

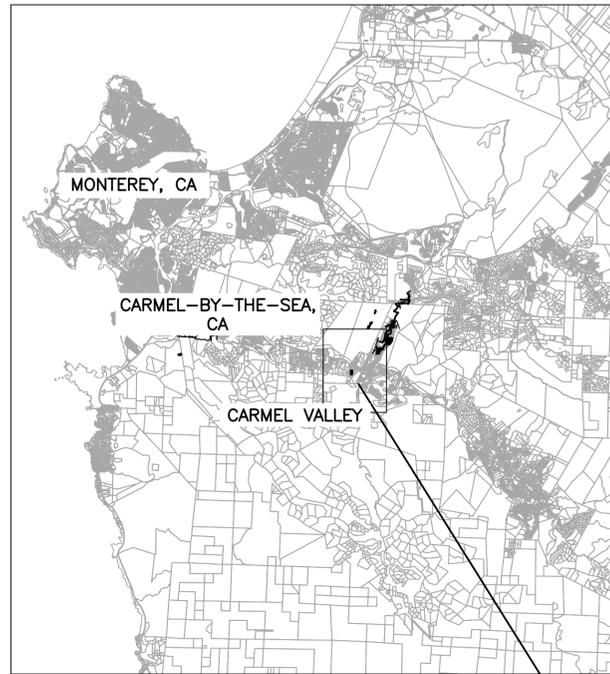
BIRP BACKWASH SYSTEM DESIGN

CARMEL, CALIFORNIA

CALIFORNIA AMERICAN WATER

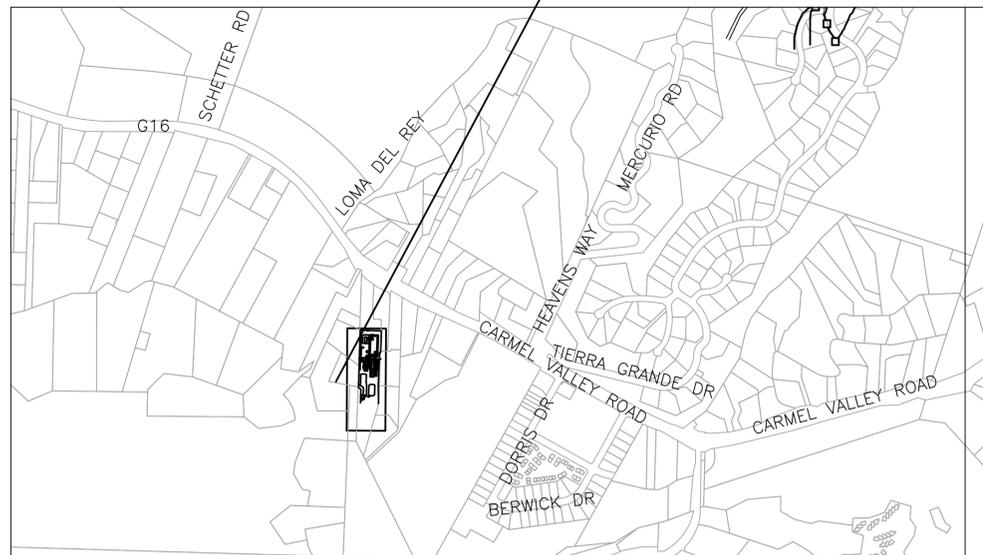
OCTOBER 2025

90% SUBMITTAL



VICINITY MAP
NTS

PROJECT LOCATION



SITE LOCATION MAP
NTS



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REVISIONS	REVISIONS
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REGISTERED PROFESSIONAL ENGINEER
TERESA A. VALENTINE
C 83580
Exp. 3-31-27
CIVIL
STATE OF CALIFORNIA
CA LICENSED PROFESSIONAL ENGINEER
NO. C 83580 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
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CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
GENERAL
COVER AND INDEX
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-GO.0

GENERAL NOTES:

- DEFINITIONS: IN THE FOLLOWING NOTES, OWNER SHALL MEAN CALIFORNIA-AMERICAN WATER COMPANY, 511 FOREST LODGE ROAD, SUITE 100 PACIFIC GROVE, CA 93950, AND CONTRACTOR SHALL MEAN ANY DEVELOPER, CONTRACTOR, PROPERTY OWNER, FIRM OR PERSON WHO HAS BEEN DULY AUTHORIZED BY CALIFORNIA-AMERICAN WATER COMPANY TO PERFORM WORK ON THE WATER SYSTEMS AND FACILITIES OWNED AND/OR OPERATED BY CALIFORNIA-AMERICAN WATER COMPANY.
- OWNER CONTACT PERSON: FOR MATTERS RELATED TO WORK TO BE PERFORMED BY CONTRACTOR, PLEASE CONTACT OWNER'S ENGINEER : CALIFORNIA-AMERICAN WATER COMPANY, 511 FOREST LODGE ROAD, #100 PACIFIC GROVE, CA 93950, EMAIL: SCOTT.OTTMAR@AMWATER.COM.
- CONTRACTOR REPRESENTATIVE: CONTRACTOR SHALL ASSIGN AND PROVIDE OWNER WITH THE NAME AND CONTACT INFORMATION OF A REPRESENTATIVE (JOB FOREMAN) AT THE JOB SITE WHERE THE WORK WILL BE PERFORMED ON OWNER FACILITIES. CONTRACTOR'S REPRESENTATIVES IS REQUIRED TO ATTEND ANY PRE-CONSTRUCTION WALK-THROUGH MEETINGS. CONTRACTOR REPRESENTATIVE IS REQUIRED TO BE ON THE JOBSITE DURING ALL PHASES OF WORK, INCLUDING INSPECTIONS, AND CONTRACTOR SHALL NOT REPLACE THE REPRESENTATIVE WITHOUT PRIOR APPROVAL FROM OWNER.
- LOCAL, STATE AND COUNTY ROAD ENCROACHMENT PERMITS. ANY WORK WITHIN A STATE HIGHWAY RIGHT-OF-WAY SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE DEPARTMENT OF TRANSPORTATION (CALTRANS), INCLUDING ENCROACHMENT PERMITS. WORK WITHIN A COUNTY RIGHT-OF-WAY SHALL COMPLY WITH COUNTY REQUIREMENTS, INCLUDING ENCROACHMENT PERMITS. IT SHALL BE INSTALLER'S RESPONSIBILITY TO BE THOROUGHLY FAMILIAR WITH THE CITY, STATE OF CALIFORNIA AND/OR LOS ANGELES COUNTY STANDARDS OF WORK REQUIRED AND INCLUDE THE FULL COST OF COMPLIANCE INCLUDING TRAFFIC CONTROL, PERMITS, TRENCH FEES, ETC., IN THE RESPECTIVE BID ITEMS.
- OTHER PERMITS: INSTALLER OR HIS REPRESENTATIVE SHALL BE REQUIRED TO VERIFY THE REQUIRED PERMITS FOR THE WORK TO BE PERFORMED AND OBTAIN AND COMPLY WITH ALL NECESSARY PERMITS FOR CONSTRUCTION OF THE WATER SYSTEM, INCLUDING ENCROACHMENT PERMITS AND ANY REQUIRED PERMITS FOR WATER SERVICE LINES FROM WATER METERS TO BUILDINGS. INSTALLER IS RESPONSIBLE FOR NOTIFICATION TO JURISDICTIONAL AGENCIES BEFORE COMMENCEMENT OF WORK.
- IDENTIFICATION OF BURIED UTILITIES. BEFORE ANY WORK ON UNDERGROUND FACILITIES, INSTALLER SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) FOR IDENTIFYING ANY BURIED UTILITIES NEAR THE WORK AREA. USA (PHONE 1-800-642-2444) MUST BE GIVEN A 48 HOUR ADVANCE NOTICE. OWNER IS ONLY RESPONSIBLE FOR MARKING THOSE WATER FACILITIES OWNED BY CALIFORNIA-AMERICAN WATER AND SHALL NOT BE RESPONSIBLE FOR MARKING NEW FACILITIES UNTIL OWNER ACCEPTS OWNERSHIP. ANY CALLS TO THE OWNER REGARDING SUCH FACILITIES WILL BE FORWARDED TO THE CONTRACTOR. ANY DAMAGES TO WATER FACILITIES TO BE OWNED BY CALIFORNIA-AMERICAN WATER MUST BE REPORT TO OWNER IMMEDIATELY AND OWNER MUST BE ALLOWED TO INSPECT AND APPROVE REPAIRS OR REPLACEMENTS.
- WATER SHUTDOWN NOTICES. CONTRACTOR SHALL NOTIFY OWNER OR ASSOCIATED COMPANIES 48 HOURS BEFORE COMMENCING CONSTRUCTION AND FOR NOTIFICATION OF WATER SYSTEM SHUT OFF REQUESTS. CONTRACTOR MUST ENSURE THAT SHUT DOWN TIME WILL NOT EXCEED FOUR (4) HOURS WITHOUT PRIOR UTILITY APPROVAL.
- INSPECTION NOTICES. WHEN APPLICABLE, CONTRACTOR SHALL GIVE OWNER AND COUNTY INSPECTOR 48 HOURS NOTICE (MINIMUM) BEFORE SCHEDULING ANY MEETING OR STARTING CONSTRUCTION, AND 24 HOURS NOTICE (MINIMUM) FOR INSPECTION.
- VERIFICATION OF DATA AND INFORMATION PROVIDED BY OWNER. NOTICE IS HEREBY GIVEN TO THE CONTRACTOR THAT OWNER HAS MADE ALL REASONABLE EFFORTS TO IDENTIFY THE TYPES, LOCATIONS, SIZES, AND DEPTH OF EXISTING OR PLANNED UNDERGROUND OR ABOVEGROUND UTILITIES, STRUCTURES, ROADS, PIPELINES, HARD ROCK, STRATA, TOPOGRAPHY, ETC. SUCH ITEMS, WHEN DEPICTED ON THE PLANS, HAVE BEEN OBTAINED FROM SOURCES OF VARYING RELIABILITY. THEREFORE, OWNER AND ASSOCIATED COMPANIES CANNOT ASSUME RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF SAID INFORMATION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING FACILITIES BY POT-HOLING ALL WATER LINE CONNECTION POINTS TO CONFIRM SIZE, DEPTH AND MATERIAL TYPE OF EXISTING FACILITIES. IN CASE OF CONFLICT/S, CONTRACTOR SHALL BRING THE MATTER TO THE ATTENTION OF OWNER FOR RESOLUTION BEFORE CONTINUING WORK.
- SURVEYING AND LOCATING. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SURVEYING AND STAKING, SHOWING THE LOCATION AND GRADES FOR INSTALLING THE WATER SYSTEM. CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL SURVEY MONUMENTS AND STAKING WHETHER EXISTING OR DISCOVERED DURING CONSTRUCTION.
- JOBSITE SAFETY. CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY CURRENTLY APPLICABLE SAFETY LAW OF ANY JURISDICTIONAL AGENCY. CONTRACTOR IS ALSO RESPONSIBLE FOR PROJECT SITE SAFETY INCLUDING TRAFFIC CONTROL, 24-HOURS PER DAY FOR ALL DAYS FROM THE NOTICE TO PROCEED THROUGH THE NOTICE OF COMPLETION.
- MATERIAL OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MATERIALS AND INSULATION OF THE WATER DISTRIBUTION SYSTEM IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF OWNER AND ASSOCIATED COMPANIES, WHICH ARE INCORPORATED HEREIN BY REFERENCE, UNLESS OTHERWISE NOTED ON THESE PLANS. OWNER HAS THE FINAL DECISION ON ALL MATERIALS, INCLUDING BACKFILL, PIPE, FITTING, AND VALVES, THAT WILL BE USED FOR PLACEMENT OF ALL WATER FACILITIES INCLUDING ANY NEW WATER MAIN.
- WORK COORDINATION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THEIR WORK WITH ALL OTHER SUB-CONTRACTORS TO AVOID ANY CONFLICTS.
- PIPE AND FITTINGS. CONTRACTOR SHALL PROVIDE PIPE AND FITTING MATERIALS SUBMITTAL TO OWNER FOR APPROVAL BEFORE BEGINNING WORK.
- FLANGED FITTINGS. ALL FLANGED FITTINGS SHALL BE BOLTED TOGETHER WITH ZINC COATED STEEL NUTS AND BOLTS, GRADE 5 OR BETTER.
- MECHANICAL JOINTS. USE EBAA MECHANICAL JOINT MEGA-LUGS ON ALL MECHANICAL JOINT FITTINGS.
- SEPARATION DISTANCE FORM SEWER LINES AND SOURCES OF CONTAMINATION. WATER MAINS SHALL BE LAID IN SEPARATE TRENCHES AS FAR AS POSSIBLE FROM NEARBY SEWER AND STORM DRAIN LINES. IF LESS THAN TEN-FOOT HORIZONTAL SEPARATION BETWEEN THE WATER LINES AND SEWER OR STORM DRAIN LINES, C-900 CLASS 200 PVC PIPE OR CLASS 50 DUCTILE IRON PIPE SHALL BE USED (CLASS OR PRESSURE RATING TO BE DETERMINED OR APPROVED BY OWNER). PLACEMENT OF WATER LINES NEAR OTHER SOURCES OF CONTAMINATION OR HYDROCARBON RELATED FACILITIES SHOULD REQUIRE SPECIAL APPROVAL FROM OWNER. CONTRACTOR TO IMMEDIATELY INFORM THE OWNER'S ENGINEER WHEN INSUFFICIENT SEPARATION CONDITIONS OCCUR (LESS THAN 10-FOOT HORIZONTAL OR 1-FOOT VERTICAL).
- UNDERGROUND PIPE IDENTIFIER: ALL INSTALLATION OF MAINS AN SERVICES SHALL HAVE GREEN-COATED #10 GA STANDARD COPPER WIRE FOR LOCATING.
- HOT TAPS: ALL TAPPING SLEEVES TO BE MECHANICAL JOINT TYPE OR ALL STAINLESS STEEL CIRCUMFERENCE SEAL TYPE WITH STAINLESS STEEL FLANGE, BOLTS AND NUTS.
- EXPIRATION OF OWNER APPROVALS. OWNER'S APPROVAL SIGNATURES ON THE CONSTRUCTION PLANS ARE GOOD FOR ONE YEAR FROM DATE OF SIGNATURE. PLANS WILL BE SUBJECT TO REVIEW THEREAFTER.
- VALVES. UNLESS OTHERWISE NOTED OR DIRECTED BY OWNER, CONTRACTOR SHALL INSTALL GATE VALVES (AWWA C-509) FOR WATER MAINS 12-INCHES OR SMALLER, AND INSTALL BUTTERFLY VALVES (AWWA C-504) FOR MAINS LARGER THAN 12-INCHES. ALL VALVES SHALL BE FLANGED TO FITTINGS (CROSS, TEE, ETC) EXCEPT WHERE MAINS ARE 4- FEET BEHIND SIDEWALK WITH TEES UNDER CORNER RADIUS IN WHICH CASE THE VALVE SHALL BE PLACED IN LINE BEYOND THE RADIUS AND RESTRAINED. GATE VALVES SHALL BE RESILIENT WEDGE, EPOXY COATED WITH SS BOLTS. VALVES STEM SHALL BE PROVIDED FOR VALVES WITH A COVER OF 4-FT OR GREATER. UNDERGROUND VALVES SHALL HAVE 8" DIAMETER (MINIMUM) VALVE BOX RISER, GRADE VALVE BOX AND METAL LID MARKED "WATER", AS SHOWN ON UTILITY STANDARD DRAWINGS.
- BACKFLOW PREVENTION DEVICE. BACKFLOW PREVENTION DEVICES IF REQUIRED, SHALL BE INSTALLED AND TESTED BY A OWNER APPROVED AND CERTIFIED BACKFLOW TESTER BEFORE WATER SERVICE ACTIVATION. THE TYPE OF BACKFLOW PREVENTION DEVICE SHALL BE SPECIFIED BY OWNER AND INSTALLED ABOVE GROUND BY CONTRACTOR PER OWNER'S STANDARDS AND SPECIFICATION. NO SINGLE CHECK DETECTOR CHECKS VALVES WILL BE ALLOWED. NO TEES OR CROSS CONNECTIONS WILL BE ALLOWED BETWEEN ANY WATER METER AND ANY BACKFLOW PREVENTION DEVICE. THE BACKFLOW PREVENTION DEVICE SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE WATER METER OR POINT OF SERVICED CONNECTION (TYPICALLY WITHIN 18 INCHES).
- CONCRETE THRUST BLOCKS. THRUST BLOCK SHALL BE INSTALLED WHERE PIPE DEFLECTIONS EXCEED 4 DEGREES PER COUPLING/FITTINGS, AS SPECIFIED BY PIPE MANUFACTURER. USE EBAA MECHANICAL JOINT MEGA-LUGSON ALL MECHANICAL JOINT FITTINGS. USE EBAA SERIES 1600 PIPE RESTRAINTS IN LIEU OF CONCRETE THRUST BLOCKS. OWNER'S ENGINEER WILL ADVISE CONTRACTOR OF REQUIRED LENGTH OF PIPE TO BE RESTRAINED. CONCRETE THRUST BLOCK TO BE USED IF RESTRAINTS CANNOT BE UTILIZED.
- TRENCH DEPTH AND COVER. TRENCH DEPTH SHALL BE SUFFICIENT TO ALLOW TOP OF WATER MAIN TO HAVE A MINIMUM OF 36-INCHES OF COVER, UNLESS OTHERWISE DIRECTED BY OWNER'S ENGINEER.
- INSPECTION BEFORE BACKFILLING. ALL WATER FACILITIES TO BE OWNED AND MAINTAINED BY CALIFORNIA-AMERICAN WATER, INCLUDING MAINS, FITTINGS, VALVES AND SERVICES SHALL BE INSPECTED AND APPROVED BY OWNER BEFORE BACKFILLING.
- BACKFILL AND COMPACTION. ALL TRENCHES IN EXISTING OR PROPOSED STREETS AND PAVED AREAS SUCH AS PARKING LOTS, DRIVEWAYS, ETC., SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS BY OWNER, UNLESS OTHERWISE NOTES AND SHALL ALSO COMPLY WITH MINIMUM REQUIREMENTS OF THE COUNTY FOR WHICH THE WORK IS BEING DONE, INCLUDING ANY ENCROACHMENT PERMIT CONDITIONS. TRENCH COMPACTION SHALL BE BY MECHANICAL COMPACTION TO A MINIMUM OF 95 PERCENT, UNLESS NOTED OTHERWISE ON THE PLANS.
- BACKFILL SOIL COMPACTION TESTING. INSTALLER IS RESPONSIBLE FOR SECURING, COMPENSATING AND MONITORING OF; A STATE CERTIFIED INDEPENDENT SOILS TESTING SERVICED TO PROVIDE COMPACTION TESTING OF ALL BACKFILL WORK. COMPACTION TESTS DOCUMENTING COMPLIANCE WITH MINIMUM COMPACTION REQUIREMENTS WILL BE TAKEN AT 50 FOOT INTERVALS OR PER THE MINIMUM COUNTY REQUIREMENTS, WHICHEVER IS GREATER. ALL TESTING REPORTS SHALL BE SUBMITTED TO OWNER FOR REVIEW AND APPROVAL AS SOON AS AVAILABLE. TESTING RESULTS FROM A CERTIFIED COUNTY OR CITY REPRESENTATIVE IS PERMITTED WHERE JURISDICTIONAL REQUIREMENTS PROVIDE SUCH COMPACTION TESTING.
- LANDSCAPING RESTRICTIONS. PLANTING OF TREES AND SHRUBS IN THE AFFECTED AREAS AND/OR EASEMENT WHERE A WATER MAIN AND/OR SERVICES ARE PROPOSED OR EXISTING SHOULD BE AVOIDED. UNDER NO CIRCUMSTANCES SHOULD A TREE OR SHRUB BE PLANTED IN THE WATER TRENCH LINES. ALL SHRUBS AND/OR TREES THAT ARE ALLOWED TO BE PLANTED WITHIN THE PLANNED UNIT DEVELOPMENT SHOULD BE CENTER TAPPING ROOT ORNAMENTAL STYLE.
- DISINFECTON AND FLUSHING. CONTRACTOR SHALL PERFORM DISINFECTIONS AND FLUSHING OF NEW WATER SYSTEM/S IN ACCORDANCE WITH OWNER'S STANDARDS. WITH REGARDS TO THE DISPOSAL OF THE FLUSH WATER, CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH OWNER, COUNTY AND STATE NPDES DISCHARGE PERMIT REQUIREMENTS AND SHALL PROVIDE NECESSARY DOCUMENTATION ENSURING COMPLIANCE WHERE APPLICABLE.
- INSPECTION BEFORE ACTIVATION. ALL WATER FACILITIES TO BE OWNED AND MAINTAINED BY CALIFORNIA-AMERICAN WATER, INCLUDING MAINS, FITTINGS, VALVES AND SERVICES SHALL BE INSPECTED AND APPROVED BY OWNER BEFORE ACTIVATION, CONTRACTOR SHALL PROVIDE HYDROSTATIC TEST TO BE WITNESSED BY OWNER'S REPRESENTATIVE PER OWNER'S STANDARDS. UTILITY SHALL COLLECT SAMPLES FOR BACTERIOLOGICAL TESTING, NEW SADDLES AND SERVICES SHALL BE INSTALLED PRIOR TO BACTERIOLOGICAL AND PRESSURE TESTING OF MAIN.
- AS-BUILT DRAWINGS. INSTALLER SHALL SUBMIT AS-BUILT (RECORD) DRAWINGS OF THE WATER SYSTEM, OR MODIFICATION INSTALLED BY THE INSTALLER. THE AS-BUILT DRAWINGS MUST BE SUBMITTED TO, AND APPROVED BY, UTILITY WITHIN 30 DAYS OF COMPLETION OF CONSTRUCTION, RETENTIONS SHALL BE HELD UNTIL AS-BUILT APPROVAL BY OWNER.
- WARRANTY. WARRANTY OF NEW FACILITIES TO BE CONVEYED TO OWNER SHALL BE FOR A MINIMUM PERIOD OF ONE YEAR FROM DATE OF COMMENCEMENT (OR FINAL ACCEPTANCE).
- RETURNING PROPERTY TO ORIGINAL CONDITION. INSTALLER IS ADVISED TO PHOTOGRAPH OR VIDEOTAPE JOB SITE AREA TO DOCUMENT EXISTING CONDITIONS BEFORE BEGINNING WORK TO MINIMIZE UNDUE CLAIMS. INSTALLER IS RESPONSIBLE TO RETURN ALL PROPERTY TO ORIGINAL OR BETTER CONDITION, INCLUDING TRAFFIC MARKINGS. A COPY OF THE CLAIM DOCUMENTS SHALL BE SUBMITTED TO OWNER'S ENGINEER WITHIN 48 HOURS AFTER RECEIVING SUCH ANY CLAIMS.

CONSTRUCTION NOTES

- INSPECTION: ALL WORK AND MATERIALS SHALL BE INSPECTED BY THE INSPECTOR OF PUBLIC WORKS DURING CONSTRUCTION PURSUANT TO LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK) AS AMENDED BY THE CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS "BROWN BOOK", AND THE STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION AS APPLICABLE. CALL (213) 485-5080 BEFORE NOON OF THE WORKING DAY BEFORE THE FIRST SCHEDULED DAY OF CONSTRUCTION. PRIOR TO THE START OF ANY CONSTRUCTION, DEMOLITION, REMOVALS, SAWCUTTING, OR INSTALLATION OF TRAFFIC CONTROL THE CONTRACTOR SHALL MEET WITH THE INSPECTOR TO DISCUSS SAFETY, TRAFFIC CONTROL REQUIREMENTS, PUBLIC ACCESS, CONSTRUCTION IMPACT MITIGATION, REMOVAL LIMITS, AND CONTRACTOR'S PLANNED SEQUENCING OF OPERATIONS. PRIOR TO OR AT THE PROJECT PRECONSTRUCTION MEETING THE PERMITTEE OR ITS CONTRACTOR SHALL PROVIDE THE INSPECTOR TWO SETS OF FULL-SIZE PLANS AND MAINTAIN ONE SET OF FULL-SIZE PLANS AT THE SITE DURING CONSTRUCTION. INDEXED PLANS ARE AVAILABLE FROM THE CITY'S WEBSITE AT HTTP://ENGVault.LAcITY.ORG.
- UNDERGROUND SERVICE ALERT: BEFORE COMMENCING ANY EXCAVATION, THE CONTRACTOR SHALL OBTAIN AN UNDERGROUND SERVICE ALERT (USA) INQUIRY I.D. NUMBER BY CALLING (800) 227-2600. TWO WORKING DAYS SHALL BE ALLOWED AFTER THE I.D. NUMBER IS OBTAINED AND BEFORE THE CONTRACTOR STARTS THE EXCAVATION WORK SO THAT UTILITY OWNERS CAN BE NOTIFIED. IF THE UTILITY OWNER IS THE CITY OF LOS ANGELES, A CONFIRMATION NUMBER INDICATING THE CITY HAS BEEN NOTIFIED SHALL BE OBTAINED BY USA AND/OR THE CONTRACTOR FROM THE APPROPRIATE CITY DEPARTMENT. THE I.D. NUMBER TOGETHER WITH THE DATE ACQUIRED SHALL BE REPORTED TO THE BUREAU OF CONTRACT ADMINISTRATION WHEN CALLING FOR INSPECTION. I.D. NUMBERS WILL NOT BE GIVEN MORE THAN 10 DAYS BEFORE STARTING EXCAVATION WORK.
- AT LEAST THIRTY (30) DAYS BEFORE THE START OF CONSTRUCTION THE CONTRACTOR/ENGINEER SHALL CONTACT THE BUREAU OF STREET SERVICES, COORDINATING SECTION AT (213) 847-3200 TO VERIFY THAT THERE IS NO PROPOSED PROJECT IN THIS AREA.
- NOTIFICATION: AT LEAST TEN (10) DAYS BEFORE THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY, IN WRITING, ABUTTING PROPERTY OCCUPANTS OF THE PROPOSED CONSTRUCTION START DATE. A COPY OF SAID WRITTEN NOTIFICATION SHALL BE PROVIDED TO THE PUBLIC WORKS INSPECTOR FOR APPROVAL BEFORE THEY ARE DISTRIBUTED TO THE OCCUPANTS OF THE ABUTTING PROPERTY.
- ADVANCE CONSTRUCTION NOTICE SIGNS: IN ADDITION TO SIGNS REQUIRED BY THE PROVISIONS OF THE "WORK AREA TRAFFIC CONTROL HANDBOOK" (WATCH), LATEST EDITION, FURNISH AND PLACE SIGNS FOR GIVING ADVANCE NOTICE TO MOTORISTS OF TRAFFIC DISRUPTION AS PART OF THIS PROJECT IN ACCORDANCE WITH STANDARD PLAN S-791-1.
- CUTS OR EXCAVATIONS IN STREETS THAT HAVE BEEN RESURFACED ONE YEAR OR LESS FROM THE DATE OF A PROPOSED CUT OR EXCAVATION ARE PROHIBITED UNLESS THE PERMITTEE RESURFACES THE ENTIRE BLOCK OR INTERSECTION WITHIN WHICH SUCH CUT OR EXCAVATION OCCURS, PER ORDINANCE NO. 171922, 171923, 171924, AND SPECIAL ORDER NO. 06-0807.
- REMOVALS:
 - REMOVE ALL EXISTING IMPROVEMENTS THAT INTERFERE WITH THE CONSTRUCTION OF THIS PROJECT.
 - ALL UTILITIES SHALL BE REMOVED OR RELOCATED BY OTHERS.
- REPAIR AND/OR REPLACE ANY EXISTING BROKEN OR OFF-GRADE PAVEMENT, CONCRETE CURB, GUTTER OR SIDEWALK IMMEDIATELY ADJACENT TO OR WITHIN THE AREA OF THIS IMPROVEMENT SATISFACTORY TO THE CITY ENGINEER.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND DIMENSION OF ALL BLOCKOUTS, PADS, SLEEVES, OPENINGS, EMBEDDED OR ATTACHED ITEMS. PIPES WITH WATERSTOPS SHALL BE CAST-IN-PLACE.
- THE STAMPED SET OF PLANS AND SPECIFICATIONS SHALL BE KEPT AT THE JOB SITE AND UPDATED WITH RECORD INFORMATION. THE SET SHALL BE AVAILABLE TO THE INSPECTOR, BUILDING OFFICIAL OR ENGINEER AT ANY TIME. THE CONTRACTOR SHALL NOT DEVIATE FROM THE STAMPED SET OF PLANS AND SPECIFICATIONS WITHOUT OFFICIAL APPROVAL.
- ANY CRANES OR OTHER CONSTRUCTION EQUIPMENT MUST COMPLY WITH MINIMUM SEPARATION DISTANCE OF 10- FEET FROM POWERLINES, AS REQUIRED BY OSHA.



