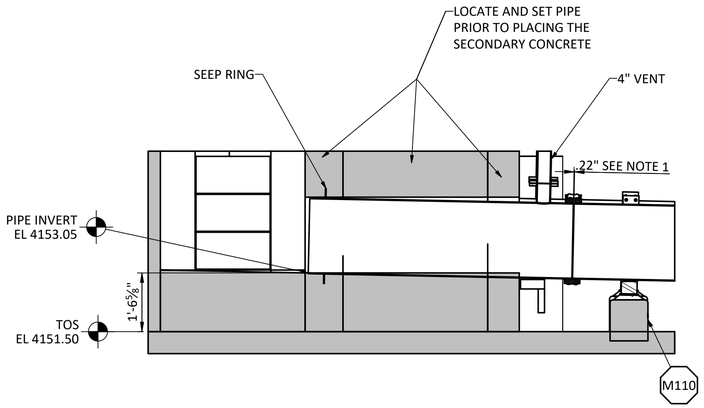
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
FISH RETURN
SCREEN 2

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

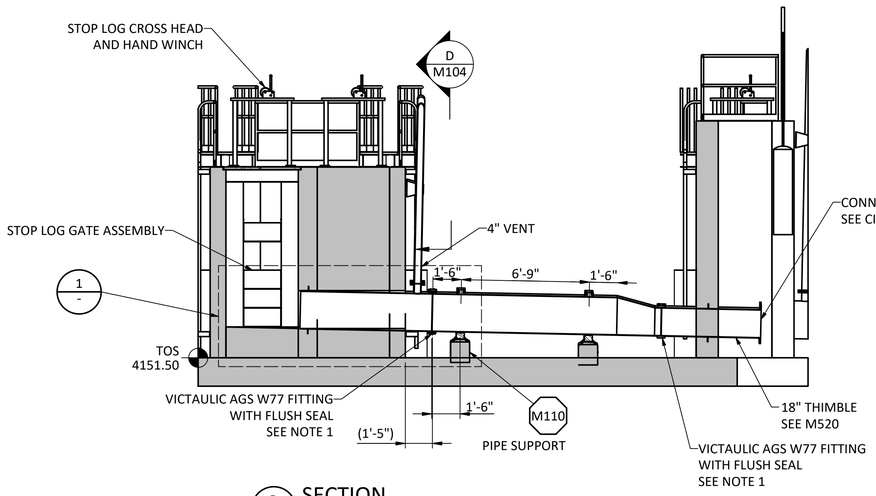
DRAWING
M302

SHEET NOTES:

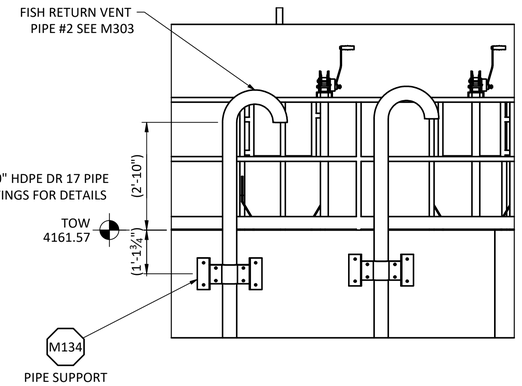
1. ADJUST GAP DIMENSION FOR INSTALLATION TEMPERATURE BASED ON MANUFACTURERS INSTALLATION GUIDE.



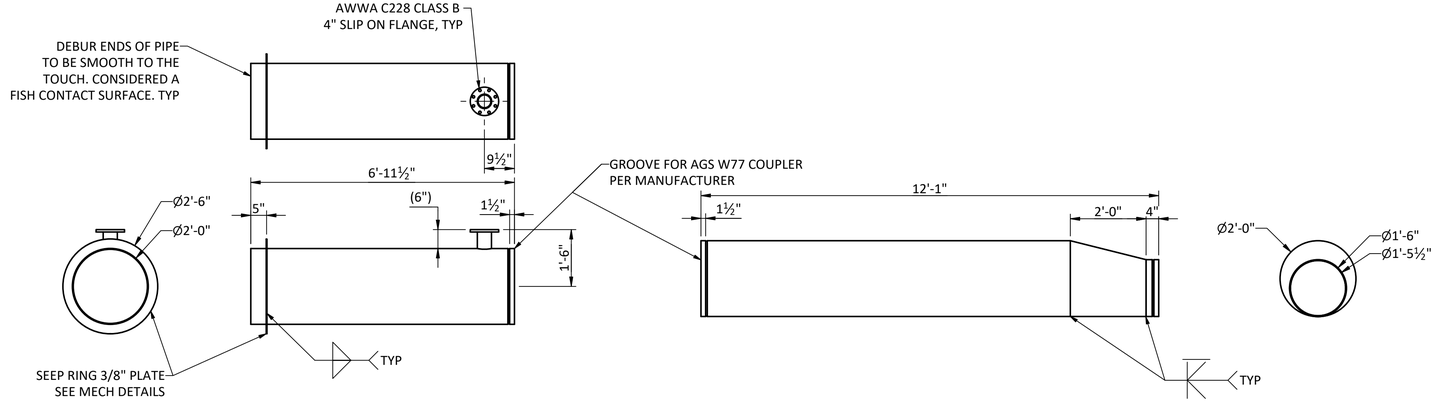
1 - DETAIL
SCALE: 1/2"=1'-0"



D M104 SECTION
SCALE: 1/4"=1'-0"



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



FISH RETURN PIPE 3-1
SCALE: 1/2"=1'-0"
MATERIAL: 304 SS
SCHEDULE 10

FISH RETURN PIPE 3-2
SCALE: 1/2"=1'-0"
MATERIAL: 304 SS
SCHEDULE 10

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

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

McMillen

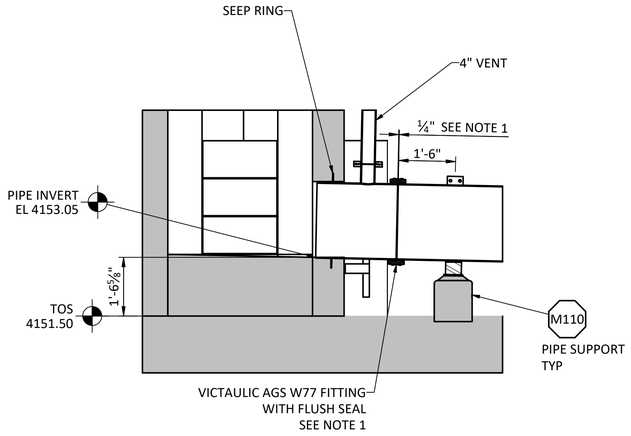
CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
FISH RETURN
SCREEN 3

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

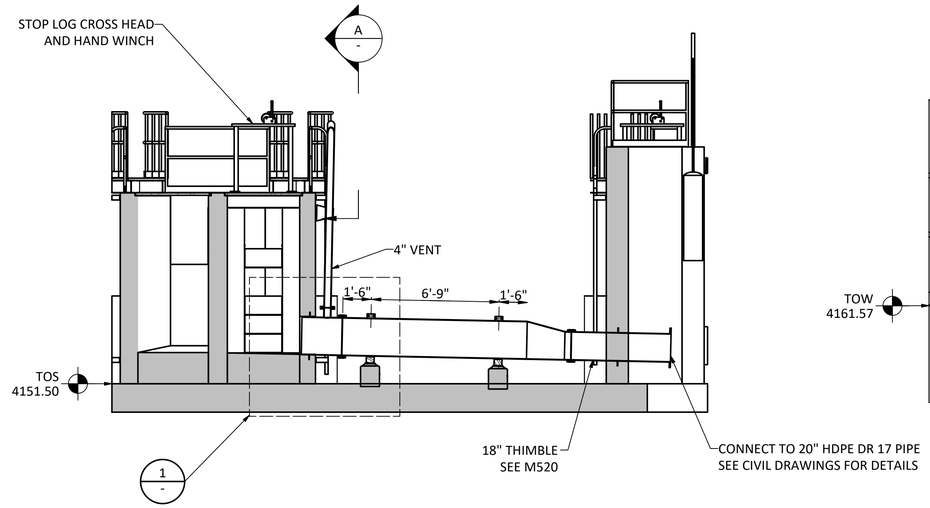
DRAWING
M303

SHEET NOTES:

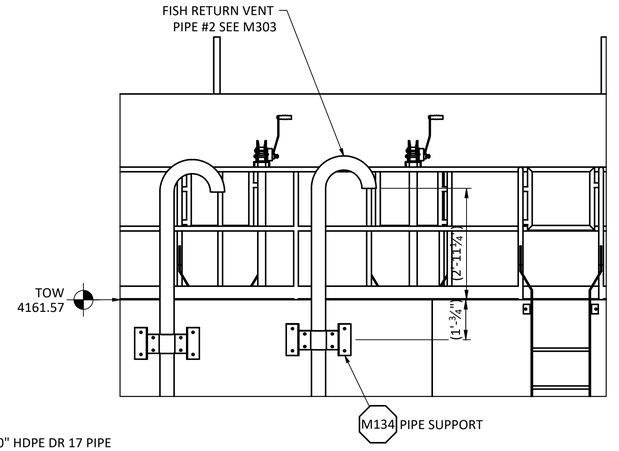
1. ADJUST GAP DIMENSION FOR INSTALLATION TEMPERATURE BASED ON MANUFACTURERS INSTALLATION GUIDE.



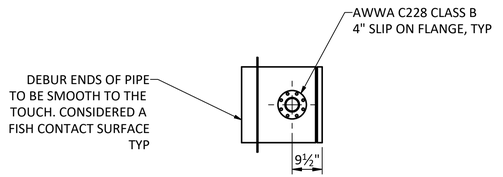
1 - DETAIL
SCALE: 1/2"=1'-0"

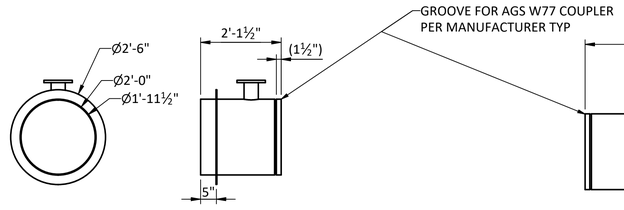


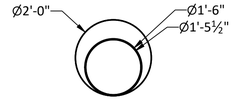
E M104 SECTION
SCALE: 1/4"=1'-0"



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







FISH RETURN PIPE 4-1
SCALE: 1/2"=1'-0"
MATERIAL: 304 SS
SCHEDULE 10

FISH RETURN PIPE 4-2
SCALE: 1/2"=1'-0"
MATERIAL: 304 SS
SCHEDULE 10

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

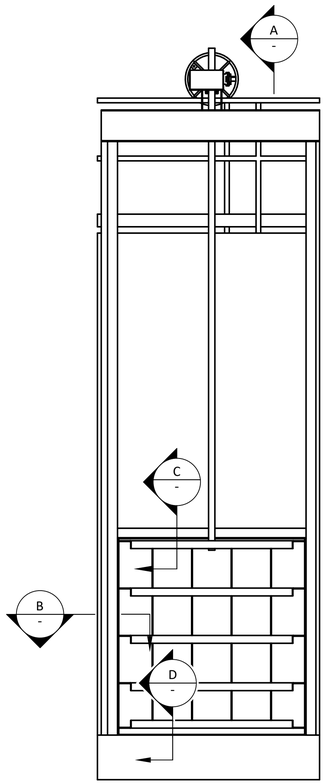
FISH RETURN
SCREEN 4

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

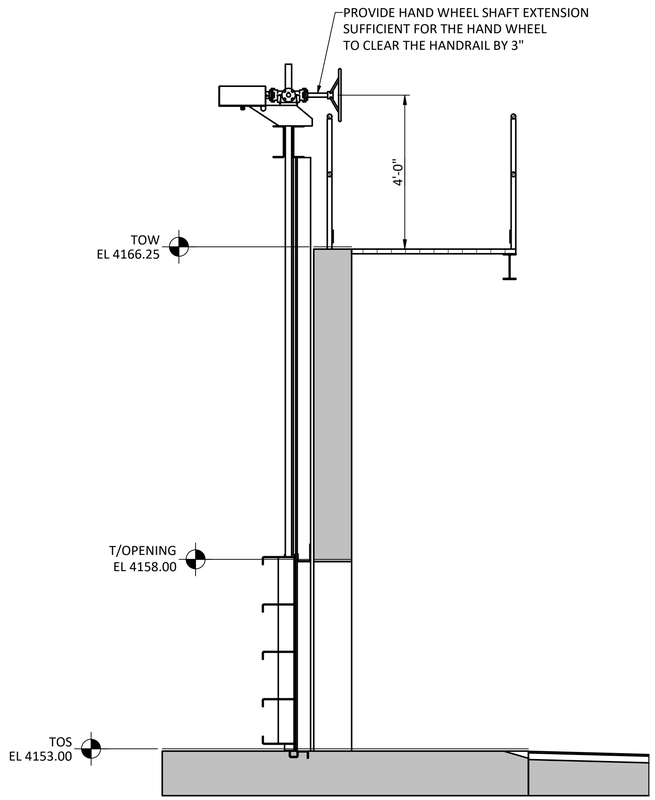
DRAWING
M304

SHEET NOTES:

1. SEE DRAWING GM001 FOR DETAILS ON GATE FEATURES.
2. DETAILS ARE TYPICAL, ACTUAL MOUNTING DETAIL WILL VARY BY MFR. SUBMIT MFR'S MOUNTING DETAILS FOR APPROVAL.
3. SEE SPECIFICATIONS FOR FULL GATE AND OPERATOR REQUIREMENTS.

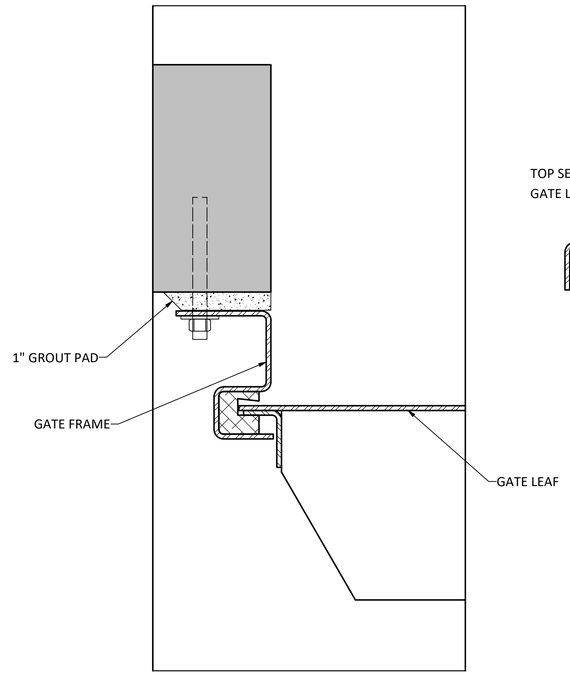


(SWG-01 AND SWG-02)
TYPICAL SLUICEWAY GATE

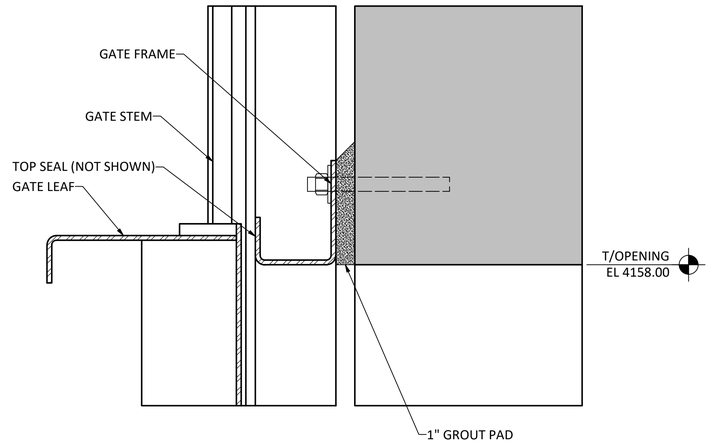


1 M110 DETAIL
SCALE: 1/2"=1'-0"
0" 2' 4'

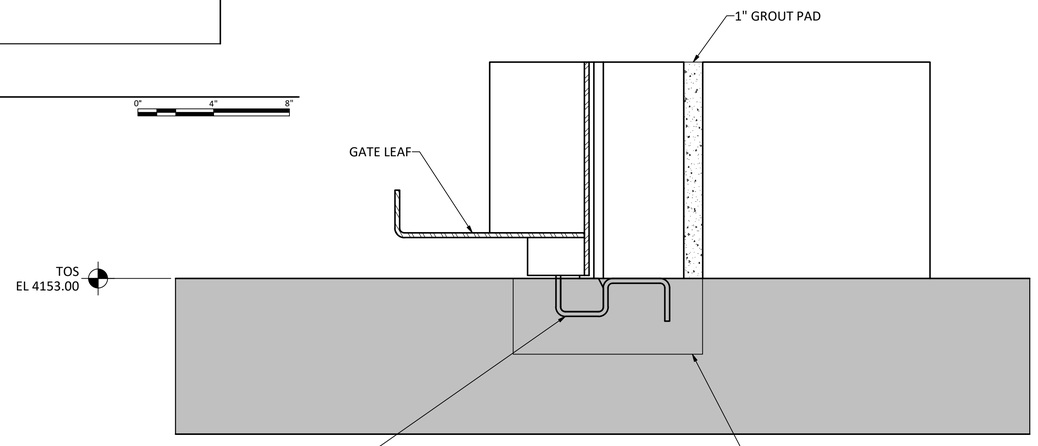
A - SECTION
SCALE: 1/2"=1'-0"
0" 2' 4"



B - SECTION
SCALE: 3"=1'-0"
0" 4" 8"



C - SECTION
SCALE: 3"=1'-0"
0" 4" 8"



D - SECTION
SCALE: 3"=1'-0"
0" 4" 8"

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

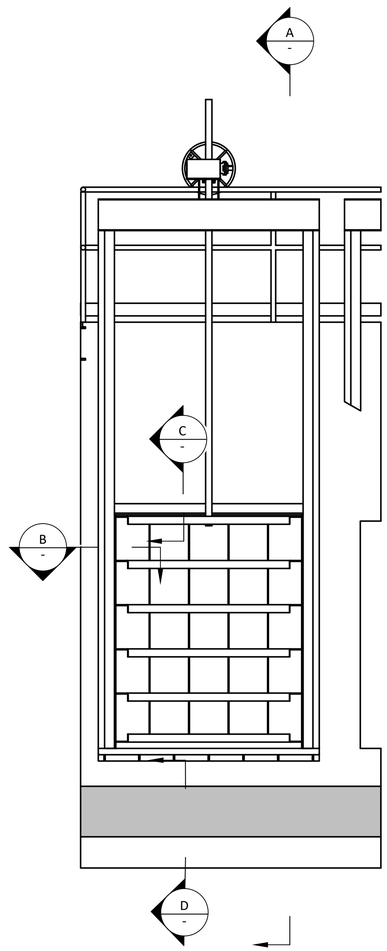
SLUICE GATE
SECTIONS AND DETAIL

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

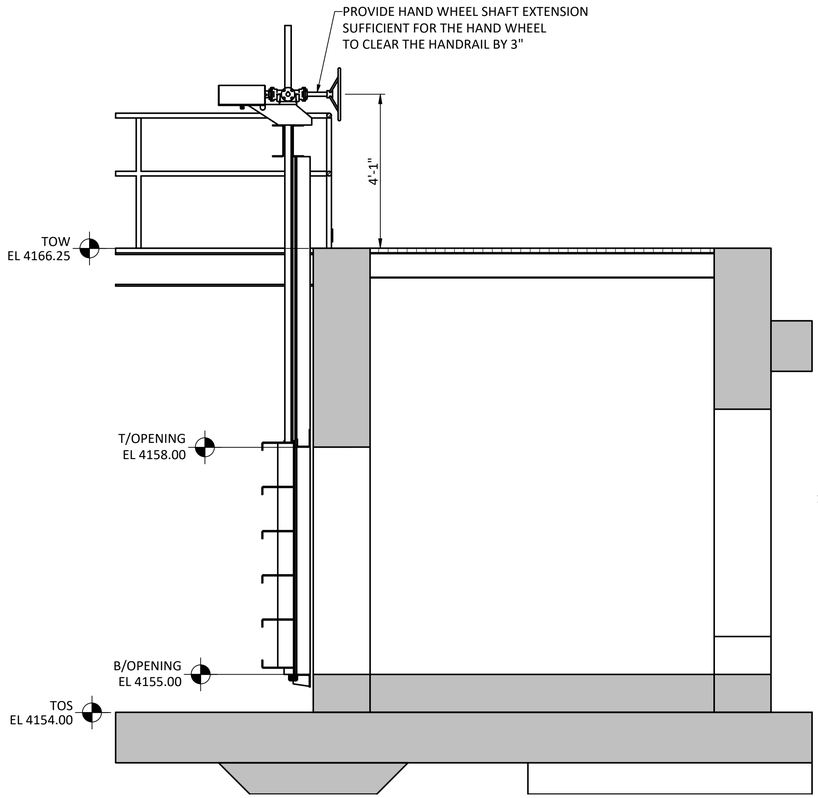
DRAWING
M500

SHEET NOTES:

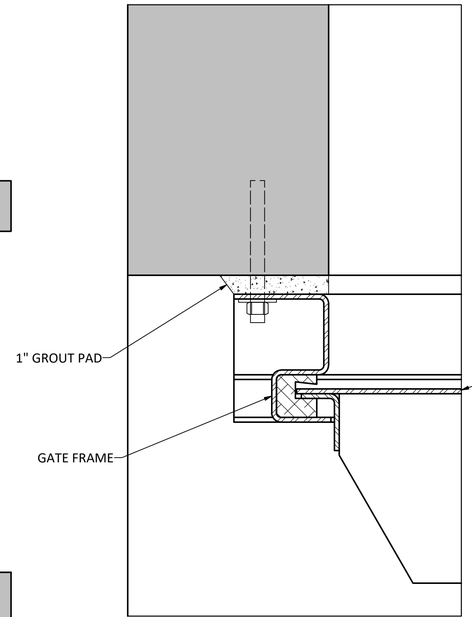
1. SEE DRAWING GM001 FOR DETAILS ON GATE FEATURES.
2. DETAILS ARE TYPICAL, ACTUAL MOUNTING DETAIL WILL VARY BY MFR. SUBMIT MFR'S MOUNTING DETAILS FOR APPROVAL.
3. SEE SPECIFICATIONS FOR FULL GATE AND OPERATOR REQUIREMENTS.



