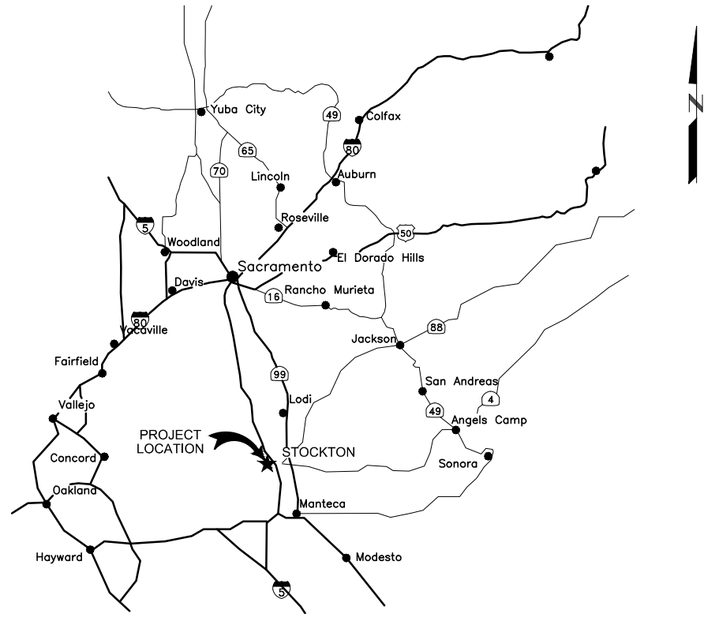
Contract Drawings For

San Joaquin Area Flood Control Agency

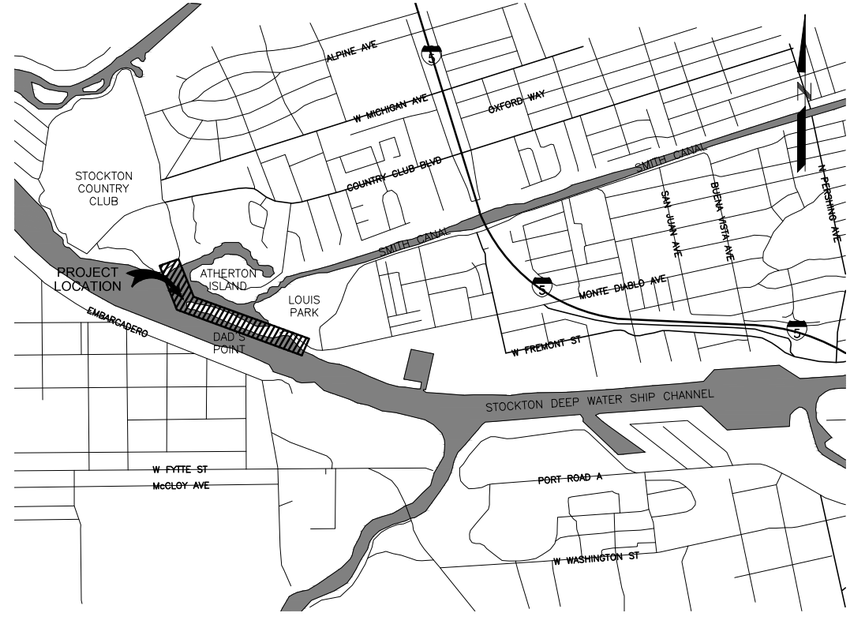
SMITH CANAL GATE PROJECT

65% DESIGN
NOT FOR CONSTRUCTION
JUNE, 2017

PRELIMINARY



LOCATION MAP
NTS



VICINITY MAP
NTS

65% SUBMITTAL - NOT FOR CONSTRUCTION

SAN JOAQUIN AREA FLOOD CONTROL AGENCY:

Roger Churchwell — Date
Director of Engineering

RECLAMATION DISTRICT 1614

Christopher Neudeck — Date

RECLAMATION DISTRICT 828

Christopher Neudeck — Date

PETERSON BRUSTAD INC.

David A. Peterson, RCE No. C43432 — Date

HDR ENGINEERING:

Kenny Dosanjh, RCE No. C72288 — Date
HDR Engineering

Kevin Gerst, RSE No. S6262 — Date
HDR Engineering

Kris Balaji — Date
Director of Public Works
San Joaquin County Flood Control and Water Conservation District

CALL BEFORE YOU DIG 800-227-2600

WARNING: CONTRACTOR TO USE EXTREME CAUTION. EXACT DEPTH AND LOCATION OF UNDERGROUND UTILITIES ARE UNKNOWN. CONTRACTOR TO FIELD VERIFY LOCATIONS AND DEPTH OF EXISTING UTILITIES PRIOR TO CONSTRUCTION AND SHALL NOTIFY ENGINEER OF ANY CONFLICT. CONTRACTOR SHALL CALL USA AT 1-800-227-2600 AT LEAST TWO WORKING DAYS BEFORE DIGGING.

REV	DATE	BY	DESCRIPTION

SCALE: NTS

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN WAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 R.C.E. NO. — 3/31/19 EXP. DATE
PROJECT ENGINEER

DAVID A. PETERSON, PE — 43432 R.C.E. NO. — 6/30/18 EXP. DATE
PROJECT MANAGER

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

TITLE SHEET

SHEET G-001

SHEET 01 OF __

SHEET INDEX

GENERAL:

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G-004	LEGEND AND SYMBOLS
G-005	GENERAL NOTES AND LIST OF PROJECT CONTACTS
G-006	PROJECT OVERVIEW
G-007	PROJECT EASEMENTS
G-008	STAGING AREAS AND HAUL ROUTES

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CIVIL:

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M-303	MECHANICAL DETAILS 3
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E-106	CONTROL STAND AND SIREN DETAILS
E-107	SITE LIGHTING LAYOUT
E-108	LIGHTING DETAILS

NOTES:

1. BOLD SHEETS INCLUDED IN CURRENT 65% PLAN SET.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

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ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
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SMITH CANAL GATE PROJECT

SHEET INDEX

SHEET G-002

SHEET 02 OF __

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

GENERAL NOTES:

1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY THAT ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF A WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION; "INC" MAY MEAN INCLUDED OR INCLUDING AND "REINF" MAY MEAN EITHER REINFORCE OR REINFORCING.
4. SEE INSTRUMENTATION LEGEND SHEET FOR PROJECT-SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: NTS

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
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Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

ABBREVIATIONS

SHEET G-003

SHEET 03 OF __

SITE PLAN SYMBOLOGY

- EMBANKMENT SLOPE
- 50.5 — CONTOUR
- EXISTING GRADE
- VEGETATION
- CO CLEAN OUT
- MH MANHOLE
- MW MONITORING WELL
- PZ PIEZOMETER
- CB STORM DRAIN CATCH BASIN
- UV UTILITY VAULT
- PP POWER POLE
- TP TELEPHONE POLE
- FIRE HYDRANT
- WH WHARF HYDRANT
- × 75.5 EXISTING SPOT ELEVATION
- 75.8 FINISHED SPOT ELEVATION
- HORIZONTAL CP–X, CONTROL POINT
- BENCHMARK
- TH–"X" IDENTIFICATION AND APPROXIMATE LOCATION OF SOIL TEST HOLE
- GUYWIRE

NOTES:

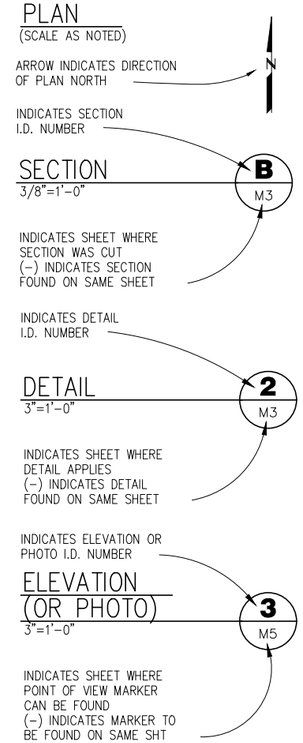
UTILITIES THAT ARE SUSPENDED ABOVE GRADE ARE DESIGNATED BY THE PREFIX "OH".

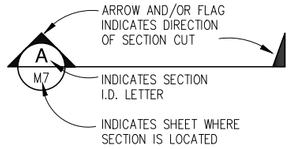
- T — TELEPHONE LINE
- E — ELECTRIC LINE
- F/O — F/O — FIBER OPTIC
- GAS — GAS LINE
- OHE — OVERHEAD ELECTRIC LINE
- W — WATER LINE
- SS — SEWER LINE
- SD — STORM DRAIN LINE
- PIPELINE
- LARGE PIPELINE
- PIPELINE BENEATH CONCRETE OR STRUCTURE
- DRAINAGE FLOW
- NATURAL WATERWAY
- x — CHAIN LINK FENCE
- PROPERTY LINE
- CENTERLINE
- RB ROCK BERM
- SF SILT FENCE
- EDGE OF PAVEMENT

MATERIALS IN PLAN/SECTION

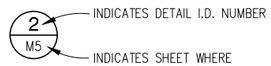
- DEMOLITION (FEATURES AS INDICATED ON PLANS)
- CONCRETE
- TURF BLOCK
- AGGREGATE BASE
- SAND (IN SECTION)
- EARTH
- METAL (SECTION)
- GRATING (PLAN)
- CHECKERED PLATE
- RIGID INSULATION
- BATT INSULATION
- ACCOUSTICAL INSULATION
- RIP RAP
- ENGINEERED FILL

GENERAL SYMBOLOGY

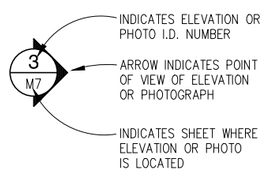




SECTION CUT MARKER



DETAIL MARKER



ELEVATION OR PHOTO MARKER

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: NTS

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — PROJECT ENGINEER — 86512 R.C.E. NO. — 3/31/19 EXP. DATE

DAVID A. PETERSON, PE — PROJECT MANAGER — 43432 R.C.E. NO. — 6/30/18 EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

LEGENDS AND SYMBOLS

SHEET G-004

SHEET04 OF __

BASIS OF DESIGN

1. BASIS OF DESIGN UTILIZED FOR THIS DRAWING SET IS PROVIDED BY PBI AND HDR, INC IN THE FOLLOWING DOCUMENT:

   A. DRAFT BASIS OF DESIGN, SAN JOAQUIN AREA FLOOD CONTROL AGENCY (SJAFCA) – SMITH CANAL FLOODWALL AND CONTROL STRUCTURE DESIGN, STOCKTON, CA, DATED JUNE 29, 2016.

2. GEOTECHNICAL INFORMATION USED FOR THIS DRAWING SET WAS PROVIDED BY KLEINFELDER, INC. IN THE FOLLOWING DOCUMENT:

   A. GEOTECHNICAL DATA REPORT, SMITH CANAL PROJECT ALTERNATIVE #1, GATE STRUCTURE AND DUAL SHEETPILE FLOODWALL, STOCKTON, CA, DATED FEBRUARY 2, 2016.

   B. DAD'S POINT GEOTECHNICAL REPORT, DATED MARCH 15, 2010.

3. THE DESIGN WATER SURFACE ELEVATION USED TO ESTABLISH THE TOP OF SHEET PILE WALL ELEVATION WAS PROVIDED BY PETERSON BRUSTAD, INC. IN THE FOLLOWING DOCUMENT:

   A. SMITH CANAL GATE, HYDRODYNAMIC MODELING, ALIGNMENT AND GATE WIDTH EVALUATION, FINAL REPORT, DATED FEBRUARY 24, 2015.

4. THE TOPOGRAPHIC INFORMATION USED IN THE DEVELOPMENT OF THIS DRAWING SET WAS PROVIDED BY KJELDSEN, SINNOCK & NEUDECK, INC. THE BATHYMETRIC SURVEY WAS PERFORMED ON JANUARY 21, 2016 FOR KSN BY eTRAC, INC, 737 LINDARO STREET SAN RARAEL, CA 94901. THE AERIAL PHOTOGRAPHY WAS ACQUIRED ON JANUARY 27, 2016.

5. SEISMIC ANALYSIS IS STILL IN PROGRESS AND WAS NOT INCLUDED AS PART OF THIS SUBMITTAL. IT WILL BE INCLUDED AT 95% AND MAY POTENTIALLY NECESSITATE DESIGN CHANGES.

CONTRACT REPRESENTATIVES

PUBLIC / UTILITY SERVICE	RESPONSIBLE ENTITY	REPRESENTATIVE	TELEPHONE
UNDERGROUND ALERT	USA	---	800-227-2600
AGENCY	SJAFCA	JAMES GIOTIONINI	209-937-8339
AGENCY (O&M)	RD 1614	CHRISTOPHER NEUDECK	209-946-0268
AGENCY (O&M)	RD 828	CHRISTOPHER NEUDECK	209-946-0268
PROJECT MANAGER	PBI	DAVE PETERSON	916-608-2212
PROJECT MANAGER	PBI	ASHLEY MARTIN	916-608-2212
DESIGN ENGINEER – CIVIL	HDR	JASON NETTLETON	916-817-4700
DESIGN ENGINEER – GATE	HDR	KEVIN GERST	916-817-4700
DESIGN ENGINEER – FLOODWALL	HDR	KENNY DOSANJH	916-817-4700
DESIGN ENGINEER – GEOTECHNICAL	HDR	GARRETT HARRIS	916-817-4700
DESIGN ENGINEER – MECHANICAL	HDR	MATT MCGUIRE	503-423-3700
DESIGN ENGINEER – ELECTRICAL	HDR	MEGAN TATARA	503-423-3700
GEOTECHNICAL ENGINEER	KLEINFELDER, INC.	CARL HENDERSON	209-948-1345
HABITAT MANAGER			
NATURAL GAS	PACIFIC GAS AND ELECTRIC CO.		
ELECTRICITY	PACIFIC GAS AND ELECTRIC CO.		
TELEPHONE	AT&T		
SEWER/WATER/DRAINAGE	CITY OF STOCKTON	ROSA ALUBREZ	209-937-8134
CONSTRUCTION MANAGER	AECOM		
TRANSPORTATION	CITY OF STOCKTON		
ENVIROMENTAL COMPLIANCE PERMIT LEAD	ICF	ANDREW HUMPHREY	916-737-3000
CEQA/NEPA LEAD	ICF	MEGAN SMITH	916-737-3000

NOTE:

ADMINISTRATION OF ALL WORK PERFORMED BY THE CONTRACTOR SHALL COMPLY WITH THE GENERAL SPECIFICATIONS.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: NTS

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — PROJECT ENGINEER — 86512 R.C.E. NO. — 3/31/19 EXP. DATE

DAVID A. PETERSON, PE — PROJECT MANAGER — 43432 R.C.E. NO. — 6/30/18 EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

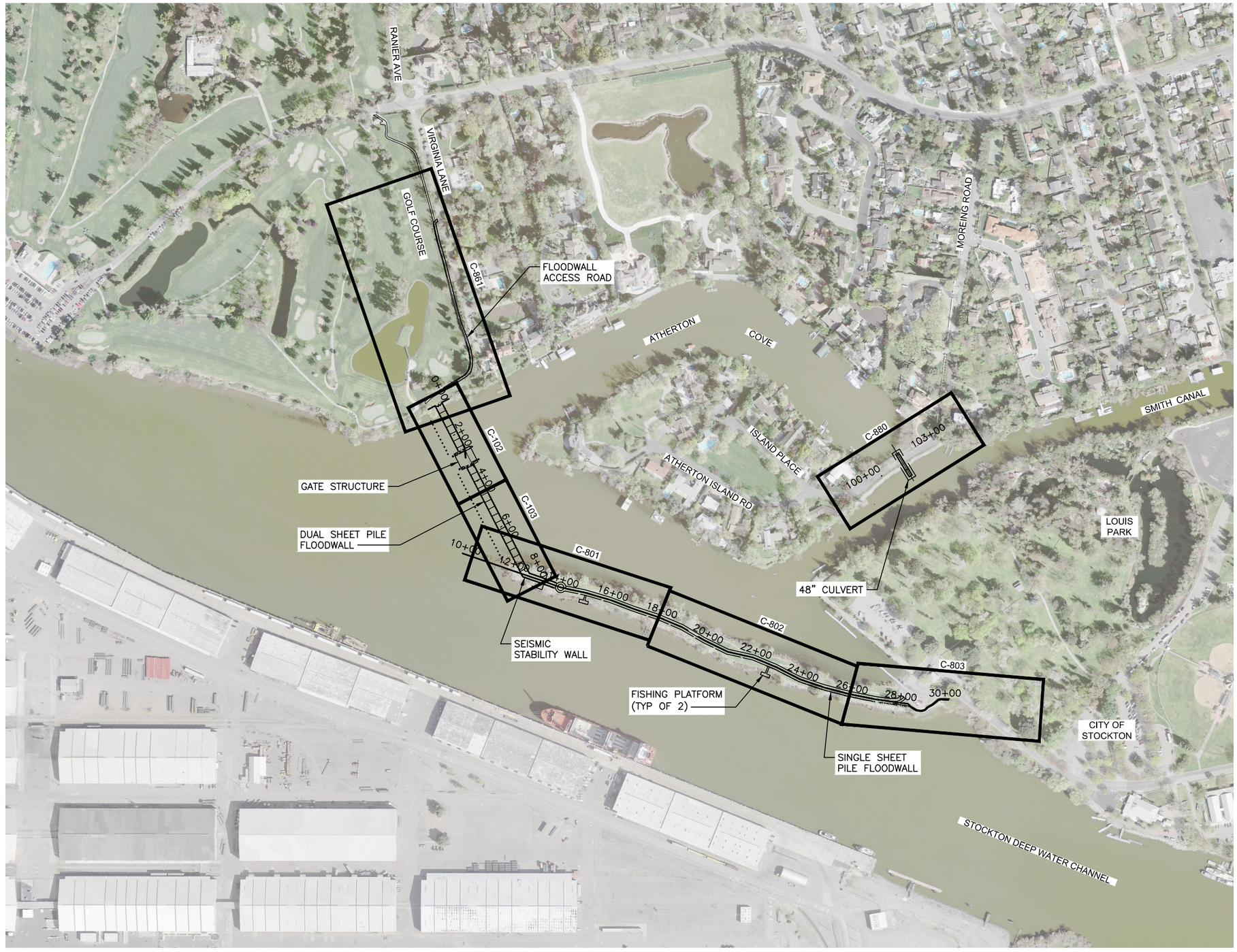
PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

GENERAL NOTES AND
LIST OF PROJECT CONTRACTS

SHEET G-005

SHEET 05 OF __



65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1"=200'

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — PROJECT ENGINEER — 86512 R.C.E. NO. — 3/31/19 EXP. DATE

DAVID A. PETERSON, PE — PROJECT MANAGER — 43432 R.C.E. NO. — 6/30/18 EXP. DATE

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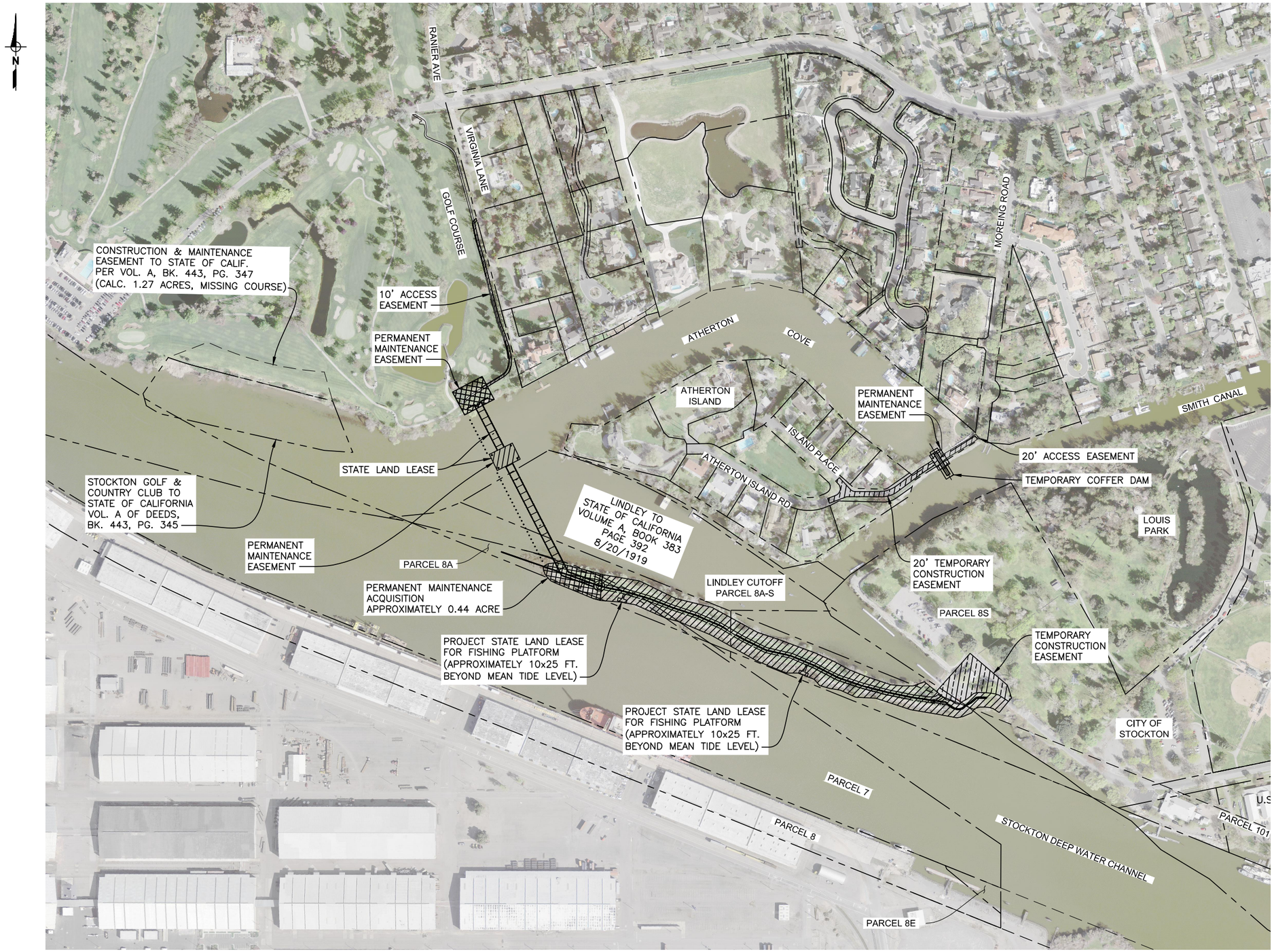
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

PROJECT OVERVIEW

SHEET G-006

SHEET OF __

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65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1"=200'

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

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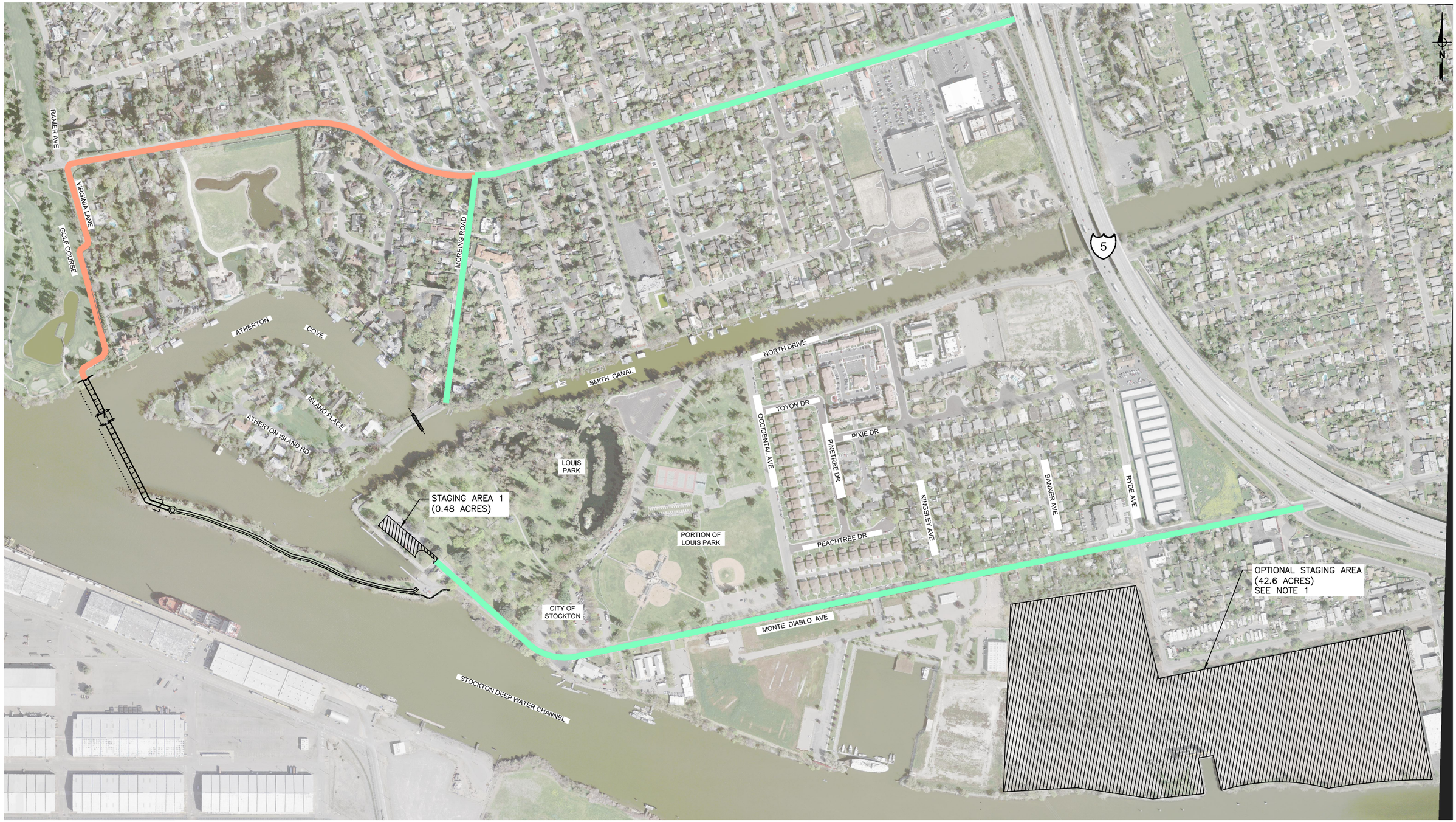
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

PROJECT EASEMENTS

SHEET G-007

SHEET OF __

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LIGHT TRAFFIC ONLY

HAUL ROUTE

NOTES:
1. CONTRACTOR RESPONSIBLE FOR ESTABLISHING APPROPRIATE RIGHTS TO USE SITE AND ENSURING PROPER PERMITS. THE CONTRACTOR MUST COMPLY WITH ALL NECESSARY APPROVALS.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1"=250'

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

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Folsom, CA 95630
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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

STAGING AREAS AND HAUL ROUTES

SHEET G-008 SHEET OF __

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TABLE				
POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
401	2171294.09	6318038.96	18.87	SET PK NAIL AND SHINNER, PAINTED FLIGHT PANEL
402	2171570.18	6317303.22	10.05	SET CHISLED "X", PAINTED FLIGHT PANEL
403	2171950.74	6316363.14	15.57	SET PK NAIL AND SHINNER, PAINTED FLIGHT PANEL
404	2172031.85	6316002.52	13.80	SET PK NAIL AND SHINNER, PAINTED FLIGHT PANEL
405	2172075.88	6318288.28	8.10	SET HUT AND TACK, CLOCK FLIGHT PANEL
406	2172538.52	6317603.24	10.61	SET PK NAIL AND SHINNER, PAINTED FLIGHT PANEL
407	2173085.33	6315671.46	4.98	SET HUT AND TACK, CLOCK FLIGHT PANEL
408	2172633.51	6315511.64	17.88	SET HUT AND TACK, CLOCK FLIGHT PANEL
409	2173110.86	6314728.25	8.07	SET HUT AND TACK, CLOCK FLIGHT PANEL
410	2173590.98	6314862.32	7.67	SET HUT AND TACK, CLOCK FLIGHT PANEL
411	2173932.13	6315974.91	2.73	SET PK NAIL AND SHINNER, PAINTED FLIGHT PANEL
412	2174170.65	6317135.48	1.47	SET PK NAIL AND SHINNER, PAINTED FLIGHT PANEL
413	2173528.19	6318541.20	1.33	SET PK NAIL AND SHINNER, PAINTED FLIGHT PANEL
502	2171542.69	6317623.37	13.29	SET PK NAIL AND WASHER, SET AT DAD'S POINT BOAT LAUNCH ON WEBB TRACT, ON TOP OF BACK OF WALK AT THE ADA RAMP, 9.3' NORTHERLY OF A ADA PARKING SIGN

NOTES:

1. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD 83) CONVERTED TO THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 3 (CCS83-3) AS REFERENCED BY AVAILABLE CITY OF STOCKTON AND NGS PUBLISHED CONTROL MONUMENTS.

2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AS REFERENCED BY AVAILABLE CITY OF STOCKTON AND NGS BENCHMARKS. UNITS SHOWN ARE BASED ON THE U.S. SURVEY FOOT, EPOCH DATE 1991.35 ADJUSTMENT. ALL COORDINATES AND DISTANCES ARE GRID, TO CONVERT GRID DISTANCES TO GROUND, MULTIPLY BY 1.00005972.

3. BATHYMETRIC SURVEY WAS PERFORMED FOR KSN BY
   eTRAC, INC.
   737 LINDARO STREET
   SAN RAFAEL, CA 94901

   THIS BATHYMETRIC SURVEY WAS PREPARED FOR THE DESIGN OF THE SMITH CANAL GATE CLOSURE STRUCTURE IMPROVEMENT PLANS (SURVEY DATE JANUARY 21, 2016).

4. AERIAL PHOTOGRAPHY WAS PERFORMED FOR KSN BY
   AERIAL PHOTOMAPPING SERVICES
   2921 LARKIN AVE.
   CLOVIS, CA. 93612

   DATE OF PHOTOGRAPHY: 1-27-16
   MAP SCALE: 1"=40'
   CONTOUR INTERVAL: 1'
   THIS MAP CONFORMS TO NATIONAL MAP ACCURACY STANDARDS FOR THE SCALE AND C.I. NOTED JOB #201605

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1"=400'

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

SURVEY CONTROL MAP

SHEET V-001 SHEET OF __

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GROUP SYMBOLS AND NAMES

Graphic	Group Names	Graphic	Group Names	Graphic	Group Names	Graphic	Group Names
	Lean Clay (CL)		Lean Clay with Sand (CL)		Lean Clay with Gravel (CL)		Sandy Fat Clay (CH)
	Sandy Lean Clay (CL)		Sandy Lean Clay with Gravel (CL)		Gravelly Lean Clay (CL)		Sandy Clayey Silt (ML/CL)
	Gravelly Lean Clay with Sand (CL)		Fat Clay (CH)		Fat Clay with Sand (CH)		Sandy Elastic Silt (MH)
	Silty Clay (CL-ML)		Silty Clay with Sand (CL-ML)		Sandy Silty Clay (CL-ML)		Poorly Graded Sand with Clay and Gravel (SP-SC)
	Silt (ML)		Silt with Sand (ML)		Sandy Silt (ML)		Silty Gravel (GM)
	Sandy Silt with Gravel (ML)		Gravelly Silt (ML)		Gravelly Silt with Sand (ML)		Clayey Silt (ML/CL)
	Elastic Silt (MH)		Elastic Silt with Sand (MH)		Poorly Graded Sand (SP)		Lean to Fat Clay (CL/CH)
	Poorly Graded Sand with Gravel (SP)		Poorly Graded Sand with Clay (SP-SC)		Poorly Graded Sand with Silty Clay (SP-SC)		Sandy Silty Clay to Clayey Silt (CL/ML)
	Poorly Graded Sand with Silt (SP-SM)		Poorly Graded Sand with Silt and Gravel (SP-SM)		Well-Graded Sand (SW)		Sandy Clayey Silt (ML/CL)
	Well-Graded Sand with Gravel (SW)		Well-Graded Sand with Clay (SW-SC)		Well-Graded Sand with Clay and Gravel (SW-SC)		
	Well-Graded Sand with Silt (SW-SM)		Well-Graded Sand with Silt and Gravel (SW-SM)		Clayey Sand (SC)		
	Clayey Sand with Gravel (SC)		Silty Sand (SM)		Silty Sand with Gravel (SM)		
	Poorly Graded Gravel (GP)		Poorly Graded Gravel with Sand (GP)		Poorly Graded Gravel with Clay (GP-GC)		
	Poorly Graded Gravel with Clay and Sand (GP-GC)		Poorly Graded Gravel with Silt (GP-GM)		Poorly Graded Gravel with Silt and Sand (GP-GM)		
	Well-Graded Gravel (GW)		Well-Graded Gravel with Sand (GW)		Well-Graded Gravel with Clay (GW-GC)		
	Well-Graded Gravel with Clay and Sand (GW-GC)		Well-Graded Gravel with Silt (GW-GM)		Well-Graded Gravel with Silt and Sand (GW-GM)		
	Clayey Gravel (GC)		Clayey Gravel with Sand (GC)		Silty Gravel with Sand (GM)		

OTHER SYMBOLS

	Asphalt		Boulders and Cobbles		Fill

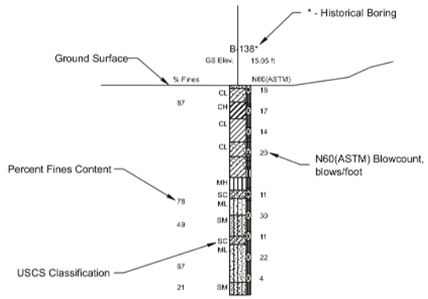
Note: Soils were classified in the field in general accordance with ASTM D2488, Standard Practice for Description and Identification of Soils (Visual Manual Procedure). Where laboratory testing was performed, classifications were modified in general accordance with ASTM D2487, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).

Borderline symbols, two group symbols seperated by a slash, may be used in field visual classification when (1) percentage of fines is estimated to be between 45% and 55%, (2) percentages of sand and gravel are estimated to be about the same, (3) soil could be either well graded or poorly graded, (4) soil could be either a silt or a clay, (5) fine-grained soil has properties indicating that it is at the boundary between low and high plasticity. Refer to DWR Soil and Rock Logging Classification, and Presentation Manual for guidelines in the use of borderline symbols.

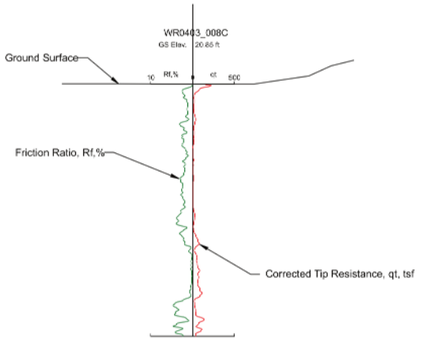
SAMPLER GRAPHIC SYMBOLS

	Standard Penetration Test (1.4 in. ID)		
	Standard California (2.5 in. ID)		
	Modified California (2.0 in. ID)		
	Shelby Tube (2.87 in. ID)		
	Punch Core		Sonic Core
	Dry Core		Bag Sample

Boring Information



Cone Penetrometer Test Information



LEGEND:

- KLEINFELDER (2015) BORING LOCATION
- DWR (2009) BORING LOCATION
- DWR (2009) CPT LOCATION

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED JN
DRAWN AJ
CHECKED —

JASON NETTLETON, PE — PROJECT ENGINEER — C73184 R.C.E. NO. — 12/31/18 EXP. DATE

WES JACOBS, PE — PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

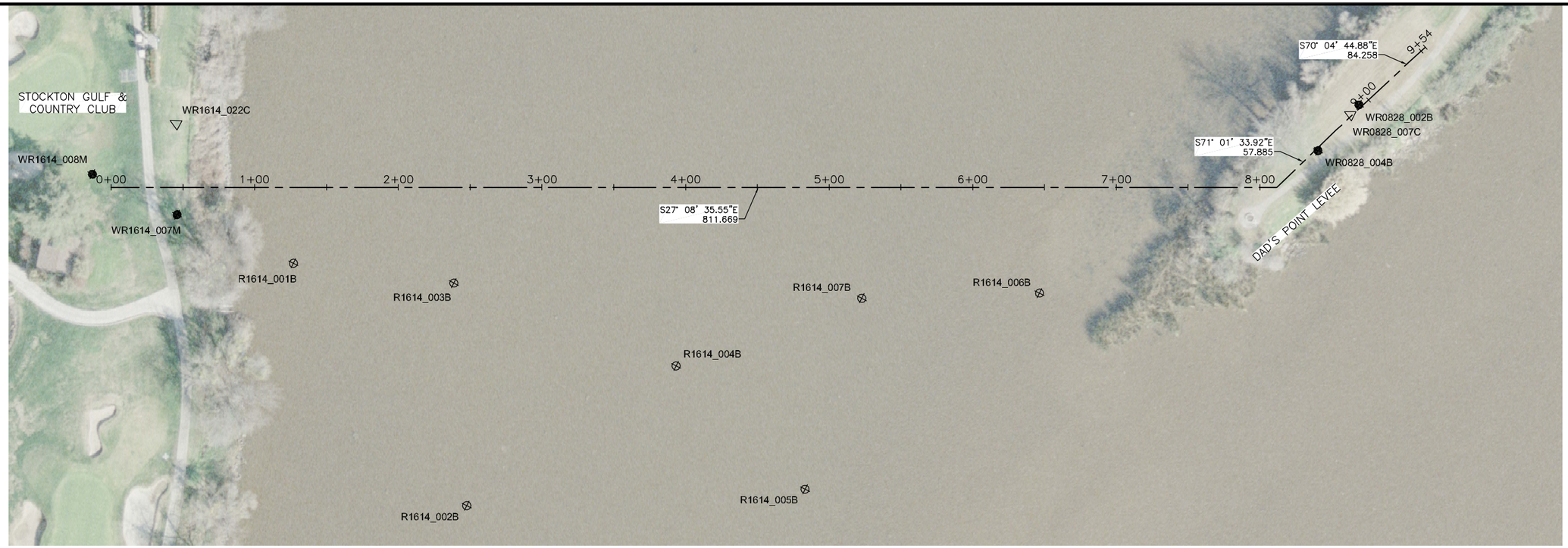
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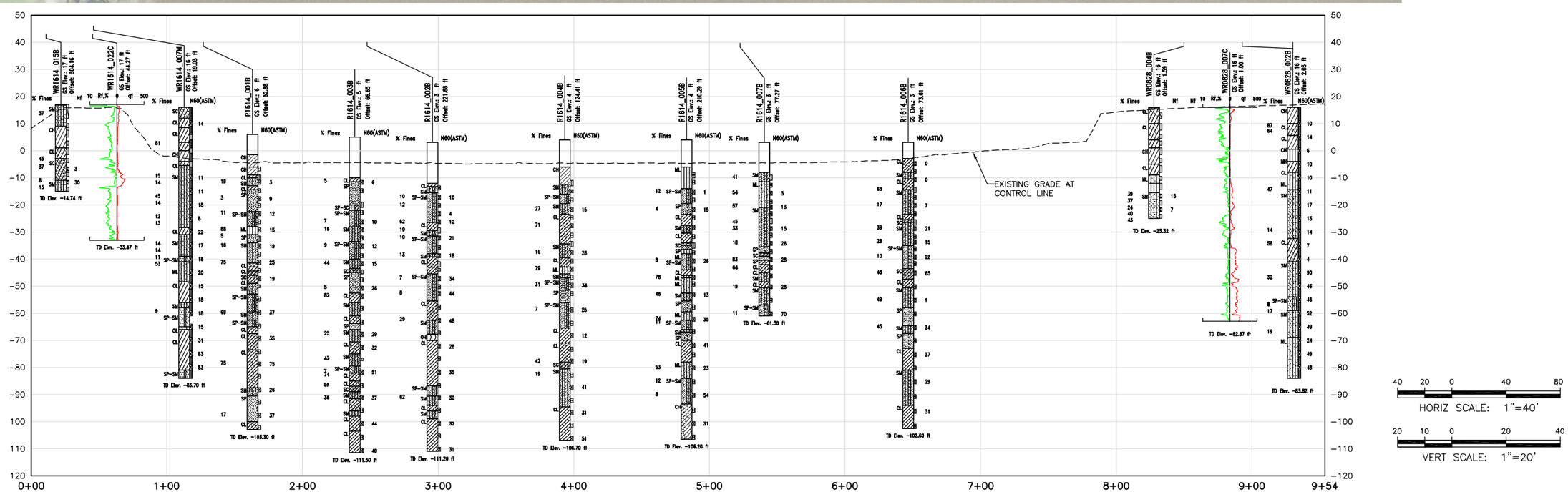
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

BORING LOG LEGEND

SHEET B-001

SHEET 11OF 109





HORIZ SCALE: 1"=40'

VERT SCALE: 1"=20'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

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DATE: JUNE 2017

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WES JACOBS, PE
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

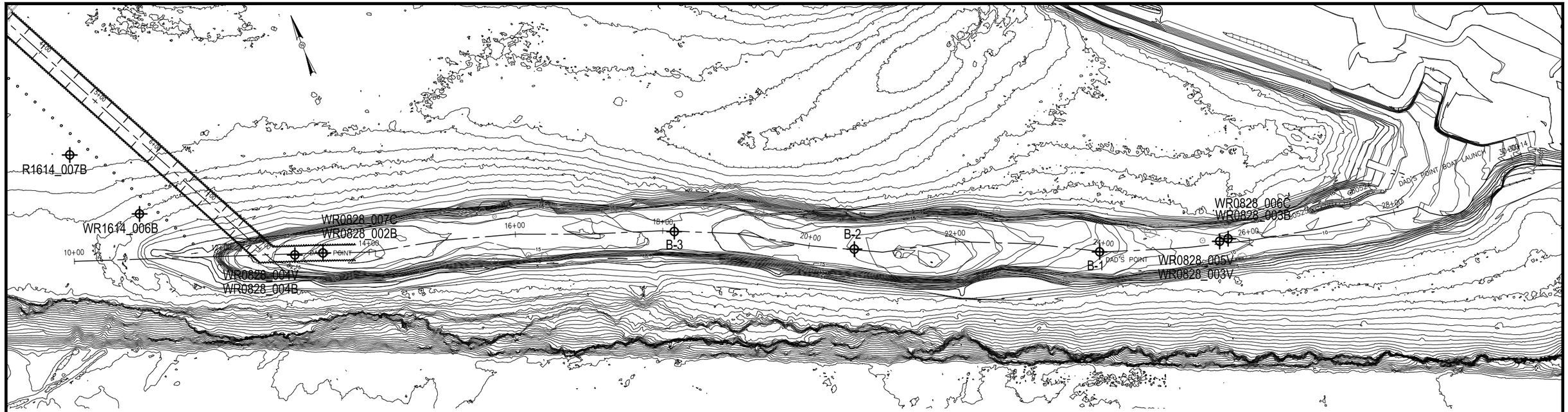
SJAFCA San Joaquin Area FLOOD CONTROL Agency

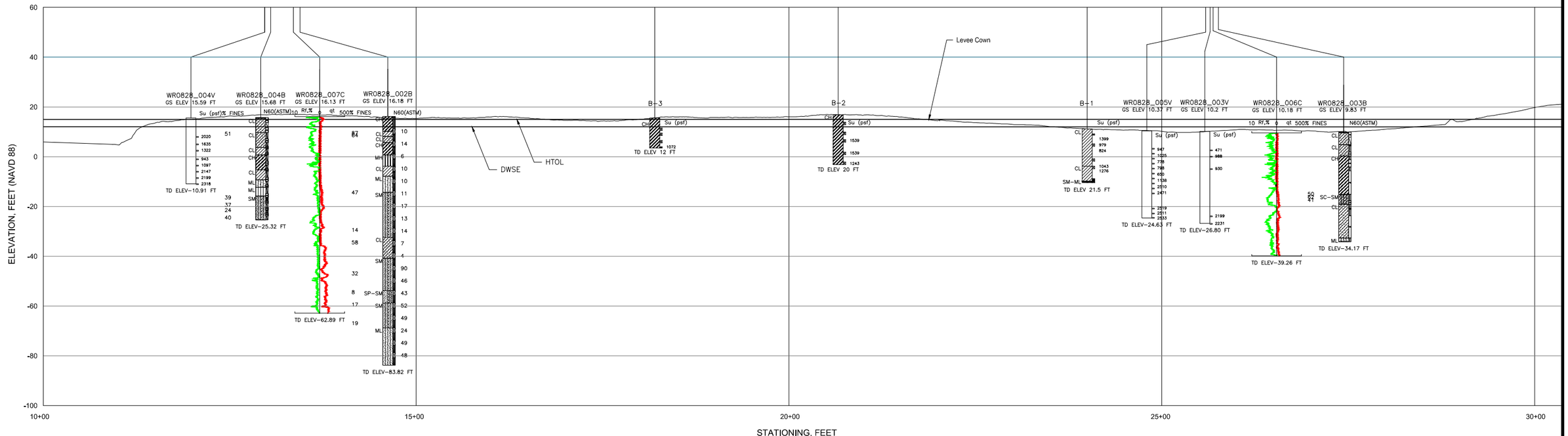
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

BORING LOG PLAN AND PROFILE
FLOODWALL CONTROL LINE

SHEET B-002





65% SUBMITTAL - NOT FOR CONSTRUCTION

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REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

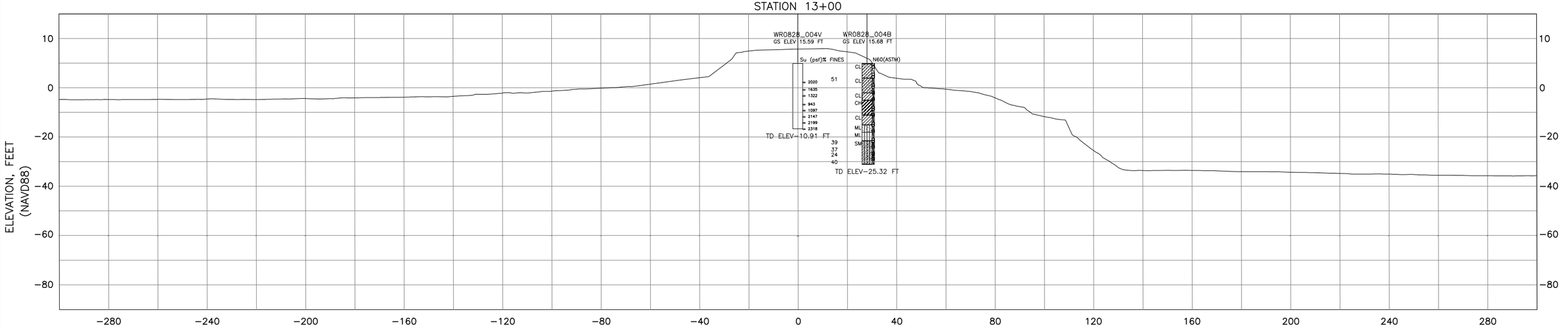
PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

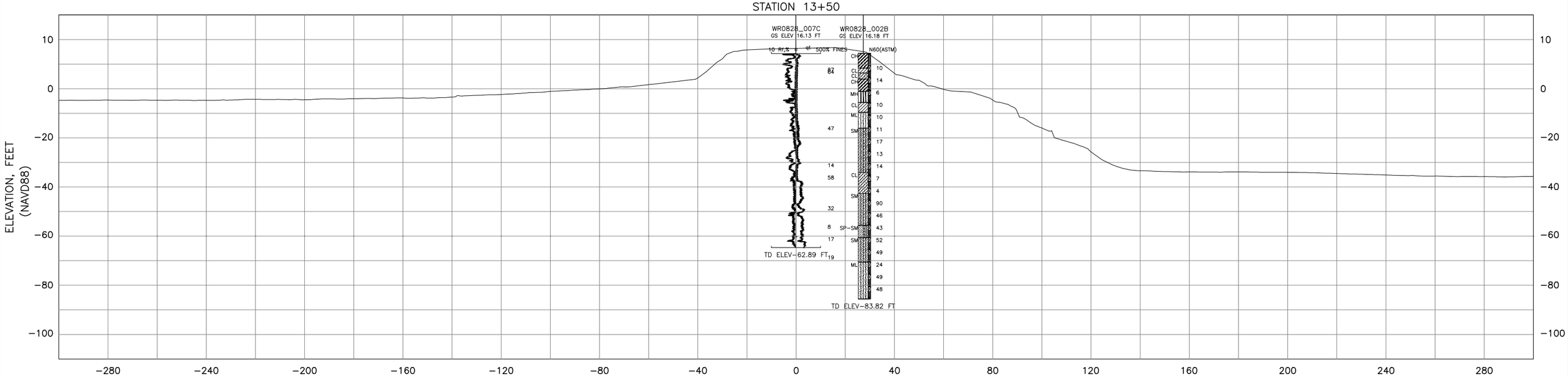
DAD'S POINT BORE LOG PLAN AND PROFILE

SHEET B-003 SHEET OF

STATION 13+00



STATION 13+50



65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1"=20'

DATE: JUNE 2017

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

DESIGNED AAM
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ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

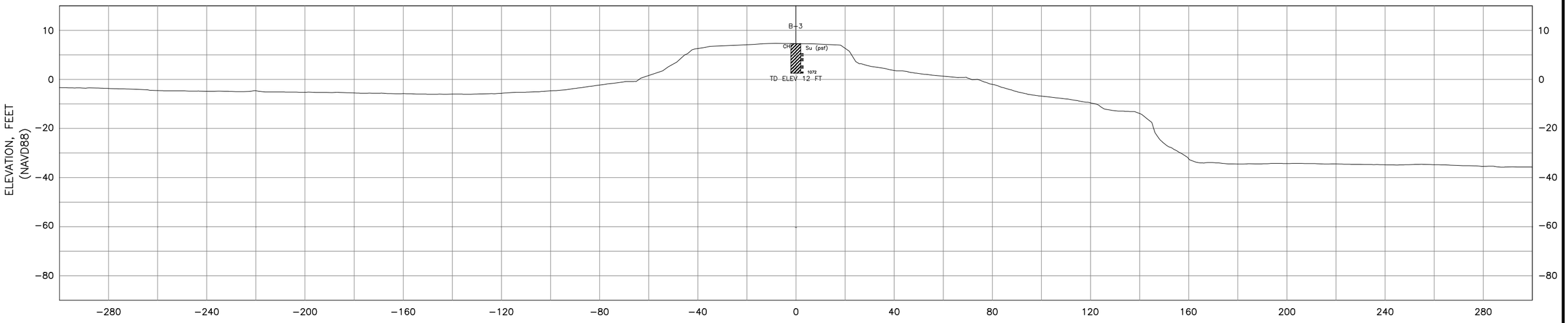
DAD'S POINT
BORING CROSS SECTIONS I

SHEET B-004

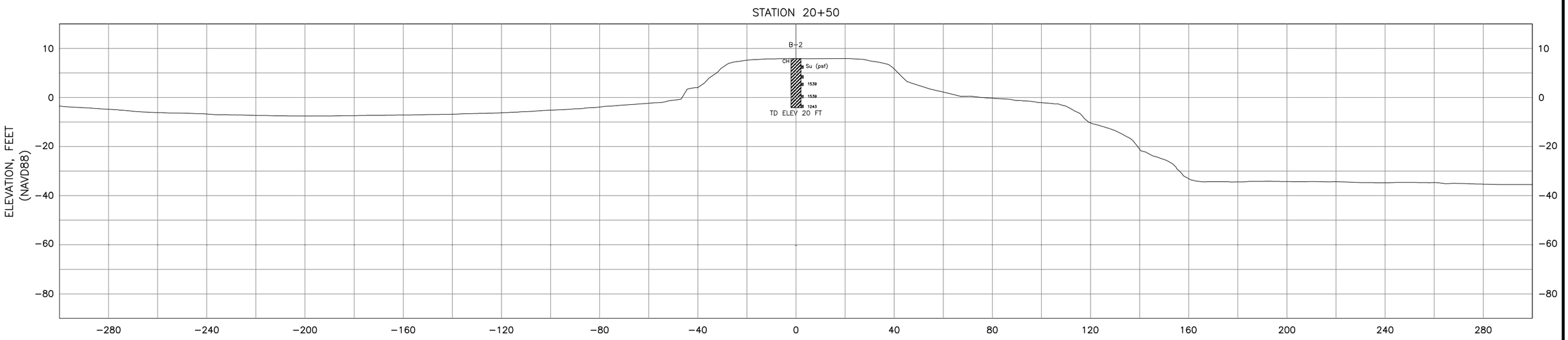
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STATION 18+00



STATION 20+50



65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1"=20'

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — PROJECT ENGINEER — 86512 R.C.E. NO. — 3/31/19 EXP. DATE

DAVID A. PETERSON, PE — PROJECT MANAGER — 43432 R.C.E. NO. — 6/30/18 EXP. DATE

PRELIMINARY

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Folsom, CA 95630
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Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

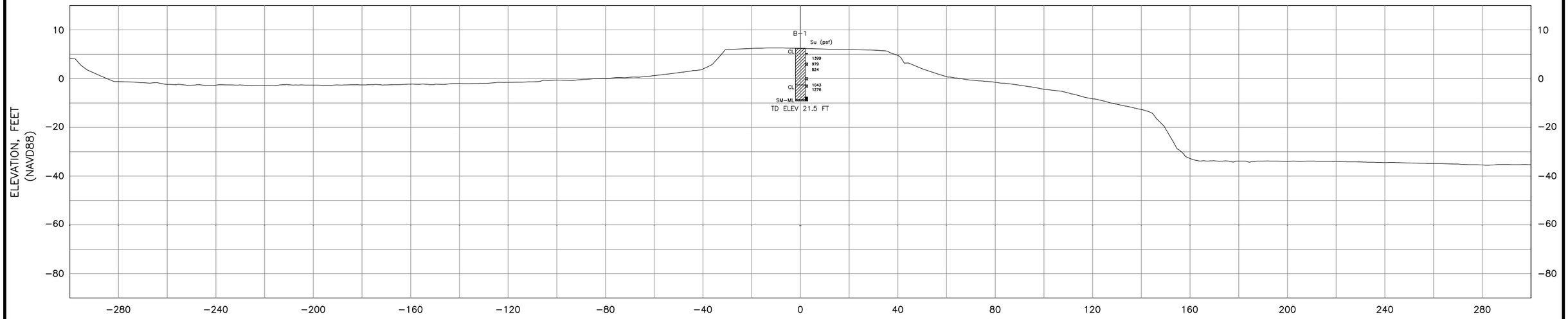
DAD'S POINT
BORING CROSS SECTIONS II

SHEET B-005

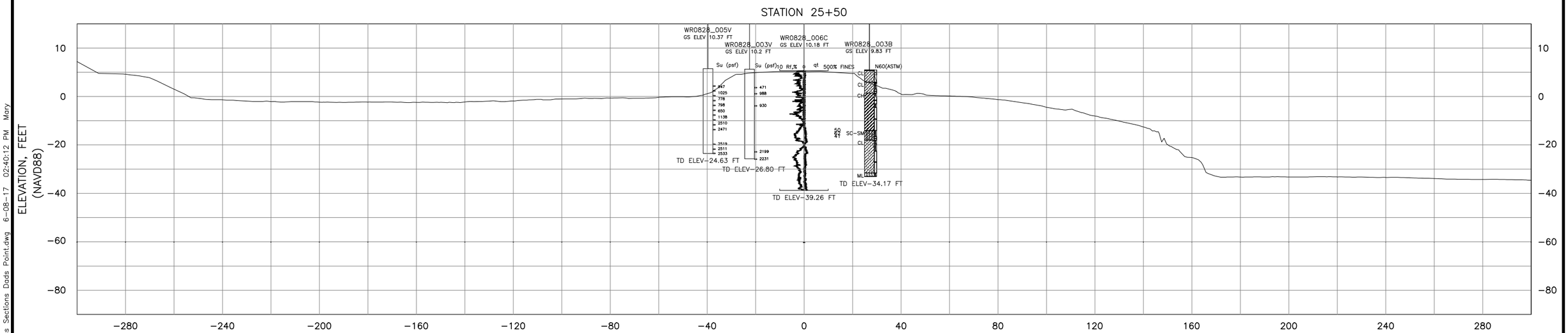
SHEET OF __

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STATION 24+00



STATION 25+50



65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1"=20'