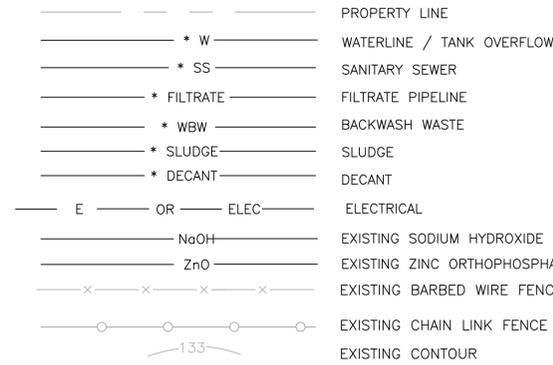
	REVISIONS	REVISIONS				BIRP BACKWASH SYSTEM DESIGN GENERAL CONSTRUCTION NOTES 9210 CARMEL VALLEY ROAD CARMEL CA, 93923																					
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200 Clock Tower Place Building B, Suite B200 Carmel, CA 93003 Phone: (831) 200-9093 Website: http://www.valentineengineers.com					CA LICENSED PROFESSIONAL ENGINEER NO. C 83580 DATE: -/-/-		PROJECT XXXXXX-XXXX		USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES		90% SUBMITTAL	XXXXXX-XXXX-G1.0															

ABBREVIATIONS

AC	ASPHALT CONCRETE
ACI	AMERICAN CONCRETE INSTITUTE
APN	ASSESSOR'S PARCEL NUMBER
AR	AIR RELEASE VALVE
ARFC	AS REQUIRED FOR CONSTRUCTION
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASPH	ASPHALT
ASS	ASSEMBLY
@	AT
AV	AIR AND VACUUM VALVE
AVAIL	AVAILABLE
AWWA	AMERICAN WATER WORKS ASSOCIATION
BFV	BUTTERFLY VALVE
BOC	BACK OF CURB
BC	BEGIN HORIZONTAL CURVE
BO	BLOW OFF
BOL	BEGINNING OF LINE
BLDG	BUILDING
B.S.L.	BUILDING SET BACK LINE
B.V.C.	BEGIN VERTICAL CURVE
C	CENTER
C/C	CENTER TO CENTER
CA	CEMENT ASBESTOS
CATV	CABLE TELEVISION
CBC	CONCRETE BOX CULVERT
C.C.S.	CONCRETE CYLINDER PIPE
CFS	CUBIC FEET PER SECOND
CIP	CAST IRON PIPE
CL	CENTERLINE
CLR	CLEAR
CM	CORRUGATED METAL
CMC	CEMENT MORTAR COATED
CML	CEMENT MORTAR LINED
CML&C	CEMENT MORTAR LINED & COATED
CMP	CORRUGATED METAL PIPE
CO	COMPANY
CONC	CONCRETE
CONST	CONSTRUCTION
C.O.S.	CITY OF SCOTTSDALE
CPLG	COUPLING
CS	CHLORINE SOLUTION
D	DRAIN
DOCKET	DOCKET
DG	DECOMPOSED GRANITE
DTL	DETAIL
DI	DRAIN INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
D/L	DAYLIGHT
DWG	DRAWING
EA	EACH
EC	END HORIZONTAL CURVE
E.F.	EACH FACE
EHH	ELECTRIC HANDHOLE
EL.E.	ELECTRICAL EASEMENT
EL	ELEVATION
ELEV	ELEVATION
ELEC	ELECTRIC
E'LY	EASTERLY
EM	ELECTRIC METER
EOP	EDGE OF PAVEMENT
EP	ELECTRIC PANEL
EPED	ELECTRIC PEDESTAL
ESMT	EASEMENT
EV	ELECTRIC VAULT
E.V.C.	END VERTICAL CURVE
EOL	END OF LINE
E.W.	EACH WAY
EXIST	EXISTING
FND	FOUND
F.F.	FINISHED FLOOR
FH	FIRE HYDRANT
FL	FLOW LINE
FLG	FLANGE
FP	FLAG POLE
FRUL	FULLY RESTRAINED JOINT LENGTH
FTW	FILTER TO WASTE
FW	FINISHED WATER
GA	GAUGE
GAC	GRANULATE ACTIVATED CARBON
GALV	GALVANIZED
GP	GUY POLE
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPT	GUARD POST
GSV	GAS VALVE
GW	GUY WIRE
HDWL	HEADWALL
HH	HAND HOLE
HORIZ	HORIZONTAL
HPG	HIGH PRESSURE GASLINE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INV	INVERT
IRRIG	IRRIGATION
L	CURVE LENGTH
LF	LINEAR FEET

LOC	LIMITS OF CONSTRUCTION
LS	LUMP SUM
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
M.O.	MARKOUT
MRKD	MARKED
MTR	METER
MW	MANWAY
N.A.O.S.	NATURAL AREA OPEN SPACE
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO.	NUMBER
NPW	NON-POTABLE WATER
OFF	OFFSET
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
P	PRESSURE
PA	PROCESS AIR
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PED	PEDESTAL
PG	PRESSURE GAUGE
PIT	PRESSURE INDICATING TRANSMITTER
PLCS	PLACES
PMH	PROPOSED MANHOLE
PP(#)	POWER POLE (POLE#)
PRA	PRESSURE REGULATING ASSEMBLY
PSI	POUNDS PER SQUARE INCH
P.T.L.G.	PUBLIC TRAIL EASEMENT
P.U.E.	PUBLIC UTILITY EASEMENT
P.U.I.&E.E.	PUBLIC UTILITY INGRESS & EGRESS EASEMENT
PW	PUMP WELL
Q	VOLUMETRIC FLOW RATE
R	RADIUS
RCCP	REINFORCED CONCRETE CYLINDER PIPE
RCP	REINFORCED CONCRETE PIPE
RDWYE.	ROADWAY EASEMENT
REG.	REGIONAL
REQ'D	REQUIRED
RR	RAILROAD
R/W	RIGHT-OF-WAY
RW	RAW WATER
RT	RIGHT
SEC	SECTION
SCO	SEWER CLEAN OUT
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SDR	STANDARD DIMENSION RATIO
SIM	SIMILAR
SMH	SEWER MANHOLE
SHT	SHEET
SHS	SODIUM HYPOCHLORITE SOLUTION
SPEC(S)	SPECIFICATION(S)
SO	SQUARE
SS	SANITARY SEWER
SSFM	SANITARY SEWER FORCE MAIN
STA	STATION
SFAT	SLUDGE FLUIDIZATION AND TRANSFER
STD	STANDARD
STL	STEEL
STLT	STREET LIGHT
SY	SQUARE YARDS
T	TANGENT
t	STEEL THICKNESS
TCE	TEMPORARY CONSTRUCTION EASEMENT
TELE	TELEPHONE
THH	TELEPHONE HANDHOLE
THK	THICK
TG	TOP OF GRATE
TOC	TOP OF CURBE
TOW	TOE OF SLOPE
T.O.P.	TOP OF PIPE
TPED	TELEPHONE PEDESTAL
TPOLE	TELEPHONE POLE
TRANS	TRANSFORMER
TYP	TYPICAL
UGE	UNDERGROUND ELECTRICAL
UTELE	UNDERGROUND TELEPHONE
UV	ULTRA VIOLET
VAC	VACUUM
VERT	VERTICAL
VLV	VALVE
V.P.I.	VERTICAL POINT OF INTERSECTION
W	WATERLINE
W/	WITH
WGV	WATER GATE VALVE
WBW	BACKWASH WASTE
W'LY	WESTERLY
W.L.E.	WATERLINE EASEMENT
WM	WATER METER
WMH	WATER MANHOLE
WS	WATER SERVICE
WSEL	WATER SURFACE ELEVATION
WSP	WELDED STEEL PIPE
WV	WATER VAULT
WW	WASH WATER

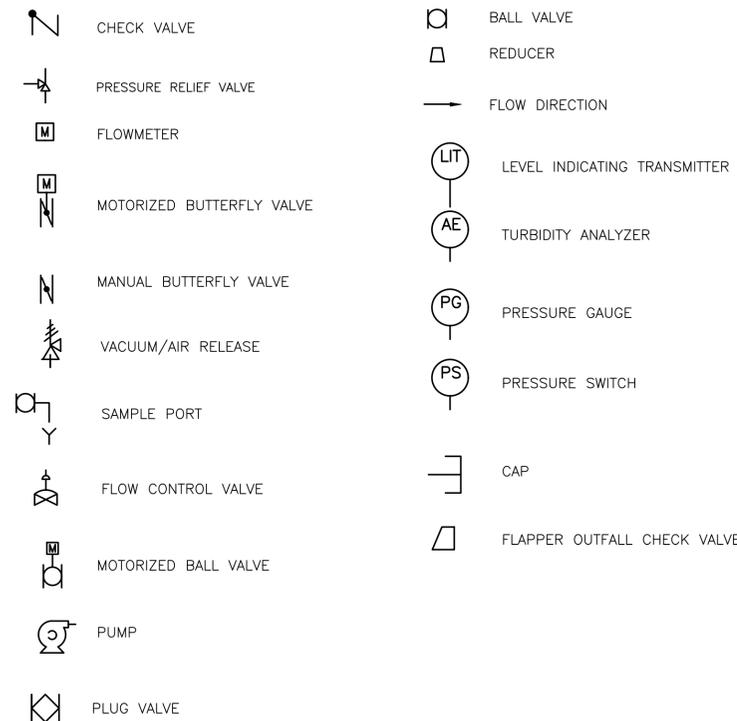
LINE TYPE LEGEND



MECHANICAL LEGEND



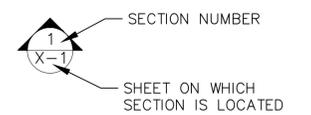
PROCESS FLOW DIAGRAM SYMBOLS LEGEND



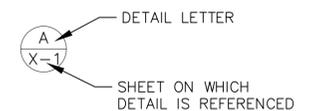
SYMBOL LEGEND



SECTION KEY

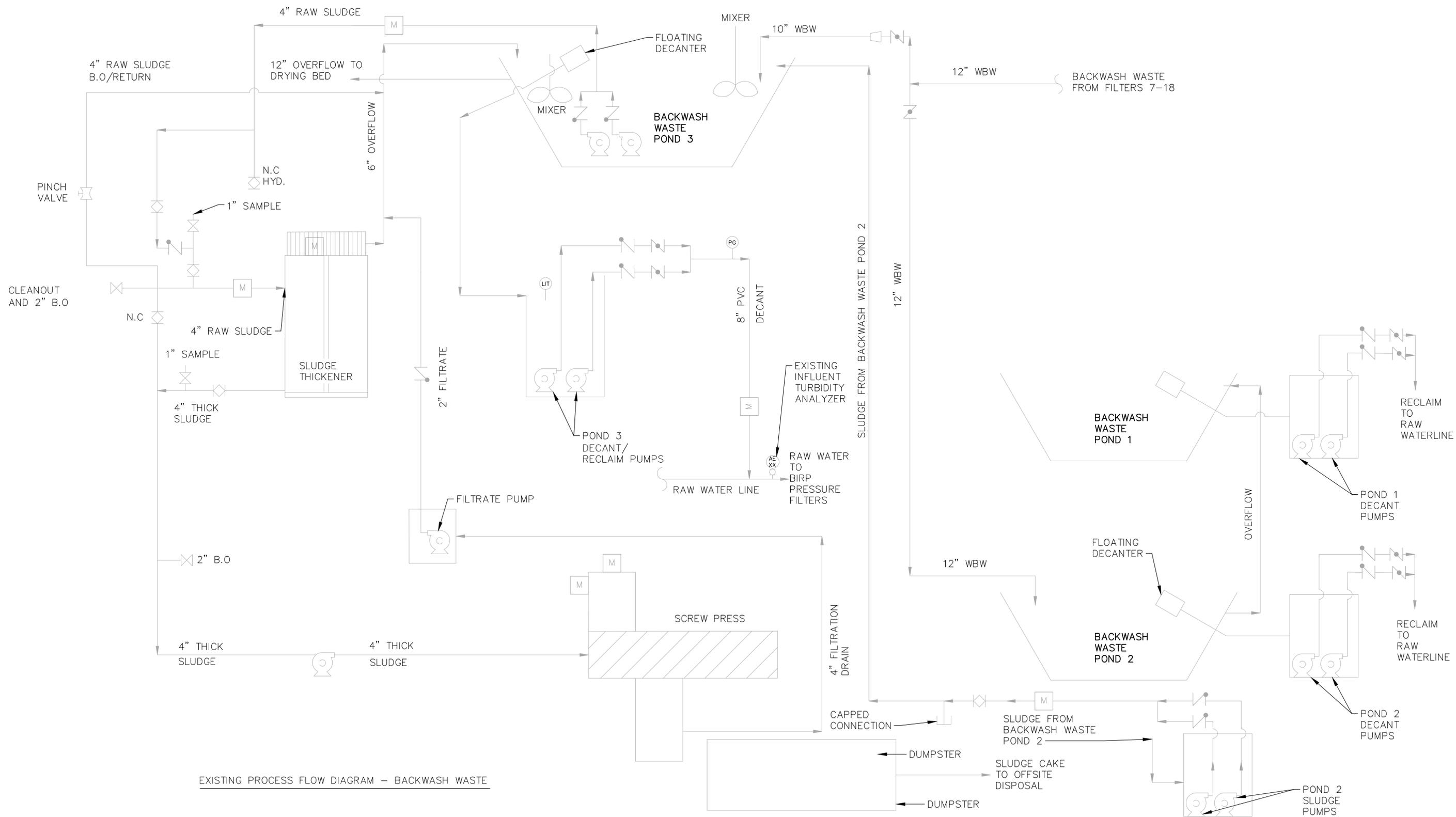


DETAIL KEY



Underground Service Alert
of Southern California
Call: TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

	REVISIONS <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;">▲</td><td></td></tr> </table>	▲		▲		▲		▲		▲		REVISIONS <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;">▲</td><td></td></tr> </table>	▲		▲		▲		▲		▲		<p>200 Clock Tower Place Building B, Suite B200 Carmel, CA 93923 Phone: (831) 200-9093 Website: http://www.valentineengineers.com</p>	<p>T. VALENTINE REGISTERED PROFESSIONAL ENGINEER TERESA A. VALENTINE C 83580 Exp. 3-31-27 CIVIL STATE OF CALIFORNIA</p>	<p>VALENTINE ENVIRONMENTAL ENGINEERS, LLC 200 CLOCK TOWER PLACE BUILDING B SUITE B200, CARMEL, CA 93923</p>	<p>BIRP BACKWASH SYSTEM DESIGN GENERAL ABBREVIATIONS AND LEGEND 9210 CARMEL VALLEY ROAD CARMEL CA, 93923</p>	<p>APN 123-456-78 ASSESSOR'S PARCEL NUMBER</p> <p>WM EXISTING IRRIGATION VALVE BOX</p> <p>PP POWER POLE</p> <p>/// DEMOLISH AND REMOVE</p>	<p>DATE OCTOBER 2025</p> <p>PROJECT XXXXXX-XXXX</p>	<p>CALIFORNIA AMERICAN WATER CO.</p> <p>COASTAL DIVISION</p> <p>90% SUBMITTAL</p>	<p>USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES</p> <p>USE DIMENSIONS ONLY SCALE NONE</p> <p>XXXXXX-XXXX-G2.0</p>
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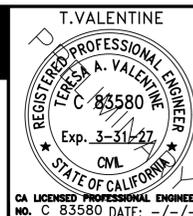
EXISTING PROCESS FLOW DIAGRAM - BACKWASH WASTE



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CALIFORNIA AMERICAN WATER

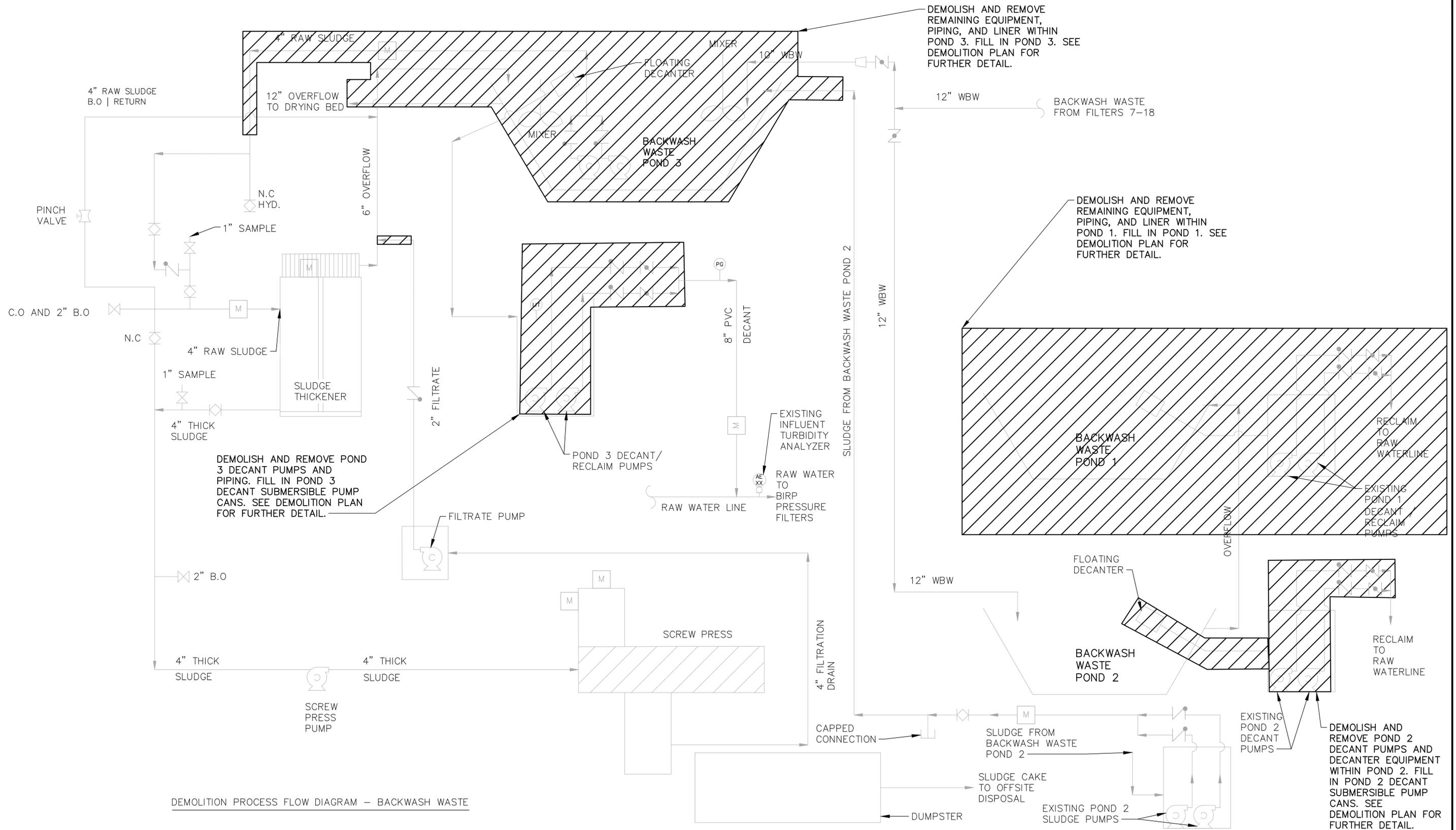
DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
GENERAL
EXISTING PROCESS FLOW DIAGRAM - BACKWASH WASTE
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-G3.0



DEMOLITION PROCESS FLOW DIAGRAM – BACKWASH WASTE



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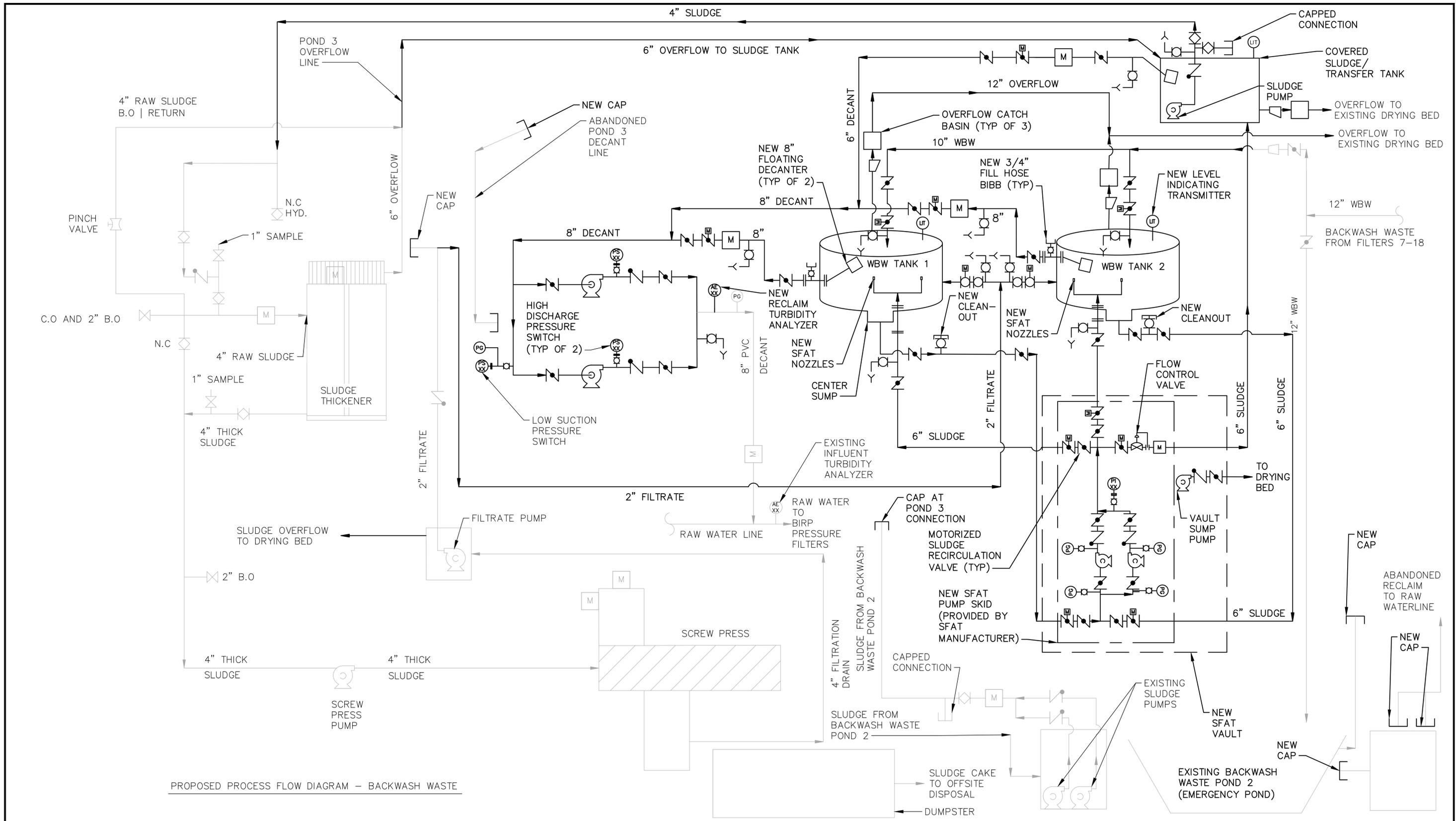
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C 83580
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STATE OF CALIFORNIA
CA LICENSED PROFESSIONAL ENGINEER
NO. C 83580 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923
DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE
DATE OCTOBER 2025
PROJECT XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
GENERAL
DEMOLITION PROCESS FLOW DIAGRAM – BACKWASH WASTE
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-G4.0



PROPOSED PROCESS FLOW DIAGRAM - BACKWASH WASTE

<p>CALIFORNIA AMERICAN WATER</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">REVISIONS</th> <th style="width: 50%;">REVISIONS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> </tbody> </table>	REVISIONS	REVISIONS											<p>VALENTINE Environmental Engineers, LLC</p> <p>200 Clock Tower Place Building B, Suite B200 Carmel, CA 93923 Phone: (831) 200 - 9093 Website: http://www.valentineengineers.com</p>	<p>T. VALENTINE REGISTERED PROFESSIONAL ENGINEER TERESA A. VALENTINE C 83580 Exp. 3-31-27 CIVIL STATE OF CALIFORNIA</p> <p>CA LICENSED PROFESSIONAL ENGINEER NO. C 83580 DATE: -/-/-</p>	<p>VALENTINE ENVIRONMENTAL ENGINEERS, LLC 200 CLOCK TOWER PLACE BUILDING B SUITE B200, CARMEL, CA 93923</p> <p></p> <p>DRAWN BY D. BRODERICK PROJECT ENG'R S. TERRELL/T. VALENTINE</p> <p>DATE OCTOBER 2025</p> <p>PROJECT XXXXXX-XXXX</p>	<p>BIRP BACKWASH SYSTEM DESIGN GENERAL</p> <p>PROPOSED PROCESS FLOW DIAGRAM - BACKWASH WASTE 9210 CARMEL VALLEY ROAD CARMEL CA, 93923</p>
	REVISIONS	REVISIONS															
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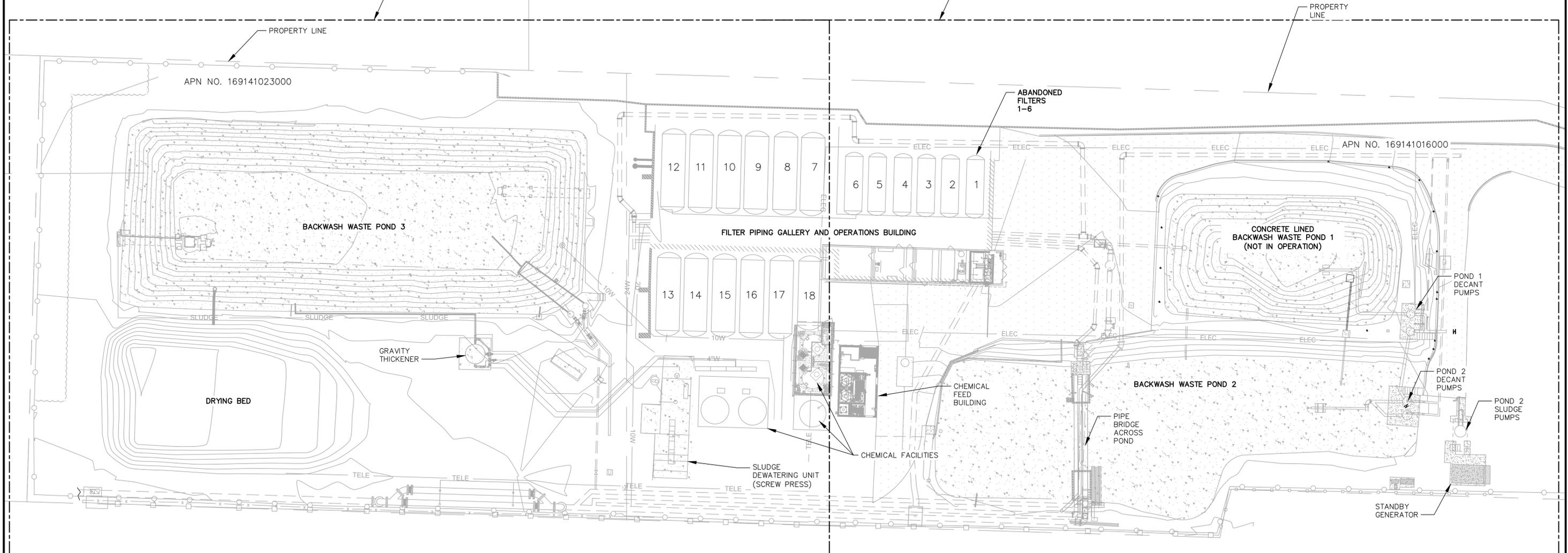


FOR ENLARGED EXISTING PLAN FOR BACKWASH WASTE POND 3 AREA, SEE SHEET C1.1 AND DEMOLITION PLAN ON SHEET D1.0

FOR ENLARGED EXISTING PLAN FOR BACKWASH WASTE PONDS 1 AND 2 AREA, SEE SHEET C1.2 AND DEMOLITION PLAN ON SHEET D2.0

NOTES:

(*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.
 (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.



LEGAL DESCRIPTION

MP OF JAMES MEADOWS TR POR OF SUB A OF SUB 1 OF L 16 & SUB A OF L 1 OF PORS OF LOTS 2 3 4 OF SEC24 T16 R1 AS DESCRIBED IN R710 PG 988 2.58 AC APRX FOR APN 169-141-016.
 VOLUME 2 PAR MAPS PG 14 PAR A EXC 1.15 AC PAR FOR APN 169-141-023

THESE PARCELS ARE RECORDED IN THE OFFICE OF COUNTY RECORDED OF MONTEREY COUNTY, STATE OF CALIFORNIA.