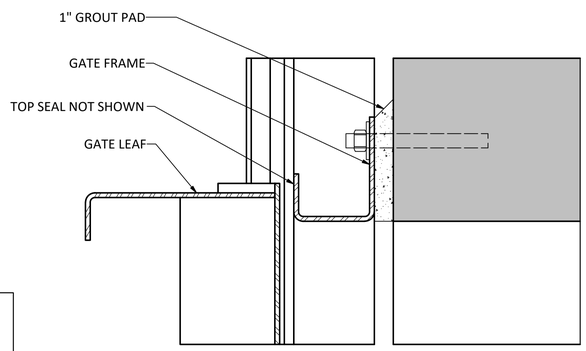
2 / M110 DETAIL
SCALE: 1/2"=1'-0"



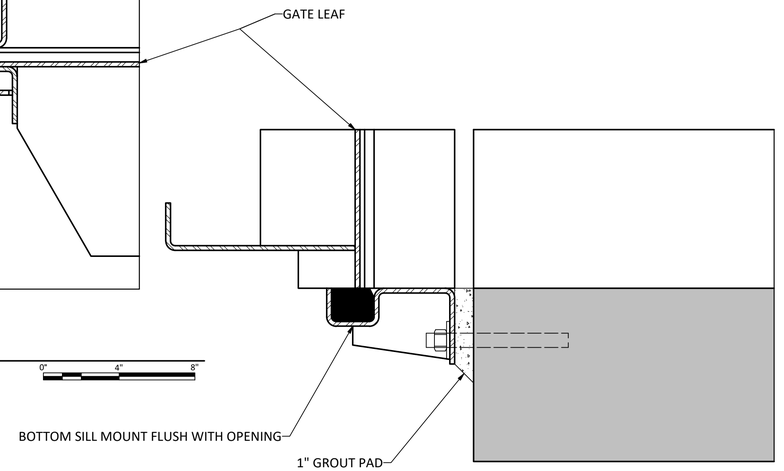
A SECTION
SCALE: 1/2"=1'-0"



B SECTION
SCALE: 3"=1'-0"



C SECTION
SCALE: 3"=1'-0"



D SECTION
SCALE: 3"=1'-0"

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

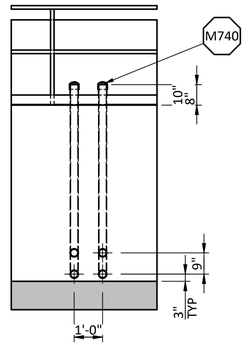
CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

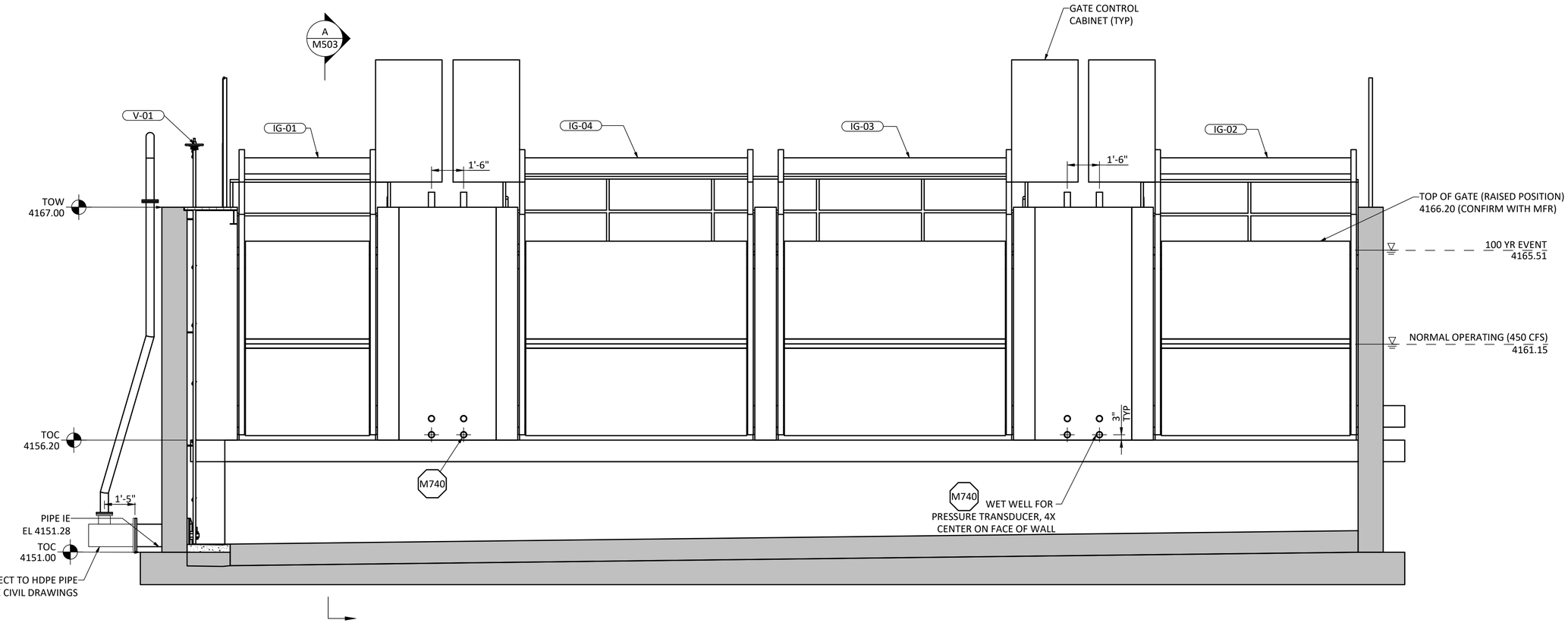
CONDUIT GATE
SECTIONS AND DETAIL

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING
M501



C M103 SECTION
SCALE: 3/8"=1'-0"
0" 2' 4'



B M103 SECTION - LANGEMANN GATES
SCALE: 3/8"=1'-0"
0" 2' 4'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

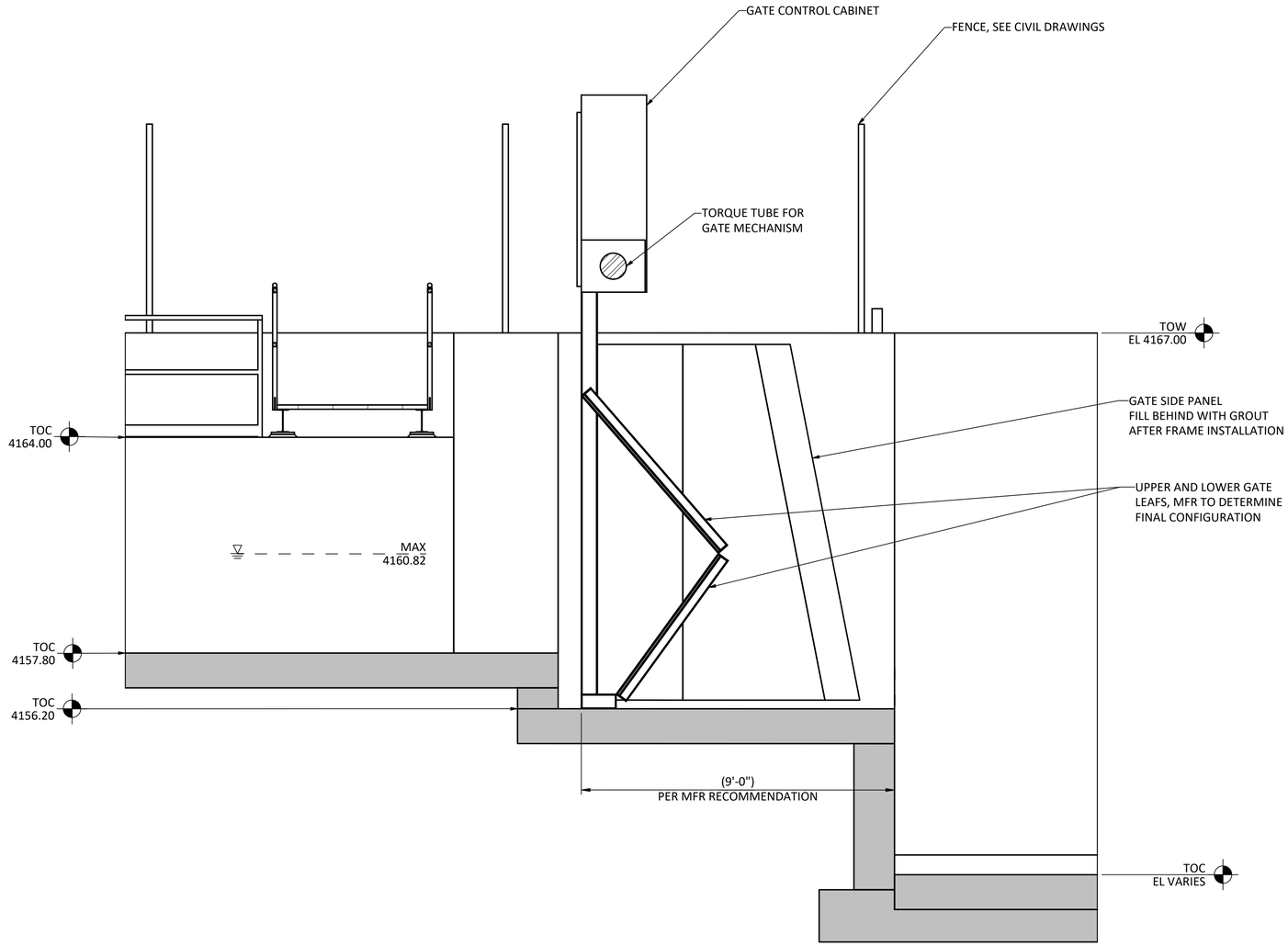
McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

LANGEMANN GATES
SECTION

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING
M502



A / M502 SECTION

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

0" 2" 4"

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

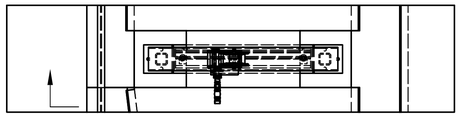
CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

INLET FLUME GATE
SECTION

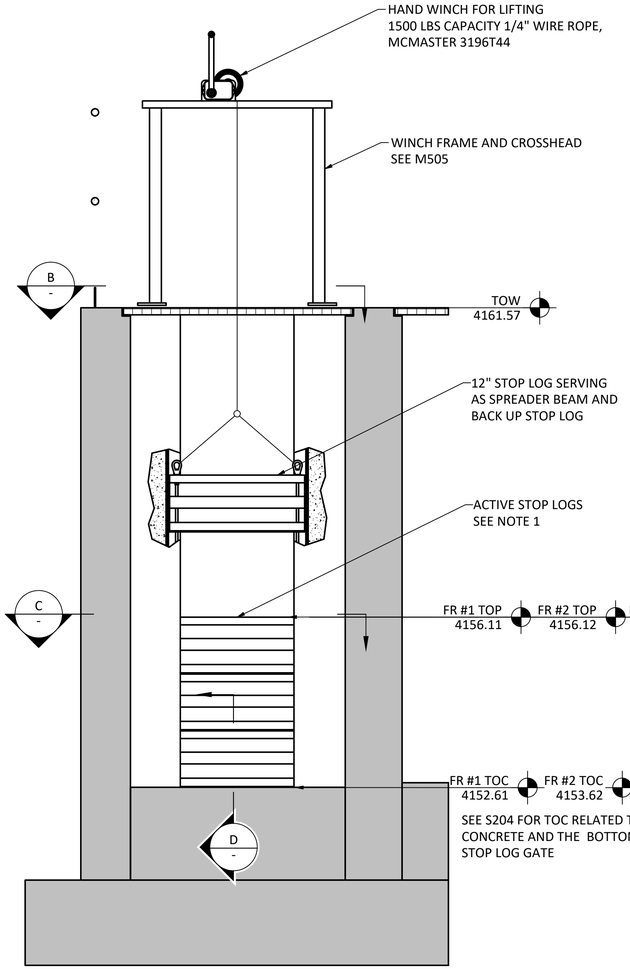
DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING
M503

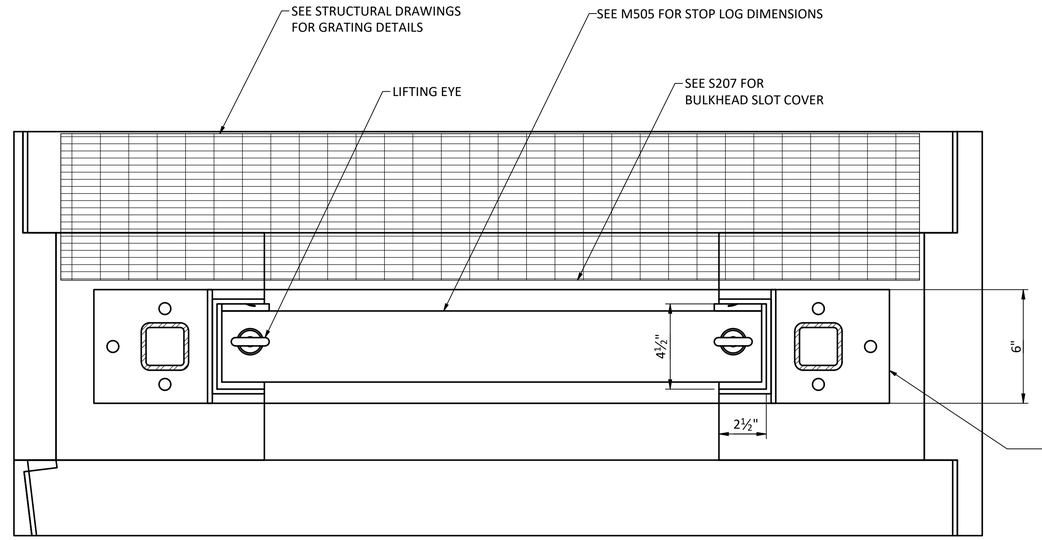


A
-

1
M104
DETAIL
SCALE: 3/4"=1'-0"
0" 1' 2'



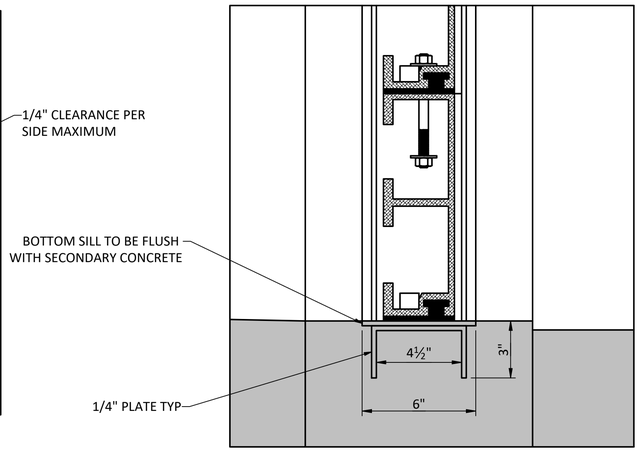
A
-
SECTION
SCALE: 3/4"=1'-0"
0" 1' 2'



B
-
SECTION
SCALE: 2"=1'-0"
0" 4" 8"



C
-
SECTION
SCALE: 2"=1'-0"
0" 4" 8"



D
-
SECTION
SCALE: 2"=1'-0"
0" 4" 8"

NOTES:

1. OPERATIONAL DISCUSSION OF THE STOP LOG GATE ASSEMBLY. DURING OPERATION THE STOP LOGS WILL ACT AS WEIR BOARDS AND ALLOW FOR WATER TO PASS OVER THE TOP. THE TOP ELEVATION IS CHOSEN TO PROVIDE SUFFICIENT ENERGY DISSIPATION IN THE U/S POOL FOR THE WATER EXITING THE SCREENS. WHEN TAKING A SCREEN OFF LINE, FISH SALVAGE OPERATION WILL COMMENCE. THE POOL BEHIND THE STOP LOGS PROVIDES A POSSIBLE HOLDING LOCATION AND CAN BE EMPTIED INCREMENTALLY BY USING THE HAND WINCH. EACH STOP LOG CAN BE RAISED 3" BEFORE ENGAGING THE ONE BELOW IT. THIS COMBINES THE FUNCTIONS OF REMOVABLE STOP LOGS, AN OVER FLOW WEIR AND A SLUICE GATE. THIS ALLOWS FOR THE WATER LEVEL TO BE INCREMENTALY LOWERED AND FISH (AND OR SEDIMENT) TO BE FLUSHED OUT THE FISH RETURN PIPE. THIS COMBINES THE FUNCTIONS OF REMOVABLE STOP LOGS, AN OVER FLOW WEIR AND A SLUICE GATE INTO A SINGLE SYSTEM. AN ADDITIONAL STOP LOG IS USED FOR THE FUNCTION OF A SPREADER BEAM AND ALSO SERVES AS A SPARE.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

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

McMillen

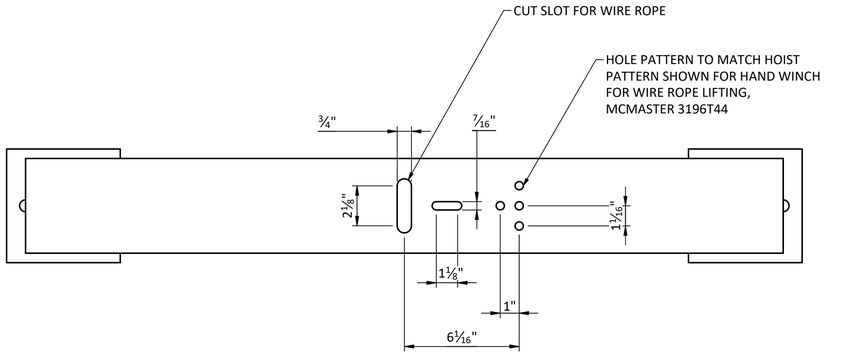
CONFEDERATED SALISH AND KOOTENAI TRIBES

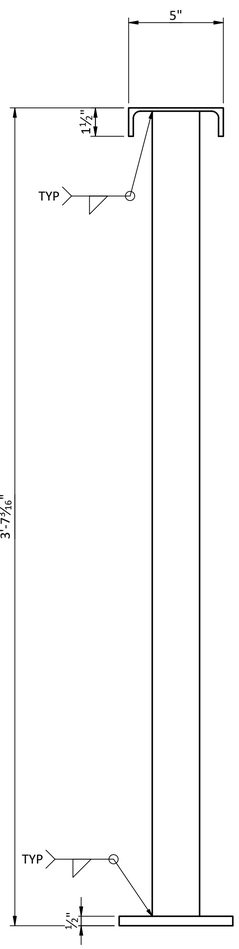
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

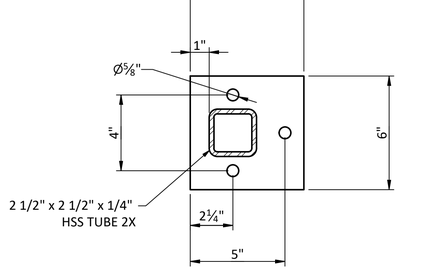
STOP LOG
GATE ASSEMBLY

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING
M504

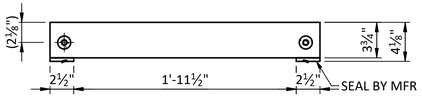




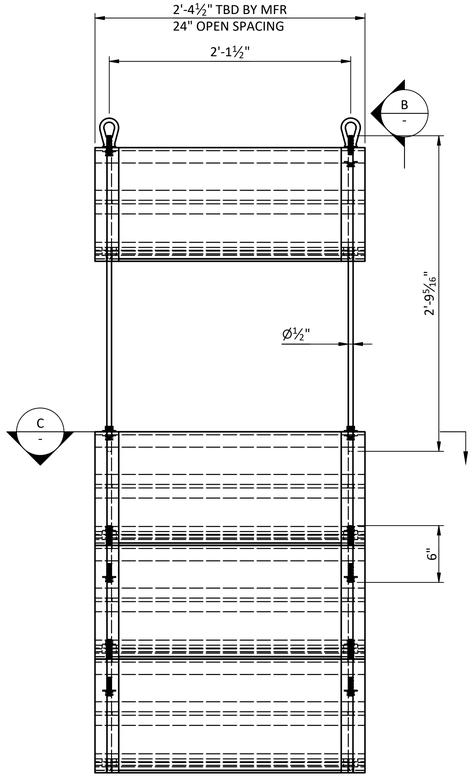


A
-
SECTION
SCALE: 2"=1'-0"
0" 4" 8"

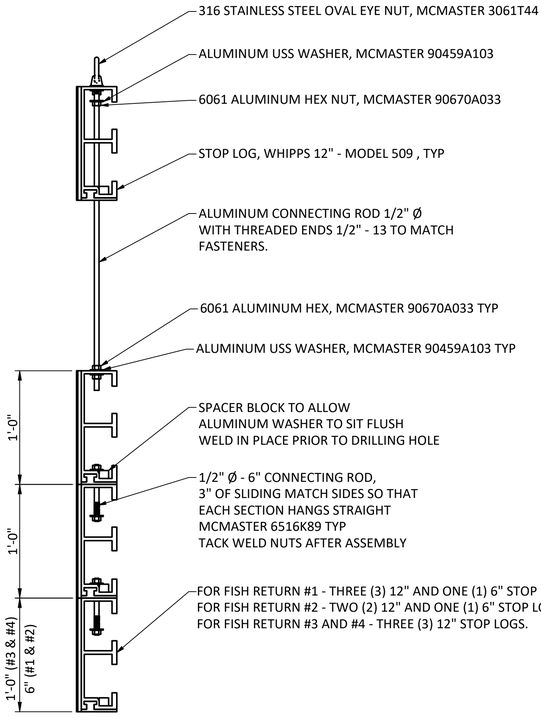
STOP LOG HOIST FRAME
SCALE: 2"=1'-0"
MATERIAL: 304 SS
0" 4" 8"



C
-
SECTION
SCALE: 1 1/2"=1'-0"
0" 8" 16"



ASSEMBLY OF STOP LOGS
SCALE: 1 1/2"=1'-0"
0" 8" 16"



B
-
SECTION
SCALE: 1 1/2"=1'-0"
0" 8" 16"

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

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

McMillen

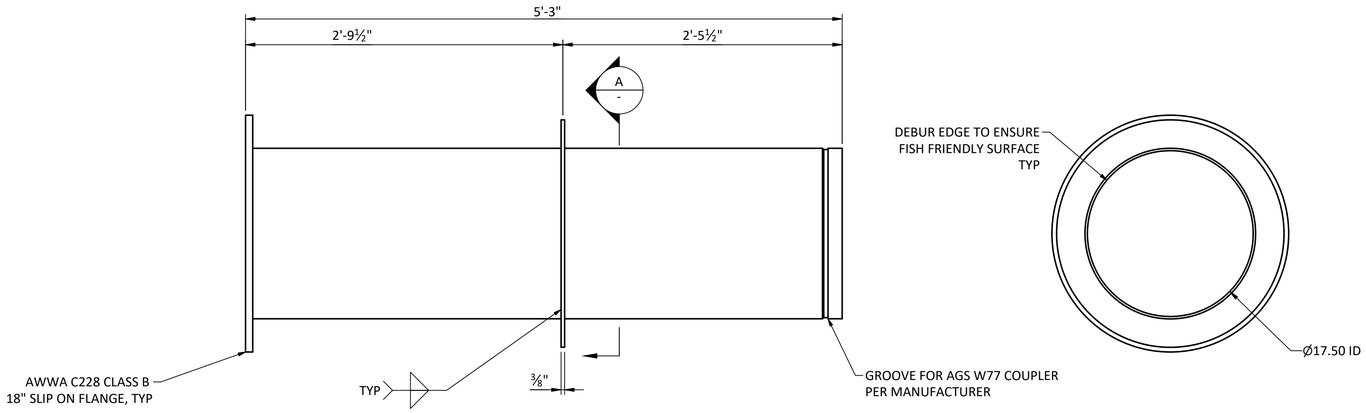
CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

STOP LOG
GATE ASSEMBLY
DETAILS 1

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

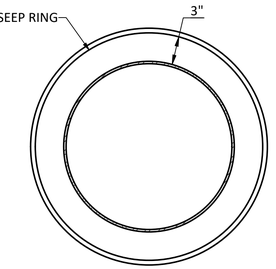
DRAWING
M505



18" PIPE THIMBLE

SCALE: 1 1/2" = 1'-0"
MATL: 304 OR 316 SS
QTY: 3

0" 8" 16"



A
-
SECTION

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

0" 8" 16"