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

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Folsom, CA 95630
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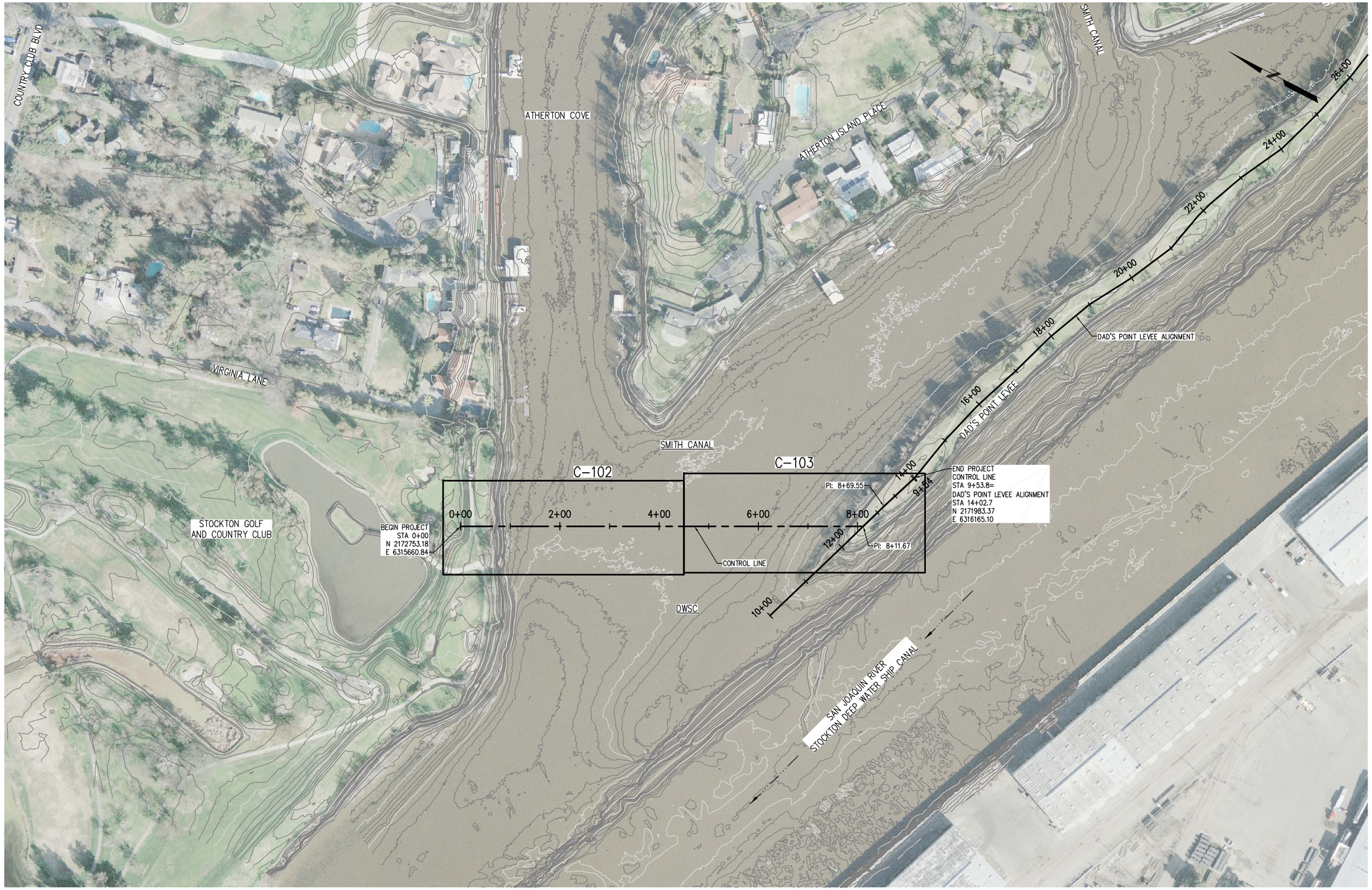
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT
BORING CROSS SECTIONS III

SHEET B-006

SHEET OF __

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100 50 0 100 200

HORIZ SCALE: 1"=100'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED JN

DRAWN AJ

CHECKED KD

JASON NETTLETON, PE — C73184 — 12/31/18
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

WES JACOBS, PE
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

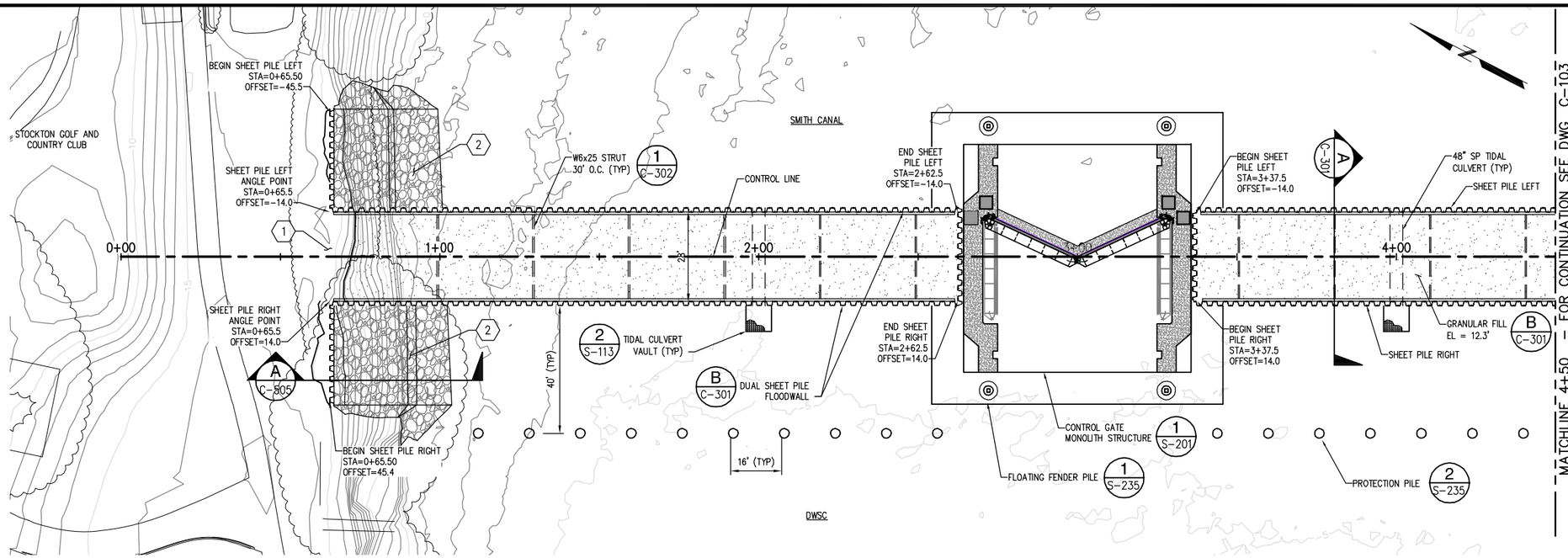
HDR

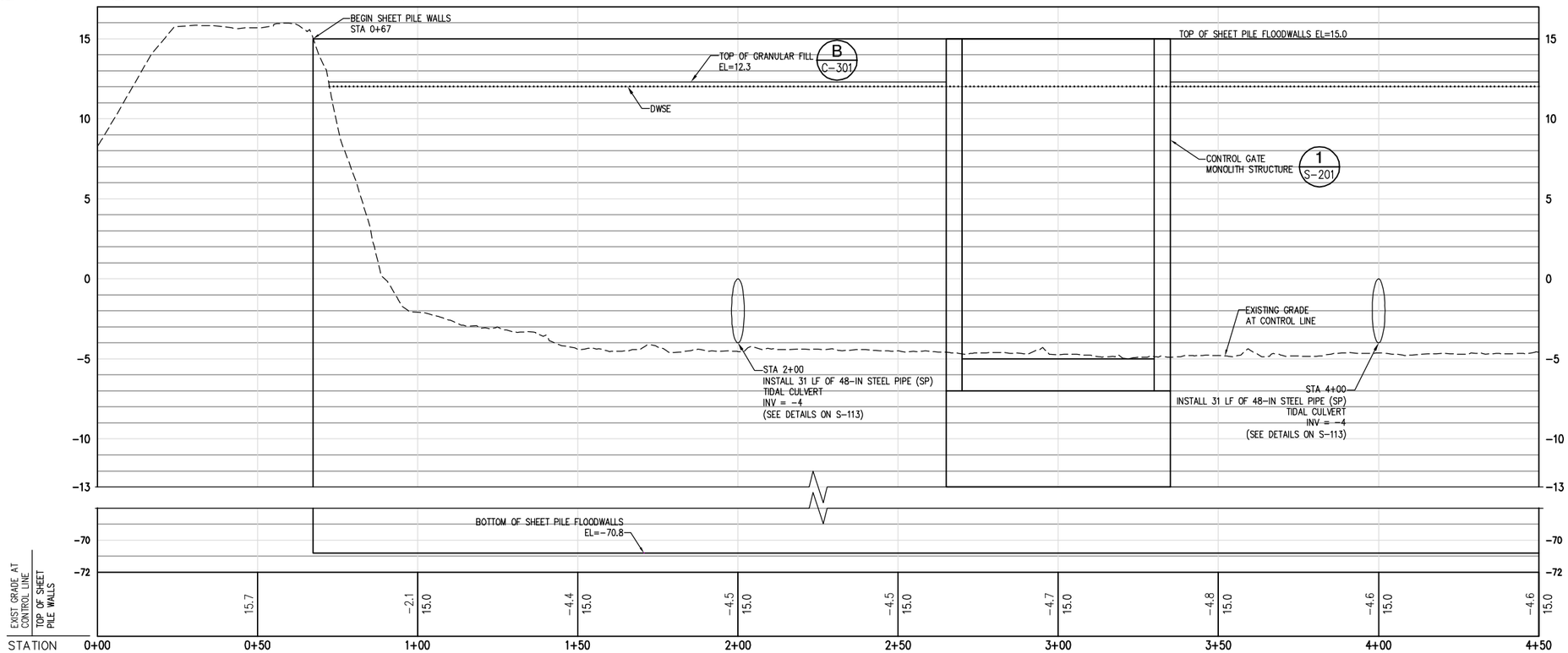
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

FLOODWALL SITE LAYOUT

SHEET C-101

SHEET - OF 109





KEY NOTES:

1. VEHICULAR ACCESS DETAILS TO BE PROVIDED BY OTHERS.
2. PLACE CALTRANS BACKING NO. 2 AS SHOWN AND PER THE STATE STANDARD SPECIFICATIONS.

GENERAL NOTES:

1. PROTECTION PILES NOT SHOWN IN PROFILE FOR CLARITY.
2. STEEL SHEET PILE TO BE PZ-40 A690M MARINE GRADE - 60.7 CUBIC INCHES FOOT.
3. 36" PIPE FILES TO BE A252 GRADE 3 - 50 KSI STEEL.

20 10 0 20 40
HORIZ SCALE: 1"=20'

4 2 0 4 8
VERT SCALE: 1"=4'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED JN
DRAWN AJ
CHECKED KD

JASON NETTLETON, PE — 73184 — 12/31/18
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

WES JACOBS, PE
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

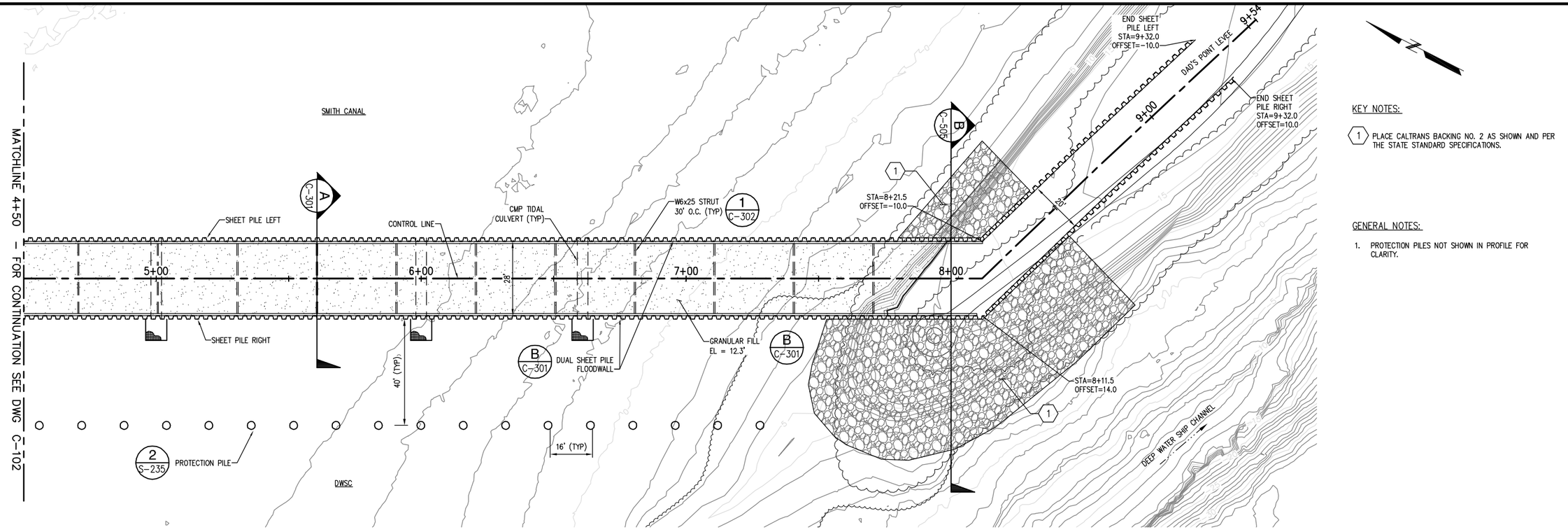
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

FLOODWALL PLAN AND PROFILE
STA 0+00 TO 4+50

SHEET C-102

SHEET - OF 109

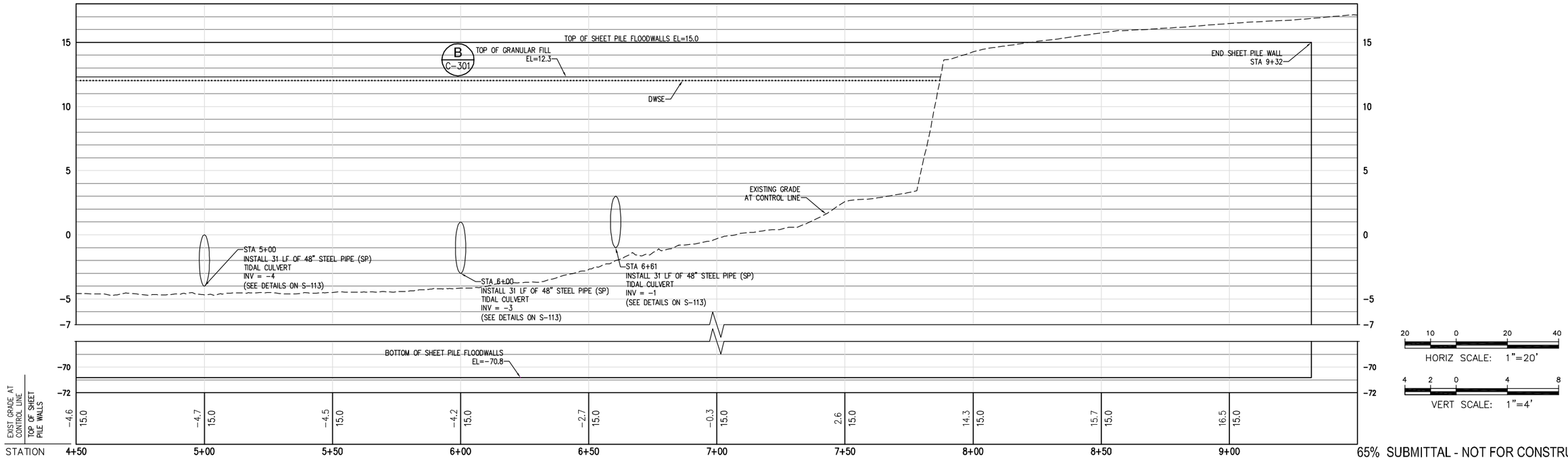


KEY NOTES:

1. PLACE CALTRANS BACKING NO. 2 AS SHOWN AND PER THE STATE STANDARD SPECIFICATIONS.

GENERAL NOTES:

1. PROTECTION PILES NOT SHOWN IN PROFILE FOR CLARITY.



65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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DESIGNED JN
DRAWN AJ
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JASON NETTLETON, PE	C73184	12/31/18
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
WES JACOBS, PE		
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

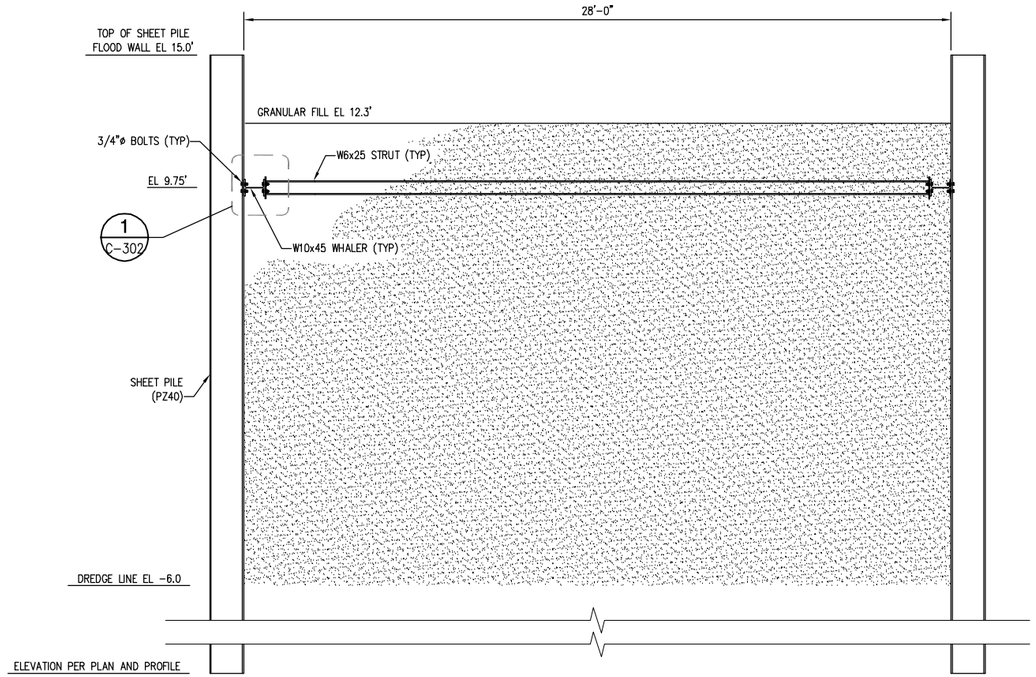
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

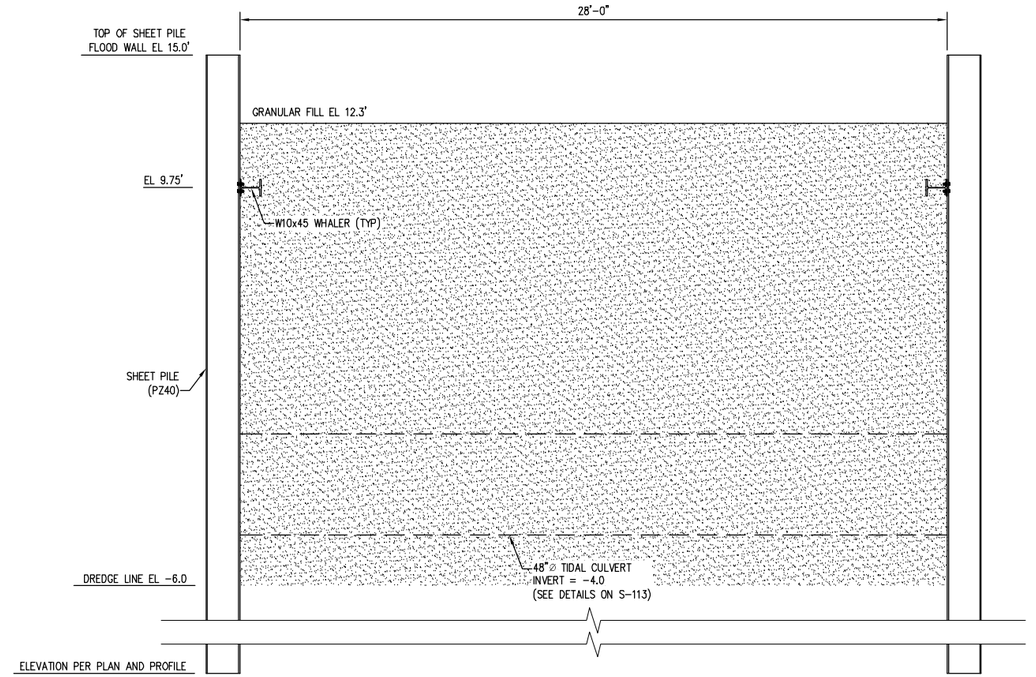
FLOODWALL PLAN AND PROFILE STA 4+50 TO 9+50

SHEET C-103

SHEET - OF 109



TYPICAL DUAL SHEET PILE WITH STRUT **A** C-102
NTS



TYPICAL DUAL SHEET PILE **B** C-102
NTS

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED KD
DRAWN AJ
CHECKED —

KENWARJIT DOSANJH, PE — C72288 — 6/30/18
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

WES JACOBS, PE
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

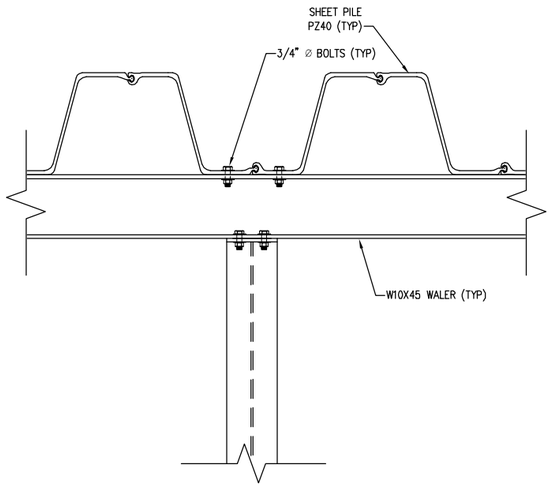
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

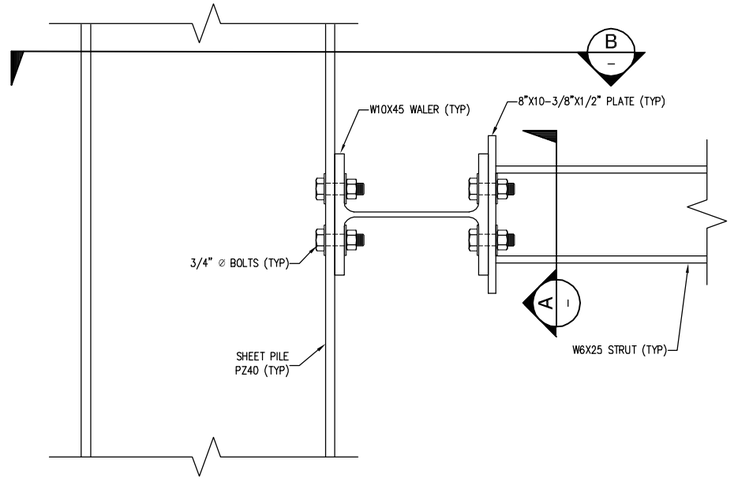
TYPICAL SECTIONS AND DETAILS

SHEET C-301

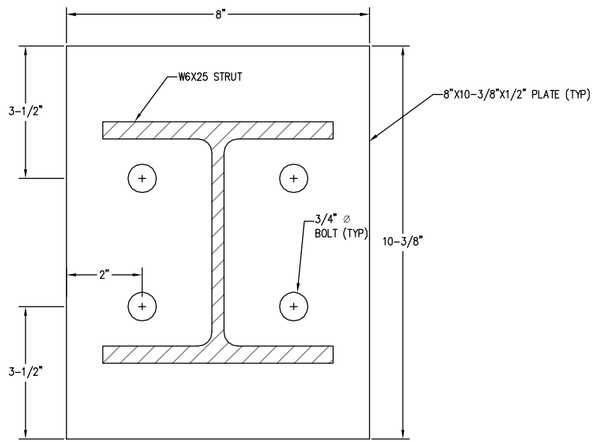
SHEET - OF 109



PLAN VIEW – WALER AND STRUT DETAIL B
NTS



DETAIL VIEW – WALER AND STRUT DETAIL 1
NTS



SECTION A
NTS

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

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DESIGNED KD
DRAWN AJ
CHECKED –

KENWARJIT DOSANJH, PE — C72288 — 6/30/18
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

WES JACOBS, PE
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

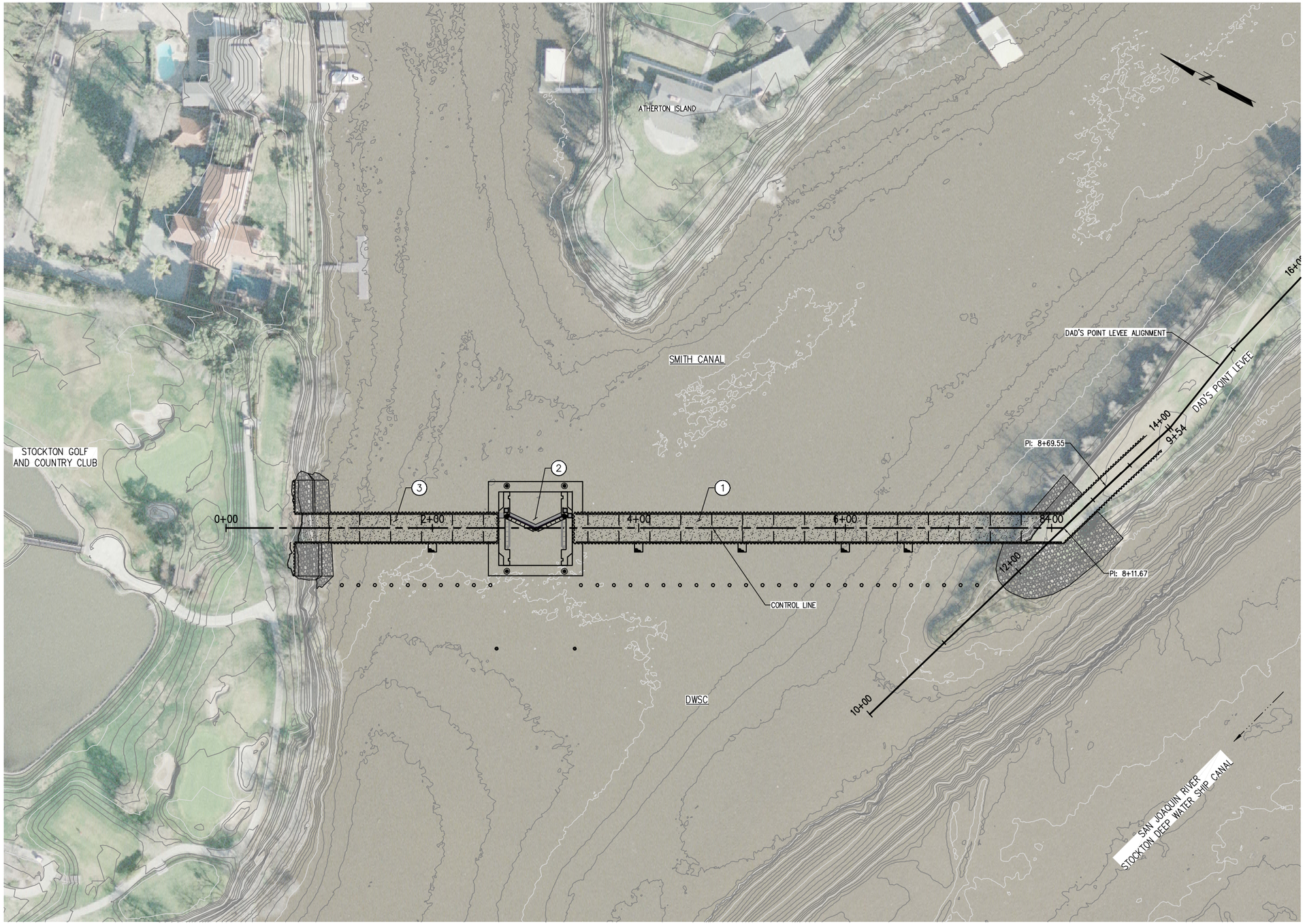
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

TYPICAL SECTIONS AND DETAILS 2

SHEET C-302

SHEET 08OF 109



CONSTRUCTION SEQUENCE:

1. CONSTRUCT SOUTHERN PORTION OF FIXED WALL. CONTRACTOR TO ALLOW ADEQUATE CONSTRUCTION SPACING FOR GATE STRUCTURES.
2. CONSTRUCT GATE STRUCTURE. COMPLETE SOUTHERN PORTION TIE-IN TO GATE STRUCTURE.
3. CONSTRUCT NORTHERN PORTION OF FIXED WALL.

100 50 0 100 200

HORIZ SCALE: 1"=100'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED JN
DRAWN AJ
CHECKED KD

JASON NETTLETON, PE — PROJECT ENGINEER — C73184 R.C.E. NO. — 12/31/18 EXP. DATE

WES JACOBS, PE — PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

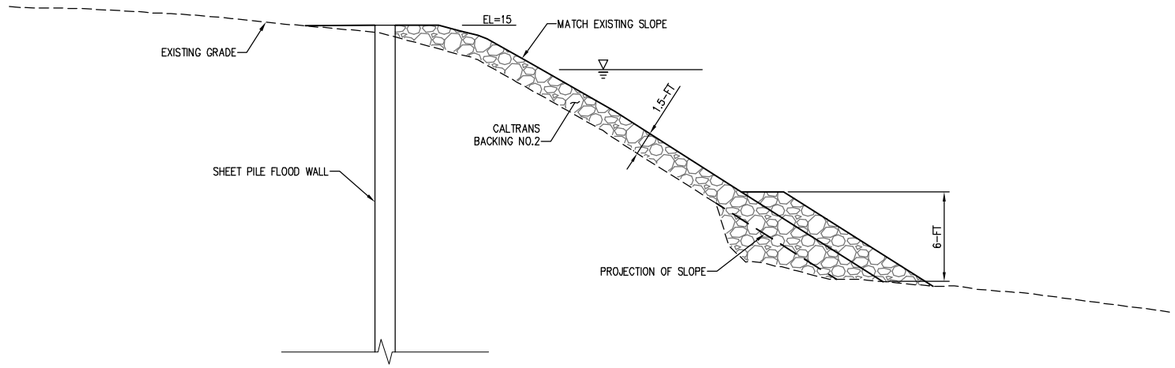
SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

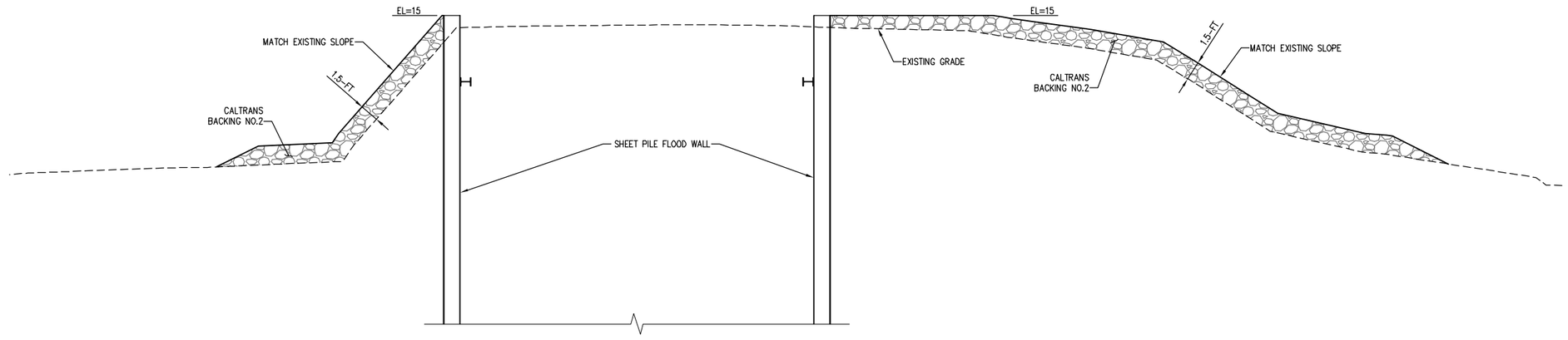
SUGGESTED CONSTRUCTION SEQUENCE

SHEET C-503



DATUM	ELEVATION (FEET, NAVD88)
HIGHEST OBSERVED WATER LEVEL (3/23/2011)*	+8.21
MEAN HIGHER HIGH WATER (MHHW)	+6.11
MEAN HIGH WATER (MHW)	+5.64
MEAN TIDE LEVEL (MTL)	+4.25
MEAN LOW WATER (MLW)	+2.87
MEAN LOWER LOW WATER (MLLW)	+2.37
LOWEST OBSERVED WATER LEVEL (10/22/2007)*	+1.28

SCOUR PROTECTION (A / C-102)
NTS



SCOUR PROTECTION (B / C-103)
NTS

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED JN
DRAWN AJ
CHECKED –

JASON NETTLETON, PE — C73184 — 12/31/18
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

WES JACOBS, PE
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

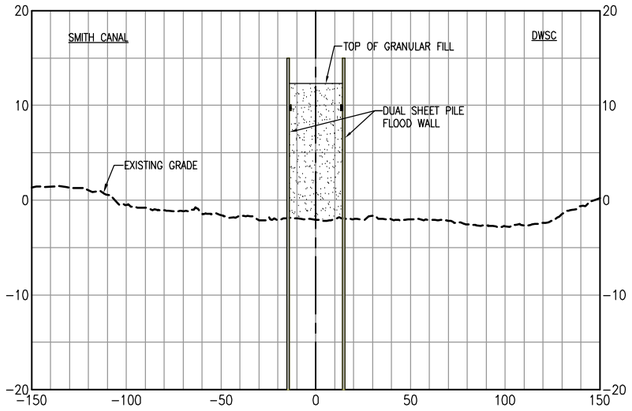
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

SCOUR PROTECTION AND ARMORING DETAILS

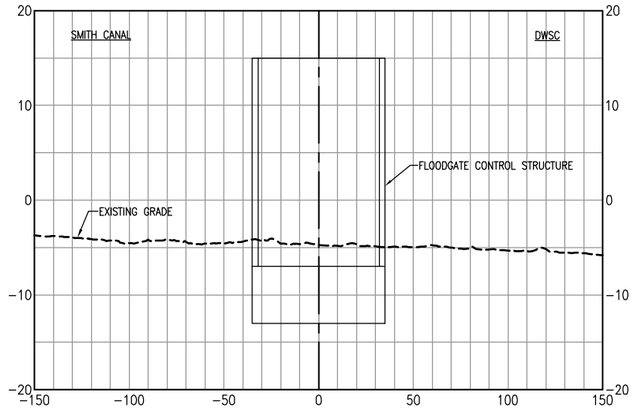
SHEET C-505

SHEET - OF 109

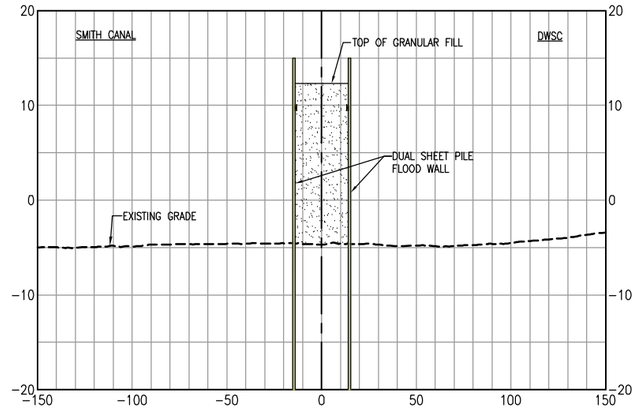
1+00



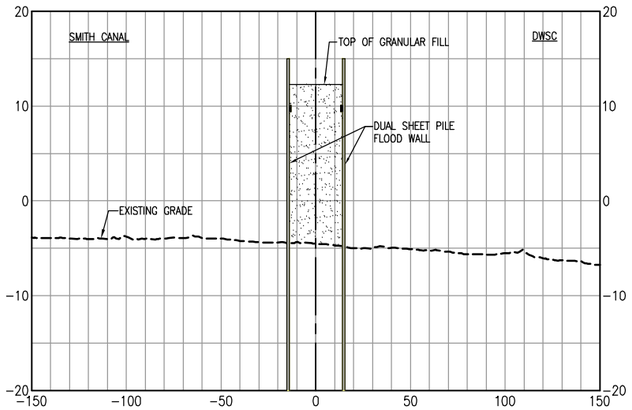
3+00



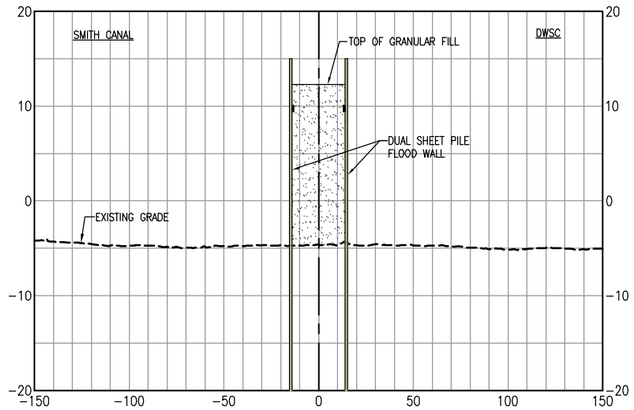
5+00



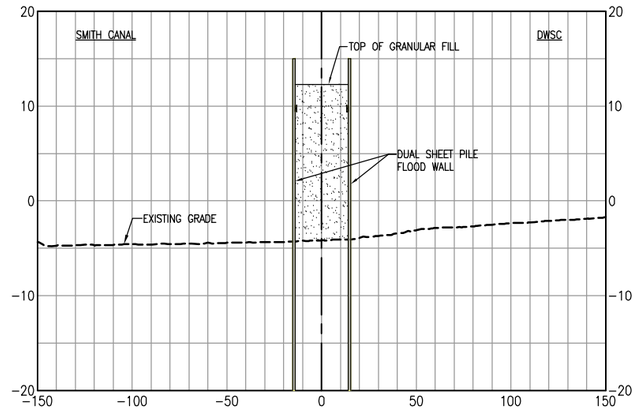
2+00



4+00



6+00



20 10 0 20 40

HORIZ SCALE: 1"=20'

4 2 0 4 8

VERT SCALE: 1"=4'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED JN

DRAWN AJ

CHECKED KD

JASON NETTLETON, PE — C73184 — 12/31/18
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

WES JACOBS, PE
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

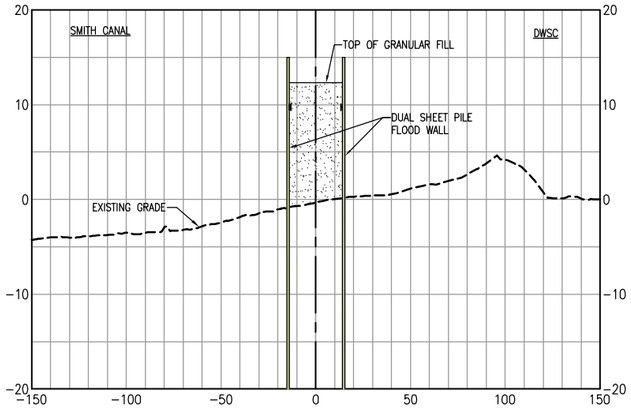
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

FLOODWALL CROSS SECTIONS
STA 1+00 TO 6+00

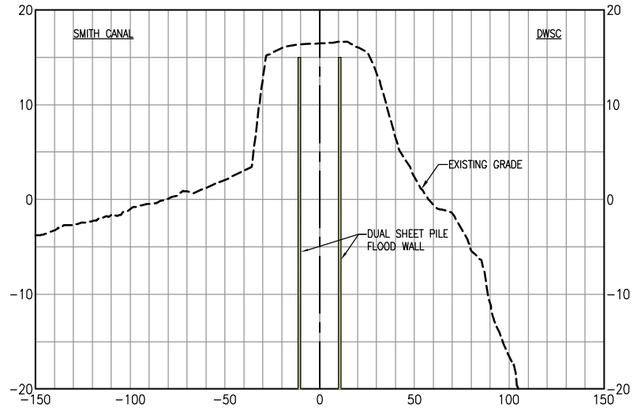
SHEET C-701

SHEET - OF 109

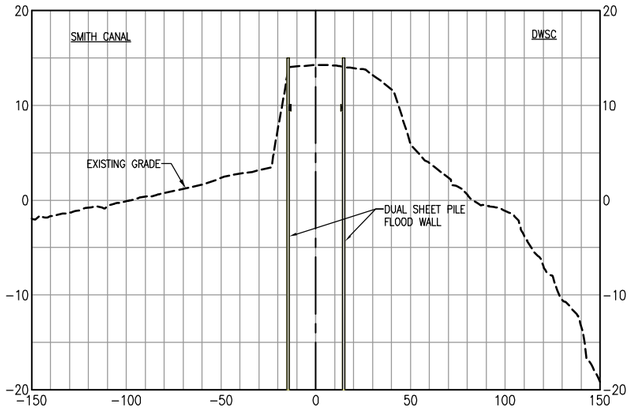
7+00



9+00



8+00



HORIZ SCALE: 1"=20'

VERT SCALE: 1"=4'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED JN
DRAWN AJ
CHECKED KD

JASON NETTLETON, PE	C73184	12/31/18
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
WES JACOBS, PE		
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

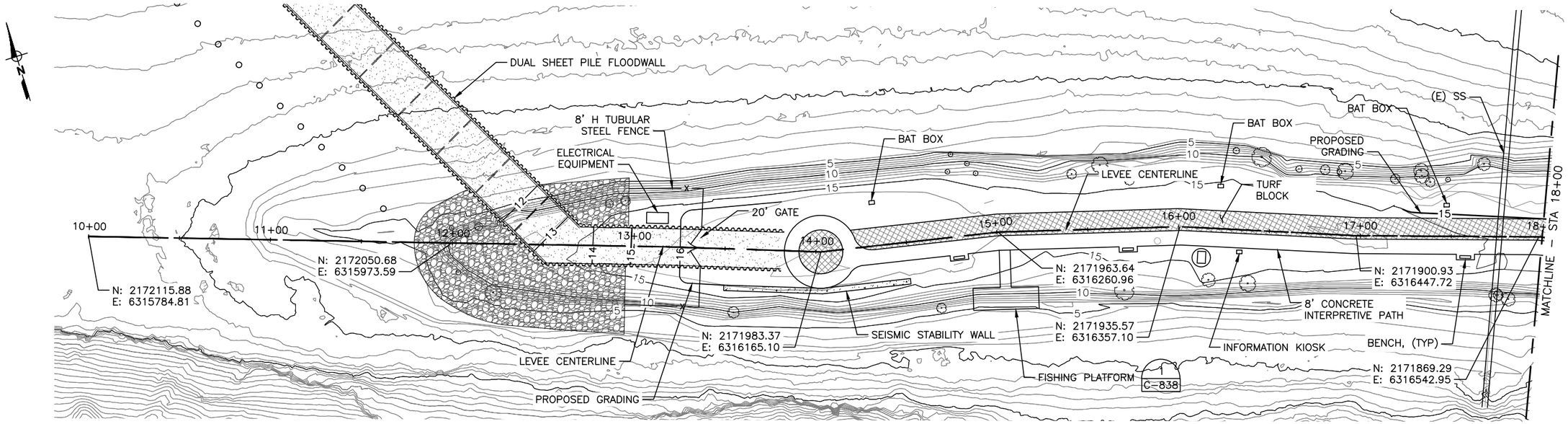
SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

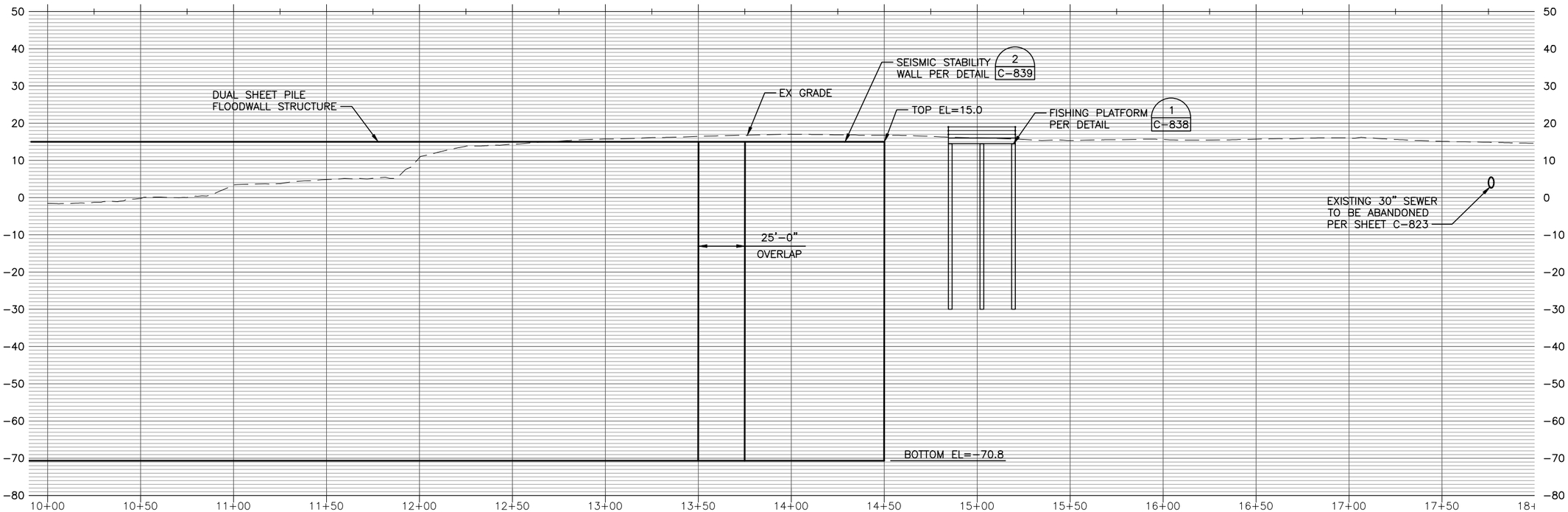
FLOODWALL CROSS SECTIONS STA 7+00 TO 9+00

SHEET C-702



NOTES:
1. ALL TURF GRASS TO BE REPLACED WITH DROUGHT TOLERANT NATIVE VEGETATION

PLAN
1" = 30'



PROFILE
H. 1" = 30'
V. 1" = 15'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

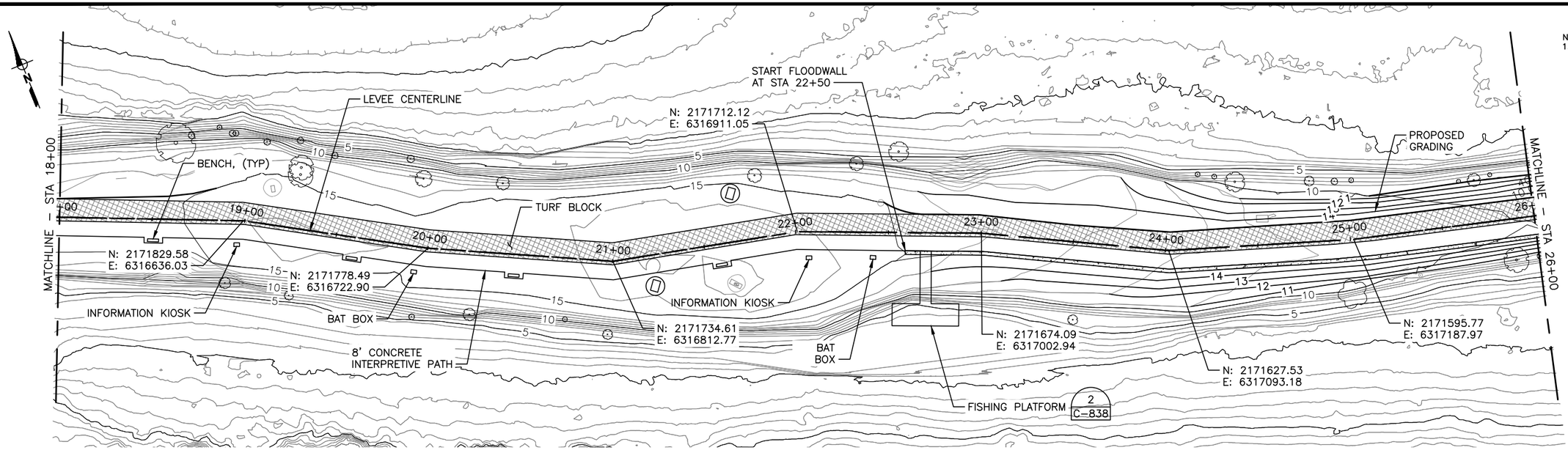
PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT
PLAN AND PROFILE
STA 10+00 TO STA 18+00

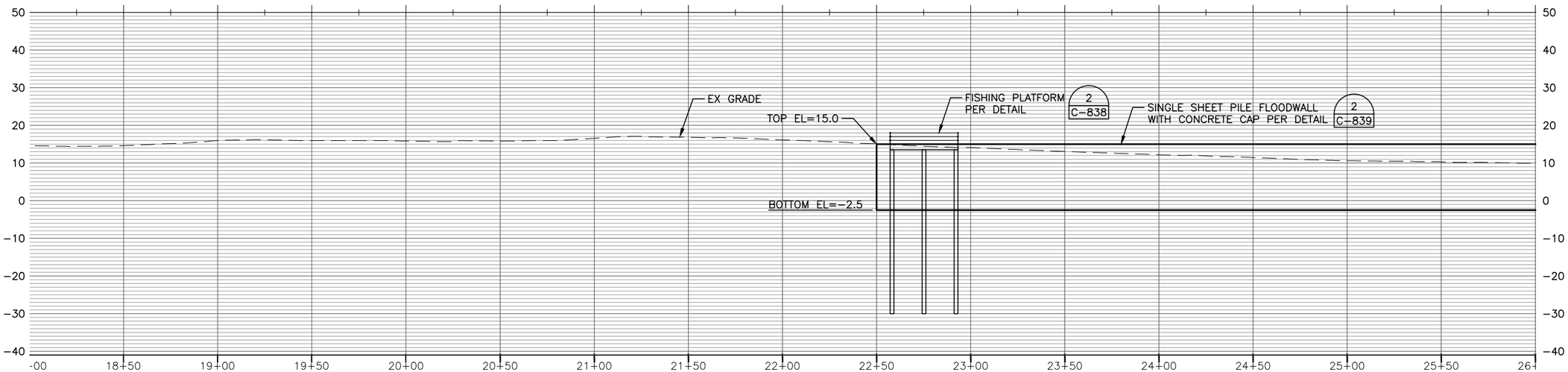
SHEET C-801
SHEET OF __

C:\Users\Mary\Dropbox\WORK\PBI\2016\SJAFCA\SMITH CANAL.dwg 6-09-17 11:21:51 AM Mary



NOTES:
1. ALL TURF GRASS TO BE REPLACED WITH DROUGHT TOLERANT NATIVE VEGETATION

PLAN
1" = 30'



PROFILE
H. 1" = 30'
V. 1" = 15'

65% SUBMITTAL - NOT FOR CONSTRUCTION

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REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

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PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

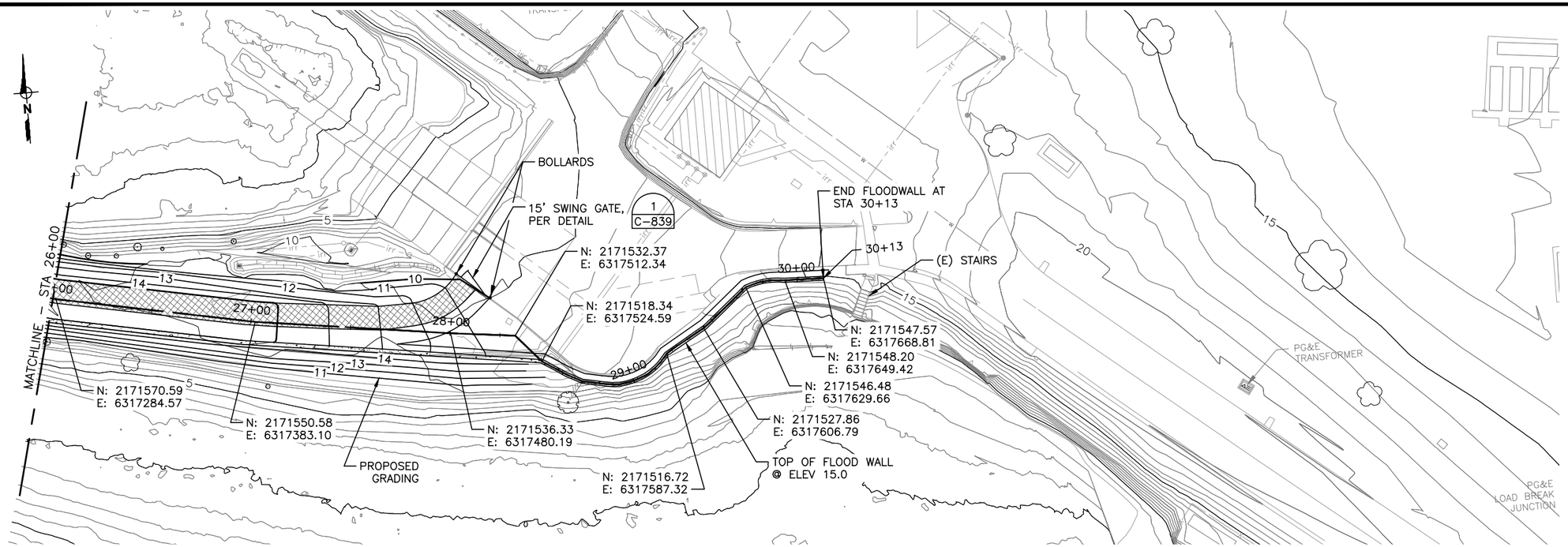
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT
PLAN AND PROFILE
STA 18+00 TO STA 26+00

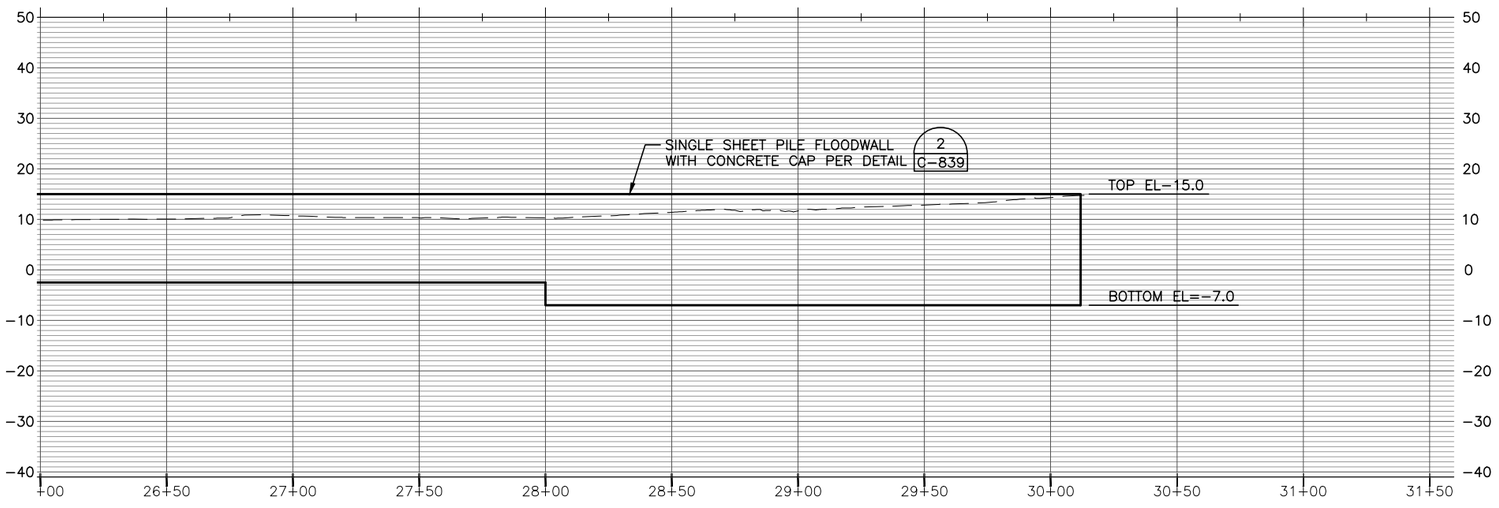
SHEET C-802

SHEET OF __

NOTES:
1. ALL TURF GRASS TO BE REPLACED WITH DROUGHT TOLERANT NATIVE VEGETATION



PLAN
1" = 30'



PROFILE
H. 1" = 30'
V. 1" = 15'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

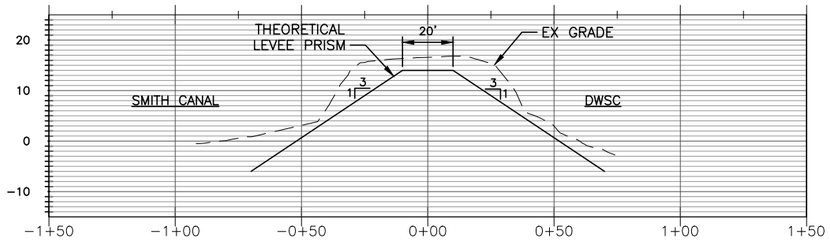
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT
PLAN AND PROFILE
STA 26+00 TO STA 31+50