SITE INFORMATION

SITE NAME: BECONIA IRON REMOVAL PLANT (BIRP)
 SITE ADDRESS: 9210 CARMEL VALLEY RD, CARMEL-BY-THE-SEA, CA 93923
 ASSESSOR'S PARCEL NO. 169-141-023 & 169-141-016

UTILITY STATEMENT

THE ENGINEER MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE/SHE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

BENCH MARK

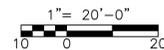
BENCHMARK INFORMATION
 BENCHMARK #1 (#1518 ON SURVEY), 1" IP LS 3772
 NORTHING = 2085730.10'
 EASTING = 5734402.88'
 ELEV = 118.19'
 BENCHMARK #2 (#3152 ON SURVEY), MAG NAIL AND WASHER
 NORTHING = 2085762.28'
 EASTING = 5734490.70'
 ELEV = 121.97'

BASIS OF BEARINGS

THE BEARINGS SHOWN HEREIN ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83). CALIFORNIA STATE PLANE ZONE 4. ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

EXISTING OVERALL SITE PLAN

SCALE: 1" = 20'-0"



1" = 20'-0"

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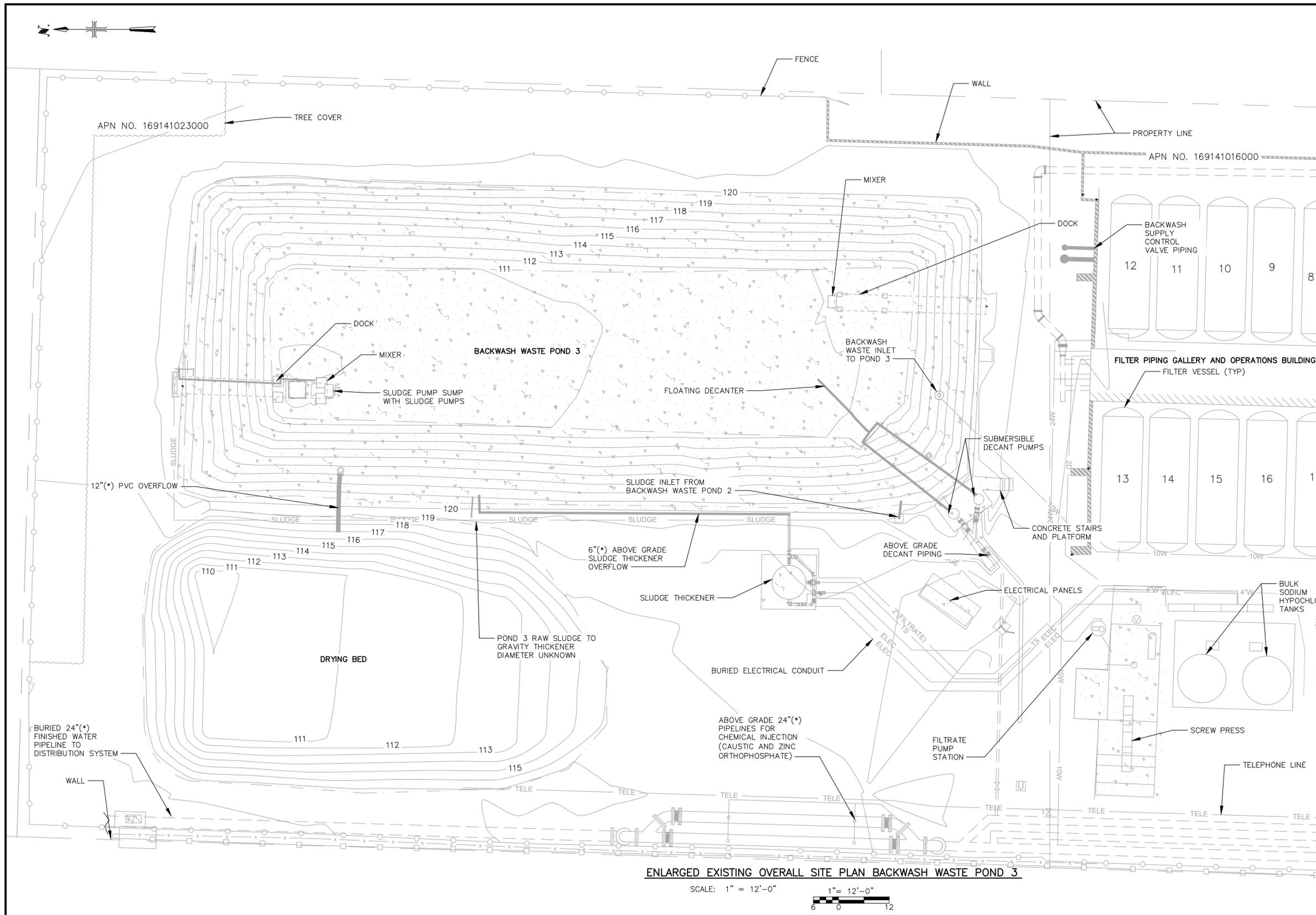
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 DRAWN BY D. BRODERICK
 PROJECT ENG'R S. TERRELL/T. VALENTINE
 DATE OCTOBER 2025
 PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
 CIVIL
 EXISTING OVERALL SITE PLAN
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923
 CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
 USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
 90% SUBMITTAL
 USE DIMENSIONS ONLY SCALE 1" = 20'-0"
 XXXXXX-XXXX-C1.0





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ENLARGED EXISTING OVERALL SITE PLAN BACKWASH WASTE POND 3

SCALE: 1" = 12'-0"
 1" = 12'-0"
 6 0 12



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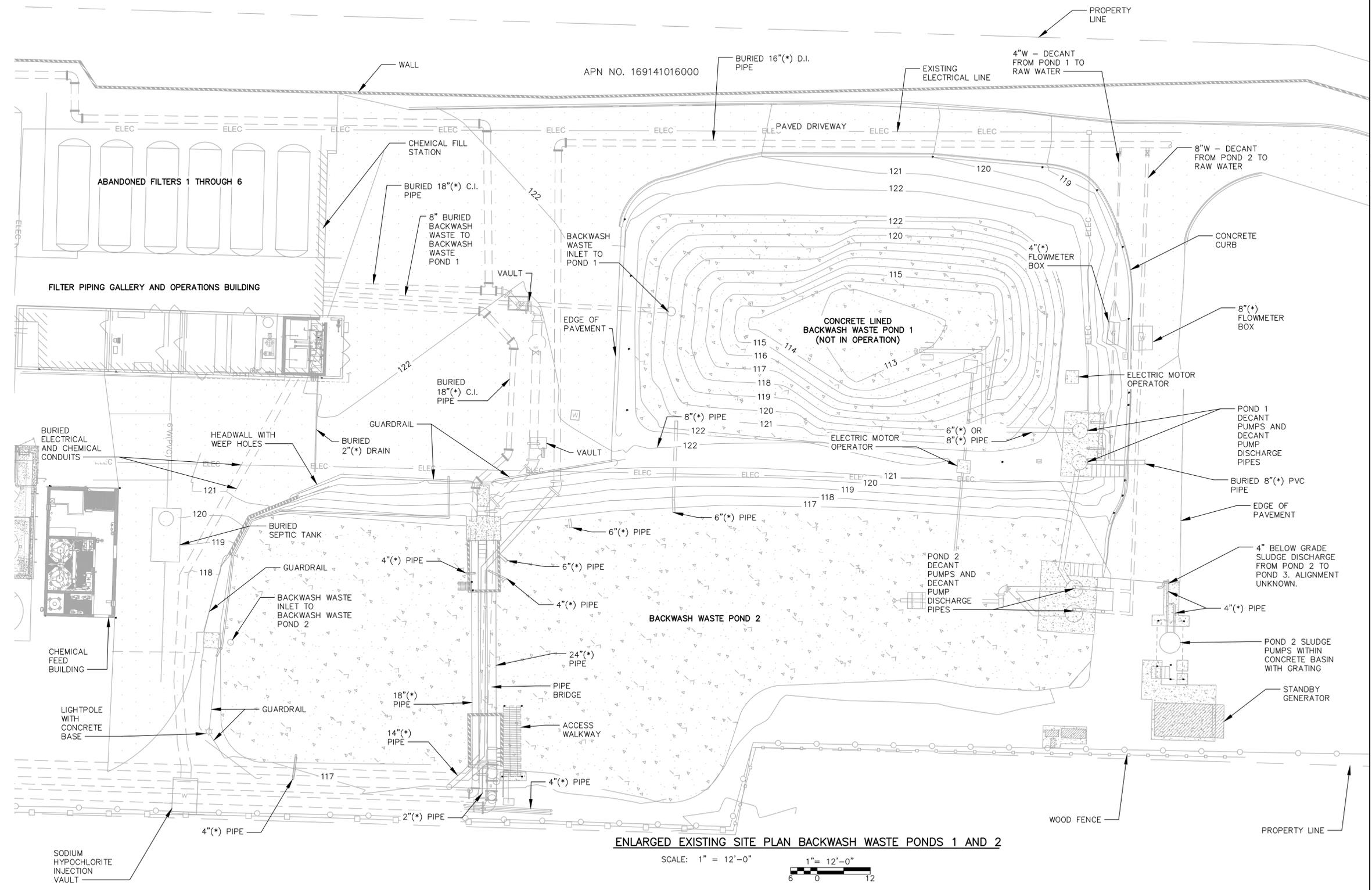
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 PROJECT ENG'R S. TERRELL/T. VALENTINE
 DATE OCTOBER 2025
 PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
 CIVIL
 ENLARGED EXISTING SITE PLAN BACKWASH WASTE POND 3
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923
 CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
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 XXXXXX-XXXX-C1.1



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ENLARGED EXISTING SITE PLAN BACKWASH WASTE PONDS 1 AND 2

SCALE: 1" = 12'-0"
 1" = 12'-0"
 6 0 12



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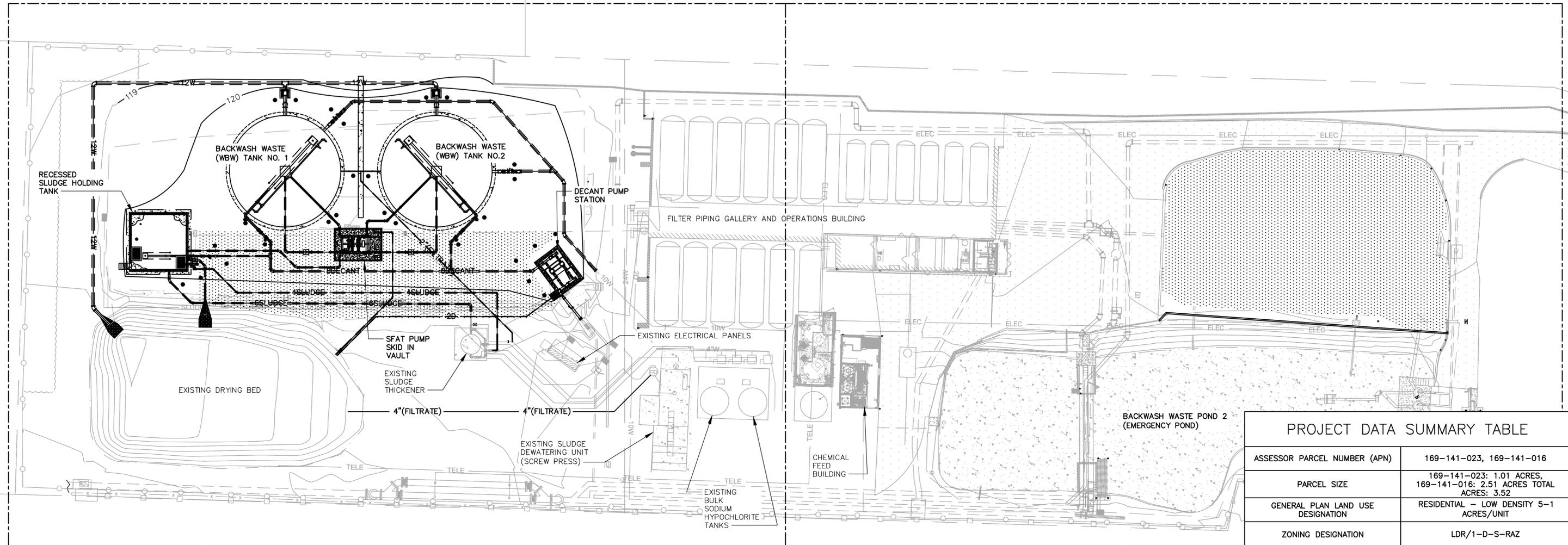
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 TERESA A. VALENTINE
 C 83580
 Exp. 3-31-27
 CIVIL
 STATE OF CALIFORNIA
 CA LICENSED PROFESSIONAL ENGINEER
 NO. C 83580 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
 200 CLOCK TOWER PL BUILDING B, SUITE B200
 CARMEL, CA 93923
 CALIFORNIA AMERICAN WATER
 DRAWN BY D. BRODERICK
 PROJECT ENG'R S. TERRELL/T. VALENTINE
 DATE OCTOBER 2025
 PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
 CIVIL
 ENLARGED EXISTING SITE PLAN BACKWASH WASTE PONDS 1 AND 2
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923
 CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
 USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
 90% SUBMITTAL
 USE DIMENSIONS ONLY SCALE 1"=12'-0"
 XXXXXX-XXXX-C1.2



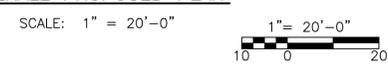
PROJECT DATA SUMMARY TABLE	
ASSESSOR PARCEL NUMBER (APN)	169-141-023, 169-141-016
PARCEL SIZE	169-141-023: 1.01 ACRES, 169-141-016: 2.51 ACRES TOTAL ACRES: 3.52
GENERAL PLAN LAND USE DESIGNATION	RESIDENTIAL - LOW DENSITY 5-1 ACRES/UNIT
ZONING DESIGNATION	LDR/1-D-S-RAZ
LOT COVERAGE CALCULATIONS	TOTAL BUILDING FOOTPRINT SF: 16953.5 LOT COVERAGE = 16953.5 SF/(3.52 ACRES x 43,560) * 100 = 11.06%
FLOOR AREA RATIO CALCULATIONS	N/A
TOTAL NEW IMPERVIOUS AREA	N/A - NEW FACILITIES WILL BE WITHIN THE VICINITY OF A CONCRETE POND THAT WAS AN IMPERVIOUS STRUCTURE
ESTIMATED CUT/FILL	4125.3 CY FILL
ESTIMATED SOIL IMPORT/EXPORT	4125.3 CY IMPORT
TREE REMOVAL	NONE - SEE NOTE 1 ON THIS SHEET
IMPERVIOUS COVERAGE	1) TOTAL AREA COVERED BY STRUCTURES: 16953.5 SF 2) TOTAL AREA COVERED BY IMPERVIOUS SURFACES (NEW + EXISTING PAVEMENT): 25248.6 SF
REQUIRED AND PROPOSED PARKING COUNTS	N/A
WATER SERVICE	CALIFORNIA-AMERICAN WATER
SEWER	N/A

FOR PROPOSED SITE PLAN
BACKWASH WASTE POND 3
SEE SHEET C2.1

FOR PROPOSED SITE PLAN
BACKWASH WASTE PONDS 1
AND 2 SEE SHEET C2.2

NOTES:
1. VEGETATION MAINTENANCE - NO VEGETATION IS
WITHIN PROPERTY LINE THAT IS WITHIN 100 FEET OF
THE PROPOSED STRUCTURES.

OVERALL PROPOSED PLAN



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CALIFORNIA AMERICAN WATER

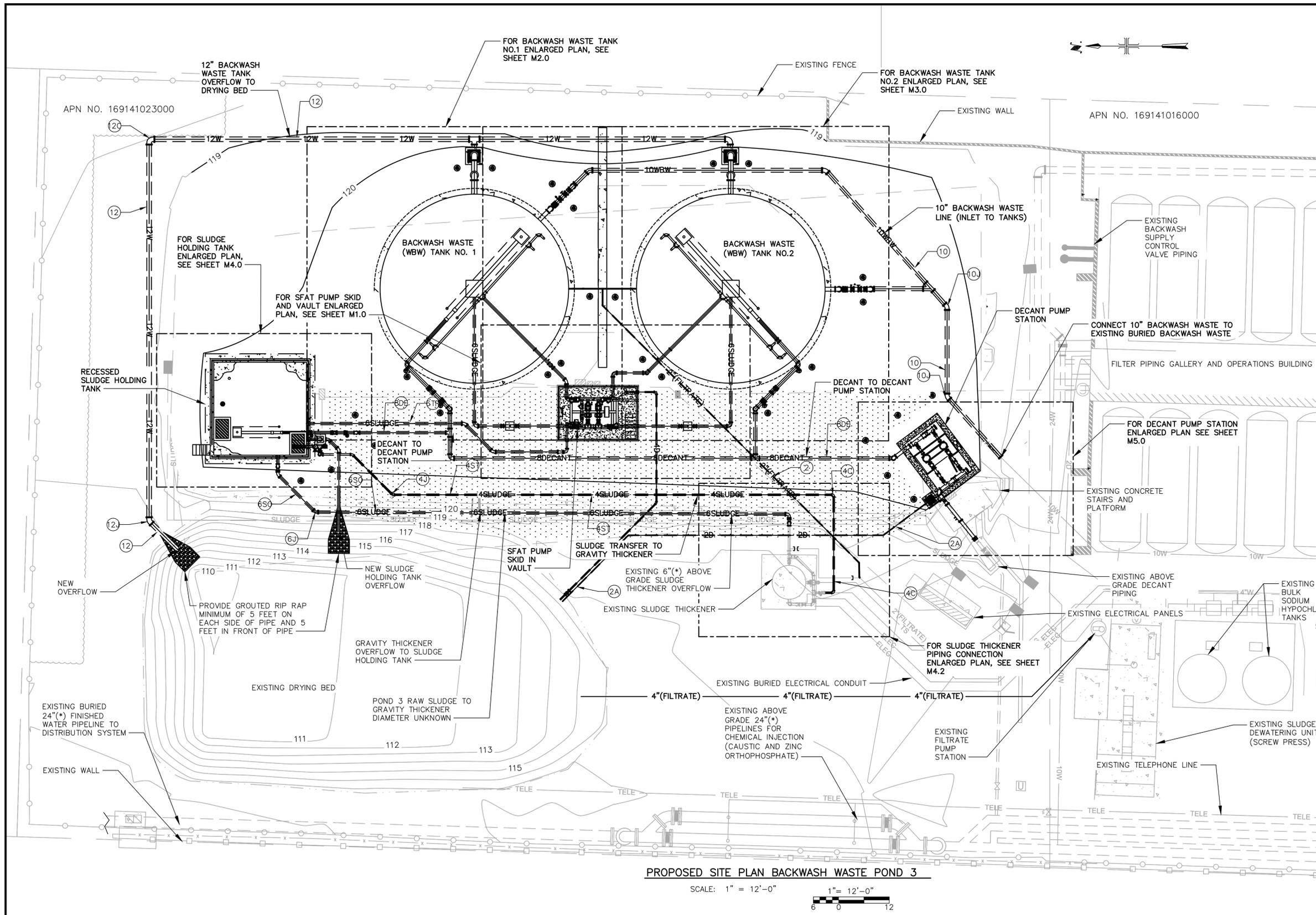
DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
CIVIL
OVERALL PROPOSED PLAN
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=20'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-C2.0



- CONSTRUCTION NOTES:**
- (2) PROVIDE 2-INCH FILTRATE PIPE.
 - (2A) PROVIDE 2-INCH DRAIN PIPE.
 - (4) PROVIDE 4-INCH SUMP PUMP DISCHARGE.
 - (4C) PROVIDE 4-INCH 90° BEND (MxMJ).
 - (4J) PROVIDE 4-INCH 45° BEND (MxMJ).
 - (6J) PROVIDE 6-INCH 45° BEND (MxMJ).
 - (6S) PROVIDE 6-INCH SLUDGE SUCTION PIPE.
 - (6SO) PROVIDE 6-INCH SLUDGE THICKENER OVERFLOW.
 - (6TR) PROVIDE 6-INCH SLUDGE TRANSFER PIPE.
 - (8D) PROVIDE 8-INCH DECANT PIPE.
 - (10) PROVIDE 10-INCH BACKWASH WASTE PIPING.
 - (10J) PROVIDE 10-INCH 45° BEND (MxMJ).
 - (12) PROVIDE 12-INCH OVERFLOW PIPING.
 - (12C) PROVIDE 12-INCH 90° BEND (MxMJ).
 - (12J) PROVIDE 12-INCH 45° BEND (MxMJ).

NOTES:

(*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.

(**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.

PROPOSED SITE PLAN BACKWASH WASTE POND 3

SCALE: 1" = 12'-0"
 1" = 12'-0"
 6 0 12



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CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
 PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN CIVIL

PROPOSED SITE PLAN BACKWASH WASTE POND 3
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

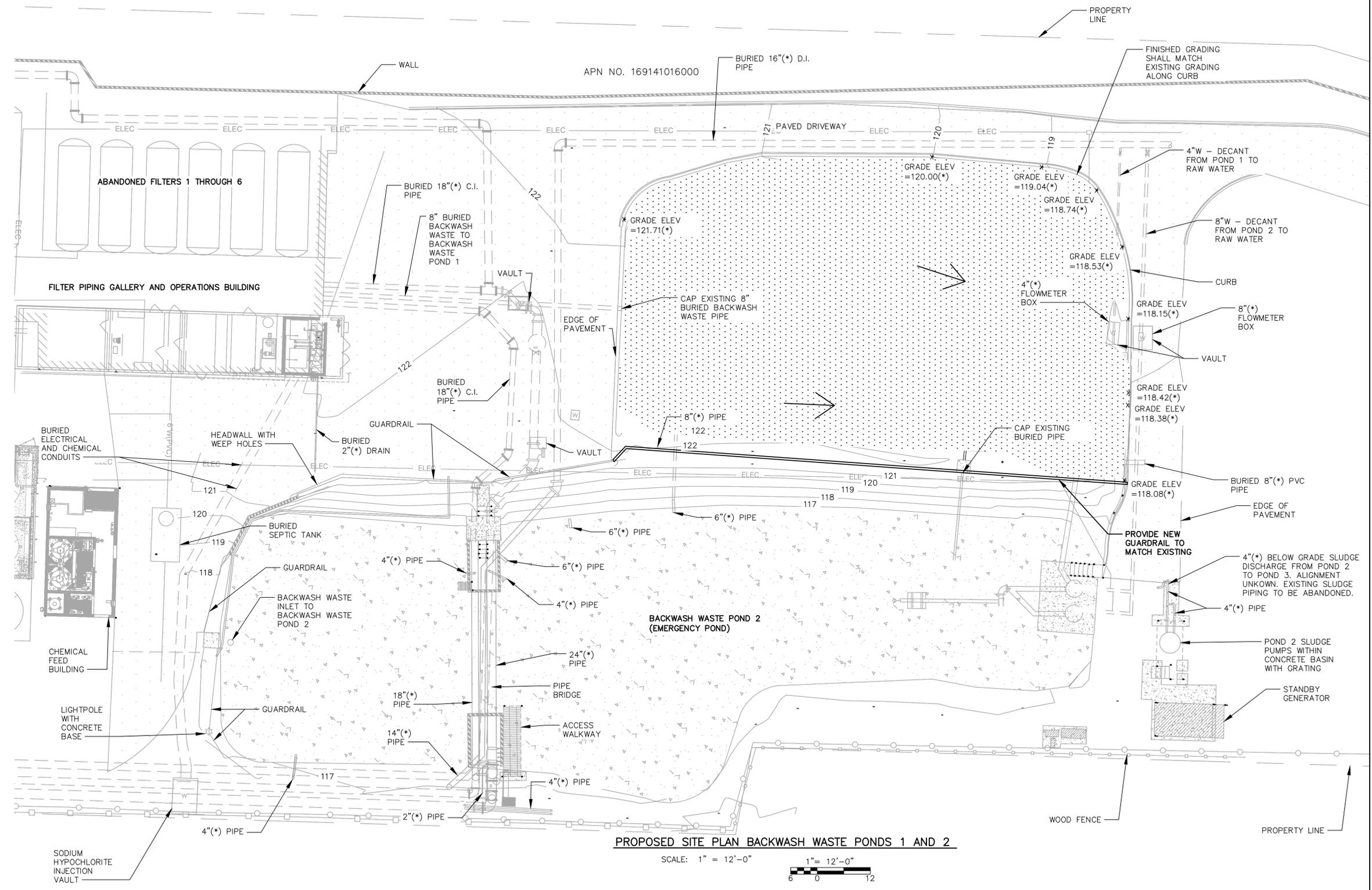
CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=12'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-C2.1



NOTES:
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 (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.

EARTHWORK CALCULATIONS
 TOTAL CUT: 0 CY
 TOTAL FILL: 863.36 CY
 NET: 863.36 CY FILL (IMPORT)
 FILL MATERIAL AND PLACEMENT SHALL MEET ALL REQUIREMENTS OF THE PROJECT GEOTECHNICAL REPORT.

LEGEND
 FLOW DIRECTION OF DRAINAGE
 NEW ASPHALT



PROPOSED SITE PLAN BACKWASH WASTE PONDS 1 AND 2

SCALE: 1" = 12'-0"



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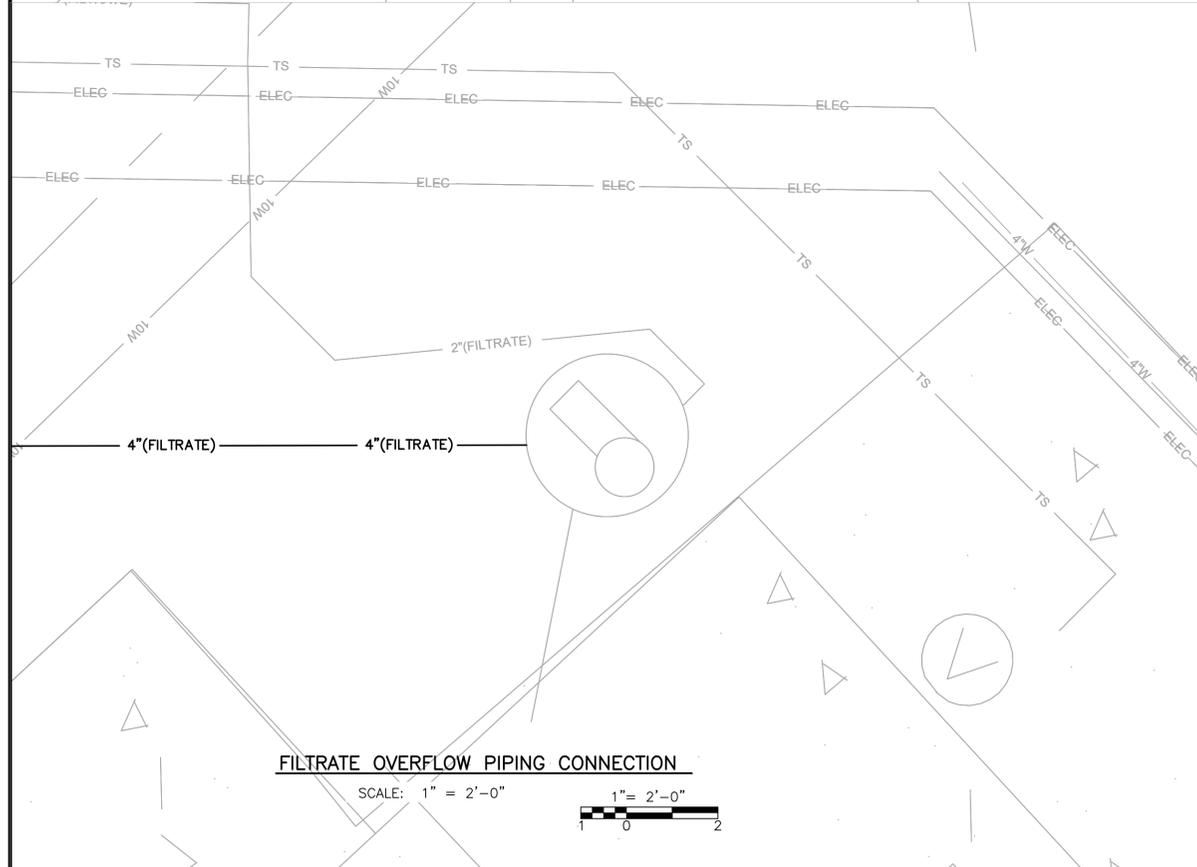
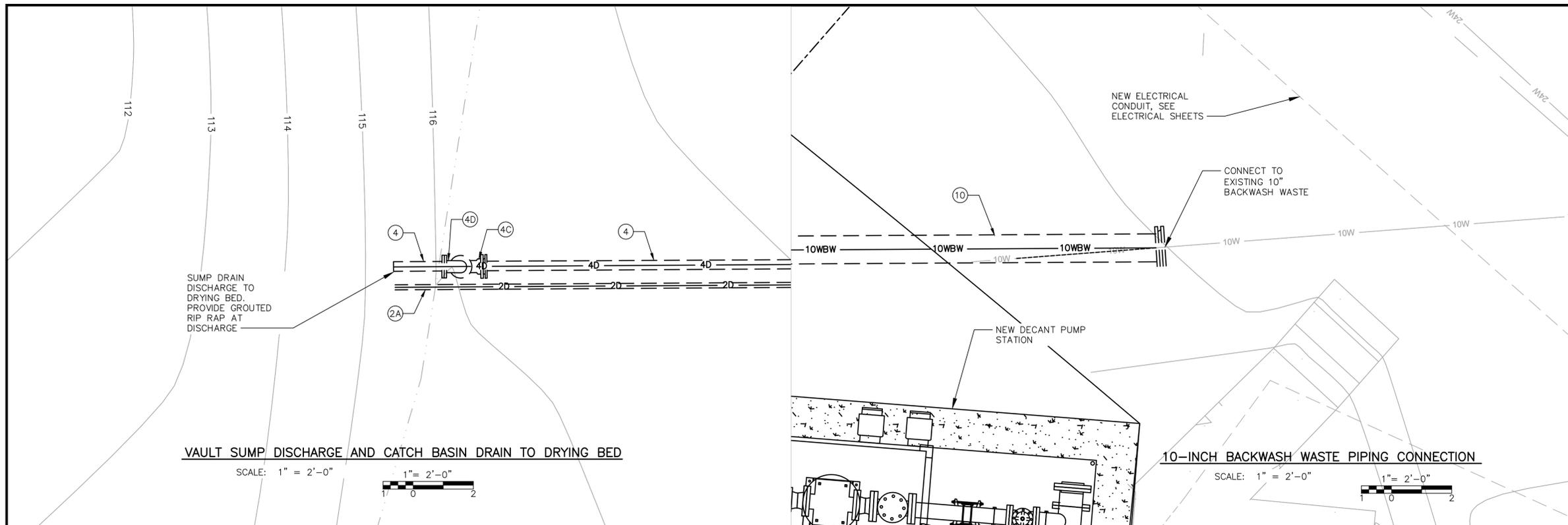
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 CARMEL, CA 93923

 DRAWN BY: D. BRODERICK
 PROJECT ENG'R: S. TERRELL/T. VALENTINE
 DATE: OCTOBER 2025
 PROJECT: XXXXXX-XXXX

BIRP BACKWASH DESIGN
 CIVIL
PROPOSED SITE PLAN BACKWASH WASTE PONDS 1 AND 2
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=12'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-C2.2



- CONSTRUCTION NOTES:**
- (2A) PROVIDE 2-INCH DRAIN PIPE
 - (4) PROVIDE 4-INCH DRAIN PIPE.
 - (4C) PROVIDE 4-INCH 90° BEND (MJxMJ).
 - (4D) PROVIDE 4-INCH 90° BEND (FLGxFLG).
 - (10) PROVIDE 10-INCH BACKWASH WASTE PIPING.