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

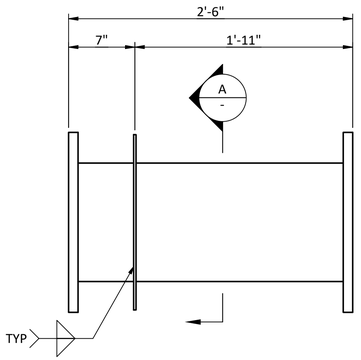
CONFEDERATED SALISH AND KOOTENAI TRIBES

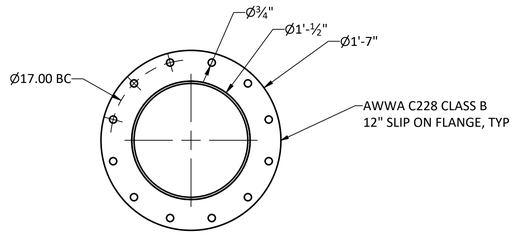
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

18" PIPE THIMBLE
DETAILS

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

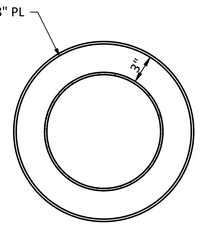
DRAWING
M520



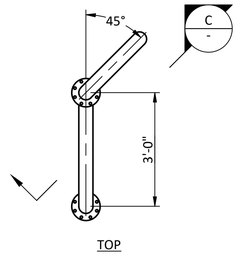


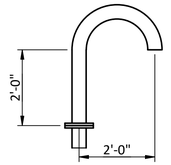
12" PIPE THIMBLE - FLUSHING LINE

SCALE: 1 1/2"=1'-0"
0" 8" 16"
MATL: 304 OR 316 SS
QTY: 1

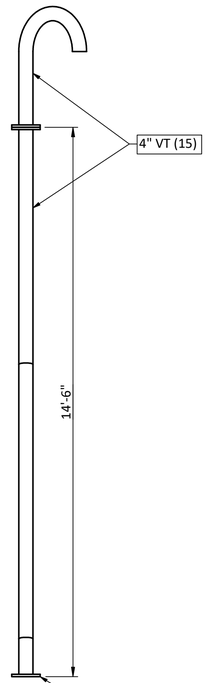


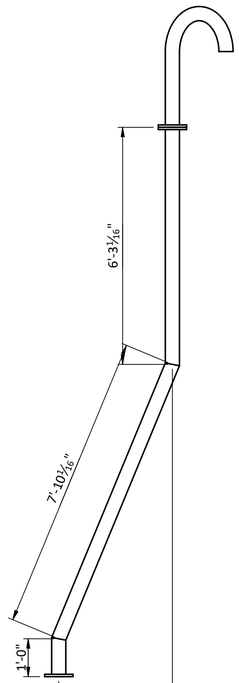
A
-
SECTION
SCALE: 1 1/2" = 1'-0"
0" 8" 16"





C
-
SECTION
SCALE: 1 1/2" = 1'-0"
0" 8" 16"





4" AIR VENT FOR FLUSHING VALVE

SCALE: 1/2"=1'-0"
0" 2" 4"
MATL: 304 OR 316 SS
QTY: 1

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
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A	10/24/22	JPB	DRAFT 30% DESIGN

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

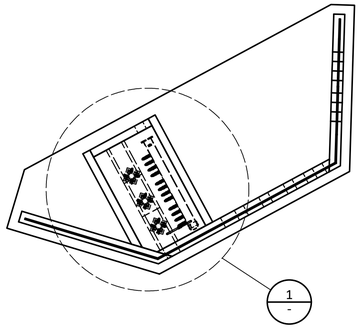
12" PIPE THIMBLE

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

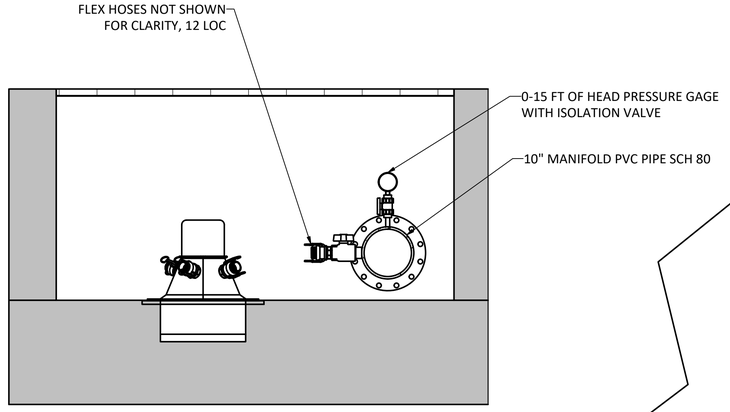
DRAWING
M521

SHEET NOTES:

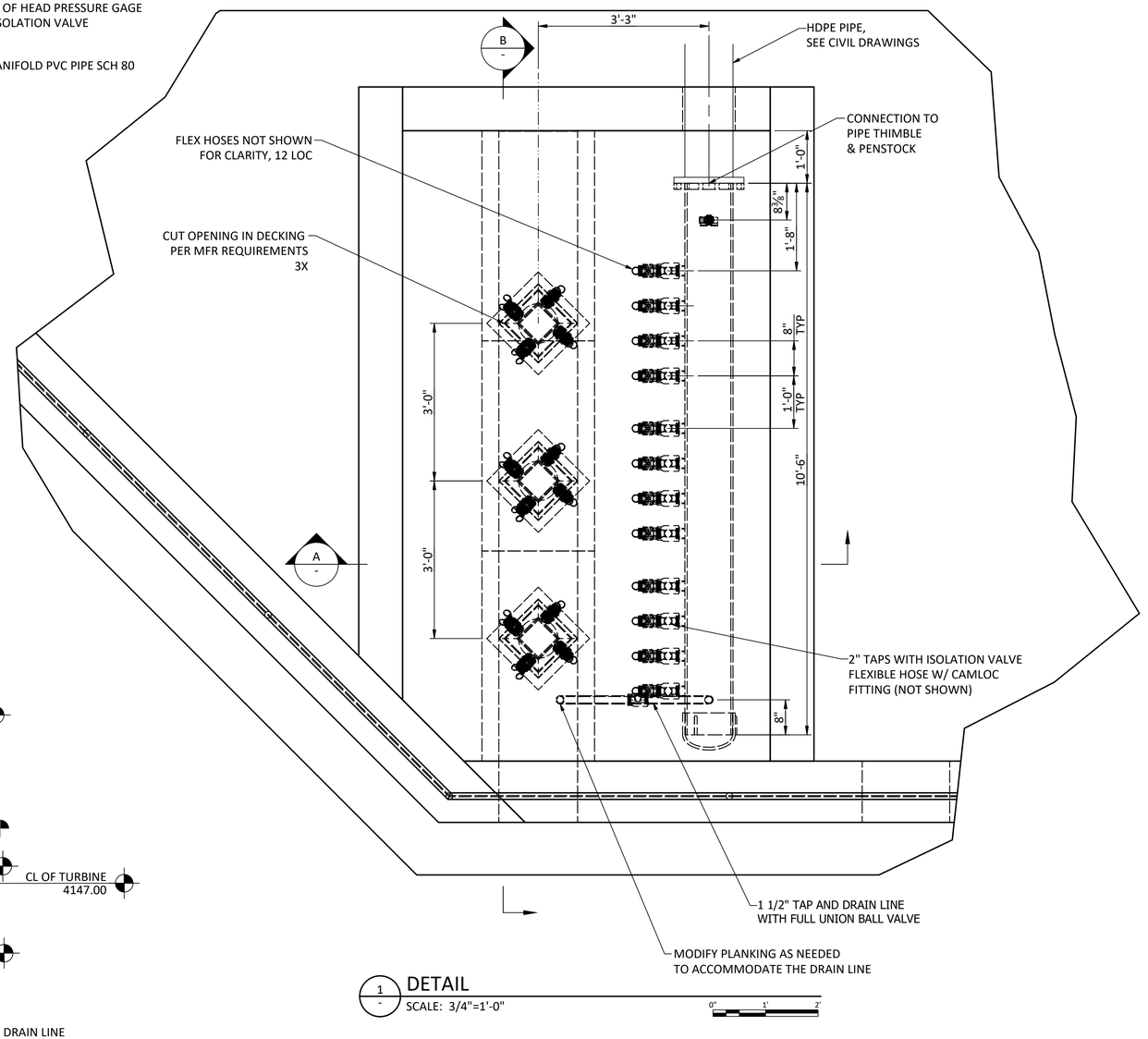
1. HOSE SUPPORTS ARE REQUIRED TO SUPPORT THE FLEXIBLE HOSE & KEEP IT THE NOZZLE ALIGNED W/ THE TURBINE.
2. UNSUPPORTED HOSES MAY CAUSE THE JET NOZZLES TO IMPACT THE INCORRECT LOCATIONS WHICH EFFECTS TURBINE/GENERATOR PERFORMANCE & OUTPUT.



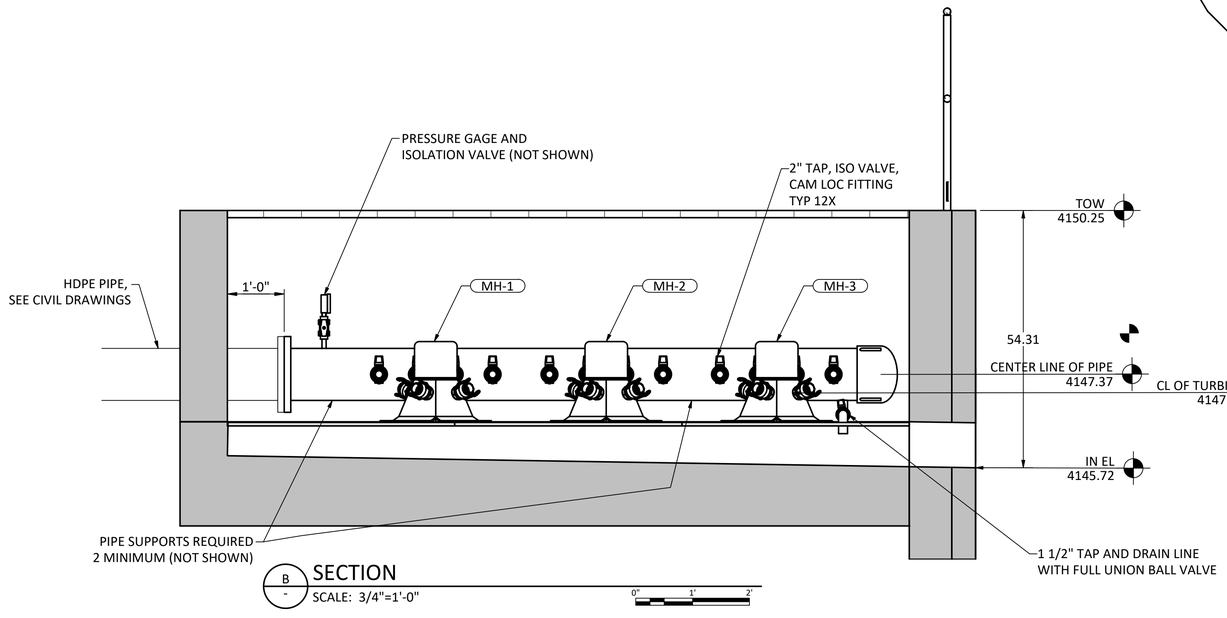
A M105 MICRO-HYDRO AT OUTFALL STRUCTURE
SCALE: 1/8"=1'-0"



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



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



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

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
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A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
OUTFALL
MICRO-HYDRO VAULT

DESIGNED B. WELTON
DRAWN B. WELTON
CHECKED J. DALLAS
PROJECT DATE 02/14/25

DRAWING
M530

IEEE STANDARD CONTROL AND PROTECTION DEVICES FUNCTION NUMBERS

01	MASTER ELEMENT
02	TIME-DELAY STARTING OR CLOSING RELAY (TDPU)
03	CHECKING OR INTERLOCKING RELAY
04	MASTER CONTACTOR
05	STOPPING DEVICE
06	STARTING CIRCUIT BREAKER
07	RATE-OF-CHANGE RELAY
08	CONTROL POWER DISCONNECTING DEVICE
09	REVERSING DEVICE
10	UNIT SEQUENCE SWITCH
11	MULTIFUNCTION DEVICE
12	OVER-SPEED DEVICE
13	SYNCHRONOUS-SPEED DEVICE
14	UNDER-SPEED DEVICE
15	SPEED OR FREQUENCY MATCHING DEVICE
16	DATA COMMUNICATIONS DEVICE
17	SHUNTING OR DISCHARGE SWITCH
18	ACCELERATING OR DECELERATING DEVICE
19	STARTING-TO-RUNNING TRANSITION CONTACTOR
20	ELECTRONICALLY OPERATED VALVE
21	DISTANCE RELAY
22	EQUALIZER CIRCUIT BREAKER
23	TEMPERATURE CONTROL DEVICE
24	VOLTS PER HERTZ RELAY
25	SYNCHRONIZING OR SYNCHRONISM - CHECK DEVICE
26	APPARATUS THERMAL DEVICE
27	UNDERVOLTAGE RELAY
28	FLAME DETECTOR
29	ISOLATING CONTACTOR
30	ANNUNCIATOR RELAY
31	SEPARATE EXCITATION DEVICE
32	DIRECTIONAL POWER RELAY
33	POSITION SWITCH
34	MASTER SEQUENCE DEVICE
35	BRUSH-OPERATING OF SLIP-RING SHORT-CIRCUITING DEVICE
36	POLARITY OR POLARIZING VOLTAGE DEVICE
37	UNDERCURRENT OR UNDERPOWER RELAY
38	BEARING PROTECTIVE DEVICE
39	MECHANICAL CONDITION MONITOR
40	FIELD (OVER/UNDER EXCITATION) RELAY
41	FIELD CIRCUIT BREAKER
42	RUNNING CIRCUIT BREAKER
43	MANUAL TRANSFER OR SELECTOR DEVICE
44	UNIT SEQUENCE STARTING RELAY
45	ATMOSPHERIC CONDITION MONITOR
46	REVERSE-PHASE OR PHASE-BALANCE CURRENT RELAY
47	PHASE-SEQUENCE OR PHASE-BALANCE VOLTAGE RELAY
48	INCOMPLETE SEQUENCE RELAY
49	MACHINE OR TRANSFORMER THERMAL RELAY
50	INSTANTANEOUS OVERCURRENT OR RATE-OF-RISE RELAY
51	AC INVERSE TIME OVERCURRENT RELAY
52	AC CIRCUIT BREAKER
53	EXCITER OR DC GENERATOR RELAY
54	TURNING GEAR ENGAGING DEVICE
55	POWER FACTOR RELAY
56	FIELD APPLICATION RELAY
57	SHORT-CIRCUITING OR GROUNDING DEVICE
58	RECTIFICATION FAILURE RELAY
59	OVERVOLTAGE RELAY
60	VOLTAGE OR CURRENT BALANCE RELAY
61	DENSITY SWITCH OR SENSOR
62	TIME-DELAY STOPPING OR OPENING RELAY (TDDO)
63	PRESSURE SWITCH
64	GROUND DETECTOR RELAY
65	GOVERNOR
66	NOTCHING OR JOGGING DEVICE
67	AC DIRECTIONAL OVERCURRENT RELAY
68	BLOCKING RELAY
69	PERMISSIVE CONTROL DEVICE
70	RHEOSTAT
71	LEVEL SWITCH
72	DC CIRCUIT BREAKER
73	LOAD-RESISTOR CONTACTOR
74	ALARM RELAY
75	POSITION CHANGING MECHANISM
76	DC OVERCURRENT RELAY
77	PULSE TRANSMITTER
78	PHASE-ANGLE MEASURING OR OUT-OF-STEP PROTECTIVE RELAY
79	AC RECLOSING RELAY
80	FLOW SWITCH
81	FREQUENCY RELAY
82	DC RECLOSING RELAY
83	AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY
84	OPERATING MECHANISM
85	CARRIER OR PILOT-WIRE RECEIVER RELAY
86	LOCKOUT RELAY
87	DIFFERENTIAL PROTECTIVE RELAY
88	AUXILIARY MOTOR OR MOTOR GENERATOR
89	LINE SWITCH
90	REGULATING DEVICE
91	VOLTAGE DIRECTIONAL RELAY
92	VOLTAGE AND POWER DIRECTIONAL RELAY
93	FIELD-CHANGING CONTACTOR
94	TRIPPING OR TRIP-FREE RELAY
95	RESERVED FOR FUTURE APPLICATION
96	RESERVED FOR FUTURE APPLICATION
97	RESERVED FOR FUTURE APPLICATION
98	CREEP DETECTOR DEVICE
99	RESERVED FOR FUTURE APPLICATION

METERING SYSTEMS AND DEVICES INDEX

A	AMMETER	PB	PUSHBUTTON
AH	AMPERE HOUR METER	PF	POWER FACTOR METER
AS	AMMETER SELECTOR SWITCH	PH	PHASE METER
C	COUNTER	PI	POSITION INDICATOR
CMA	CONTACT MAKING AMMETER	REC	RECORDER
CMC	CONTACT MAKING CLOCK	RF	REACTIVE FACTOR METER
CMV	CONTACT MAKING VOLTMETER	RPM	SPEED INDICATOR
CS	CONTROL STATION	SW	TRANSFER SWITCH
DM	DEMAND METER	SY	SYNCHROSCOPE
ETM	ELAPSE TIME METER	T	TEMPERATURE METER
F	FREQUENCY METER	TLM	TELEMETER
G	GALVANOMETER	TOC	TRUCK-OPERATED CONTACT
GD	GROUND FAULT DETECTOR	TS	TIME SWITCH
KV	KILO-VOLTMETER	V	VOLTMETER
KW	KILO-WATTMETER	VAR	VARMETER
KWH	KILO-WATT HOUR METER	VH	VAR HOUR METER
mA	MILLI-AMMETER (TRANSDUCER)	VS	VOLTMETER SELECTOR SWITCH
MOC	MECHANISM-OPERATED CONTACT	W	WATTMETER
OHM	OHMMETER	WH	WATT HOUR METER
OSC	OSCILLOGRAPH	WHDM	WATT HOUR DEMAND METER

NOTE: "R" IN FRONT OF LETTERS INDICATES A RECORDING TYPE METER.

PILOT - INDICATOR LIGHT INDEX

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

FIRST LETTER SUFFIX OF IEEE DEVICE DESIGNATION

A	GOVERNOR SYSTEM (OR ACTUATOR SYSTEMS - GATES)
B	BATTERY CHARGING AND MONITORING SYSTEM OR BUS
C	HIGH-VOLTAGE CABLE SYSTEM OR CLOSING RELAY/CONTACTOR
D	DATA ACQUISITION SYSTEM
E	EXCITATION SYSTEM INCLUDING TRANSFORMER AND REGULATOR BUT NOT MAIN FIELD
F	FIRE AND CO2 SYSTEM
G	MAIN GENERATOR INCLUDING AUXILIARY SYSTEMS OR GROUND
G/M	GENERATOR MOTOR INCLUDING AUXILIARY SYSTEMS IN PUMPED STORAGE APPLICATIONS
H	TURBINE OR MAIN PUMP INCLUDING AUXILIARY SYSTEMS
I	ISOLATED AND OTHER POWER BUS SYSTEMS (NOT HIGH VOLTAGE CABLE)
J	POWER CIRCUIT BREAKER INCLUDING AUXILIARY SYSTEMS
K	POWER TRANSFORMER INCLUDING AUXILIARY SYSTEMS
L	ANNUNCIATOR SYSTEM, SECURITY SYSTEM, LINE, OR LOWERING RELAY/CONTACTOR
M	MAIN PUMP MOTOR INCLUDING AUXILIARY SYSTEMS AND VARIABLE SPEED DRIVE
N	AIR (PNEUMATIC) SYSTEM OR NEUTRAL
O	OPENING RELAY/CONTACTOR
P	PENSTOCK OR DISCHARGE LINE SYSTEM
Q	OIL STORAGE, HANDLING, PURIFICATION SYSTEM
R	FIELD FLASHING SYSTEM, PHASE REVERSAL SWITCH INCLUDING AUXILIARY SYSTEM, OR RAISING RELAY/CONTACTOR
S	STATION SERVICE SUBSTATION SYSTEM INCLUDING ENGINE/GENERATOR SYSTEM
T	TONE AND TRANSFER TRIP SYSTEM OR TRANSFORMER
U	UNIT CONTROL CIRCUIT SYSTEM OR UNINTERRUPTIBLE POWER SUPPLY SYSTEM
V	INTAKE AND/OR DISCHARGE VALVE SYSTEM
W	WATER SYSTEMS INCLUDING INTAKE/OUTLET WORKS AND PLANT WATER AND SUMP SYSTEMS
X	DEFINED FOR SYSTEMS UNIQUE TO A FACILITY
Y	DEFINED FOR SYSTEMS UNIQUE TO A FACILITY
Z	DEFINED FOR SYSTEMS UNIQUE TO A FACILITY

SECOND AND SUBSEQUENT LETTER SUFFIXES OF THE IEEE DEVICE DESIGNATION

A	ABNORMAL, A.C., ACCELERATION, ADMISSION, ALARM, AMPERES, AUTOMATIC, AUXILIARIES, PHASE A, ECT.
B	BACKUP, BEARING, BLOCK, BLOWER, BOOSTER, BRAKES, BUS, BUTTON, BYPASS, PHASE B, ETC.
C	CABLE, CARRIER, CHARGER, CHECK, CHLORINATION, CLOSE, COLLECTOR, COMMON, COMPENSATOR, COMPRESSOR, CONTROL, COOLING, CURRENT, CYCLE, CYLINDER, PHASE C, CONVEYOR, ECT.
D	D.C, DECELERATION, DELAY, DEPRESS, DETECTOR, DIELECTRIC, DIFFERENTIAL, DISCHARGE, DISCONNECT, DISCORDANCE, DOMESTIC, DOWN, DOWNSTREAM, DRAFT TUBE, DRAIN, ETC.
E	EJECTOR, ELEVATOR, EMERGENCY, EXPLOSIVE, ETC.
F	FAILURE, FAN, FAULT, FEEDER, FIELD, FILTER, FIRE, FLAME, FLOW, FOLLOWER, FORWARD, FREQUENCY, FULL, FUMES, FUSE, ETC.
G	GAS, GATE, GATING (SCR), GENERATE, GROUND, GUIDE BEARING, ETC.
H	HALON, HAND, HEAT, HEATER, HIGH, HOIST, HORN, HOT, HOUSING, HYDROPNEUMATIC TANK, ETC.
I	INDICATION, INITIAL, INLET, INOUT, INSTANTANEOUS, INTAKE, INTERFACE, INTERLOCK, INTERRUPT, INVERTER, IONIZATION, ETC.
J	JACKING, JET, ETC.
K	KEY, TRANSFORMER
L	LAMPS, LEFT, LEVEL, LIGHTS, LIMITS, LINE, LIQUID, LOCAL, LOGIC, LOSS, LOUVERS, LOW, LOWER, LUBRICATION, ETC.
M	MAIN, MALFUNCTION, MANUAL, METER, METERING, MOTOR, ETC.
N	NEGATIVE, NETWORK, NEUTRAL, NORMAL, ETC.
O	OPEN, OUTLET, OUTPUT, ETC.
P	PACKING BOX, PARALLEL, PARAMETER, PENSTOCK, PHASE, PHASEBACK, PILOT, PIT, POSITION, POTENTIAL, POTHEAD, POWER, PRESSURE, PRIMARY, PROTECTION, PULSE, PUMP, PURIFICATION, PUSH, ETC.
Q	OIL, ETC.
R	RAISE, REACTOR, RECLOSE, RECORD, RECTIFIER, REED, REFRIGERATION, REGULATE, RELAY, RELEASE, RELIEF, REMOTE, RESERVOIR, RESET, RESISTOR, RIGHT, ROTATION, ROTOR, RUNNER, ETC.
S	SEALS, SECONDARY, SELECTOR, SEWAGE, SHORTING, SHUTDOWN, SIGNAL, SKIMMER, SLUDGE, SMOKE, SOLENOID, SPEED, SPIRAL OR SCROLL CASE, SPLICE, STABILIZER, STANDBY, STARTING, STATOR, STEPPING, STORAGE, STRAINER, SUCTION, SUMP, SUPPLY, SWITCH, SYNCHRONIZING, ETC.
T	TANK, TEMPERATURE, TEST, THERMAL, THRUST BEARING, THYRATRON, TIE, TIME, TRANSDUCER, TRANSER, TRANSMITTER, TRIP, TROUBLE, TRASHRAKE, ETC.
U	UNIT, UNLOADER, UNWATERING, UP, UPPER, UPSTREAM, ETC.
V	VALVE, VARS, VIBRATION. VOLTAGE, ETC.
W	WATER, WATTS, WINDINGS, ETC.
X	AUXILIARY DEVICE, ETC.
Y	AUXILIARY TO DEVICE X, ANTIPUMP RELAY, ETC.
Z	AUXILIARY TO DEVICE Y