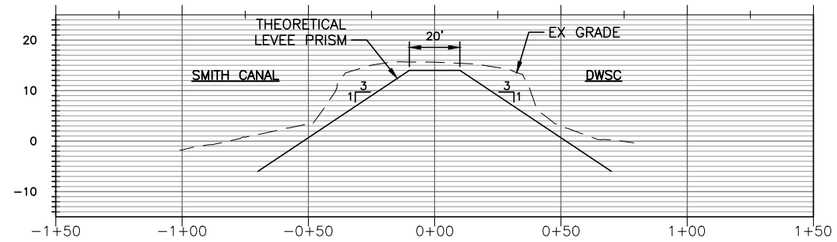
SHEET C-803

SHEET OF __

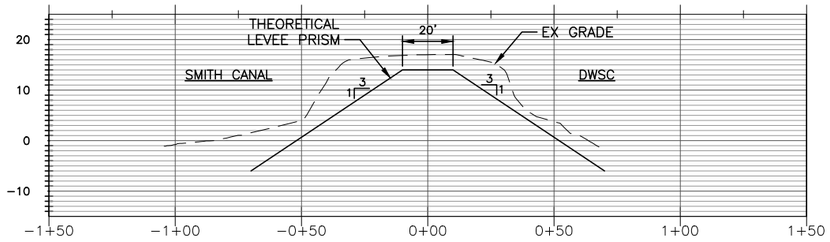
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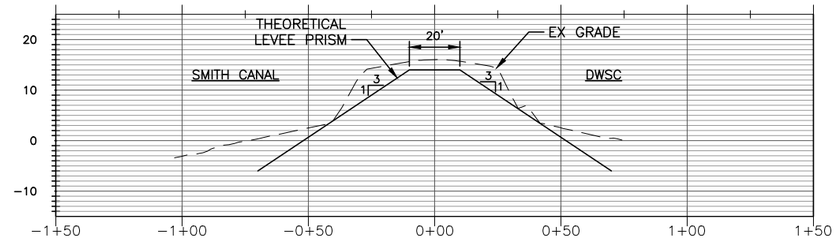
STA 13+31
H. 1" = 30'
V. 1" = 15'



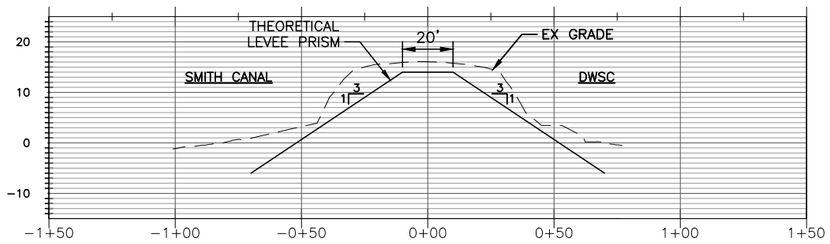
STA 16+00
H. 1" = 30'
V. 1" = 15'



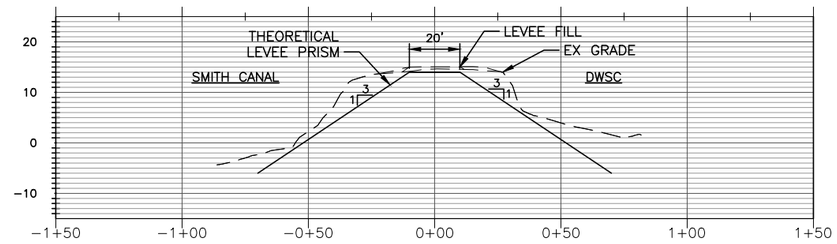
STA 14+00
H. 1" = 30'
V. 1" = 15'



STA 17+00
H. 1" = 30'
V. 1" = 15'



STA 15+00
H. 1" = 30'
V. 1" = 15'



STA 18+00
H. 1" = 30'
V. 1" = 15'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE:
H: 1"=30'
V: 1"=15'

DATE:
JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA
San Joaquin Area FLOOD CONTROL Agency

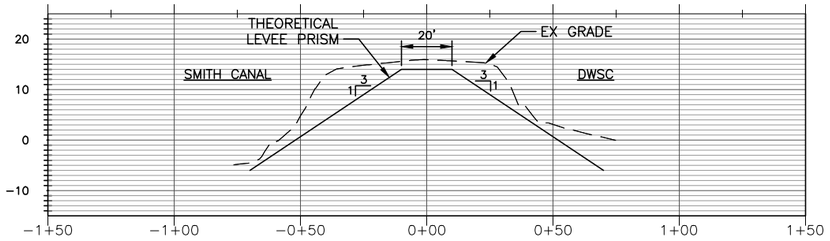
PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

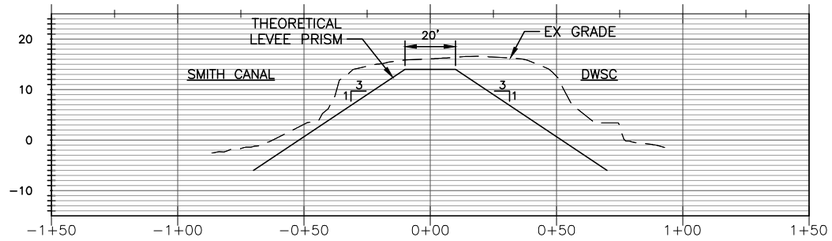
DAD'S POINT
CROSS SECTIONS I

SHEET
C-811
SHEET OF __

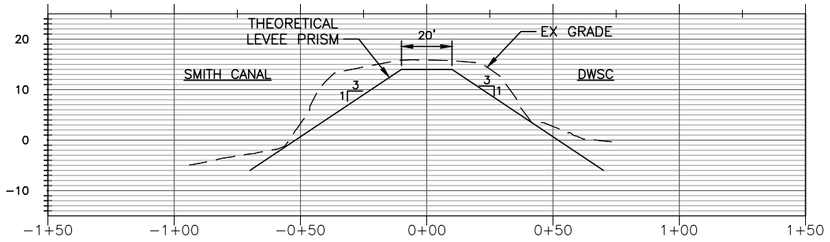
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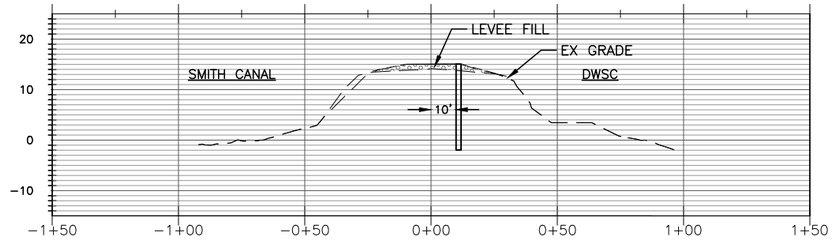
STA 19+00
H. 1" = 30'
V. 1" = 15'



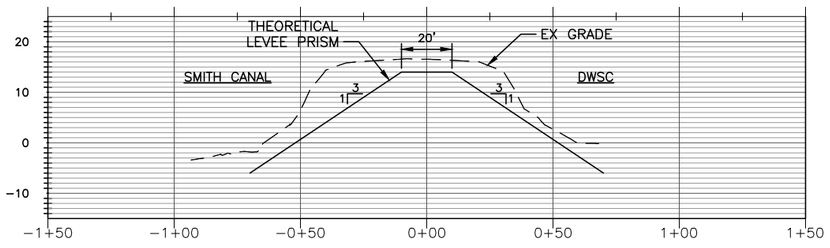
STA 22+00
H. 1" = 30'
V. 1" = 15'



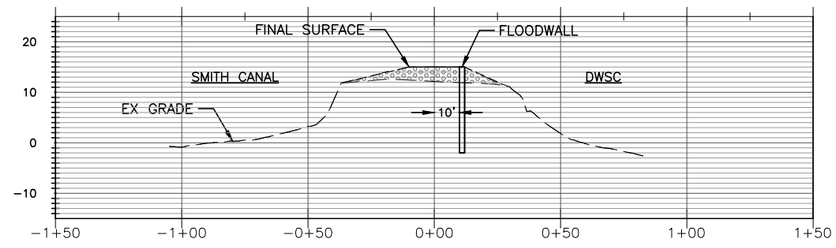
STA 20+00
H. 1" = 30'
V. 1" = 15'



STA 23+00
H. 1" = 30'
V. 1" = 15'



STA 21+00
H. 1" = 30'
V. 1" = 15'



STA 24+00
H. 1" = 30'
V. 1" = 15'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE:
H: 1"=30'
V: 1"=15'

DATE:
JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — PROJECT ENGINEER — 86512 R.C.E. NO. — 3/31/19 EXP. DATE

DAVID A. PETERSON, PE — PROJECT MANAGER — 43432 R.C.E. NO. — 6/30/18 EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

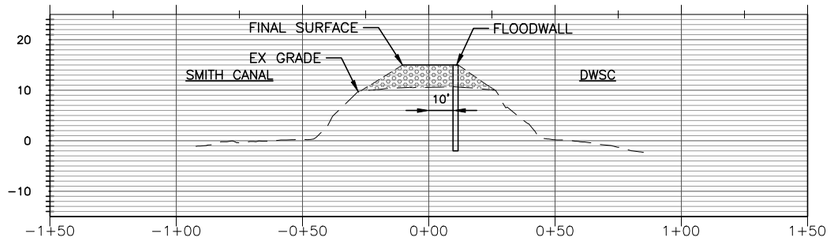
PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

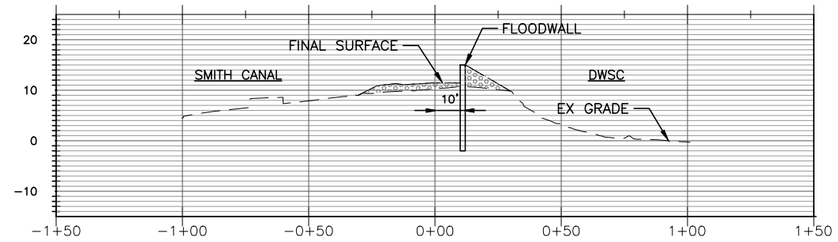
DAD'S POINT
CROSS SECTIONS II

SHEET
C-812
SHEET OF __

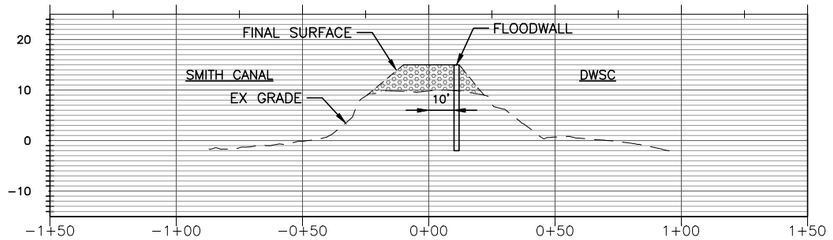
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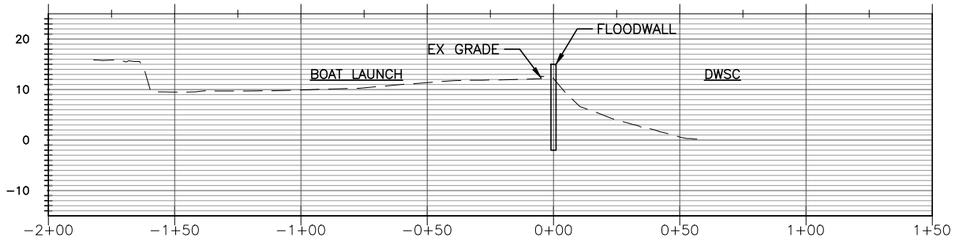
STA 25+00
H. 1" = 30'
V. 1" = 15'



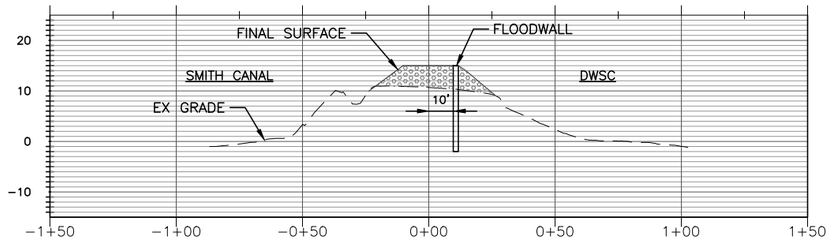
STA 28+00
H. 1" = 30'
V. 1" = 15'



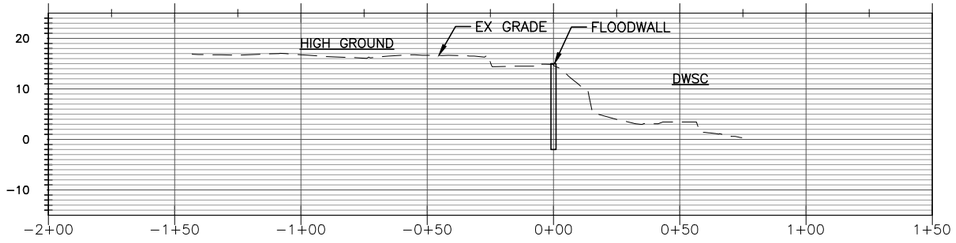
STA 26+00
H. 1" = 30'
V. 1" = 15'



STA 29+00
H. 1" = 30'
V. 1" = 15'



STA 27+00
H. 1" = 30'
V. 1" = 15'



STA 30+00
H. 1" = 30'
V. 1" = 15'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE:
H: 1"=30'
V: 1"=15'

DATE:
JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — PROJECT ENGINEER — 86512 R.C.E. NO. — 3/31/19 EXP. DATE

DAVID A. PETERSON, PE — PROJECT MANAGER — 43432 R.C.E. NO. — 6/30/18 EXP. DATE

PRELIMINARY

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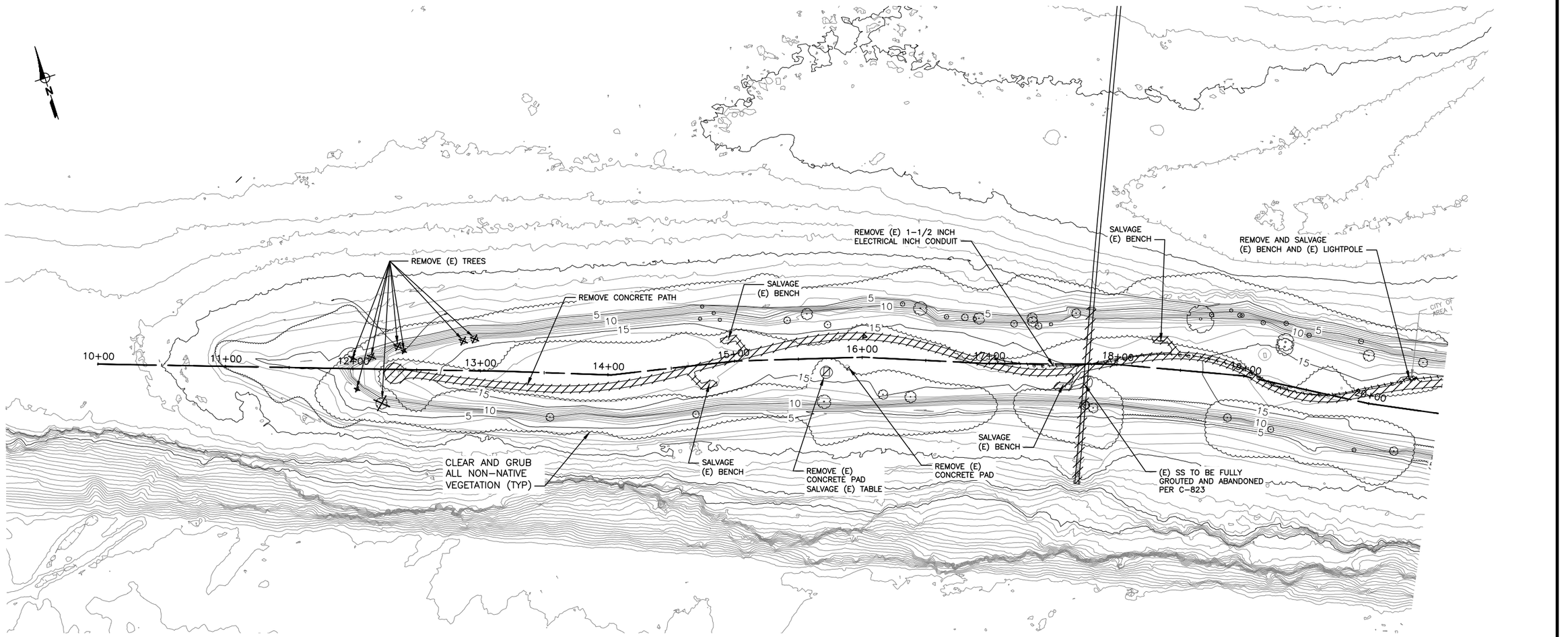
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Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT
CROSS SECTIONS III

SHEET
C-813
SHEET OF __

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REV	DATE	BY	DESCRIPTION

SCALE: 1" = 40'

DATE: JUNE 2017

WARNING
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DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

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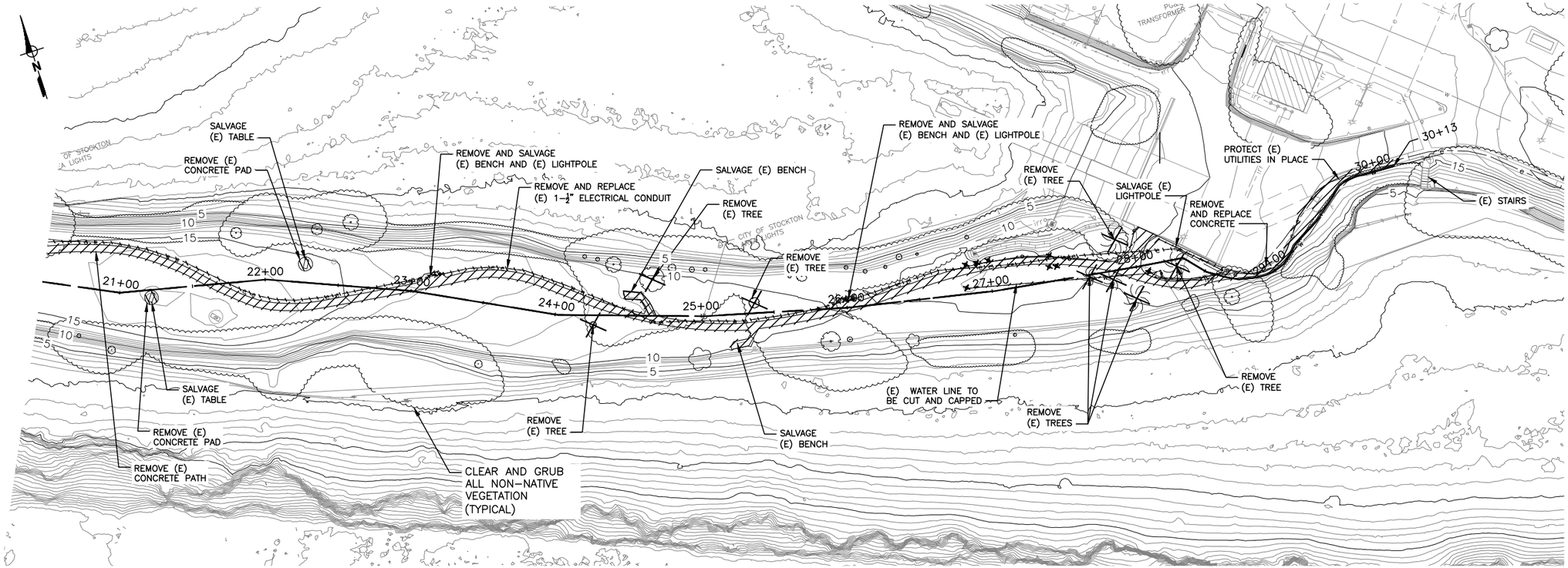
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT DEMOLITION PLAN I

SHEET C-821

SHEET OF __

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65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 40'

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — PROJECT ENGINEER — 86512 R.C.E. NO. — 3/31/19 EXP. DATE

DAVID A. PETERSON, PE — PROJECT MANAGER — 43432 R.C.E. NO. — 6/30/18 EXP. DATE

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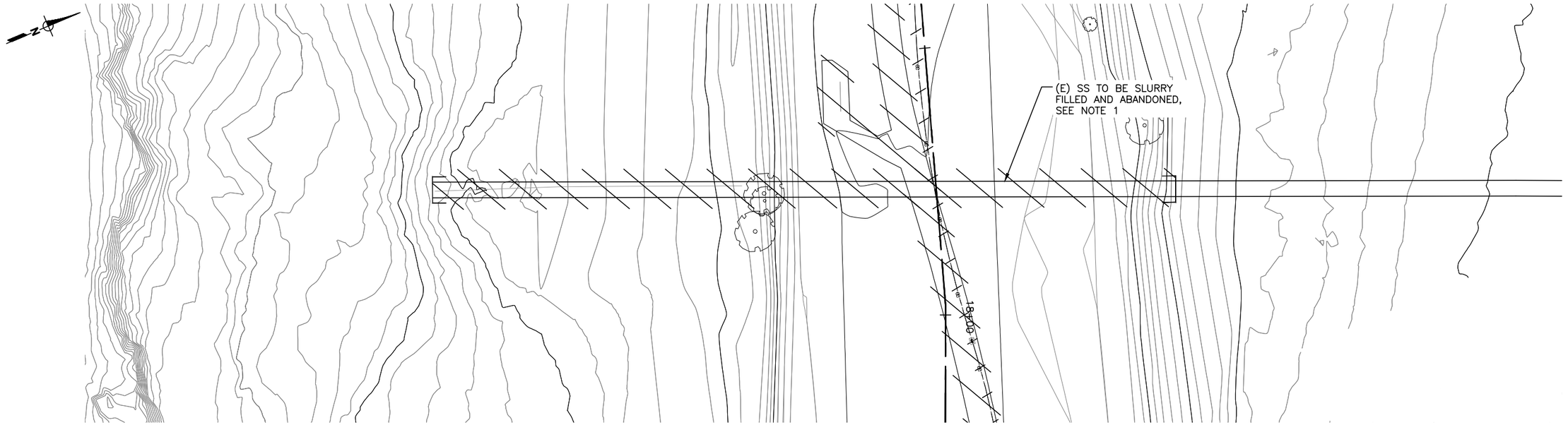
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT DEMOLITION PLAN II

SHEET C-822

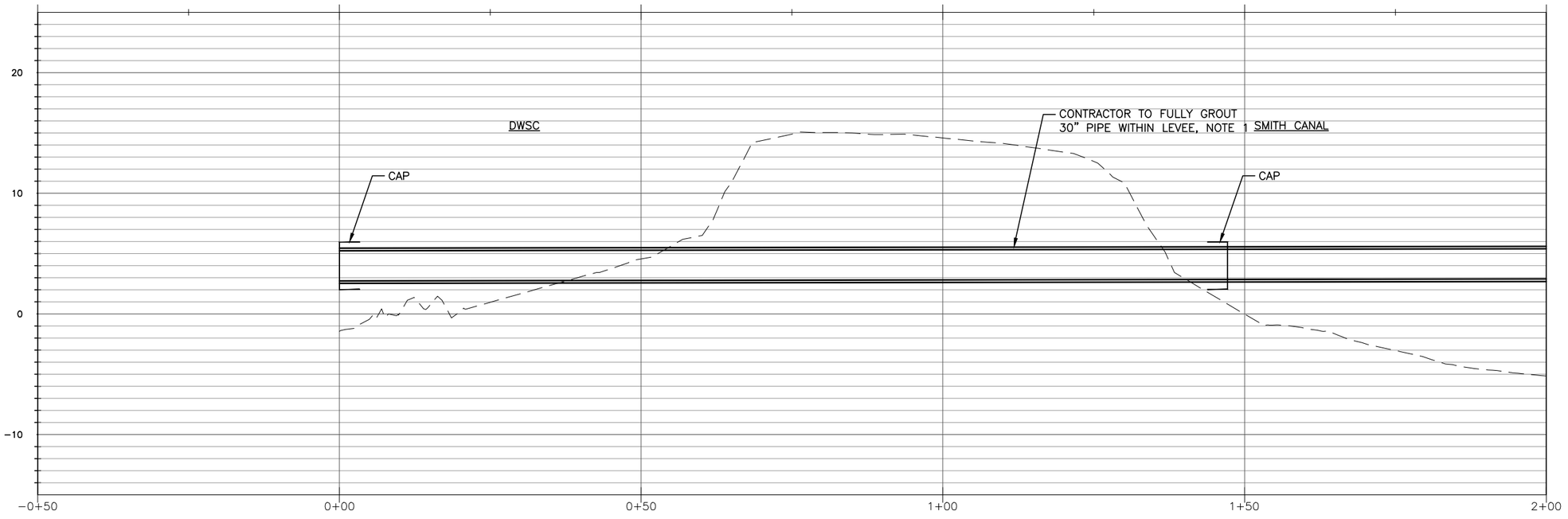
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PLAN
1" = 10'

NOTE:
1. CONCRETE TO BE USED TO FILL ABANDONED PIPE MUST BE A (3) SACK CEMENT MIX, OR EQUIVALENT, WTIH AGGREGATE HAVING A MAX SIZE OF 3/8" AND A WATER CONTENT SUFFICIENT TO PRODUCE A 6–8 INCH SLUMP.



PROFILE
H. 1" = 10'
V. 1" = 5'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE:
H: 1" = 10'
V: 1" = 2'

DATE:
JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

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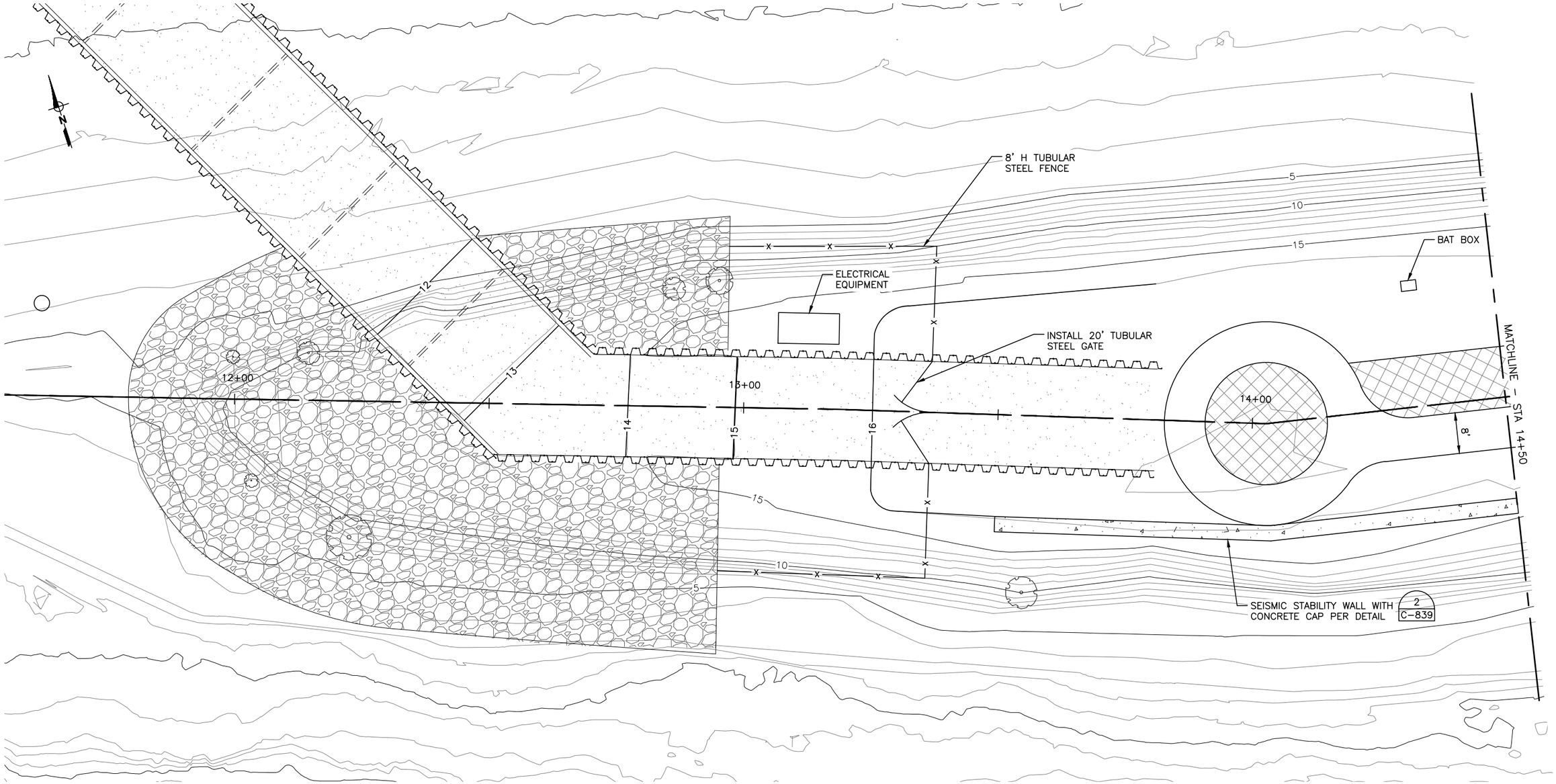
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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT SEWER ABANDONMENT PLAN AND PROFILE

SHEET
C-823
SHEET OF __

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65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

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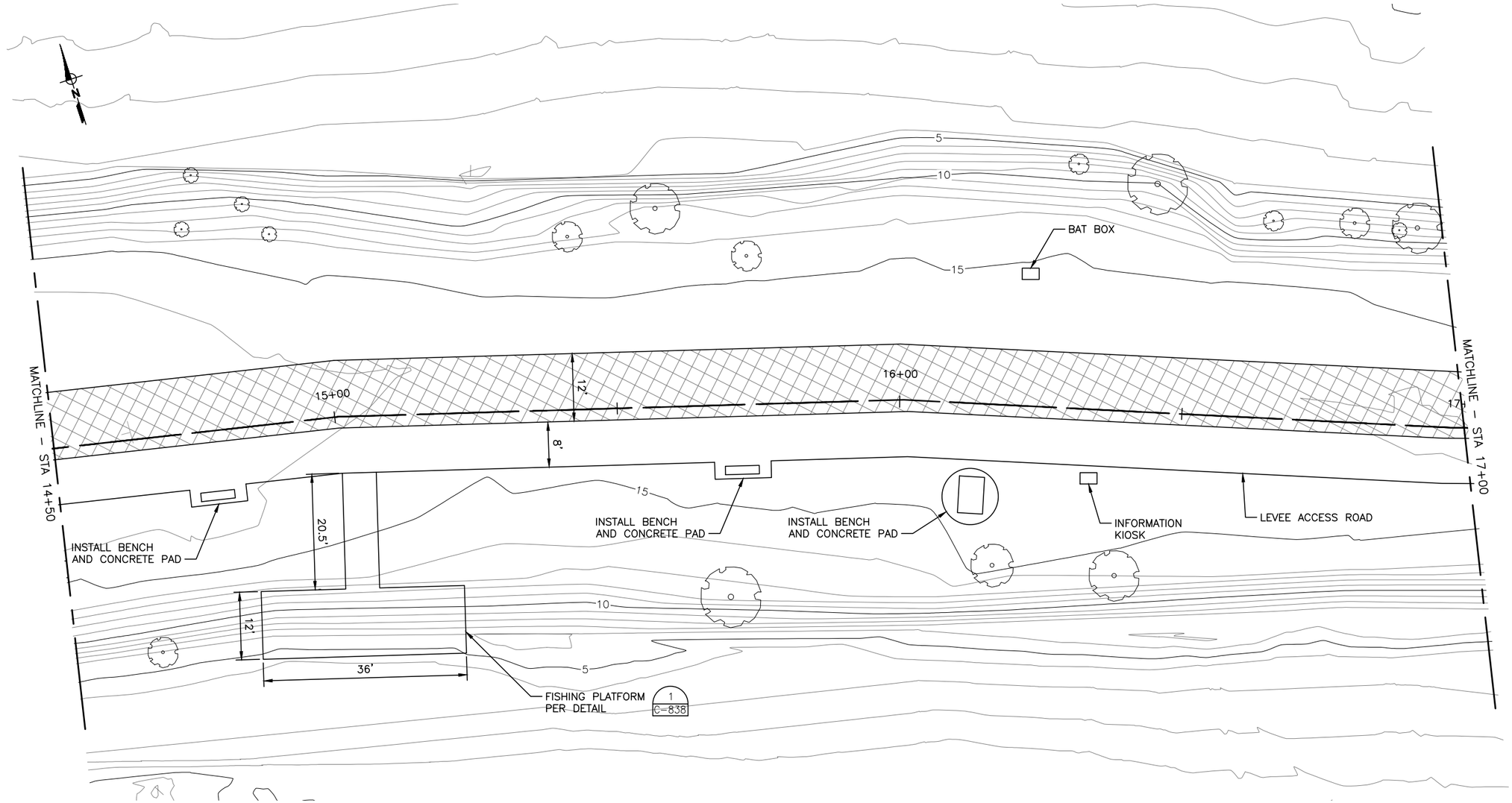
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT CONSTRUCTION PLAN I

SHEET C-831

SHEET OF __

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REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

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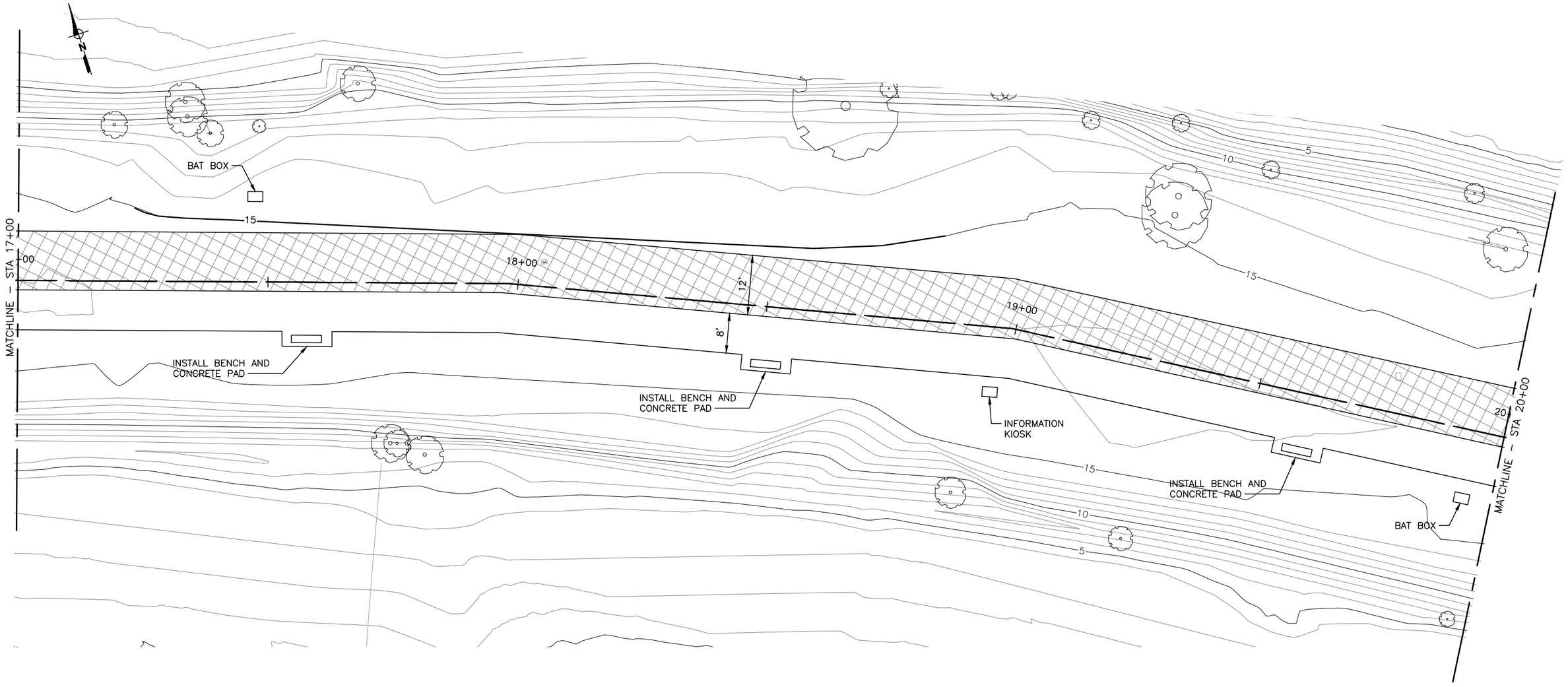
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT CONSTRUCTION PLAN II

SHEET C-832

SHEET OF __

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REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'

DATE: JUNE 2017

WARNING
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DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

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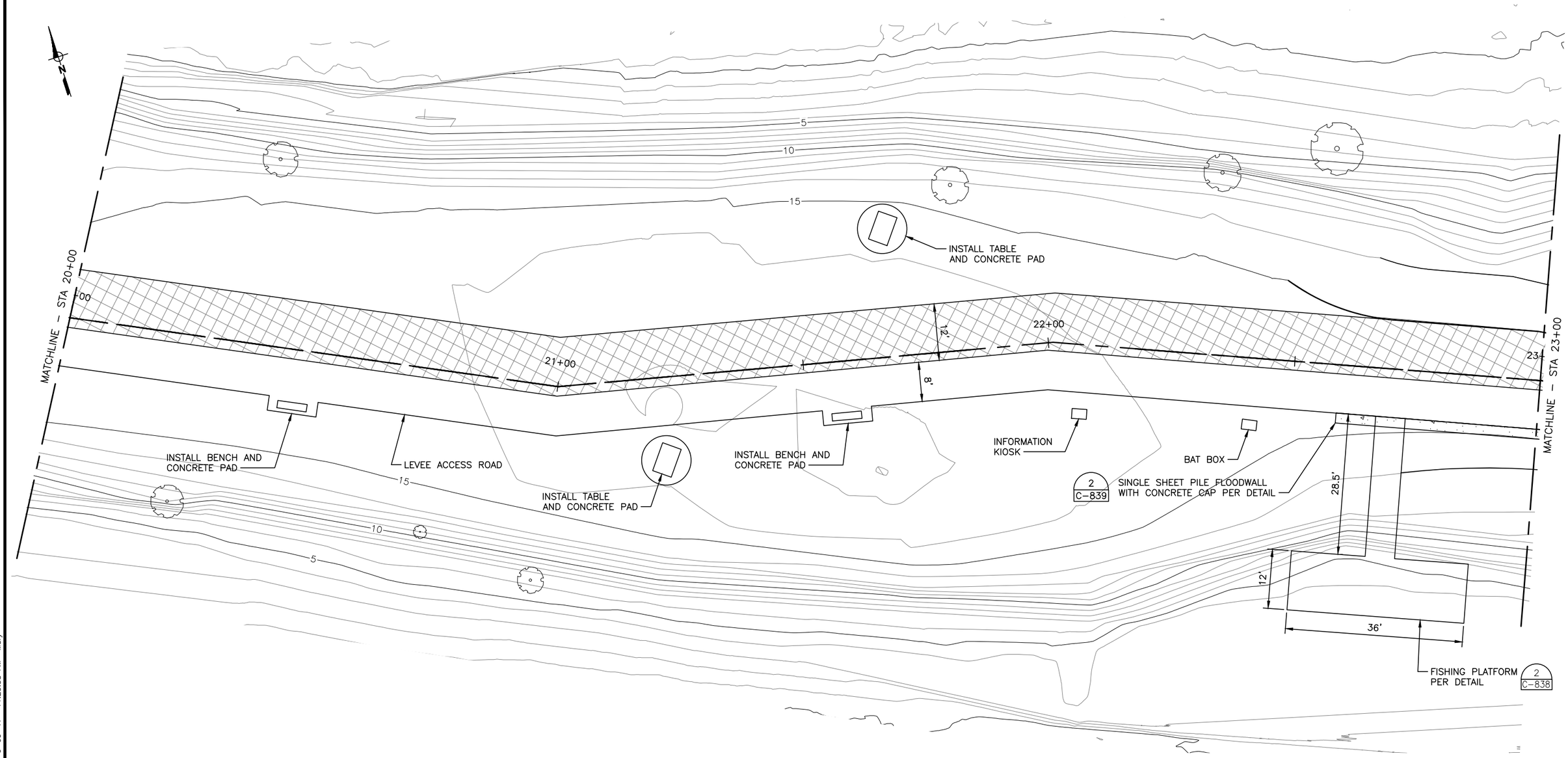
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT CONSTRUCTION PLAN III

SHEET C-833

SHEET OF __

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REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

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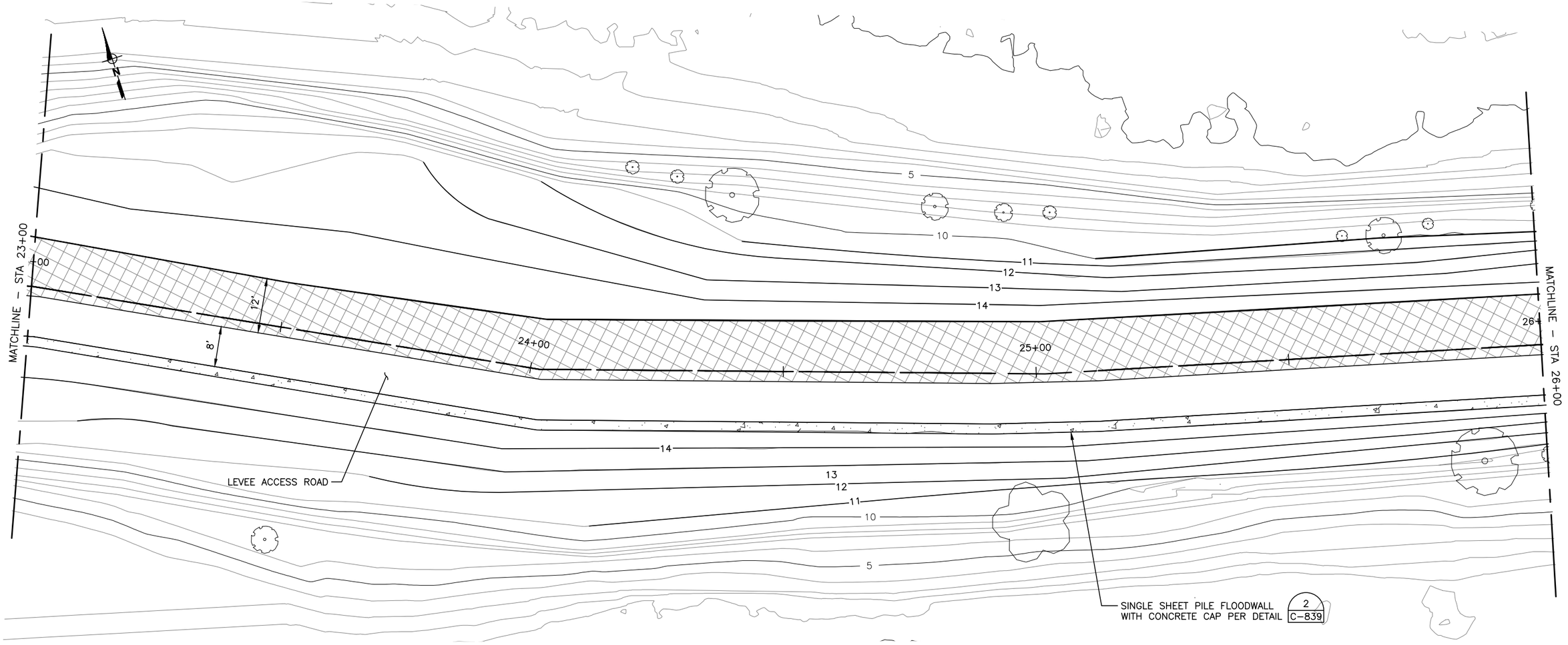
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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT CONSTRUCTION PLAN IV

SHEET C-834

SHEET OF



65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

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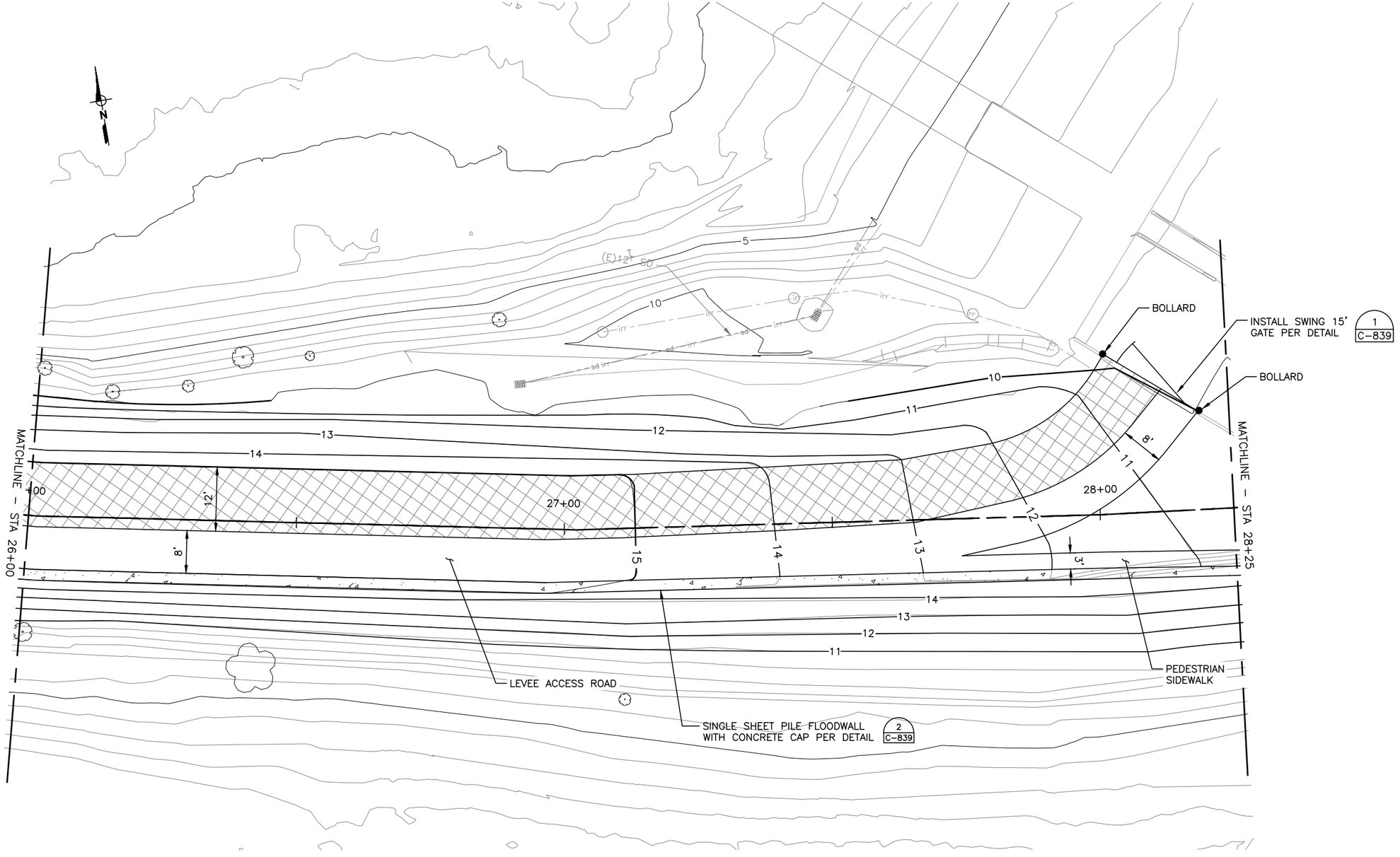
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINTCONSTRUCTION PLAN V

SHEET C-835

SHEET OF __

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65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT CONSTRUCTION PLAN VI

SHEET C-836

SHEET OF __

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65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

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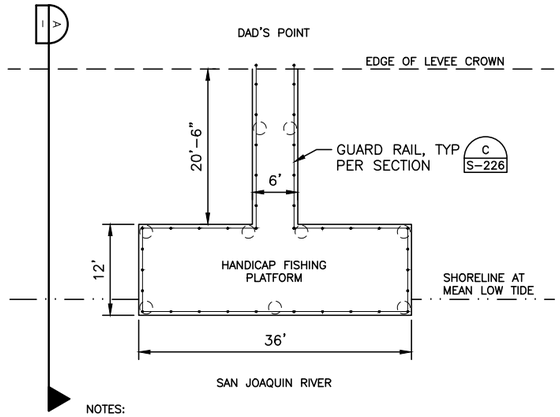
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT CONSTRUCTION PLAN VII

SHEET C-837

SHEET OF __

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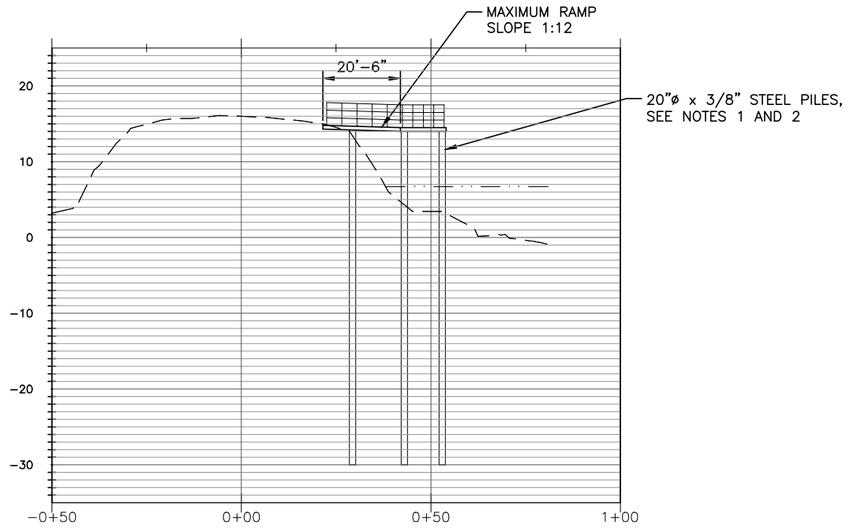


NOTES:

1. REPAIR EXISTING ROCK PROTECTION ALONG DAD'S POINT FOLLOWING INSTALLATION OF SUPPORT PILES.

FISHING PLATFORM STA 15+00 DETAIL 1

1" = 10'

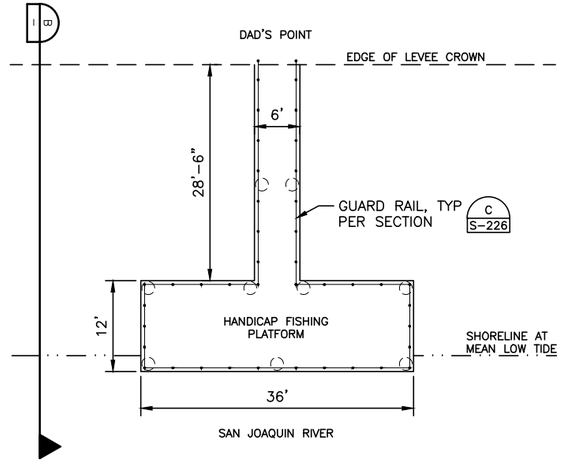


NOTES:

1. STEEL PIPE PILE SHALL BE PER SPECIFICATIONS, SECTION 31 62 18
2. ALL STEEL PIERS SHALL BE COATED FULL LENGTH PER SPECIFICATION, SECTION 89 97 B.26

SECTION A

H: 1" = 20'
V: 1" = 10'

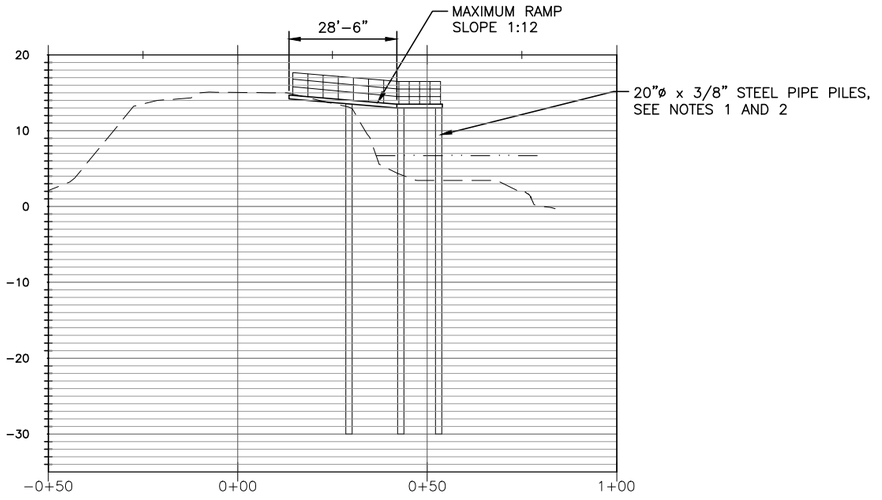


NOTES:

1. REPAIR EXISTING ROCK PROTECTION ALONG DAD'S POINT FOLLOWING INSTALLATION OF SUPPORT PILES.

FISHING PLATFORM STA 22+75 DETAIL 2

1" = 10'



NOTES:

1. STEEL PIPE PILE SHALL BE PER SPECIFICATIONS, SECTION 31 62 18
2. ALL STEEL PIERS SHALL BE COATED FULL LENGTH PER SPECIFICATION, SECTION 89 97 B.26

SECTION B

H: 1" = 20'
V: 1" = 10'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

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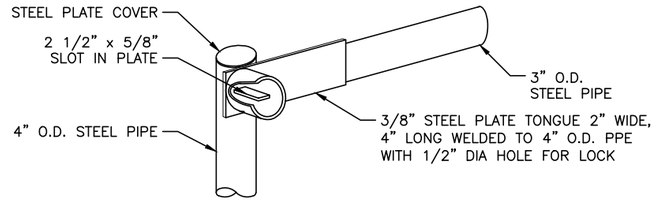
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT IMPROVEMENTS DETAILS I

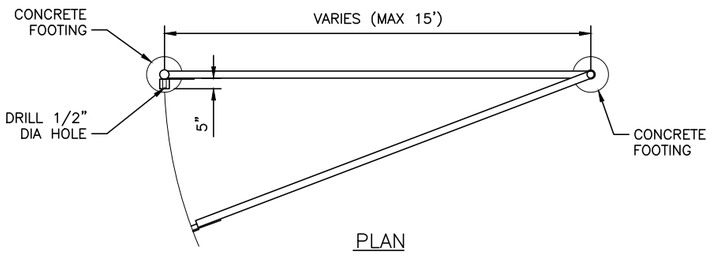
SHEET C-838

SHEET OF __

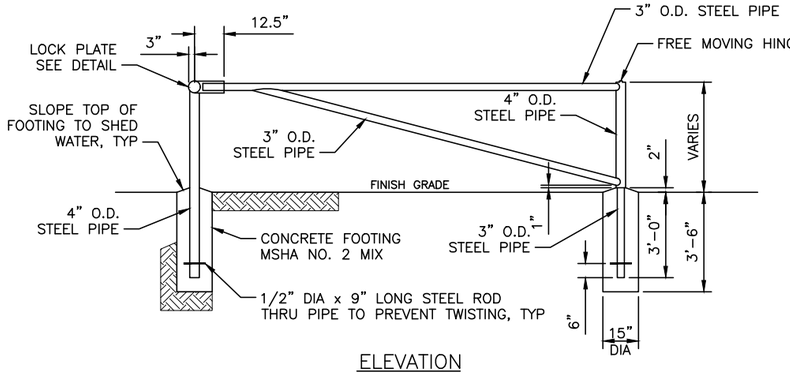
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LOCK PLATE DETAIL



PLAN



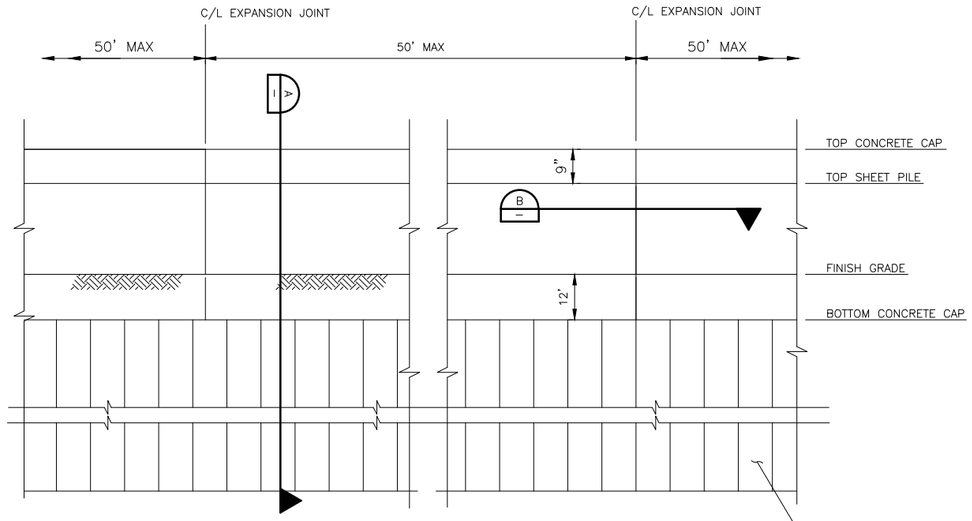
ELEVATION

NOTES:

1. STEEL POST SHALL BE CAPPED WITH STEEL PLATE WELDED TO PIPE AND TO REFLECT SHAPE OF POST.
2. ALL WELDS SHALL BE CONTINUOUS AND SHALL BE GROUND DOWN TO BE FREE OF ALL PROTRUSIONS.
3. FINISH ALL METAL WITH ONE COAT OF PRIMER AND TWO COATS OF INDUSTRIAL GRADE ENAMEL, FINISH PAINT COLOR: GREENAAND YELLOW.
4. GATE TO SWING AS SHOWN ON SITE PLAN.