(*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.
 (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.



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CALIFORNIA AMERICAN WATER

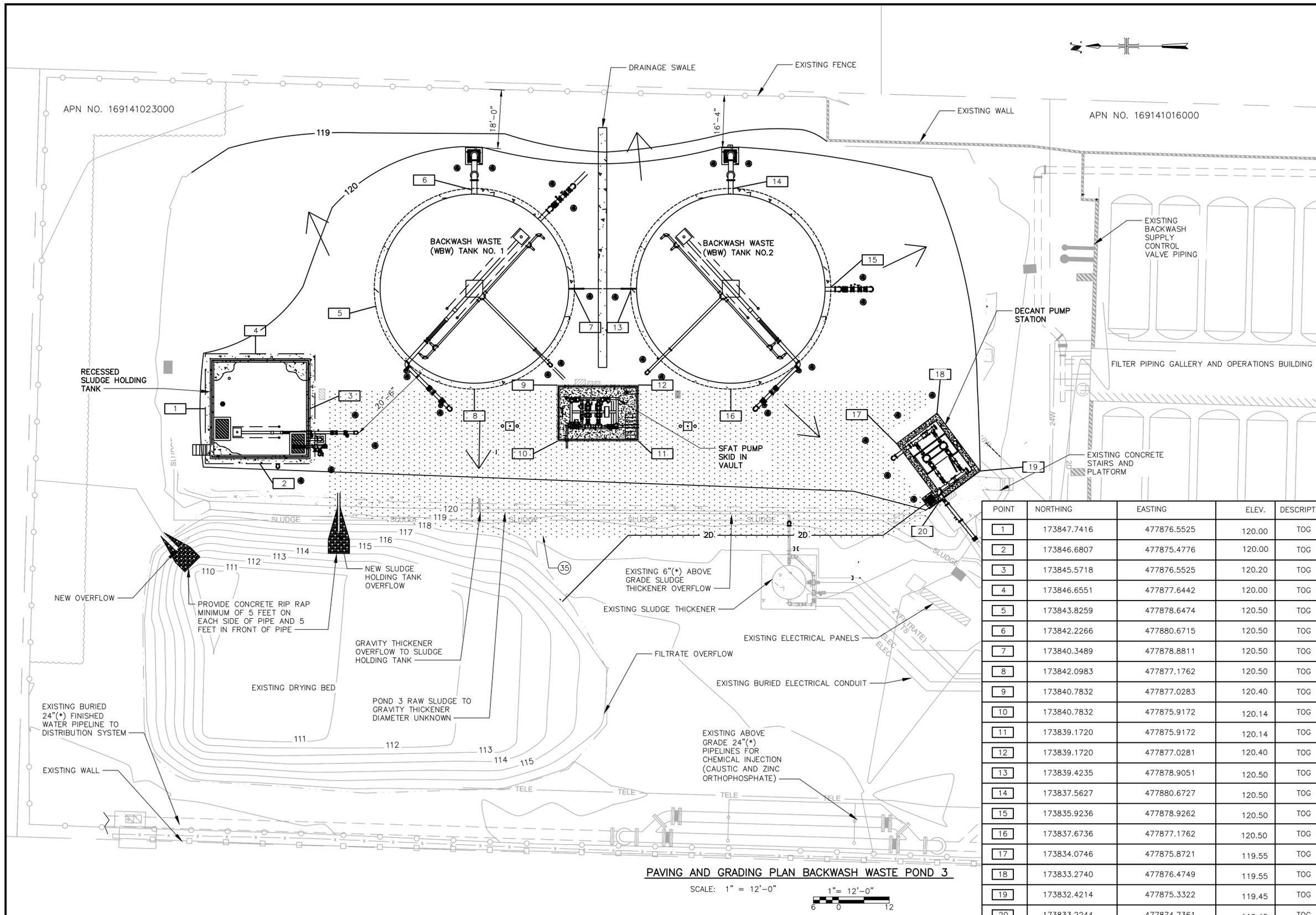
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 PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
 CIVIL
 YARD PIPING DETAILS
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1" = 2'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-C3.0



CONSTRUCTION NOTES:
 (35) PROVIDE ASPHALT PAVEMENT. SEE TRENCH DETAIL AND SPECIFICATION SECTION 02740.

NOTES:
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 (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.

1. A MINIMUM SLOPE OF 2% SHALL BE MAINTAINED FOR DRAINAGE AWAY FROM THE TANKS.

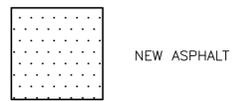
EARTHWORK CALCULATIONS

TOTAL CUT: 0 CY
 TOTAL FILL: 3261.94 CY

NET: 3261.94 CY FILL (IMPORT)

FILL MATERIAL AND PLACEMENT SHALL MEET ALL REQUIREMENTS OF THE PROJECT GEOTECHNICAL REPORT.

LEGEND



POINT	NORTHING	EASTING	ELEV.	DESCRIPT
1	173847.7416	477876.5525	120.00	TOG
2	173846.6807	477875.4776	120.00	TOG
3	173845.5718	477876.5525	120.20	TOG
4	173846.6551	477877.6442	120.00	TOG
5	173843.8259	477878.6474	120.50	TOG
6	173842.2266	477880.6715	120.50	TOG
7	173840.3489	477878.8811	120.50	TOG
8	173842.0983	477877.1762	120.50	TOG
9	173840.7832	477877.0283	120.40	TOG
10	173840.7832	477875.9172	120.14	TOG
11	173839.1720	477875.9172	120.14	TOG
12	173839.1720	477877.0281	120.40	TOG
13	173839.4235	477878.9051	120.50	TOG
14	173837.5627	477880.6727	120.50	TOG
15	173835.9236	477878.9262	120.50	TOG
16	173837.6736	477877.1762	120.50	TOG
17	173834.0746	477875.8721	119.55	TOG
18	173833.2740	477876.4749	119.55	TOG
19	173832.4214	477875.3322	119.45	TOG
20	173833.2244	477874.7361	119.45	TOG

PAVING AND GRADING PLAN BACKWASH WASTE POND 3

SCALE: 1" = 12'-0"
 1" = 12'-0"



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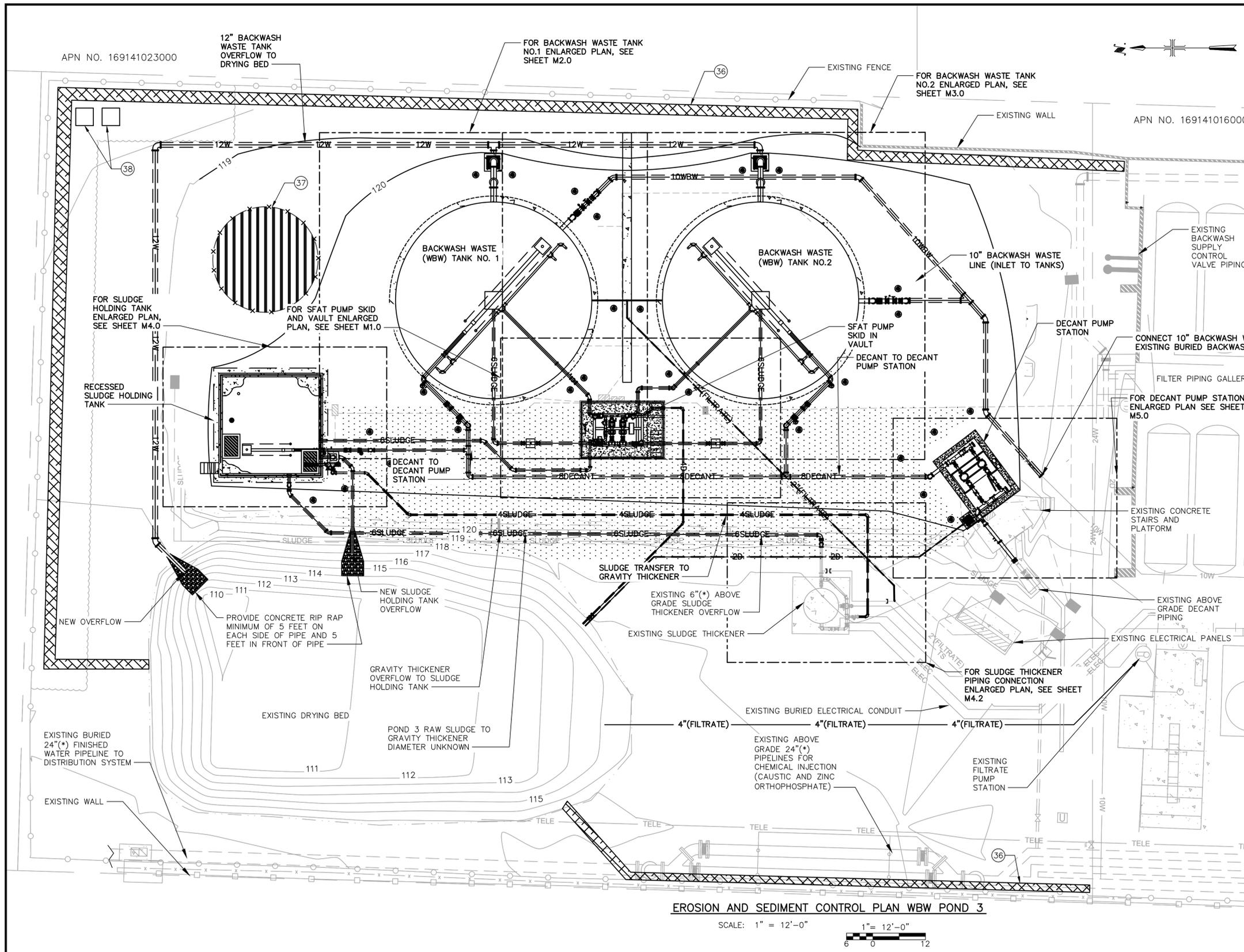
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 CALIFORNIA AMERICAN WATER
 DRAWN BY D. BRODERICK
 PROJECT ENG'R S. TERRELL/T. VALENTINE
 DATE OCTOBER 2025
 PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
 CIVIL
PAVING AND GRADING PLAN BACKWASH WASTE POND 3
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923
 CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
 USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
90% SUBMITTAL
 USE DIMENSIONS ONLY SCALE 1"=12'-0"
XXXXXX-XXXX-C4.0



- CONSTRUCTION NOTES:**
- (36) PROVIDE FIBER ROLL IN ACCORDANCE WITH MONTEREY COUNTY CONSTRUCTION SITE BMP HANDBOOK.
 - (37) PROVIDE STOCKPILE WITH PERIMETER FENCE IN ACCORDANCE WITH MONTEREY COUNTY CONSTRUCTION SITE BMP HANDBOOK.
 - (38) PROVIDE SANITARY FACILITIES IN ACCORDANCE WITH MONTEREY COUNTY CONSTRUCTION SITE BMP HANDBOOK.

NOTES:

(*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.

(**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.

GENERAL NOTES:

- 1.) FINISHED GRADE ELEVATIONS AROUND FOUNDATIONS SHALL MAINTAIN A MINIMUM OF 2% SLOPE FOR FIVE HORIZONTAL FEET AROUND EDGE OF FOUNDATION TO PROVIDE POSITIVE DRAINAGE AWAY FROM FOUNDATION.
- 2.) FINISHED GRADE ELEVATIONS SHALL CONFORM TO THE POINTS CALLED OUT ON THIS PLAN. CONTRACTOR SHALL VERIFY THAT FINISHED GRADE IS SMOOTH AND THERE ARE NO HIGH POINTS OBSTRUCTING FLOW TO EXISTING STORM DRAIN BASINS.
- 3.) CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING STORM DRAINS AND CATCH BASINS FROM LOOSE DEBRIS, GRAVEL, SEDIMENT, SAND OR TRASH DURING THE CONSTRUCTION OF THIS PROJECT AND SHALL BE IN COMPLIANCE WITH GOOD HOUSEKEEPING BMP'S.

STANDARD NOTES FOR EROSION CONTROL PLAN

INCLUDE EROSION AND SEDIMENT CONTROL NOTES ON ALL PLANS. ADDITIONAL NOTES ARE REQUIRED TO DIRECT THE CONTRACTORS AND CREW ON SITE SPECIFIC CONDITIONS.

1. THIS PLAN MAY NOT COVER ALL THE SITUATIONS OR PHASES THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS IN GENERAL. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STORM RUN-OFF FROM LEAVING THE SITE. SEDIMENT ROLLS AND SILT FENCES SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE AND ENTERING THE STORM DRAIN SYSTEM. TEMPORARY EROSION CONTROL DEVICES SHOWN ON GRADING PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
2. EROSION CONTROL FACILITIES SHALL BE MAINTAINED DAILY. THESE FACILITIES SHALL CONTROL AND CONTAIN EROSION-CAUSED SILT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SILT FREE STORM WATER INTO EXISTING AND PROPOSED STORM DRAIN FACILITIES. DESIGN OF THESE FACILITIES MUST BE APPROVED AND UPDATED EACH YEAR BY THE ENGINEER (OCTOBER 15 TO APRIL 15).
3. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES & IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED CONSTRUCTION WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS, AND/OR PROJECT STOP ORDER.
4. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
5. IF EXISTING DRIVEWAY IS REMOVED DURING CONSTRUCTION, THE CONTRACTOR SHALL PLACE DRAIN ROCK AS A GRAVEL ROADWAY (8" MINIMUM THICKNESS FOR THE FULL WIDTH AND LENGTH OF SITE EGRESS AREA AS DEFINED IN THESE PLANS) AT ENTRANCE TO THE SITE. CONSTRUCTION EGRESS SHALL BE EQUIPPED WITH A TRUCK WASHING STATION. ALL TRUCKS SHALL WASH TIRES AND UNDERSIDE OF VEHICLES AS APPROPRIATE WHEN LEAVING THE SITE. ANY MUD THAT IS TRACKED ONTO PUBLIC STREETS SHALL BE REMOVED THE SAME DAY AS REQUIRED BY THE CITY ENGINEER.
6. DURING THE RAINY SEASON, ALL PAVED AREAS ARE TO BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE IS TO BE MAINTAINED SO AS TO MINIMIZE SEDIMENT RUNOFF TO ANY STORM DRAIN SYSTEM.
7. DURING PERIODS WHEN STORMS ARE FORECAST:
 - A. EXCAVATE SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREAS.
 - B. ANY EXCAVATED SOILS SHOULD BE REMOVED FROM THE SITE BY END OF THE DAY.
 - C. WHERE STOCKPILING IS NECESSARY, USE A TARPULIN OR SURROUND THE STOCKPILED MATERIAL WITH FIBER ROLLS, GRAVEL SEDIMENT BARRIER, SILT FENCE, OR OTHER RUNOFF CONTROLS.
 - D. USE INLET CONTROLS AS NEEDED (E.G. BLOCK & GRAVEL SEDIMENT BARRIER) FOR STORM DRAIN ADJACENT TO THE PROJECT SITE OR STOCKPILED SOIL.
8. THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION AND PLACEMENT.
9. STAND-BY CREWS SHALL BE ALERTED BY THE PERMIT APPLICANT OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
10. AFTER OCTOBER 15TH TO APRIL 15TH, ALL EROSION CONTROL MEASURES WILL BE INSPECTED DAILY AND AFTER EACH STORM. BREACHES IN DIKES AND TEMPORARY SWALES WILL BE REPAIRED AT THE CLOSE OF EACH DAY AND WHEREVER RAIN IS FORECAST.
11. AS A PART OF THE EROSION CONTROL MEASURES, UNDERGROUND STORM DRAIN FACILITIES SHALL BE INSTALLED COMPLETE AS SHOWN ON THE IMPROVEMENT PLANS.
12. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES TO THE SATISFACTION OF THE CITY ENGINEER.
13. SANDBAGS SHALL BE STOCKPILED ON SITE AND PLACED AT INTERVALS SHOWN ON EROSION CONTROL PLANS WHEN THE RAIN FORECAST IS 40% OR GREATER, OR WHEN DIRECTED BY THE INSPECTOR.
14. SANDBAGS REFERRED TO IN THE PRECEDING ITEMS MUST BE FULL. APPROVED SANDBAG FILL MATERIALS ARE SAND, DECOMPOSED GRANITE, AND/OR GRAVEL, OR OTHER MATERIALS APPROVED BY THE INSPECTOR.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SAFETY OF VEHICLES OPERATING IN ROADWAY ADJACENT TO EROSION CONTROL FACILITIES.
16. AFTER RAINSTORM CONTRACTOR SHALL CHECK FOR AND REMOVE SEDIMENT TRAPPED BY SANDBAGS AT STAGING AREAS. REPLACE SANDBAGS IF DETERIORATION IS EVIDENT.
17. DUST CONTROL SHOULD BE PRACTICED ON ALL CONSTRUCTION SITE WITH EXPOSED SOIL AS NEEDED. IT IS IMPORTANT IN WINDY OR WIND-PRONE AREAS. DUST CONTROL IS CONSIDERED A TEMPORARY MEASURE AND AS AN INTERMEDIATE TREATMENT BETWEEN SITE DISTURBANCE AND CONSTRUCTION, PAVING OR REVEGETATION.

EROSION AND SEDIMENT CONTROL PLAN WBW POND 3

SCALE: 1" = 12'-0" 1" = 12'-0"



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CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN CIVIL

EROSION AND SEDIMENT CONTROL PLAN WBW POND 3
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=12'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-C5.0

CONSTRUCTION NOTES:

- 36 PROVIDE FIBER ROLL IN ACCORDANCE WITH MONTEREY COUNTY CONSTRUCTION SITE BMP HANDBOOK.
- 39 PROVIDE STABILIZED CONSTRUCTION ACCESS IN ACCORDANCE WITH MONTEREY COUNTY CONSTRUCTION SITE BMP HANDBOOK.
- 40 PROVIDE CONCRETE WASHOUT IN ACCORDANCE WITH MONTEREY COUNTY CONSTRUCTION SITE BMP HANDBOOK.

NOTES:

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 (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.

GENERAL NOTES:

- 1.) FINISHED GRADE ELEVATIONS AROUND FOUNDATIONS SHALL MAINTAIN A MINIMUM OF 2% SLOPE FOR FIVE HORIZONTAL FEET AROUND EDGE OF FOUNDATION TO PROVIDE POSITIVE DRAINAGE AWAY FROM FOUNDATION.
- 2.) FINISHED GRADE ELEVATIONS SHALL CONFORM TO THE POINTS CALLED OUT ON THIS PLAN. CONTRACTOR SHALL VERIFY THAT FINISHED GRADE IS SMOOTH AND THERE ARE NO HIGH POINTS OBSTRUCTING FLOW TO EXISTING STORM DRAIN BASINS.
- 3.) CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING STORM DRAINS AND CATCH BASINS FROM LOOSE DEBRIS, GRAVEL, SEDIMENT, SAND OR TRASH DURING THE CONSTRUCTION OF THIS PROJECT AND SHALL BE IN COMPLIANCE WITH GOOD HOUSEKEEPING BMP'S.

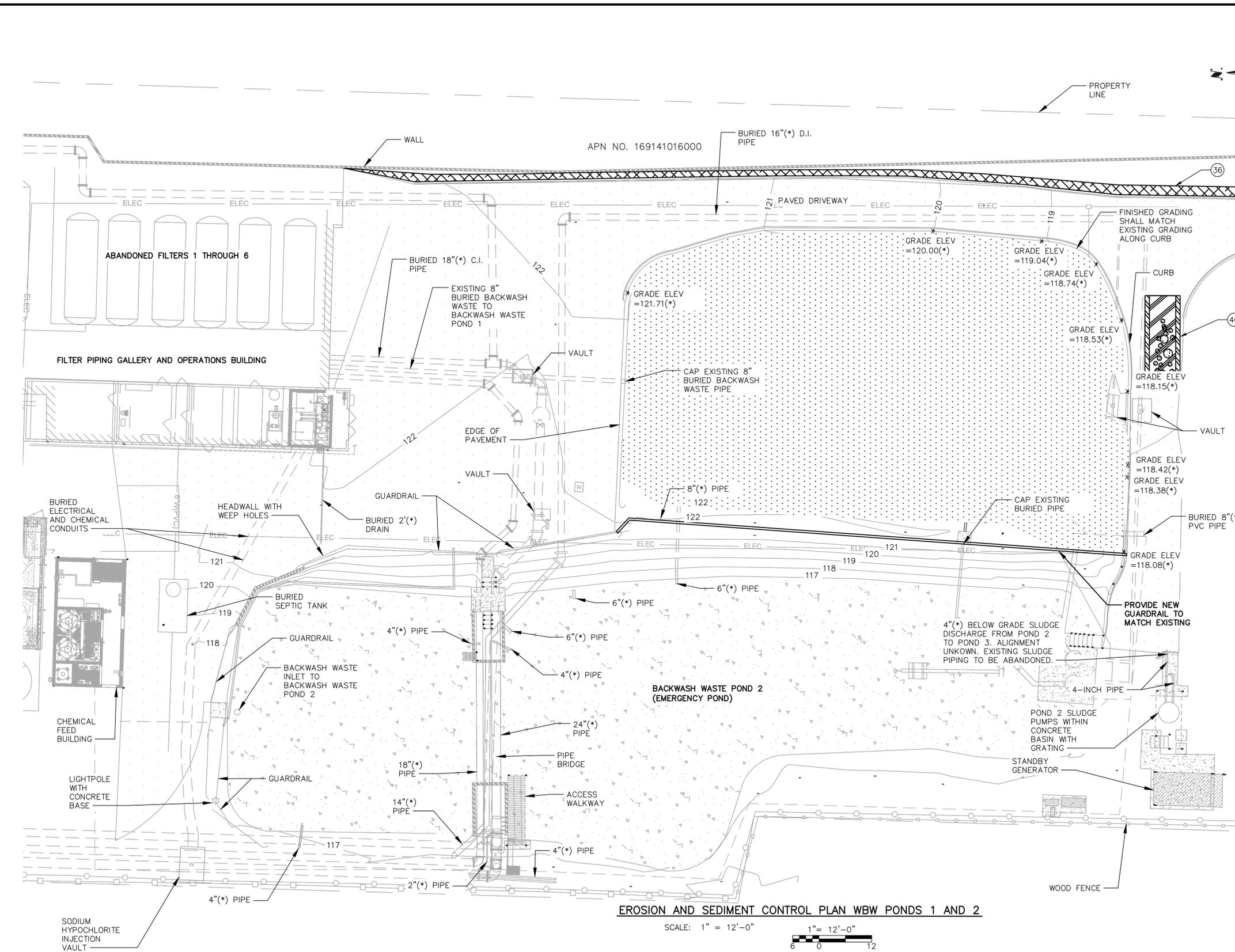
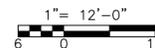
STANDARD NOTES FOR EROSION CONTROL PLAN

INCLUDE EROSION AND SEDIMENT CONTROL NOTES ON ALL PLANS. ADDITIONAL NOTES ARE REQUIRED TO DIRECT THE CONTRACTORS AND CREW ON SITE SPECIFIC CONDITIONS.

1. THIS PLAN MAY NOT COVER ALL THE SITUATIONS OR PHASES THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS IN GENERAL. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STORM RUN-OFF FROM LEAVING THE SITE. SEDIMENT ROLLS AND SILT FENCES SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE AND ENTERING THE STORM DRAIN SYSTEM. TEMPORARY EROSION CONTROL DEVICES SHOWN ON GRADING PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
2. EROSION CONTROL FACILITIES SHALL BE MAINTAINED DAILY. THESE FACILITIES SHALL CONTROL AND CONTAIN EROSION-CAUSED SILT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SILT FREE STORM WATER INTO EXISTING AND PROPOSED STORM DRAIN FACILITIES. DESIGN OF THESE FACILITIES MUST BE APPROVED AND UPDATED EACH YEAR BY THE ENGINEER (OCTOBER 15 TO APRIL 15).
3. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES & IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED CONSTRUCTION WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS, AND/OR PROJECT STOP ORDER.
4. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
5. IF EXISTING DRIVEWAY IS REMOVED DURING CONSTRUCTION, THE CONTRACTOR SHALL PLACE DRAIN ROCK AS A GRAVEL ROADWAY (8" MINIMUM THICKNESS FOR THE FULL WIDTH AND LENGTH OF SITE EGRESS AREA AS DEFINED IN THESE PLANS) AT ENTRANCE TO THE SITE. CONSTRUCTION EGRESS SHALL BE EQUIPPED WITH A TRUCK WASHING STATION. ALL TRUCKS SHALL WASH TIRES AND UNDERSIDE OF VEHICLES AS APPROPRIATE WHEN LEAVING THE SITE. ANY MUD THAT IS TRACKED ONTO PUBLIC STREETS SHALL BE REMOVED THE SAME DAY AS REQUIRED BY THE CITY ENGINEER.
6. DURING THE RAINY SEASON, ALL PAVED AREAS ARE TO BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE IS TO BE MAINTAINED SO AS TO MINIMIZE SEDIMENT RUNOFF TO ANY STORM DRAIN SYSTEM.
7. DURING PERIODS WHEN STORMS ARE FORECAST:
 - A. EXCAVATE SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREAS.
 - B. ANY EXCAVATED SOILS SHOULD BE REMOVED FROM THE SITE BY END OF THE DAY.
 - C. WHERE STOCKPILING IS NECESSARY, USE A TARPULIN OR SURROUND THE STOCKPILED MATERIAL WITH FIBER ROLLS, GRAVEL SEDIMENT BARRIER, SILT FENCE, OR OTHER RUNOFF CONTROLS.
 - D. USE INLET CONTROLS AS NEEDED (E.G. BLOCK & GRAVEL SEDIMENT BARRIER) FOR STORM DRAIN ADJACENT TO THE PROJECT SITE OR STOCKPILED SOIL.
8. THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION AND PLACEMENT.
9. STAND-BY CREWS SHALL BE ALERTED BY THE PERMIT APPLICANT OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
10. AFTER OCTOBER 15TH TO APRIL 15TH, ALL EROSION CONTROL MEASURES WILL BE INSPECTED DAILY AND AFTER EACH STORM. BREACHES IN DIKES AND TEMPORARY SWALES WILL BE REPAIRED AT THE CLOSE OF EACH DAY AND WHEREVER RAIN IS FORECAST.
11. AS A PART OF THE EROSION CONTROL MEASURES, UNDERGROUND STORM DRAIN FACILITIES SHALL BE INSTALLED COMPLETE AS SHOWN ON THE IMPROVEMENT PLANS.
12. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES TO THE SATISFACTION OF THE CITY ENGINEER.
13. SANDBAGS SHALL BE STOCKPILED ON SITE AND PLACED AT INTERVALS SHOWN ON EROSION CONTROL PLANS WHEN THE RAIN FORECAST IS 40% OR GREATER, OR WHEN DIRECTED BY THE INSPECTOR.
14. SANDBAGS REFERRED TO IN THE PRECEDING ITEMS MUST BE FULL. APPROVED SANDBAG FILL MATERIALS ARE SAND, DECOMPOSED GRANITE, AND/OR GRAVEL, OR OTHER MATERIALS APPROVED BY THE INSPECTOR.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SAFETY OF VEHICLES OPERATING IN ROADWAY ADJACENT TO EROSION CONTROL FACILITIES.
16. AFTER RAINSTORM CONTRACTOR SHALL CHECK FOR AND REMOVE SEDIMENT TRAPPED BY SAND BAGS AT STAGING AREAS. REPLACE SANDBAGS IF DETERIORATION IS EVIDENT.
17. DUST CONTROL SHOULD BE PRACTICED ON ALL CONSTRUCTION SITE WITH EXPOSED SOIL AS NEEDED. IT IS IMPORTANT IN WINDY OR WIND-PRONE AREAS. DUST CONTROL IS CONSIDERED A TEMPORARY MEASURE AND AS AN INTERMEDIATE TREATMENT BETWEEN SITE DISTURBANCE AND CONSTRUCTION, PAVING OR REVEGETATION.