ABBREVIATIONS

A, AMP	AMP, AMPERE
AAAC	ALL ALUMINUM ALLOY CONDUCTOR
AC	ALTERNATING CURRENT
AF	AMPERE FRAME SIZE
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AH	AMPERE HOURS
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	ALUMINUM
A/R	AS REQUIRED
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AVR	AUTOMATIC VOLTAGE REGULATOR
BAT	BATTERY
C	CONDUIT
CB	CIRCUIT BREAKER
CG	CONDUIT GATE
CHG	CHARGER
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CO	CONDUIT ONLY
COB	COMBINER BOX
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DCS	DISTRIBUTED CONTROL SYSTEM
DISC	DISCONNECT
DP	DISTRIBUTION PANEL
DPDT	DOUBLE-POLE, DOUBLE-THROW
DPST	DOUBLE-POLE, SINGLE-THROW
EDH	ELECTRIC DUCT HEATER
EG	ENGINE GENERATOR
EPT	EXCITATION POWER TRANSFORMER
EUH	ELECTRIC UNIT HEATER
EV	ELECTRICAL VAULT
F, FU	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAS	FIRE ALARM SYSTEM
FREQ	FREQUENCY
FS	FLOAT SWITCH
FT	FLOW TRANSMITTER
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR
GFI	GROUND-FAULT INTERRUPTION
GFP	GROUND-FAULT PROTECTION
GND	GROUND
GPR	GENERATOR PROTECTION RELAY
GSU	GENERATOR STEP-UP TRANSFORMER
HMI	HUMAN-MACHINE INTERFACE
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HPU	HYDRAULIC POWER UNIT
HTR	HEATER
HZ	HERTZ (CYCLES PER SECOND)
IC	INTERRUPTING CAPACITY
I & C	INSTRUMENTATION AND CONTROL
IG	INTAKE GATE
I/O	INPUT/OUTPUT
INST	INSTANTANEOUS
INTLK	INTERLOCK
IP	INTERNET PROTOCOL
K	KEY INTERLOCK
kV	KILOVOLTS
kVA	KILOVOLT AMPERES (APPARENT POWER)
kVAR	KILOVARS (REACTIVE POWER)
kW	KILOWATTS (REAL POWER)
kWH	KILOWATT HOUR
LC	LIGHTING CONTROLLER
LCP	LOCAL CONTROL PANEL
LE	LEVEL ELEMENT
LIT	LEVEL INDICATING TRANSMITTER
LOR	LOCAL-OFF-REMOTE
LP	LIGHTING PANEL
LS	LEVEL SWITCH
LT	LEVEL TRANSMITTER
mA	MILLIAMPERES
M	MOTOR, MAN, MANUAL
MAG	MAGNETIC
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MFM	MULTIFUNCTIONAL METER
MPR	MOTOR PROTECTION RELAY
MTS	MANUAL TRANSFER SWITCH
mV	MILLIVOLTS
MVA	MEGAVOLT AMPERES (APPARENT POWER)
MVAR	MEGAVARS (REACTIVE POWER)
MW	MEGAWATTS (REAL POWER)
MWH	MEGAWATT HOUR
NEUT	NEUTRAL
NGR	NEUTRAL GROUNDING RESISTOR
OHM	OHMMETER
OL	OVERLOAD
OPER	OPERATOR, OPERATED
PB	PANELBOARD, PULLBOX, PUSH BUTTON
PC	PHOTOCELL
PCB	POWER CIRCUIT BREAKER
PCC	POINT OF COMMON CONNECTION
PF	POWER FACTOR
PH, Ø	PHASE
PMP	PUMP
PNL	PANEL
PLC	PROGRAMMABLE LOGIC CONTROLLER
POI	POINT OF INTER-CONNECTION
PS	PRESSURE SWITCH
PTT	PUSH-TO-TEST
PWR	POWER
R	RELAY, REVERSE, RUN
RCP	RECEPTACLE
RIO	REMOTE I/O
RTD	RESISTANCE TEMPERATURE DETECTOR
RVNR	REDUCED VOLTAGE NON-REVERSING
RVR	REDUCED VOLTAGE REVERSING
S	SYNC SCOPE
SA	SURGE ARRESTER
SC	SURGE CAPACITOR
SDP	STANDBY DISTRIBUTION PANEL
SEL	SELECTOR, SCHWEITZER ENGINEERING LABORATORIES
SPD	SURGE PROTECTION DEVICE
SPDT	SINGLE-POLE, DOUBLE-THROW
SPST	SINGLE-POLE, SINGLE-THROW
S/S	STATION SERVICE
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWG	SLUICEWAY GATE
SWGR	SWITCHGEAR
T	THERMOSTAT
TB	TERMINAL BLOCK, TERMINAL BOX
TD	TEMPERATURE DETECTOR, TIME DELAY
TEL	TELEPHONE
TS	THERMOSTAT
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TX	TRANSMITTER
UH	UNIT HEATER
UP	UTILITY POWER
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VAC	VOLTS ALTERNATING CURRENT
VC	VIDEO CAMERA
VCB	VACUUM CIRCUIT BREAKER
VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE, WATTS
WP	WEATHER PROOF
XD	TRANSDUCER
XFMR	TRANSFORMER
XLP	CROSS LINKED POLYETHYLENE
XP	EXPLOSION PROOF

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

ELECTRICAL GENERAL NOTES AND ABBREVIATIONS

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
GE001

JOB NO: 21-094

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DIAGRAMS

HIGH - MEDIUM VOLTAGE SWITCHING

- POWER CIRCUIT BRK, DRAWOUT
- POWER CIRCUIT BRK, NON-DRAWOUT
- HV ISOLATING SW MOTOR OPERATED
- HV INTERRUPTER SW FUSED
- CENTER-BREAK SW MOTOR OPERATED
- DUAL-BREAK SW MOTOR OPERATED
- LOAD-BREAK SW MOTOR OPERATED
- HORN GAP SW

TRANSFORMERS:

- POWER XFMR
- MAG CORE XFMR
- LOAD TAP CHANGING XFMR
- SPLIT SECONDARY XFMR
- AUTO-XFMR

INSTRUMENT TRANSFORMERS:

- POTENTIAL XFMR
- POTENTIAL XFMR DUAL SECONDARY
- (3) 800:5 — CURRENT XFMR, QTY & RATIO AS INDICATED
- (1) 50:5 — CORE BALANCE CURRENT XFMR RATIO AS INDICATED
- (3) 800:5 — BUSHING CURRENT XFMR, QTY & RATIO AS INDICATED
- kWH — KILOWATT-HOUR METER

MACHINES:

- M — MOTOR-DC — XXHP
- M — MOTOR-AC — XXHP
- G — AC GENERATOR — XXKW XXPF
- G — DC GENERATOR — XXKW

TRANSFORMERS WINDING CONNECTIONS:

- DELTA 3PH3W
- DELTA CENTER TAP GND 3PH4W
- DELTA CORNER GRD 3PH3W
- BROKEN DELTA 3PH2W
- OPEN DELTA 2PH2W
- WYE 3PH3W
- WYE GRD 3PH4W
- ZIG-ZAG 3PH3W
- ZIG-ZAG GRD 3PH4W

HIGH - MEDIUM VOLTAGE DEVICES

- L/A OR — LIGHTNING ARRESTER
- WT — WAVE TRAP
- M, 57 — GROUND SW MOTOR OPER
- MV CABLE TERMINATION
- CABLE POTHEAD OIL-FILLED

MISC DEVICES & CONNECTIONS:

- IN/OUT LINE
- 01 02 — PROTECTIVE DEVICE ELEMENT, SEE DEVICE FUNCTION INDEX
- TEST SWITCH
- TEST SWITCH, CURRENT SHORTING
- BATTERY
- GROUND
- DISCONNECTING DEVICE
- NEUTRAL CONNECTION
- ISOL PH BUS FLEX CONN
- ISOL PH BUS REMOVEABLE LINK

MISC DEVICES & CONNECTIONS:

- DEVICE TERMINAL POINT
- TERMINAL BLOCK
- EXTERNAL EQUIPMENT INTERCONNECTION
- XX XX — RELAY, SOLENOID, OR CONTACTOR COIL
- TD XX — TRANSDUCER
- I XX — INDICATING METER
- TLM XX — TELEMETRY
- X — PUSH-TO-TEST LIGHT
- X — PILOT/INDIC LIGHT
- XA — FUSE, SIZE AS INDICATED
- FUSE DUMMY
- XA — DISC SW FUSED
- FUSIBLE LINK
- CAPACITOR
- 3% — REACTOR
- RES — RESISTOR
- RES — RESISTOR VARIABLE
- OR — HEATER ELEMENT
- RECTIFIER SOLID STATE
- AC, DC+, DC-, AC — RECTIFIER FULLWAVE
- DC BRAKE
- GROUND
- CHASSIS GROUND
- CURRENT SHUNT

LOW VOLTAGE SWITCHING:

- DISCONNECTING SWITCH, MANUALLY GANG-OPERATED
- MOLDED CASE OR AIR CIRCUIT BREAKER
- CONTACTOR WITH THERMAL OL TRIP
- CONTACTOR WITH MAGNETIC OL TRIP
- CONTACTOR WITH THERMAL AND MAGNETIC OL TRIP
- E — CIR BKR DRAWOUT ELEC OPER
- E — CIR BKR THERMO O/L DRAWOUT ELEC OPER
- E — CIR BKR MAG O/L DRAWOUT ELEC OPER
- E — CIR BKR THERMO/MAG O/L DRAWOUT ELEC OPER

SELECTOR:

- J, K; A1, A2 — TWO-POSITION X-CONTACT CLOSED

	J	K
A1	X	
A2		X

- J, K, L; A1, A2 — THREE-POSITION X-CONTACT CLOSED

	J	K	L
A1	X		
A2			X

- A, B; 1, 2, 3, 4 — TWO-POSITION SELECTOR PUSHBUTTON X-CONTACT CLOSED

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

CONTROL SWITCHING:

- XX — PB SWITCH NORM OPEN
- XX — PB SWITCH NORM CLOSED
- XX OFF MAN AUTO — SELECTOR SWITCH
- XX — LIMIT SW NORM OPEN
- XX — LIMIT SW NORM CLOSED
- XX — LIMIT SW NORM OPEN HELD CLOSED
- XX — LIMIT SW NORM CLOSED HELD OPEN
- SOLENOID
- XX — CONTACT NORM OPEN
- XX — CONTACT NORM CLOSED
- XX — FLOW OPER NORM OPEN
- XX — FLOW OPER NORM CLOSED
- XX — LEVEL OPER NORM OPEN
- XX — LEVEL OPER NORM CLOSED
- XX — SWITCH NORM OPEN
- XX — SWITCH NORM CLOSED
- XX — TEMP ACT SW NORM OPEN
- XX — TEMP ACT SW NORM CLOSED
- XX — FOOT OPER NORM OPEN
- XX — FOOT OPER NORM CLOSED
- XX — PRESS OPER NORM OPEN
- XX — PRESS OPER NORM CLOSED

MOMENTARY CONTACTS:

- NO, NC — SINGLE CIRCUIT
- NO & NC — DOUBLE CIRCUIT

MAINTAINED CONTACTS:

- TWO SINGLE CIRCUIT
- ONE DOUBLE CIRCUIT
- ESS — E-STOP, 2NC

INSTANT OPERATION CONTACTS WITH BLOWOUT

- XA — NO
- XA — NC

INSTANT OPERATION CONTACTS WITHOUT BLOWOUT

- XA — NO
- XA — NC

TIMED CONTACTS - CONTACT ACTION DELAYED AFTER COIL IS ENERGIZED

- NOTC — XX SEC
- NCTC — XX SEC

TIMED CONTACTS - CONTACT ACTION DELAYED AFTER COIL IS DE-ENERGIZED

- NOTC — XX SEC
- NCTC — XX SEC

SUPPLEMENTARY CONTACTS SYMBOLS:

- SPST, NO SINGLE-BREAK
- SPST, NO DOUBLE-BREAK
- SPST, NC SINGLE-BREAK
- SPST, NC DOUBLE-BREAK
- SPDT, SINGLE-BREAK
- SPDT, DOUBLE-BREAK
- DPST, NO, SINGLE-BREAK
- DPST, NO, DOUBLE-BREAK
- DPST, NC, SINGLE-BREAK
- DPST, NC, DOUBLE-BREAK
- DPDT, SINGLE-BREAK
- DPDT, DOUBLE-BREAK

NOTE:

1. "X" OR "XX" SHOWN ON SYMBOLS WILL BE SUBSTITUTED WITH DEVICE FUNCTION NUMBERS, LETTER SUFFIXES, PILOT LIGHT COLORS, OR OTHER DESCRIPTIVE TEXT, WHICH ARE DEFINED ELSEWHERE IN THESE LEGEND DRAWINGS.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

ELECTRICAL STANDARD SYMBOLS 1

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
GE002

JOB NO: 21-094

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PRIVATE TELEPHONE SYSTEM

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

PRIVATE ETHERNET NETWORK SYSTEM

- DATA JACK
- VOICE/DATA JACK

PAGE/SOUND SYSTEM

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

INTRUSION ALARM/ACCESS SYSTEM

S A — SECURITY ALARM
- A POINT OF CONTACT
- C SECURITY PROXIMITY CARD READER (+48" AFF)
- E SECURITY ELEVATOR LOCKOUT CONTROL
- K SECURITY KEYPAD
- P SECURITY PANIC BUTTON (MOUNT UNDER CABINET)

SC D — SECURITY DOOR CONTACT
- D INTEGRAL TO DOOR HARDWARE OR HINGE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE
- S SURFACE MOUNTED CONTACT/MAGNET COMBO WITH TAMPER RESISTANT METAL-CLAD PIGTAIL.
- M FULLY RECESSED CONTACT/MAGNET COMBO INSTALLED IN DOOR FRAME HEADER/TOP OF DOOR.

SL D — SECURITY DOOR LOCK CONNECTION (LOCK BY OTHERS)
- D INTEGRAL TO DOOR HARDWARE OR HINGE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE
- S ELECTRICAL STRIKE IN DOOR FRAME LATCH.
- M MAGNETIC LOCK ON DOOR FRAME HEADER.

S M — SECURITY MOTION SENSOR - ARROW INDICATES DIRECTION OF SENSING; 360° INDICATES SENSING IN ALL DIRECTIONS

SM — SECURITY MONITOR AND MULTIPLEXOR/DVM

REX D — REQUEST TO EXIT SIGNAL DEVICE
- D INTEGRAL TO DOOR HARDWARE OR HINGE. SEE ARCHITECTURAL DOOR HARDWARE SCHEDULE
- P PASSIVE INFRARED DETECTOR MOUNTED ABOVE DOOR FRAME. PROVIDE J-BOX TYPE 'B' HORIZONTALLY MOUNTED 6" ABOVE DOOR.

P — POWERED DOOR OPERATOR ACTUATOR

CCTV SYSTEM

- CCTV — CAMERA FIXED POSITION
- PTZ CCTV — CAMERA, PAN-TILT-ZOOM
- CCTV — CCTV MONITOR
- CCTV — CCTV MONITOR

LOW VOLTAGE ELECTRICAL MATERIALS

- CB CIRCUIT BREAKER SWITCH
- UF UNFUSED DISCONNECT SWITCH
- F FUSED DISCONNECT SWITCH
- MOTOR STARTER MANUAL
- MOTOR STARTER MAGNETIC
- CB MOTOR STARTER MAG. COMBINATION C.B. SW.
- F MOTOR STARTER MAG. COMBINATION FUSED D.S.
- VFD VARIABLE FREQUENCY DRIVE
- PUSHBUTTON SW. EMERG. STOP
- PUSHBUTTON SW. STOP/START
- PUSHBUTTON STATION
- SELECTOR SWITCH
- CS CONTROL STATION
- FS FLOAT SWITCH
- LI LEVEL SWITCH
- BI BIN LEVEL SWITCH
- LS LIMIT SWITCH
- PS PRESSURE SWITCH
- PE ELECTRICAL/PNEUMATIC SWITCH
- PT PRESSURE TRANSMITTER
- SV SOLENOID VALVE
- T THERMOSTAT
- TS TEMPERATURE SWITCH
- LT LEVEL TRANSMITTER

- 2 MOTOR
- POINT OF CONNECTION
- J JUNCTION BOX OR CONDUIT FITTING

$ — WALL SWITCH
- (1a) NUMBER & LETTER IN PARENTHESES INDICATES PANELBOARD CIRCUIT & SWITCHING ZONE
- 3 THREE WAY
- 4 FOUR WAY
- D DIMMER
- OS OCC SENSOR
- T TIMER
- XP EXPLOSIVE PROOF
- WP WATERPROOF

$ M — MOTOR SWITCH
- M MOTOR RATED TOGGLE SWITCH WITHOUT OVERLOADS
- MS MANUAL MOTOR STARTER WITH OVERLOADS

- DS DAYLIGHT SENSOR
- OS WALL MOUNTED OCCUPANCY SENSOR
- OS CEILING MOUNTED OCCUPANCY SENSOR
- PC PHOTOCELL, SUBSCRIPT INDICATES CIRCUIT

CONVENIENCE RECEPTACLE - DUPLEX
- C CLOCK
- CR CORROSION RESISTANT
- GFI GROUND FAULT INTERRUPTER
- TL TWIST LOCK, NEMA CONFIGURATION AS INDICATED
- U UPS FED
- WP WEATHERPROOF

SUBSCRIPT NUMBER AT RECEPTACLE INDICATES CIRCUIT

- QUADRUPLEX RECEPTACLE
- SINGLE RECEPTACLE
- FLOOR RECEPTACLE
- SPECIAL PURPOSE RECEPTACLE, NEMA CONFIGURATION AS INDICATED

SITE ELECTRICAL

- POLE CONCRETE
- POLE WOOD
- POLE MOUNTED TRANSFORMER
- DOWN GUY
- SIDEWALK GUY
- M MANHOLE
- H HANDHOLE
- V VAULT
- S PAD MOUNTED SWITCH
- T TRANSFORMER VAULT
- PAD MOUNTED TRANSFORMER

GROUNDING

- GROUND ROD
- GROUND ROD WITH ACCESS BOX
- GROUND CONNECTION EXOTHERMIC
- GROUND CONNECTION MECHANICAL BOLTED
- GROUND CONNECTION COMPRESSION
- GROUND COIL (PIGTAIL) 5'0" (1.5M)
- GROUND GRADIENT MAT (SAFETY MAT) 4'X 4'
- GROUND GRADIENT MAT (SAFETY MAT) 4'X 6'

ELECTRICAL LIGHTING FIXTURES

- SURFACE/PENDANT LINEAR FIXTURE
- SURFACE/PENDANT LINEAR FIXTURE WITH BATTERY BACKUP
- RECESSED LINEAR FIXTURE
- RECESSED LINEAR FIXTURE WITH BATTERY BACKUP
- DOWNLIGHT FIXTURE SURFACE/PENDANT CEILING MOUNT
- DOWNLIGHT OR SCONCE FIXTURE SURFACE WALL MOUNT
- R DOWNLIGHT FIXTURE RECESSED CEILING MOUNT
- R DOWNLIGHT OR SCONCE FIXTURE RECESSED WALL MOUNT
- H HAZARDOUS AREA LIGHT FIXTURE CEILING MOUNT
- EXIT SIGN, ARROW INDICATES DIRECTION SURFACE/PENDANT CEILING MOUNT, FILLED QUARTER INDICATES NON-INDICATING FACE
- EXIT SIGN, ARROW INDICATES DIRECTION SURFACE WALL MOUNT, FILLED QUARTER INDICATES NON-INDICATING FACE
- R EXIT SIGN, ARROW INDICATES DIRECTION RECESSED WALL MOUNT, FILLED QUARTER INDICATES NON-INDICATING FACE

- R EMERGENCY DOWNLIGHT FIXTURE SURFACE/PENDANT CEILING MOUNT
- EMERGENCY DOWNLIGHT OR SCONCE FIXTURE SURFACE WALL MOUNT
- R EMERGENCY DOWNLIGHT FIXTURE RECESSED CEILING MOUNT
- R EMERGENCY DOWNLIGHT OR SCONCE FIXTURE RECESSED WALL MOUNT
- EMERGENCY LIGHTING UNIT, 1 HEAD
- EMERGENCY LIGHTING UNIT, 2 HEAD
- EMERGENCY LIGHTING UNIT, 3 HEAD
- SURFACE MTD. DISTR. PANELBOARD
- FLUSH MTD. DISTR. PANELBOARD
- LF-1 — LF-1 POLE-MOUNTED AREA LIGHT, NUMBER OF FIXTURES AND CONFIGURATION AS SHOWN AND PER SCHEDULE
- A (2a) LETTER NEXT TO LUMINAIRE INDICATES TYPE PER SCHEDULE. NUMBER AND LOWER CASE LETTER IN PARENTHESES INDICATES CIRCUIT AND SWITCHING ZONE IN PANELBOARD.