SWING GATE DETAIL (1)

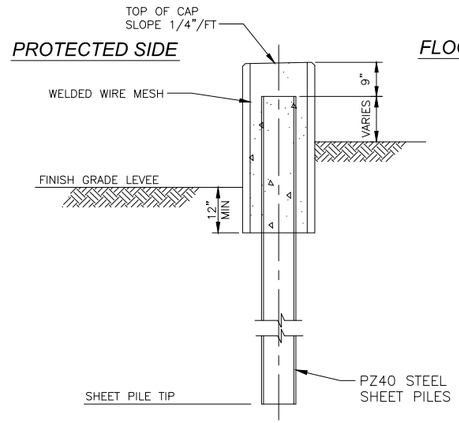
NTS



TYPICAL SINGLE SHEET PILE FLOODWALL WITH CONCRETE CAP

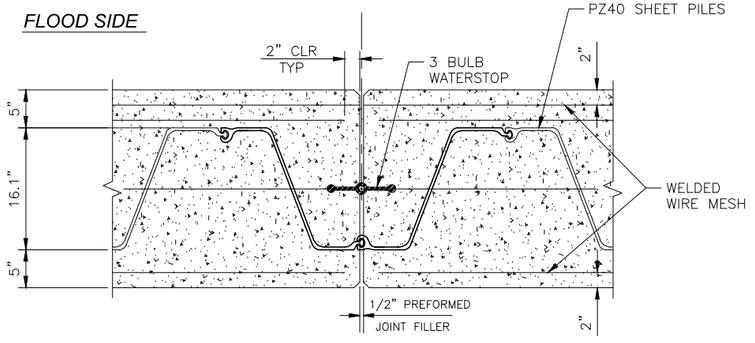
ELEVATION (2)

NTS



SECTION (A)

NTS



TYPICAL REINFORCEMENT AT MONOLITH JOINTS

SECTION (B)

NTS

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — PROJECT ENGINEER — 86512 R.C.E. NO. — 3/31/19 EXP. DATE

DAVID A. PETERSON, PE — PROJECT MANAGER — 43432 R.C.E. NO. — 6/30/18 EXP. DATE

PRELIMINARY

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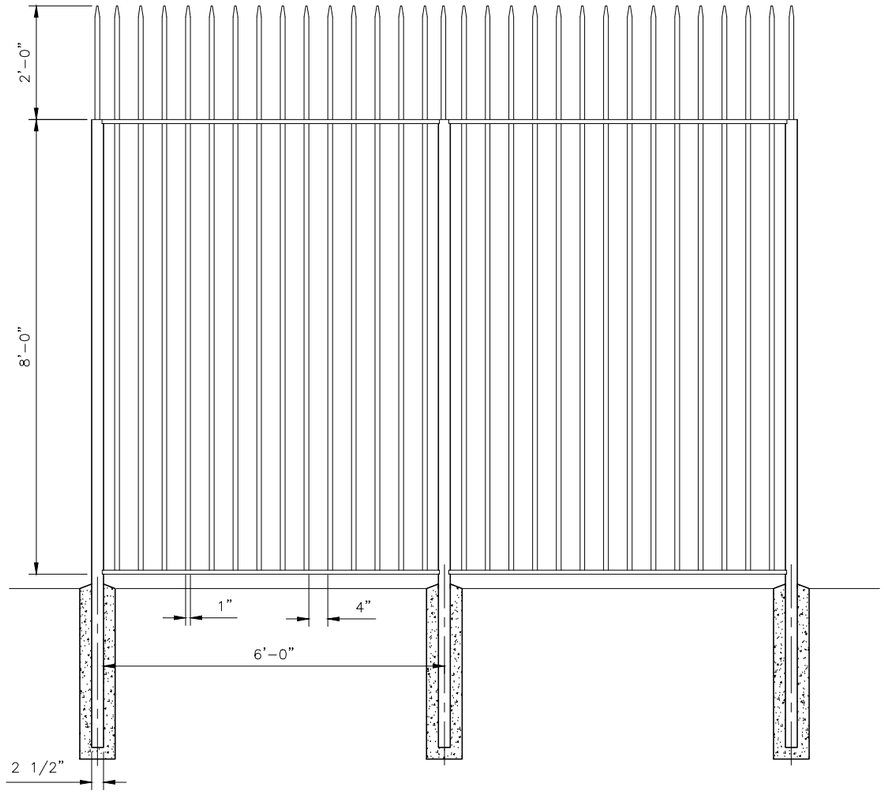
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT IMPROVEMENTS
DETAILS II

SHEET C-839

SHEET OF __

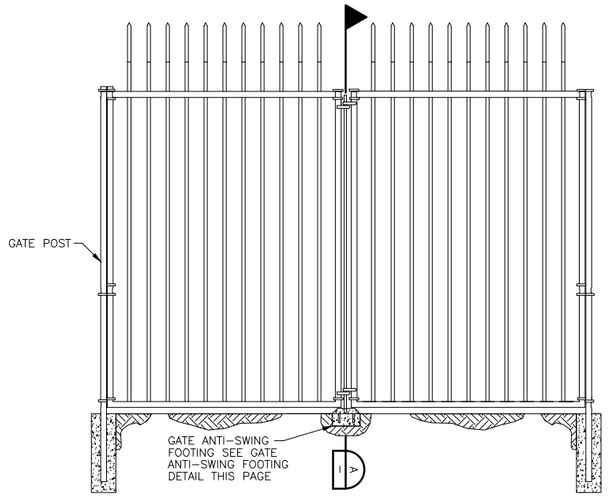
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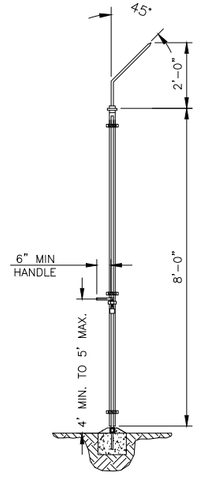
NOTES:

1. GALVANIZED STEEL AND POWDER COATED.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ALL DIMENSIONS ARE CONSIDERED TRUE AND REFLECT MANUFACTURER'S SPECIFICATIONS.

TUBULAR STEEL FENCE/GATE DETAIL 1
3/4"=1'-0"

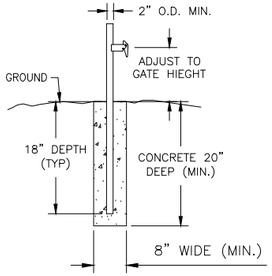


GATE AND LINE POST DETAIL
NTS

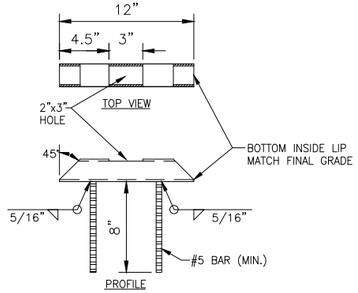


GATE OPERATOR SECTION A
NTS

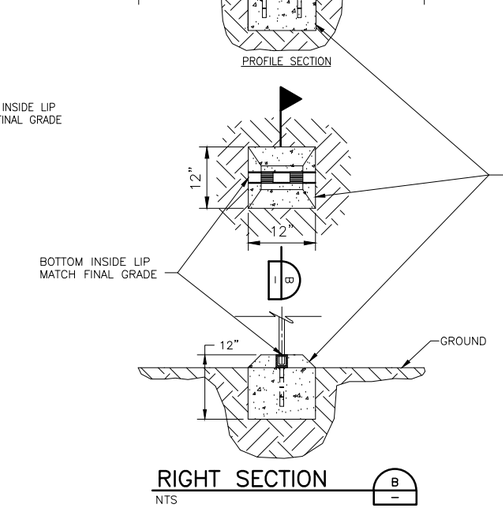
8' HIGH STEEL TUBULAR GATE DETAIL 2
NTS



GATE KEEPER
NTS



2" SQUARE TUBING DETAIL
NTS



12"W x 12"L x 12"D CONCRETE BASE WITH 2" (SQ. TUBING) x 0.250" WALL TH. x 12"L, CUT ONE 3" x 2" HOLE IN TOP AND ANGLE CUT BOTH ENDS 45° FROM HORIZONTAL. REINFORCE WITH 2 EA./#5 BAR x 8"L WELDED @ EQUAL DISTANCES SEE DETAIL ABOVE. ALL BARE METAL AFTER FABRICATION SHALL BE PAINTED ACCORDING TO PCWA SPECIFICATIONS (SEC T – PART 5). BOTTOM INSIDE LIP OF SQUARE TUBING SHALL MATCH FINAL GRADE. "DO NOT BLOCK ENDS OF SQUARE TUBING WITH CONCRETE".

RIGHT SECTION B
NTS

GATE ANI-SWING FOOTING DETAIL
NTS

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

PBI
1180 Iron Point Rd. Suite 260
Folsom, CA 95630
PH. 916-608-2212
Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

DAD'S POINT IMPROVEMENTS
DETAILS III

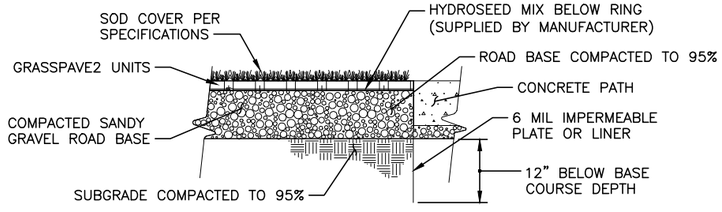
SHEET C-840

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PLAN
1" = 30'-0"



DETAIL
NTS
1

NOTE:
COMPACTED SUBGRADE, 95% MODIFIED PROCTOR DENSITY.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

GOLF COURSE ACCESS ROAD IMPROVEMENTS

SHEET C-861

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PLAN
1" = 30'-0"

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE	86512	3/31/19
PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
DAVID A. PETERSON, PE	43432	6/30/18
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

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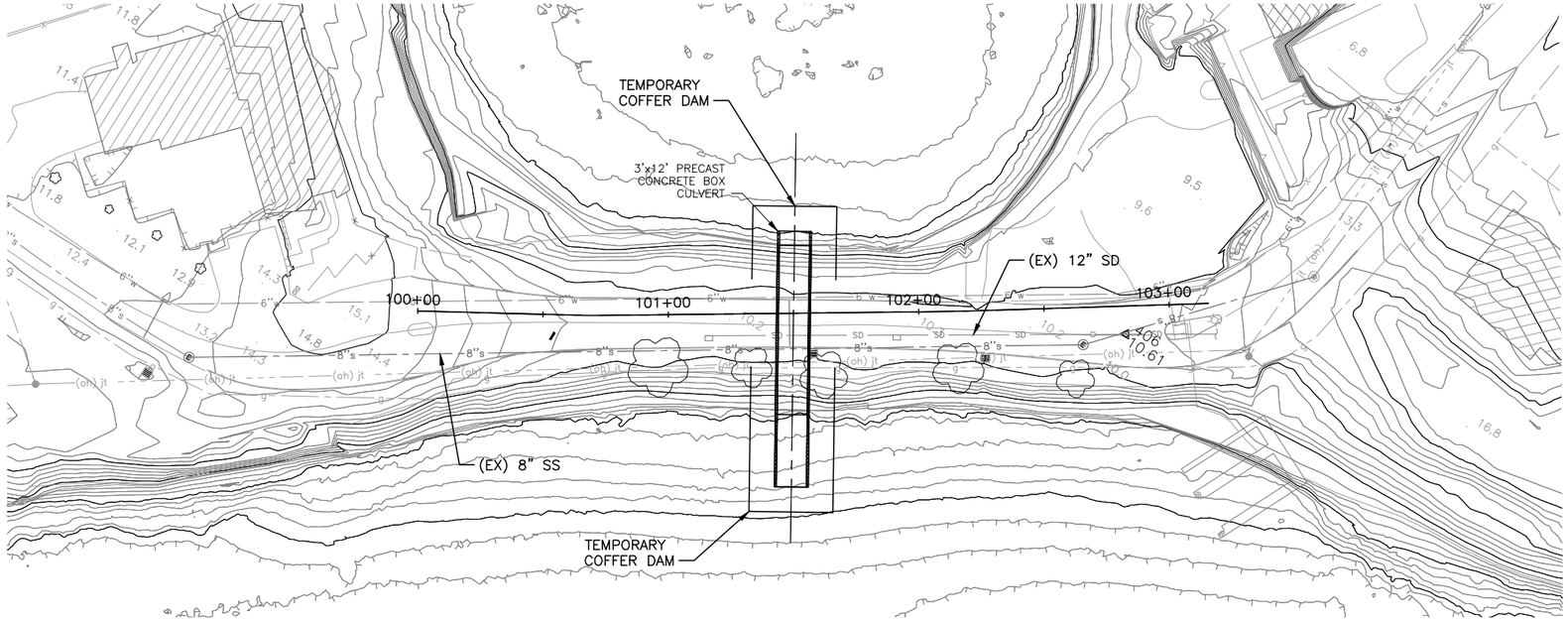
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

GOLF COURSE DEMO PLAN

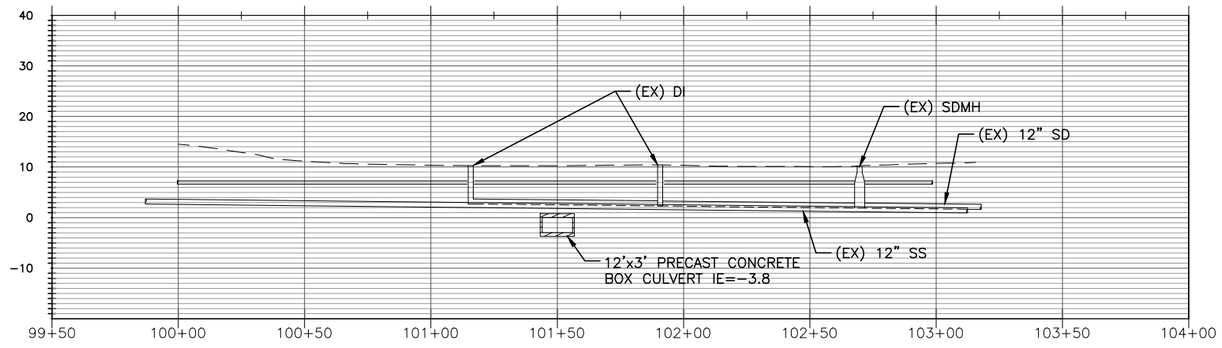
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PLAN
1" = 30'



PLAN & PROFILE
H. 1" = 30'
V. 1" = 15'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

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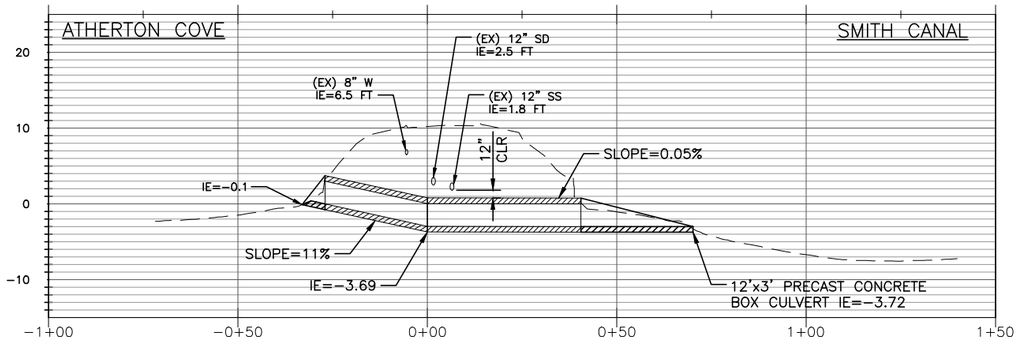
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Folsom, CA 95630
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Fax 916-608-2232

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

MOREING ROAD
PLAN AND PROFILE

SHEET C-880
SHEET OF __

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STA 101+50
HORIZ. 1" = 20'
VERT. 1" = 10'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE:
H: 1"=20'
V: 1"=10'

DATE:
JUNE 2017

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

DESIGNED AAM
DRAWN MAH
CHECKED DAP

ASHLEY A. MARTIN, PE — 86512 — 3/31/19
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

DAVID A. PETERSON, PE — 43432 — 6/30/18
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

San Joaquin Area FLOOD CONTROL Agency

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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

MOREING ROAD
CROSS SECTIONS

SHEET
C-881
SHEET OF __

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GENERAL STRUCTURAL NOTES (GSN)

GENERAL:

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

G2 APPLICABLE SPECIFICATIONS AND CODES:
- A. U.S. ARMY CORPS OF ENGINEERS HURRICANE AND STORM DAMAGE RISK REDUCTION SYSTEM DESIGN GUIDELINES (HSDRRSDG).
- B. U.S. ARMY CORPS OF ENGINEERING TECHNICAL LETTER (ETL 1110-2-584) – PRIMARY STEEL DESIGN REF.
- C. U.S. ARMY CORPS OF ENGINEERING MANUAL (EM 1110-2-2703).
- D. U.S. ARMY CORPS OF ENGINEERING MANUAL (EM 1110-2-2104) – PRIMARY CONCRETE DESIGN REF.
- E. ACI 350-06 ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES.
- F. ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
- G. AISC 360-14TH ED. STEEL CONSTRUCTION MANUAL.

G3 SAFETY:
SAFETY AND STRUCTURE STABILITY DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LIVE LOADS ONLY AS A COMPLETED STRUCTURE.

G4 STANDARD DETAILS:
THE STANDARD DETAILS DEPICT TYPICAL DETAILING TO BE USED ON THIS PROJECT. IF CONDITIONS ARE NOT EXPLICITLY SHOWN ON THE DRAWINGS THEY SHALL BE MADE SIMILAR TO THE STANDARD DETAILS. OBTAIN APPROVAL OF ENGINEER IN WRITING FOR SIMILAR CONDITIONS PRIOR TO CONSTRUCTION.

G5 THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION AS REQUIRED TO COORDINATE NEW CONSTRUCTION. SUBMIT REQUIRED CHANGES FOR APPROVAL.

G6 ALL CONSTRUCTION JOINTS, CONTRACTION JOINTS & EXPANSION JOINTS SHALL BE PROVIDED WHERE SHOWN ON THE APPROVED SHOP DRAWINGS. NO OTHER JOINTS SHALL BE INTRODUCED UNLESS APPROVED BY THE ENGINEER BEFORE CONCRETE IS PLACED. WATERSTOP SHALL BE PLACED AT ALL CONSTRUCTION JOINTS.

G7 SEISMIC ANALYSIS IS STILL IN PROGRESS AND WAS NOT INCLUDED AS PART OF THIS SUBMITTAL. IT WILL BE INCLUDED AT 95% AND MAY POTENTIALLY NECESSITATE DESIGN CHANGES.

G8 THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES, UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST MONITOR ALL ADJACENT PROPERTY BY SURVEYING OR OTHER RECORDABLE METHOD AND MUST TAKE ACTION TO PREVENT ADJACENT PROPERTY OR UTILITY DAMAGE.

G9 CONTRACTOR MUST BE RESPONSIBLE FOR ALL CARE OF WATER WITHIN HIS WORK AREA DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE A CARE OF WATER DESCRIPTION AND PLAN FOR REVIEW AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.

G10 PROVIDE TEMPORARY SUPPORT DURING CONSTRUCTION AS REQUIRED, UNTIL STRUCTURAL ELEMENTS ARE PERMANENTLY ATTACHED. DRAWINGS INDICATE STRUCTURE IN THE FINAL FORM CAPABLE OF SUPPORTING DESIGN LOADS. REFER TO ALL DRAWINGS (CIVIL, ELECTRICAL, MECHANICAL) FOR LOCATION OF DETAILS OF EMBEDDED ITEMS, REQUIRED BLOCKOUTS, ANCHOR BOLTS, AND ACNCHORAGE PLATES. VERIFY THE LOCATION OF EMBEDDED ITEMS PRIOR TO CONCRETING.

G11 CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO PROVIDE TEMPORARY SUPPORT AND TO AVOID DAMAGE TO THE ADJACENT CONCRETE STRUCTURE DURING DEMOLITION (REFER TO DEMOLITION DRAWINGS). UNTIL STRUCTURAL ELEMENTS ARE PERMANENTLY ATTACHED, ANY DAMAGE TO THE CONCRETE ELEMENT OR SURFACE MUST BE REPAIRED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE OWNER.

DESIGN CRITERIA:

D1 DEAD LOAD:
- A. ACTUAL TRIBUTARY STRUCTURE WEIGHT.
- B. SUPERIMPOSED DEAD LOAD.

D2 LIVE LOAD:
- A. WALKWAY, PLATFORM, STAIRS: 100 PSF.
- B. HANDRAILING: 200LB CONCENTRATED LOAD OR 50 PLF UNIFORM LOAD.
- C. SLAB ON GRADE: 200 PSF.

D3 WIND:
50 PSF.

D4 SEISMIC:
100 YEAR RETURN PERIOD: 0.83g.

D5 HYDROSTATIC WATER SURFACE ELEVATIONS:
THE FOLLOWING ARE FROM USACE HSDRRSDG:
- A. 200 YEAR ELEVATION WITH PROJECTED SEA LEVEL RISE: 12.0 FT.
- B. DESIGN RESILIENCY CASES: 15.0 FT.
- C. TAILWATER ELEVATION: 4.0 FT.

D6 HYDRODYNAMIC LOADS:
- A. PER USACE CRITERIA USING EITHER WESTERGAARD OR VELOCITY POTENTIAL METHODS AS APPROPRIATE.
- B. HEADWATER ELEVATION: 4.25 FT.
- C. TAILWATER ELEVATION: 2.37 FT.

D7 IMPACT:
50 KIP RECREATIONAL VESSEL POINT LOAD.

CONCRETE:

C1 DESIGN STRENGTHS:
f'c= 5,000 psi @ 90 DAYS (CONCRETE MIX DESIGN SUBMITTED SHALL STATE A TARGET 28 DAY STRENGTH)
fy= 60,000 psi

C2 CONCRETE CLEAR COVER SHALL BE 4" TYPICAL UNLESS NOTED OTHERWISE

C3 SEE SPECIFICATIONS FOR REINFORCING PLACEMENT REQUIREMENTS

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

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

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

C7 CONTINUOUS WATERSTOP SHALL BE INSTALLED IN JOINTS SUBJECT TO STATIC WATER PRESSURE.

C8 UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER IN WRITING, ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED.

C9 CONTRACTOR SHALL SUBMIT A CONCRETE PLACEMENT PLAN PER SPECIFICATION IDENTIFYING JOINT TYPES, JOINT LOCATIONS AND CONCRETE PLACEMENT SEQUENCE.

C10 ALL CAST IN PLACE AND POST-INSTALLED ANCHORS INDICATED IN THE STRUCTURAL DOCUMENTS SHALL COMPLY WITH CHAPTER 17 OF ACI 318 ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

C11 UNLESS OTHERWISE NOTED, WALL HORIZONTAL REINFORCING LAYER SHALL BE CLOSEST TO WALL SURFACE, AND WALL VERTICAL REINFORCING LAYERS SHALL BE PLACED ATTACHED TO & BETWEEN HORIZONTAL LAYERS.

C12 ALL CONSTRUCTION JOINTS AND SURFACES BETWEEN 1ST POUR CONCRETE AND 2ND POUR NON-SHRINK GROUT SHALL BE ROUGHENED TO 1/4" AMPLITUDE.

STEEL – GATE, GUDGEON ASSEMBLY, PINTLE ASSEMBLY, ACTUATOR CONNECTION PLATES:

S1 MATERIAL PROPERTIES:
ALL STRUCTURAL STEEL, UNLESS NOTED OTHERWISE, SHALL CONFORM TO ASTM A709 F2 GRADE 50. (Fy = 50 KSI).

S2 ALL FABRICATION WELDING SHALL CONFORM WITH THE REQUIREMENTS IN AWS D1.5 LATEST EDITION FOR CARBON STEEL AND AWS D1.6 LATEST EDITION FOR STAINLESS STEEL. SEE SPECIFICATIONS 05 12 00 AND 35 20 16.33.

S3 ALL CARBON STEEL BOLTED CONNECTIONS SHALL BE F3125 GRADE A325 SLIP-CRITICAL (TYPE A) UNLESS OTHERWISE NOTED. PROVIDE LOAD INDICATING WASHERS AT SLIP-CRITICAL CONNECTIONS. SEE SPECIFICATION 05 12 00 FOR MORE DETAILS.

S4 ALL STAINLESS STEEL BOLTED CONNECTIONS SHALL BE EITHER ASTM A593 TYPE 316L OR TYPE 410 AS INDICATED ON THE DRAWINGS AND THEY SHALL BE INSTALLED SNUG-TIGHT WITH LOCTITE 262 APPLIED UNLESS NOTED OTHERWISE. SEE SPECIFICATION 35 20 16.33.

S5 PAINTING:
STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATION 09 91 00.

S6 STAINLESS STEEL:
STAINLESS STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATION 35 20 16.33.

S7 ALL BOLT HOLES SHALL BE STANDARD SIZE, UNLESS OTHERWISE NOTED.

S8 DRAIN HOLES SHALL BE DRILLED. NO FLAME CUTTING IS PERMITTED.

S9 STRUCTURAL STEEL FRAMING SHALL BE TRUE AND PLUMB BEFORE BOLTING OR WELDING OF CONNECTIONS.

S10 ALL BOLTED ASSEMBLIES CONFORMING TO ASTM F3125 (BOLTS, NUTS, AND WASHERS) SHALL BE MECHANICALLY GALVANIZED PER ASTM B695.

S11 PIPE PILE SHALL BE ASTM A252 GRADE 3 (MOD) (Fy = 50 KSI) AND SHALL MEET REQUIREMENTS IN SPECIFICATION 31 62 18.

S12 ALL WELDING TO BE CERTIFIED FOR THE MATERIALS AND POSITIONS UTILIZED.

S13 SHEETPILE SHALL BE ASTM A690 (Fy = 50 KSI) AND SHALL MEET REQUIREMENTS IN SPECIFICATION 31 41 16

S14 ALL EPOXY ANCHORS TO BE HILTI-HIT HY200 WITH STANDARD HAS THREADED ROD OR APPROVED EQUAL. SUBMIT AND INSTALL PER ICC EVALUATION REPORT.

STEEL – PLATFORM, WALKWAY AND GUARDRAIL:

S15 DESIGN STRENGTHS:

WIDE FLANGE AND TEES:	Fy = 50 KSI
PIPES:	Fy = 30 KSI
HSS SECTIONS:	Fy = 46 KSI
ALL OTHER PLATES AND SECTIONS:	Fy = 36 KSI

S16 GRATING SHALL BE FISHER LUDLOW TRU WELD BAR GRATING TYPE 19-4 WITH 1 1/4" X 1 3/16" SERRATED GALVANIZED BEARING BARS AT 1 3/16" C/C UNLESS NOTED OTHERWISE ON THE DRAWINGS OR APPROVED EQUAL.

ALL GRATING TO BE FASTENED TO SUPPORTING MEMBERS WITH FIXING CLIPS IN ACCORDANCE WITH MANUFACTURER INSTRUCTION UNLESS NOTED OTHERWISE ON DRAWINGS. BANDING BARS SHALL BE PROVIDED AT GRATING OPENINGS AND GRATING EDGES WHEREVER REQUIRED, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- A. OPEN ENDS OF GRATING AT HEAD OF LADDER APPROACH TO PLATFORM.
- B. ALL DIMENSIONED OPENINGS IN GRATING.
- C. GRATING PANELS WITH 4 OR LESS CROSS BARS.
- D. ALL CUT-OUTS HAVING UNSUPPORTED BEARING BARS.

S17 SEE SPECIFICATIONS 05 50 00 AND 05 52 05 FOR DETAILED REQUIREMENTS.

S18 ALL ACCESS STRUCTURE SHALL BE HOT-DIPPED GALVANIZED PER ASTM A123 OR ASTM A153.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED BB
DRAWN AJ
CHECKED KG

KEVIN GERST P.E. S.E. — S6262 — 9/31/17
PROJECT ENGINEER — R.S.E. NO. — EXP. DATE

WESLEY JACOBS P.E. — – — –
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

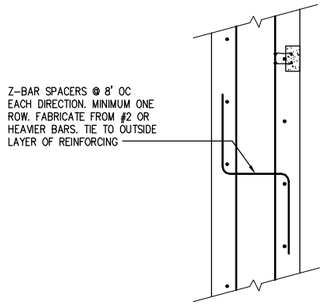
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

GENERAL STRUCTURAL NOTES

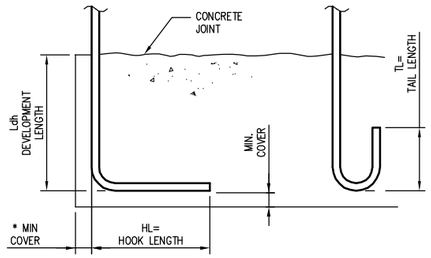
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SHEET - OF 109



SPACER FOR WALL REINFORCEMENT
NTS

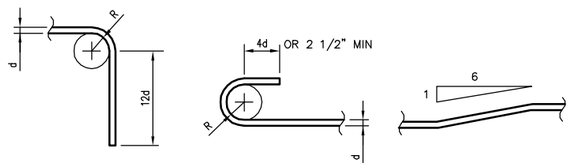
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90° STD HOOK 180° STD HOOK

BAR SIZE GRADE 60	f'c=4000 psi & 4500 psi				f'c=5000 psi
	Ldh *	HL	HW	TL	Ldh*
#3	6"	6"	3"	4"	6"
#4	7"	8"	4"	4 1/2"	6"
#5	9"	10"	5"	5"	8"
#6	10"	1'-0"	6"	6"	9"
#7	1'-0"	1'-2"	7"	7"	11"
#8	1'-2"	1'-4"	8"	8"	1'-0"
#9	1'-3"	1'-7"	11 3/4"	10 1/2"	1'-2"
#10	1'-5"	1'-10"	1'-1 1/4"	11 1/2"	1'-3"
#11	1'-7"	2'-0"	1'-2 3/4"	1'-1"	1'-5"

* COMPLYING WITH MINIMUM COVER REQUIREMENTS OF ACI 350, 12.5.3.2. OTHERWISE Ldh MUST BE RE-CALCULATED.



90° BEND 180° BEND MAX OFFSET BEND

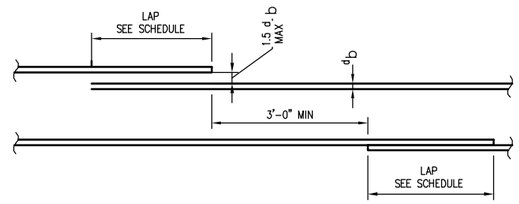
REINFORCING HOOK SCHEDULE
NTS

2

BAR SIZE	f'c = 5.0 ksi		fy = 60 ksi	
	LAP LENGTH (IN)		EMBEDMENT LENGTH (IN)	
	TOP	OTHER	TOP	OTHER
#3	22	17	17	12
#4	29	22	22	16
#5	36	28	28	21
#6	43	33	33	25
#7	63	48	48	37
#8	72	55	55	42
#9	81	62	62	47
#10	91	70	70	53
#11	101	78	78	59

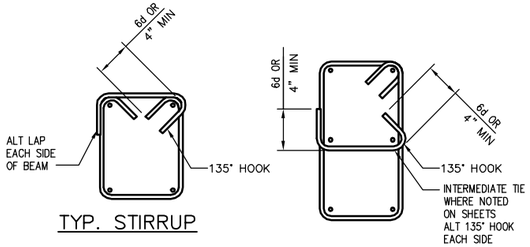
NOTES:

1. LAP LENGTHS SHOWN ARE FOR CLASS "B" TENSION SPLICES.
2. TOP REINFORCING IS HORIZONTAL STEEL SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCING.
3. LAP LENGTH SHOWN ARE FOR BARS THAT MEET C.C. SPACING AT LEAST 3.0 d_b AND CONCRETE COVER ATLEAST 1.0 d_b IN ACCORDANCE WITH ACI 350-06
4. IF C.C SPACING IS < 3.0 d_b, INCREASE LAP LENGTH SHOWN BY 50%

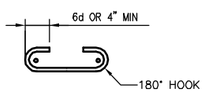


REINFORCING LAP SCHEDULE
NTS

3



TYP. STIRRUP TYP. COLUMN TIE OR CLOSED STIRRUP

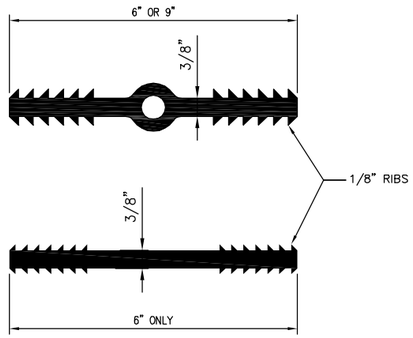


TYP. STIRRUP

BAR SIZE	R
#3 TIES & STIRRUPS	2d
#4-#8	3d
#9-#11	4d
#14-#18	5d

TYPICAL STIRRUPS & TIES
NTS

4



NOTES:

1. – USE 9" AT EXPANSION JOINTS ONLY.
   – USE 9" BULB AT CONSTRUCTION JOINTS.
   – USE 6" NON-BULB AT CONSTRUCTION JOINTS. (WITH REINFORCING CONTINUOUS THRU JOINT)
2. WATERSTOP TO BE PVC UNLESS NOTED OTHERWISE.

WATERSTOP
NTS

5

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED BB
DRAWN AJ
CHECKED KG

KEVIN GERST P.E. S.E. — PROJECT ENGINEER — S6262 R.S.E. NO. — 9/30/17 EXP. DATE

WESLEY JACOBS P.E. — PROJECT MANAGER — – R.C.E. NO. — – EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

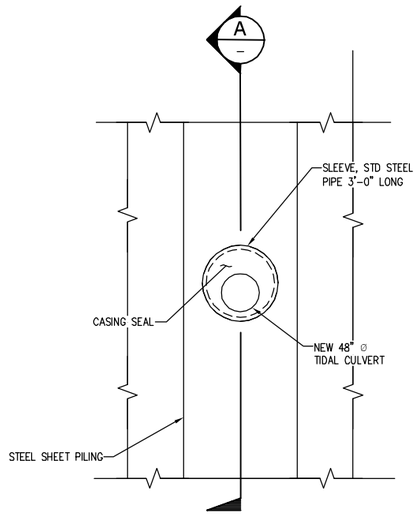
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

TYPICAL CONCRETE REINFORCING DETAILS

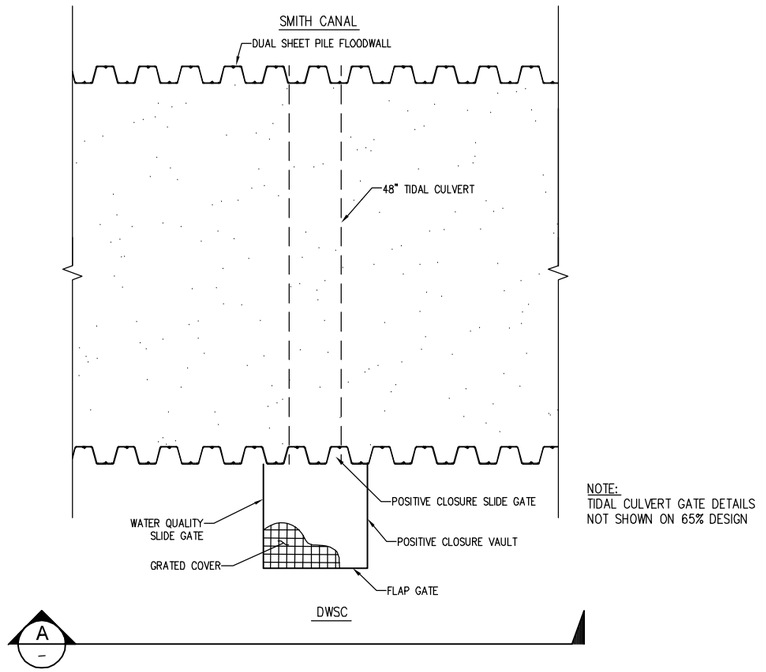
SHEET S-002

SHEET - OF 109



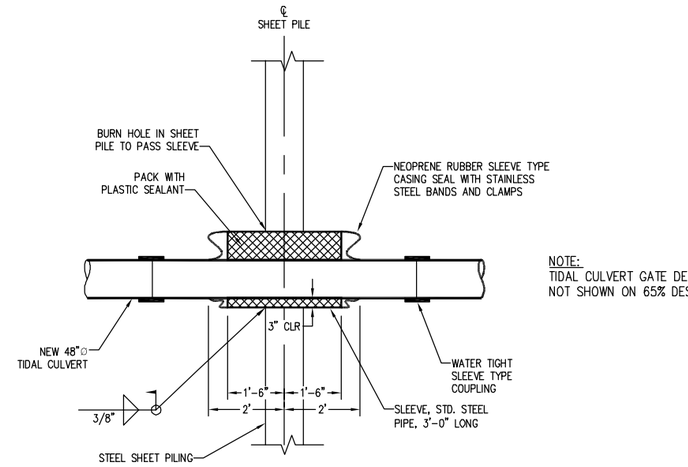
NOTE:
TIDAL CULVERT GATE DETAILS NOTSHOWN ON 65% DESIGN

ELEVATION – TIDAL CULVERT THRU STEEL SHEET PILING (1 / C-102)
NTS



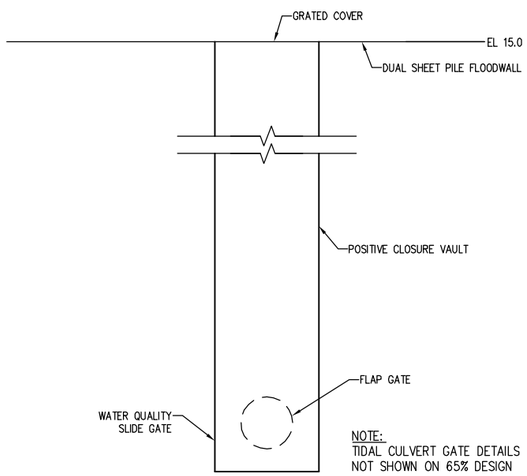
NOTE:
TIDAL CULVERT GATE DETAILS NOT SHOWN ON 65% DESIGN

TIDAL CULVERT VAULT PLAN (2 / C-102)
NTS



NOTE:
TIDAL CULVERT GATE DETAILS NOT SHOWN ON 65% DESIGN

TYPICAL TIDAL CULVERT THRU STEEL SHEET PILING (A / –)
NTS



NOTE:
TIDAL CULVERT GATE DETAILS NOT SHOWN ON 65% DESIGN

ELEVATION (A / –)
NTS

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED FGS
DRAWN AJ
CHECKED –

KENNY DOSANJH, PE — C72288 — 6/30/18
PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

WES JACOBS, PE
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

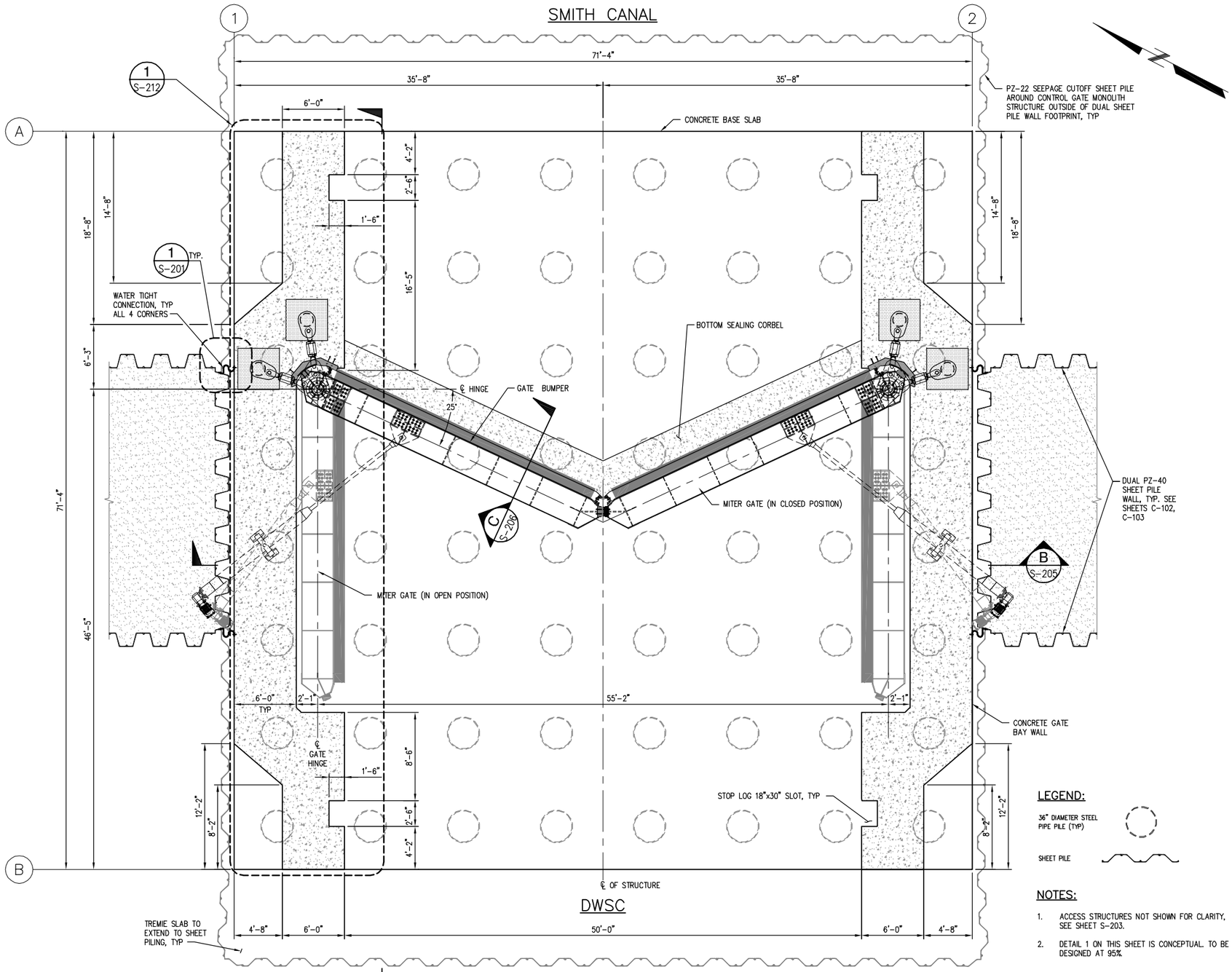
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

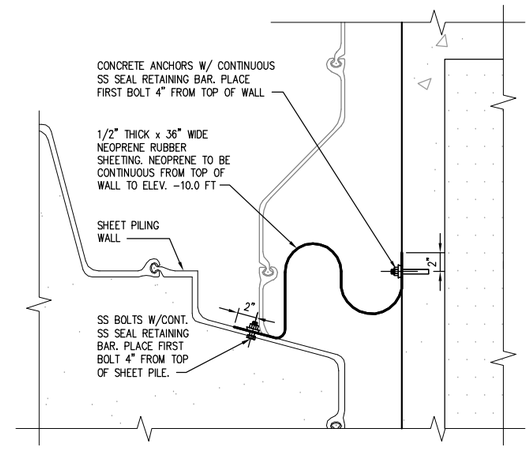
TIDAL CULVERT TYPICAL SECTIONS AND DETAILS

SHEET S-113

SMITH CANAL



PLAN – FLOODGATE MONOLITH STRUCTURE
3/16"=1'-0"
1 C-102



FLOODGATE MONOLITH STRUCTURE–TO–SHEET PILE WALL SEAL DETAIL
1-1/2"=1'-0"
1 –

LEGEND:

36" DIAMETER STEEL PIPE PILE (TYP)

SHEET PILE

NOTES:

1. ACCESS STRUCTURES NOT SHOWN FOR CLARITY, SEE SHEET S–203.
2. DETAIL 1 ON THIS SHEET IS CONCEPTUAL. TO BE DESIGNED AT 95%.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED BB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E. — S6262 — 9/30/17
PROJECT ENGINEER — R.S.E. NO. — EXP. DATE

WESLEY JACOBS P.E. — – — –
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

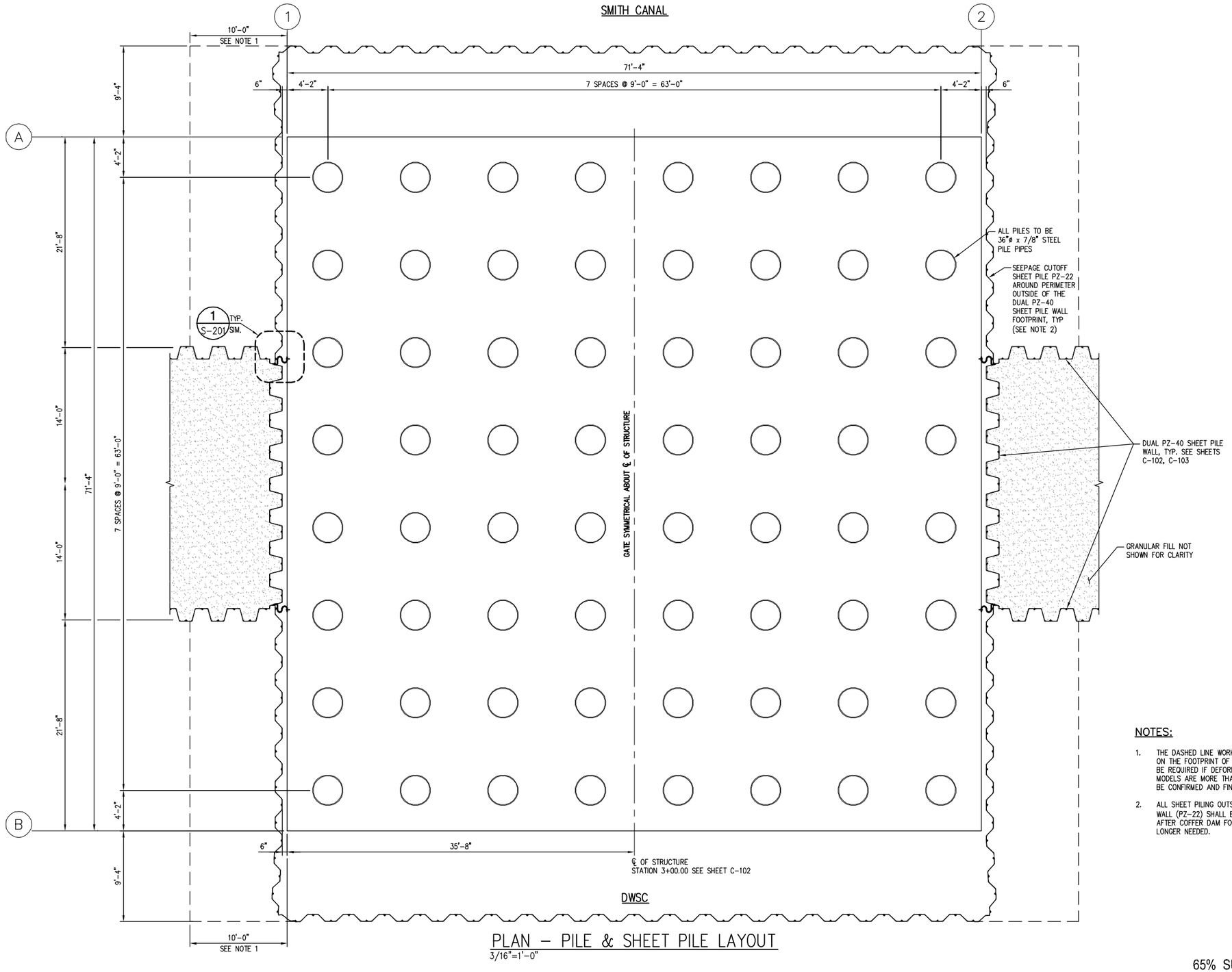
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

FLOODGATE LAYOUT

SHEET S-201

SHEET __ OF 109

SMITH CANAL



PLAN – PILE & SHEET PILE LAYOUT

3/16"=1'-0"

NOTES:

1. THE DASHED LINE WORK REPRESENTS A MAXIMUM LIMIT ON THE FOOTPRINT OF THE SHEET PILING WHICH COULD BE REQUIRED IF DEFORMATIONS FROM THE SEISMIC MODELS ARE MORE THAN CURRENTLY ANTICIPATED. TO BE CONFIRMED AND FINALIZED AT 95%.
2. ALL SHEET PILING OUTSIDE OF THE DUAL SHEET PILE WALL (PZ-22) SHALL BE CUT DOWN TO ELEV. -10.0 AFTER COFFER DAM FOR THE GATE STRUCTURE IS NO LONGER NEEDED.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED BB

DRAWN MM

CHECKED KG

KEVIN GERST P.E. S.E.	S6262	9/30/17
PROJECT ENGINEER	R.S.E. NO.	EXP. DATE
WESLEY JACOBS P.E.	–	–
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

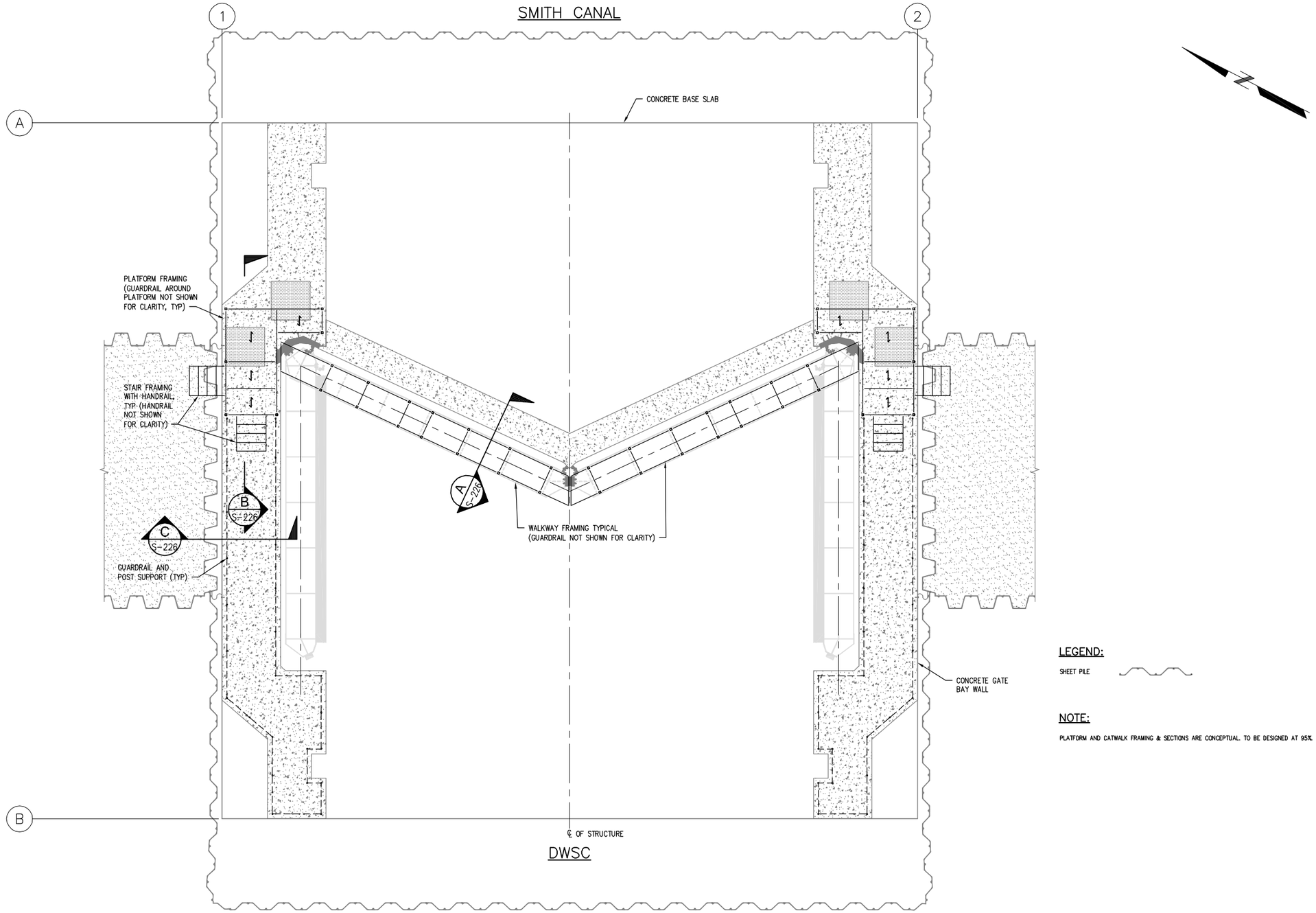
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

PILE & SHEET PILE LAYOUT

SHEET S-202

SHEET __ OF 109



LEGEND:

SHEET PILE

NOTE:

PLATFORM AND CATWALK FRAMING & SECTIONS ARE CONCEPTUAL. TO BE DESIGNED AT 95%.