EROSION AND SEDIMENT CONTROL PLAN WBW PONDS 1 AND 2

SCALE: 1" = 12'-0"



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 NO. C 83580 DATE: -/-/-

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 CARMEL, CA 93923

CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
 PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
 CIVIL
EROSION AND SEDIMENT CONTROL PLAN WBW PONDS 1 AND 2
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=12'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-C5.1

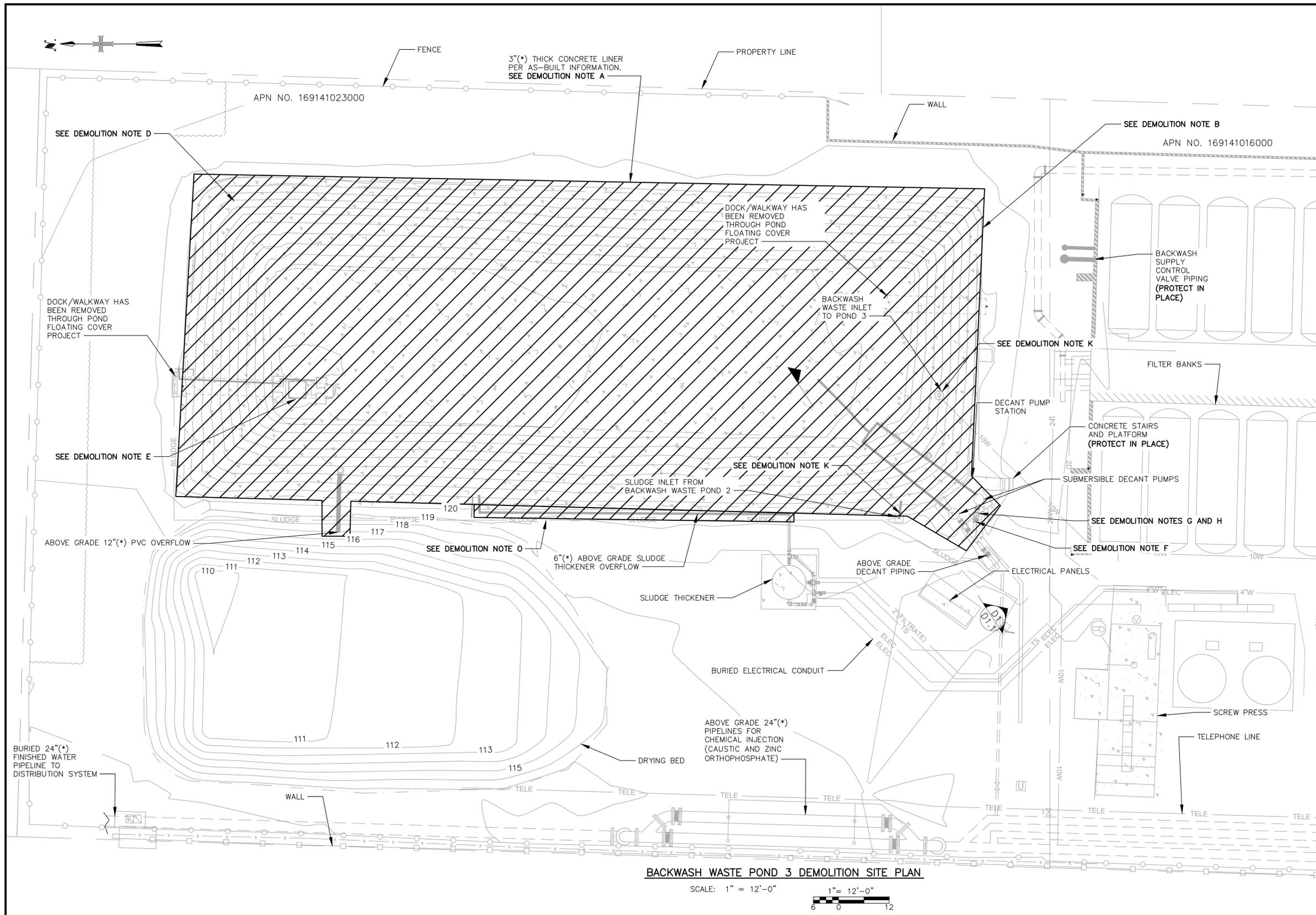
DEMOLITION NOTES

- A. DEWATER BACKWASH WASTE STORAGE POND AND REMOVE AND DISPOSE OF ALL SLUDGE. DEMOLISH AND REMOVE EXISTING BACKWASH WASTE STORAGE POND CONCRETE LINER. DISPOSE OF IN ACCORDANCE WITH REGULATORY REQUIREMENTS. AS DESCRIBED IN DEMOLITION NOTE D.
- B. DEMOLISH AND REMOVE ALL EQUIPMENT WITHIN EXISTING BACKWASH WASTE STORAGE POND INCLUDING MIXERS, PUMPS, AND FLOATING DECANTERS. CONFIRM ITEMS TO SALVAGE WITH OWNER
- D. FILL BACKWASH WASTE POND WITH ENGINEERED/NON-EXPANSIVE NATIVE FILL. FILL SHALL MEET ALL REQUIREMENTS OF THE BEGONIA IRON REMOVAL PLANT GEOTECHNICAL REPORT (PACIFIC CREST ENGINEERING, MARCH 26, 2025) INCLUDING PLACING IN MAXIMUM 8-INCH LIFTS BEFORE COMPACTION AND PROVIDING A MINIMUM OF 5 FEET ENGINEERED FILL BENEATH ALL TANK FOUNDATIONS AND STRUCTURAL IMPROVEMENTS COMPACTED TO GEOTECHNICAL REQUIREMENTS DESCRIBED WITHIN THE GEOTECHNICAL REPORT. PER GEOTECHNICAL REPORT REQUIREMENTS A MAXIMUM ENGINEERED FILL DIFFERENTIAL BELOW NEW BACKWASH TANKS IS LIMITED TO 4 FEET.
- E. DEMOLISH AND REMOVE ALL ELECTRICAL PANELS, CONDUIT AND OTHER APPURTENANCES ASSOCIATED WITH DEMOLISHED EQUIPMENT. SEE ELECTRICAL DRAWINGS.
- F. DEMOLISH AND REMOVE ABOVE GRADE PIPING TO EXTENTS REQUIRED TO FACILITATE CONNECTION OF NEW DECANT PUMP STATION DISCHARGE. DEMOLISH AND REMOVE HANDRAIL. PROTECT IN PLACE EXISTING CONCRETE PLATFORM AND STAIRS.
- G. DEMOLISH AND REMOVE EXISTING DECANT PUMPS, FILL CANS WITH CLSM.
- H. DEMOLISH AND REMOVE EXISTING WINCH SYSTEMS ASSOCIATED WITH DECANT PUMP STATION/FLOATING DECANTERS.
- K. DEMOLISH AND REMOVE EXISTING PIPING TO MINIMUM 3 FEET BELOW GRADE AND PROVIDE RESTRAINED BLIND FLANGE ON EXISTING PIPE.
- O. DEMOLISH AND REMOVE ABOVE GRADE SLUDGE THICKENER OVERFLOW PIPING TO POINT OF CONNECTION.
- P. COORDINATE ALL DEMOLITION WORK AND SHUT DOWN OF EXISTING FACILITIES WITH OWNER'S OPERATIONS IN ACCORDANCE WITH TECHNICAL SPECIFICATION 01047.

NOTES:

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1. CONTRACTOR SHALL PREPARE MOPO AS SUBMITTAL - SEE SPECIFICATION SECTION 01047.
2. COORDINATE ALL DEMOLITION WORK AND SHUT DOWN OF EXISTING FACILITIES WITH OWNER'S OPERATIONS IN ACCORDANCE WITH TECHNICAL SPECIFICATION 01047.



BACKWASH WASTE POND 3 DEMOLITION SITE PLAN

SCALE: 1" = 12'-0"
 1" = 12'-0"
 6 0 12



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CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
 PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN DEMOLITION
BACKWASH WASTE POND 3 DEMOLITION SITE PLAN
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

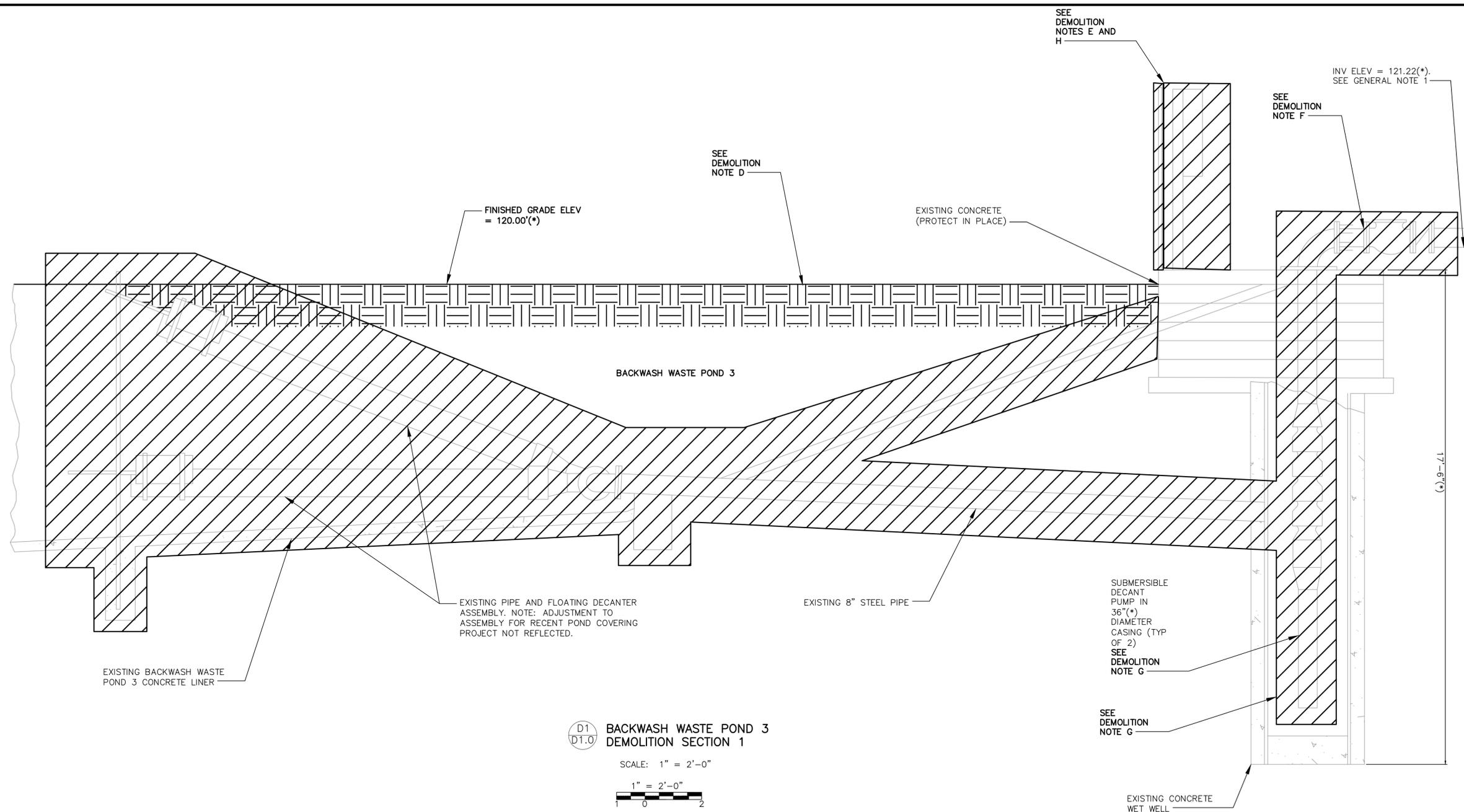
CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=12'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-D1.0

DEMOLITION NOTES

- D. FILL BACKWASH WASTE POND WITH ENGINEERED/NON-EXPANSIVE NATIVE FILL. FILL SHALL MEET ALL REQUIREMENTS OF THE BEGONIA IRON REMOVAL PLANT GEOTECHNICAL REPORT (PACIFIC CREST ENGINEERING, MARCH 26, 2025) INCLUDING PLACING IN MAXIMUM 8-INCH LIFTS BEFORE COMPACTION AND PROVIDING A MINIMUM OF 5 FEET ENGINEERED FILL BENEATH ALL TANK FOUNDATIONS AND STRUCTURAL IMPROVEMENTS COMPACTED TO GEOTECHNICAL REQUIREMENTS DESCRIBED WITHIN THE GEOTECHNICAL REPORT. PER GEOTECHNICAL REPORT REQUIREMENTS A MAXIMUM ENGINEERED FILL DIFFERENTIAL BELOW NEW BACKWASH TANKS IS LIMITED TO 4 FEET.
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- 1. EXISTING INVERT ELEVATION UNAVAILABLE FROM AS-BUILTS. CONTRACTOR TO VERIFY EXISTING PIPELINE DISCHARGE AND MATCH NEW DECANT PUMP STATION TIE-IN PRIOR TO INSTALLATION OF NEW DECANT PUMP STATION TIE-IN.
- 2. COORDINATE ALL DEMOLITION WORK AND SHUT DOWN OF EXISTING FACILITIES WITH OWNER'S OPERATIONS IN ACCORDANCE WITH TECHNICAL SPECIFICATION 01047.



D1
D1.0 BACKWASH WASTE POND 3
DEMOLITION SECTION 1

SCALE: 1" = 2'-0"

BACKWASH WASTE POND 3 DEMOLITION SECTIONS



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CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN DEMOLITION BACKWASH WASTE POND 3 DEMOLITION SECTIONS 9210 CARMEL VALLEY ROAD CARMEL CA, 93923		
CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1" = 2'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	D1.1

DEMOLITION NOTES

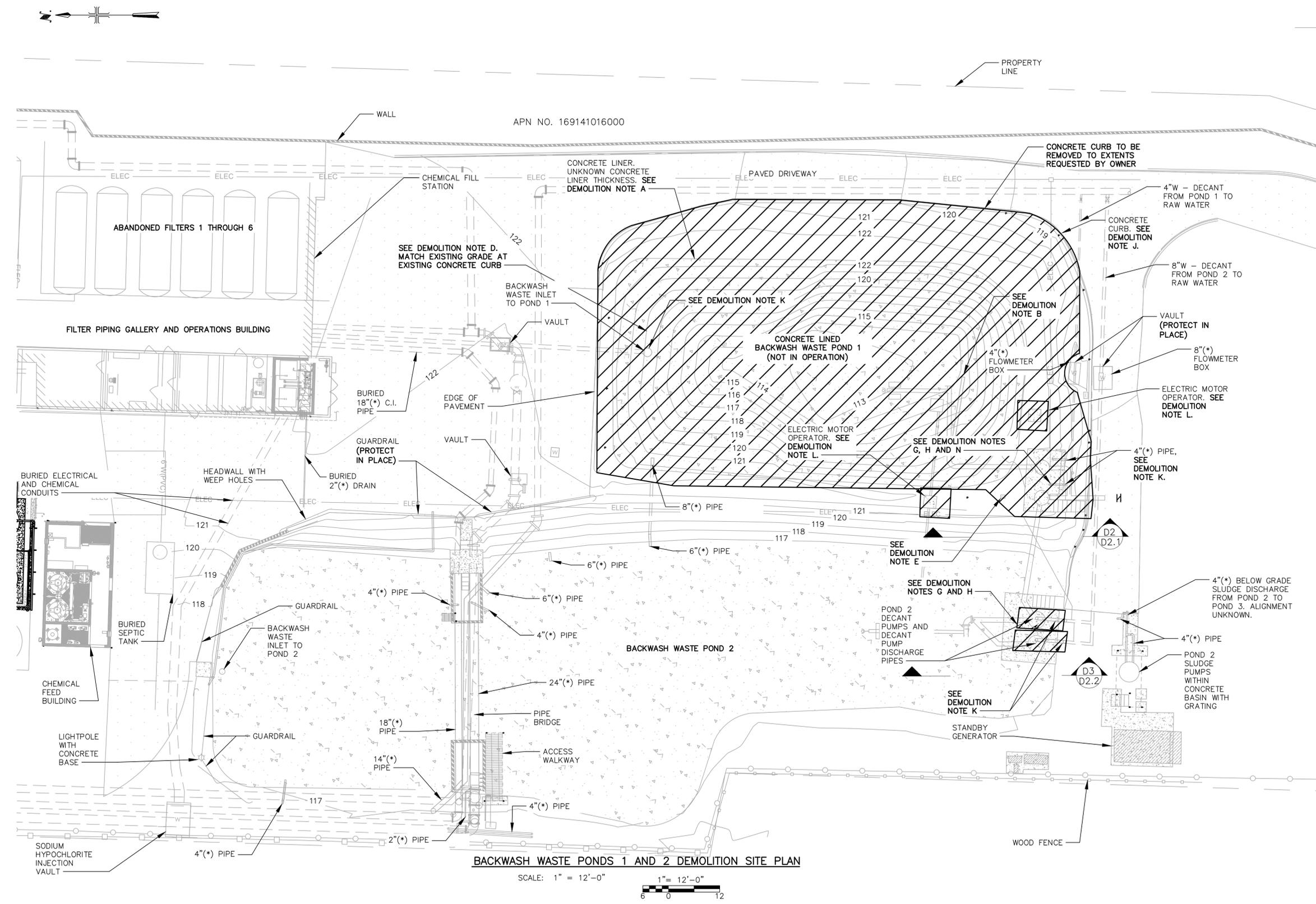
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- G. DEMOLISH AND REMOVE EXISTING DECAT PUMPS, FILL CANS WITH CLSM.
- H. DEMOLISH AND REMOVE EXISTING WINCH SYSTEMS ASSOCIATED WITH DECAT PUMP STATION/FLOATING DECATERS.
- J. DEMOLISH AND REMOVE CONCRETE CURB TO EXTENTS REQUESTED BY OWNER.
- K. DEMOLISH AND REMOVE EXISTING PIPING TO MINIMUM 3 FEET BELOW GRADE AND PROVIDE RESTRAINED BLIND FLANGE ON EXISTING PIPE.
- L. DEMOLISH AND REMOVE ELECTRIC MOTOR OPERATORS. PROVIDE RESTRAINED BLIND FLANGE ON PIPING FROM BACKWASH WASTE POND 2 TO BACKWASH WASTE POND 1.
- N. DEMOLISH AND REMOVE EXISTING DECAT PUMP STATION STRUCTURE FOR BACKWASH WASTE POND 1.

NOTES:

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1. COORDINATE ALL DEMOLITION WORK AND SHUT DOWN OF EXISTING FACILITIES WITH OWNER'S OPERATIONS IN ACCORDANCE WITH TECHNICAL SPECIFICATION 01047.



BACKWASH WASTE PONDS 1 AND 2 DEMOLITION SITE PLAN

SCALE: 1" = 12'-0"
 1" = 12'-0"
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CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
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DATE OCTOBER 2025

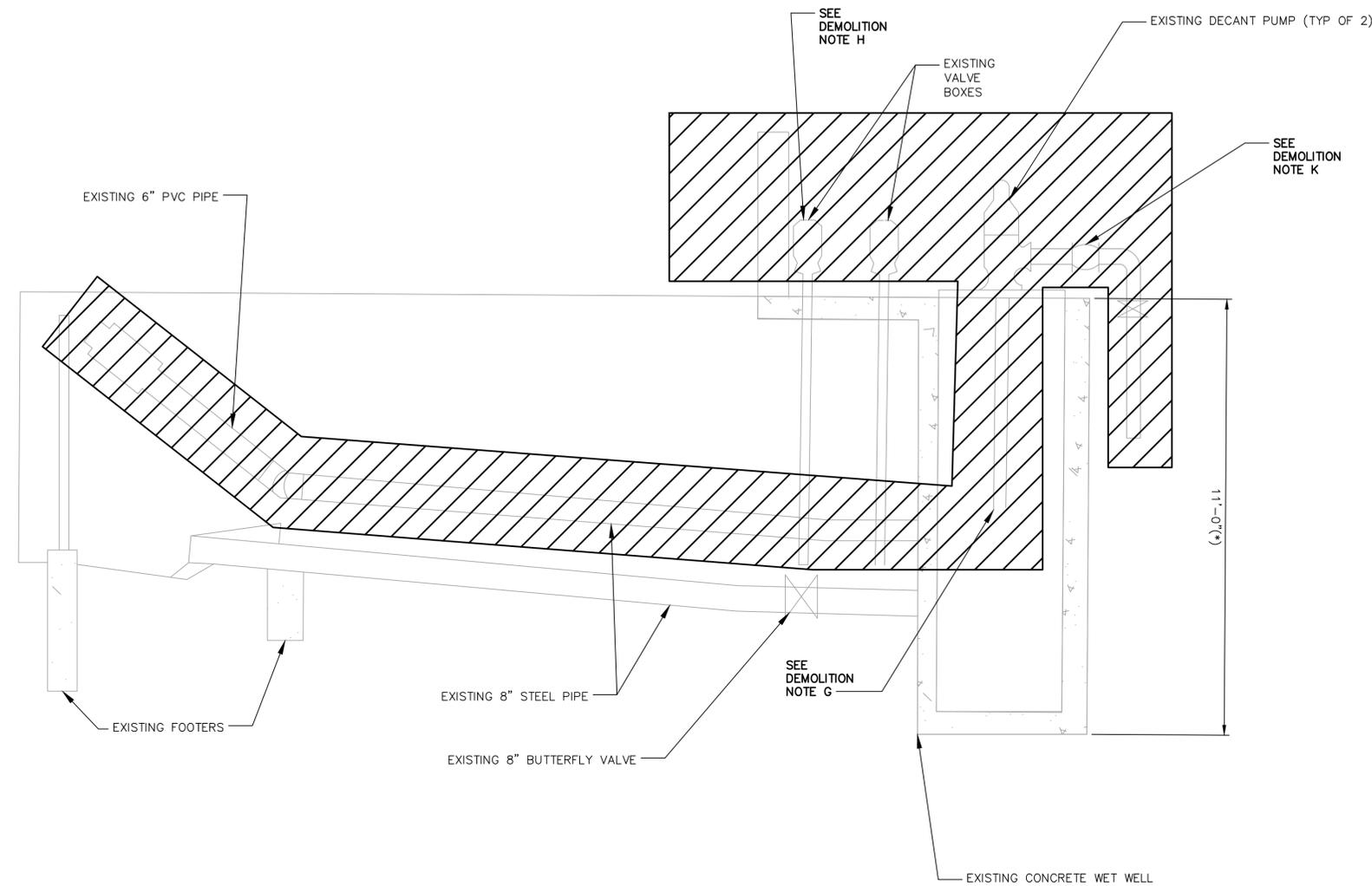
PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN DEMOLITION
BACKWASH WASTE PONDS 1 AND 2 DEMOLITION SITE PLAN
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=12'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-D2.0

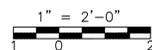
DEMOLITION NOTES

- G. DEMOLISH AND REMOVE EXISTING DECANT PUMPS, FILL CANS WITH CLSM.
- H. DEMOLISH AND REMOVE EXISTING WINCH SYSTEMS ASSOCIATED WITH DECANT PUMP STATION/FLOATING DECANTERS.
- K. DEMOLISH AND REMOVE EXISTING PIPING TO MINIMUM 3 FEET BELOW GRADE AND PROVIDE RESTRAINED BLIND FLANGE ON EXISTING PIPE.



D2
D2.0 BACKWASH WASTE POND 1
DEMOLITION SECTION

SCALE: 1" = 2'-0"



BACKWASH WASTE POND 1 DEMOLITION SECTION

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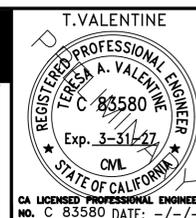
1. COORDINATE ALL DEMOLITION WORK AND SHUT DOWN OF EXISTING FACILITIES WITH OWNER'S OPERATIONS IN ACCORDANCE WITH TECHNICAL SPECIFICATION 01047.



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DRAWN BY D.BRODERICK
PROJECT ENG'R S.TERRELL/T.VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
DEMOLITION
BACKWASH WASTE POND 1 DEMOLITION SECTION
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.

COASTAL DIVISION

USE DIMENSIONS ONLY
SCALE 1" = 2'-0"

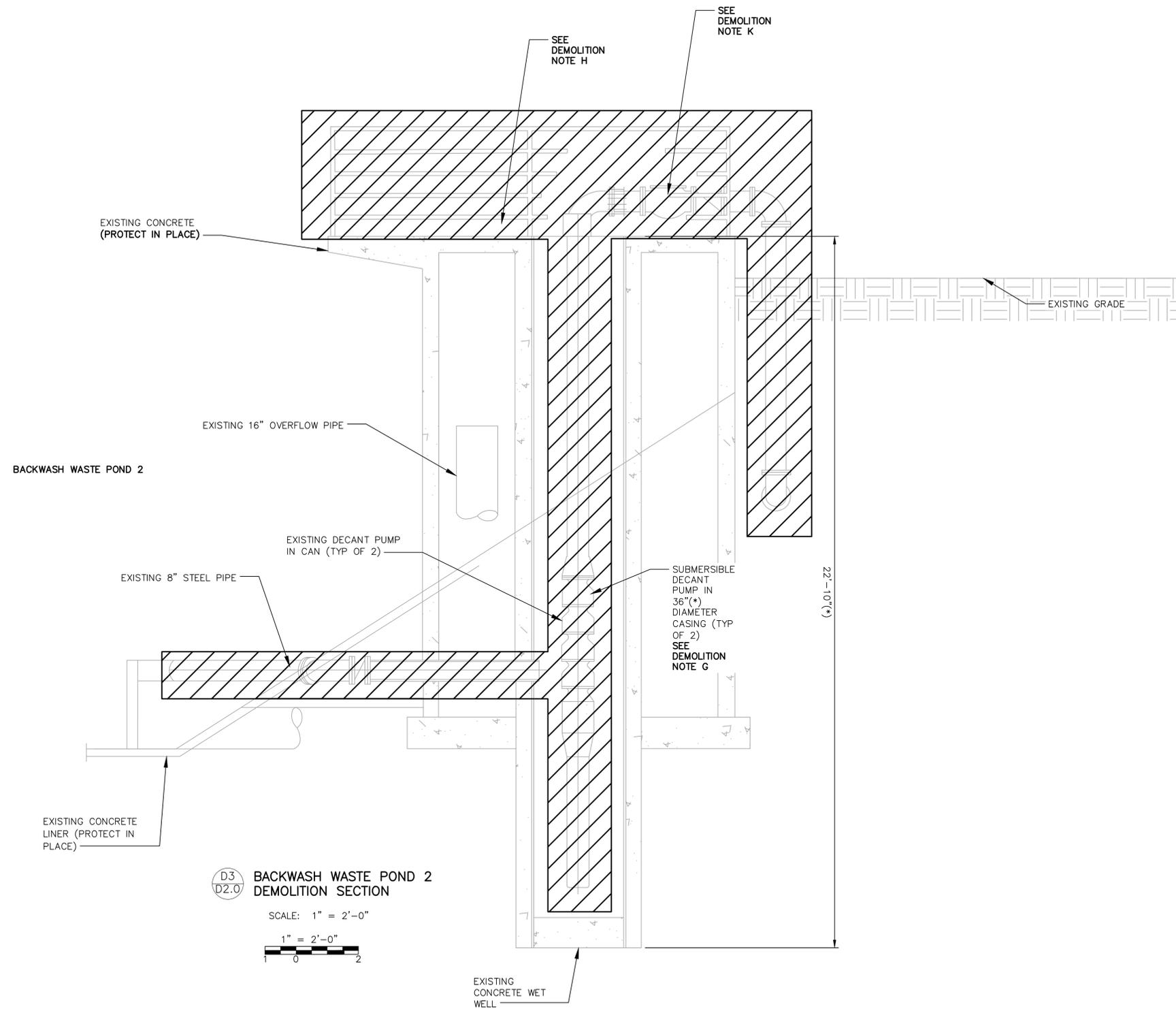
USE APPROVED DRAWINGS ONLY
FOR CONSTRUCTION PURPOSES

90% SUBMITTAL

D2.1

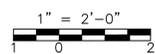
DEMOLITION NOTES

- G. DEMOLISH AND REMOVE EXISTING DECANT PUMPS, FILL CANS WITH CLSM.
- H. DEMOLISH AND REMOVE EXISTING WINCH SYSTEMS ASSOCIATED WITH DECANT PUMP STATION/FLOATING DECATERS.
- K. DEMOLISH AND REMOVE EXISTING PIPING TO MINIMUM 3 FEET BELOW GRADE AND PROVIDE RESTRAINED BLIND FLANGE ON EXISTING PIPE.