PLAN LINETYPES AND CONVENTIONS

- EXPOSED CONDUCTOR/CONDUIT
- CONCEALED/EMBEDDED CONDUCTOR/CONDUIT
- CONDUCTOR/CONDUIT DOWN
- CONDUCTOR/CONDUIT UP
- G GROUNDING ELECTRODE CONDUCTOR, BARE COPPER
- G GROUND CONNECTION, EXOTHERMIC OR WELDED
- G GROUND CONNECTION, BOLTED
- EOH OH POWER
- EUG UG POWER
- [3/4"C, 3#12, 1#12G] CIRCUIT CALLOUT, CONDUIT AND CONDUCTOR SIZES AS INDICATED; "n-" IN FRONT OF CALLOUT INDICATES "n" PARALLEL SETS
- RXX RACEWAY CALLOUT, INDEX NUMBER AS INDICATED IN RACEWAY SCHEDULE

DIAGRAM LINETYPES AND CONVENTIONS

- ENCLOSURE
- CONDUCTOR, CABLE, CIRCUIT, OR BUS
- INTERCONNECTION WITH EXTERNAL EQUIPMENT
- GANG OPERATED INTERLOCK
- OR CONDUCTOR, CROSSING OF PATHS OR CONDUCTORS NOT CONNECTED
- CONDUCTOR, JUNCTION OF CONNECTED PATHS, CONDUCTORS OR WIRES

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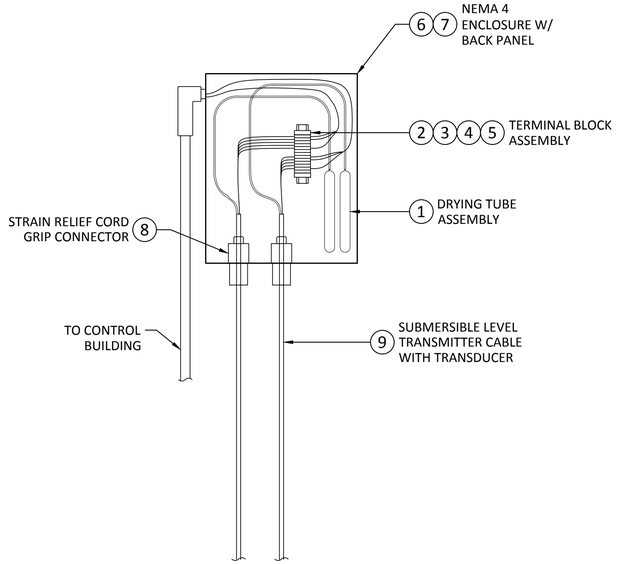
ELECTRICAL STANDARD SYMBOLS 2

DESIGNED M. CHAN
DRAWN D. JOHNSTON
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
GE003

JOB NO: 21-094

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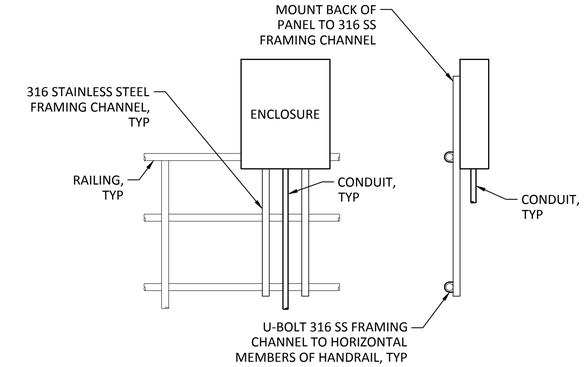
1. SEE MECHANICAL FOR STILLING WELL PIPE INSTALLATION AND DETAILS.
2. SUPPORT LEVEL SENSOR CABLES WITH MANUFACTURER PROVIDED STRAIN RELIEF/PRESSURE CONNECTORS.
3. COIL EXTRA CABLE FOR SENSOR IN ENCLOSURE.
4. ENSURE STILLING WELL, ENCLOSURE, AND CONDUITS ARE BONDED TO GROUND ACCORDING TO NEC. USE GROUNDING BUSHINGS ON CONDUIT ENTRY TO ENCLOSURE.
5. ATTACH DRYING TUBE ASSEMBLY TO LEVEL SENSOR CABLE VENT TUBE.
6. PROVIDE MATERIALS FROM LIST BELOW, OR APPROVED EQUAL.
7. OMIT SECOND CORD GRIP AND DRYING TUBE ASSEMBLY IF ONLY ONE LEVEL TRANSDUCER TERMINATES AT TERMINAL BOX.

MATERIAL LIST				
ITEM	QTY	DESCRIPTION	MANUFACTURER	PART NO.
1	2	DRYING TUBE ASSEMBLY	KELLER AMERICA	N.A.
2	8	UNIVERSAL TERMINAL BLOCKS, UKFN, 30A	PHOENIX	3004362
3	2	END COVER FOR UK4	PHOENIX	3003020
4	2	END BRACKETS, TYPE E/UK	PHOENIX	1201442
5	1	DIN RAIL STYLE MOUNTING TRACK	PHOENIX	1201730
6	1	NEMA 4 ENCLOSURE 16"H x 12"W x 8" D	HOFFMAN	
7	1	BACK PANEL FOR 16"H x 12"W	HOFFMAN	
8	2	1/2" NPT PIPE CONDUIT FITTING/PRESSURE RELIEF CORD GRIP CONNECTOR	KELLER AMERICA	N.A.
9	2	SUBMERSIBLE LEVEL TRANSMITTER CABLE WITH TRANSDUCER	KELLER AMERICA	

SUBMERSIBLE LEVEL SENSOR TERMINAL BOX - DETAIL

SCALE: NTS

E900



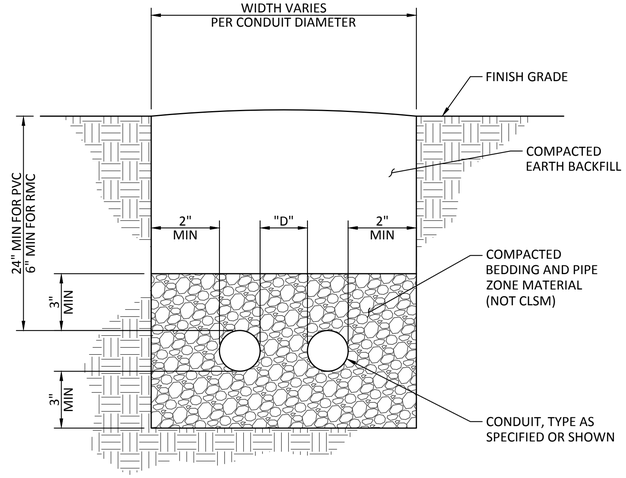
NOTE :

1. WRAP 1/8" THICK RUBBER MATERIAL AROUND RAIL AT U-BOLT CONNECTIONS TO PREVENT MARRING OF HANDRAIL FINISH.

HANDRAIL MOUNTED EQUIPMENT

SCALE: NTS

E902



D = 3" MIN FOR 2" AND LARGER CONDUIT
D = 2" MIN FOR 1½" AND SMALLER CONDUIT

TRENCH AND CONDUIT PLACING; DIRECT-BURY

SCALE: NTS

E118

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

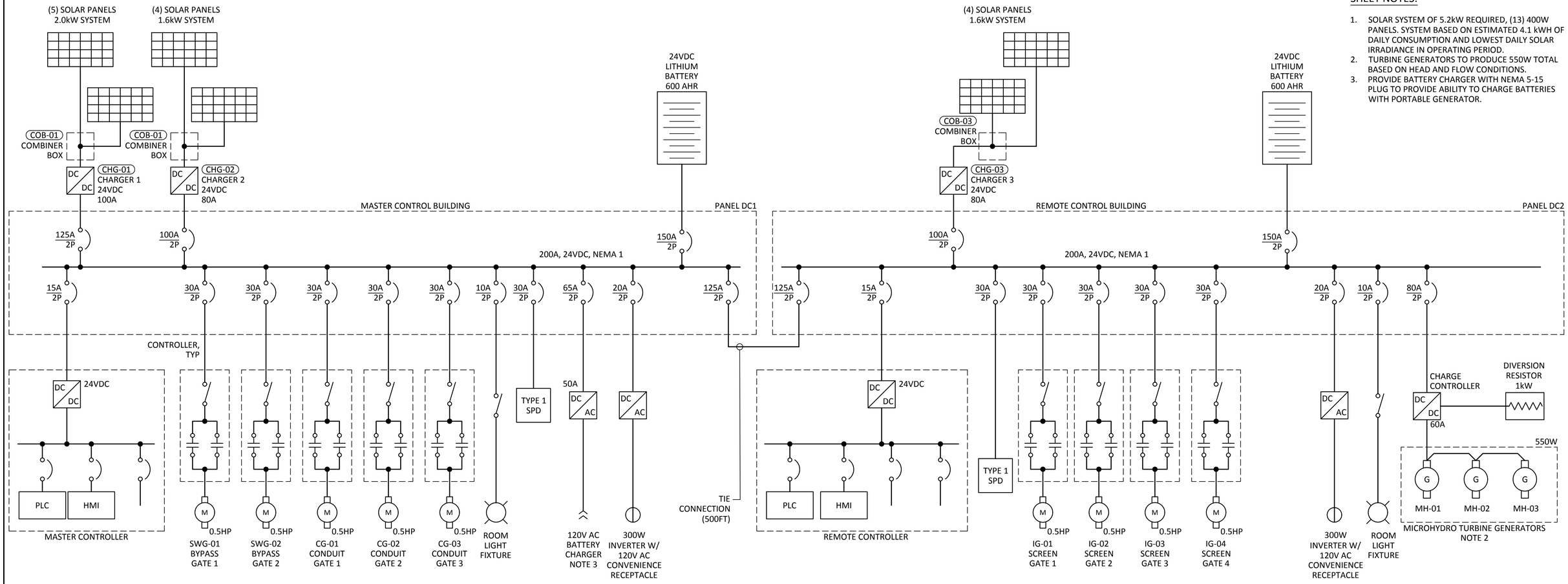
ELECTRICAL STANDARD DETAILS

DESIGNED M. CHAN
DRAWN D. JOHNSTON
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
GE004

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_GE004.dwg Plot date: Feb 11, 2025 04:46pm, CAD User: JoeNeves



SHEET NOTES:

1. SOLAR SYSTEM OF 5.2kW REQUIRED, (13) 400W PANELS. SYSTEM BASED ON ESTIMATED 4.1 kWH OF DAILY CONSUMPTION AND LOWEST DAILY SOLAR IRRADIANCE IN OPERATING PERIOD.
2. TURBINE GENERATORS TO PRODUCE 550W TOTAL BASED ON HEAD AND FLOW CONDITIONS.
3. PROVIDE BATTERY CHARGER WITH NEMA 5-15 PLUG TO PROVIDE ABILITY TO CHARGE BATTERIES WITH PORTABLE GENERATOR.

PANEL DC1		PANEL SCHEDULE							PROJECT: NF JOCKO TABOR FEEDER			
24VDC, 2W		200A Bus							LOCATION: MASTER CONTROL BUILDING			
MOUNTING: SURFACE					NEMA 1				Date: 8/12/24	NEUTRAL: NONE		
CKT	DESCRIPTION/LOCATION	LOAD VA	LOAD AMP	CB AMP	CB POLE	PHASE	CB POLE	CB AMP	LOAD AMP	LOAD VA	DESCRIPTION/LOCATION	CKT
1	BATTERY BANK			150	2	A	2	125			CHARGER 1	2
3						B						4
5	TIE TO PANEL DC2			125	2	A	2	100			CHARGER 2	6
7						B						8
9	ROOM LIGHT	50	2.1	10	2	A	2	15	4.2	100	MASTER CONTROLLER	10
11						B						12
13	SURGE PROTECTOR DEVICE (SPD)			30	2	A	2	20	14.6	350	BYPASS GATE 1	14
15						B						16
17	AC BATTERY CHARGER			65	2	A	2	20	14.6	350	BYPASS GATE 2	18
19						B						20
21	CONDUIT GATE 1	350	14.6	20	2	A	2	20	12.5	300	INVERTER	22
23						B						24
25	CONDUIT GATE 2	350	14.6	20	2	A						26
27						B						28
29	CONDUIT GATE 3	350	14.6	20	2	A						30
31						B						32
33						A						34
35						B						36
37						A						38
39						B						40
41						A						42

PANEL DC2		PANEL SCHEDULE							PROJECT: NF JOCKO TABOR FEEDER			
24VDC, 2W		200A Bus							LOCATION: REMOTE CONTROL BUILDING			
MOUNTING: SURFACE					NEMA 1				Date: 8/12/24	NEUTRAL: NONE		
CKT	DESCRIPTION/LOCATION	LOAD VA	LOAD AMP	CB AMP	CB POLE	PHASE	CB POLE	CB AMP	LOAD AMP	LOAD VA	DESCRIPTION/LOCATION	CKT
1	BATTERY BANK			150	2	A	2	100			BATTERY CHARGER	2
3						B						4
5	TIE TO PANEL DC1			125	2	A	2	15	2.1	50	REMOTE CONTROLLER	6
7						B						8
9	SCREEN GATE 3	350	14.6	20	2	A	2	20	14.6	350	SCREEN GATE 4	10
11						B						12
13	SCREEN GATE 1	350	14.6	20	2	A	2	20	14.6	350	SCREEN GATE 2	14
15						B						16
17	ROOM LIGHT	50	2.1	10	2	A	2	80			MICROHYDRO CHARGER	18
19						B						20
21	SURGE PROTECTOR DEVICE (SPD)			30	2	A	2	20	12.5	300	INVERTER	22
23						B						24
25						A						26
27						B						28
29						A						30
31						B						32
33						A						34
35						B						36
37						A						38
39						B						40
41						A						42

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

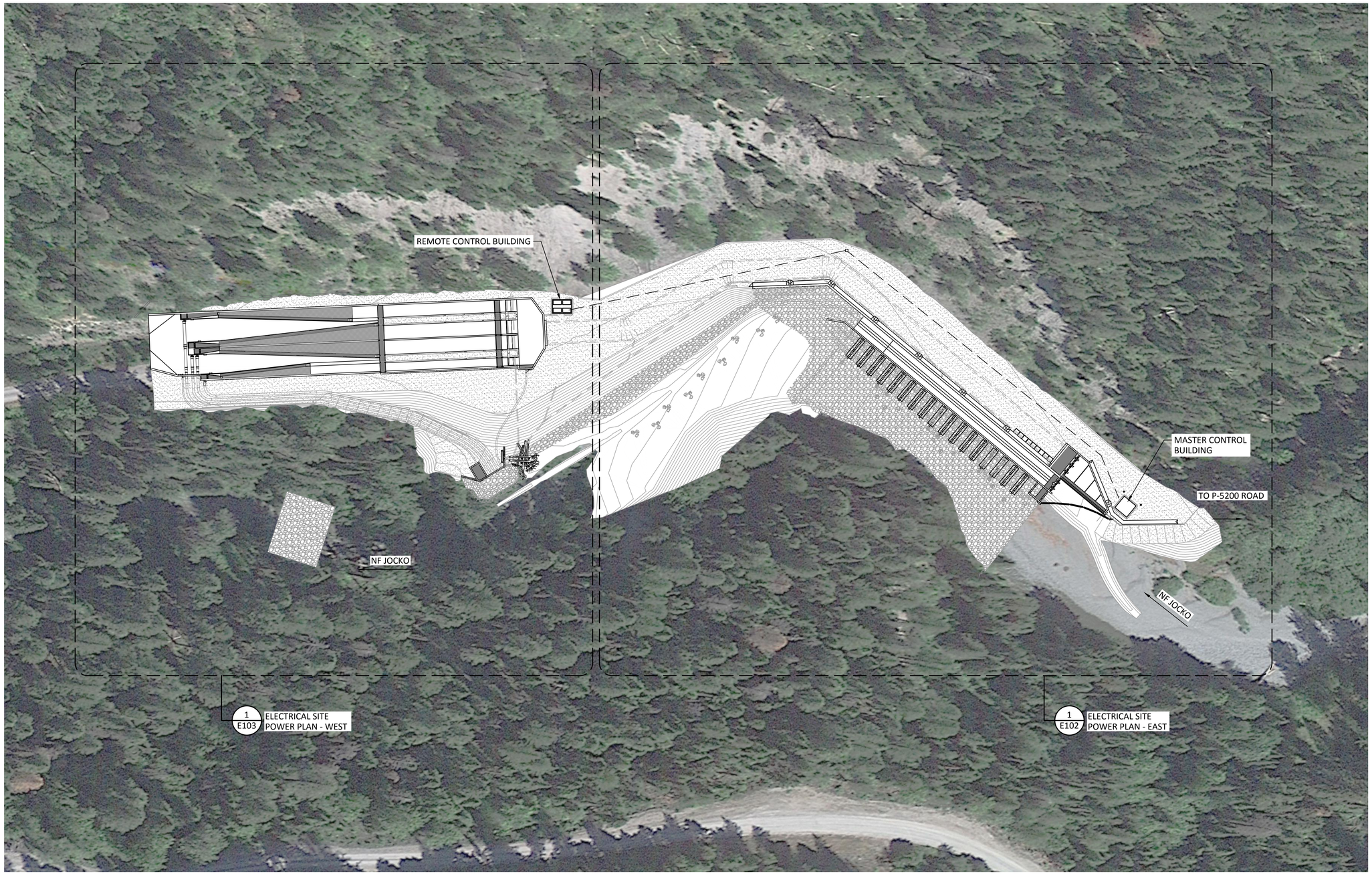
POWER DISTRIBUTION 24VDC

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
E100

JOB NO: 21-094

Path: C:\Users\JoeNeves\DCVACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_E100.dwg Plot date: Feb 11, 2025 04:46pm, CAD User: JoeNeves



ELECTRICAL SITE KEY PLAN

SCALE: 1"= 40'

0" 40' 80'

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

ELECTRICAL SITE KEY PLAN

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING

E101

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_E101.dwg Plot date: Feb 11, 2025 04:47pm, CAD User: JoeNeves

MATCHLINE - SEE DRAWING E103

2' x 2' HANDHOLE
HH-1

R049
R050

TIE CONNECTION AND FIBER OPTIC CONDUIT TO REMOTE CONTROL BUILDING R014R048

SLUICEWAY

E118

FENCE

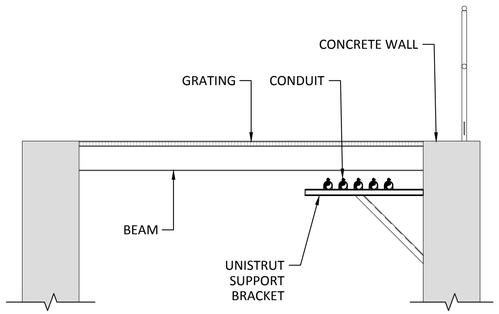
NF JOCKO

SHEET NOTES:

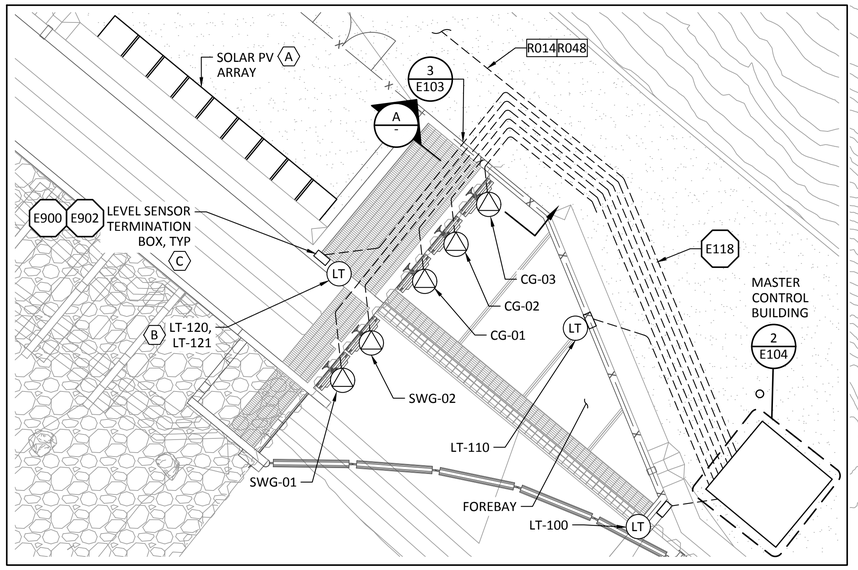
1. NOT ALL CONDUIT SHOWN. ROUTE CONDUIT FOR INSTRUMENTATION ON SCREENING STRUCTURE AND UNDERGROUND AS NEEDED. ADDITIONAL INFORMATION IN CONDUIT SCHEDULE ON E111.
2. CONTRACTOR SHALL PREPARE AND SUBMIT CONDUIT PLANS FOR APPROVAL PRIOR TO CONSTRUCTION.
3. INSTALL CABLE SUPPORT GRIPS AT ALL STILLING WELL LOCATIONS.

SHEET KEY NOTES:

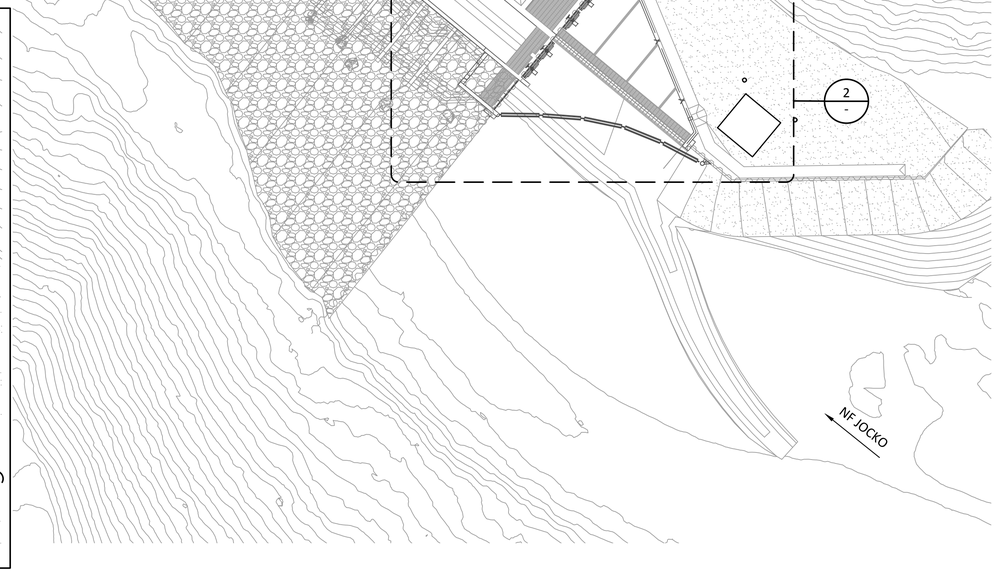
A. INSTALL SOLAR PV ARRAY AT LOCATION INDICATED. PANELS TO BE MOUNTED AT AN AZIMUTH OF 180 DEGREES AND AT INCLINATION OF 30 DEGREES.
B. EACH PAIR OF LEVEL TRANSDUCERS SHALL BE MOUNTED IN ADJACENT STILLING WELLS.
C. MOUNT LEVEL SENSOR TERMINATION BOXES AT ACCESSIBLE HEIGHT ON HANDRAIL WHILE MAINTAINING ACCESS ALONG WALKWAY.