PLAN – CONTROL GATE MONOLITH STRUCTURE

3/16"=1'-0"

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED BB

DRAWN MM

CHECKED KG

KEVIN GERST P.E. S.E.	S6262	9/30/17
PROJECT ENGINEER	R.S.E. NO.	EXP. DATE
WESLEY JACOBS P.E.	–	–
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

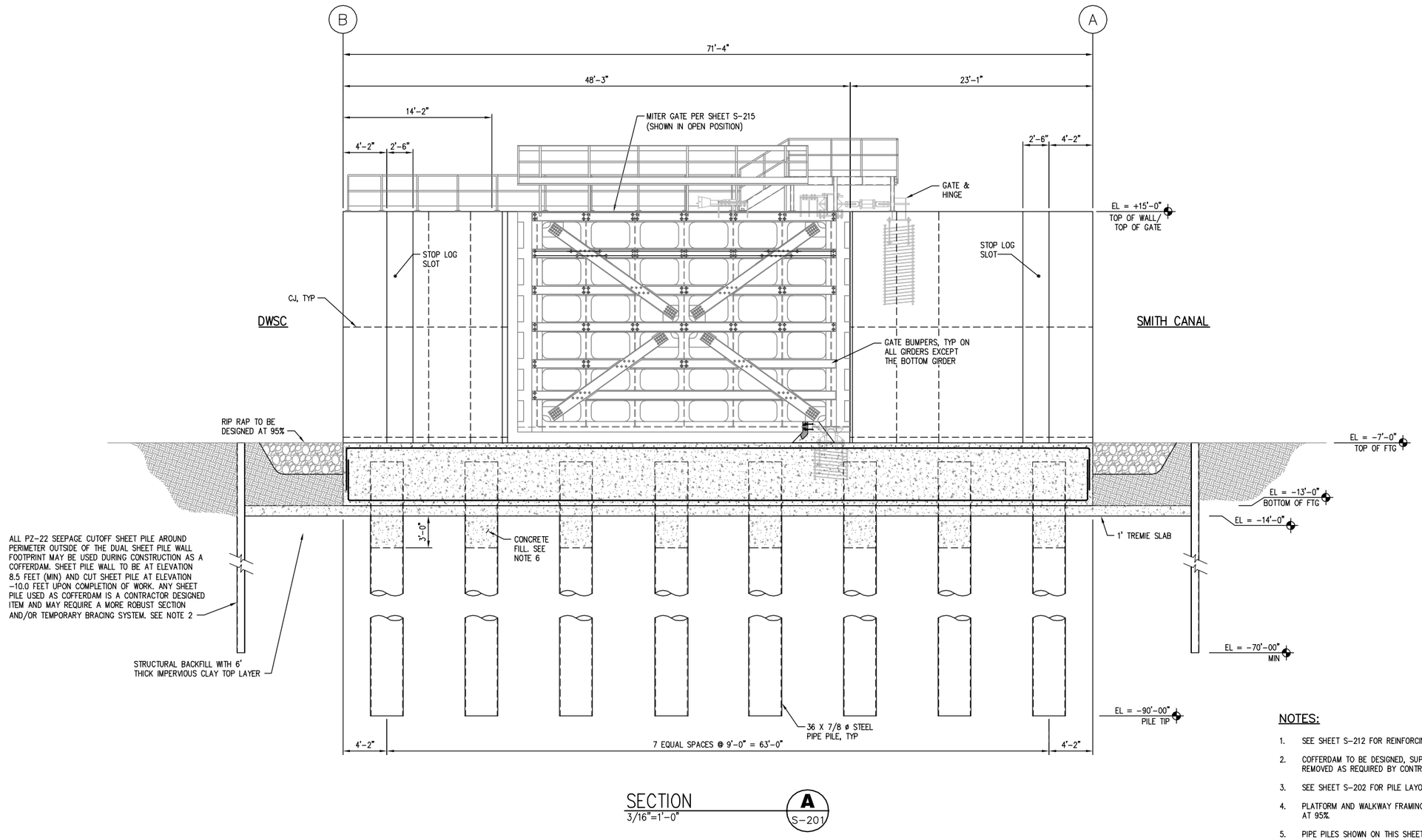
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

CONTROL STRUCTURE PLATFORM, CATWALK AND GUARDRAIL

SHEET S-203

SHEET __ OF 109



SECTION
3/16"=1'-0"

A
S-201

NOTES:

1. SEE SHEET S-212 FOR REINFORCING SIZE AND SPACING.
2. COFFERDAM TO BE DESIGNED, SUPPLIED INSTALLED, MAINTAINED, AND REMOVED AS REQUIRED BY CONTRACTOR AND APPROVED BY ENGINEER.
3. SEE SHEET S-202 FOR PILE LAYOUT.
4. PLATFORM AND WALKWAY FRAMING ARE CONCEPTUAL. TO BE DESIGNED AT 95%.
5. PIPE PILES SHOWN ON THIS SHEET SHALL BE COATED WITH COAL TAR EPOXY PER SPECIFICATION 09 97 13.26 FOR THE TOP 10 FEET.
6. PIPE PILE SHOWN ON THIS SHEET SHALL BE FILLED WITH CONCRETE FROM THE TOP OF THE PILE TO 1 FOOT BELOW THE BOTTOM OF THE TREMIE SLAB.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED BB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E.	S6262	9/30/17
PROJECT ENGINEER	R.S.E. NO.	EXP. DATE
WESLEY JACOBS P.E.	–	–
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

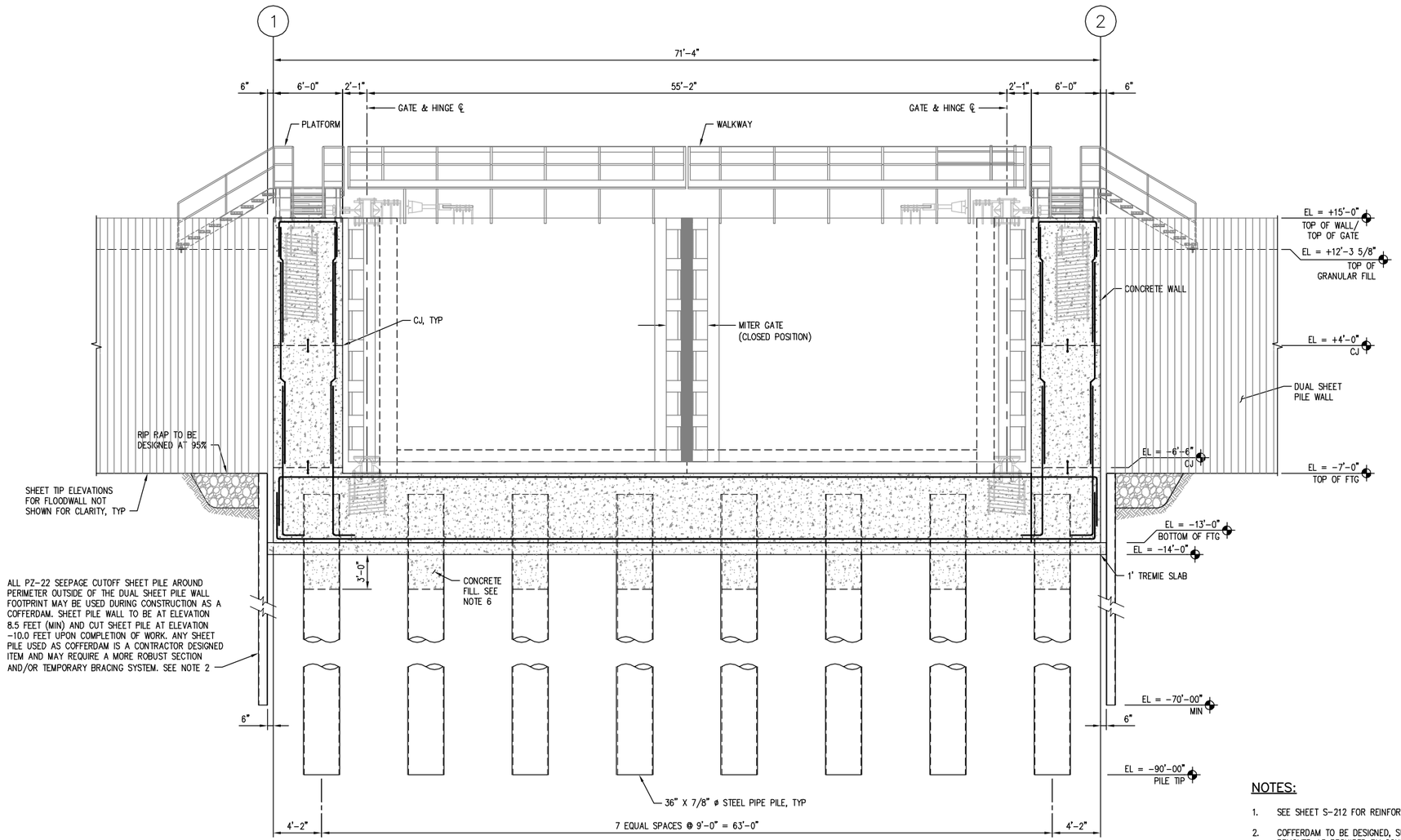
SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

CONCRETE MONOLITH
ELEVATION 1

SHEET
S-204
SHEET __ OF 109



SECTION B
3/16"=1'-0"
S-201

NOTES:

1. SEE SHEET S-212 FOR REINFORCING SIZE AND SPACING.
2. COFFERDAM TO BE DESIGNED, SUPPLIED INSTALLED, MAINTAINED, AND REMOVED AS REQUIRED BY CONTRACTOR AND APPROVED BY ENGINEER.
3. SEE SHEET S-202 FOR PILE LAYOUT.
4. PLATFORM AND WALKWAY FRAMING ARE CONCEPTUAL. TO BE DESIGNED AT 95%.
5. PIPE PILES SHOWN ON THIS SHEET SHALL BE COATED WITH COAL TAR EPOXY PER SPECIFICATION 09 97 13.26 FOR THE TOP 10 FEET.
6. PIPE PILE SHOWN ON THIS SHEET SHALL BE FILLED WITH CONCRETE FROM THE TOP OF THE PILE TO 3 FOOT BELOW THE BOTTOM OF THE TREMIE SLAB.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED BB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E.	S6262	9/30/17
PROJECT ENGINEER	R.S.E. NO.	EXP. DATE
WESLEY JACOBS P.E.	–	–
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

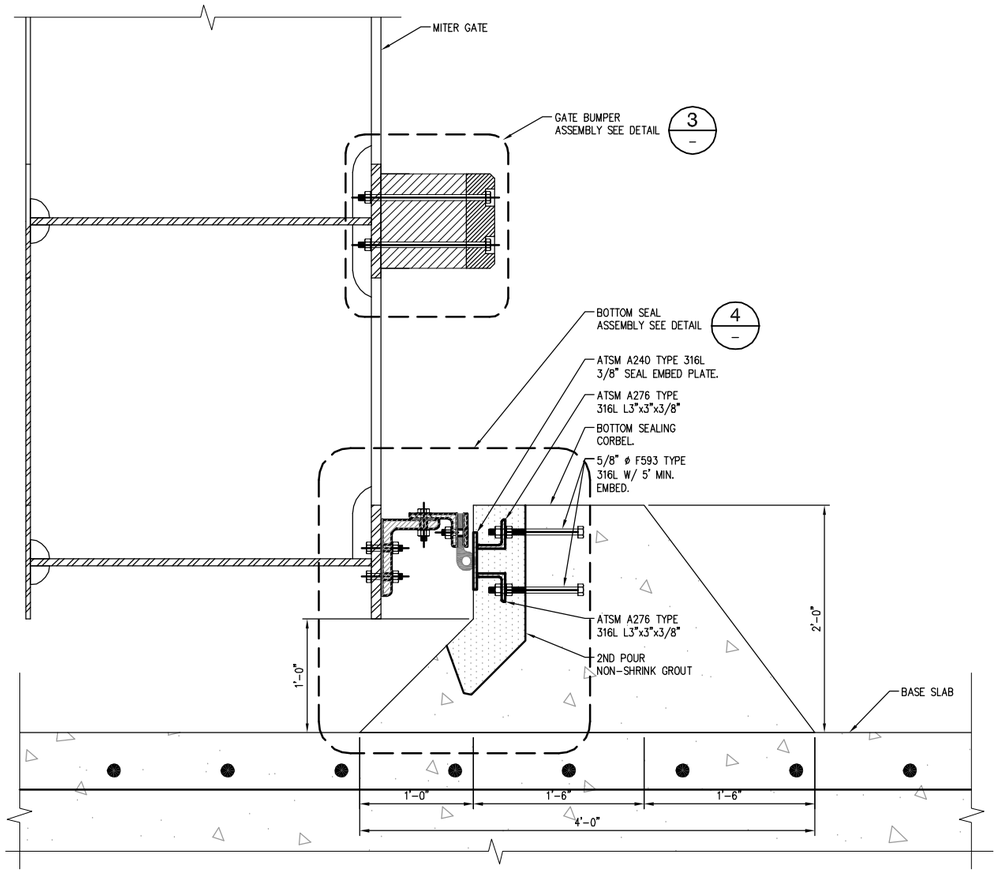
SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

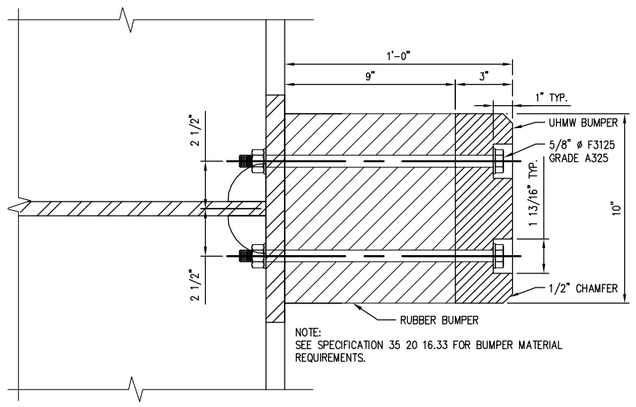
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

CONCRETE MONOLITH
ELEVATION 2

SHEET
S-205
SHEET __ OF 109

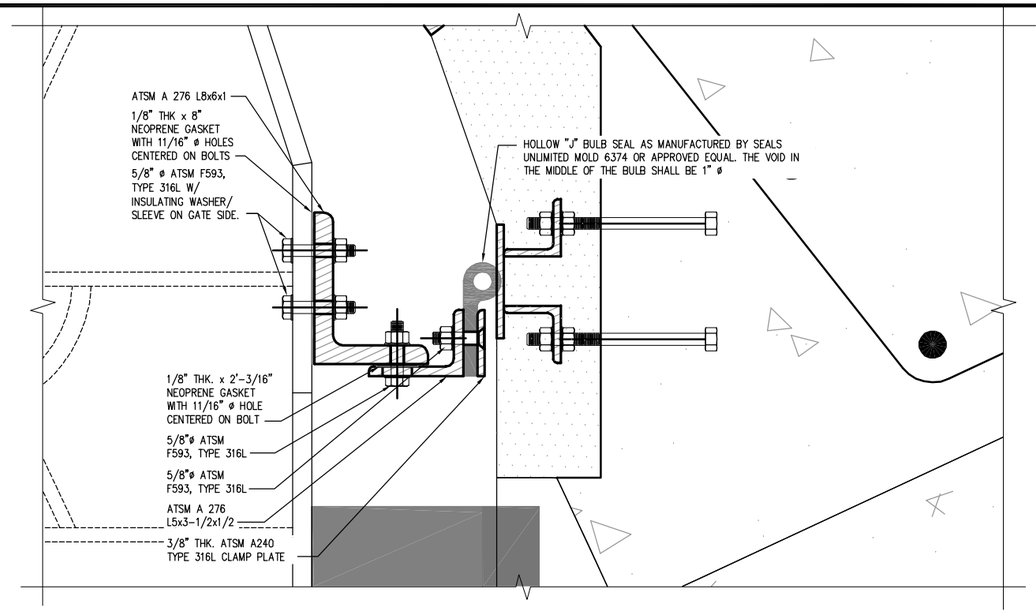


SECTION (C)
(SCALE: 1-1/2" = 1'-0") S-201

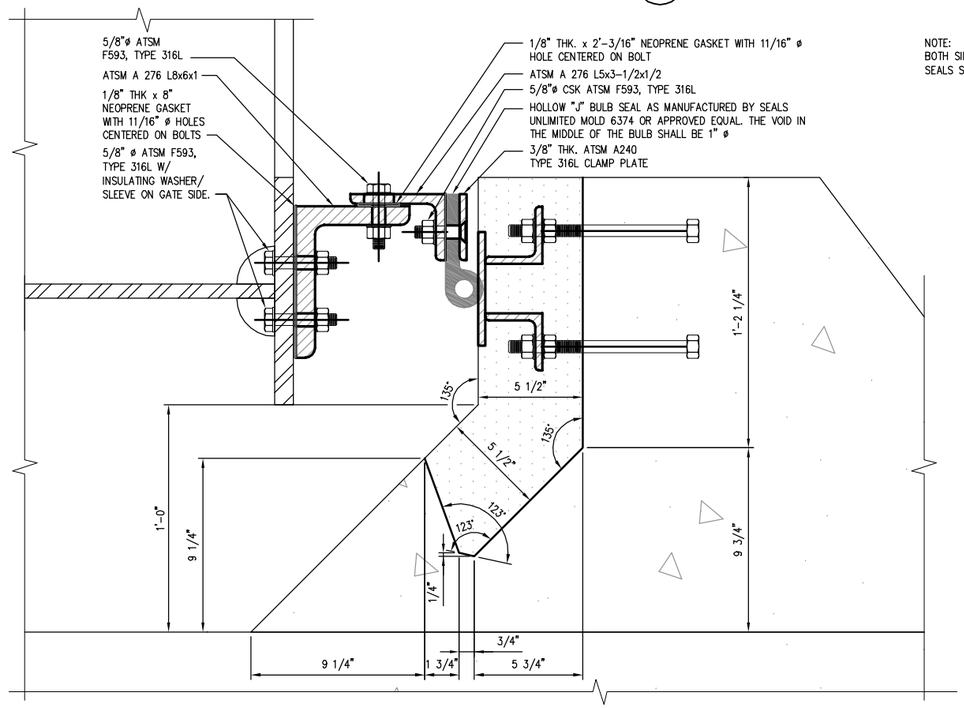


NOTE:
SEE SPECIFICATION 35 20 16.33 FOR BUMPER MATERIAL REQUIREMENTS.

GATE BUMPER DETAIL (3)
(SCALE: 3/4" = 1'-0") --



SIDE SEAL AT WALL (5)
(SCALE: 3/4" = 1'-0") S-212



NOTE:
BOTH SIDE AND BOTTOM "J" BULB SEALS SHALL HAVE A 1/4" PRESET

BOTTOM SEAL, AT CORBEL (4)
(SCALE: 3/4" = 1'-0") --

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED BB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E.	S6262	9/30/17
PROJECT ENGINEER	R.S.E. NO.	EXP. DATE
WESLEY JACOBS P.E.	–	–
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

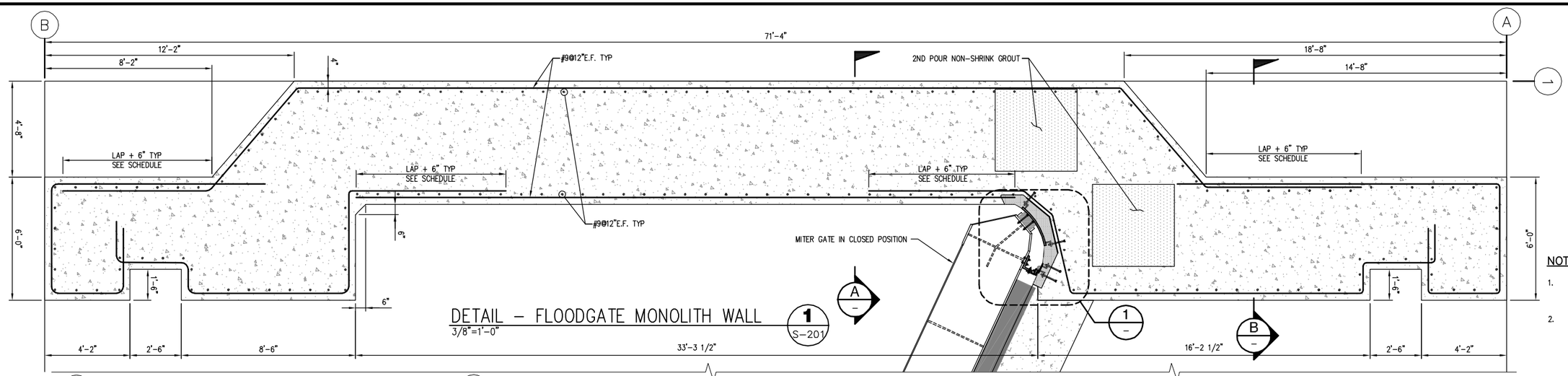
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

FLOODGATE MONOLITH
MISC SECTIONS

SHEET S-206

SHEET __ OF 109



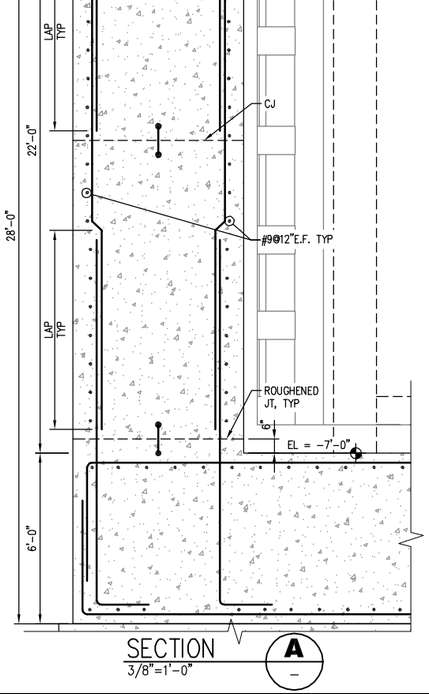
DETAIL – FLOODGATE MONOLITH WALL

3/8"=1'-0"

1 / S-201

NOTE:

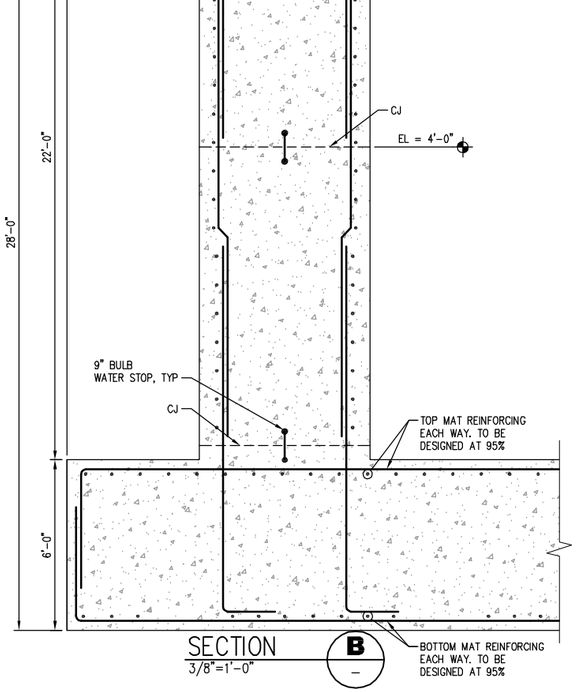
1. THE GUDGEON ASSEMBLY, ACTUATOR, AND ACCESS STRUCTURES NOT SHOWN FOR CLARITY.
2. STOPLOG SLOT AND OTHER MISC. STEEL EMBED ARMORING TO BE DESIGNED AT 95%



SECTION

3/8"=1'-0"

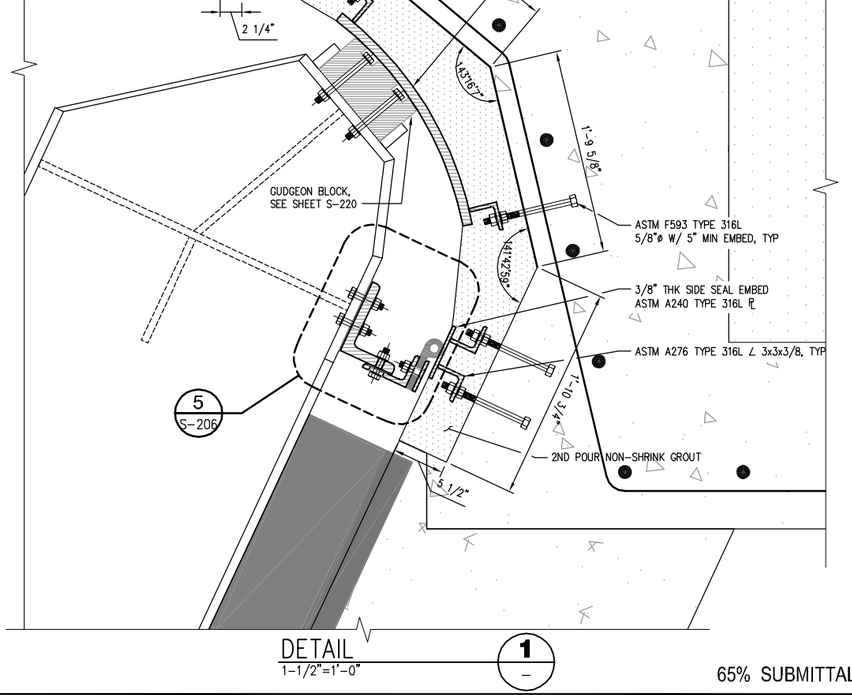
A



SECTION

3/8"=1'-0"

B



DETAIL

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

1

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED BB

DRAWN MM

CHECKED KG

KEVIN GERST P.E. S.E.	S6262	9/30/17
PROJECT ENGINEER	R.S.E. NO.	EXP. DATE
WESLEY JACOBS P.E.	–	–
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

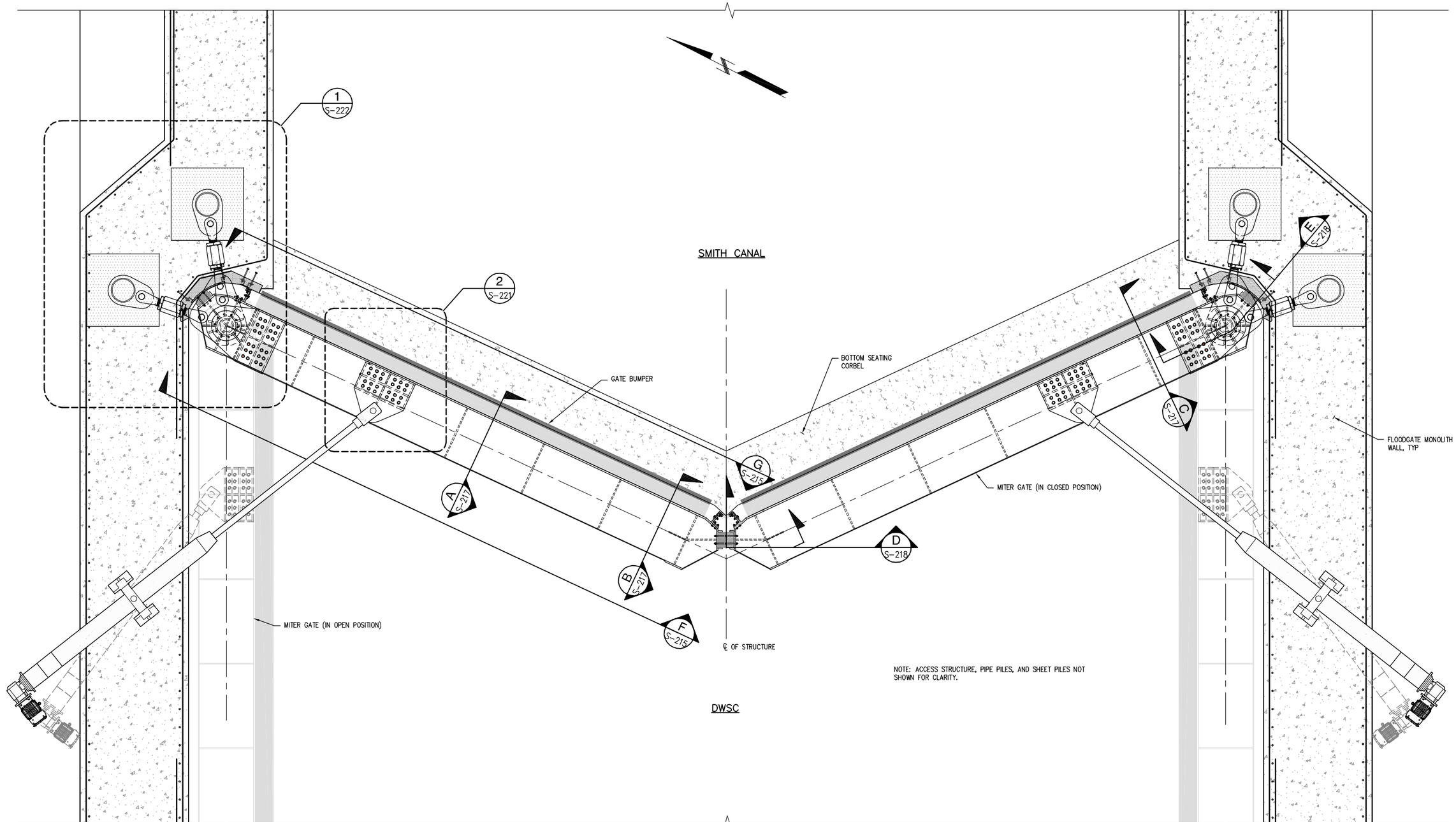
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

FLOODGATE MONOLITH
WALL REINFORCEMENT - 1

SHEET S-212

SHEET — OF 109



NOTE: ACCESS STRUCTURE, PIPE PILES, AND SHEET PILES NOT SHOWN FOR CLARITY.

DWSC

GATE PLAN VIEW
(SCALE: 3/8" = 1'-0")

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED BB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E.	S6262	9/30/17
PROJECT ENGINEER	R.S.E. NO.	EXP. DATE
WESLEY JACOBS P.E.	–	–
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

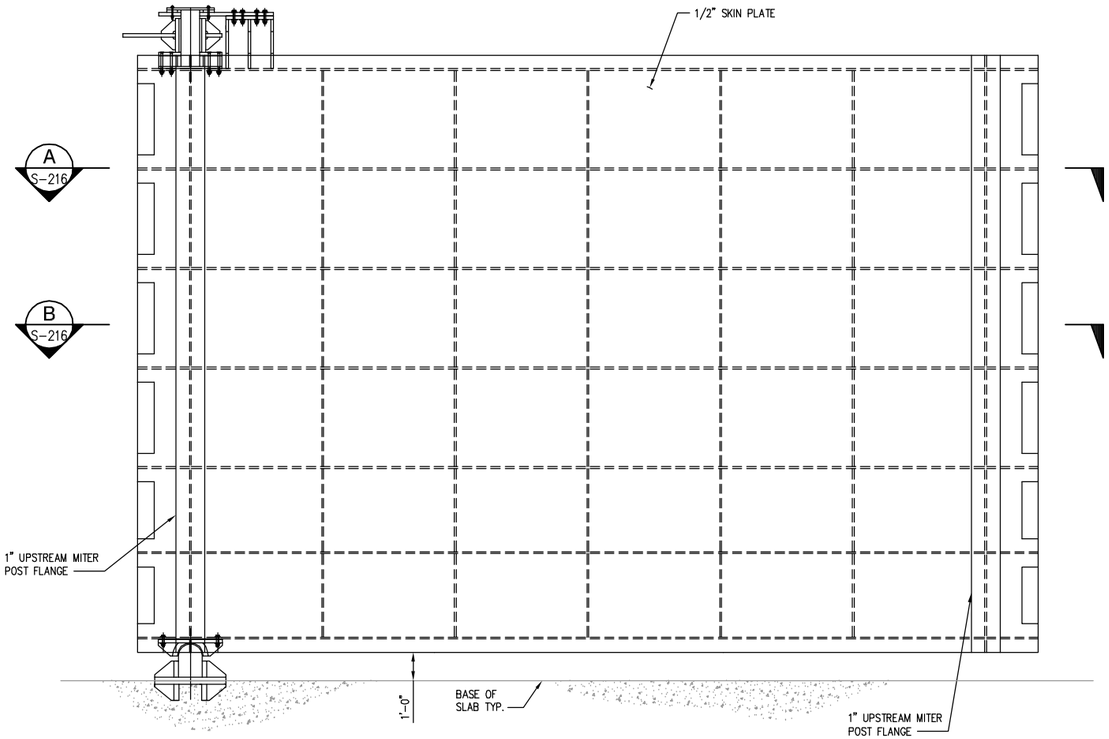
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

FLOODGATE PLAN VIEW

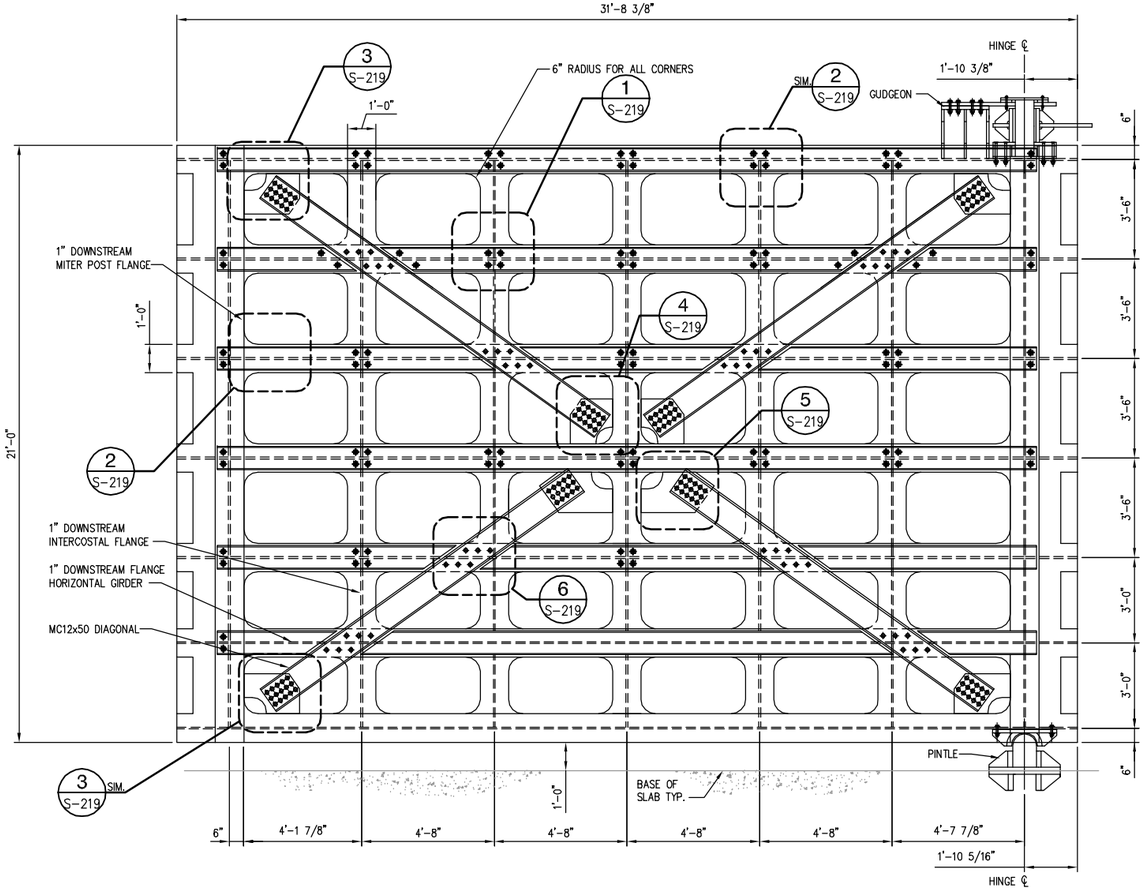
SHEET S-214

SHEET __ OF 109



ELEVATION – UPSTREAM (DWSC)
3/8" = 1'-0"

F
214



ELEVATION – DOWNSTREAM (SMITH CANAL)
3/8" = 1'-0"

G
214

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED CB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E. — S6262 — 9/30/17
PROJECT ENGINEER — R.S.E. NO. — EXP. DATE

WESLEY JACOBS P.E. — – — –
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

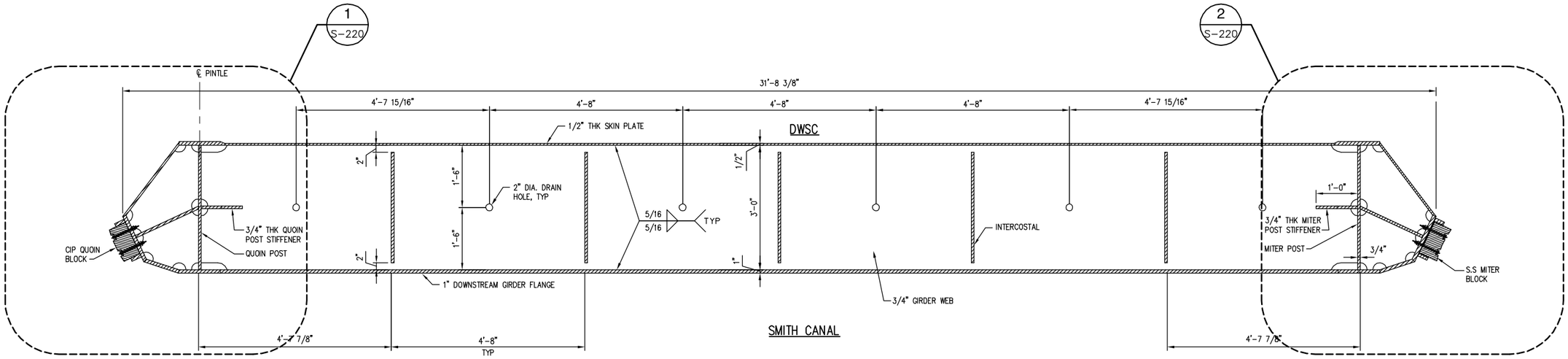
SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

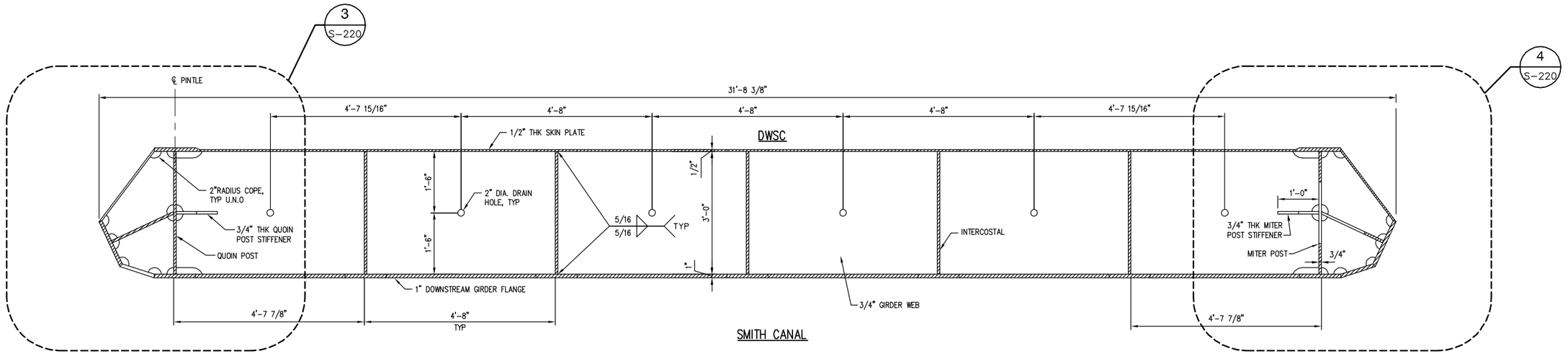
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

FLOODGATE LAYOUT & CLEARANCE

SHEET
S-215
SHEET __ OF 109



SECTION – GIRDER (A S-215)
3/4" = 1'-0"



SECTION – BETWEEN GIRDERS (B S-215)
3/4" = 1'-0"

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED CB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E. — PROJECT ENGINEER — S6262 R.S.E. NO. — 9/30/17 EXP. DATE

WESLEY JACOBS P.E. — PROJECT MANAGER — – R.C.E. NO. — – EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

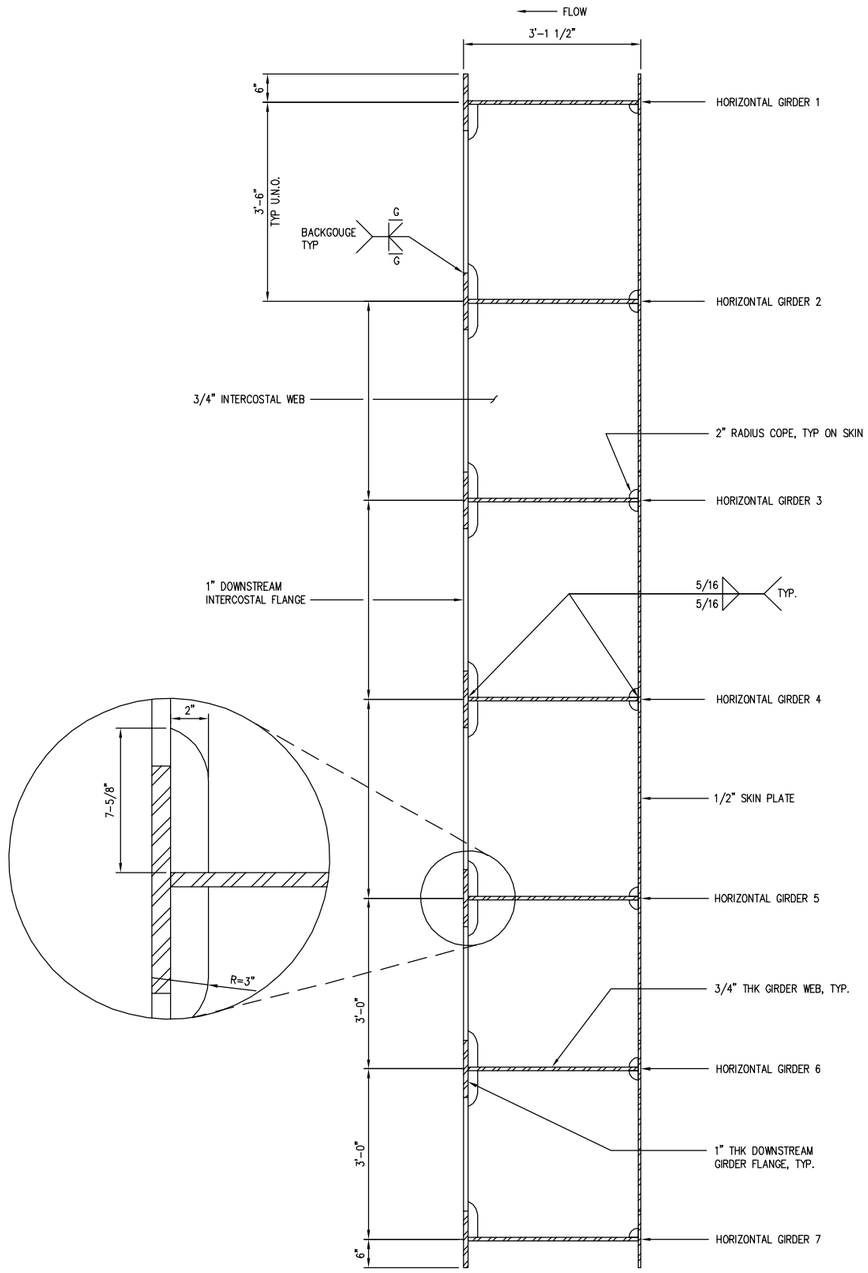
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

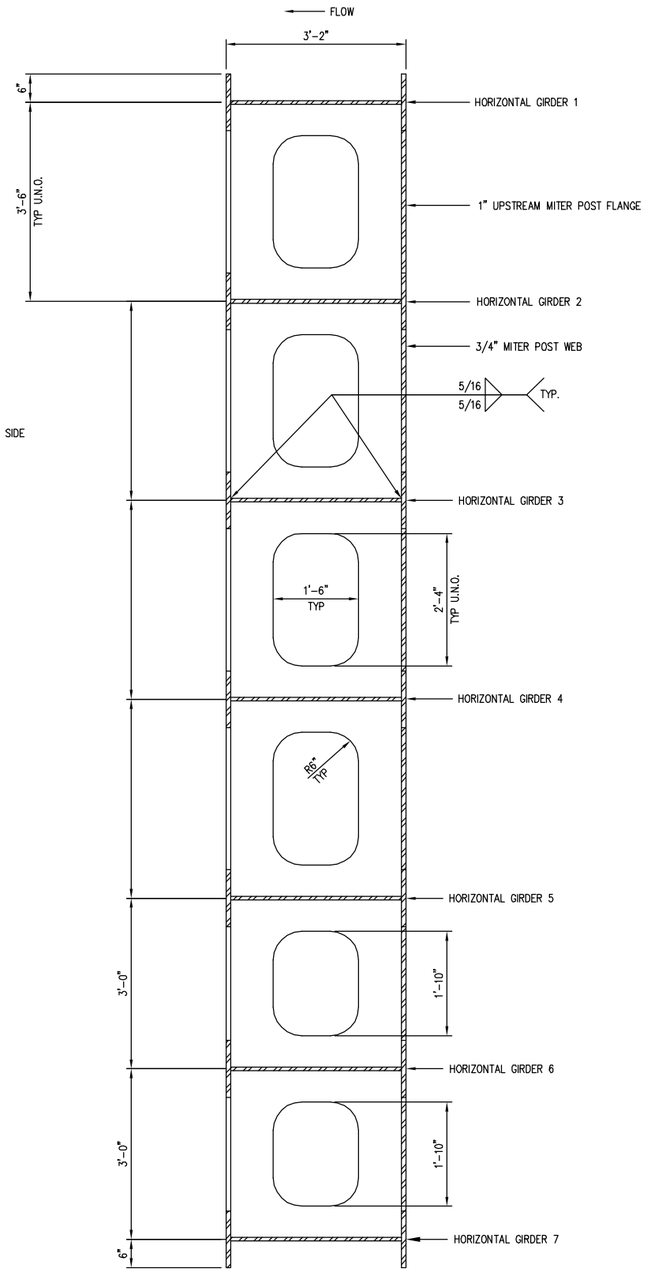
FLOODGATE HORIZONTAL GIRDERS

SHEET S-216

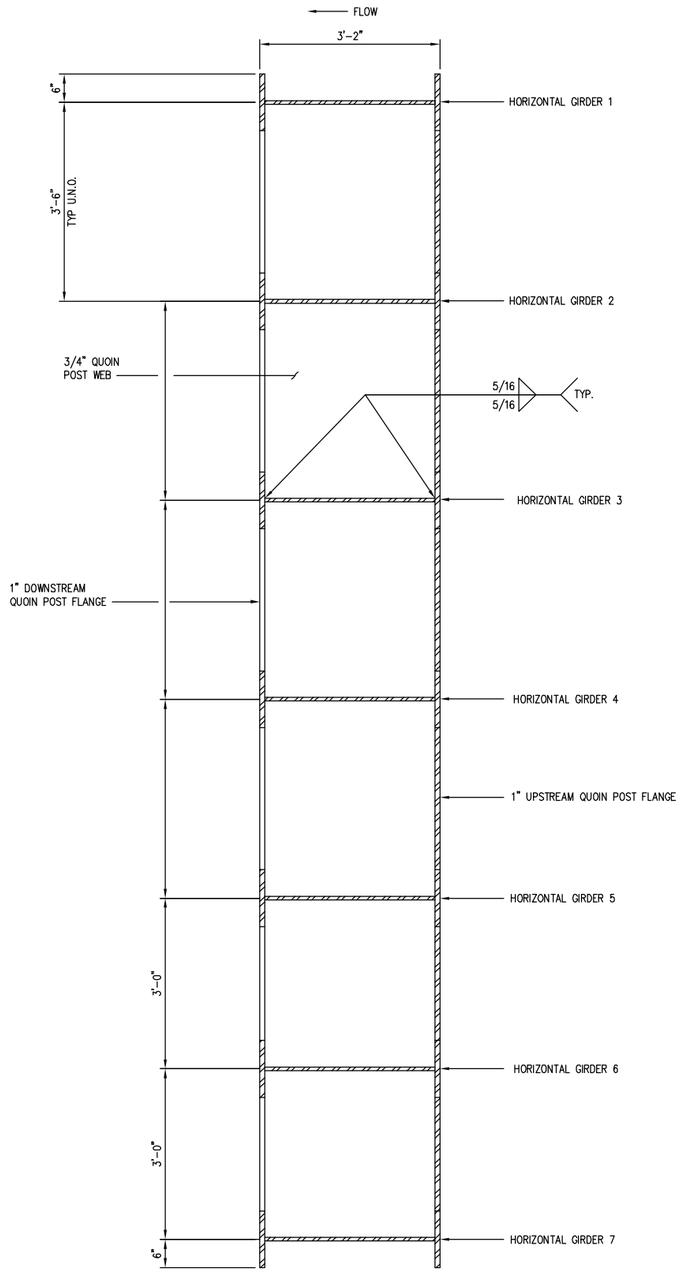
SHEET __ OF 109



SECTION – INTERCOSTAL **A**
3/4" = 1'-0" S-214



SECTION – MITER POST **B**
3/4" = 1'-0" S-214



SECTION – QUOIN POST **C**
3/4" = 1'-0" S-214

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED CB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E. — S6262 — 9/30/17
PROJECT ENGINEER — R.S.E. NO. — EXP. DATE

WESLEY JACOBS P.E. — – — –
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

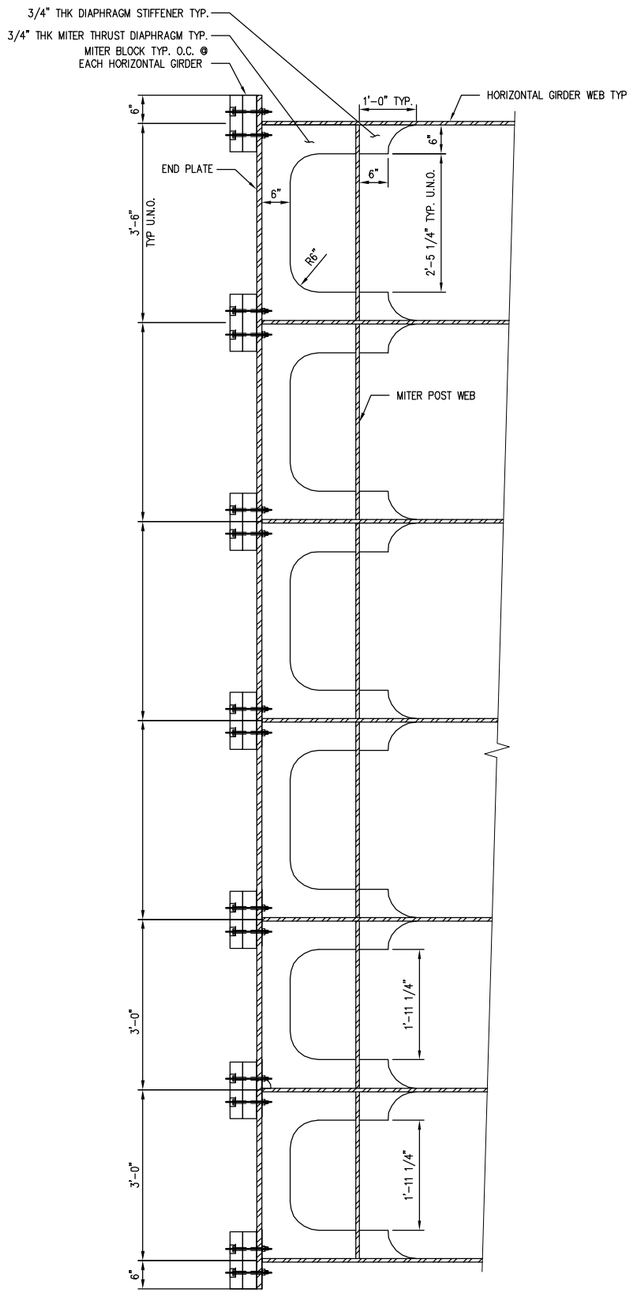
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

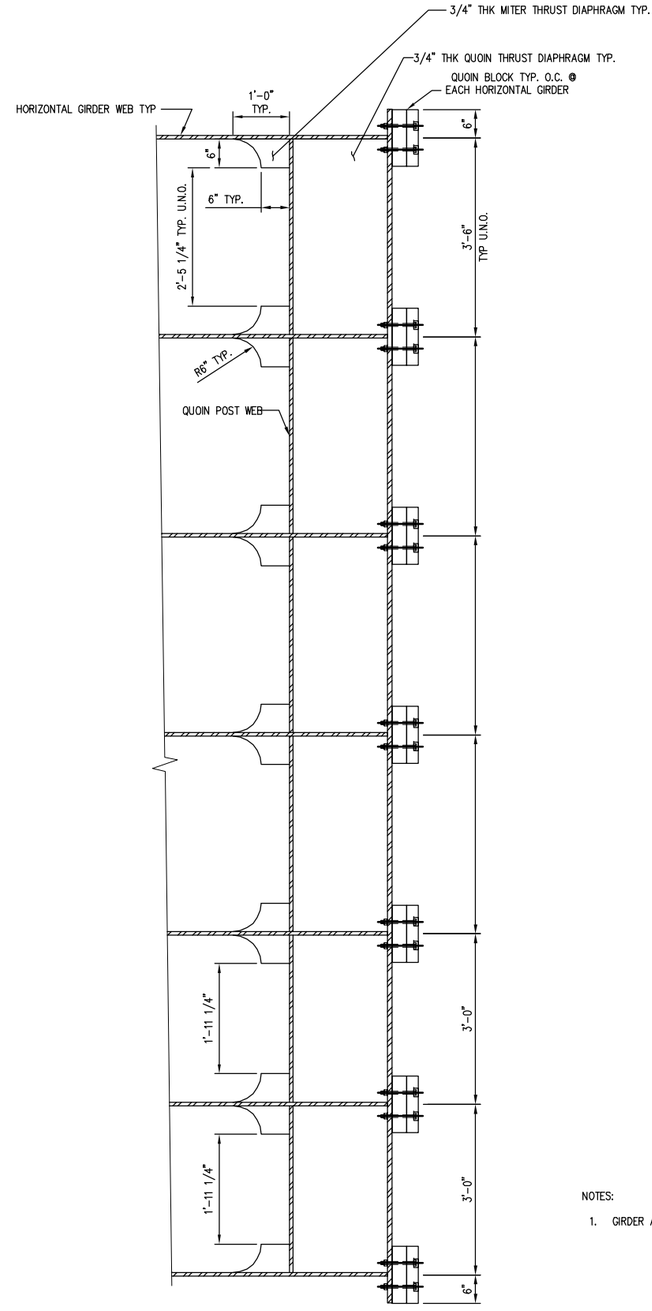
FLOODGATE VERTICAL SECTIONS 1

SHEET S-217

SHEET __ OF 109



SECTION – MITER POST (D, S-214)
3/4" = 1'-0"



SECTION – QUOIN POST (E, S-214)
3/4" = 1'-0"

NOTES:

1. GIRDER AND POST FLANGES NOT SHOWN FOR CLARITY

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED CB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E. — PROJECT ENGINEER — S6262 R.S.E. NO. — 9/30/17 EXP. DATE

WESLEY JACOBS P.E. — PROJECT MANAGER — – R.C.E. NO. — – EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

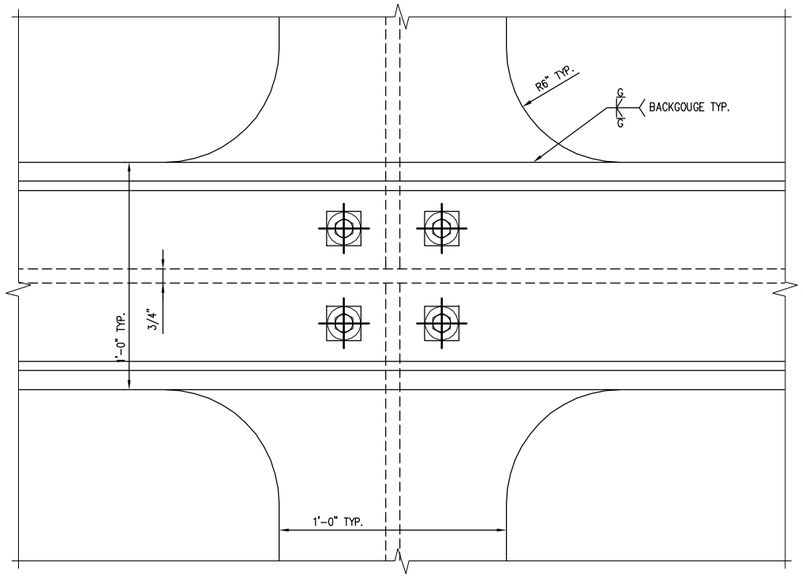
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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

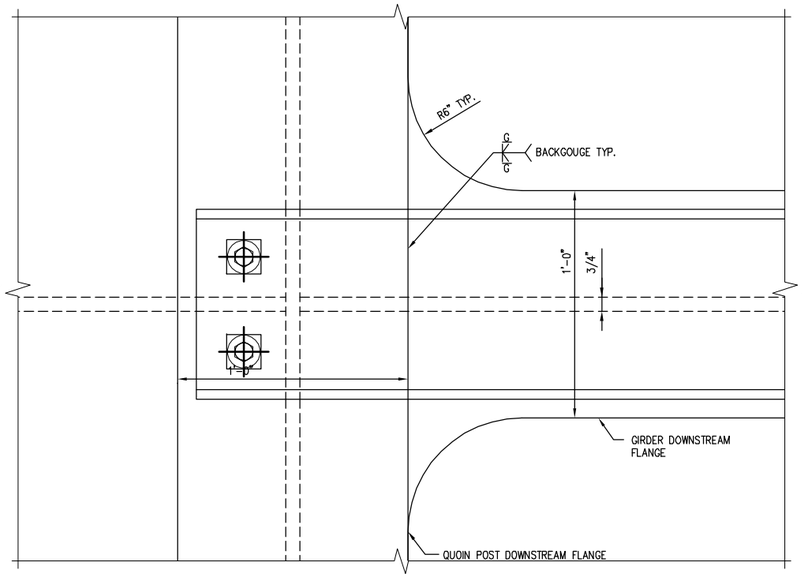
FLOODGATE VERTICAL SECTIONS 2

SHEET S-218

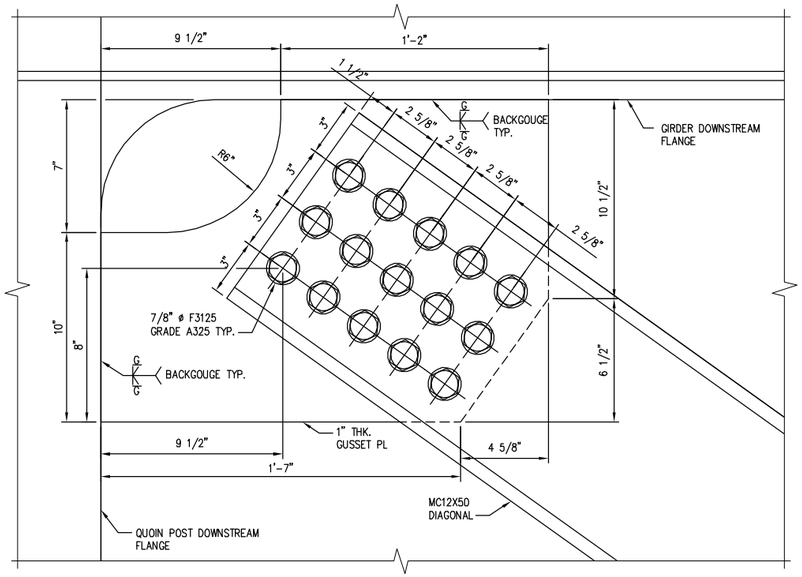
SHEET __ OF 109



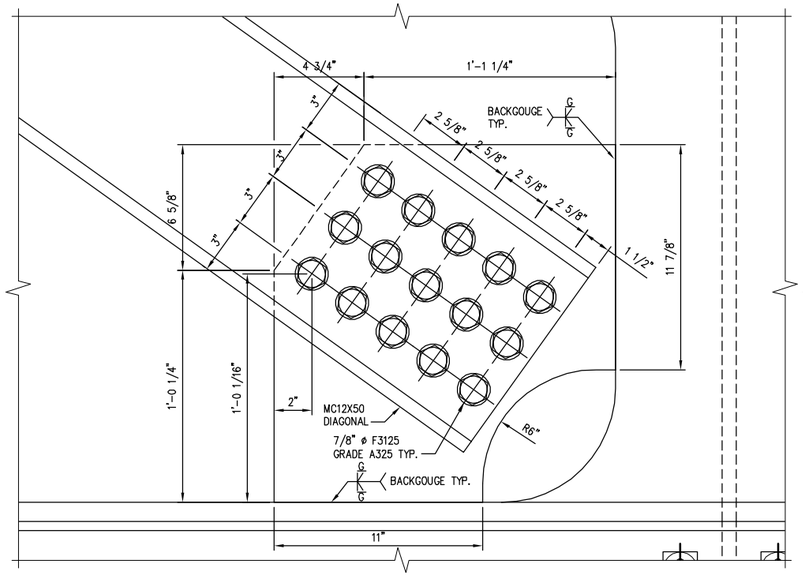
DETAIL 1 / 215
3" = 1'-0"