D3
D2.0 BACKWASH WASTE POND 2
DEMOLITION SECTION

SCALE: 1" = 2'-0"



BACKWASH WASTE POND 2 DEMOLITION SECTION

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CARMEL, CA 93923

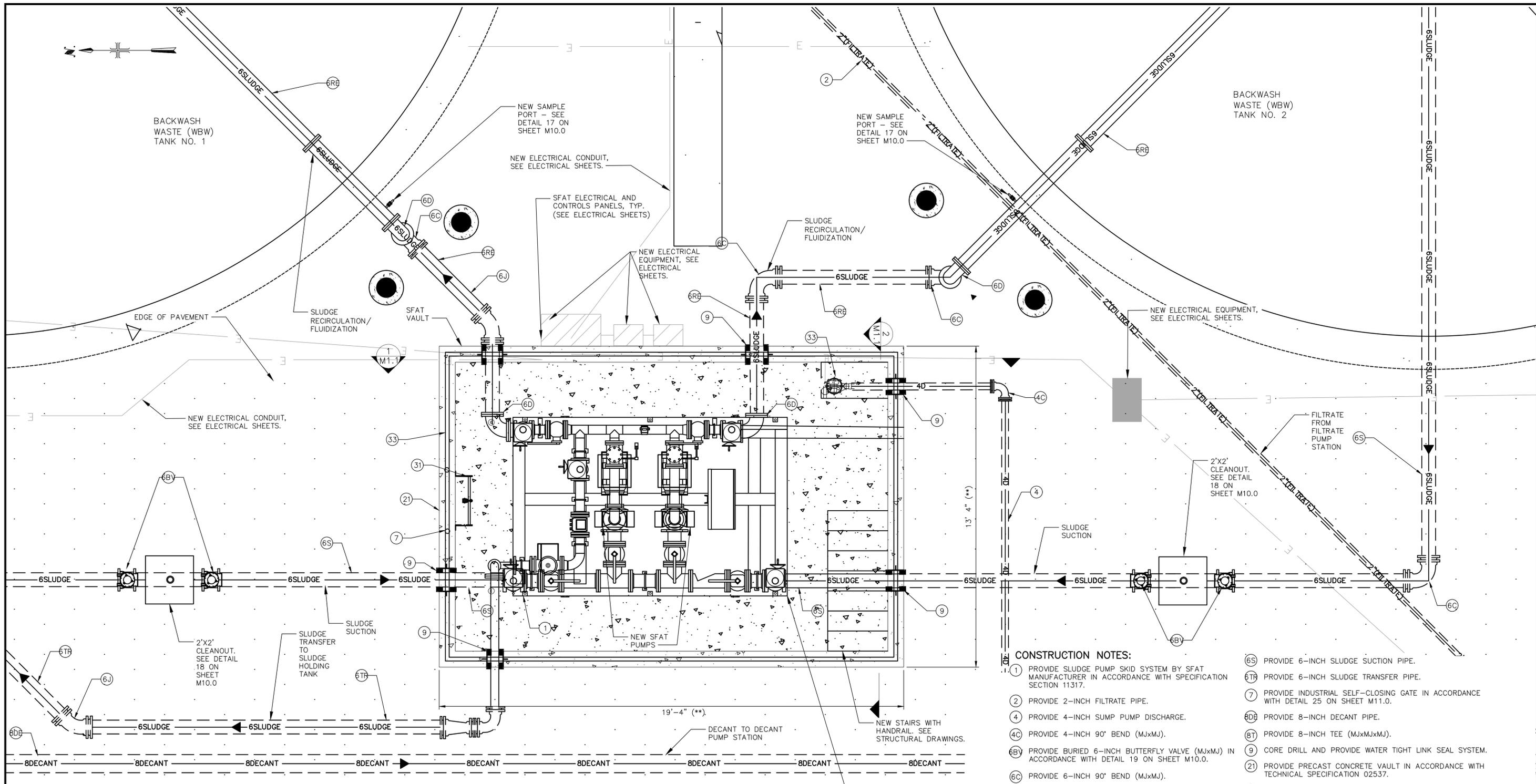
CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

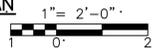
PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN DEMOLITION BACKWASH WASTE POND 2 DEMOLITION SECTION 9210 CARMEL VALLEY ROAD CARMEL CA, 93923			
CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	USE DIMENSIONS ONLY SCALE 1" = 2'-0"
90% SUBMITTAL		D2.2	



SFAT PUMP SKID AND VAULT ENLARGED PLAN

SCALE: 1" = 2'-0"



NOTES:

- (*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.
- (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.
- 1. CONTOUR ELEVATIONS EVERY 1 FOOT.

CONSTRUCTION NOTES:

- 1. PROVIDE SLUDGE PUMP SKID SYSTEM BY SFAT MANUFACTURER IN ACCORDANCE WITH SPECIFICATION SECTION 11317.
- 2. PROVIDE 2-INCH FILTRATE PIPE.
- 4. PROVIDE 4-INCH SUMP PUMP DISCHARGE.
- 4C. PROVIDE 4-INCH 90° BEND (MJxMJ).
- 6B. PROVIDE BURIED 6-INCH BUTTERFLY VALVE (MJxMJ) IN ACCORDANCE WITH DETAIL 19 ON SHEET M10.0.
- 6C. PROVIDE 6-INCH 90° BEND (MJxMJ).
- 6D. PROVIDE 6-INCH 90° BEND (FLGxFLG).
- 6J. PROVIDE 6-INCH 45° BEND (MJxMJ).
- 6R. PROVIDE 6-INCH x 4-INCH REDUCER (FLGxFLG).
- 6RB. PROVIDE 6-INCH SLUDGE RECIRCULATION/FLUIDIZATION PIPE.
- 6S. PROVIDE 6-INCH SLUDGE SUCTION PIPE.
- 6TR. PROVIDE 6-INCH SLUDGE TRANSFER PIPE.
- 7. PROVIDE INDUSTRIAL SELF-CLOSING GATE IN ACCORDANCE WITH DETAIL 25 ON SHEET M11.0.
- 8D. PROVIDE 8-INCH DECANT PIPE.
- 8T. PROVIDE 8-INCH TEE (MJxMJxMJ).
- 9. CORE DRILL AND PROVIDE WATER TIGHT LINK SEAL SYSTEM.
- 21. PROVIDE PRECAST CONCRETE VAULT IN ACCORDANCE WITH TECHNICAL SPECIFICATION 02537.
- 22. PROVIDE NEW STAIRS WITH HANDRAIL SEE DETAIL 23 ON SHEET M11.0.
- 30. PROVIDE NEW SUMP PUMP SYSTEM INCLUDING CHECK VALVE AND ISOLATION VALVE SUBMIT FOR APPROVAL.
- 31. PROVIDE NEW VAULT STAINLESS STEEL ACCESS LADDER. SUBMIT FOR APPROVAL.
- 33. PROVIDE SAFETY RAILING IN ACCORDANCE WITH DETAIL 24 ON SHEET M11.0.



REVISIONS	REVISIONS
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VALENTINE ENVIRONMENTAL ENGINEERS, LLC
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CARMEL, CA 93923



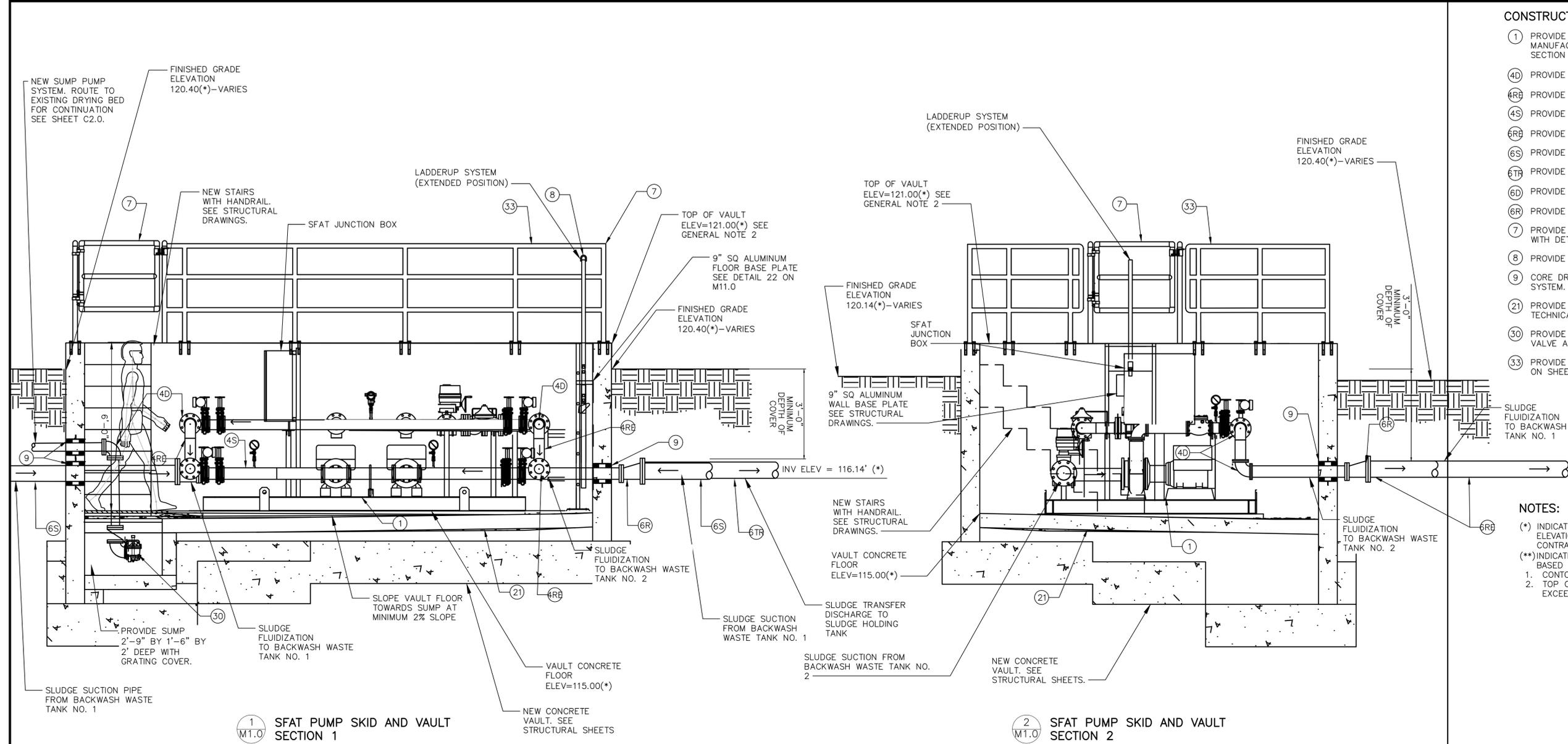
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PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
MECHANICAL
SFAT PUMP SKID AND VAULT ENLARGED PLAN
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	USE DIMENSIONS ONLY SCALE 1"=2'-0"
	90% SUBMITTAL		XXXXXX-XXXX-M1.0



- CONSTRUCTION NOTES:**
- ① PROVIDE SLUDGE PUMP SKID SYSTEM BY SFAT MANUFACTURER IN ACCORDANCE WITH SPECIFICATION SECTION 11317
 - ④D PROVIDE 4-INCH 90° BEND (FLGxFLG).
 - ④R PROVIDE 4-INCH SLUDGE RECIRCULATION/FLUIDIZATION
 - ④S PROVIDE 4-INCH SLUDGE SUCTION PIPE.
 - ⑥R PROVIDE 6-INCH SLUDGE RECIRCULATION/FLUIDIZATION PIPE.
 - ⑥S PROVIDE 6-INCH SLUDGE SUCTION PIPE.
 - ⑥TR PROVIDE 6-INCH SLUDGE TRANSFER PIPE.
 - ⑥D PROVIDE 6-INCH 90° BEND (FLGxFLG).
 - ⑥R PROVIDE 6-INCH x 4-INCH REDUCER (FLGxFLG).
 - ⑦ PROVIDE INDUSTRIAL SELF-CLOSING GATE IN ACCORDANCE WITH DETAIL 25 ON SHEET M11.0.
 - ⑧ PROVIDE LADDER SAFETY POST.
 - ⑨ CORE DRILL AND PROVIDE WATER-TIGHT LINK SEAL SYSTEM.
 - ⑫ PROVIDE PRECAST CONCRETE VAULT IN ACCORDANCE WITH TECHNICAL SPECIFICATION 02537.
 - ⑩ PROVIDE NEW SUMP PUMP SYSTEM INCLUDING CHECK VALVE AND ISOLATION VALVE. SUBMIT FOR APPROVAL.
 - ⑬ PROVIDE SAFETY RAILING IN ACCORDANCE WITH DETAIL 24 ON SHEET M11.0.

- NOTES:**
- (*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.
 - (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.
 - 1. CONTOUR ELEVATIONS EVERY 1 FOOT.
 - 2. TOP OF CONCRETE VAULT SHALL BE PLACED TO MEET OR EXCEED 500 YEAR FLOODPLAIN ELEVATION OF 121.00 FEET

① SFAT PUMP SKID AND VAULT SECTION 1
 SCALE: 1" = 2'-0"

② SFAT PUMP SKID AND VAULT SECTION 2
 SCALE: 1" = 2'-0"



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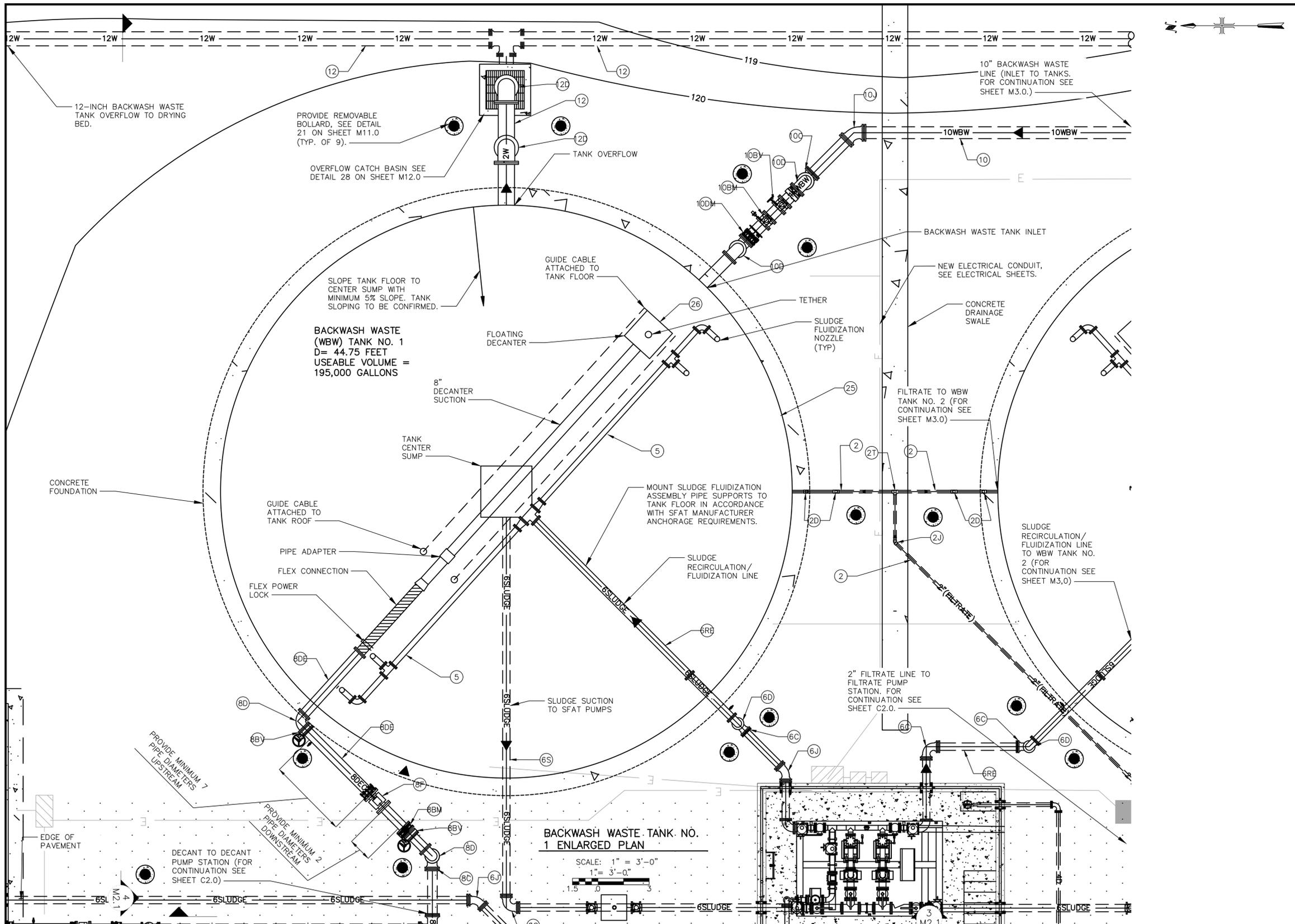
T. VALENTINE
 REGISTERED PROFESSIONAL ENGINEER
 TERESA A. VALENTINE
 C 83580
 Exp. 3-31-27
 CIVIL
 STATE OF CALIFORNIA
 CA LICENSED PROFESSIONAL ENGINEER
 NO. C 83580 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
 200 CLOCK TOWER PL BUILDING B, SUITE B200
 CARMEL, CA 93923

 DRAWN BY D. BRODERICK
 PROJECT ENG'R S. TERRELL/T. VALENTINE
 DATE OCTOBER 2025
 PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
 MECHANICAL
 SFAT PUMP SKID AND VAULT SECTIONS
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=2'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M1.1



- CONSTRUCTION NOTES:**
- (2) PROVIDE 2-INCH FILTRATE PIPE.
 - (2D) PROVIDE 2-INCH 90° BEND (PVCxPVC).
 - (2J) PROVIDE 2-INCH 45° BEND (PVCxPVC).
 - (2T) PROVIDE 2-INCH TEE (PVCxPVCxPVC).
 - (5) PROVIDE SLUDGE FLUIDIZATION PIPING ASSEMBLIES AND PIPE SUPPORTS BY SFAT MANUFACTURER IN ACCORDANCE WITH SPECIFICATION 11317.
 - (6C) PROVIDE 6-INCH 90° BEND (MjxMj).
 - (6D) PROVIDE 6-INCH 90° BEND (FLGxFLG).
 - (6J) PROVIDE 6-INCH 45° BEND (MjxMj).
 - (6R) PROVIDE 6-INCH SLUDGE RECIRCULATION/FLUIDIZATION PIPE.
 - (6S) PROVIDE 6-INCH SLUDGE SUCTION PIPE.
 - (8B) PROVIDE 8-INCH MOTORIZED BUTTERFLY VALVE.
 - (8BY) PROVIDE 8-INCH MANUAL BUTTERFLY VALVE.
 - (8C) PROVIDE 8-INCH 90° BEND (MjxMj).
 - (8D) PROVIDE 8-INCH 90° BEND (FLGxFLG).
 - (8DF) PROVIDE 8-INCH DECANT PIPE.
 - (8F) PROVIDE 8-INCH FLOWMETER (FLGxFLG).
 - (10) PROVIDE 10-INCH BACKWASH WASTE PIPING.
 - (10B) PROVIDE 10-INCH MOTORIZED BUTTERFLY VALVE.
 - (10BY) PROVIDE 10-INCH MANUAL BUTTERFLY VALVE.
 - (10C) PROVIDE 10-INCH 90° BEND (MjxMj).
 - (10D) PROVIDE 10-INCH 90° BEND (FLGxFLG).
 - (10DM) PROVIDE 10" EXPANSION JOINT WITH LIMIT CONTROL RODS, PROCO MODEL 233 OR EQUAL. EXPANSION JOINT SHALL BE NSF 61 CERTIFIED.
 - (10J) PROVIDE 10-INCH 45° BEND (MjxMj).
 - (12) PROVIDE 12-INCH OVERFLOW PIPING.
 - (2C) PROVIDE 12-INCH 90° BEND (MjxMj).
 - (2D) PROVIDE 12-INCH 90° BEND (FLGxFLG).
 - (19) PROVIDE REMOVABLE BOLLARD, SEE DETAIL 21 ON SHEET M11.0.
 - (25) PROVIDE BACKWASH WASTE STORAGE TANK MEETING ALL REQUIREMENTS FOR POTABLE WATER USE WITH USEABLE VOLUME OF 195,000 GALLONS (AQUASTORE GLASS-FUSED-TO-STEEL TANK) AND FOUNDATION. SEE TECHNICAL SPECIFICATION SECTION 13212.
 - (26) PROVIDE FLOATING DECANTER ASSEMBLY BY SFAT MANUFACTURER IN ACCORDANCE WITH SPECIFICATION SECTION 11317.

- NOTES:**
- (*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.
 - (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.
 - 1. CONTOUR ELEVATIONS EVERY 1 FOOT.

BACKWASH WASTE TANK NO. 1 ENLARGED PLAN
 SCALE: 1" = 3'-0"
 1" = 3'-0"
 1.5 0 3



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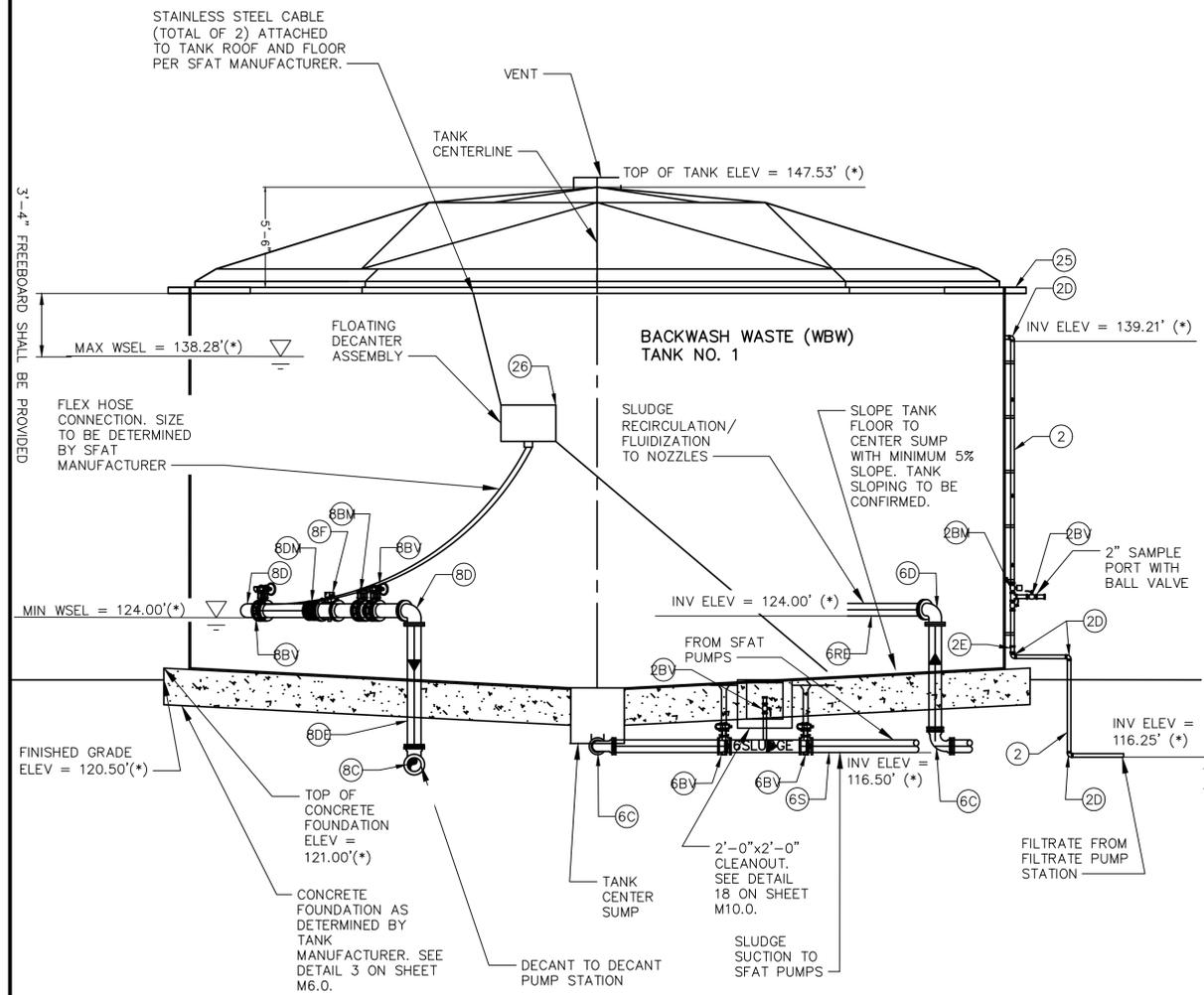
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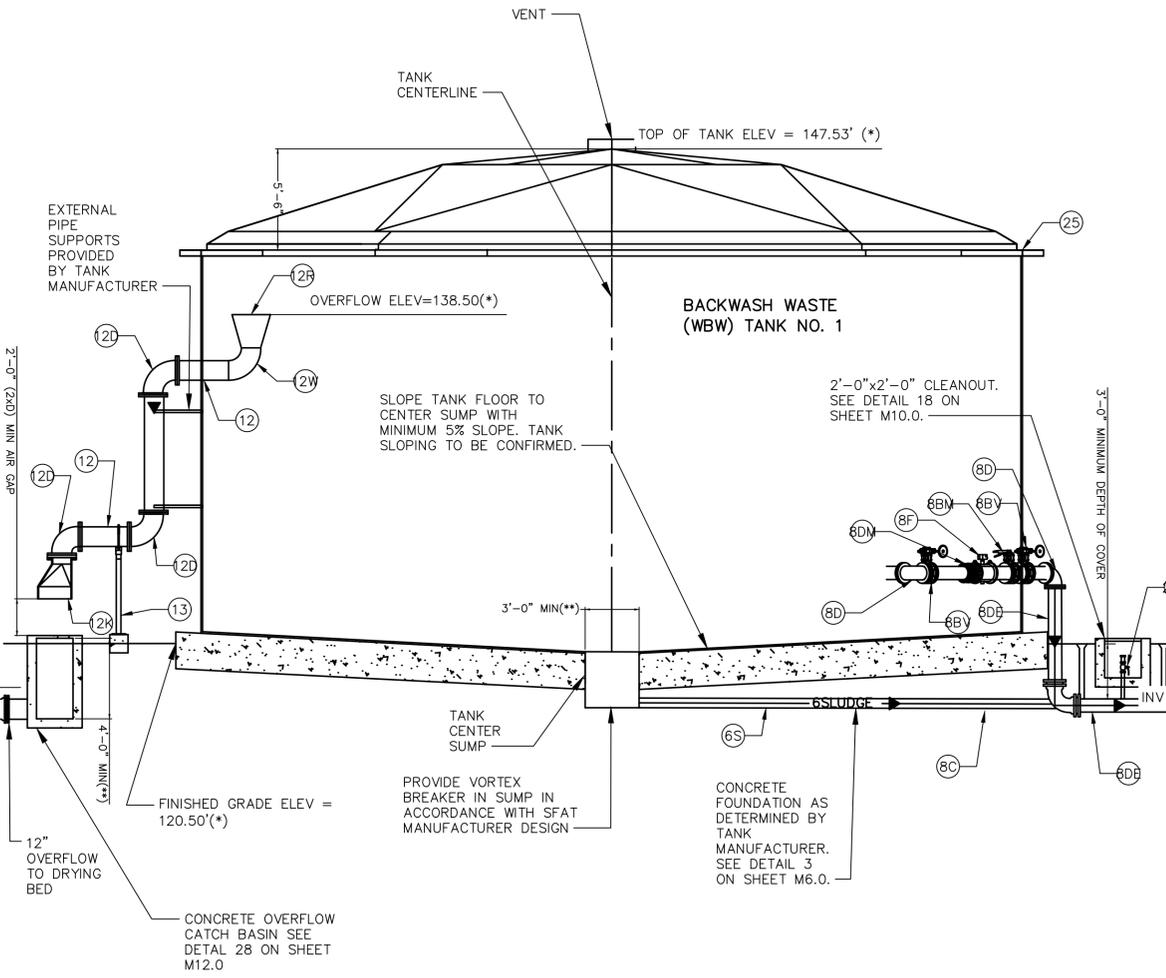
VALENTINE ENVIRONMENTAL ENGINEERS, LLC
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 CARMEL, CA 93923
 CALIFORNIA AMERICAN WATER
 DRAWN BY D. BRODERICK
 PROJECT ENG'R S. TERRELL/T. VALENTINE
 DATE OCTOBER 2025
 PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN MECHANICAL
BACKWASH WASTE TANK NO. 1 ENLARGED PLAN
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=3'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M2.0