A / - SECTION
SCALE: 1/2"= 1'-0"
0' 2' 4'



2 / - FOREBAY
SCALE: 1"= 10'
0" 10' 20'



1 / E101 ELECTRIAL SITE POWER PLAN - EAST
SCALE: 1"= 20'
0" 20' 40'

N

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

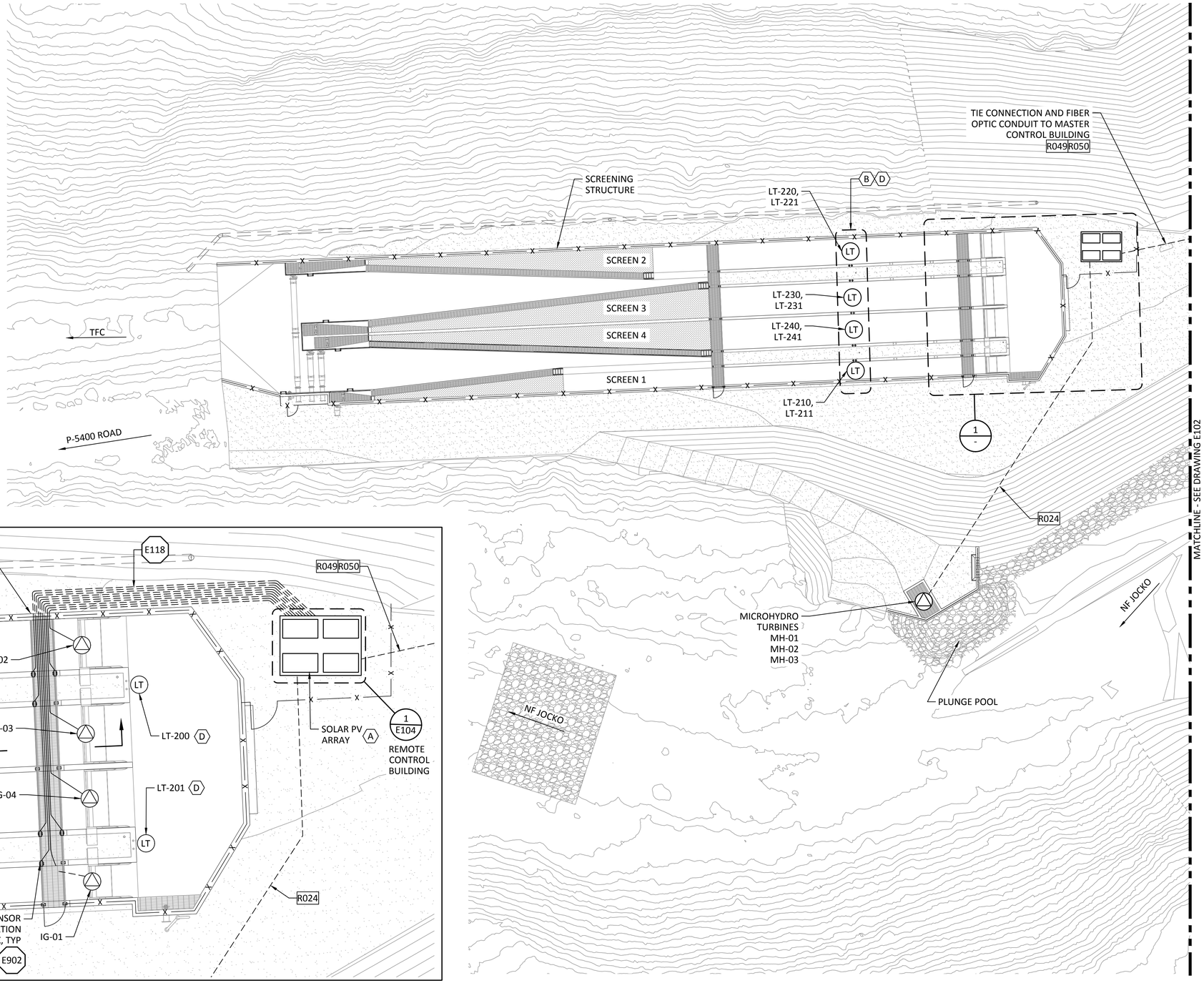
ELECTRICAL SITE POWER PLAN - EAST

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

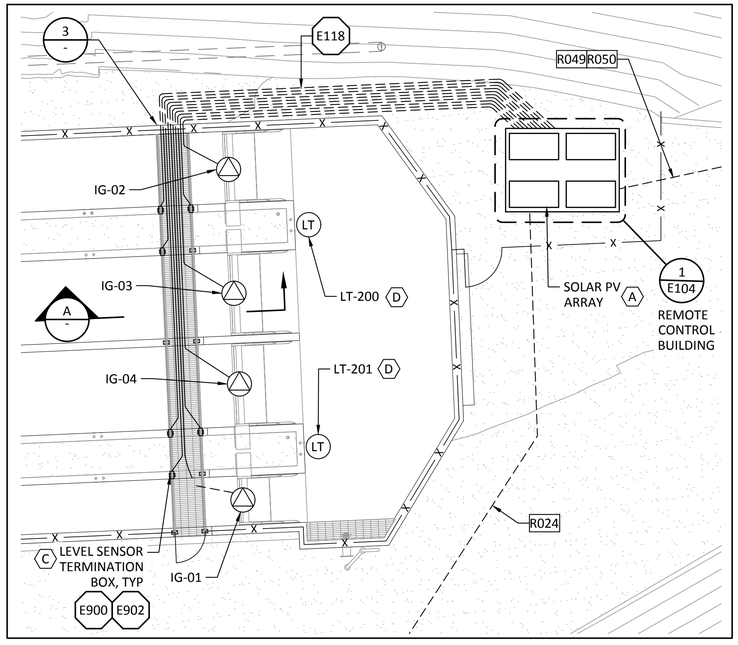
DRAWING
E102

JOB NO: 21-094

Path: C:\Users\JoeNeves\DCVACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_E102.dwg Plot date: Feb 11, 2025 04:48pm, CAD User: JoeNeves



1 E101 ELECTRICAL SITE POWER PLAN - WEST
SCALE: 1"= 20'



2 - SCREENING STRUCTURE - EAST
SCALE: 1"= 10'

SHEET NOTES:

1. NOT ALL CONDUIT SHOWN. ROUTE CONDUIT FOR EQUIPMENT AND INSTRUMENTATION ON SCREENING STRUCTURE AND UNDERGROUND AS NEEDED. ADDITIONAL INFORMATION IN CONDUIT SCHEDULE ON E111.
2. CONTRACTOR SHALL PREPARE AND SUBMIT CONDUIT PLANS FOR APPROVAL PRIOR TO CONSTRUCTION.
3. ROUTE CONDUITS ON DIVERSION STRUCTURE WITHOUT CROSSING AND OBSTRUCTING WALKWAYS.
4. PROVIDE CONDUIT BODIES OR JUNCTION BOXES TO FACILITATE CABLE PULLING.
5. PENETRATE CONCRETE WALLS LESS THAN 1 FT BELOW TOW TO STAY ABOVE 100-YEAR FLOOD ELEVATION.

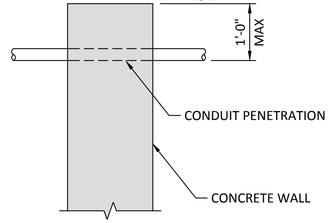
SHEET KEY NOTES:

A. INSTALL SOLAR PV ARRAY ON ROOF OF REMOTE CONTROL BUILDING AT LOCATION INDICATED. PANELS TO BE MOUNTED AT AN AZIMUTH OF 180 DEGREES AND AT INCLINATION OF 30 DEGREES.

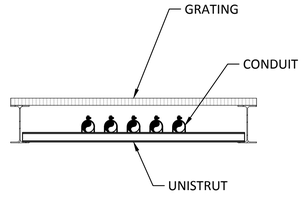
B. EACH PAIR OF LEVEL TRANSDUCERS SHALL BE MOUNTED IN ADJACENT STILLING WELLS. FINAL LOCATION TO BE DETERMINED DURING COMMISSIONING.

C. MOUNT LEVEL SENSOR TERMINATION BOXES AT ACCESSIBLE HEIGHT ON HANDRAIL WHILE MAINTAINING ACCESS ALONG WALKWAY.

D. INSTALL CABLE SUPPORT GRIPS AT ALL STILLING WELL LOCATIONS. LEVEL TRANSDUCER CABLES SHALL BE SECURED TO TOP OF WALL USING CABLE CLIPS DURING COMMISSIONING.



3 - TYPICAL WALL PENETRATION DETAIL
SCALE: 3/4"= 1'-0"



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

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES
NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION
ELECTRICAL SITE POWER PLAN - WEST

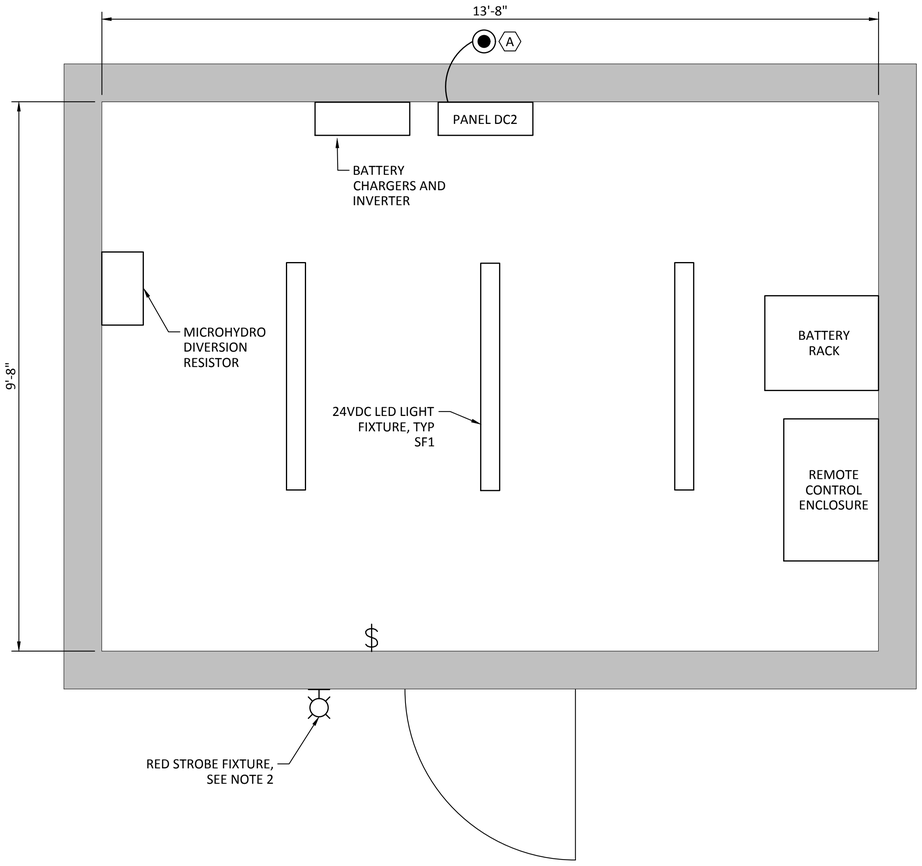
DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
E103

JOB NO: 21-094

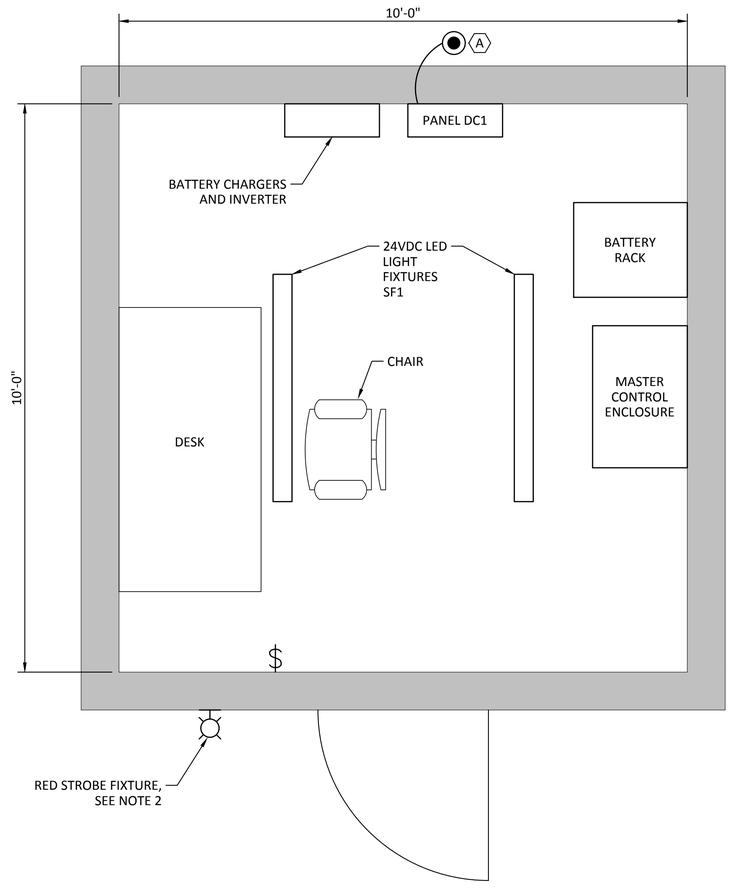
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_E103.dwg Plot date: Feb 11, 2025 04:49pm, CAD User: JoeNeves

LUMINAIRE SCHEDULE				
TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	NOTES
SF1	LINEAR LED FIXTURE, 4 FT, 5000 LUMENS, 24VDC, 5000K, 75CRI	LARSON ELECTRONICS	HAL-48-IPS-LED-24V	100 DEGREE FLOOD AND 5000K OPTION SELECTED. MOUNT 8FT FROM FINISHED FLOOR.



1 E102 REMOTE CONTROL BUILDING LAYOUT

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



2 E103 MASTER CONTROL BUILDING LAYOUT

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

SHEET NOTES:

1. CONTROL BUILDINGS TO BE CMU BUILDING TYPE. INSTALL 1" RIGID BOARD INSULATION ON INTERIOR.
2. INSTALL 24VDC RED STROBE LIGHT FIXTURE ON EXTERIOR OF CONTROL BUILDING. TERMINATE CONDUCTORS TO PLC DISCRETE OUTPUT. FIXTURE PROVIDES SCADA ALARM INDICATION.
3. CABLE AND CONDUIT NOT SHOWN AFTER INSULATION INSTALLATION. ROUTE SURFACE MOUNT CONDUIT FOR EQUIPMENT AS NEEDED. ADDITIONAL INFORMATION IN CABLE AND CONDUIT SCHEDULES ON E111. UNDERGROUND CONDUIT TO TRANSITION TO RGS TYPE BEFORE BEING STUBBED UP THROUGH SLAB.
4. CONTRACTOR SHALL PREPARE AND SUBMIT CONDUIT PLANS FOR APPROVAL PRIOR TO CONSTRUCTION.

SHEET KEY NOTES:

A. PROVIDE GROUND ROD(S) AND BARE COPPER 2/0 GROUNDING ELECTRODE CONDUCTORS AT EACH OF THE CONTROL BUILDINGS. INSTALL PER ARTICLE 250 OF THE NEC

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

CONTROL BUILDING LAYOUTS

DESIGNED M. CHAN

DRAWN J. NEVES

CHECKED J. BAKKEN

PROJECT DATE 02/14/25

DRAWING

E104

JOB NO: 21-094

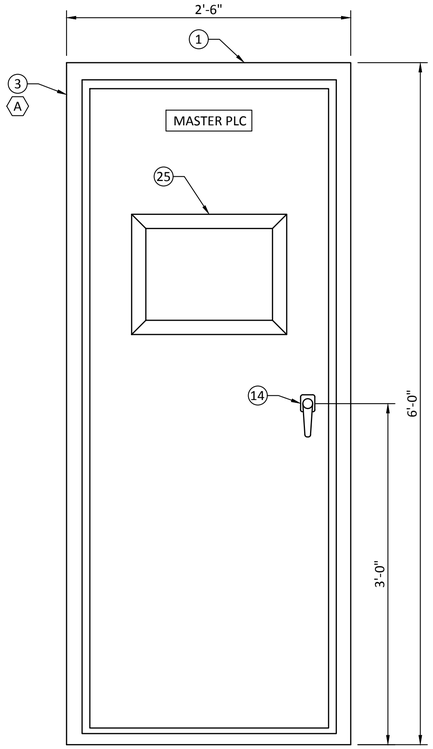
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_E104.dwg Plot date: Feb 11, 2025 04:49pm, CAD User: JoeNeves

SHEET NOTES:

1. SEE E107 FOR BILL OF MATERIALS.
2. PLC SHALL BE ALLEN BRADLEY COMPACTLOGIX, SEE BILL OF MATERIALS FOR I/O MODULE LIST.
3. PREPARE AND SUBMIT FOR APPROVAL DETAILED LAYOUT DRAWINGS, SCHEMATIC DRAWINGS, WIRING DIAGRAMS, PLC/HMI LOGIC AND CONFIGURATION DRAWINGS.

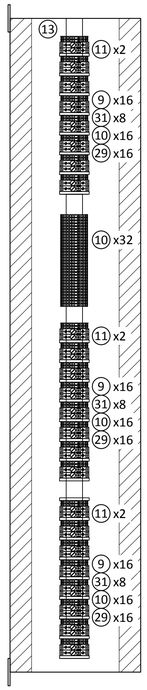
SHEET KEY NOTES:

A. LIGHT FIXTURE SHALL BE INSTALLED ON THE INTERIOR TOP PORTION OF THE ENCLOSURE.

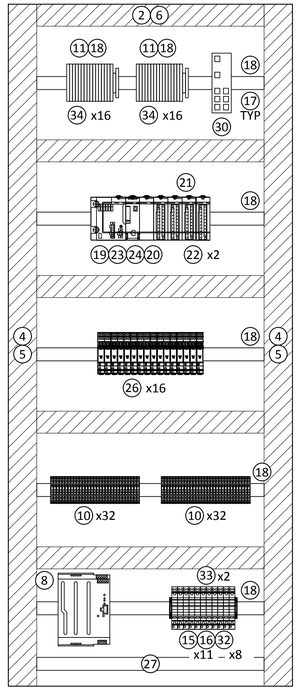


MASTER CONTROL ENCLOSURE - FRONT

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



SIDE PANEL



BACK PANEL

MASTER CONTROL ENCLOSURE - LAYOUT

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

MASTER PLC MODULE ARRANGEMENT

POWER SUPPLY	PROCESSOR	EMBEDDED I/O	DI	DO	AI	AI
SLOT	0	1	2	3	4	5

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

MASTER CONTROL ENCLOSURE LAYOUT

DESIGNED M. CHAN

DRAWN J. NEVES

CHECKED J. BAKKEN

PROJECT DATE 02/14/25

DRAWING

E105

JOB NO: 21-094

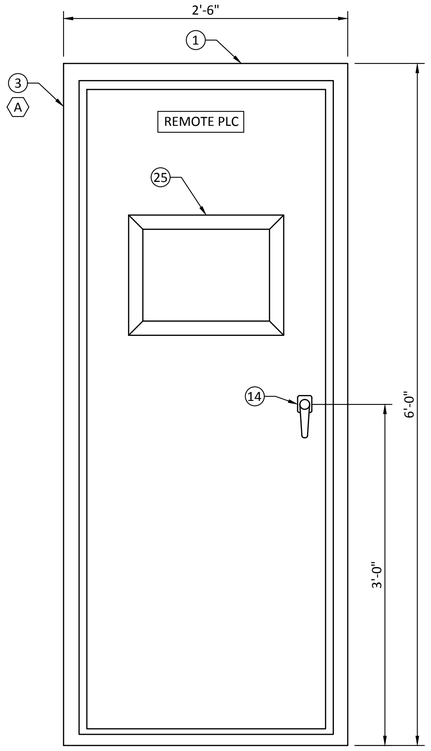
Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_E105.dwg Plot date: Feb 11, 2025 04:49pm, CAD User: JoeNeves

SHEET NOTES:

1. SEE E107 FOR BILL OF MATERIALS.
2. PLC SHALL BE ALLEN BRADLEY / ROCKWELL COMPACTLOGIX, SEE BILL OF MATERIALS FOR I/O MODULE LIST.
3. PREPARE AND SUBMIT FOR APPROVAL DETAILED LAYOUT DRAWINGS, SCHEMATIC DRAWINGS, WIRING DIAGRAMS, PLC/HMI LOGIC AND CONFIGURATION DRAWINGS.

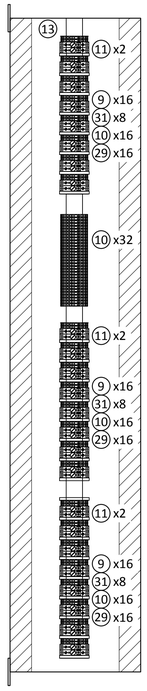
SHEET KEY NOTES:

A. LIGHT FIXTURE SHALL BE INSTALLED ON THE INTERIOR TOP PORTION OF THE ENCLOSURE.

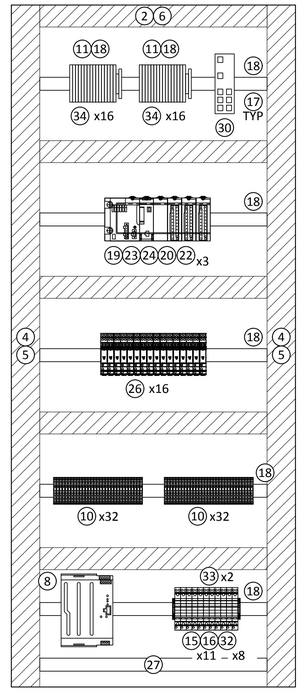


REMOTE CONTROL ENCLOSURE - FRONT

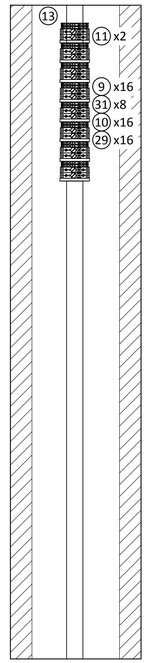
SCALE: 1 1/2"= 1'-0"



SIDE PANEL



BACK PANEL



SIDE PANEL

REMOTE CONTROL ENCLOSURE - LAYOUT

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

REMOTE PLC MODULE ARRANGEMENT

POWER SUPPLY	PROCESSOR	EMBEDDED I/O	AI	AI	AI
SLOT	0	1	2	3	4

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

WARNING

0 1/2 1

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

REMOTE CONTROL ENCLOSURE LAYOUT

DESIGNED M. CHAN

DRAWN J. NEVES

CHECKED J. BAKKEN

PROJECT DATE 02/14/25

DRAWING

E106

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_E106.dwg Plot date: Feb 11, 2025 04:49pm, CAD User: JoeNeves

SHEET NOTES:

1. BILL OF MATERIALS SHOWN CONTAINS COMBINED QUANTITIES FOR MASTER AND REMOTE CONTROL ENCLOSURES.

BILL OF MATERIALS				
ITEM	QTY.	DESCRIPTION	MANUFACTURER	P/N
1	2	ENCLOSURE, ONE DOOR, 72"H X 30"W X 24"D	HOFFMAN	A723024FSDAG
2	2	BACK PANEL 72"H X 30"W	HOFFMAN	A72P30F1
3	2	LIGHT, PANEL, LED	HOFFMAN	LED24V15
4	A/R	WIRE DUCT, 3"W X 3"H	PANDUIT	F3X3LG6
5	A/R	WIRE DUCT COVER, 3"W	PANDUIT	C3LG8
6	A/R	WIRE DUCT, 2"W X 2"H	PANDUIT	F2X3LG6
7	A/R	WIRE DUCT COVER, 3"W	PANDUIT	C2LG8
8	2	POWER SUPPLY, UNIVERSAL, 24VDC, 10 A WITH BATTERY	PHOENIX	2320267
9	112	FUSE HOLDER, UK10-DREHSILA	PHOENIX	3005662.000000
10	304	KNIFE DISCONNECT TB - UKK 5-MTK-P/P -	PHOENIX	2800004
11	18	END CLAMP, E/NS	PHOENIX	0804376
12	A/R	MARKER CARRIERS - UBE/D	PHOENIX	800307
13	3	SIDE PANEL, 72"H X 24"D	HOFFMAN	A72SMP14
14	2	ENCLOSURE DOOR LATCH KIT, TYPE 12, 3 POINT	HOFFMAN	AL3DR
15	22	BASE, CIRCUIT BREAKER, ELEMENT, CB 1/10-1/10 UT-BE	PHOENIX	2801305
16	2	CIRCUIT BREAKER, 16A	PHOENIX	2800889
17	A/R	DIN RAIL, TS35, PERFORATED	PHOENIX	
18	14	TB, GROUNDING, USLK535, DIN RAIL	PHOENIX	0444019
19	2	COMPACTLOGIX 5370 L2 CONTROLLER W/ EMBEDDED IO AND POWER SUPPLY	ALLEN BRADLEY	1769-L24ER-QBFC1B
20	1	COMPACTLOGIX DISCRETE INPUT MODULE, 16 INPUTS, 24VDC, SINK/SOURCE	ALLEN BRADLEY	1769-IQ16
21	1	COMPACTLOGIX DISCRETE OUTPUT MODULE, 16 OUTPUTS, 24VDC, SOURCE	ALLEN BRADLEY	1769-OB16
22	4	COMPACTLOGIX ANALOG INPUT MODULE, 8 INPUTS	ALLEN BRADLEY	1769-IF8
23	2	COMPACTLOGIX REMOVABLE TERMINAL KIT EMBEDDED DIGITAL IO	ALLEN BRADLEY	1769-RTB40DIO
24	2	COMPACTLOGIX REMOVABLE TERMINAL KIT EMBEDDED ANALOG IO	ALLEN BRADLEY	1769-RTB40AIO
25	2	GRAPHIC TERMINAL, PANELVIEW PLUS 7, 12.1", 24VDC, SINGLE ETHERNET	ALLEN BRADLEY	2711P-T12W21D8S
26	32	RELAY, TERMINAL BLOCK	ALLEN BRADLEY	700-HLT12Z24
27	2	GROUND BUS, 2" COPPER		
28	A/R	PANEL GROUNDING		
29	112	FUSE, 0.315A	LITTELFUSE	508.315
30	2	SWITCH, NETWORK	MOXA	EDS-408A-SS-SC
31	56	GROUND TERMINAL BLOCK TYPE VT 2.5-PE	PHOENIX	3044092
32	16	CIRCUIT BREAKER, 2A	PHOENIX	2800870
33	4	CIRCUIT BREAKER, 3A	PHOENIX	2800882
34	64	TERMINAL BLOCK, SURGE PROTECTION DEVICE	PHOENIX	2906798