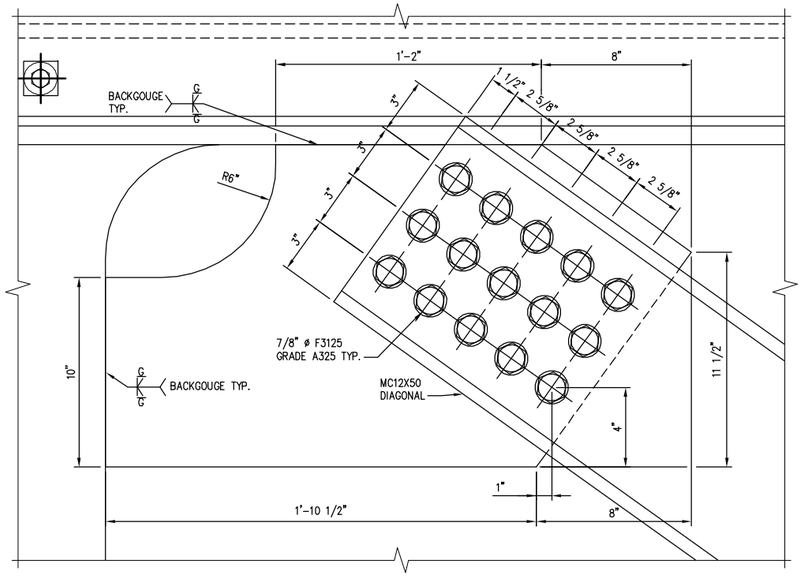
DETAIL 2 / 215
3" = 1'-0"



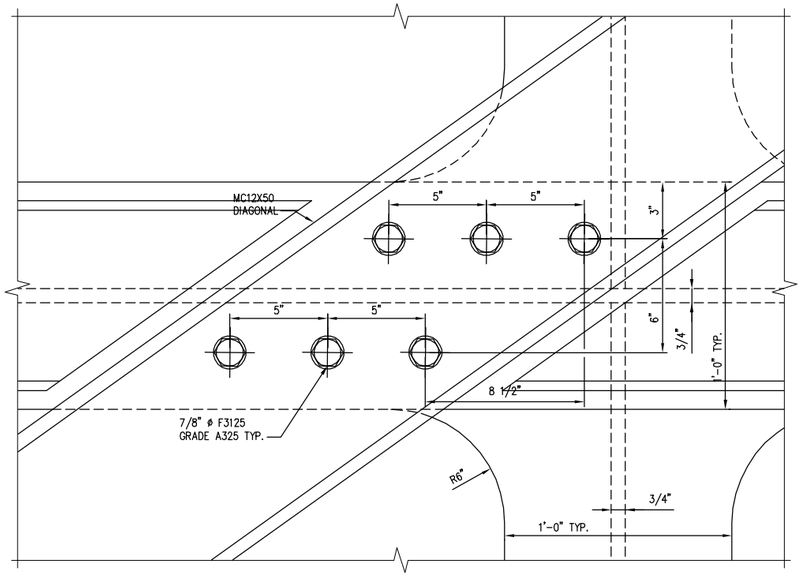
DETAIL 3 / 215
3" = 1'-0"



DETAIL 4 / 215
3" = 1'-0"



DETAIL 5 / 215
3" = 1'-0"



DETAIL 6 / 215
3" = 1'-0"

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED CB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E. — PROJECT ENGINEER — S6262 R.S.E. NO. — 9/30/17 EXP. DATE

WESLEY JACOBS P.E. — PROJECT MANAGER — – R.C.E. NO. — – EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

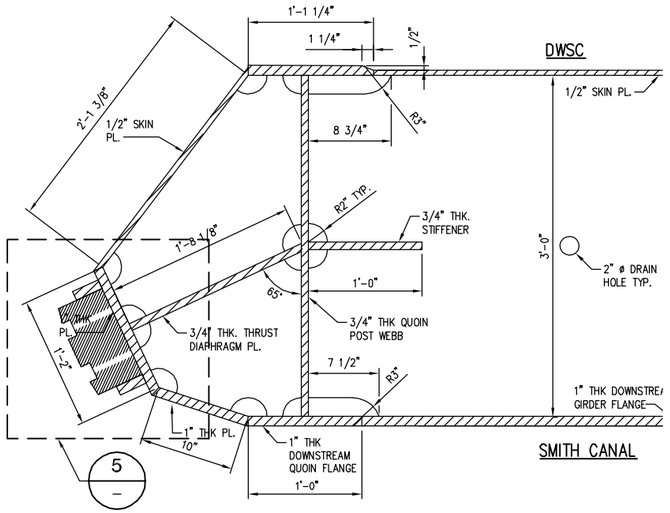
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

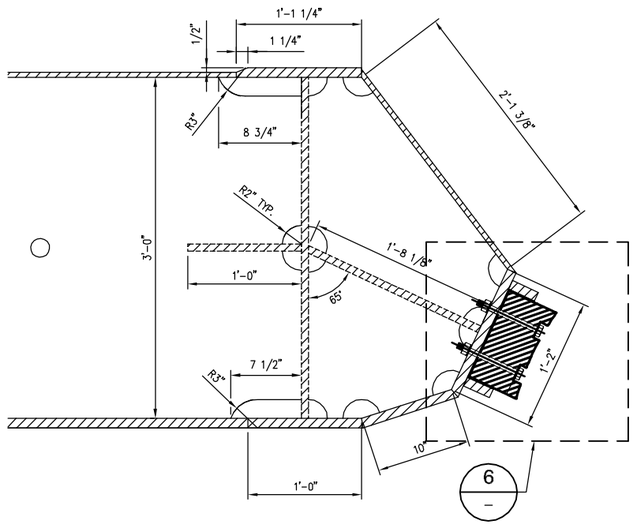
FLOODGATE DETAILS 1

SHEET S-219

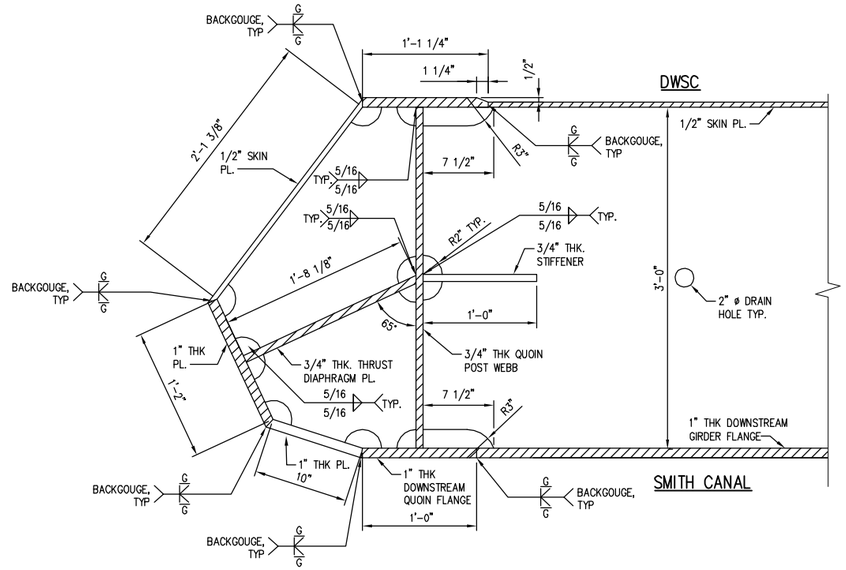
SHEET __ OF 109



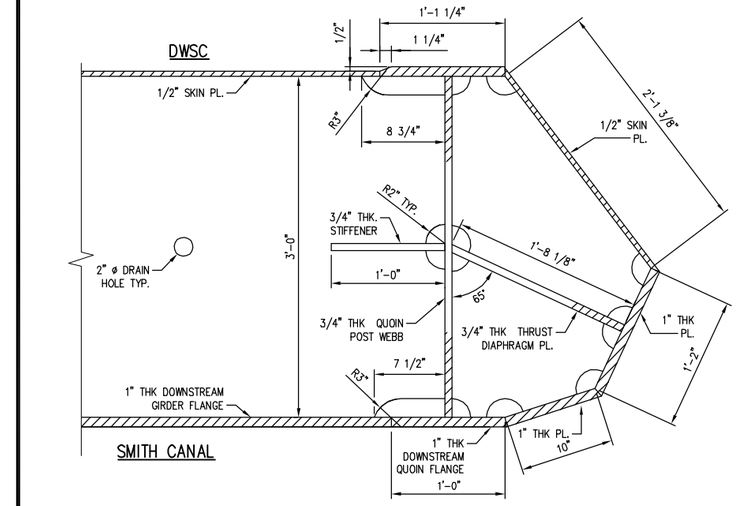
DETAIL
1-1/2" = 1'-0"
1
216



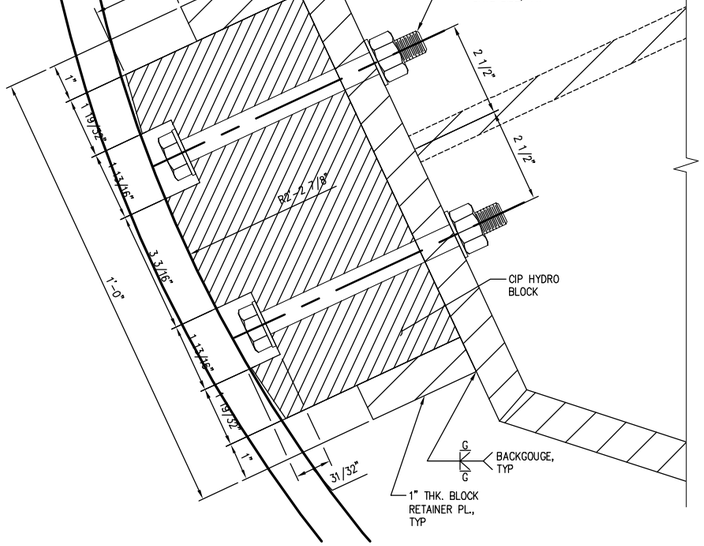
DETAIL
1-1/2" = 1'-0"
2
216



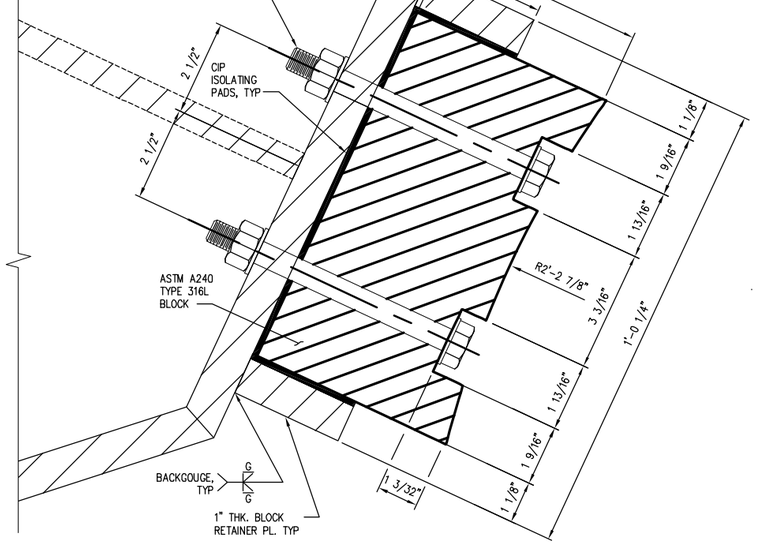
DETAIL
1-1/2" = 1'-0"
3
216



DETAIL
1-1/2" = 1'-0"
4
216



DETAIL
6" = 1'-0"
5
–



DETAIL
6" = 1'-0"
6
–

NOTES:

1. THRUST DIAPHRAGM PLATES SHALL BE MILLED TO BEAR AT BOTH ENDS.
2. ALL WELD CALLOUTS ON DETAIL 3 SHALL BE TYPICAL ON DETAILS 1, 2, AND 4 ON THIS SHEETS.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

WARNING
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PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

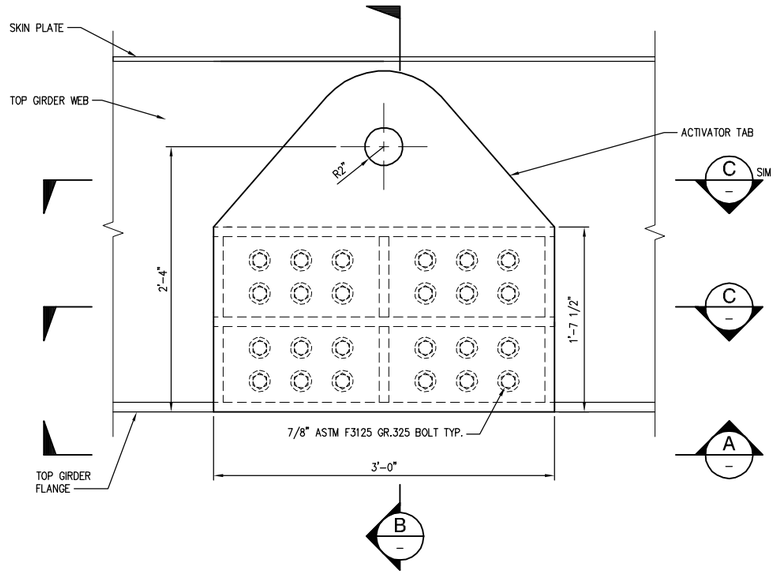
SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

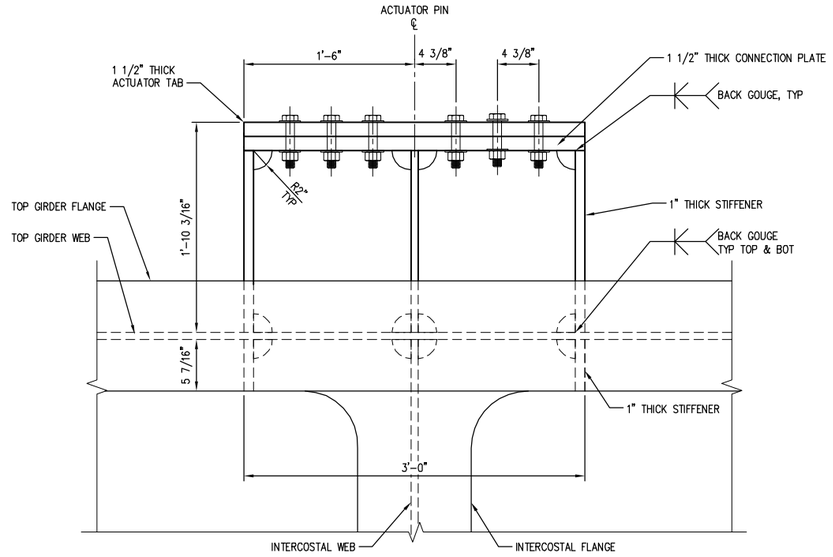
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

FLOODGATE GATE DETAILS 2

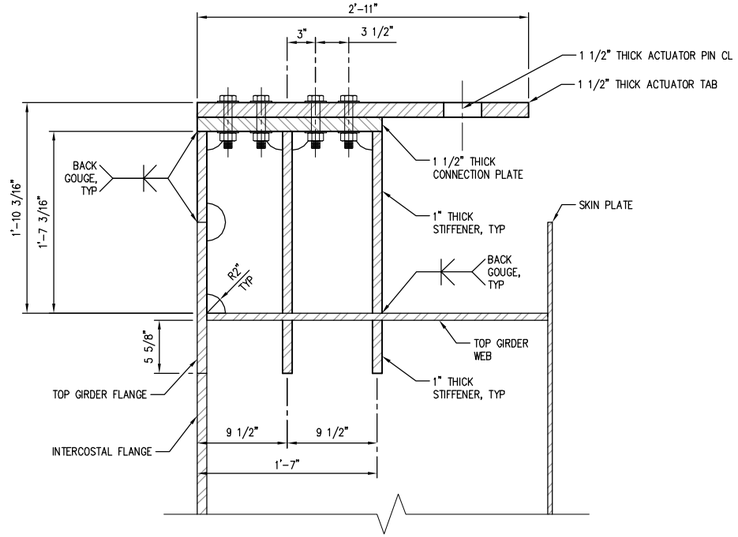
SHEET
S-220
SHEET __ OF 109



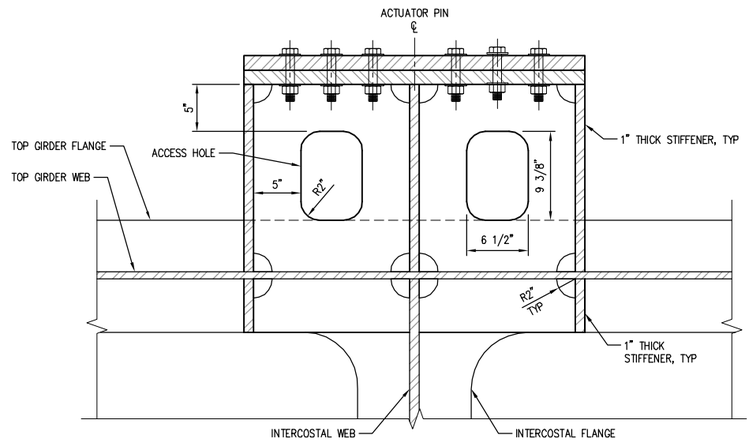
DETAIL – ACTUATOR CONNECTION **2**
1 1/2"=1'-0" S-214



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



SECTION **B**
1 1/2"=1'-0"



SECTION **C**
1 1/2"=1'-0"

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED CB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E.	S6262	9/30/17
PROJECT ENGINEER	R.S.E. NO.	EXP. DATE
WESLEY JACOBS P.E.	–	–
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

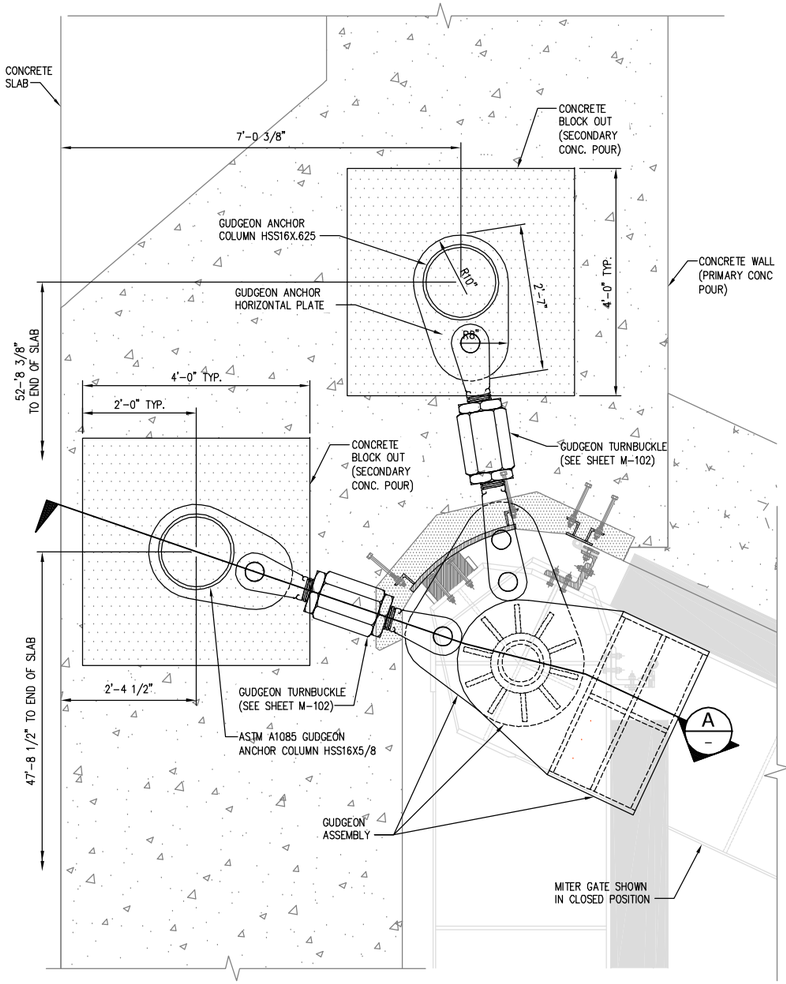
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

STEEL GATE DETAILS 4

SHEET S-221

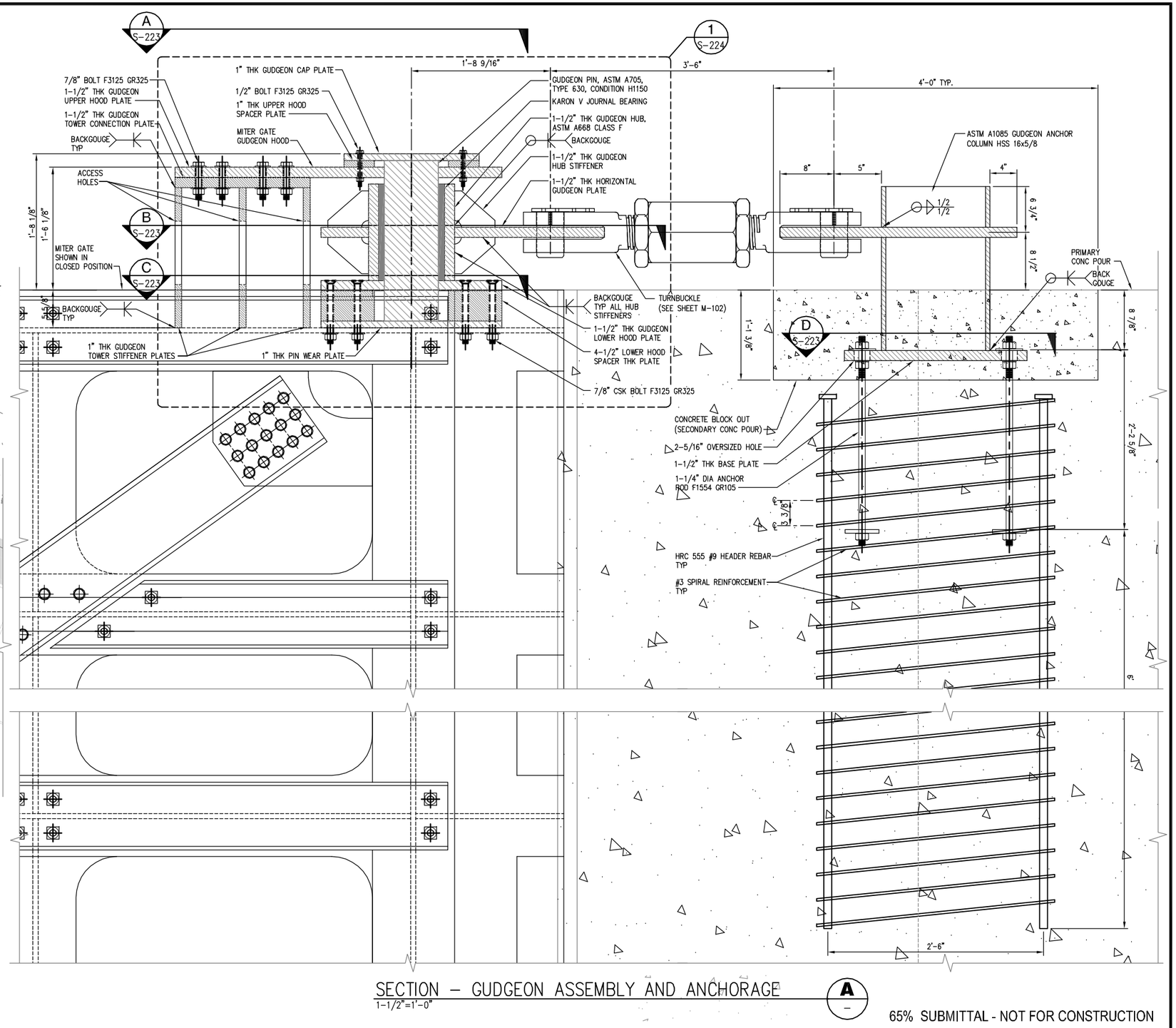
SHEET __ OF 109



DETAIL 1 – GUDGEON ASSEMBLY

3/4"=1'-0"

1 / S-214



SECTION – GUDGEON ASSEMBLY AND ANCHORAGE

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

A / –

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED CB

DRAWN MM

CHECKED KG

KEVIN GERST P.E. S.E. — PROJECT ENGINEER — S6262 R.S.E. NO. — 9/30/17 EXP. DATE

WESLEY JACOBS P.E. — PROJECT MANAGER — – R.C.E. NO. — – EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

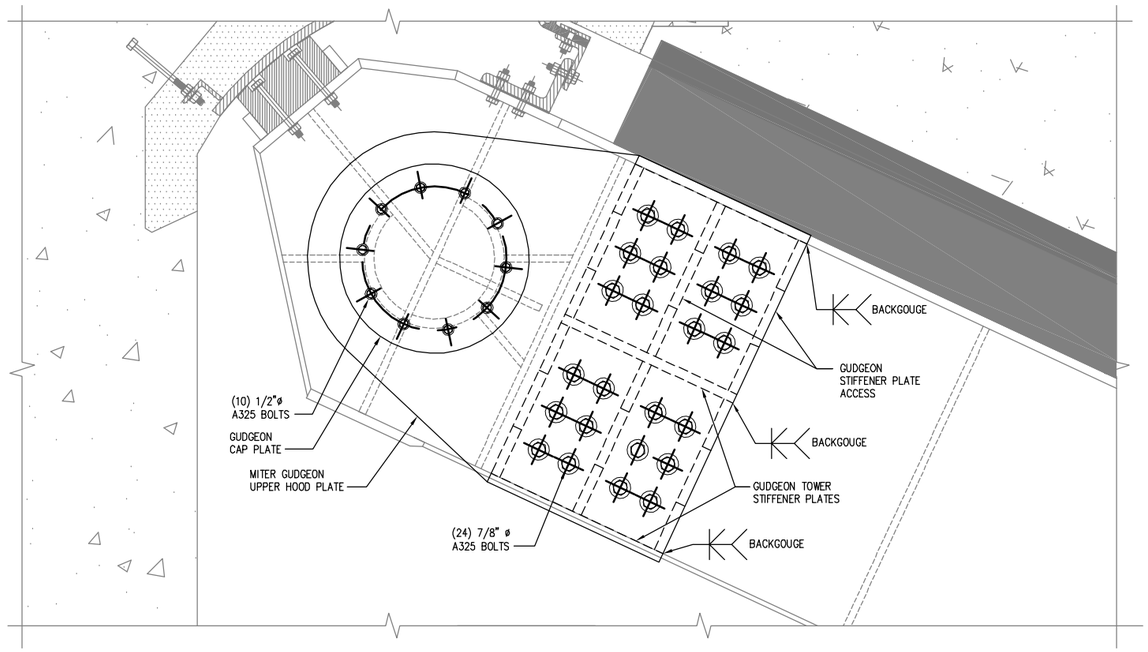
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

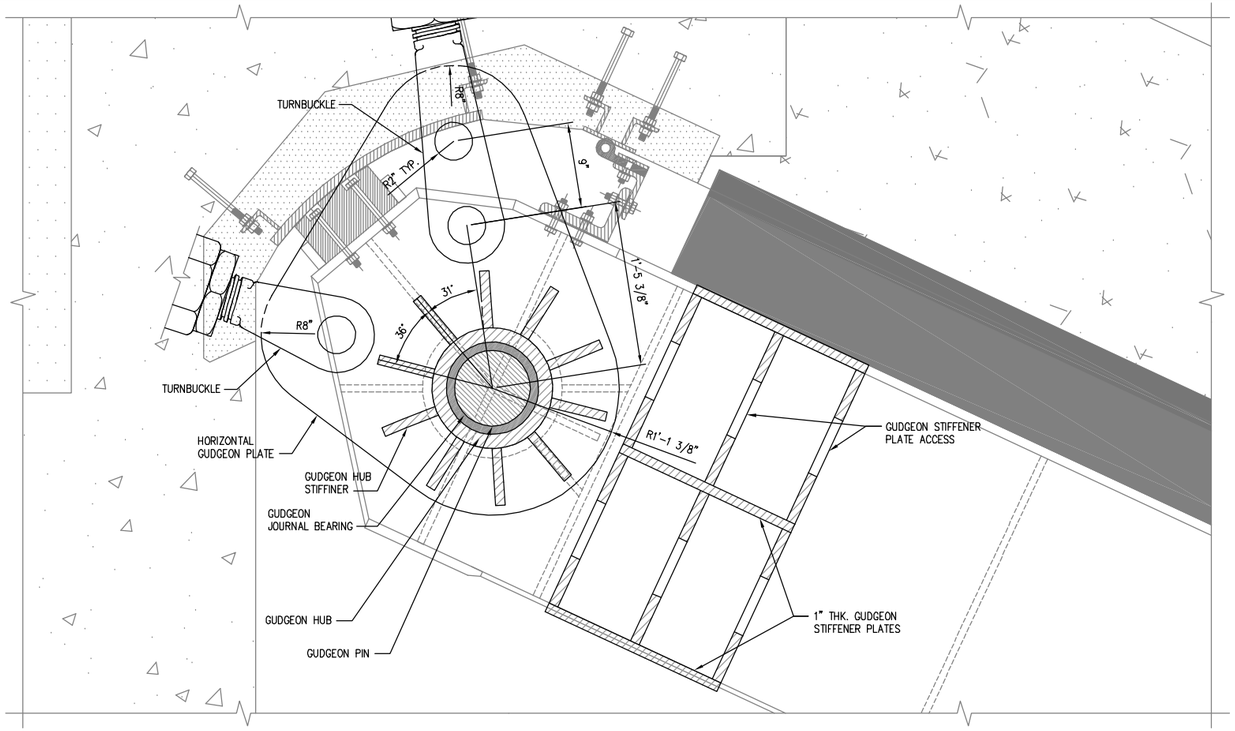
GUDGEON DETAILS 1

SHEET S-222

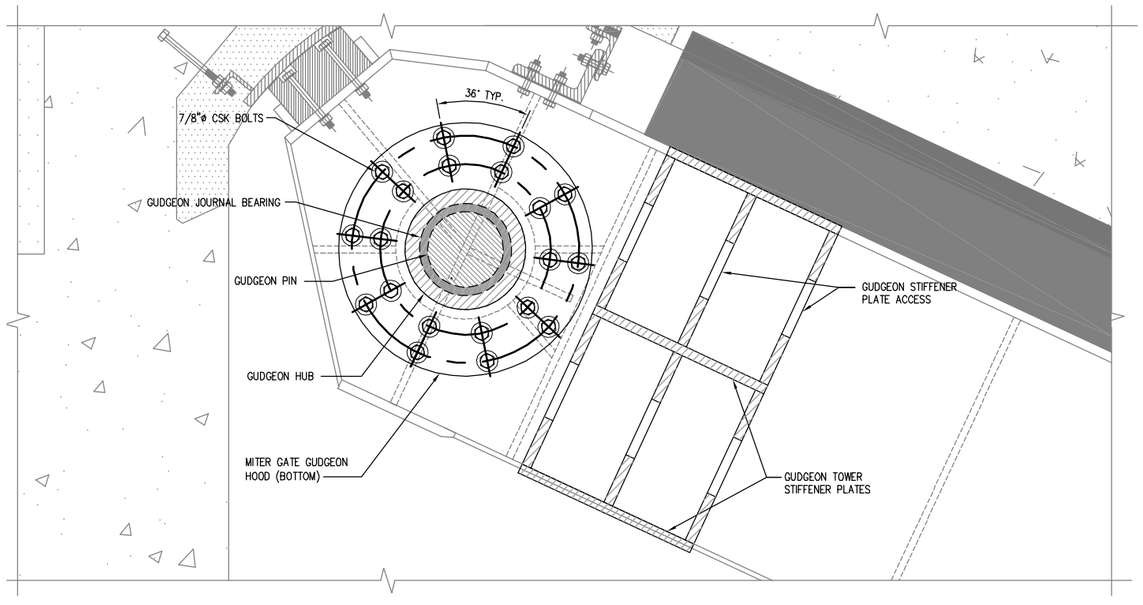
SHEET – OF 109



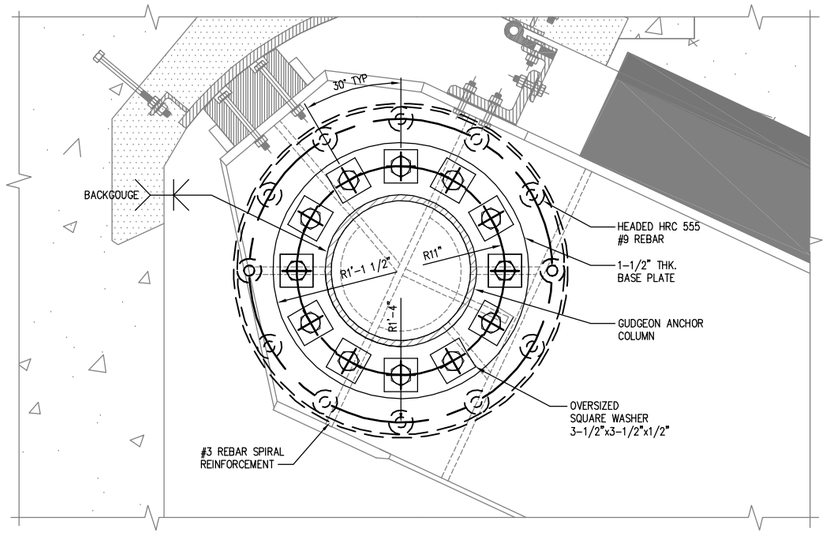
GUDGEON SECTION **A**
1-1/2"=1'-0" S-222



GUDGEON SECTION **B**
1-1/2"=1'-0" S-222



GUDGEON SECTION **C**
1-1/2"=1'-0" S-222



GUDGEON ANCHOR COLUMN BASE PLATE ASSEMBLY **D**
1-1/2"=1'-0" S-222

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED CB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E. — S6262 — 9/30/17
PROJECT ENGINEER — R.S.E. NO. — EXP. DATE

WESLEY JACOBS P.E. — – — –
PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

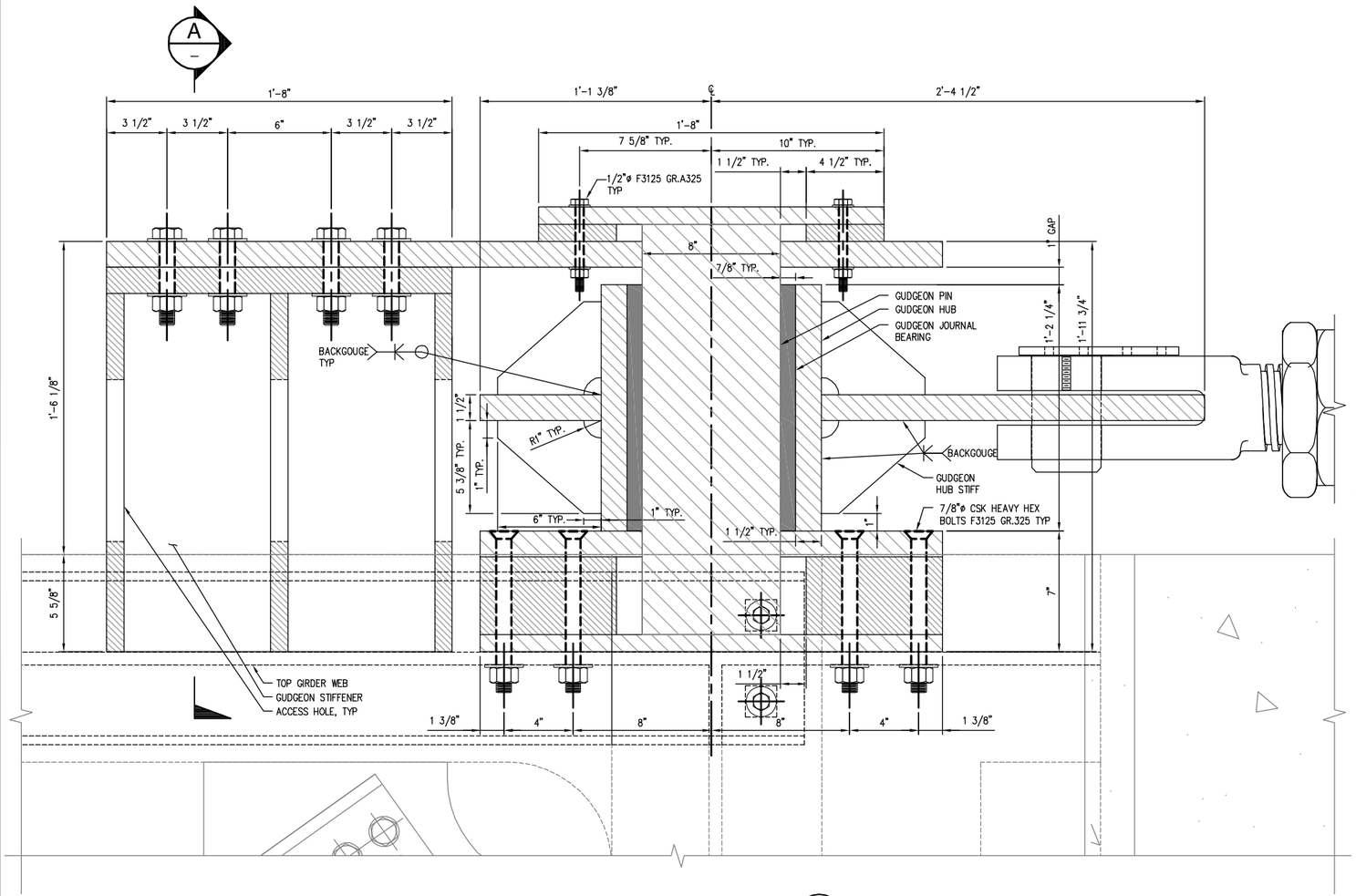
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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

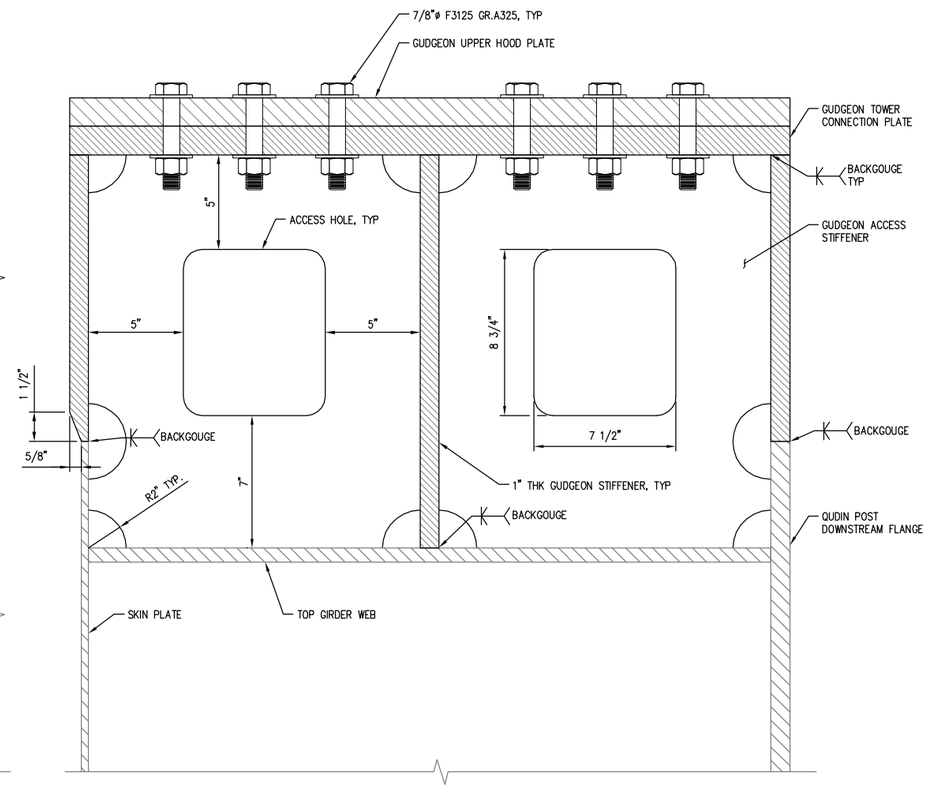
GUDGEON DETAILS 2

SHEET S-223

SHEET — OF 109



GUDGEON ASSEMBLY DETAIL 1
3"=1'-0" S-222



GUDGEON TOWER SECTION A
3"=1'-0" –

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED CB
DRAWN MM
CHECKED KG

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PROJECT ENGINEER	R.C.E. NO.	EXP. DATE
WESLEY JACOBS P.E.	–	–
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

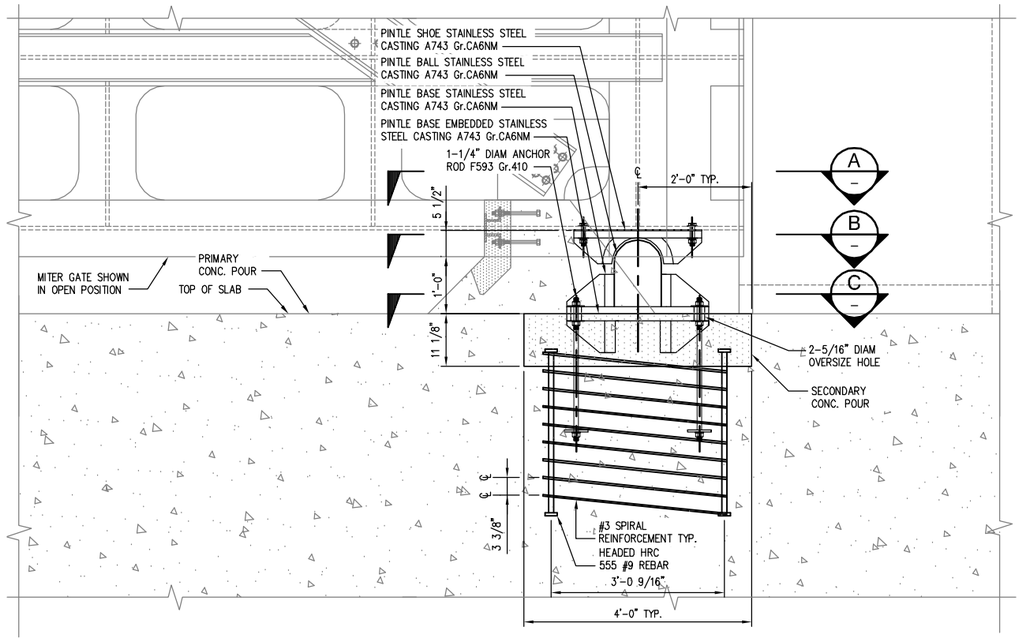
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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

GUDGEON DETAILS 3

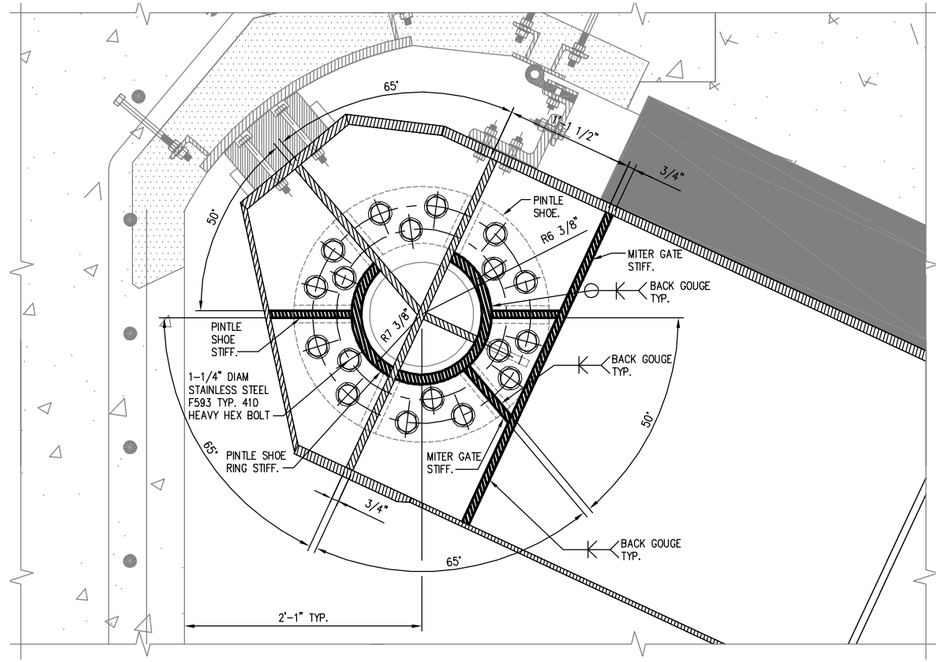
SHEET S-224

SHEET – OF 109



PINTLE ASSEMBLY AND ANCHOR SECTION

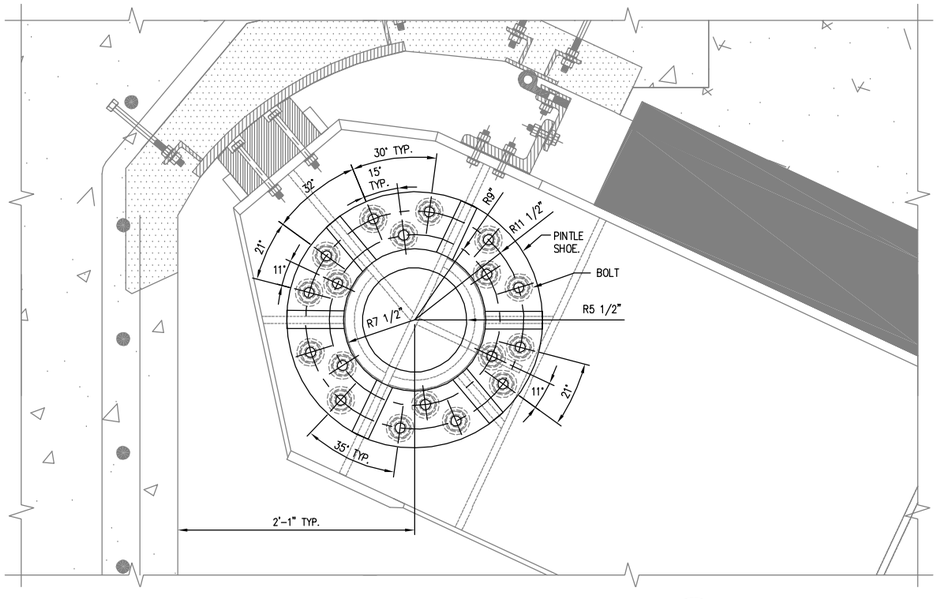
3/4"=1'-0"



PINTLE ASSEMBLY AT MITER GATE STIFF.

A

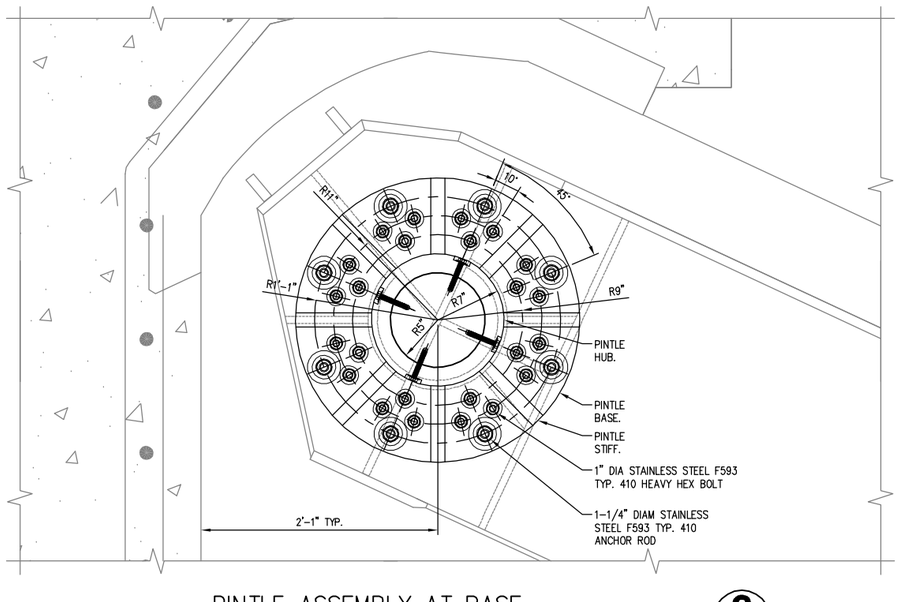
1-1/2"=1'-0"



PINTLE ASSEMBLY AT PINTLE SHOE

B

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



PINTLE ASSEMBLY AT BASE

C

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

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED CB

DRAWN MM

CHECKED KG

KEVIN GERST P.E. S.E. — PROJECT ENGINEER — S6262 R.S.E. NO. — 9/30/17 EXP. DATE

WESLEY JACOBS P.E. — PROJECT MANAGER — – R.C.E. NO. — – EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

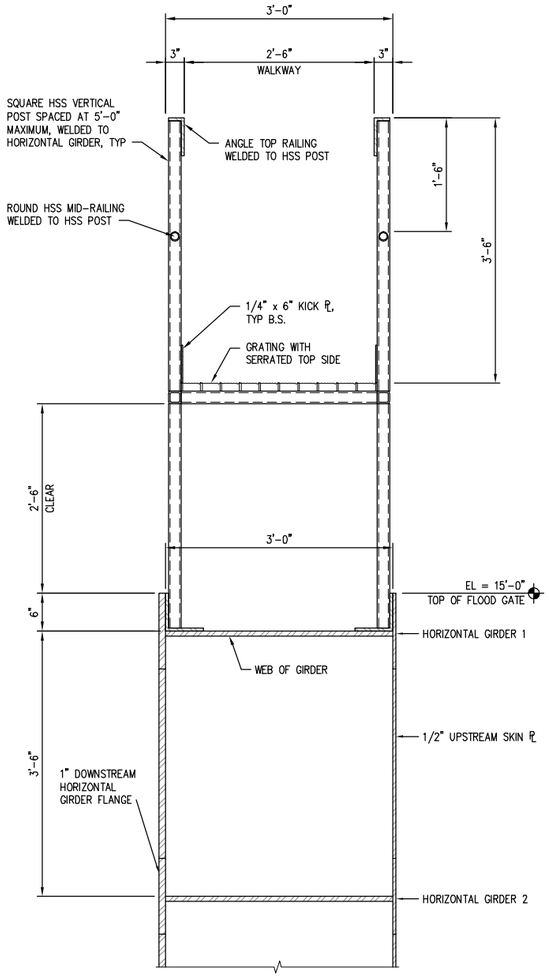
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

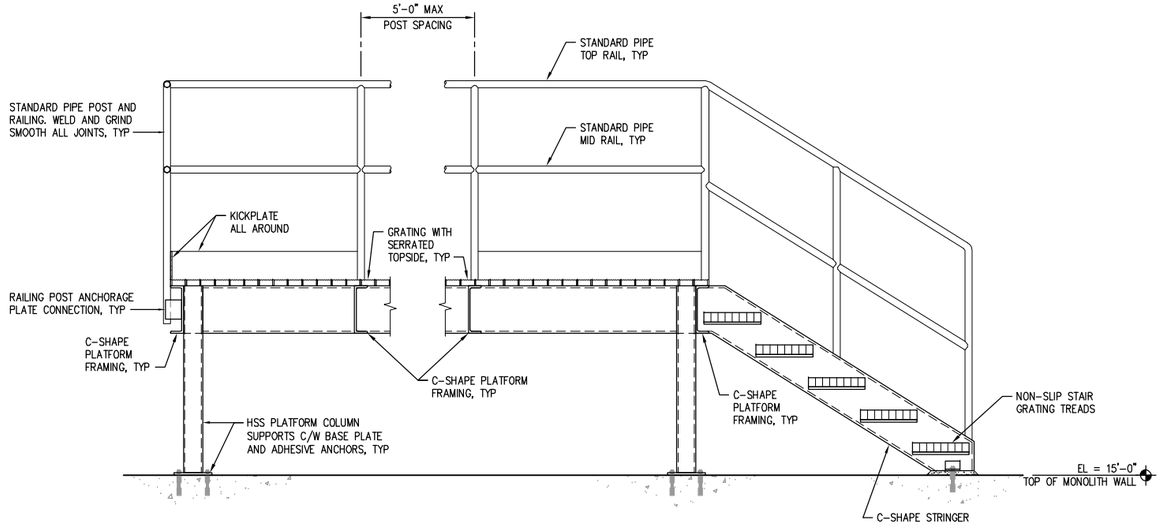
STEEL GATE DETAILS.