3 BACKWASH WASTE TANK NO.1 SECTION 1
SCALE: 1" = 5'-0"
1" = 5'-0"
2.5 0 5



4 BACKWASH WASTE TANK NO.1 SECTION 2
SCALE: 1" = 5'-0"
1" = 5'-0"
2.5 0 5

- CONSTRUCTION NOTES:**
- 2 PROVIDE 2-INCH FILTRATE PIPE.
 - 2D PROVIDE 2-INCH 90° BEND (PVCxPVC).
 - 2B PROVIDE 2-INCH MOTORIZED BALL VALVE.
 - 2BY PROVIDE 2-INCH MANUAL BALL VALVE.
 - 2E PROVIDE 2-INCH EXPANSION JOINT.
 - 6BY PROVIDE BURIED 6-INCH BUTTERFLY VALVE (MJxMJ) IN ACCORDANCE WITH DETAIL 19 ON SHEET M10.0.
 - 6R PROVIDE 6-INCH SLUDGE RECIRCULATION/FLUIDIZATION PIPE.
 - 6S PROVIDE 6-INCH SLUDGE SUCTION PIPE.
 - 8B PROVIDE 8-INCH MOTORIZED BUTTERFLY VALVE.
 - 8BY PROVIDE 8-INCH MANUAL BUTTERFLY VALVE.
 - 8C PROVIDE 8-INCH 90° BEND (MJxMJ).
 - 8D PROVIDE 8-INCH 90° BEND (FLGxFLG).
 - 8DE PROVIDE 8-INCH DECANT PIPE.
 - 8DM PROVIDE 8-INCH DISMANTLING JOINT.
 - 8F PROVIDE 8-INCH FLOWMETER (FLGxFLG).
 - 12 PROVIDE 12-INCH OVERFLOW PIPING.
 - 12C PROVIDE 12-INCH 90° BEND (MJxMJ).
 - 12D PROVIDE 12-INCH 90° BEND (FLGxFLG).
 - 12K PROVIDE 12-INCH FLAPPER CHECK VALVE.
 - 12R PROVIDE 12-INCH x 20-INCH REDUCER.
 - 2W PROVIDE 12-INCH 90° BEND WELDED.
 - 13 PROVIDE U-BOLT PIPE SUPPORT ON GRADE, SEE DETAIL 14A ON SHEET M9.0.
 - 25 PROVIDE BACKWASH WASTE STORAGE TANK MEETING ALL REQUIREMENTS FOR POTABLE WATER USE WITH USEABLE VOLUME OF 195,000 GALLONS (AQUASTORE GLASS-FUSED-TO-STEEL TANK) AND FOUNDATION. SEE TECHNICAL SPECIFICATION SECTION 13212.
 - 26 PROVIDE FLOATING DECANTER ASSEMBLY BY SFAT MANUFACTURER IN ACCORDANCE WITH SPECIFICATION SECTION 11317.

- NOTES:**
- (*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.
 - (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.
 - 1. CONTOUR ELEVATIONS EVERY 1 FOOT.



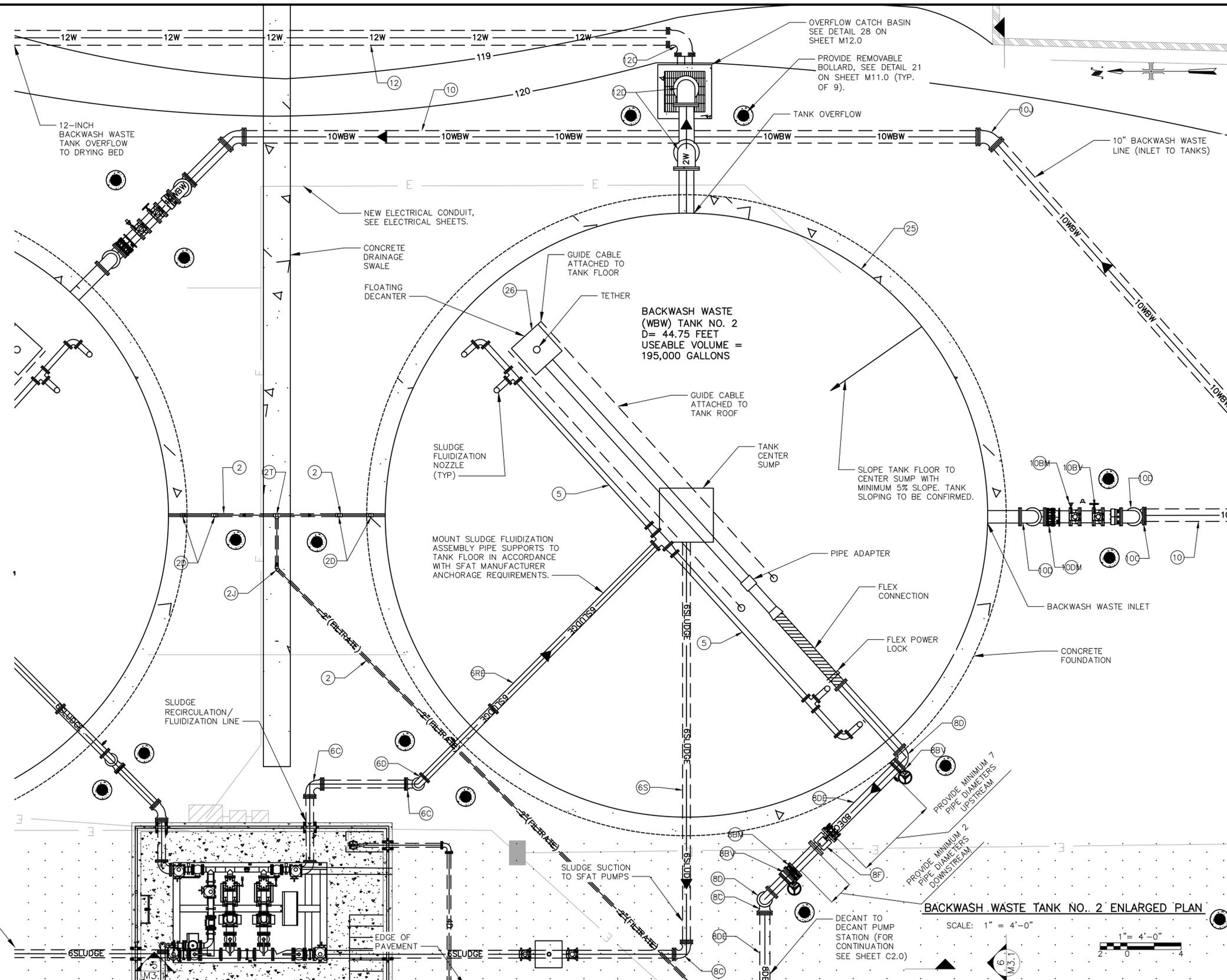
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200 CLOCK TOWER PL BUILDING B, SUITE B200
CARMEL, CA 93923
DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE
DATE OCTOBER 2025
PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
MECHANICAL
BACKWASH WASTE TANK NO.1 SECTIONS
9210 CARMEL VALLEY ROAD CARMEL CA, 93923
CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
90% SUBMITTAL
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
USE DIMENSIONS ONLY SCALE 1"=5'-0"
XXXXXX-XXXX-M2.1



- CONSTRUCTION NOTES:**
- (2) PROVIDE 2-INCH FILTRATE PIPE.
 - (2D) PROVIDE 2-INCH 90° BEND (PVCxPVC).
 - (2J) PROVIDE 2-INCH 45° BEND (PVCxPVC).
 - (2T) PROVIDE 2-INCH TEE (PVCxPVCxPVC).
 - (5) PROVIDE SLUDGE FLUIDIZATION PIPING ASSEMBLIES BY SFAT MANUFACTURER IN ACCORDANCE WITH SPECIFICATION SECTION 11317.
 - (6C) PROVIDE 6-INCH 90° BEND (MjxMj).
 - (6D) PROVIDE 6-INCH 90° BEND (FLGxFLG).
 - (6J) PROVIDE 6-INCH 45° BEND (MjxMj).
 - (6RF) PROVIDE 6-INCH SLUDGE RECIRCULATION/FLUIDIZATION PIPE.
 - (6S) PROVIDE 6-INCH SLUDGE SUCTION PIPE.
 - (8BM) PROVIDE 8-INCH MOTORIZED BUTTERFLY VALVE.
 - (8BV) PROVIDE 8-INCH MANUAL BUTTERFLY VALVE.
 - (8D) PROVIDE 8-INCH 90° BEND (FLGxFLG).
 - (8DE) PROVIDE 8-INCH DECANT PIPE.
 - (8F) PROVIDE 8-INCH FLOWMETER (FLGxFLG).
 - (10) PROVIDE 10-INCH BACKWASH WASTE PIPING.
 - (10BM) PROVIDE 10-INCH MOTORIZED BUTTERFLY VALVE.
 - (10BV) PROVIDE 10-INCH MANUAL BUTTERFLY VALVE.
 - (10C) PROVIDE 10-INCH 90° BEND (MjxMj).
 - (10D) PROVIDE 10-INCH 90° BEND (FLGxFLG).
 - (10DM) PROVIDE 10" EXPANSION JOINT WITH LIMIT CONTROL RODS, PROCO MODEL 233 OR EQUAL. EXPANSION JOINT SHALL BE NSF 61 CERTIFIED.
 - (10J) PROVIDE 10-INCH 45° BEND (MjxMj).
 - (10T) PROVIDE 10-INCH x 10-INCH x 10-INCH TEE (MjxMj).
 - (12) PROVIDE 12-INCH OVERFLOW PIPING.
 - (2C) PROVIDE 12-INCH 90° BEND (MjxMj).
 - (2D) PROVIDE 12-INCH 90° BEND (FLGxFLG).
 - (19) PROVIDE REMOVABLE BOLLARD, SEE DETAIL 21 ON SHEET M11.0.
 - (25) PROVIDE BACKWASH WASTE STORAGE TANK MEETING ALL REQUIREMENTS FOR POTABLE WATER USE WITH USEABLE VOLUME OF 195,000 GALLONS (AQUASTORE GLASS-FUSED-TO-STEEL TANK) AND FOUNDATION. SEE TECHNICAL SPECIFICATION SECTION 13212.
 - (26) PROVIDE FLOATING DECANTER ASSEMBLY BY SFAT MANUFACTURER IN ACCORDANCE WITH SPECIFICATION SECTION 11317.

- NOTES:**
- (*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.
 - (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.
1. CONTOUR ELEVATIONS EVERY 1 FOOT.



REVISIONS	REVISIONS
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CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
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DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

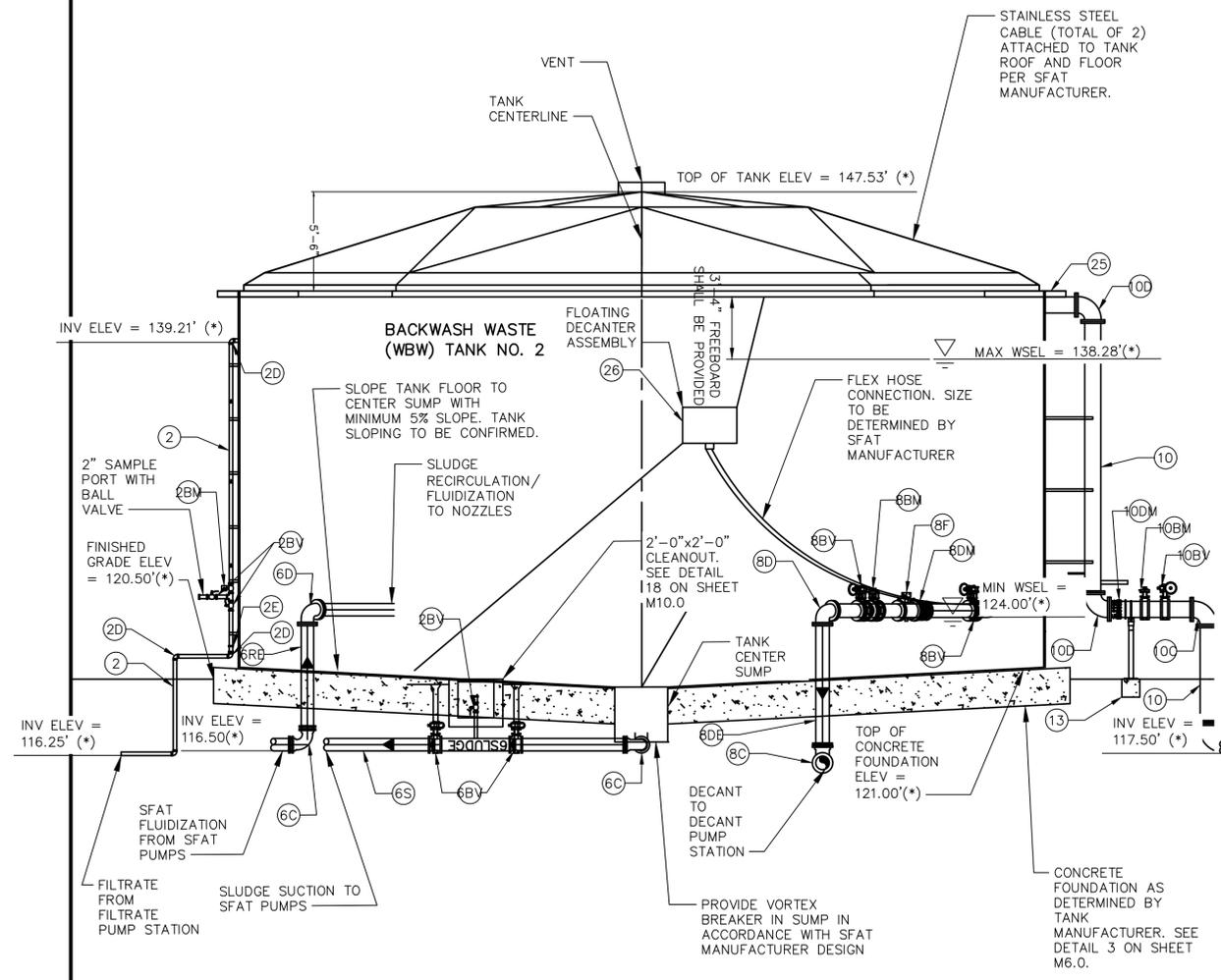
BIRP BACKWASH DESIGN MECHANICAL

BACKWASH WASTE TANK NO.2 ENLARGED PLAN
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

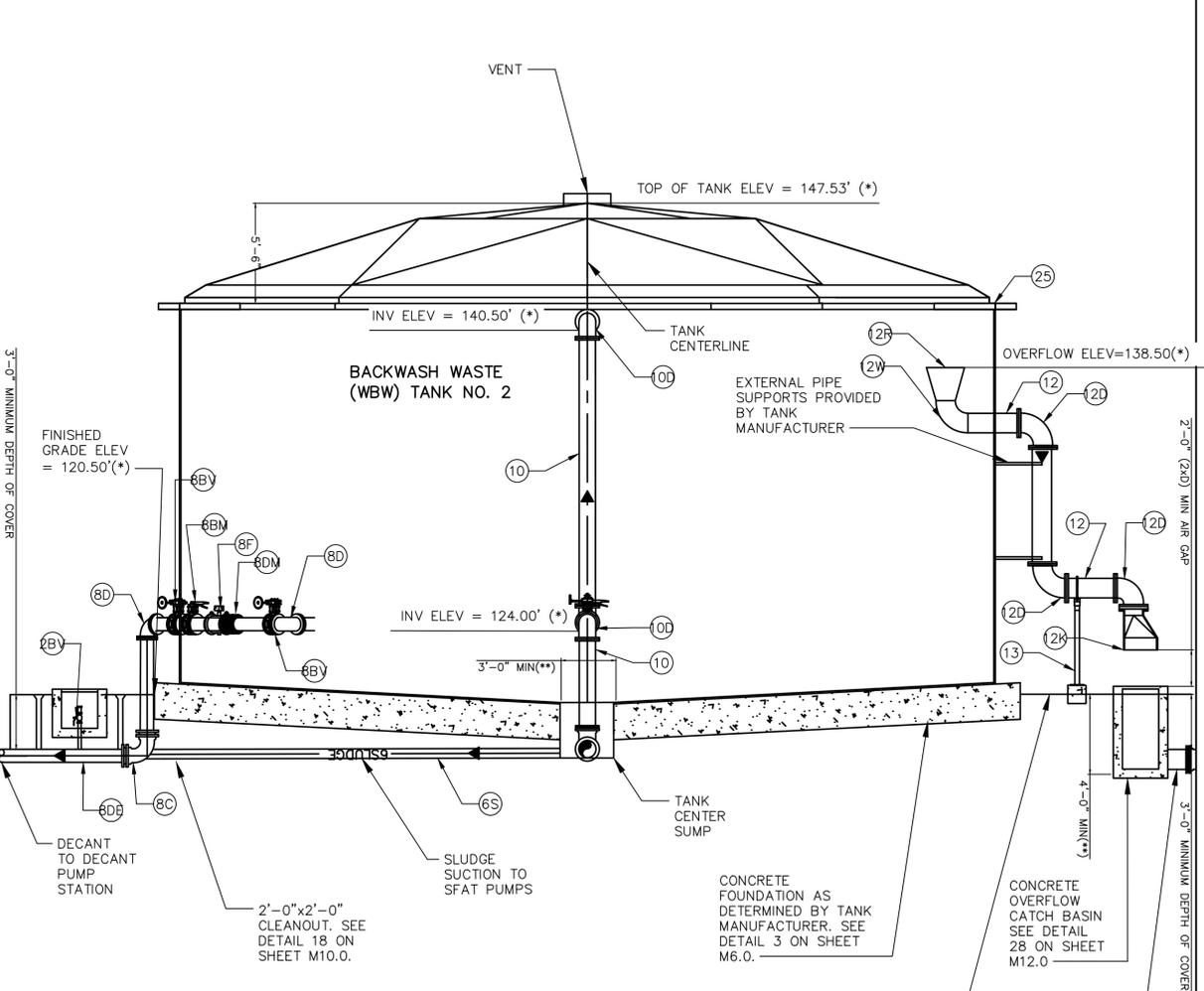
CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=3'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M3.0

- CONSTRUCTION NOTES:**
- (2) PROVIDE 2-INCH FILTRATE PIPE.
 - (2D) PROVIDE 2-INCH 90° BEND (PVCxPVC).
 - (2B) PROVIDE 2-INCH MOTORIZED BALL VALVE.
 - (2BY) PROVIDE 2-INCH MANUAL BALL VALVE.
 - (2E) PROVIDE 2-INCH EXPANSION JOINT.
 - (6B) PROVIDE BURIED 6-INCH BUTTERFLY VALVE (MjxMj) IN ACCORDANCE WITH DETAIL 19 ON SHEET M10.0.
 - (6R) PROVIDE 6-INCH SLUDGE RECIRCULATION/FLUIDIZATION PIPE.
 - (6S) PROVIDE 6-INCH SLUDGE SUCTION PIPE.
 - (8D) PROVIDE 8-INCH DECANT PIPE.
 - (8B) PROVIDE 8-INCH MOTORIZED BUTTERFLY VALVE.
 - (8V) PROVIDE 8-INCH MANUAL BUTTERFLY VALVE.
 - (8C) PROVIDE 8-INCH 90° BEND (MjxMj).
 - (8D) PROVIDE 8-INCH 90° BEND (FLGxFLG).
 - (8F) PROVIDE 8-INCH FLOWMETER (FLGxFLG).
 - (8D) PROVIDE 8-INCH DISMANTLING JOINT.
 - (10) PROVIDE 10-INCH BACKWASH WASTE PIPING.
 - (10C) PROVIDE 10-INCH 90° BEND (MjxMj).
 - (10D) PROVIDE 10-INCH 90° BEND (FLGxFLG).
 - (10DM) PROVIDE 10" EXPANSION JOINT WITH LIMIT CONTROL RODS, PROCO MODEL 233 OR EQUAL. EXPANSION JOINT SHALL BE NSF 61 CERTIFIED.
 - (12) PROVIDE 12-INCH OVERFLOW PIPING.
 - (20) PROVIDE 12-INCH 90° BEND (MjxMj).
 - (2D) PROVIDE 12-INCH 90° BEND (FLGxFLG).
 - (2K) PROVIDE 12-INCH FLAPPER CHECK VALVE
 - (2F) PROVIDE 12-INCH x 20-INCH REDUCER.
 - (2W) PROVIDE 12-INCH 90° BEND WELDED.
 - (13) PROVIDE U-BOLT PIPE SUPPORT ON GRADE, SEE DETAIL 14A ON SHEET M9.0
 - (25) PROVIDE BACKWASH WASTE STORAGE TANK MEETING ALL REQUIREMENTS FOR POTABLE WATER USE WITH USEABLE VOLUME OF 195,000 GALLONS (AQUASTORE GLASS-FUSED-TO-STEEL TANK) AND FOUNDATION. SEE TECHNICAL SPECIFICATION SECTION 13212.
 - (26) PROVIDE FLOATING DECANTER ASSEMBLY BY SFAT MANUFACTURER IN ACCORDANCE WITH SPECIFICATION SECTION 11317.

- NOTES:**
- (*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.
 - (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.
 - 1. CONTOUR ELEVATIONS EVERY 1 FOOT.



5
M3.0 BACKWASH WASTE TANK NO.2 SECTION 1
SCALE: 1" = 5'-0"
1" = 5'-0"
2.5 0 5



6
M3.0 BACKWASH WASTE TANK NO.2 SECTION 2
SCALE: 1" = 5'-0"
1" = 5'-0"
2.5 0 5



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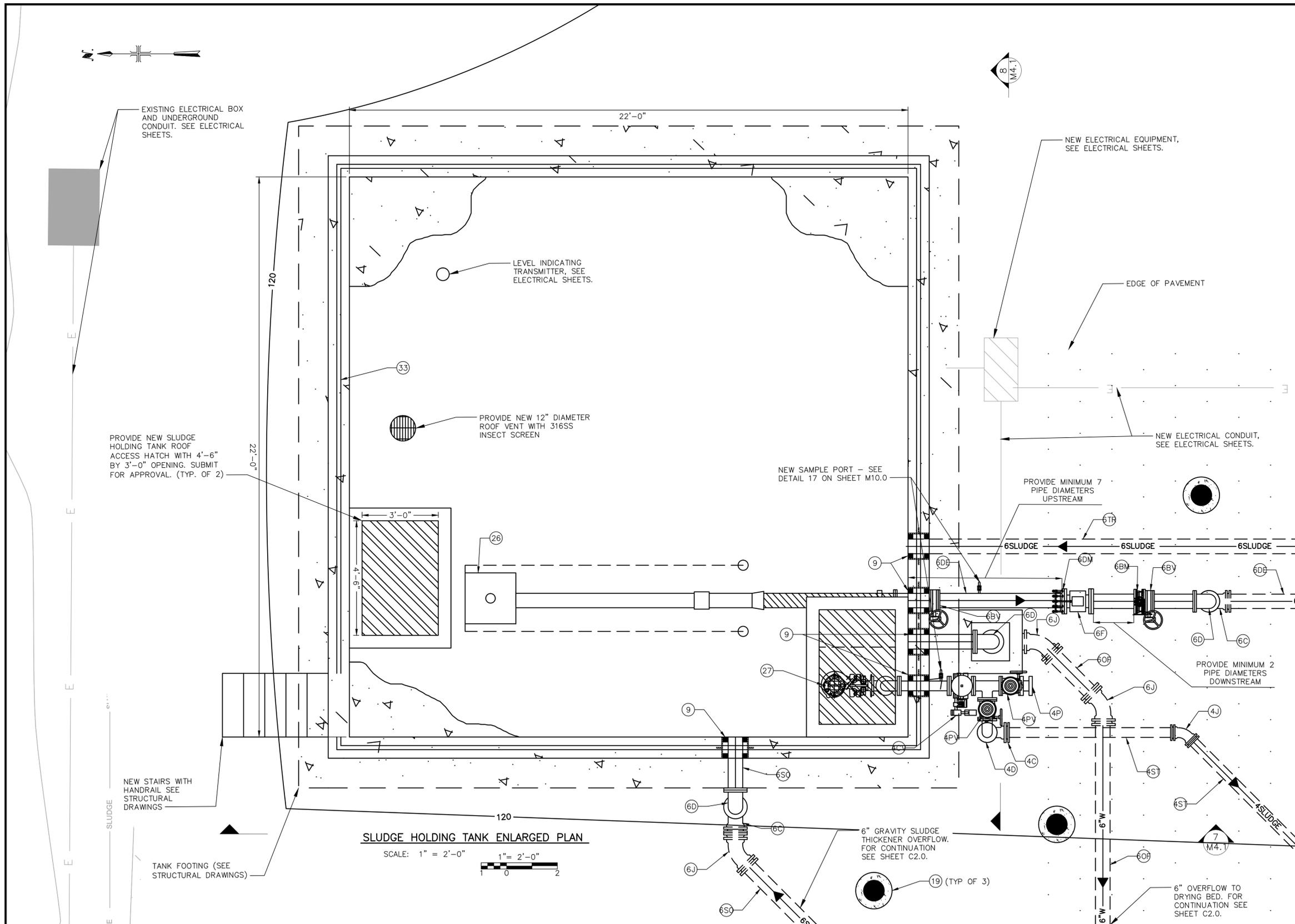
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REGISTERED PROFESSIONAL ENGINEER
TERESA A. VALENTINE
C 83580
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CA LICENSED PROFESSIONAL ENGINEER
NO. C 83580 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PL BUILDING B, SUITE B200
CARMEL, CA 93923
DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE
DATE OCTOBER 2025
PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN MECHANICAL
BACKWASH WASTE TANK NO.2 SECTIONS
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=5'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M3.1



- CONSTRUCTION NOTES:**
- (4C) PROVIDE 4-INCH 90° BEND (MJxMJ).
 - (4CY) PROVIDE 4-INCH CHECK VALVE.
 - (4D) PROVIDE 4-INCH 90° BEND (FLGxFLG).
 - (4J) PROVIDE 4-INCH 45° BEND (MJxMJ).
 - (4P) PROVIDE 4-INCH LOCKABLE PIPE CAP.
 - (4PV) PROVIDE 4-INCH MANUAL PLUG VALVE.
 - (5T) PROVIDE 4-INCH PIPE TO SLUDGE THICKENER.
 - (6B) PROVIDE 6-INCH MOTORIZED BUTTERFLY VALVE.
 - (6BY) PROVIDE 6-INCH BUTTERFLY VALVE (FLGxFLG).
 - (6C) PROVIDE 6-INCH 90° BEND (MJxMJ).
 - (6D) PROVIDE 6-INCH 90° BEND (FLGxFLG).
 - (6DE) PROVIDE 6-INCH DECANT PIPE.
 - (6DM) PROVIDE 6-INCH DISMANTLING JOINT.
 - (6F) PROVIDE 6-INCH FLOWMETER.
 - (6J) PROVIDE 6-INCH 45° BEND (MJxMJ).
 - (6OF) PROVIDE 6-INCH SLUDGE STORAGE TANK OVERFLOW.
 - (6SO) PROVIDE 6-INCH SLUDGE THICKENER OVERFLOW.
 - (6TF) PROVIDE 6-INCH SLUDGE TRANSFER PIPE.
 - (9) CORE DRILL AND PROVIDE WATER TIGHT LINK SEAL SYSTEM.
 - (19) PROVIDE REMOVABLE BOLLARD, SEE DETAIL 21 ON SHEET M11.0.
 - (26) PROVIDE FLOATING DECANTER ASSEMBLY BY SFAT MANUFACTURER IN ACCORDANCE WITH SPECIFICATION SECTION 11317.
 - (27) PROVIDE SUBMERSIBLE SLUDGE PUMP, SEE TECHNICAL SPECIFICATION 11316.
 - (33) PROVIDE SAFETY RAILING IN ACCORDANCE WITH DETAIL 24 ON SHEET M11.0.