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A	10/24/22	JPB	DRAFT 30% DESIGN

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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

CONTROL ENCLOSURE BILL OF MATERIALS

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
E107

JOB NO: 21-094

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DEVICE SCHEDULE

DEVICE DESCRIPTION	SIGNAL SOURCE	DIGITAL INPUT	DIGITAL OUTPUT	ANALOG INPUT	ANALOG OUTPUT	MASTER PLC OR REMOTE I/O	POINT DESCRIPTION
LT-100 RIVER LEVEL TRANSDUCER 1	PRESSURE TRANSDUCER, 4-20 mA			1		MASTER	UPSTREAM RIVER LEVEL
LT-110 FOREBAY LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		MASTER	FOREBAY LEVEL
LT-120 BOX CULVERT LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		MASTER	BOX CULVERT LEVEL
LT-121 BOX CULVERT LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		MASTER	BOX CULVERT LEVEL (BACKUP)
LT-200 EDB LEVEL TRANSDUCER 1	PRESSURE TRANSDUCER, 4-20 mA			1		REMOTE	ENERGY DISSIPATION BOX LEVEL
LT-201 EDB LEVEL TRANSDUCER 2	PRESSURE TRANSDUCER, 4-20 mA			1		REMOTE	ENERGY DISSIPATION BOX LEVEL (BACKUP)
LT-210 IG-01 LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		REMOTE	LEVEL DOWNSTREAM OF GATE IG-01
LT-211 IG-01 LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		REMOTE	LEVEL DOWNSTREAM OF GATE IG-01 (BACKUP)
LT-220 IG-02 LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		REMOTE	LEVEL DOWNSTREAM OF GATE IG-02
LT-221 IG-02 LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		REMOTE	LEVEL DOWNSTREAM OF GATE IG-02 (BACKUP)
LT-230 IG-03 LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		REMOTE	LEVEL DOWNSTREAM OF GATE IG-03
LT-231 IG-03 LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		REMOTE	LEVEL DOWNSTREAM OF GATE IG-03 (BACKUP)
LT-240 IG-04 LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		REMOTE	LEVEL DOWNSTREAM OF GATE IG-04
LT-241 IG-04 LEVEL TRANSDUCER	PRESSURE TRANSDUCER, 4-20 mA			1		REMOTE	LEVEL DOWNSTREAM OF GATE IG-04 (BACKUP)
SWG-01 BYPASS GATE 1	RAISE COMMAND		1			MASTER	RAISE GATE
	LOWER COMMAND		1			MASTER	LOWER GATE
	GATE OVERLOAD / FAULT	1				MASTER	GATE FAULT/ALARM CONDITION
	REMOTE MODE	1				MASTER	GATE IN REMOTE CONTROL MODE
	GATE POSITION			1		MASTER	ACTUAL GATE POSITION
SWG-02 BYPASS GATE 2	RAISE COMMAND		1			MASTER	RAISE GATE
	LOWER COMMAND		1			MASTER	LOWER GATE
	GATE OVERLOAD / FAULT	1				MASTER	GATE FAULT/ALARM CONDITION
	REMOTE MODE	1				MASTER	GATE IN REMOTE CONTROL MODE
	GATE POSITION			1		MASTER	ACTUAL GATE POSITION
CG-01 CONDUIT GATE 1	RAISE COMMAND		1			MASTER	RAISE GATE
	LOWER COMMAND		1			MASTER	LOWER GATE
	GATE OVERLOAD / FAULT	1				MASTER	GATE FAULT/ALARM CONDITION
	REMOTE MODE	1				MASTER	GATE IN REMOTE CONTROL MODE
	GATE POSITION			1		MASTER	ACTUAL GATE POSITION
CG-02 CONDUIT GATE 2	RAISE COMMAND		1			MASTER	RAISE GATE
	LOWER COMMAND		1			MASTER	LOWER GATE
	GATE OVERLOAD / FAULT	1				MASTER	GATE FAULT/ALARM CONDITION
	REMOTE MODE	1				MASTER	GATE IN REMOTE CONTROL MODE
	GATE POSITION			1		MASTER	ACTUAL GATE POSITION
CG-03 CONDUIT GATE 3	RAISE COMMAND		1			MASTER	RAISE GATE
	LOWER COMMAND		1			MASTER	LOWER GATE
	GATE OVERLOAD / FAULT	1				MASTER	GATE FAULT/ALARM CONDITION
	REMOTE MODE	1				MASTER	GATE IN REMOTE CONTROL MODE
	GATE POSITION			1		MASTER	ACTUAL GATE POSITION
IG-01 SCREEN GATE 1	RAISE COMMAND		1			REMOTE	RAISE GATE
	LOWER COMMAND		1			REMOTE	LOWER GATE
	GATE OVERLOAD / FAULT	1				REMOTE	GATE FAULT/ALARM CONDITION
	REMOTE MODE	1				REMOTE	GATE IN REMOTE CONTROL MODE
	GATE POSITION			1		REMOTE	ACTUAL GATE POSITION
IG-02 SCREEN GATE 2	RAISE COMMAND		1			REMOTE	RAISE GATE
	LOWER COMMAND		1			REMOTE	LOWER GATE
	GATE OVERLOAD / FAULT	1				REMOTE	GATE FAULT/ALARM CONDITION
	REMOTE MODE	1				REMOTE	GATE IN REMOTE CONTROL MODE
	GATE POSITION			1		REMOTE	ACTUAL GATE POSITION
IG-03 SCREEN GATE 3	RAISE COMMAND		1			REMOTE	RAISE GATE
	LOWER COMMAND		1			REMOTE	LOWER GATE
	GATE OVERLOAD / FAULT	1				REMOTE	GATE FAULT/ALARM CONDITION
	REMOTE MODE	1				REMOTE	GATE IN REMOTE CONTROL MODE
	GATE POSITION			1		REMOTE	ACTUAL GATE POSITION
IG-04 SCREEN GATE 4	RAISE COMMAND		1			REMOTE	RAISE GATE
	LOWER COMMAND		1			REMOTE	LOWER GATE
	GATE OVERLOAD / FAULT	1				REMOTE	GATE FAULT/ALARM CONDITION
	REMOTE MODE	1				REMOTE	GATE IN REMOTE CONTROL MODE

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0 1/2 1
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McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

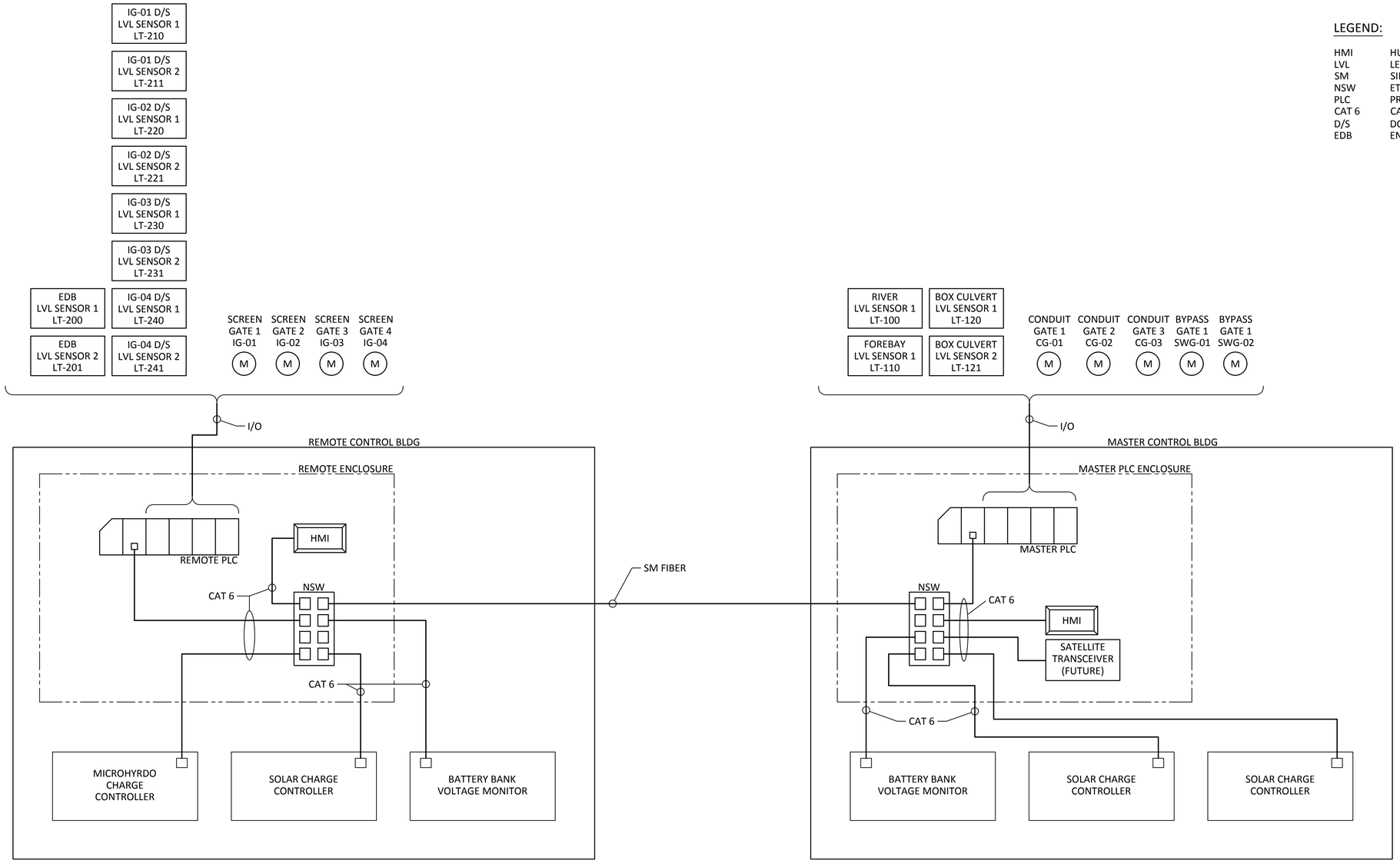
DEVICE SCHEDULE

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
E108

JOB NO: 21-094

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LEGEND:

HMI	HUMAN MACHINE INTERFACE
LVL	LEVEL
SM	SINGLE MODE FIBER OPTIC CABLE
NSW	ETHERNET NETWORK SWITCH
PLC	PROGRAMMABLE LOGIC CONTROLLER
CAT 6	CATEGORY 6 CABLE
D/S	DOWNSTREAM
EDB	ENERGY DISSIPATION BOX

REV	DATE	BY	DESCRIPTION
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CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

NETWORK CONTROL BLOCK DIAGRAM

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
E110

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_E110.dwg Plot date: Feb 11, 2025 04:50pm, CAD User: JoeNeves

CABLE SCHEDULE

ID#	SIZE	TYPE	FROM	TO	RACEWAY		COMMENTS
C-001	#10, 2-1CC	POWER XLPE	COB-01 SOLAR MASTER ARRAY 1 COMBINER BOX	CHG-01 100A SOLAR BATTERY CHARGER	R001		
C-002	#10, 2-1CC	POWER XLPE	COB-02 SOLAR MASTER ARRAY 2 COMBINER BOX	CHG-02 80A SOLAR BATTERY CHARGER	R002		
C-003	#10, 2-1CC	POWER XLPE	COB-03 SOLAR REMOTE ARRAY COMBINER BOX	CHG-03 80A SOLAR BATTERY CHARGER	R003		
C-004	#1, 2-1CC	POWER XLPE	CHG-01 100A SOLAR BATTERY CHARGER	PANEL DC1	R004		
C-005	#3, 2-1CC	POWER XLPE	CHG-02 80A SOLAR BATTERY CHARGER	PANEL DC1	R005		
C-006	#3, 2-1CC	POWER XLPE	CHG-03 80A SOLAR BATTERY CHARGER	PANEL DC2	R006		
C-007	#12, 2-1CC	POWER XLPE	PANEL DC1	MASTER CONTROL ENCLOSURE	R007		
C-008	#3, 2-1CC	POWER XLPE	PANEL DC1	SWG-01 BYPASS GATE ACTUATOR	R008		
C-009	#3, 2-1CC	POWER XLPE	PANEL DC1	SWG-02 BYPASS GATE ACTUATOR	R009		
C-010	#12, 2-1CC	POWER XLPE	PANEL DC1	ROOM LIGHTING	R010		
C-011	#6, 2-1CC	POWER XLPE	PANEL DC1	AC BATTERY CHARGER	R011		
C-012	#12, 2-1CC	POWER XLPE	PANEL DC1	300W INVERTER WITH CONVENIENCE RECEPTACLE	R012		
C-013	#1/0, 2-1CC	POWER XLPE	PANEL DC1	LITHIUM BATTERY BANK - MASTER	R013		
C-014	#2/0, 2-1CC	POWER XLPE	PANEL DC1	PANEL DC2	R014	R049	TIE CONNECTION
C-015	#12, 2-1CC	POWER XLPE	PANEL DC2	REMOTE CONTROL ENCLOSURE	R015		
C-016	#3, 2-1CC	POWER XLPE	PANEL DC2	IG-01 SCREEN GATE ACTUATOR	R016		
C-017	#3, 2-1CC	POWER XLPE	PANEL DC2	IG-02 SCREEN GATE ACTUATOR	R017		
C-018	#3, 2-1CC	POWER XLPE	PANEL DC2	IG-03 SCREEN GATE ACTUATOR	R018		
C-019	#3, 2-1CC	POWER XLPE	PANEL DC2	IG-04 SCREEN GATE ACTUATOR	R019		
C-020	#1/0, 2-1CC	POWER XLPE	PANEL DC2	LITHIUM BATTERY BANK - REMOTE	R020		
C-021	#12, 2-1CC	POWER XLPE	PANEL DC2	300W INVERTER WITH CONVENIENCE RECEPTACLE	R021		
C-022	#12, 2-1CC	POWER XLPE	PANEL DC2	ROOM LIGHTING	R022		
C-023	#4, 2-1CC	POWER XLPE	PANEL DC2	60A MICROHYDRO CHARGE CONTROLLER	R023		
C-024	#4, 2-1CC	POWER XLPE	60A MICROHYDRO CHARGE CONTROLLER	MICROHYDRO TURBINES - JUNCTION BOX	R024		
C-025	#4, 2-1CC	POWER XLPE	60A MICROHYDRO CHARGE CONTROLLER	MICROHYDRO DIVERSION RESISTOR	R025		
C-026	#16, 2CC	TSP	LT-100 RIVER LEVEL TRANSDUCER 1	MASTER CONTROL ENCLOSURE	R026		
C-027	#16, 2CC	TSP	LT-110 FOREBAY LEVEL TRANSDUCER 1	MASTER CONTROL ENCLOSURE	R028		
C-028	#16, 2CC	TSP	LT-200 EDB LEVEL TRANSDUCER 1	REMOTE CONTROL ENCLOSURE	R029		
C-029	#16, 2CC	TSP	LT-201 EDB LEVEL TRANSDUCER 2	REMOTE CONTROL ENCLOSURE	R029		
C-030	#16, 2CC	TSP	LT-210 IG-01 LEVEL TRANSDUCER 1	REMOTE CONTROL ENCLOSURE	R032		
C-031	#16, 2CC	TSP	LT-220 IG-02 LEVEL TRANSDUCER 1	REMOTE CONTROL ENCLOSURE	R033		
C-032	#16, 2CC	TSP	LT-230 IG-03 LEVEL TRANSDUCER 1	REMOTE CONTROL ENCLOSURE	R034		
C-033	#16, 2CC	TSP	LT-240 IG-04 LEVEL TRANSDUCER 1	REMOTE CONTROL ENCLOSURE	R035		
C-034	#18, 7CC	CONTROL	SWG-01 BYPASS GATE ACTUATOR	MASTER CONTROL ENCLOSURE	R036		
C-035	#16, 2CC	TSP	SWG-01 BYPASS GATE ACTUATOR	MASTER CONTROL ENCLOSURE	R036		
C-036	#18, 7CC	CONTROL	SWG-02 BYPASS GATE ACTUATOR	MASTER CONTROL ENCLOSURE	R037		
C-037	#16, 2CC	TSP	SWG-02 BYPASS GATE ACTUATOR	MASTER CONTROL ENCLOSURE	R037		
C-038	#18, 7CC	CONTROL	IG-01 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	R038		
C-039	#16, 2CC	TSP	IG-01 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	R038		
C-040	#18, 7CC	CONTROL	IG-02 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	R039		
C-041	#16, 2CC	TSP	IG-02 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	R039		
C-042	#18, 7CC	CONTROL	IG-03 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	R040		
C-043	#16, 2CC	TSP	IG-03 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	R040		
C-044	#18, 7CC	CONTROL	IG-04 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	R041		
C-045	#16, 2CC	TSP	IG-04 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	R041		
C-046	#22, 8CC	CAT6	100A SOLAR BATTERY CHARGER	MASTER CONTROL ENCLOSURE	R042		TERMINATES AT NETWORK SWITCH
C-047	#22, 8CC	CAT6	80A SOLAR BATTERY CHARGER	MASTER CONTROL ENCLOSURE	R043		TERMINATES AT NETWORK SWITCH
C-048	#22, 8CC	CAT6	80A SOLAR BATTERY CHARGER	REMOTE CONTROL ENCLOSURE	R044		TERMINATES AT NETWORK SWITCH
C-049	#22, 8CC	CAT6	BATTERY BANK VOLTAGE MONITOR - MASTER	MASTER CONTROL ENCLOSURE	R045		TERMINATES AT NETWORK SWITCH
C-050	#22, 8CC	CAT6	BATTERY BANK VOLTAGE MONITOR - REMOTE	REMOTE CONTROL ENCLOSURE	R046		TERMINATES AT NETWORK SWITCH
C-051	#22, 8CC	CAT6	60A MICROHYDRO CHARGE CONTROLLER	REMOTE CONTROL ENCLOSURE	R047		TERMINATES AT NETWORK SWITCH
C-052	4-FIBER	SMFO	MASTER CONTROL ENCLOSURE	REMOTE CONTROL ENCLOSURE	R048	R050	TERMINATES AT EACH NETWORK SWITCH
C-053	#3, 2-1CC	POWER XLPE	PANEL DC1	CG-01 CONDUIT GATE ACTUATOR	R051		
C-054	#3, 2-1CC	POWER XLPE	PANEL DC1	CG-02 CONDUIT GATE ACTUATOR	R052		
C-055	#3, 2-1CC	POWER XLPE	PANEL DC1	CG-03 CONDUIT GATE ACTUATOR	R053		
C-056	#18, 7CC	CONTROL	CG-01 CONDUIT GATE ACTUATOR	MASTER CONTROL ENCLOSURE	R054		
C-057	#16, 2CC	TSP	CG-01 CONDUIT GATE ACTUATOR	MASTER CONTROL ENCLOSURE	R054		
C-058	#18, 7CC	CONTROL	CG-02 CONDUIT GATE ACTUATOR	MASTER CONTROL ENCLOSURE	R055		
C-059	#16, 2CC	TSP	CG-02 CONDUIT GATE ACTUATOR	MASTER CONTROL ENCLOSURE	R055		
C-060	#18, 7CC	CONTROL	CG-03 CONDUIT GATE ACTUATOR	MASTER CONTROL ENCLOSURE	R031		
C-061	#16, 2CC	TSP	CG-03 CONDUIT GATE ACTUATOR	MASTER CONTROL ENCLOSURE	R031		
C-062	#16, 2CC	TSP	LT-120 BOX CULVERT LEVEL TRANSDUCER 1	MASTER CONTROL ENCLOSURE	R027		
C-063	#16, 2CC	TSP	LT-121 BOX CULVERT LEVEL TRANSDUCER 2	MASTER CONTROL ENCLOSURE	R027		
C-064	#16, 2CC	TSP	LT-211 IG-01 LEVEL TRANSDUCER 2	REMOTE CONTROL ENCLOSURE	R032		
C-065	#16, 2CC	TSP	LT-221 IG-02 LEVEL TRANSDUCER 2	REMOTE CONTROL ENCLOSURE	R033		
C-066	#16, 2CC	TSP	LT-231 IG-03 LEVEL TRANSDUCER 2	REMOTE CONTROL ENCLOSURE	R034		
C-067	#16, 2CC	TSP	LT-241 IG-04 LEVEL TRANSDUCER 2	REMOTE CONTROL ENCLOSURE	R035		