SHEET S-225

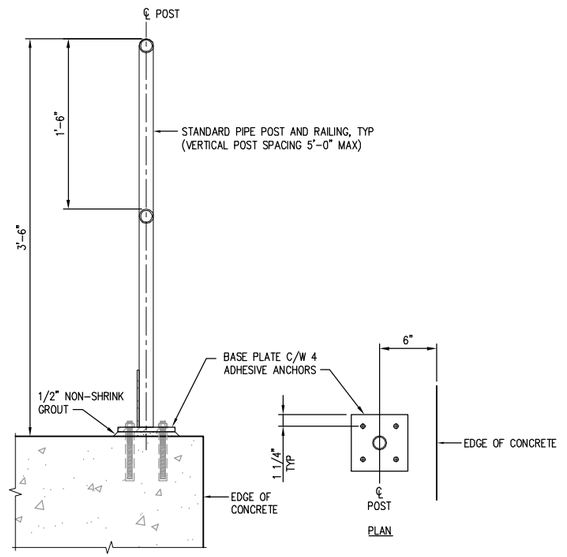
SHEET – OF 109



WALKWAY SECTION (A) S-203
1"=1'-0"



TYPICAL PLATFORM SECTION (B) S-203
3/4"=1'-0"



SECTION (C) S-203
1-1/2"=1'-0"

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED
DATE: JUNE 2017

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

DESIGNED CB
DRAWN MM
CHECKED KG

KEVIN GERST P.E. S.E.	S6262	9/30/17
PROJECT ENGINEER	R.S.E. NO.	EXP. DATE
WESLEY JACOBS P.E.	–	–
PROJECT MANAGER	R.C.E. NO.	EXP. DATE

PRELIMINARY

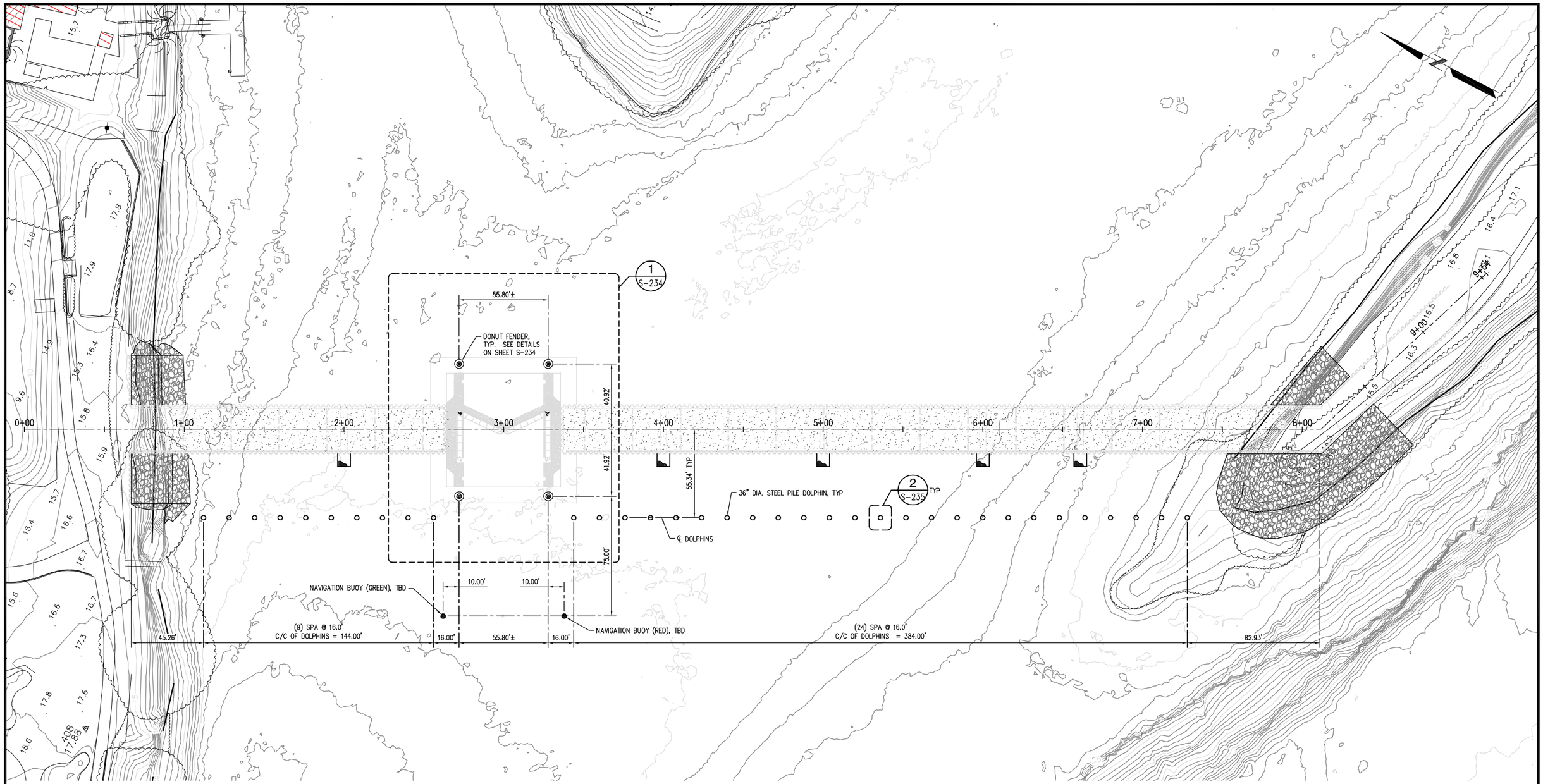
San Joaquin Area FLOOD CONTROL Agency

HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

PLATFORM & WALWAY SECTIONS

SHEET S-226
SHEET __ OF 109



PROTECTIVE FENDER/DOLPHIN LAYOUT 1

1"=30'

NOTES:

1. STEEL PIPE PILE SHALL BE PER SPECIFICATIONS, SECTION 31 62 18.
2. ALL STEEL PIPE PILES SHALL BE COATED TO THE EXTENT SHOWN PER SPECIFICATION, SECTION 09 97 13.26.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED NKG

DRAWN DRJ

CHECKED –

PROJECT ENGINEER R.C.E. NO. EXP. DATE

PROJECT MANAGER R.C.E. NO. EXP. DATE

PRELIMINARY

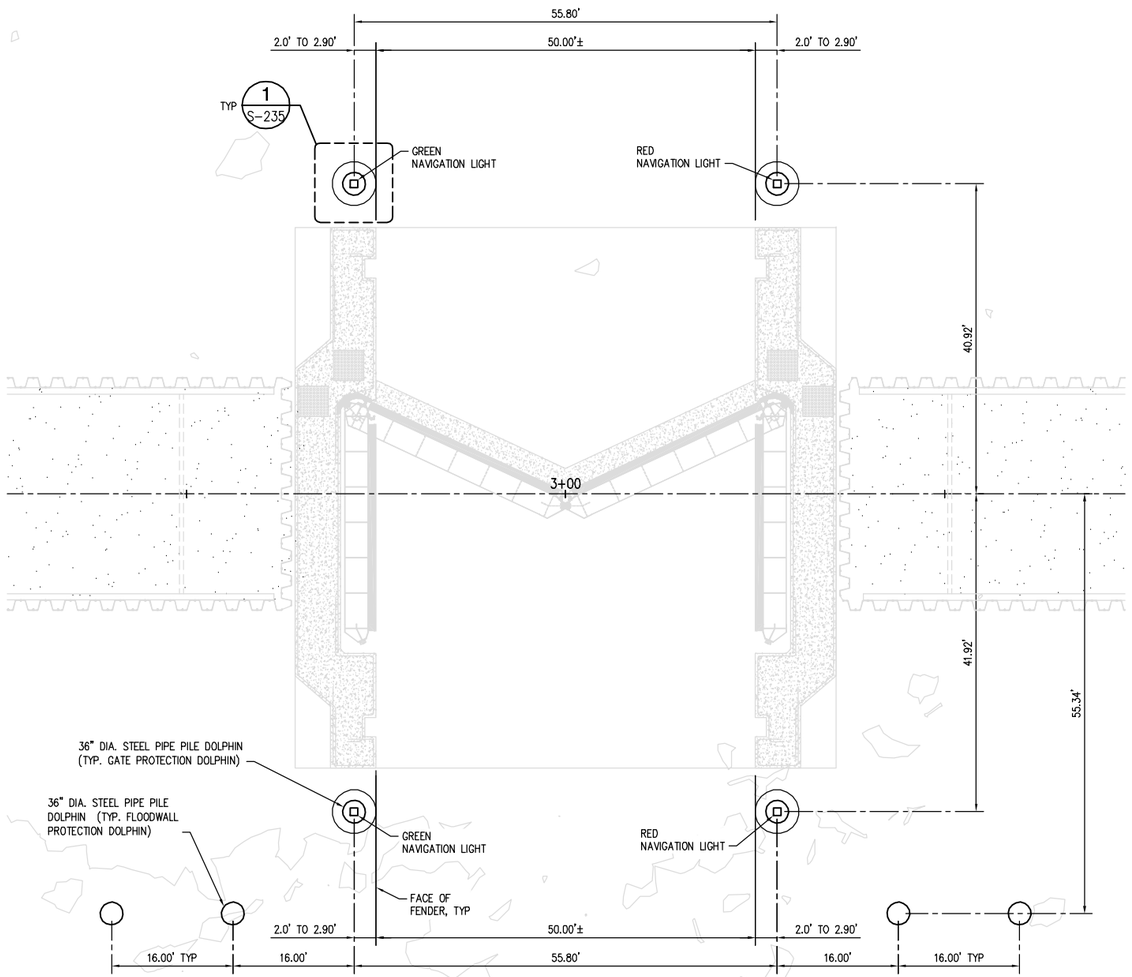
SJAFCA San Joaquin Area FLOOD CONTROL Agency

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SMITH CANAL GATE PROJECT

PROTECTIVE FENDER/DOLPHIN LAYOUT

SHEET S-233



PROTECTIVE FENDER/DOLPHIN ENLARGED PLAN 1 S-233

1"=10'

NOTES:

1. SEE NOTES ON SHEET S-233.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED NKG

DRAWN DRJ

CHECKED –

PROJECT ENGINEER R.C.E. NO. EXP. DATE

PROJECT MANAGER R.C.E. NO. EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

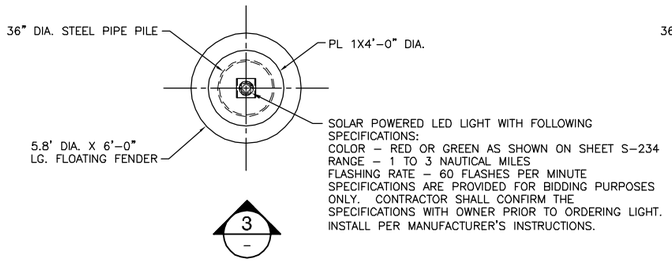
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

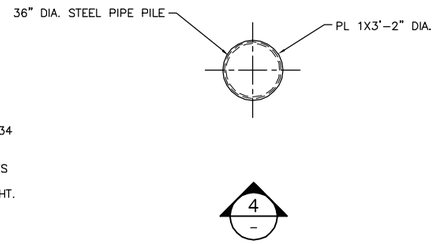
PROTECTIVE FENDER/DOLPHIN ENLARGED PLAN

SHEET S-234

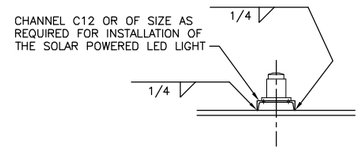
SHEET - OF 109



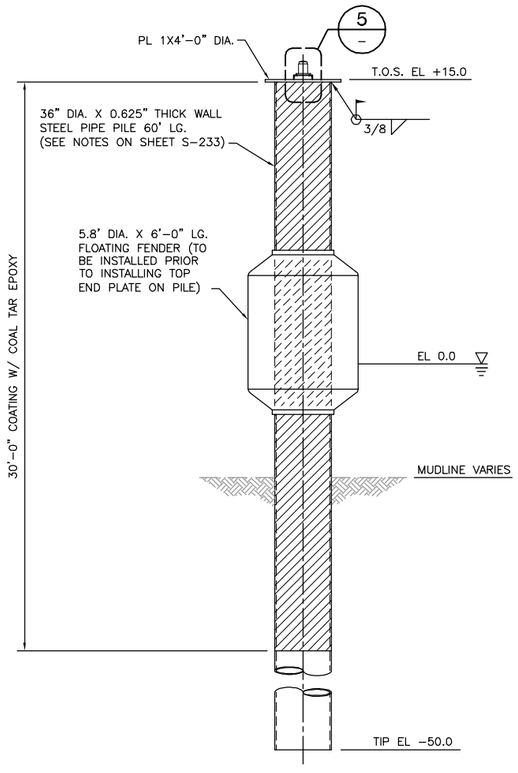
PLAN – FLOATING FENDER PILE **1**
1/4"=1'-0" S-234



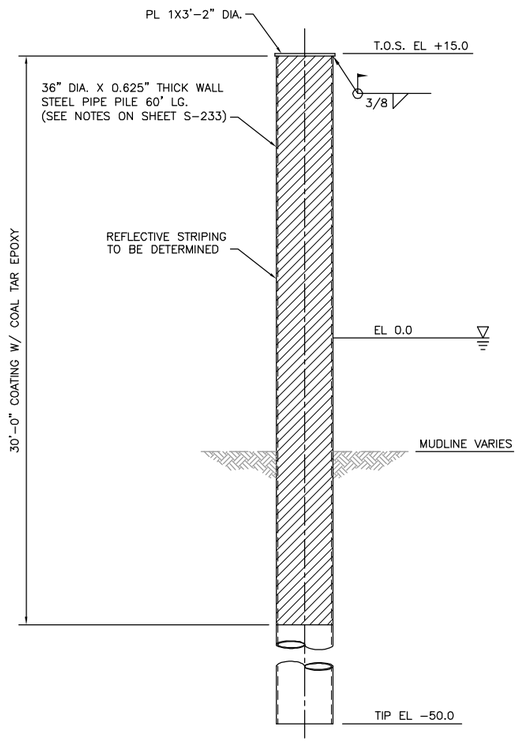
PLAN – PROTECTION PILE **2**
1/4"=1'-0" S-233



DETAIL – NAVIGATION LIGHT **5**
1/4"=1'-0" –



ELEVATION – FLOATING FENDER PILE **3**
1/4"=1'-0" –



ELEVATION – PROTECTION PILE **4**
1/4"=1'-0" –

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED NKG
DRAWN DRJ
CHECKED –

PROJECT ENGINEER R.C.E. NO. EXP. DATE

PROJECT MANAGER R.C.E. NO. EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

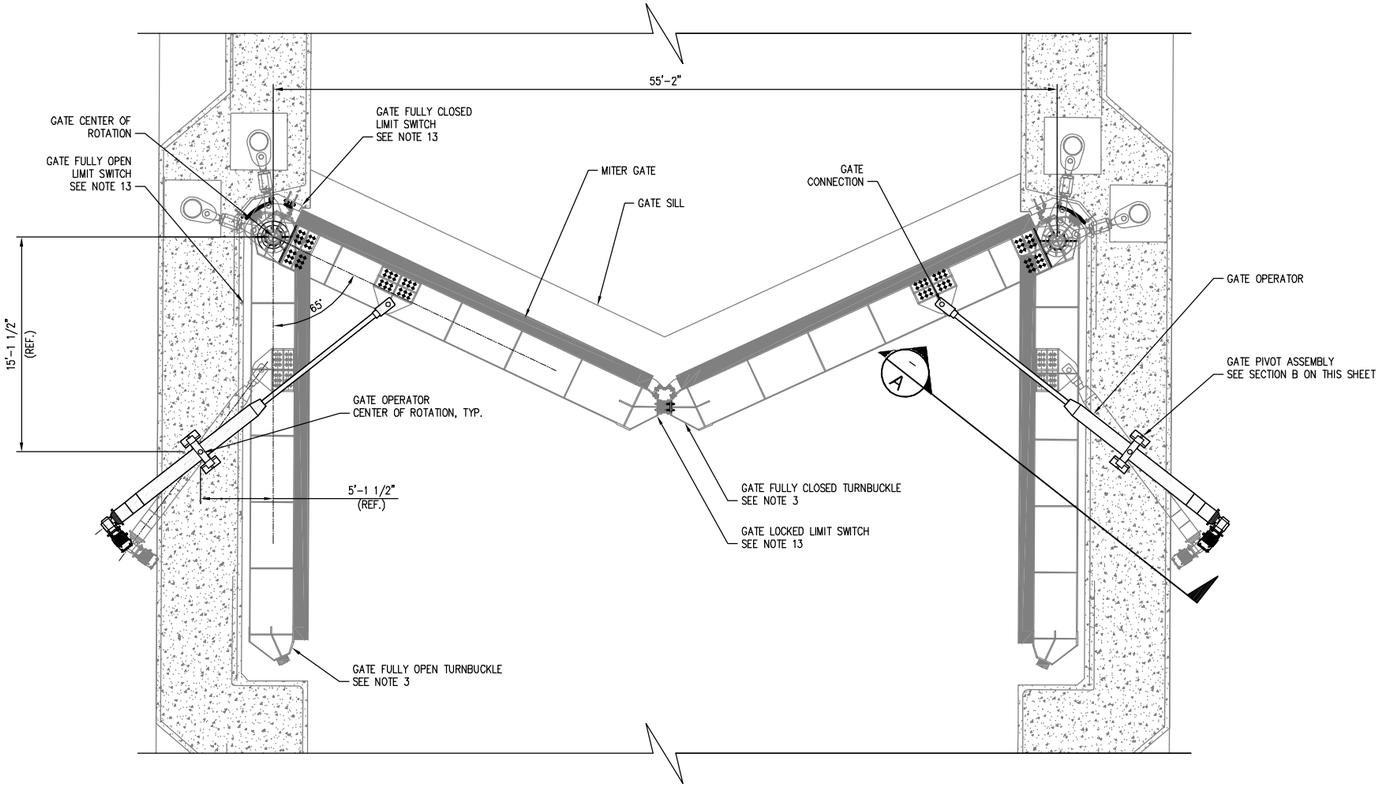
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

PROTECTION-FENDER PILE
TYPICAL SECTIONS AND DETAILS

SHEET S-235

SHEET - OF 109



MITER GATE MACHINERY PLAN
SCALE: 3/16"=1'-0"

NOTES:

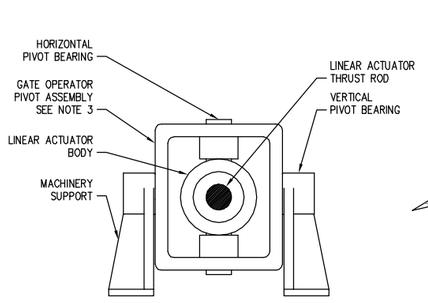
1. MACHINERY SHALL CONFORM TO UNITED STATES ARMY CORPS OF ENGINEERS (USACE) EM 1110-2-2610, ETL 1110-2-584. ANY CONFLICT BETWEEN THE PLANS, SPECIFICATIONS AND USACE MANUAL WILL BE RECTIFIED WITH THE MORE STRINGENT REQUIREMENTS.
2. SEE SPECIFICATIONS SECTION 35 01 41.00 10 FOR FURTHER REQUIREMENTS FOR THE ACTUATOR, ITS PIVOT, BASE, AND CONNECTION TO THE GATE. THE SYSTEM SHALL BE A NON-PNEUMATIC OR HYDRAULIC ELECTRO-MECHANICAL ACTUATOR. ALL COMPONENTS OF THE ACTUATOR ASSEMBLY (ACTUATOR, CARDANIC RING, BASE AND CONNECTION TO THE PIER) MUST BE SIZED FOR THE SPEED AND LOADS LISTED ON THIS DRAWING. CONTRACTOR MAY PROPOSE ALTERNATIVE MEANS OF OPERATION THAT MEET THE LOADING AND SPEED REQUIREMENTS LISTED ON THIS DRAWING.
3. FULLY OPEN AND FULLY CLOSED TURNBUCKLES ARE AN AUXILIARY SYSTEM TO BE USED IN THE EVENT OF ACTUATOR FAILURE OR MAINTENANCE AND ARE NOT INTENDED FOR USE DURING NORMAL OPERATION. WHEN ENGAGED LOCK OUT/ TAG OUT PROCEDURES SHALL BE USED TO PREVENT OPERATION OF THE GATES WITH THE TURNBUCKLES CONNECTED IN EITHER THE FULLY OPEN OR FULLY CLOSED POSITIONS.
4. ACTUATOR TO BE PROVIDED WITH A CARDANIC RING OR OTHER PIVOT ASSEMBLY THAT PROVIDES FOR SIMULTANEOUS ROTATION IN THE VERTICAL AND HORIZONTAL PLANES TO COMPENSATE FOR MISALIGNMENT AND MOVEMENT OF THE GATE AND ACCOMMODATE PIVOTING OF THE ACTUATOR DURING OPERATION. THE PIVOT MUST BE SIZED TO ACCOMMODATE THE LOADS LISTED IN THE ACTUATOR TABLE ON THIS DRAWING.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, CUT SHEETS, AND MATERIAL CERTIFICATIONS TO ENGINEER FOR APPROVAL PRIOR TO ANY FABRICATION. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO DETAIL, COORDINATE AND VERIFY THE RELATIONSHIP AND ASSEMBLY OF ALL PARTS FOR A COMPLETE WORKING LOCK SYSTEM. ALL REQUIRED MACHINING, RIGGING, SPECIAL SHIMMING, LUBRICATION, PAINTING, TESTING, ASSEMBLY AND ALIGNMENT SHALL BE CONSIDERED PART OF THE WORK AND SHALL BE DETAILLED ON THE SHOP DRAWINGS.
6. THE CONTRACTOR SHALL GREASE ALL BUSHINGS AND BEARINGS FOR THE LOCK MACHINERY THAT ARE NOT PART OF PREVIOUSLY LUBRICATED COMPONENTS PURCHASED FROM A MANUFACTURER (IE LINEAR ACTUATORS OR SIMILAR). SELF-LUBRICATING BEARINGS SUCH AS THOSE ON THE GATE CONNECTION AND ACTUATOR CARDANIC RING SHALL HAVE PROVISIONS FOR LUBRICATION AS LISTED IN THE SPECIFICATIONS BUT SHALL NOT BE LUBRICATED.
7. TURNED BOLTS MACHINED FROM ASTM A449 BOLT BLANKS SHALL BE PROVIDED AS REQUIRED TO CONNECT MACHINERY TO STRUCTURAL STEEL. ALL TURNED BOLTS CONNECTING MACHINERY TO STRUCTURAL STEEL SHALL HAVE AN LC6 FIT BETWEEN THE BODY OF THE BOLT AND THE HOLE IN ACCORDANCE WITH ANSI B4.1 UNLESS OTHERWISE NOTED. ALL FASTENERS SHALL HAVE A HARDENED PLAIN WASHER UNDER THE HEAD AND NUT.
8. MACHINERY COMPONENTS IN MOVING OR FIXED CONTACT SHALL MEET THE FOLLOWING FITS AND FINISHES:

PART	FIT	FINISH
MACHINERY BASE ON STEEL	–	250
SHAFT JOURNALS	RC6	8
JOURNAL BUSHINGS	RC6	16
SPLIT BUSHING IN BASE	LC1	125
SOLID BUSHING IN BASE	FN1	63
SOLID BUSHING IN BASE (OVER 4" THICKNESS)	FN2	63
HUBS ON SHAFT (UP TO 2" BORE)	FN2	32
HUBS ON SHAFT (OVER 2" BORE)	FN2	63
TURNED BOTLS IN FINISHED HOLES	LC6	63
KEYS AND KEYWAYS	–	63
MACHINERY PARTS IN FIXED CONTACT	–	125
OPEN SPUR GEARS		
UNDER 1" CIRCULAR PITCH	–	32
1" TO 1 3/4" CIRCULAR PITCH	–	63
OVER 1 3/4" CIRCULAR PITCH	–	125

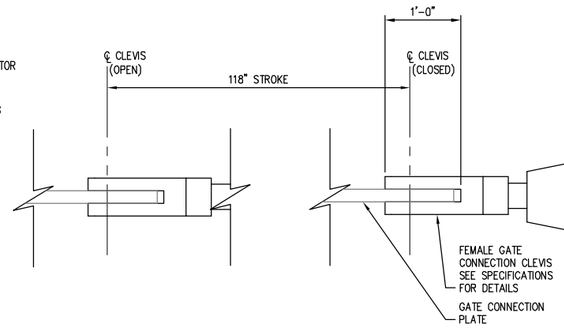
*KEYS AND KEYWAYS SHALL MEET TOLERANCE REQUIREMENTS OF ANSI B17.1.

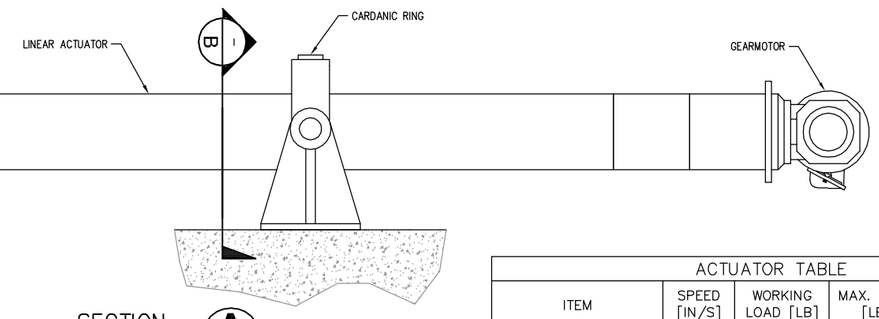
THE ABOVE FITS FOR CYLINDRICAL PARTS SHALL ALSO APPLY TO THE MAJOR DIMENSIONS OF NON-CYLINDRICAL PARTS.

9. PROVIDE STAINLESS STEEL ASTM A240 TYPE 316 SHIMS FOR LEVELING AND ALIGNING ALL MACHINERY COMPONENTS. SHIM PACKS SHALL BE ½" NOMINAL THICKNESS UNLESS OTHERWISE SPECIFIED WITH ADJUSTMENTS FOR 1/64" VARIATIONS. ALL SHIMS TO BE FULL FOOTPRINT MADE FROM STAINLESS STEEL. U-SHAPED OR SLOTTED SHIMS ARE NOT ACCEPTABLE.
10. ALL STEEL PARTS SHALL BE SHOP PAINTED PER SPECIFICATION SECTION XX PRIOR TO INSTALLATION IN THE FIELD. ALL FAYING SURFACES TO BE PRIME PAINTED ONLY. BEARING AND SHAFT JOURNALS AND PINS AND SLEEVES SHALL NOT BE PAINTED.
11. ALL WELDMENTS SHALL BE STRESS RELIEVED AND BLAST CLEANED PRIOR TO FINAL MACHINNG WORK.
12. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GR.50.
13. LIMIT SWITCHES SHALL BE GO SWITCH MODEL 81, SEE ELECTRICAL SPECIFICATIONS FOR MORE INFORMATION. GATE FULLY CLOSED LIMIT SWITCH TO PROVIDE CONTROL INDICATION TO STOP ACTUATOR AND ENGAGE BRAKE. GATE LOCKED LIMIT SWITCH TO CONFIRM MITER IS FULLY ENGAGED. OPERATOR TO BE PROVIDED WITH BYPASS OF BOTH SWITCHES. SEE ELECTRICAL DRAWINGS FOR DETAILS.



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





SECTION A
SCALE: 1"=1'-0"
SEE NOTE 2

ACTUATOR TABLE					
ITEM	SPEED [IN/S]	WORKING LOAD [LB]	MAX. LOAD [LB]	MOTOR HP	STROKE [IN]
GATE OPERATOR	1.00	42000	68000	15	118

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED MM
DRAWN MW
CHECKED MM

MATTHEW MCGUIRE P.E. — PROJECT ENGINEER — R.C.E. NO. — EXP. DATE
WESLEY JACOBS P.E. — PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

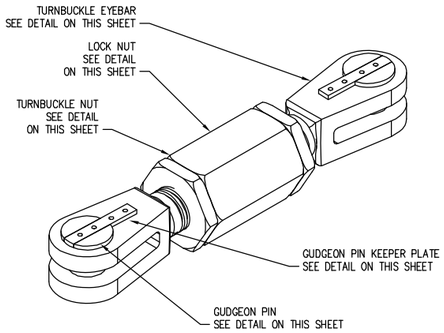
MECHANICAL LAYOUT

SHEET M-101

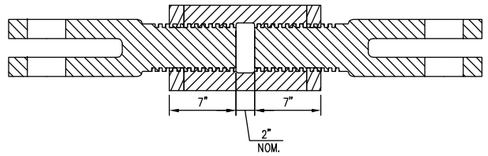
SHEET 02OF 109

NOTES:

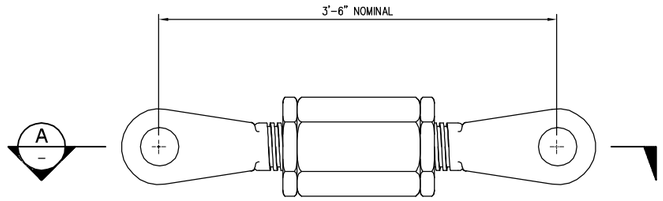
1. THREADS SHALL BE LEFT HAND ON ONE SIDE AND RIGHT HAND ON THE OTHER TO MATCH EYEBARS ON THE GUDGEON AND ANCHORAGE SIDES OF THE TURNBUCKLE.
2. AFTER FINAL MACHINING, ALL THREADS SHALL BE COATED WITH RUST INHIBITOR AND THEN LUBRICATED WITH XXX VISCOSITY LUBRICANT PRIOR TO ASSEMBLY.
3. ASSEMBLY SHALL BE SHOP PAINTED WITH THE EXCEPTION OF THREADS. AFTER FIELD ASSEMBLY AND ALIGNMENT, THE REMAINING UNPAINTED THREADS SHOWING OUTSIDE OF THE TURNBUCKLE SHALL BE PAINTED AND THE TURNBUCKLE EYEBAR INTERFACE SEALED WITH SILICONE.



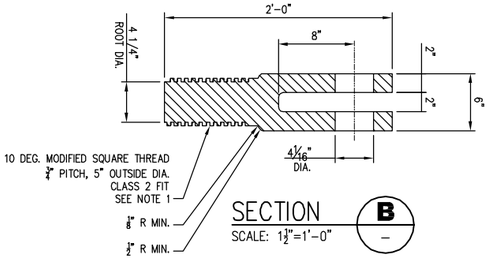
TURNBUCKLE ISOMETRIC
SCALE: 1½"=1'-0"



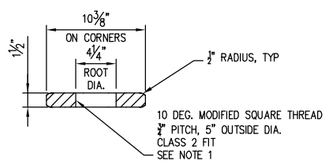
SECTION A
SCALE: 1½"=1'-0"



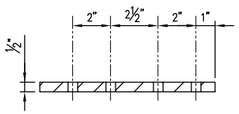
TURNBUCKLE PLAN
SCALE: 1½"=1'-0"
4 TOTAL REQUIRED



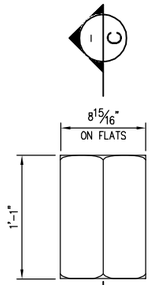
SECTION B
SCALE: 1½"=1'-0"



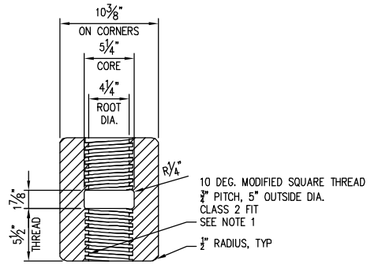
SECTION D
SCALE: 1½"=1'-0"



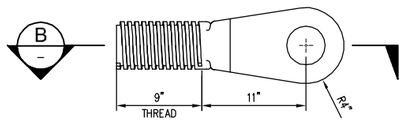
SECTION E
SCALE: 3"=1'-0"



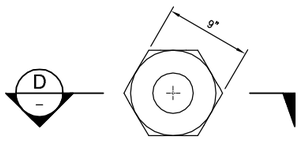
TURNBUCKLE NUT
SCALE: 1½"=1'-0"
MATERIAL: ASTM A668 GR.F
4 TOTAL REQUIRED



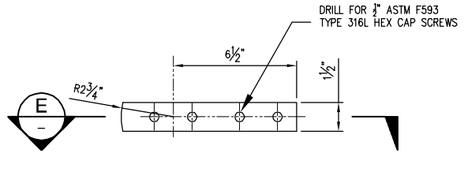
SECTION C
SCALE: 1½"=1'-0"



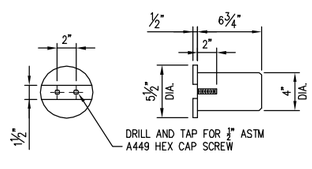
EYEBAR
SCALE: 1½"=1'-0"
MATERIAL: ASTM A668 GR.F
FOUR LEFT HAND THREAD,
FOUR RIGHT HAND THREAD



LOCK NUT
SCALE: 1½"=1'-0"
MATERIAL: ASTM A668 GR.F
THREADS OMITTED FOR CLARITY
FOUR LEFT HAND THREAD,
FOUR RIGHT HAND THREAD



GUDGEON PIN KEEPER PLATE
SCALE: 3"=1'-0"
MATERIAL: ASTM A705 TYPE
630 CONDITION H1150
8 TOTAL REQUIRED



GUDGEON PIN
SCALE: 1½"=1'-0"
MATERIAL: ASTM A705 TYPE
630 CONDITION H1150
8 TOTAL REQUIRED

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

WARNING
0 1/2 1
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DESIGNED MM
DRAWN MW
CHECKED MM

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WESLEY JACOBS P.E. — PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

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SMITH CANAL GATE PROJECT

GUDGEON TURNBUCKLE DETAILS

SHEET M-102

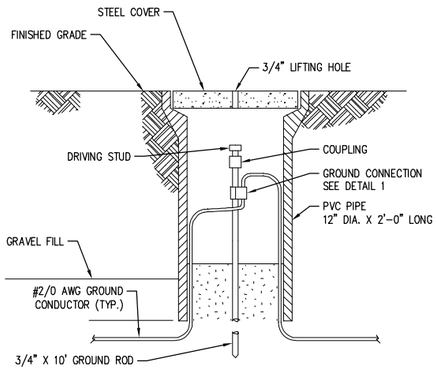
SHEET 02OF 109

LEGEND

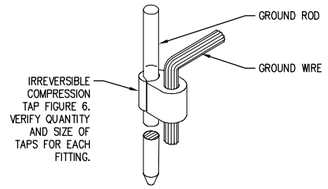
	CIRCUIT BREAKER
	OVERLOAD
M	INCOMING ELECTRICAL SERVICE METER
X A	DISCONNECT SWITCH "X A" INDICATES AMPERE RATING
	MTS WITH GENERATOR RECEPTACLE
	TRANSFORMER
	FULL VOLTAGE REVERSING MOTOR STARTER
X HP	MOTOR "X HP" INDICATES HORSEPOWER
	SITE LIGHT FIXTURE
X	INDICATOR LIGHT "X" INDICATES COLOR
OFF (K) CS-1 CS-2	3 POSITION SELECTOR SWITCH "K" INDICATES KEYED SWITCH
OFF ON	2 POSITION SELECTOR SWITCH
	NORMALLY OPEN MOMENTARY CONTACT PUSH BUTTON
	NORMALLY CLOSED MOMENTARY CONTACT MUSHROOM HEAD PUSH BUTTON
	NORMALLY OPEN LIMIT SWITCH CONTACT
	NORMALLY CLOSED CONTACT
	NORMALLY OPEN CONTACT
	RELAY COIL
	SIREN
	CONTROL CABINET
	FIELD DEVICE
	480V PANELBOARD
	CONTROL STAND #1
	CONTROL STAND #2

ABBREVIATIONS

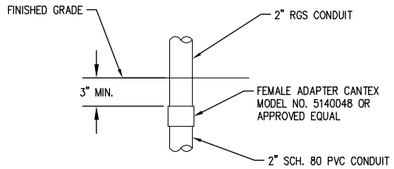
A	AMPERE
AC	ALTERNATING CURRENT
AIC	AMPERE INTERRUPTING CAPACITY
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ATS	ACCEPTANCE TESTING SPECIFICATIONS
AWG	AMERICAN WIRE GAUGE
BRKR	BREAKER
C1	CONTROL STAND 1
C2	CONTROL STAND 2
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CL	CLOSED
CM	MOTOR CONTACTOR
CR	CONTROL RELAY
CS	CONTROL STAND
DIA	DIAMETER
DS	DISCONNECT SWITCH
E	EMERGENCY
ESTOP	EMERGENCY STOP
EA	EACH
FC	FULLY CLOSED
FO	FULLY OPEN
FVR	FULL VOLTAGE REVERSING
G	GREEN
G1	GATE ACTUATOR 1
G2	GATE ACTUATOR 2
GB	GATES LOCKED BYPASS
GL	GATES LOCKED
GND	GROUND
HP	HORSEPOWER
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
IL	INDICATOR LIGHT
JB	JUNCTION BOX
KAIC	KILOAMPERE INTERRUPTING CAPACITY
KCMIL	THOUSAND CIRCULAR MILS
KS	KEYED SELECTOR SWITCH
KVA	KILOVOLT-AMPERE
KW	KILOWATT
L	LINE, LOAD
LFMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT
LS	LIMIT SWITCH
LTG	LIGHTING
MACH.	MACHINERY
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILS
MCP	MOTOR CIRCUIT PROTECTOR
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
N	NORMAL, NEUTRAL
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NETA	NATIONAL ELECTRICAL TESTING ASSOCIATION
NEUT	NEUTRAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO.	NUMBER
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OL	OVERLOAD
OP	OPEN
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
P	POLE
PB	PUSHBUTTON
PFR	PHASE FAILURE RELAY
PG&E	PACIFIC GAS AND ELECTRIC COMPANY
PH	PHASE
PPE	PERSONAL PROTECTIVE EQUIPMENT
PVC	POLYVINYL CHLORIDE
PW	POWER
QTY	QUANTITY
R	RED
RGS	RIGID GALVANIZED STEEL
SCH	SCHEDULE
SJAFCA	SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SN	SIREN
SPD	SURGE PROTECTION DEVICE
SS	SELECTOR SWITCH
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
U.S.	UNITED STATES
V	VOLTS
W	WHITE



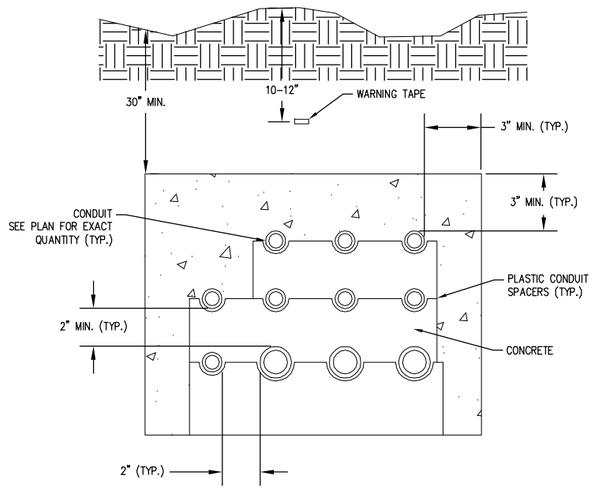
TYPICAL GROUNDING WELL DETAIL
SCALE: NTS



DETAIL 1
SCALE: NTS
NOTE: CABLE TO GROUND ROD



TYPICAL CONDUIT TRANSITION DETAIL
SCALE: 3"=1'-0"
NOTE: 2" CONDUIT SHOWN. OTHER CONDUIT SIZES SIMILAR.



DUCTBANK DETAIL
SCALE: NTS

GENERAL NOTES:

1. GENERAL NOTES, LEGEND, AND ABBREVIATIONS SHOWN ON THIS DRAWING APPLY TO ALL ELECTRICAL DRAWINGS UNDER THIS CONTRACT. REFER TO INDIVIDUAL ELECTRICAL DRAWINGS FOR ADDITIONAL NOTES.
2. CONTRACTOR SHALL ENSURE THAT ALL ELECTRICAL WORK MEETS THE MINIMUM REQUIREMENTS OF THE NFPA 70 (NATIONAL ELECTRICAL CODE), NFPA 70E, NETA ACCEPTANCE TESTING SPECIFICATIONS, OSHA REGULATIONS, AND ANY EXISTING CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION (UTILITY, LOCAL, STATE, AND FEDERAL CODES OR REGULATIONS).
3. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THESE CONTRACT DRAWINGS, THE CONTRACT SPECIFICATIONS, AND ALL OTHER CONTRACT DOCUMENTS AS DEFINED WITHIN THE CONTRACT SPECIFICATIONS. IF A CONFLICT ARISES BETWEEN THE TWO OR MORE CONTRACT DOCUMENTS, CODES, OR REGULATIONS, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
4. CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF SJAFCA, WILL NOT BE DAMAGED. IF ANY MATERIALS WHICH ARE TO REMAIN IN PLACE OR WHICH ARE TO REMAIN THE PROPERTY OF SJAFCA ARE DAMAGED, REPLACE OR REPAIR THE DAMAGED MATERIALS IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO SJAFCA. THE REPAIR OF ALL DAMAGE, DIRECT OR INDIRECT, OF WHATEVER NATURE RESULTING FROM THE PERFORMANCE OF THE CONTRACTOR'S WORK WILL BE BORNE AND SUSTAINED BY THE CONTRACTOR.
5. CONTRACTOR SHALL PERFORM ALL ELECTRICAL WORK UNDER THE SUPERVISION OF A MASTER ELECTRICIAN LICENSED IN THE CITY OF STOCKTON.
6. CONTRACTOR SHALL NOT DISTURB ANY EXISTING UTILITIES EXCEPT AS SPECIFICALLY DEFINED WITHIN THE SCOPE OF WORK FOR THIS CONTRACT. WHERE WORK AFFECTS OR IS AFFECTED BY EXISTING UTILITIES, COORDINATE THE WORK WITH SJAFCA. DO NOT PERFORM ANY WORK THAT PREVENTS NORMAL MARINE TRAFFIC WITHOUT ADVANCED WRITTEN APPROVAL FROM THE U.S. COAST GUARD.
7. THE SITE INFORMATION AND DETAILS SHOWN ON THE CONTRACT DRAWINGS HAVE BEEN OBTAINED FROM EXISTING AND PROPOSED SITE/CIVIL DRAWINGS. LOCATIONS OF EXISTING DEVICES, EQUIPMENT, AND RACEWAY ROUTINGS SHOWN IN THE CONTRACT DRAWINGS MAY BE APPROXIMATED. THE CONTRACT DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL DETAILS OF THE CONSTRUCTION, MOUNTING, AND WIRING. FIELD VERIFY ALL APPLICABLE DIMENSIONS AND CLEARANCES TO ACCOMMODATE THE PROPOSED EQUIPMENT. SUBMIT DETAILED EQUIPMENT LAYOUT PLANS, CONDUIT ROUTING PLANS, SECTIONS, AND MOUNTING DETAILS SHOWING PROPOSED EQUIPMENT AND ROUTING LOCATIONS AND CLEARANCES PRIOR TO FABRICATION AND INSTALLATION. COORDINATE EXACT INSTALLATION LOCATIONS OF EQUIPMENT AND DEVICES AND ALL DETAILS OF WORK WITH OTHER TRADES TO ACHIEVE A COMPLETE, FUNCTIONAL INSTALLATION. REFER TO OTHER CONTRACT REQUIREMENTS TO ENSURE PROPER COORDINATION. EXACT EQUIPMENT INSTALLATION LOCATIONS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
8. INCLUDE ALL COSTS FOR REMOVALS, DISPOSALS, RELOCATIONS, AND INSTALLATIONS REQUIRED TO FULFILL THE CONTRACT REQUIREMENTS. THESE COSTS INCLUDE WORK DESCRIBED IN THE CONTRACT SPECIFICATIONS AND SHOWN ON THE CONTRACT DRAWINGS INCLUDING ALLOWANCES FOR ADDITIONAL EXPENSES REQUIRED BASED ON CONTRACTOR'S MEANS AND METHODS FOR STAGING AND COMPLETING THE WORK, INCLUDING BUT NOT LIMITED TO CONDUIT AND WIRING REQUIRED BUT NOT SHOWN AND EQUIPMENT MOUNTING. ELECTRICAL CONTRACT DRAWINGS AND SPECIFICATIONS ARE PREPARED TO SHOW THE EXTENT OF INSTALLATION REQUIRED FOR A COMPLETE ELECTRICAL SYSTEM. ANY EQUIPMENT, WIRING, MATERIALS, SOFTWARE, OR LABOR NOT HEREIN SPECIFICALLY MENTIONED OR SHOWN BUT NECESSARY TO COMPLETE THE INSTALLATION THAT MEETS THE INTENT OF DESIGN, CODE, AND BEST PRACTICES OF INDUSTRY MUST BE INCLUDED AND FURNISHED IN THE CONTRACT.
9. CONTRACTOR SHALL APPLY ALL MATERIAL AND LABOR TO FURNISH A COMPLETE AND OPERABLE ELECTRICAL SYSTEM.
10. CONTRACTOR SHALL RELOCATE, OR FIELD RELOCATE, ANY ELECTRICAL EQUIPMENT OR DEVICES WHICH ARE IN CONFLICT WITH ANY STRUCTURAL OR MECHANICAL INSTALLATIONS AS PART OF THIS CONTRACT. CONTRACTOR SHALL SUBMIT PROPOSED EQUIPMENT RELOCATIONS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLING THE EQUIPMENT AT THE PROPOSED LOCATION.
11. CONTRACTOR SHALL TEST ALL ELECTRICAL EQUIPMENT AND CONDUCTORS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS AND NETA ATS. TEST ELECTRICAL CONDUCTORS PRIOR TO TERMINATION. DO NOT ENERGIZE ELECTRICAL EQUIPMENT PRIOR TO TESTING. CORRECT ALL DEFICIENCIES PRIOR TO SYSTEM COMMISSIONING.

EQUIPMENT MATERIAL AND INSTALLATION NOTES:

1. ALL MATERIALS AND TESTING OF ELECTRICAL EQUIPMENT SHALL COMPLY WITH THE LATEST PUBLISHED STANDARDS OF THE IEEE, NEMA, ANSI, AND ASTM WHERE APPLICABLE. ALL ELECTRICAL MATERIAL AND EQUIPMENT SHALL BE LISTED OR LABELED UL FOR THE SERVICE IN WHICH IT IS USED.
2. ALL MATERIALS AND EQUIPMENT SHALL BE RESISTANT TO MOISTURE AND CORROSION TO WITHSTAND THE ENVIRONMENT AND OPERATING CONDITIONS AT THEIR INSTALLED LOCATIONS.
3. ALL ABOVE GROUND CONDUIT AND FITTINGS SHALL BE RIGID GALVANIZED STEEL UNLESS OTHERWISE SPECIFIED. ALL UNDERGROUND CONDUIT AND FITTINGS SHALL BE SCH. 80 PVC UNLESS OTHERWISE SPECIFIED. CONDUIT FITTINGS SHALL HAVE DOUBLE LOCK NUTS AND WEATHERPROOF SEALING RINGS AND GROVES. LFMC SHALL BE USED ONLY FOR APPLICATIONS THAT REQUIRE A HIGH DEGREE OF FLEXIBILITY OR TO ACCOMMODATE MOVING OR VIBRATING EQUIPMENT. DO NOT SUBSTITUTE OTHER CONDUIT TYPES WITH LFMC SOLELY BASED ON CONVENIENCE OF INSTALLATION. USE LFMC FOR FINAL EQUIPMENT CONNECTIONS AT MAXIMUM LENGTHS OF 48". MINIMUM CONDUIT SIZE SHALL BE 3/4" NOMINAL. CONNECTION FROM DISCONNECT SWITCH TO GATE ACTUATOR MOTORS SHALL BE VIA WATER RESISTANT FLEXIBLE CABLE TYPE SOOW OR APPROVED EQUAL.
4. FURNISH AND INSTALL EXPANSION/DEFLECTION FITTINGS (WITH ELECTRICAL BONDING JUMPERS) WHERE CONDUITS PASS THROUGH OR CROSS STRUCTURAL EXPANSION JOINTS. FURNISH AND INSTALL EXPANSION AND DEFLECTION FITTINGS NOT SHOWN ON THE PLANS AS NECESSARY.
5. WIRING SHALL CONSIST OF SINGLE CONDUCTOR, STRANDED COPPER, 600V RATED, TYPE RHW-2 CONDUCTORS UNLESS OTHERWISE NOTED. CONNECTION FROM DISCONNECT SWITCH TO GATE ACTUATOR MOTORS SHALL BE VIA WATER RESISTANT FLEXIBLE CABLE TYPE SOOW OR APPROVED EQUAL. WIRING WITHIN CONTROL PANELS SHALL BE TYPE SIS. MINIMUM SIZE OF POWER AND CONTROL CABLES SHALL BE #12 AWG. SEAL CABLE ENDS AT ALL TIMES TO PREVENT ANY MOISTURE ENTRY OR DAMAGE TO THE CABLES. TERMINATE ANY INSTALLED SPARE WIRES ON TERMINAL BLOCKS AND LABEL EACH SPARE WIRE WITH A UNIQUE NUMBER AT EACH END OF THE WIRE.
6. ALL EQUIPMENT MOUNTING HARDWARE SHALL BE GALVANIZED OR TYPE 316 STAINLESS STEEL, UNLESS OTHERWISE SPECIFIED. PANELS, PULL BOXES, AND EQUIPMENT ENCLOSURES SHALL BE SUPPORTED INDEPENDENTLY WITH NO WEIGHT BEARING ON THE CONDUITS. PROVIDE STRUCTURAL SUPPORTS BASED ON ACTUAL EQUIPMENT SELECTED.
7. CONTRACTOR SHALL INSTALL COMMUNICATIONS AND CONTROL WIRING IN RACEWAYS SEPARATE FROM POWER CABLES AND CONDUCTORS.
8. CONTRACTOR SHALL FIELD ROUTE AND SUPPORT CONDUITS FROM RACKS OR STRUCTURES. CONDUIT SHALL BE RIGIDLY SUPPORTED BY MEANS OF APPROVED CONDUIT FASTENERS, HANGERS, STRAPS, SUPPORTS, CLAMPS, ETC., FIRMLY ANCHORED IN PLACE AND SPACED PERPENDICULAR TO WALLS AND STRUCTURAL MEMBERS WITH 90 DEGREE BENDS.
9. ALL ENCLOSURES, CABINETS, JUNCTION BOXES, ETC. SHALL BE NEMA 4X STAINLESS STEEL TYPE 316, MINIMUM 14 GAUGE, WITH CONTINUOUSLY HINGED COVERS UNLESS OTHERWISE NOTED. DO NOT USE BOXES THAT REQUIRE REMOVAL OF SCREWS OR HARDWARE TO OPEN. BOXES LARGER THAN 12" X 12" SHALL HAVE 3-POINT LATCHES AND HASPS WITH PADLOCK PROVISIONS. INSTALL JUNCTION AND PULL BOXES AS REQUIRED TO FACILITATE PULLING OF WIRE AND CABLE AND AS REQUIRED SUCH THAT THERE IS A MAXIMUM OF 90 DEGREE BENDS BETWEEN BOXES/ENCLOSURES.
10. UNLESS OTHERWISE NOTED, CONDUIT ENTRANCES TO ALL JUNCTION BOXES AND ENCLOSURES INSTALLED IN DAMP OR WET LOCATIONS SHALL BE THROUGH THE BOTTOM OR SIDES. TOP CONDUIT ENTRANCE IS NOT PERMITTED UNLESS APPROVED BY THE ENGINEER. USE WATERTIGHT/MOISTURETIGHT HUBS FOR ALL CONDUIT ENTRANCES AND CONNECTION TO EQUIPMENT ENCLOSURES. PROVIDE SUFFICIENT CABLE SLACK IN ALL BOXES TO PERMIT MOVEMENT OF CABLES WITHOUT DAMAGE.
11. INSTALL CONDUIT GROUNDING BUSHINGS ON ALL CONDUITS ENTERING CABINETS AND JUNCTION BOXES. BOND ALL BUSHINGS TO THE GROUNDING SYSTEM PER NEC REQUIREMENTS.
12. BREATHERS SHALL BE PLACED AT HIGH POINTS OF THE CONDUIT SYSTEM AND DRAINS SHALL BE PLACED AT LOW POINTS OF CONDUIT SYSTEM TO PREVENT THE ACCUMULATION OF CONDENSATION WHERE PRACTICABLE.
13. GROUND ALL EQUIPMENT PERMANENTLY AND EFFECTIVELY PER NEC REQUIREMENTS. CONTRACTOR SHALL PROVIDE PROPERLY SIZED GROUNDING CONDUCTOR THAT IS BONDED TO ENCLOSURES IN EVERY CONDUIT RUN. GROUND CONDUCTORS SHALL HAVE GREEN INSULATION. ALL ELECTRICAL EQUIPMENT ENCLOSURES AND RACEWAY SYSTEM (INCLUDING CONDUITS, LFMC, EXPANSION JOINTS, PULL BOXES, AND JUNCTION BOXES) MUST FORM A CONTINUOUS CONDUCTING PERMANENT GROUND PATH. USE COMPRESSION TYPE CONNECTIONS FOR ALL GROUNDING TERMINATIONS. MECHANICAL CONNECTIONS WILL BE ALLOWED ONLY IF COMPRESSION TYPE CONNECTIONS ARE NOT AVAILABLE FOR SUCH APPLICATION.
14. CONTRACTOR SHALL PROVIDE LABOR, EQUIPMENT, AND MATERIALS TO TEST AND DOCUMENT SYSTEM GROUNDING CONNECTIONS TO ALL ELEMENTS OF ELECTRICAL SYSTEMS INSTALLED OR OTHERWISE CONNECTED TO IN THIS CONTRACT IN ACCORDANCE WITH NETA ATS GROUNDING SYSTEMS.
15. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
16. ANY UNUSED OPENINGS IN CONDUITS, BOXES, DISCONNECT SWITCHES, CABINETS, PANELBOARDS, AND OTHER ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE CAPPED OR PLUGGED USING APPROVED MATERIALS. ALL EMPTY CONDUIT RUNS INSTALLED OVER 10 FEET LONG SHALL BE CAPPED OR PLUGGED USING APPROVED MATERIALS. ALL EMPTY CONDUIT RUNS INSTALLED OVER 10 FEET LONG SHALL BE EQUIPPED WITH A MINIMUM OF ONE #14 AWG ZINC-COATED STEEL OR MONOFILAMENT PLASTIC PULL LINE WITH NOT LESS THAN 200 POUND TENSILE STRENGTH CHARACTERISTICS. LEAVE 12 FEET OF SLACK MINIMUM AT EACH END OF CONDUIT.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED MT
DRAWN JT
CHECKED RC

MEGAN TATARA P.E. — PROJECT ENGINEER — R.C.E. NO. — EXP. DATE

WESLEY JACOBS P.E. — PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

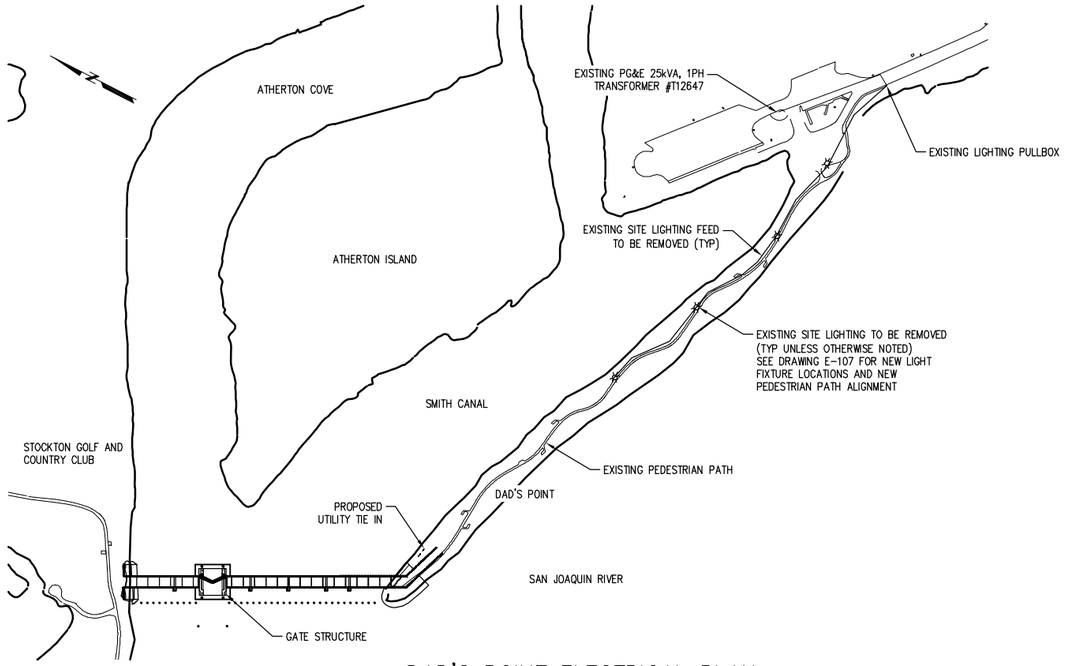
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

GENERAL ELECTRICAL NOTES, LEGEND, ABBREVIATIONS, AND TYPICAL DETAILS

SHEET E-001

SHEET X OF 109

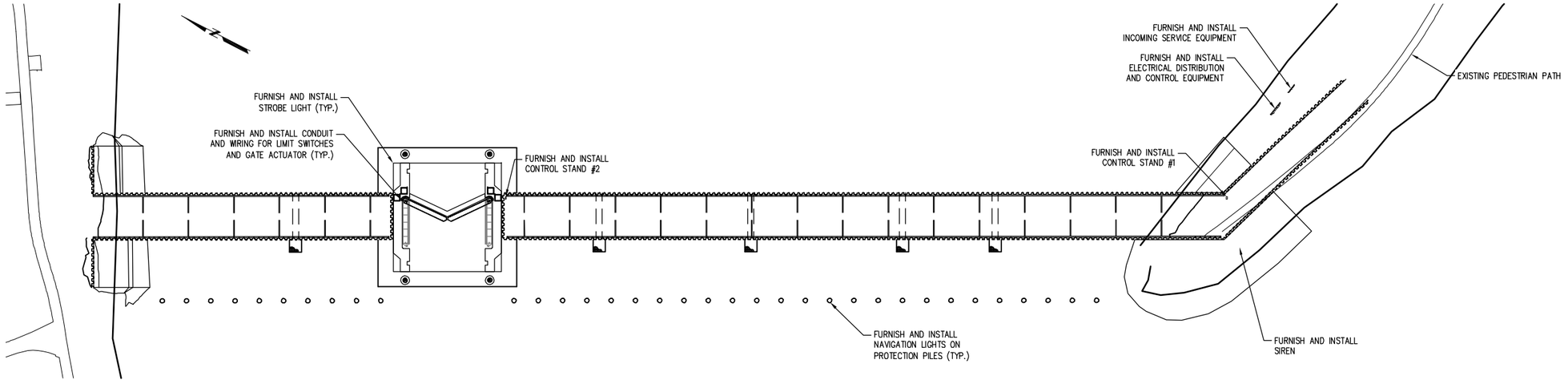


DAD'S POINT ELECTRICAL PLAN

SCALE: 1" = 200'

NOTES:

1. FOR GENERAL CONSTRUCTION STAGING INFORMATION, SEE GENERAL DRAWINGS. COORDINATE EACH CONSTRUCTION STAGE WITH OTHER TRADES.
2. OTHER CONTRACTORS MAY BE WORKING IN THE VICINITY OF THE WORK AREAS CONCURRENTLY. COORDINATE STAGING OF ELECTRICAL EQUIPMENT INSTALLATION WITH WORK PERFORMED BY OTHER TRADES TO MINIMIZE MARINE TRAFFIC CLOSURES. PERFORM ALL WORK IN ACCORDANCE WITH APPROVED INSTALLATION AND PHASING SEQUENCES.
3. SUBMIT A DETAILED WRITTEN PLAN OF OPERATION FOR APPROVAL BY THE ENGINEER. INCLUDE ALL DETAILS OF CONSTRUCTION AND STAGING FOR A SUCCESSFUL EXECUTION OF THE WORK AS SHOWN IN THE CONTRACT PLANS AND DESCRIBED IN THE CONTRACT SPECIFICATIONS. THE COST FOR THIS WRITTEN PLAN OF OPERATIONS SHALL BE CONSIDERED AS INCLUDED WITHIN THE PRICE BID FOR VARIOUS PAY ITEMS OF THIS CONTRACT. THE ENGINEER WILL NOT COMMENCE REVIEW OF THE SHOP DRAWINGS UNTIL THE ENGINEER HAS COMPLETED HIS REVIEW AND APPROVAL OF THE WRITTEN PLAN OF OPERATION.
4. PRIOR TO ANY DEMOLITION, TRACE ALL CIRCUITS AND SOURCE OF CONNECTION IN THE AREAS IMPACTED BY THE SCOPE OF WORK. IDENTIFY AND LABEL ALL CIRCUITS AFFECTED BY THE DEMOLITION WORK. PROVIDE TEMPORARY POWER TO MAINTAIN CONTINUITY OF EXISTING CIRCUITS DURING THE CONSTRUCTION PHASE. ELECTRICAL SYSTEMS IN ADJOINING AREAS IMPACTED BY THE DEMOLITION WORK MUST BE PERMANENTLY RESTORED TO THEIR ORIGINAL FUNCTIONS AT THE END OF THE PROJECT.
5. COORDINATE ANY UTILITY POWER OUTAGES WITH THE ELECTRICAL UTILITY, SJAFCA, AND OTHER CONTRACTORS. MINIMIZE THE FREQUENCY AND DURATION OF ANY POWER OUTAGES TO THE EXTENT POSSIBLE. PROVIDE TEMPORARY POWER FOR CONSTRUCTION ACTIVITIES DURING ANY UTILITY POWER OUTAGES.
6. IF ANY CONDUCTORS WILL REMAIN UNTERMINATED DURING OR BETWEEN STAGES OF CONSTRUCTION, CONDUCTORS SHALL BE PROTECTED WITHIN A COVERED NEMA 4X PULL BOX OR JUNCTION BOX. WRAPPING CONDUCTORS WITH PLASTIC OR TAPE IS NOT ACCEPTABLE MEANS OF PROTECTING CONDUCTORS AT ANY TIME DURING CONSTRUCTION.
7. GROUND RODS SHALL BE INSTALLED THROUGHOUT THE SITE AS NEEDED TO COMPLY WITH NEC REQUIREMENTS. IN ADDITION, TWO GROUND RODS SHALL BE INSTALLED AT OPPOSITE CORNERS OF THE CHANNEL, ONE GROUND ROD SHALL NEAR THE INCOMING SERVICE EQUIPMENT, AND ONE GROUND ROD SHALL BE INSTALLED FOR EACH SITE LIGHT FIXTURE. ADDITIONAL GROUND RODS SHALL BE INSTALLED AS REQUIRED TO ACHIEVE A MAXIMUM RESISTANCE OF 25 OHMS.
8. THE PROPOSED CONSTRUCTION STAGING PLAN IS AS FOLLOWS:
   - A. FIELD VERIFY EXISTING SITE CONDITIONS, INCLUDING EXISTING SITE LIGHT LOCATIONS AND UTILITY CONNECTION POINT.
   - B. FURNISH AND INSTALL CONNECTION TO THE UTILITY ONCE THE SERVICE HAS BEEN PROVIDED AT THE SITE.
   - C. FURNISH AND INSTALL UNDERGROUND CONDUITS AND SITE LIGHT FIXTURES ON DAD'S POINT DURING SITE WORK AND/OR AFTER SITE WORK HAS BEEN PERFORMED.
   - D. FURNISH AND INSTALL POWER DISTRIBUTION AND CONTROL EQUIPMENT AND ASSOCIATED CONDUIT AND CONDUCTORS ON DAD'S POINT DURING SITE WORK AND/OR AFTER SITE WORK HAS BEEN PERFORMED.
   - E. FURNISH AND INSTALL CONDUIT AND CONDUCTORS FOR LINEAR ACTUATORS AND LIMIT SWITCHES ON/WITHIN THE GATE STRUCTURE DURING GATE STRUCTURE CONSTRUCTION AND/OR AFTER THE GATE STRUCTURE HAS BEEN INSTALLED.
   - E. FURNISH AND INSTALL GATE CONTROL STANDS, SITE LIGHT FIXTURES, STROBE LIGHTS, AND ASSOCIATED CONDUIT AND CONDUCTORS ON/WITHIN THE FLOOD WALL DURING FLOOD WALL CONSTRUCTION AND/OR AFTER THE FLOOD WALL HAS BEEN INSTALLED.
   - F. TEST AND COMMISSION ALL ELECTRICAL EQUIPMENT FURNISHED AND INSTALLED UNDER THIS CONTRACT.



SMITH CANAL ELECTRICAL PLAN

SCALE: 1"=40'

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED MT
DRAWN JT
CHECKED RC

MEGAN TATARA P.E. – – PROJECT ENGINEER R.C.E. NO. EXP. DATE

WESLEY JACOBS P.E. – – PROJECT MANAGER R.C.E. NO. EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

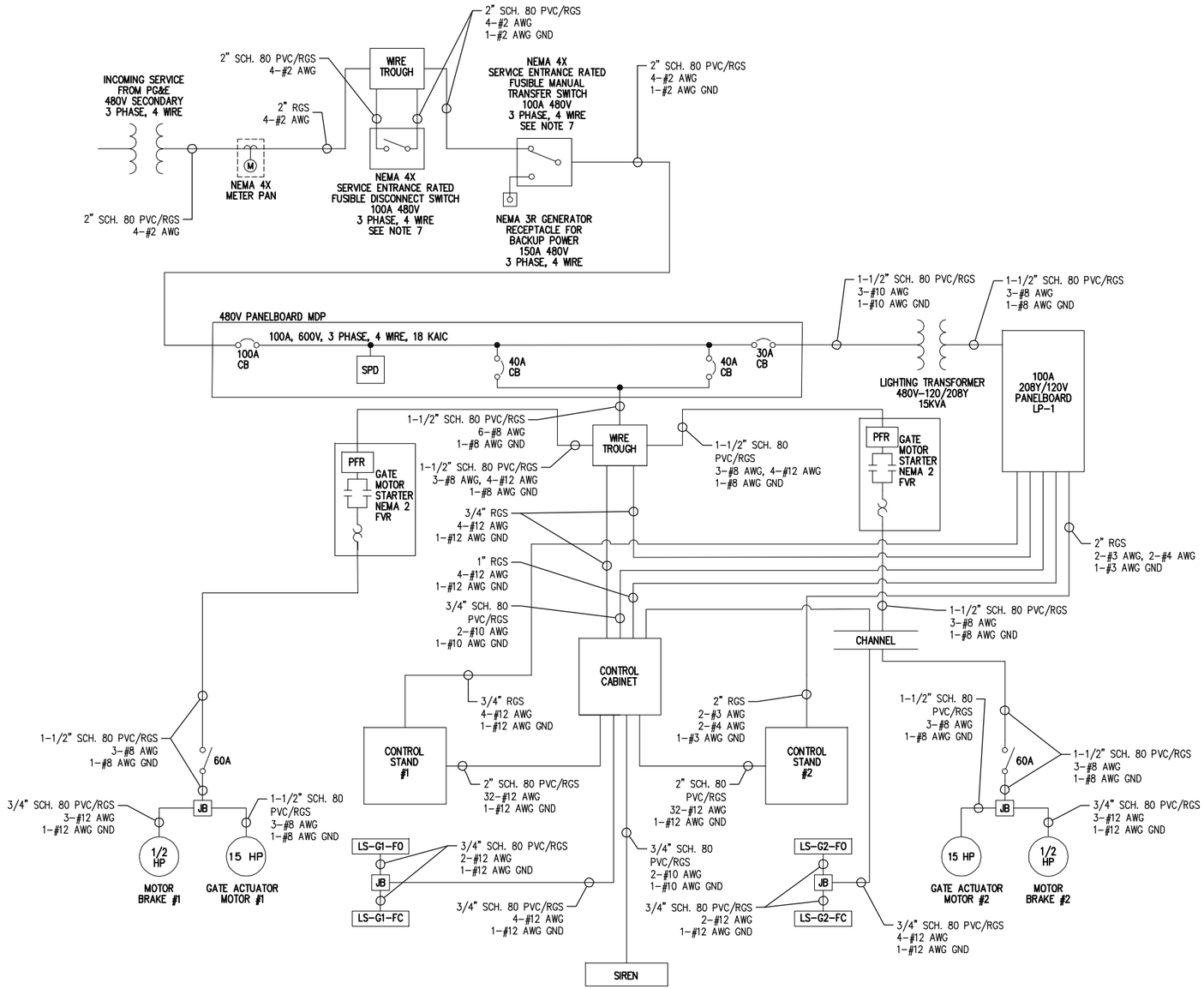
GENERAL ELECTRICAL PLAN

SHEET E-101

SHEET X OF 109

NOTES:

1. FOR ELECTRICAL GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE DRAWING E-001.
2. BOND NEUTRAL AND MAKE SERVICE GROUND CONNECTION IN FUSIBLE SERVICE ENTRANCE DISCONNECT SWITCH.
3. CONTRACTOR SHALL VERIFY CONNECTION LOCATION. SEE DRAWING E-103 FOR ADDITIONAL UTILITY COORDINATION DETAILS.
4. CONTRACTOR SHALL VERIFY CONDUCTOR AND CONDUIT SIZES AND QUANTITIES INCLUDING SPARE CONDUITS PRIOR TO INSTALLING ANY CONDUCTORS OR CONDUITS. CONDUCTOR AND CONDUIT SHALL BE SIZED PER NEC, INCLUDING VOLTAGE DROP BASED ON ACTUAL CONDUIT ROUTING CHOSEN AND ACTUAL CIRCUIT LOADS. ANY DISCREPANCY FROM THESE DRAWINGS SHALL BE PRESENTED TO THE ENGINEER FOR EVALUATION.
5. FOR CONDUITS NOTED AS "PVC/RGS", USE SCH. 80 PVC CONDUIT IN UNDERGROUND AND CONCRETE-ENCASED SECTIONS AND RGS CONDUIT IN ABOVE GROUND AND INTERIOR SECTIONS. FOR CONDUIT TRANSITION DETAILS, SEE DRAWING NUMBER E-001.
6. ALL CONDUCTORS ARE SINGLE CONDUCTOR CABLES UNLESS OTHERWISE NOTED.
7. FUSES SHALL BE CLASS R, 100A RATED.
8. EACH CONTROL STAND, CONTROL CABINET, PANELBOARD, MOTOR STARTER ENCLOSURE, ETC. SHALL INCLUDE AN EQUIPMENT HEATER TO PREVENT CONDENSATION BUILDUP.



65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED MT
DRAWN JT
CHECKED RC

MEGAN TATARA P.E. – – PROJECT ENGINEER R.C.E. NO. EXP. DATE

WESLEY JACOBS P.E. – – PROJECT MANAGER R.C.E. NO. EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

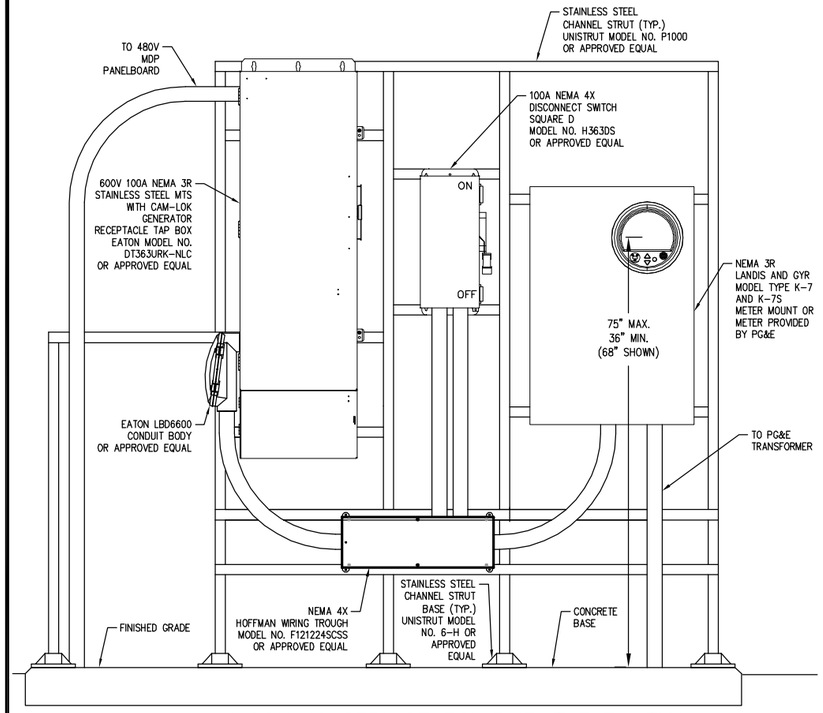
HDR

SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

ONE-LINE/RISER DIAGRAM

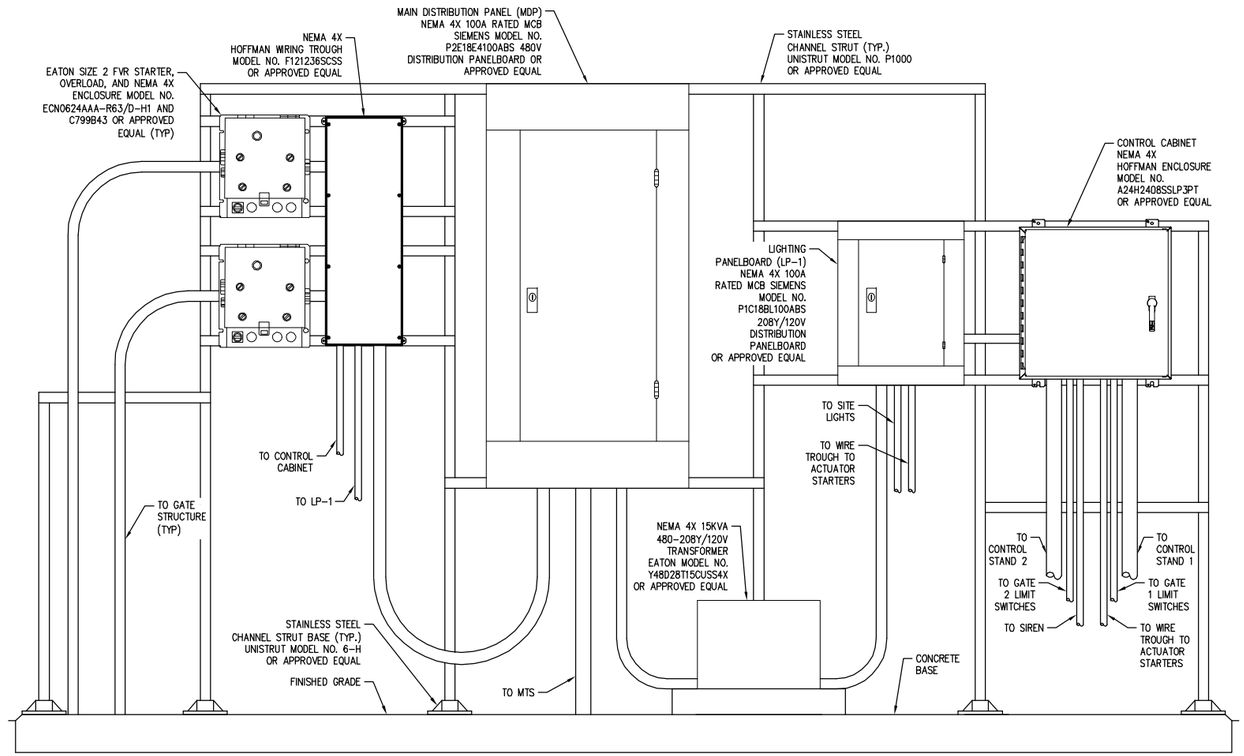
SHEET E-102

SHEET X OF 109



INCOMING SERVICE EQUIPMENT ELEVATION

SCALE: 1"=1'-0"



POWER DISTRIBUTION EQUIPMENT ELEVATION

SCALE: 1"=1'-0"

NOTES:

1. FOR ELECTRICAL GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE DRAWING NUMBER E-001.
2. CONTRACTOR SHALL CONTACT PG&E PRIOR TO ORDERING AND INSTALLING METER EQUIPMENT.
3. CONTRACTOR SHALL PROVIDE CONNECTION TO THE TRANSFORMER PROVIDED BY PG&E.
4. EACH SECTION OF SUPPORTED EQUIPMENT SHALL HAVE A CONCRETE BASE A MINIMUM OF 6" THICK. WIDTH SHALL BE THE SAME AS THE SUPPORT STRUCTURE WIDTH AT MINIMUM. DEPTH SHALL BE AT LEAST 66" OR AS REQUIRED FOR NEC WORKING SPACE CLEARANCE REQUIREMENTS, WHICHEVER IS LARGER.
5. SEVEN DUPLEX RECEPTACLES SHALL BE INSTALLED ON EACH RECEPTACLE CIRCUIT. ONE RECEPTACLE SHALL BE INSTALLED IN EACH CONTROL STAND, IN THE CONTROL CABINET, NEAR EACH SECTION OF SUPPORTED EQUIPMENT, AT EACH GATE ACTUATOR, AND AT SEVEN OTHER LOCATIONS ALONG THE GATE STRUCTURE AND DAD'S POINT. SUBMIT PROPOSED RECEPTACLE INSTALLATION LOCATIONS FOR REVIEW BY THE ENGINEER.

MDP PANELBOARD SCHEDULE

MDP	VOLTS: 480	MAINS RATING: 100A	A.I.C. RATING: 18,000	LOCATION: DAD'S POINT
	PHASE: 3	MCB: 100A	BRKR SPACE: 18	SOURCE: INCOMING PG&E TRANSFORMER
	WIRE: 4	MLO: –	MTG./NEMA#:	FEEDER: 3-#2 AWG, 1-#2 AWG GND, 2" CONDUIT

#	LOAD		BREAKER		CONNECTED LOAD (kW)						BREAKER		LOAD		#
	TYPE	DESCRIPTION	AMP	POLE	PHASE A		PHASE B		PHASE C		POLE	AMP	DESCRIPTION	TYPE	
1	PWR	GATE ACTUATOR MOTOR #1	40	3	14.84	14.84	–	–	–	–	3	40	GATE ACTUATOR MOTOR #2	PWR	2
3					–	–	14.84	14.84	–	–					4
5					–	–	–	–	14.84	14.84					6
7	PWR	208Y/120VAC XFMER	30	3	8.78	–	–	–	–	–	3	40	SPARE	–	8
9					–	–	8.78	–	–	–					10
11					–	–	–	–	8.78	–					12
13	–	SPARE	30	3	–	–	–	–	–	–	–	–	SPACE	–	14
15					–	–	–	–	–	–					16
17					–	–	–	–	–	–					18
TOTAL CONNECTED LOAD PER PHASE:					38.46		38.46		38.46		NOTE:				
TOTAL CONNECTED KW:					115.38										

LP-1 PANELBOARD SCHEDULE

LP-1	VOLTS: 208Y/120	MAINS RATING: 100A	A.I.C. RATING: 18,000	LOCATION: DAD'S POINT
	PHASE: 3	MCB: 50A	BRKR SPACE: 18	SOURCE: 208Y/120V TRANSFORMER
	WIRE: 4	MLO: –	MTG./NEMA#:	FEEDER: 3-#8 AWG, 1-#8 AWG GND, 1-1/4" CONDUIT

#	LOAD		BREAKER		CONNECTED LOAD (kW)						BREAKER		LOAD		#
	TYPE	DESCRIPTION	AMP	POLE	PHASE A		PHASE B		PHASE C		POLE	AMP	DESCRIPTION	TYPE	
1	LTG	APPROACH LIGHTS	15	1	0.61	1.26	–	–	–	–	1	15	RECEPTACLES 1	PWR	2
3	LTG	GAUGE LIGHTS	15	1	–	–	0.07	1.26	–	–	1	15	RECEPTACLES 2	PWR	4
5	LTG	PIER LIGHTS	15	1	–	–	–	–	0.60	1.26	1	15	EQUIPMENT HEATERS 1	EH	6
7	LTG	SITE LIGHTS	15	1	0.44	1.26	–	–	–	–	1	15	EQUIPMENT HEATERS 2	EH	8
9	PWR	CONTROL POWER	20	1	–	–	2.16	–	–	–	1	15	SPARE	–	10
11	–	SPACE	–	–	–	–	–	–	–	–	1	20	SPARE	–	12
13	–	SPACE	–	–	–	–	–	–	–	–	–	–	SPACE	–	14
15	–	SPACE	–	–	–	–	–	–	–	–	–	–	SPACE	–	16
17	–	SPACE	–	–	–	–	–	–	–	–	–	–	SPACE	–	18
TOTAL CONNECTED LOAD PER PHASE:					3.57		3.49		1.86		NOTE:				
TOTAL CONNECTED KW:					8.92										

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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

DESIGNED MT

DRAWN KM

CHECKED RC

MEGAN TATARA P.E. – – PROJECT ENGINEER R.C.E. NO. EXP. DATE

WESLEY JACOBS P.E. – – PROJECT MANAGER R.C.E. NO. EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

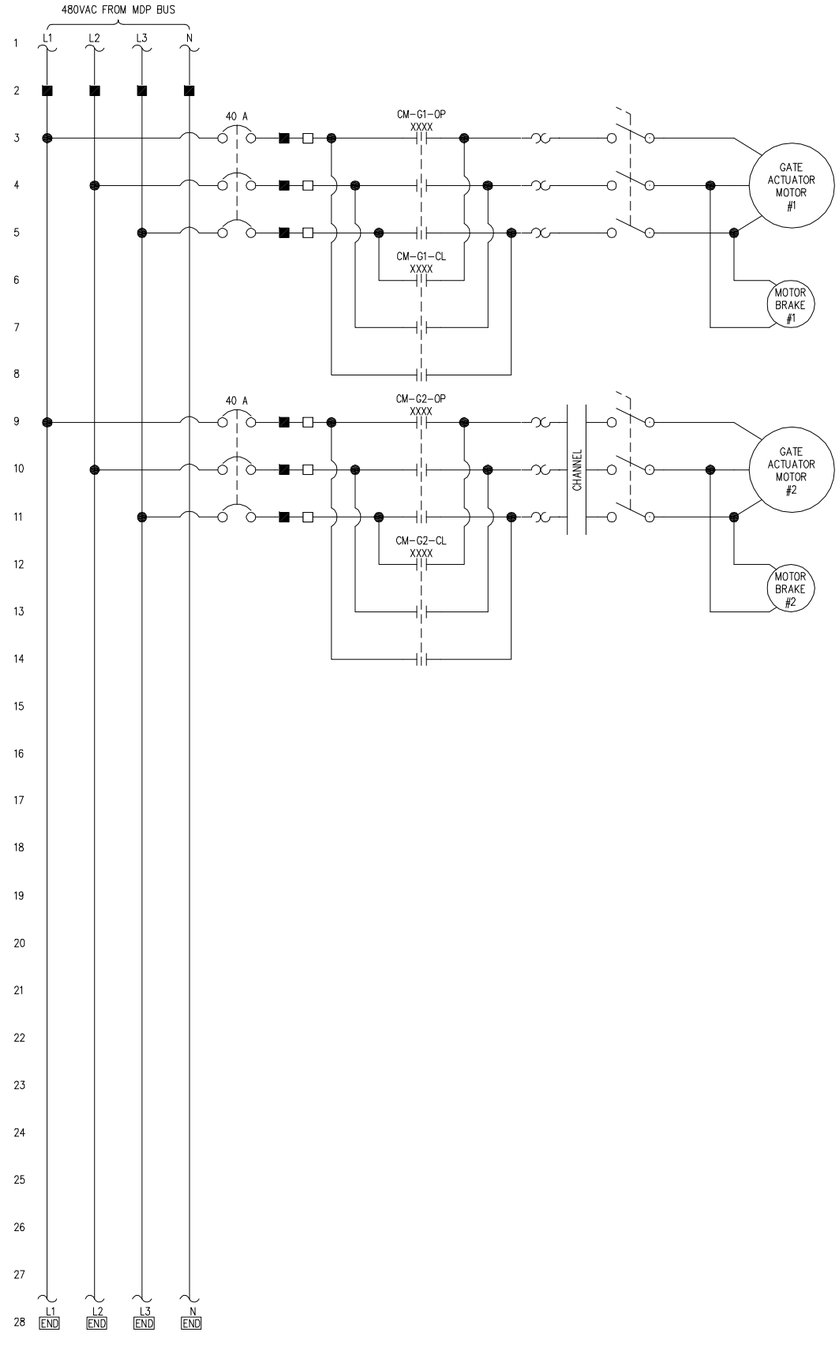
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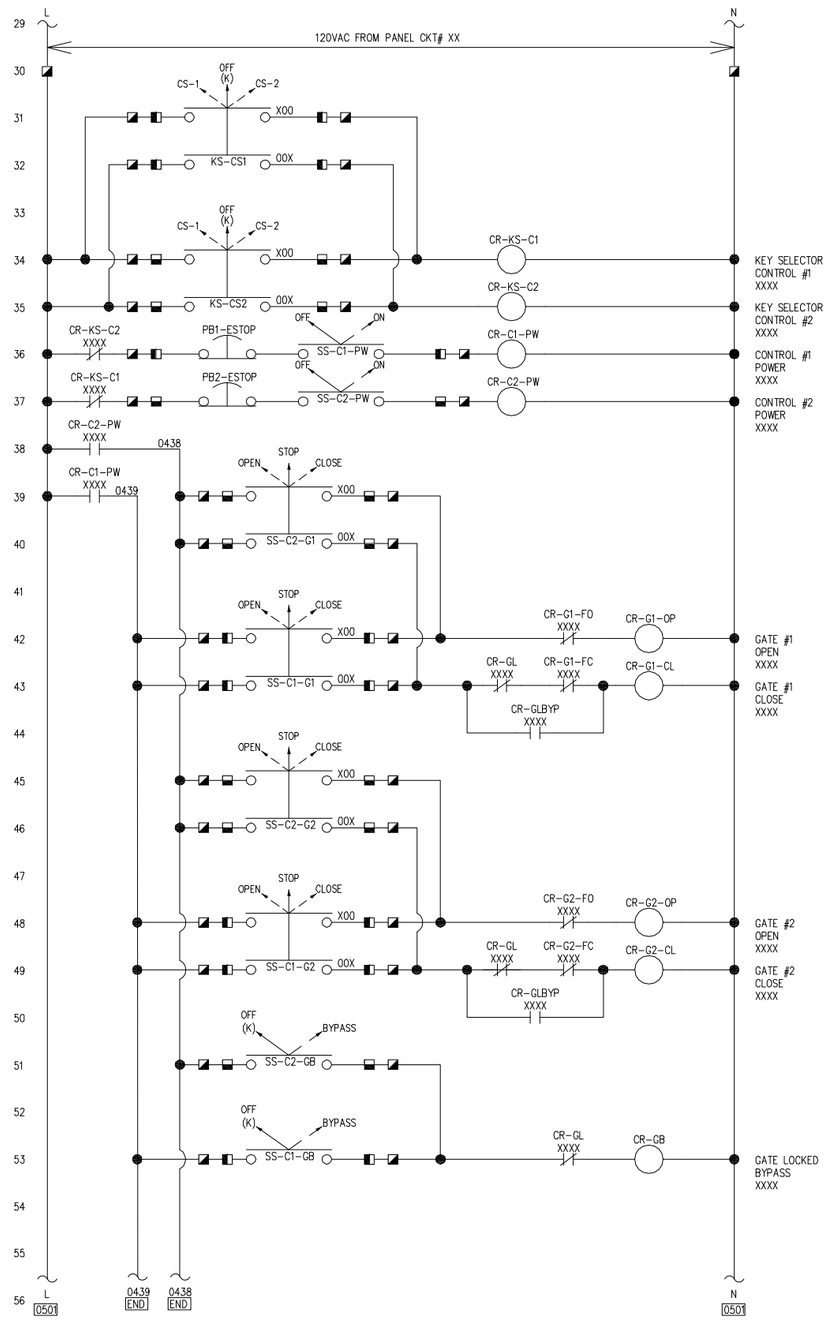
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

INCOMING SERVICE AND ELECTRICAL DISTRIBUTION LAYOUTS

SHEET E-103

SHEET X OF 109





NOTES:

1. FOR ELECTRICAL GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE DRAWING NUMBER E-001.
2. FOR PANEL SCHEDULES, SEE DRAWING E-103.
3. FOR LIMIT SWITCH MOUNTING LOCATIONS AND DETAILS, SEE MECHANICAL DRAWINGS.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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DESIGNED MT
DRAWN JT
CHECKED RC

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PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

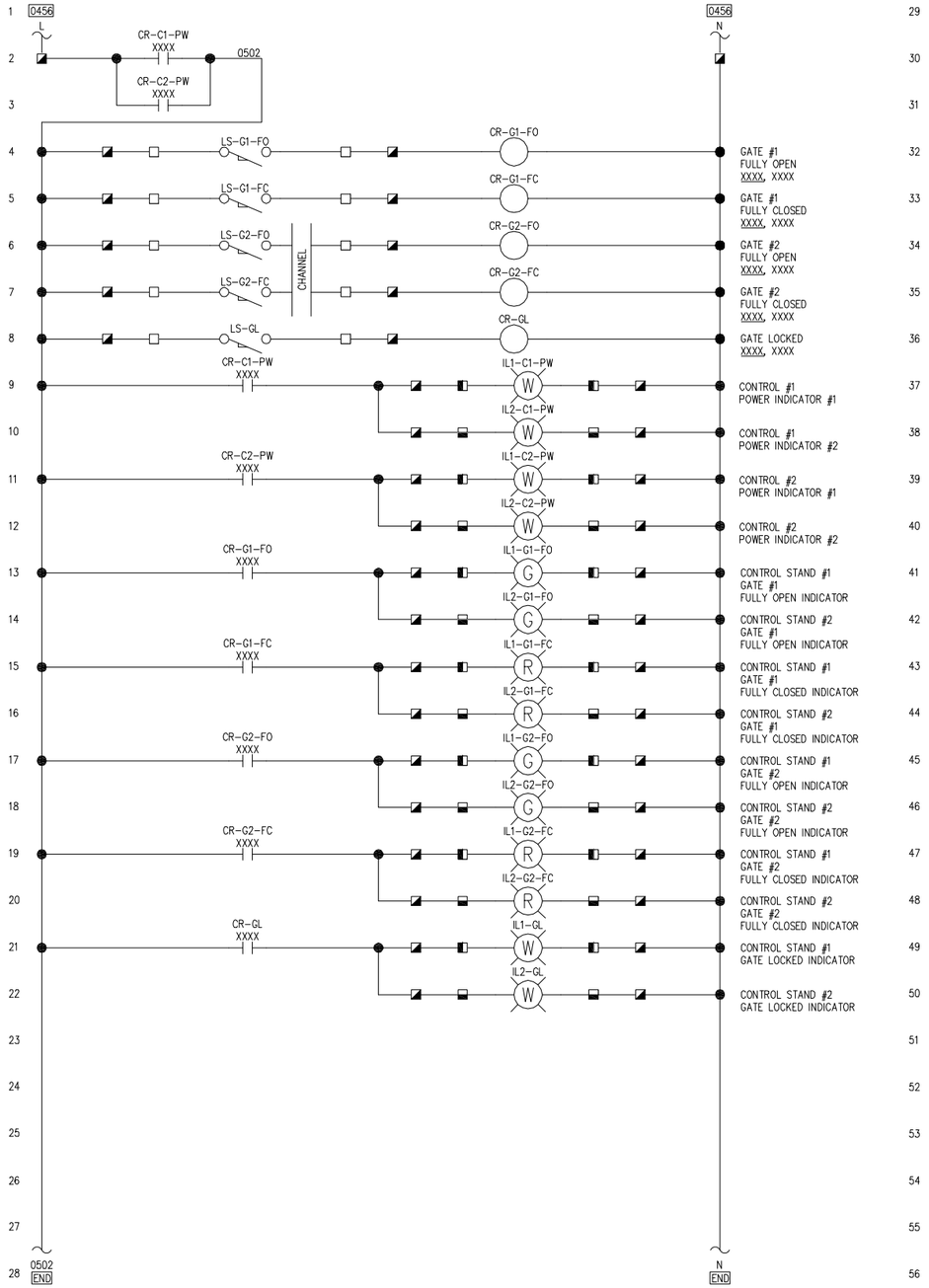
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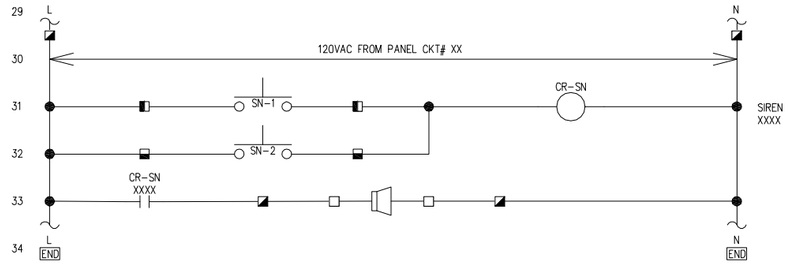
SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

CONTROL WIRING SHEET 1 OF 2

SHEET E-104

SHEET X OF 109





NOTES:

1. FOR ELECTRICAL GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE DRAWING NUMBER E-001.
2. FOR PANEL SCHEDULES, SEE DRAWING E-103.
3. FOR LIMIT SWITCH MOUNTING LOCATIONS AND DETAILS, SEE MECHANICAL DRAWINGS.

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

DATE: JUNE 2017

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DESIGNED MT
DRAWN JT
CHECKED RC

MEGAN TATARA P.E. — PROJECT ENGINEER — R.C.E. NO. — EXP. DATE
WESLEY JACOBS P.E. — PROJECT MANAGER — R.C.E. NO. — EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

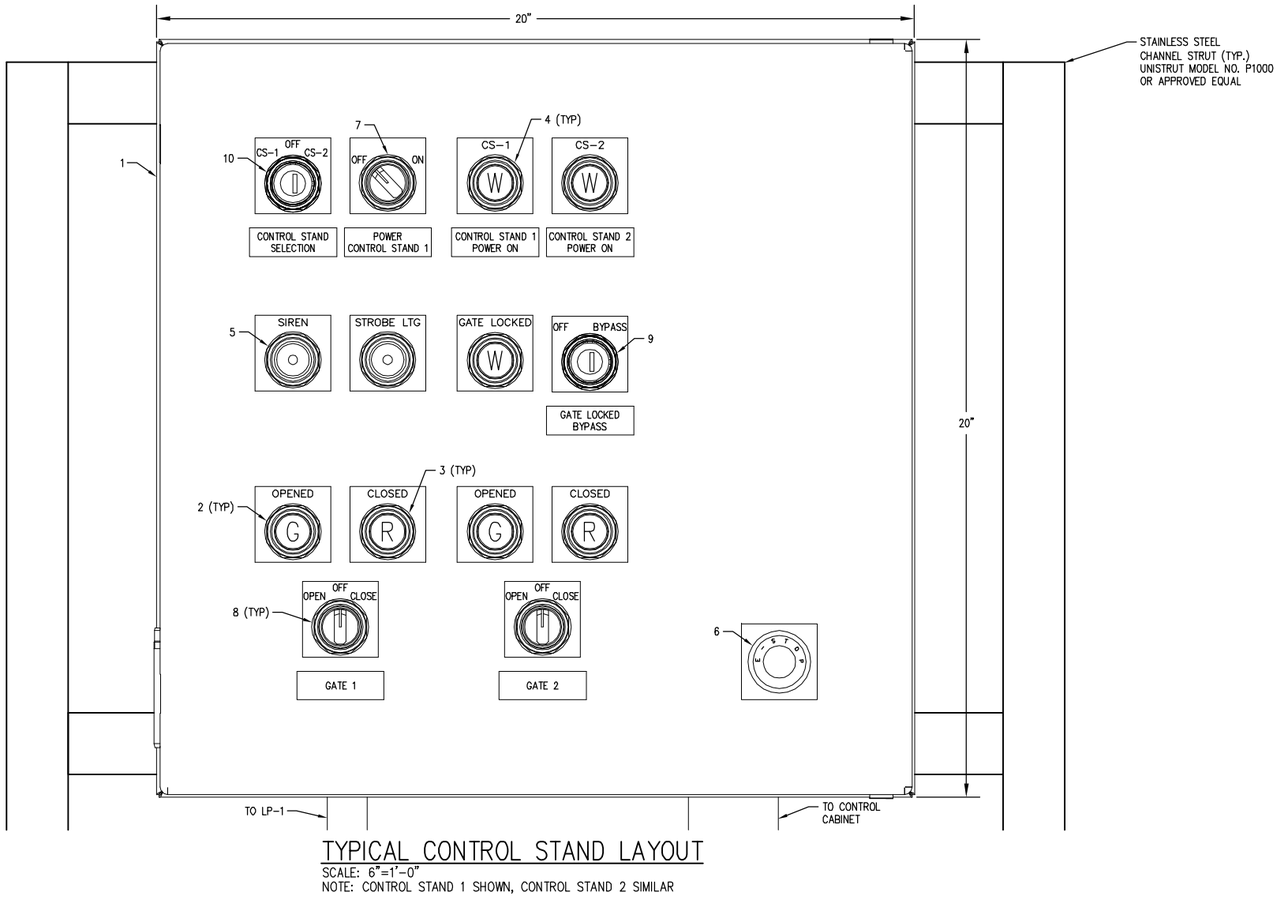
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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

CONTROL WIRING SHEET 2 OF 2

SHEET E-105

SHEET X OF 109

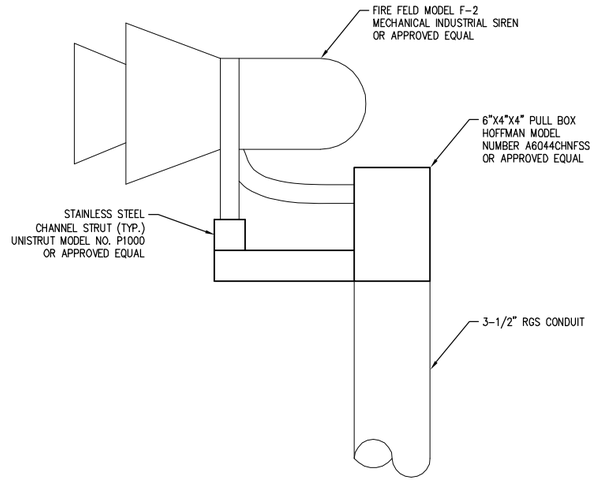


TYPICAL CONTROL STAND LAYOUT

SCALE: 6"=1'-0"
NOTE: CONTROL STAND 1 SHOWN, CONTROL STAND 2 SIMILAR

NOTES:

1. FOR ELECTRICAL GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE DRAWING NUMBER E-001.
2. CONTROL STAND INDICATOR LIGHTS AND SWITCHES SHALL BE MOUNTED ON AN INTERNAL SWING-OUT BACK PANEL WITHIN THE CONTROL STAND ENCLOSURE AND ENCLOSURE SHALL BE PAD-LOCKABLE TO PREVENT OPERATION OF THE CONSOLE BY UNAUTHORIZED PERSONNEL.
3. QUANTITIES SHOWN ON THE BILL OF MATERIALS ARE FOR EACH CONTROL STAND.
4. SEE SPECIFICATIONS FOR CONTROL STAND MOUNTING HEIGHT.
5. SIREN MOUNTING HEIGHT SHALL BE 12' ABOVE FINISHED GRADE TO TOP OF THE SIREN.



SIREN MOUNTING DETAILS

SCALE: 3"=1'-0"

CONTROL STAND BILL OF MATERIALS

ITEM NO.	ITEM DESCRIPTION	QUANTITY	MANUFACTURER	CATALOG NO.	REMARKS
1	CONTROL STAND ENCLOSURE	1	HOFFMAN	CSD2020BSS	OR APPROVED EQUAL
2	INDICATOR LIGHT, GREEN	2	EATON	E34TPB120LGG2A	OR APPROVED EQUAL
3	INDICATOR LIGHT, RED	2	EATON	E34TPB120LRG2A	OR APPROVED EQUAL
4	INDICATOR LIGHT, WHITE	3	EATON	E34TPB120LWG2A	OR APPROVED EQUAL
5	MOMENTARY CONTACT PUSH BUTTON	2	EATON	E34PB1-1	OR APPROVED EQUAL
6	E-STOP, PUSHBUTTON	1	EATON	E34GDBC2N8-1X	OR APPROVED EQUAL
7	TWO POSITION MAINTAINED SWITCH	1	EATON	E34VFBK1-1X	OR APPROVED EQUAL
8	THREE POSITION MAINTAINED SWITCH	2	EATON	E34VFBK1-2X	OR APPROVED EQUAL
9	TWO POSITION MAINTAINED KEY SWITCH	1	EATON	E34KEB2	OR APPROVED EQUAL
10	THREE POSITION MAINTAINED KEY SWITCH	1	EATON	E34KGB5	OR APPROVED EQUAL
11	TERMINAL	AS REQUIRED	PANDUIT	CR151A1	OR APPROVED EQUAL
12	WIREWAY	AS REQUIRED	PANDUIT	G3X_BL6	OR APPROVED EQUAL

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

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DESIGNED MT
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PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

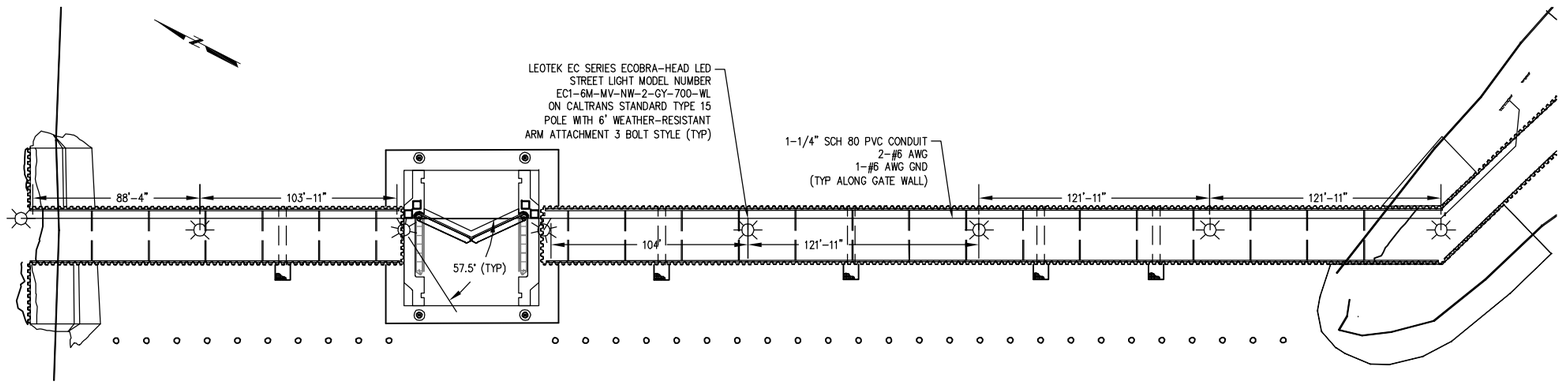
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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

CONTROL STAND AND SIREN DETAILS

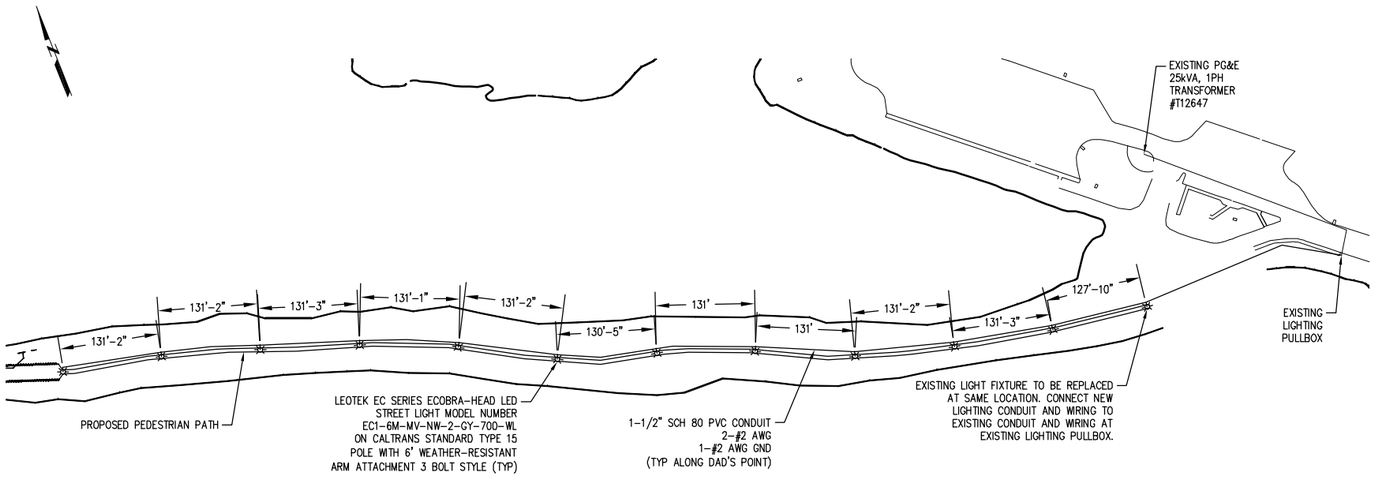
SHEET E-106

SHEET X OF 109



SITE LIGHTING LAYOUT

SCALE: 1"=40'



DAD'S POINT LIGHTING LAYOUT

SCALE: 1"=100'

NOTES:

1. FOR ELECTRICAL GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE DRAWING E-001.
2. FOR LIGHT FIXTURE DETAILS, SEE DRAWING E-108.
3. THE OWNER OR CONTRACTOR SHALL BE REQUIRED TO PAY PACIFIC GAS AND ELECTRIC COMPANY (PG&E) THE CONNECTION FEE BEFORE ACCEPTANCE BY THE CITY.
4. LIGHT POLES SHALL BE INSTALLED 6' FROM THE CENTER OF SIDEWALK ALONG DAD'S POINT. LIGHT POLES SHALL BE INSTALLED 2' FROM THE EDGE OF THE GATE WALL.
5. LIGHT FIXTURES SHALL BE ORIENTED PERPENDICULAR TO THE SIDEWALK AND GATE WALL EXCEPT THE TWO LIGHT FIXTURES AT THE GATE. THESE LIGHT FIXTURES SHALL BE ORIENTED TOWARDS THE OPPOSITE GATE CORNER.
6. MINIMUM LIGHTING LEVELS ON THE SIDEWALK SHALL BE 0.5 FOOTCANDLES WITH AN AVERAGE TO MINIMUM RATIO OF 4:1. THE DESIGNED LAYOUT PROVIDES 0.66 FOOTCANDLES WITH AN AVERAGE TO MINIMUM RATIO OF 3.3:1. MINIMUM LIGHTING LEVELS ON THE GATE WALL SHALL BE 0.5 FOOTCANDLES WITH AN AVERAGE TO MINIMUM RATIO OF 4:1. THE DESIGNED LAYOUT PROVIDES 0.68 FOOTCANDLES WITH AN AVERAGE TO MINIMUM RATIO OF 3.43:1.
7. DIMENSIONS SHOWN ARE FROM CENTERLINE OF POLE.
8. ALL NEUTRAL CONDUCTORS SHALL HAVE A WHITE OR NATURAL GRAY INSULATION. PHASE TAPPING AND/OR PAINTING ARE NOT ALLOWED. ALL COLORING SHALL BE PERMANENT ALONG THE ENTIRE LENGTH OF THE CONDUCTOR.
9. FUSEHOLDERS AND FUSES (BAF15, BLF15) SHALL BE INSTALLED IN THE BASE OF THE POLE ADJACENT TO THE HANDHOLE IN EACH POLE. FUSEHOLDERS FOR THE 120V SERVICE SHALL BE "BUSS HEX" TYPE OR APPROVED EQUAL. FUSEHOLDERS SHALL HAVE WIRE LUGS THAT ARE APPROPRIATE FOR THE WIRE SIZE. TYPE "AA" FOR WIRES UP TO #8 AWG AND TYPE "AB" FOR #6 AWG AND #4 AWG. FUSEHOLDERS SHALL BE WATERPROOFED BY USING AN INSULATING BOOT (BUSSMAN MODEL NUMBER 1A0512 OR APPROVED EQUAL.
10. A MINIMUM OF #12 AWG WIRE SHALL BE USED FROM THE PULLBOX TO THE FUSEHOLDER AND FROM THE FUSEHOLDER TO THE HEAD.

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REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED

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DESIGNED MT
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PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

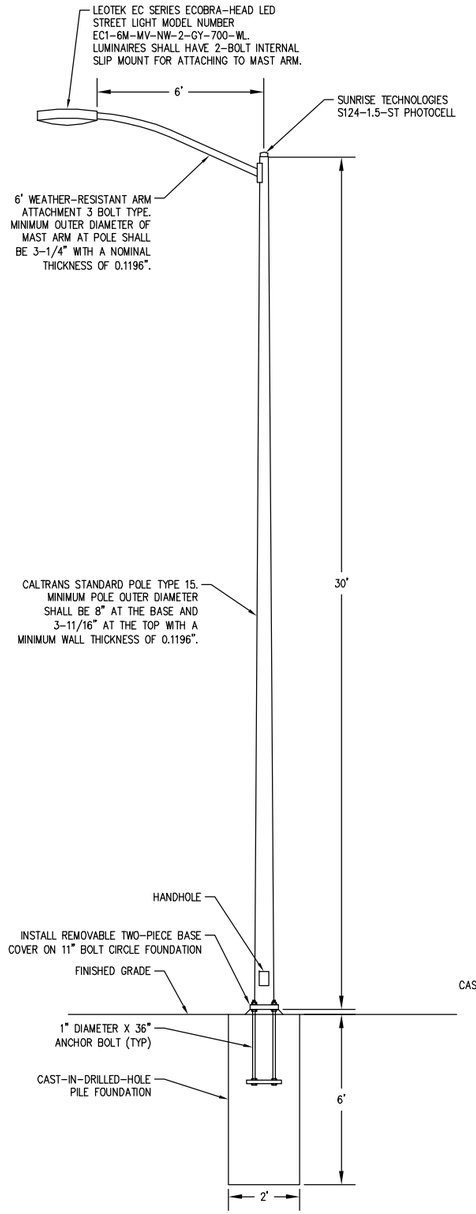
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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

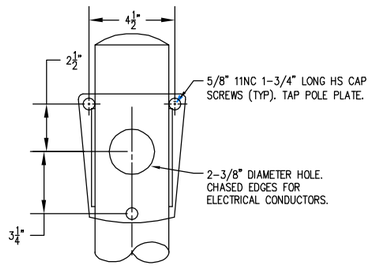
SITE LIGHTING LAYOUT

SHEET E-107

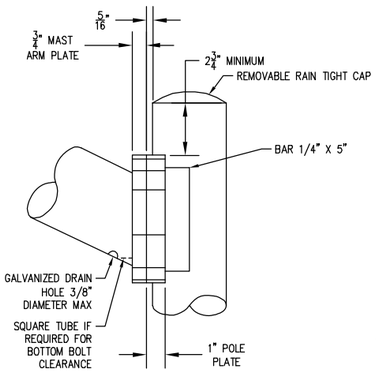
SHEET X OF 109



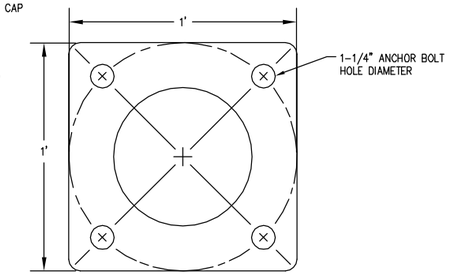
TYPICAL SITE LIGHT FIXTURE
SCALE: 3/8"=1'-0"



FRONT VIEW
SCALE: 3"=1'-0"



SIDE VIEW
SCALE: 3"=1'-0"

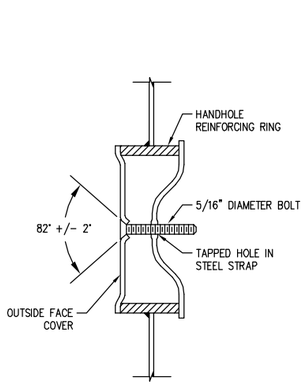


BASE PLATE DETAIL
SCALE: 3"=1'-0"

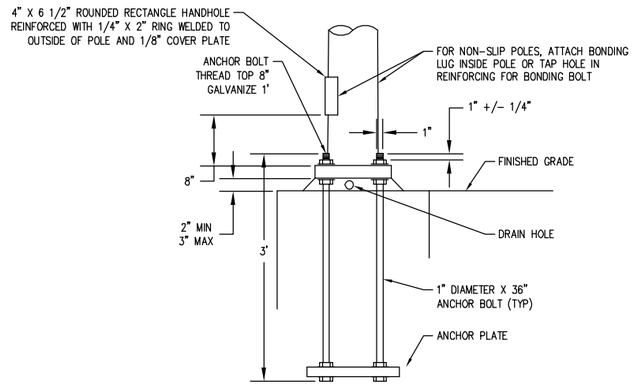
NOTES:

1. FOR ELECTRICAL GENERAL NOTES, LEGEND, AND ABBREVIATIONS, SEE DRAWING NUMBER E-001.
2. A PHOTOCELL SHALL BE PROVIDED FOR EACH LUMINAIRE. PHOTOCELLS SHALL BE SUNRISE TECHNOLOGIES MODEL NUMBER S124-1.5-ST. FEATURES INCLUDE INSTANT ON/DELAY OFF OPERATION FOR TESTING, ONE LUMEN LEVEL FOR TURN ON, FOUR LUMEN LEVEL FOR TURN OFF AND AN OPERATING RANGE FROM 105 TO 285 VOLTS. PHOTOCELLS SHALL BE INSTALLED FACING NORTH.
3. SHUNT CAPS SHALL ALSO BE BY SUNRISE TECHNOLOGIES.
4. BALLASTS SHALL BE MULTI-TAP (120/208/240/277V), REGULATOR TYPE. SINGLE POLE LIGHT INSTALLATIONS USE 120V TAP UNLESS OTHERWISE NOTED.
5. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH SECTIONS 86-1, 86-2, AND 86-6 OF CALIFORNIA STANDARD SPECIFICATIONS.
6. ALL CONDUCTOR SPLICES SHALL BE MADE WATERPROOF.

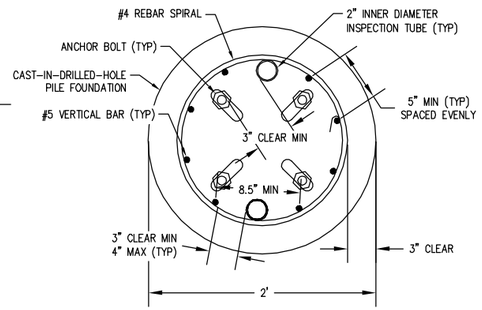
LUMINAIRE MAST ARM CONNECTION DETAILS



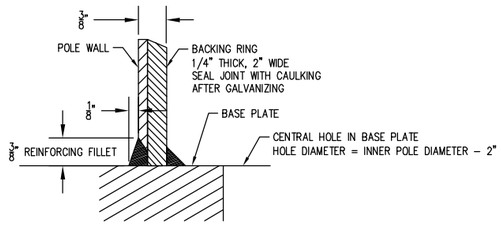
HANDHOLE COVER DETAIL
SCALE: 6"=1'-0"



POLE ANCHORAGE DETAIL
SCALE: 1"=1'-0"



CAST-IN-DRILLED-HOLE REINFORCED PILE FOUNDATION
SCALE: 1-1/2"=1'-0"



BASE PLATE REINFORCING DETAIL
SCALE: 1"=1'-0"

65% SUBMITTAL - NOT FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION

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DESIGNED MT
DRAWN JT
CHECKED RC

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WESLEY JACOBS P.E. – – PROJECT MANAGER R.C.E. NO. EXP. DATE

PRELIMINARY

SJAFCA San Joaquin Area FLOOD CONTROL Agency

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SAN JOAQUIN AREA FLOOD CONTROL AGENCY
SMITH CANAL GATE PROJECT

LIGHTING DETAILS

SHEET E-108

SHEET X OF 109