CONDUIT SCHEDULE

ID#	CLASS	FROM	TO	SIZE	TYPE	CABLES IN CONDUIT	ROUTING TYPE	COMMENTS
R001	POWER	COB-01 SOLAR MASTER ARRAY 1 COMBINER BOX	CHG-01 100A SOLAR BATTERY CHARGER	3/4"	RGS / PVC SCH 80	C-001	SURFACE / BURIED	
R002	POWER	COB-02 SOLAR MASTER ARRAY 2 COMBINER BOX	CHG-02 80A SOLAR BATTERY CHARGER	3/4"	RGS / PVC SCH 80	C-002	SURFACE / BURIED	
R003	POWER	COB-03 SOLAR REMOTE ARRAY COMBINER BOX	CHG-03 80A SOLAR BATTERY CHARGER	3/4"	RGS / PVC SCH 80	C-003	SURFACE / BURIED	
R004	POWER	CHG-01 100A SOLAR BATTERY CHARGER	PANEL DC1	1"	RGS	C-004	SURFACE	
R005	POWER	CHG-02 80A SOLAR BATTERY CHARGER	PANEL DC1	3/4"	RGS	C-005	SURFACE	
R006	POWER	CHG-03 80A SOLAR BATTERY CHARGER	PANEL DC2	3/4"	RGS	C-006	SURFACE	
R007	POWER	PANEL DC1	MASTER CONTROL ENCLOSURE	3/4"	RGS	C-007	SURFACE	
R008	POWER	PANEL DC1	SWG-01 BYPASS GATE ACTUATOR	1"	RGS / PVC SCH 80	C-008	SURFACE / BURIED	
R009	POWER	PANEL DC1	SWG-02 BYPASS GATE ACTUATOR	1"	RGS / PVC SCH 80	C-009	SURFACE / BURIED	
R010	POWER	PANEL DC1	ROOM LIGHTING	3/4"	RGS	C-010	SURFACE	
R011	POWER	PANEL DC1	AC BATTERY CHARGER	3/4"	RGS	C-011	SURFACE	
R012	POWER	PANEL DC1	300W INVERTER WITH CONVENIENCE RECEPTACLE	3/4"	RGS	C-012	SURFACE	
R013	POWER	PANEL DC1	LITHIUM BATTERY BANK - MASTER	1 1/4"	RGS	C-013	SURFACE	
R014	POWER	PANEL DC1	HANDHOLE HH-1	2"	RGS / PVC SCH 80	C-014	SURFACE / BURIED	
R015	POWER	PANEL DC2	REMOTE CONTROL ENCLOSURE	3/4"	RGS	C-015	SURFACE	
R016	POWER	PANEL DC2	IG-01 SCREEN GATE ACTUATOR	1"	RGS / PVC SCH 80	C-016	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R017	POWER	PANEL DC2	IG-02 SCREEN GATE ACTUATOR	1"	RGS / PVC SCH 80	C-017	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R018	POWER	PANEL DC2	IG-03 SCREEN GATE ACTUATOR	1"	RGS / PVC SCH 80	C-018	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R019	POWER	PANEL DC2	IG-04 SCREEN GATE ACTUATOR	1"	RGS / PVC SCH 80	C-019	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R020	POWER	PANEL DC2	LITHIUM BATTERY BANK - REMOTE	1 1/4"	RGS	C-020	SURFACE	
R021	POWER	PANEL DC2	300W INVERTER WITH CONVENIENCE RECEPTACLE	3/4"	RGS	C-021	SURFACE	
R022	POWER	PANEL DC2	ROOM LIGHTING	3/4"	RGS	C-022	SURFACE	
R023	POWER	PANEL DC2	60A MICROHYDRO CHARGE CONTROLLER	3/4"	RGS	C-023	SURFACE	
R024	POWER	60A MICROHYDRO CHARGE CONTROLLER	MICROHYDRO TURBINES - JUNCTION BOX	1"	RGS / PVC SCH 80	C-024	SURFACE / BURIED	
R025	POWER	60A MICROHYDRO CHARGE CONTROLLER	MICROHYDRO DIVERSION RESISTOR	3/4"	RGS	C-025	SURFACE	
R026	CONTROL	LT-100 RIVER LEVEL TRANSDUCER TERMINAL BOX	MASTER CONTROL ENCLOSURE	1"	RGS / PVC SCH 80	C-026	SURFACE / BURIED	
R027	CONTROL	LT-120 & LT-121 BOX CULVERT LEVEL TRANSDUCER TERMINAL BOX	MASTER CONTROL ENCLOSURE	1"	RGS / PVC SCH 80	C-062, C-063	SURFACE / BURIED	
R028	CONTROL	LT-110 FOREBAY LEVEL TRANSDUCER TERMINAL BOX	MASTER CONTROL ENCLOSURE	1"	RGS / PVC SCH 80	C-027	SURFACE / BURIED	
R029	CONTROL	LT-200 EDB LEVEL TRANSDUCER TERMINAL BOX	REMOTE CONTROL ENCLOSURE	1"	RGS / PVC SCH 80	C-028	SURFACE / BURIED	
R030	CONTROL	LT-201 EDB LEVEL TRANSDUCER TERMINAL BOX	REMOTE CONTROL ENCLOSURE	1"	RGS / PVC SCH 80	C-029	SURFACE / BURIED	
R031	CONTROL	CG-03 BYPASS GATE ACTUATOR	MASTER CONTROL ENCLOSURE	1 1/4"	RGS / PVC SCH 80	C-060, C-061	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R032	CONTROL	LT-210 & LT-211 IG-01 LEVEL TRANSDUCERS TERMINAL BOX	REMOTE CONTROL ENCLOSURE	1"	RGS / PVC SCH 80	C-030, C-064	SURFACE / BURIED	
R033	CONTROL	LT-220 & LT-221 IG-02 LEVEL TRANSDUCERS TERMINAL BOX	REMOTE CONTROL ENCLOSURE	1"	RGS / PVC SCH 80	C-031, C-065	SURFACE / BURIED	
R034	CONTROL	LT-230 & LT-231 IG-03 LEVEL TRANSDUCERS TERMINAL BOX	REMOTE CONTROL ENCLOSURE	1"	RGS / PVC SCH 80	C-032, C-066	SURFACE / BURIED	
R035	CONTROL	LT-240 & LT-241 IG-04 LEVEL TRANSDUCERS TERMINAL BOX	REMOTE CONTROL ENCLOSURE	1"	RGS / PVC SCH 80	C-033, C-067	SURFACE / BURIED	
R036	CONTROL	SWG-01 BYPASS GATE ACTUATOR	MASTER CONTROL ENCLOSURE	1 1/4"	RGS / PVC SCH 80	C-034, C-035	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R037	CONTROL	SWG-02 BYPASS GATE ACTUATOR	MASTER CONTROL ENCLOSURE	1 1/4"	RGS / PVC SCH 80	C-036, C-037	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R038	CONTROL	IG-01 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	1 1/4"	RGS / PVC SCH 80	C-038, C-039	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R039	CONTROL	IG-02 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	1 1/4"	RGS / PVC SCH 80	C-040, C-041	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R040	CONTROL	IG-03 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	1 1/4"	RGS / PVC SCH 80	C-042, C-043	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R041	CONTROL	IG-04 SCREEN GATE ACTUATOR	REMOTE CONTROL ENCLOSURE	1 1/4"	RGS / PVC SCH 80	C-044, C-045	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R042	CONTROL	100A SOLAR BATTERY CHARGER	MASTER CONTROL ENCLOSURE	3/4"	RGS	C-046	SURFACE	
R043	CONTROL	80A SOLAR BATTERY CHARGER	MASTER CONTROL ENCLOSURE	3/4"	RGS	C-047	SURFACE	
R044	CONTROL	80A SOLAR BATTERY CHARGER	REMOTE CONTROL ENCLOSURE	3/4"	RGS	C-048	SURFACE	
R045	CONTROL	BATTERY BANK VOLTAGE MONITOR - MASTER	MASTER CONTROL ENCLOSURE	3/4"	RGS	C-049	SURFACE	
R046	CONTROL	BATTERY BANK VOLTAGE MONITOR - REMOTE	REMOTE CONTROL ENCLOSURE	3/4"	RGS	C-050	SURFACE	
R047	CONTROL	60A MICROHYDRO CHARGE CONTROLLER	REMOTE CONTROL ENCLOSURE	3/4"	RGS	C-051	SURFACE	
R048	CONTROL	MASTER CONTROL ENCLOSURE	HANDHOLE HH-1	1 1/2"	RGS / PVC SCH 80	C-052	SURFACE / BURIED	
R049	POWER	HANDHOLE HH-1	PANEL DC2	2"	RGS / PVC SCH 80	C-014	SURFACE / BURIED	
R050	CONTROL	HANDHOLE HH-1	REMOTE CONTROL ENCLOSURE	1 1/2"	RGS / PVC SCH 80	C-052	SURFACE / BURIED	
R051	POWER	PANEL DC1	CG-01 CONDUIT GATE ACTUATOR	1"	RGS / PVC SCH 80	C-053	SURFACE / BURIED	
R052	POWER	PANEL DC1	CG-02 CONDUIT GATE ACTUATOR	1"	RGS / PVC SCH 80	C-054	SURFACE / BURIED	
R053	POWER	PANEL DC1	CG-03 CONDUIT GATE ACTUATOR	1"	RGS / PVC SCH 80	C-055	SURFACE / BURIED	
R054	CONTROL	CG-01 BYPASS GATE ACTUATOR	MASTER CONTROL ENCLOSURE	1 1/4"	RGS / PVC SCH 80	C-056, C-057	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT
R055	CONTROL	CG-02 BYPASS GATE ACTUATOR	MASTER CONTROL ENCLOSURE	1 1/4"	RGS / PVC SCH 80	C-058, C-059	SURFACE / BURIED	TRANSITION TO LFMC NEAR EQUIPMENT

CABLE SIZE LEGEND:

#XX, X-XCC

- #XX: AWG SIZE OF CONDUCTORS
- X: CONDUCTOR COUNT IN BUNDLE
- X: NUMBER OF CONDUCTORS

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

CABLE AND CONDUIT SCHEDULES

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

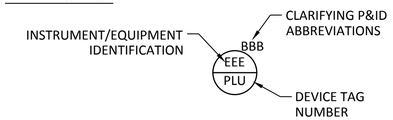
DRAWING
E111

JOB NO: 21-094

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INSTRUMENTATION / EQUIPMENT TAGS

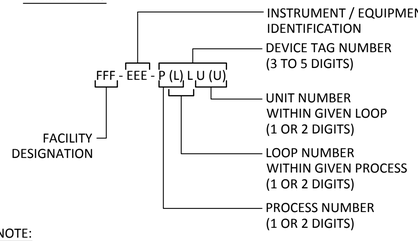
EXAMPLE SYMBOL



PROCESS NUMBER:

1
2
3
4
5
6
7
8
9

EXAMPLE TAG



NOTE:

FACILITY DESIGNATION FOR ALL INSTRUMENTS ON THIS PROJECT SHALL BE 'XXX'. THIS HAS BEEN OMITTED ON THE DRAWINGS FOR BREVITY.

GENERAL INSTRUMENT OR FUNCTIONAL SYMBOLS

	FIELD MOUNTED	PRIMARY OR PANEL MOUNTED - ACCESSIBLE (1)	PRIMARY OR PANEL MOUNTED - INACCESSIBLE (2)	SECONDARY OR MCC MOUNTED - ACCESSIBLE (1)	SECONDARY OR MCC MOUNTED - INACCESSIBLE (2)
INSTRUMENT	EEE / PLU	EEE / PLU	EEE / PLU	EEE / PLU	EEE / PLU
SHARED DISPLAY SHARED CONTROL OR HMI	EEE / PLU	EEE / PLU	EEE / PLU	EEE / PLU	EEE / PLU
INDICATING LIGHTS	EEE / PLU	EEE / PLU	N/A	EEE / PLU	N/A

(1) NORMALLY ACCESSIBLE TO OPERATOR
(2) NORMALLY INACCESSIBLE TO OPERATOR (BEHIND-THE-PANEL)

SPECIAL CASE INSTRUMENT OR FUNCTIONAL SYMBOLS

SINGLE INSTRUMENT OR OTHER COMPONENT HAVING MULTIPLE FUNCTIONS

RELAY INTERLOCK LOGIC - SEE SCHEMATICS OR SPECIFICATIONS FOR MORE INFORMATION

EEE / PLU OO — ON-OFF HAND SWITCH, MAINTAINED CONTACT (CONTROLLED DEVICE WILL RESTART ON RETURN OF POWER AFTER POWER FAILURE)

EEE / PLU SS — START-STOP HAND SWITCH, MOMENTARY CONTACT (CONTROLLED DEVICE WILL NOT RESTART ON RETURN OF POWER AFTER POWER FAILURE)

24 VDC — POWER SUPPLY (SIZE AS NOTED)

AS — AIR SUPPLY

PRIMARY ELECTRICAL POWER (120V / 60 HZ UNLESS INDICATED OTHERWISE)

INDICATES VENDOR PACKAGE

CR — CONTROL RELAY

LIGHTNING SURGE ARRESTOR

M — MOTOR

PRIMARY ELEMENT SYMBOLS

PARSHALL FLUME

WEIR

ORIFICE PLATE

FLOW TUBE

PITOT-STATIC

VORTEX METER

PROPELLER OR TURBINE METER

THERMAL FLOWMETER

LEVEL (BUBBLER TUBE)

LSH / PLU — LEVEL (FLOAT)

FI / PLU — ROTAMETER

DE / PLU — DENSITY METER

XX / PLU — GENERIC

LE / PLU — LEVEL (ULTRASONIC)

PROCESS SYMBOLS

MANUAL SLIDE TYPE GATE

H — HAND CRANK/LEVER SLIDE TYPE GATE

M — MOTORIZED SLIDE TYPE GATE

M — MOTORIZED LANGEMAN TYPE GATE

G — MICROHYDRO TURBINE GENERATOR

HAND OPERATED VALVE

INSTRUMENTATION IDENTIFICATION TABLE

FIRST LETTER			SUCCEEDING LETTER(S)		
LETTER	MEASURED INITIATING VARIABLE	VARIABLE MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT OR ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS (+)		ALARM		
B	BURNER, COMBUSTION				
C	CONDUCTIVITY			CONTROL	CLOSED
D	DENSITY (S.G.)	DIFFERENTIAL			
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	GAUGE		GLASS, GAUGE, VIEWING DEVICE	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION	MOMENTARY			MIDDLE, INTERMEDIATE
N	TORQUE		ISOLATE	ISOLATOR	
O			ORIFICE, RESTRICTION		OPEN
P	PRESSURE (VACUUM), PNEUMATIC		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION/ RESISTANCE (ELECTRICAL)		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTI VARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	INTRUSION	X-AXIS			
Y	EVENT, STATE OR PRESENCE	Y-AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z-AXIS		DRIVER, ACTUATOR, FINAL CONTROL ELEMENT	

EQUIPMENT IDENTIFICATION TABLE

ACT	ACTUATOR	P	PUMP
AFD	ADJUSTABLE FREQUENCY DRIVE	PCP	PLANT CONTROL PANEL
ATS	AUTOMATIC TRANSFER SWITCH	PFL	PRE-FILTER
CV	CHECK VALVE	PLC	PROGRAMMABLE LOGIC CONTROLLER
DCU	DISTRIBUTED CONTROL UNIT	RCT	RECTIFIER
ECP	ENVIRONMENTAL CONTROL PANEL (HVAC)	RIO	REMOTE I/O UNIT
EF	EXHAUST FAN	RTU	REMOTE TELEMETRY UNIT
FCP	FIRE ALARM SYSTEM CONTROL PANEL	SEC	SECURITY CONTROL PANEL
FIL	FILTER	SHG	SODIUM HYPOCHLORITE GENERATOR
FOR	FIBER OPTIC REPEATER	STR	STRAINER
FOT	FIBER OPTIC TRANSCEIVER	TNK	TANK
GEN	GENERATOR	UPS	UNINTERRUPTABLE POWER SUPPLY
HMI	HUMAN-MACHINE INTERFACE	UVR	UV REACTOR
LCP	LOCAL CONTROL PANEL	V	VALVE
LCS	LOCAL CONTROL STATION	VCP	VENDOR CONTROL PANEL
MCC	MOTOR CONTROL CENTER	VFD	VARIABLE FREQUENCY DRIVE
MCP	MAIN CONTROL PANEL	VSP	VENDOR SUPPLIED PANEL
MOV	MOTOR OPERATED VALVE	WS	WATER SOFTENER
MS	MOTOR STARTER	YLT	EVENT PILOT LIGHT
MTR	MOTOR	ZZK	SECURITY GATE INTERFACE

INSTRUMENTATION LINE SYMBOLOGY

PRIMARY PROCESS (CLOSED CONDUIT, DASHED LINE INDICATES ALTERNATE FLOW STREAM)

PRIMARY PROCESS (OPEN CHANNEL)

ANALOG SIGNAL, (4 TO 20 mAdc, ECT)

DISCRETE SIGNAL, (ON/OFF, ECT)

PNEUMATIC SIGNAL

FILLED SYSTEM SIGNAL

HYDRAULIC SYSTEM SIGNAL

DIGITAL DATA LINK

PACKAGE SYSTEM EQUIPMENT

STRUCTURE/FACILITY BOUNDARY

CABLE FURNISHED WITH EQUIPMENT

M — MECHANICAL POWER/LINKAGE

E — ELECTRICAL POWER

PARALLELING LINES

(2) (A) (B) 3 (2)

(A) TOTAL OF 2 SIGNALS

(B) 3 TYPICAL SETS OF 2 SIGNALS EACH. TOTAL OF 6 SIGNALS.

CONNECTING LINES

NON-CONNECTING LINES

SYSTEM CONTINUATION INTERFACES

GG | ISSS — SIGNAL INTERFACE — GG | IDDD

HH | ISSS — PROCESS INTERFACE — HH | IDDD

INTERFACE TO OR FROM PROCESS EXTERNAL TO PROJECT

N — PROCESS OR SIGNAL LINE ON-SHEET CONTINUATION N=1,2,3,ETC — N

GG SIGNAL INTERFACE NO.
HH PROCESS INTERFACE NO.
DDD DESTINATION DRAWING NO.
SSS SOURCE DRAWING NO.

SIGNAL SYSTEM INTERFACES

AA / PLU — ANALOG INPUT

AA / PLU — ANALOG OUTPUT

AA / PLU / X — DISCRETE INPUT

AA / PLU / X — DISCRETE OUTPUT

AA / PLU / YY — DIGITAL DATA SIGNAL

AA = I/O DESIGNATION

YY = DIGITAL PROTOCOL

X: H-MAINTAINED/LATCHING
M = MOMENTARY/FOLLOWER

ANALOG I/O DESIGNATORS

CR	CHLORINE RESIDUAL
DP	DIFFERENTIAL PRESSURE
FL	FLOW
LE	LOWER EXPLOSIVE LIMIT
LV	LEVEL
MO	MANIPULATED OUTPUT
PH	ACIDITY
PO	POSITION
PR	PRESSURE
PV	PROCESS VARIABLE
SP	SPEED
TE	TEMPERATURE
TU	TURBIDITY

DIGITAL PROTOCOL DESIGNATORS

DN	DEVICENET
IP	ETHERNET /IP
MB	MODBUS RTU
PB	PROFIBUS
PL	PARALLEL
SL	SERIAL
TC	MODBUS TCP

DISCRETE I/O DESIGNATORS

AM	AUTO-MANUAL
AU	AUTO
CL	CLOSED
EN	ENABLE
EL	POWER AVAILABLE
FA	FIRE ALARM
FW	FORWARD / REVERSE
HH	HI-HI LEVEL
HI	HI LEVEL
LL	LOW-LOW LEVEL
LO	LOW LEVEL
MN	MANUAL
OO	ON-OFF
OP	OPEN
RB	RUN BOOSTER
RC	RUN CLOSED
RE	REMOTE
RF	RUN FORWARD
RG	RUNNING
RN	RUN-STOP
RO	RUN-OPEN
RR	RUN-REVERSE
RV	REVERSE
YA	FAULT
SU	SUPERVISORY
SW	SELECTION
TR	TROUBLE

P&ID ABBREVIATIONS

AC	ALTERNATING CURRENT
AM	AUTO-MANUAL
COD	CHEMICAL OXYGEN DEMAND
DEV	DEVIATION
DC	DIRECT CURRENT
DCS	DISTRIBUTED CONTROL SYSTEM
ECS	ENVIRONMENTAL CONTROL SYSTEM (HVAC)
EPO	EMERGENCY POWER OFF
FAS	FIRE ALARM SYSTEM
FOC	FIBER OPTIC CABLE
FOS	FAST-OFF-SLOW
FOSA	FAST-OFF-SLOW-AUTO
FOSR	FAST-OFF-SLOW-REMOTE
HI	HIGH
HML	HIGH-MID-LOW
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
ISR	INTRINSICALLY SAFE RELAY
LEL	LOWER EXPLOSIVE LIMIT
LO	LOW
LOR	LOCAL-OFF-REMOTE
LOS	LOCKOUT STOP
LR	LOCAL-REMOTE
MC	MODULATE-CLOSE
MOA	MANUAL-OFF-AUTO
MSC	MANUFACTURER SUPPLIED CABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OC	OPEN-CLOSE(D)
OCA	OPEN-CLOSE-AUTO
OCR	OPEN-CLOSE-REMOTE
OI	OPERATOR INTERFACE
OO	ON-OFF
OOA	ON-OFF-AUTO
OOR	ON-OFF-REMOTE
ORP	OXIDATION REDUCTION POTENTIAL
OSC	OPEN-STOP-CLOSE
PC	PERSONAL COMPUTER
PCS	PLANT CONTROL SYSTEM
pH	HYDROGEN ION CONCENTRATION
PID	PROPORTIONAL INTEGRAL DERIVATIVE CONTROL
POT	POTENTIOMETER
RC	RUN CLOSE
RO	RUN OPEN
RL	RAISE-LOWER
RM	REMOTE MULTIPLEXING MODULE
RSL	RAISE-STOP-LOWER
RVSS	REDUCED VOLTAGE SOLID-STATE STARTER
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SEL	SELECT
SET	SET POINT
SF	SLOWER-FASTER
SHC	SODIUM HYPOCHLORITE
SR	START-RESET
SS	START-STOP
SSC	SUPERVISORY SET POINT CONTROL
ST	START
SW	SEAL WATER
TC	THERMOCOUPLE
TCR	TOTAL CHLORINE RESIDUAL
TEMP	TEMPERATURE
TSP	TWISTED SHIELD PAIR
TURB	TURBIDITY
VHC	VOLATILE HYDROCARBONS
VIB	VIBRATION
VSP	VENDOR SUPPLIED PANEL
VTO	VENT TO OUTSIDE
WSEL	WATER SURFACE ELEVATION

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

PROCESS & INSTRUMENTATION LEGEND

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
GI001

JOB NO: 21-094

Path: C:\Users\JoeNeves\DC\ACCDocs\McMillen Inc\CSKT Jocko Diversion\Project Files\Drawings\21-094_Jocko TFD_GI001.dwg Plot date: Feb 11, 2025 04:50pm, CAD User: JoeNeves

PLC/SCADA

LOCAL CONTROL

LOCAL DEVICES

LI LI ZC ZI ZC ZI ZC ZI ZC ZI ZC ZI LI LI

ACTUATOR CONTROLLER ACTUATOR CONTROLLER ACTUATOR CONTROLLER ACTUATOR CONTROLLER ACTUATOR CONTROLLER

SHEET NOTES:

1. CONTRACTOR'S INTEGRATOR TO ASSIGN PLC AND P&ID DEVICE TAG NUMBERS.

TRASH RACK

NORTH FORK JOCKO RIVER

FOREBAY

LT 100

LT 110

M ZT CG-01

M ZT CG-02

M ZT CG-03

LT 120

LT 121

BOX CULVERT

I002 - A

M ZT SWG-01

M ZT SWG-02

SLUICEWAY CHANNEL

ROUGHENED CHANNEL

NORTH FORK JOCKO RIVER

I002 - B

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

PROCESS & INSTRUMENTATION DIAGRAM 1

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
I001

JOB NO: 21-094

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PLC/SCADA

LOCAL CONTROL

LOCAL DEVICES

LI LI ZC ZI LI LI ZC ZI LI LI ZC ZI LI LI ZC ZI LI LI YA JI

ACTUATOR CONTROLLER

ACTUATOR CONTROLLER

ACTUATOR CONTROLLER

ACTUATOR CONTROLLER

CHARGE CONTROLLER

M ZT LT 210 LT 211

IG-01

SCREEN 1

FISH RETURN PIPE 1

SCREENING STRUCTURE

I001-A

LT 200 LT 201

M ZT LT 220 LT 221

IG-02

SCREEN 2

FISH RETURN PIPE 2

MICROHYDRO TURBINE GENERATORS (550W OUTPUT TOTAL)

G

MH-01

SEDIMENT DRAIN

M ZT LT 230 LT 231

IG-03

SCREEN 3

FISH RETURN PIPE 3

G

MH-02

M ZT LT 240 LT 241

IG-04

SCREEN 4

FISH RETURN PIPE 4

G

MH-03

TABOR FEEDER CANAL

I001-B

NORTH FORK JOCKO RIVER

SHEET NOTES:

1. CONTRACTOR'S INTEGRATOR TO ASSIGN PLC AND P&ID DEVICE TAG NUMBERS.

REV	DATE	BY	DESCRIPTION
D	02/14/25	JPB	DRAFT 100% DESIGN
C	08/14/24	JPB	DRAFT 90% DESIGN
B	01/19/24	JPB	DRAFT 60% DESIGN
A	10/24/22	JPB	DRAFT 30% DESIGN

PRELIMINARY
NOT FOR CONSTRUCTION

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

McMillen

CONFEDERATED SALISH AND KOOTENAI TRIBES

NF JOCKO RIVER REHABILITATION - TABOR FEEDER DIVERSION

PROCESS & INSTRUMENTATION DIAGRAM 2

DESIGNED M. CHAN
DRAWN J. NEVES
CHECKED J. BAKKEN
PROJECT DATE 02/14/25

DRAWING
I002

JOB NO: 21-094

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