NOTES:

(*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.

(**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.

1. CONTOUR ELEVATIONS EVERY 1 FOOT.

SLUDGE HOLDING TANK ENLARGED PLAN

SCALE: 1" = 2'-0"



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CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
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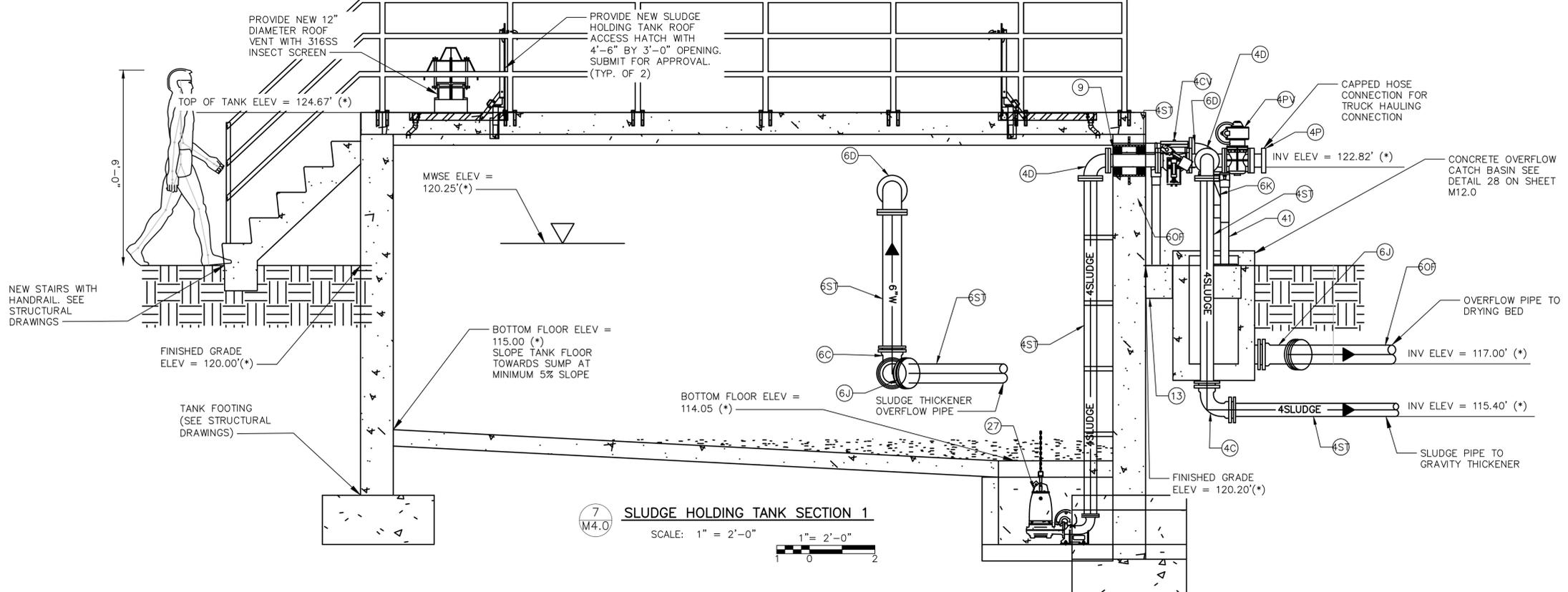
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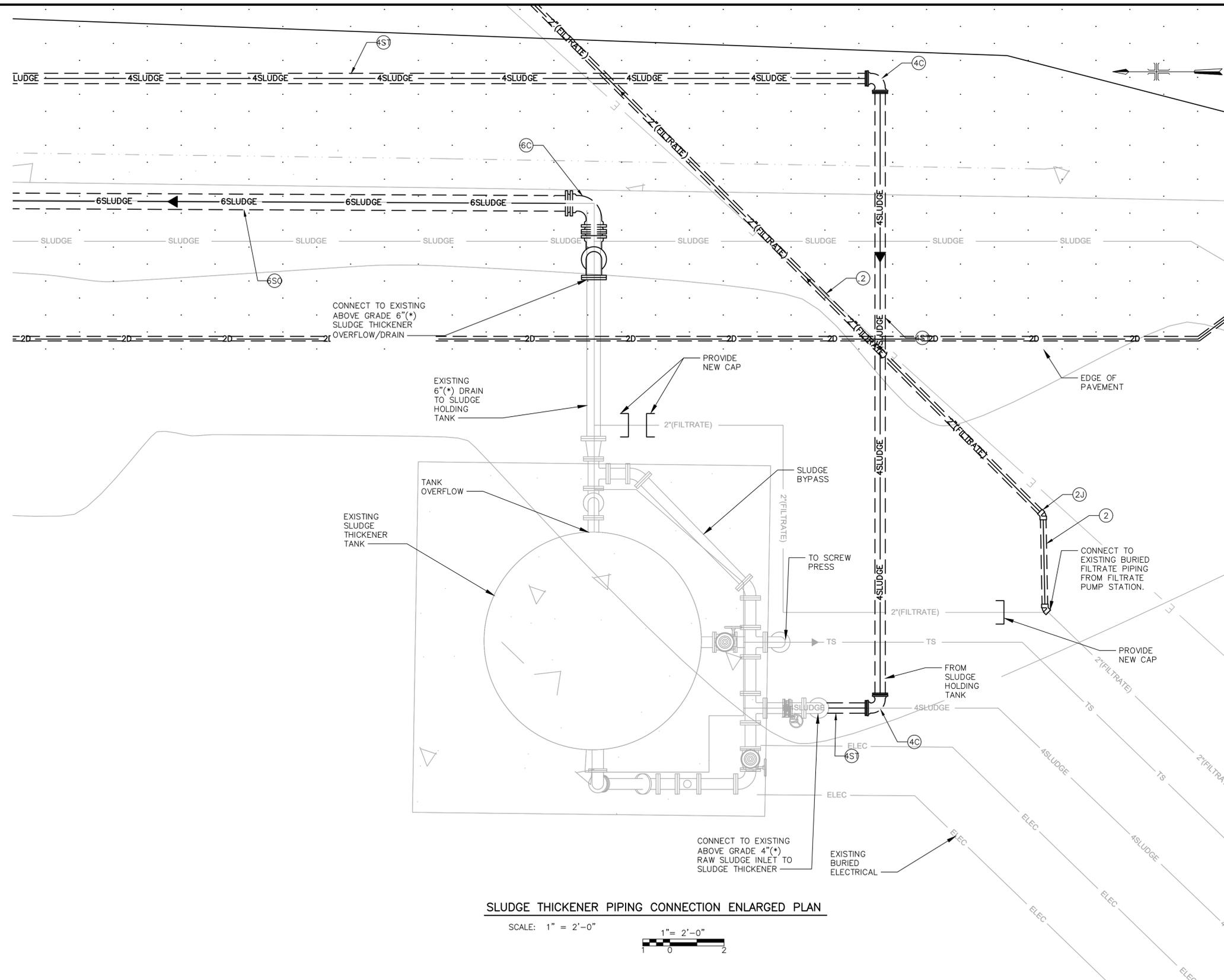
PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN MECHANICAL

SLUDGE HOLDING TANK ENLARGED PLAN
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=2'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M4.0





- CONSTRUCTION NOTES:**
- ② PROVIDE 2-INCH FILTRATE PIPE.
 - ②J PROVIDE 2-INCH 45° BEND (PVCxPVC).
 - ④C PROVIDE 4-INCH 90° BEND (MJXMJ).
 - ④ST PROVIDE 4-INCH PIPE TO SLUDGE THICKENER.
 - ⑥C PROVIDE 6-INCH 90° BEND (MJXMJ).
 - ⑥SO PROVIDE 6-INCH SLUDGE THICKENER OVERFLOW.
- NOTES:**
- (*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.
 - (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.
1. CONTOUR ELEVATIONS EVERY 1 FOOT.

SLUDGE THICKENER PIPING CONNECTION ENLARGED PLAN
 SCALE: 1" = 2'-0"



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CALIFORNIA AMERICAN WATER

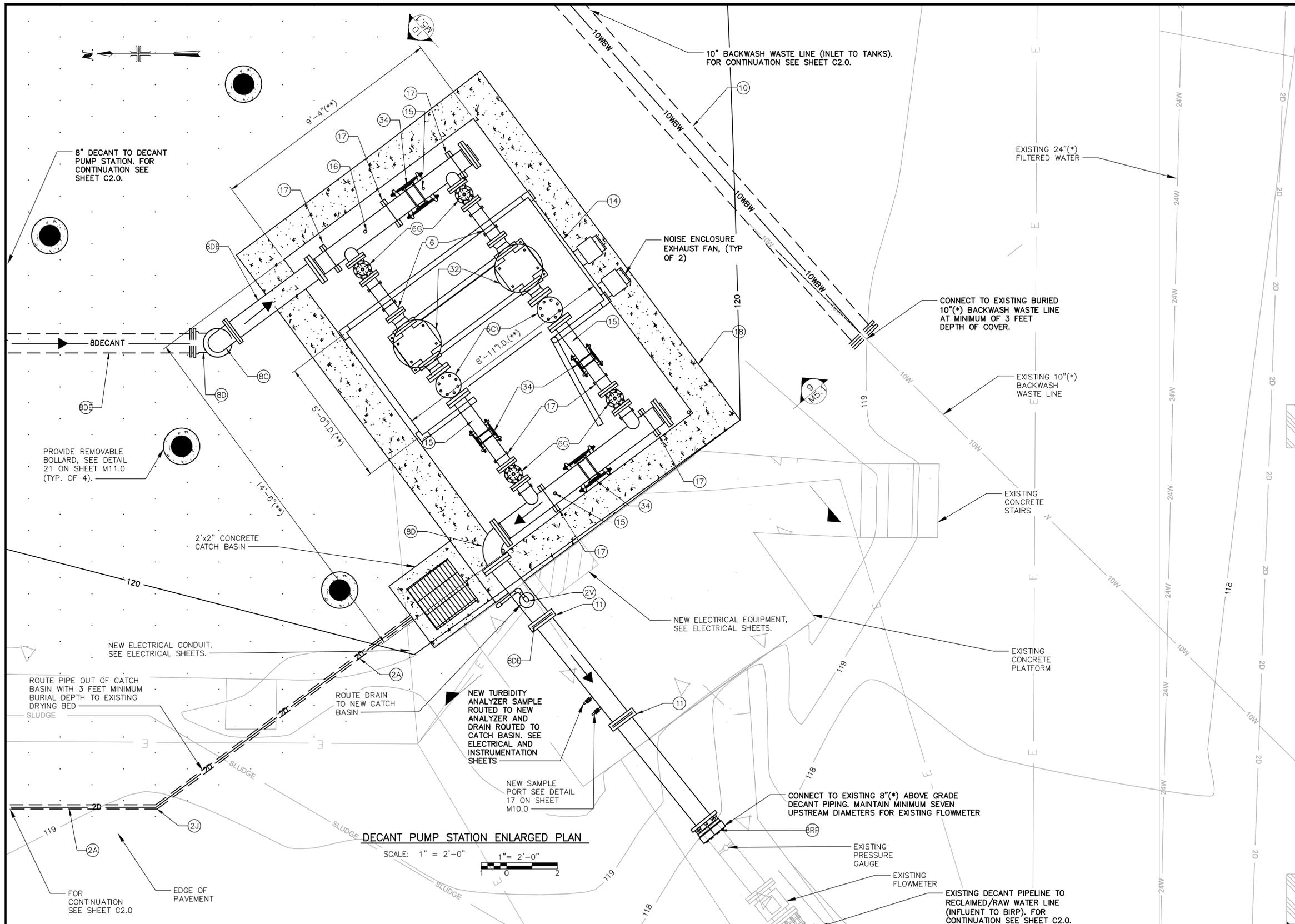
DRAWN BY D. BRODERICK
 PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

**BIRP BACKWASH DESIGN
 MECHANICAL
 SLUDGE THICKENER PIPING CONNECTION ENLARGED PLAN
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923**

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=2'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M4.2



- CONSTRUCTION NOTES:**
- (2A) PROVIDE 2-INCH DRAIN PIPE
 - (2J) PROVIDE 2-INCH 45° BEND (PVCxPVC).
 - (2V) PROVIDE COMBINATION AIR/VACUUM RELIEF VALVE. SEE DETAIL 29 ON SHEET M12.0
 - (6C) PROVIDE 6-INCH CHECK VALVE (FLGxFLG) (INCLUDED WITH SKID MOUNTED PUMP STATION. SEE TECHNICAL SPECIFICATION SECTION 11310).
 - (6D) PROVIDE 6-INCH DECANT PIPE.
 - (6E) PROVIDE 6-INCH GATE VALVE (FLGxFLG) (INCLUDED WITH SKID MOUNTED PUMP STATION. SEE TECHNICAL SPECIFICATION SECTION 11310).
 - (8D) PROVIDE 8-INCH 90° BEND (MJxMJ).
 - (8DE) PROVIDE 8-INCH 90° BEND (FLGxFLG).
 - (8J) PROVIDE 8-INCH DECANT PIPE.
 - (8RF) PROVIDE 8-INCH 45° BEND (MJxMJ).
 - (10) PROVIDE 8-INCH RESTRAINED FLANGE COUPLING ADAPTER.
 - (11) PROVIDE 10-INCH BACKWASH WASTE PIPING.
 - PROVIDE UNISTRUT PIPE SUPPORT ON SLAB IN ACCORDANCE WITH DETAIL 14B ON SHEET M9.0.
 - (14) PROVIDE PUMP NOISE ENCLOSURE WITH DOOR, BILCO HATCH, AND VENTILATION FAN IN ACCORDANCE WITH TECHNICAL SPECIFICATION SECTION 11250.
 - (15) PROVIDE HIGH PRESSURE SWITCH (INCLUDED WITH SKID MOUNTED PUMP STATION. SEE TECHNICAL SPECIFICATION SECTION 11310). INSTALL IN ACCORDANCE WITH DETAIL 16B ON SHEET M9.0.
 - (16) PROVIDE LOW PRESSURE SWITCH AND PRESSURE GAUGE (INCLUDED WITH SKID MOUNTED PUMP STATION. SEE TECHNICAL SPECIFICATION SECTION 11310). INSTALL IN ACCORDANCE WITH DETAIL 16C ON SHEET M9.0.
 - (17) PROVIDE PIPE SUPPORTS ON SKID (INCLUDED WITH SKID MOUNTED PUMP STATION).
 - (18) PROVIDE CONCRETE SLAB IN ACCORDANCE WITH DETAIL 26 ON SHEET M12.0.
 - (19) PROVIDE REMOVABLE BOLLARD, SEE DETAIL 21 ON SHEET M11.0.
 - (32) PROVIDE VERTICAL INLINE PUMPS (INCLUDED WITH SKID MOUNTED PUMP STATION. SEE TECHNICAL SPECIFICATION SECTION 11310).
 - (34) PROVIDE FLEXIBLE HARNESS COUPLING (INCLUDED WITH SKID MOUNTED PUMP STATION. SEE TECHNICAL SPECIFICATION SECTION 11310).

NOTES:

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- (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.

1. CONTOUR ELEVATIONS EVERY 1 FOOT.

DECANT PUMP STATION ENLARGED PLAN

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



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CALIFORNIA AMERICAN WATER

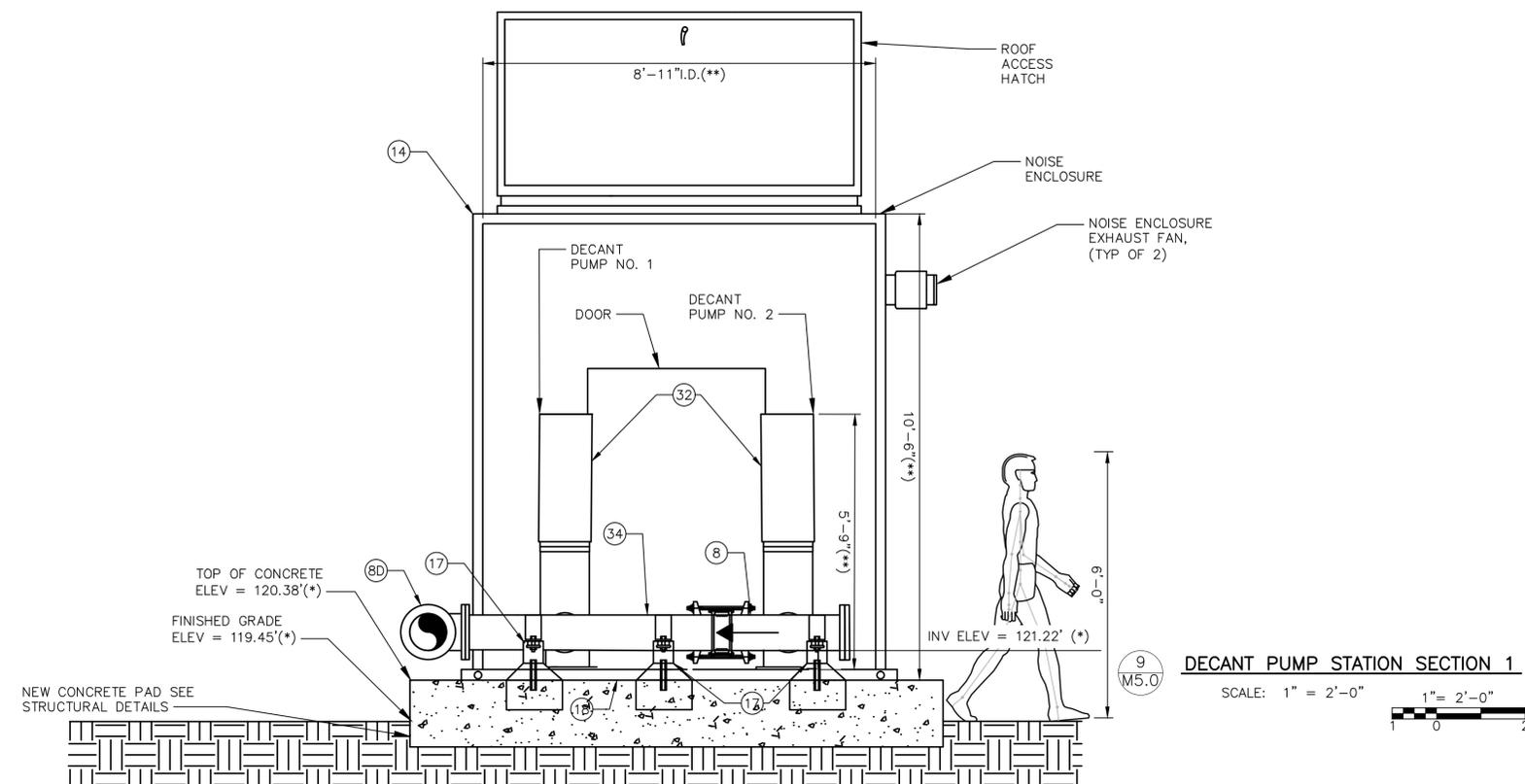
DRAWN BY D. BRODERICK
 PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

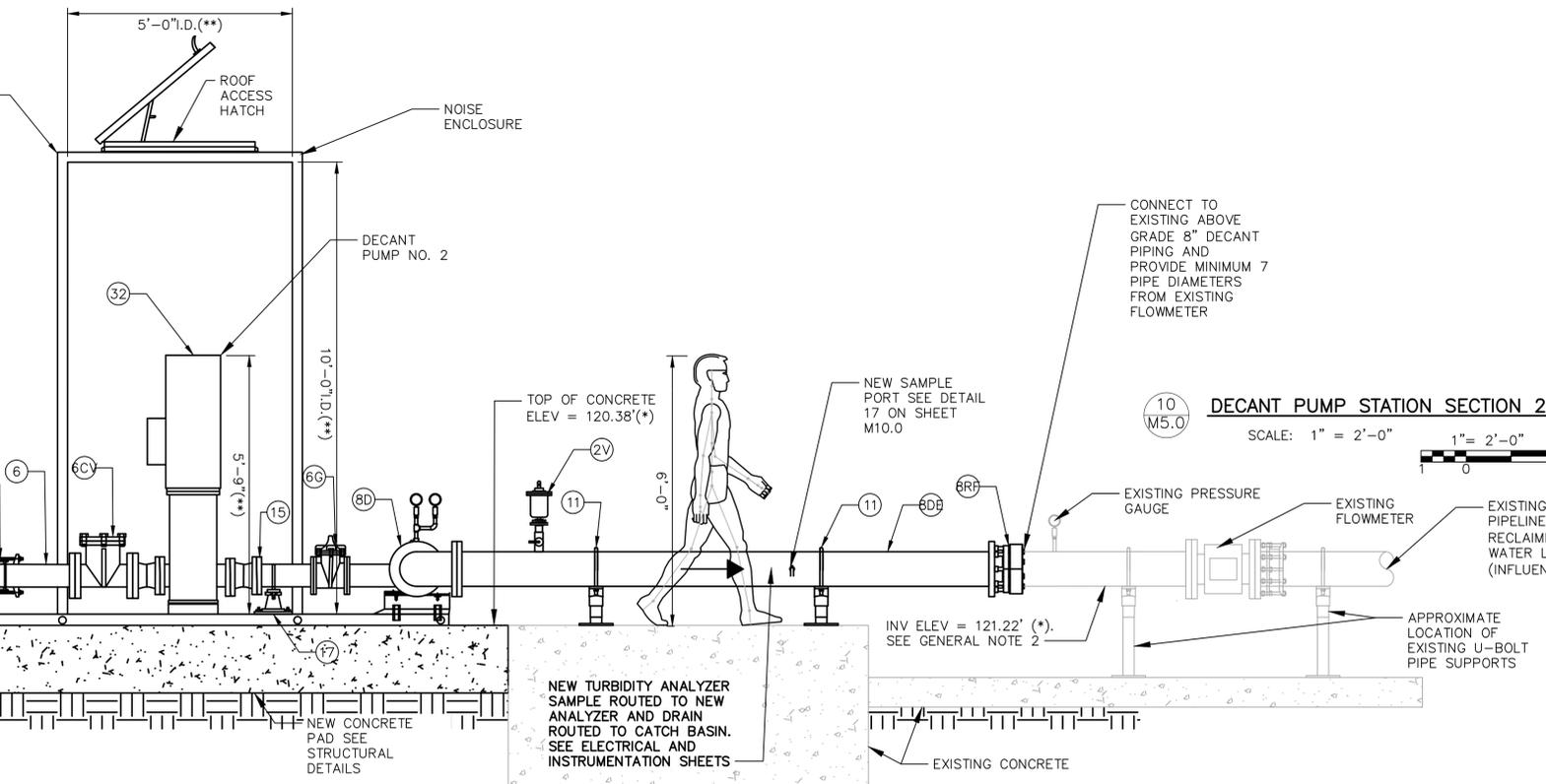
PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN MECHANICAL
 DECANT PUMP STATION ENLARGED PLAN
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1"=2'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M5.0



DECANT PUMP STATION SECTION 1
SCALE: 1" = 2'-0"
1" = 2'-0"



DECANT PUMP STATION SECTION 2
SCALE: 1" = 2'-0"
1" = 2'-0"

- CONSTRUCTION NOTES:**
- (2V) PROVIDE COMBINATION AIR/VACUUM RELIEF VALVE. SEE DETAIL 29 ON SHEET M12.0
 - (6C) PROVIDE 6-INCH CHECK VALVE (FLGxFLG) (INCLUDED WITH SKID MOUNTED PUMP STATION. SEE TECHNICAL SPECIFICATION SECTION 11310).
 - (6D) PROVIDE 6-INCH DECANT PIPE.
 - (6G) PROVIDE 6-INCH GATE VALVE (FLGxFLG) (INCLUDED WITH SKID MOUNTED PUMP STATION. SEE TECHNICAL SPECIFICATION SECTION 11310).
 - (8C) PROVIDE 8-INCH 90° BEND (MJxMJ).
 - (8D) PROVIDE 8-INCH 90° BEND (FLGxFLG).
 - (8E) PROVIDE 8-INCH DECANT PIPE.
 - (8J) PROVIDE 8-INCH 45° BEND (MJxMJ).
 - (8R) PROVIDE 8-INCH RESTRAINED FLANGE COUPLING ADAPTER.
 - (10) PROVIDE 10-INCH BACKWASH WASTE PIPING.
 - (11) PROVIDE UNISTRUT PIPE SUPPORT ON SLAB IN ACCORDANCE WITH DETAIL 14B ON SHEET M9.0.
 - (14) PROVIDE PUMP NOISE ENCLOSURE WITH DOOR, BILCO HATCH, AND VENTILATION FAN IN ACCORDANCE WITH TECHNICAL SPECIFICATION SECTION 11250.
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- NOTES:**
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 - (**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.
 - 1. CONTOUR ELEVATIONS EVERY 1 FOOT.
 - 2. EXISTING INVERT ELEVATION UNAVAILABLE FROM AS-BUILTS. CONTRACTOR TO VERIFY EXISTING PIPELINE DISCHARGE AND MATCH NEW DECANT PUMP STATION TIE-IN PRIOR TO INSTALLATION OF NEW DECANT PUMP STATION TIE-IN.



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CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

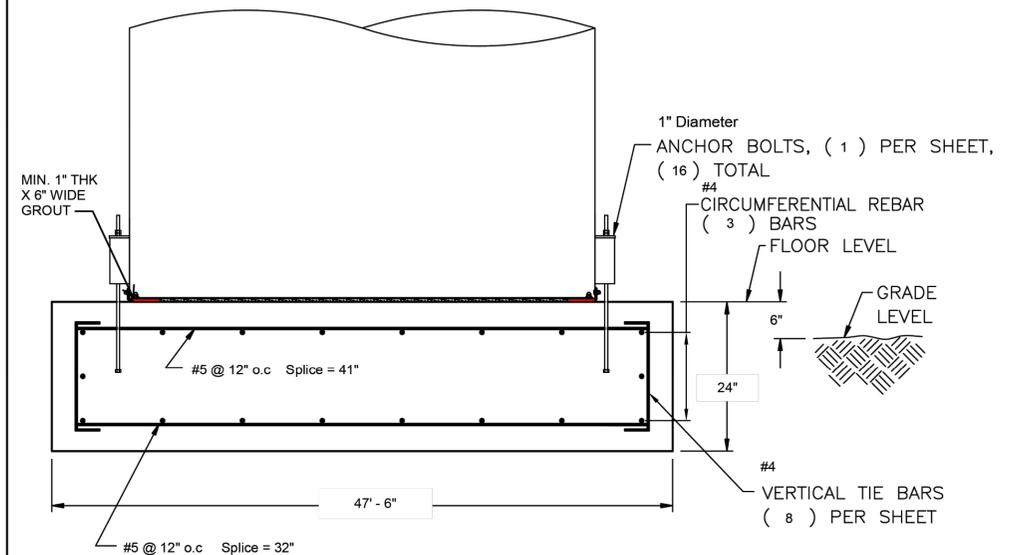
BIRP BACKWASH DESIGN MECHANICAL
DECANT PUMP STATION SECTIONS
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1" = 2'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M5.1



Preliminary	<input checked="" type="checkbox"/>	Project Name	BIRP Carmel
Final	<input type="checkbox"/>	Project Loc.	Isleton, California
Di. (ft)	45	Project Number	28378-P3V0-3
Ht. (ft)	21	By KND/SH	Release No. 0 Revision No. 8
Fnd. Type	Steel Floor	Date	08/29/25 Page 1 of 6
Prod. Type	WT		

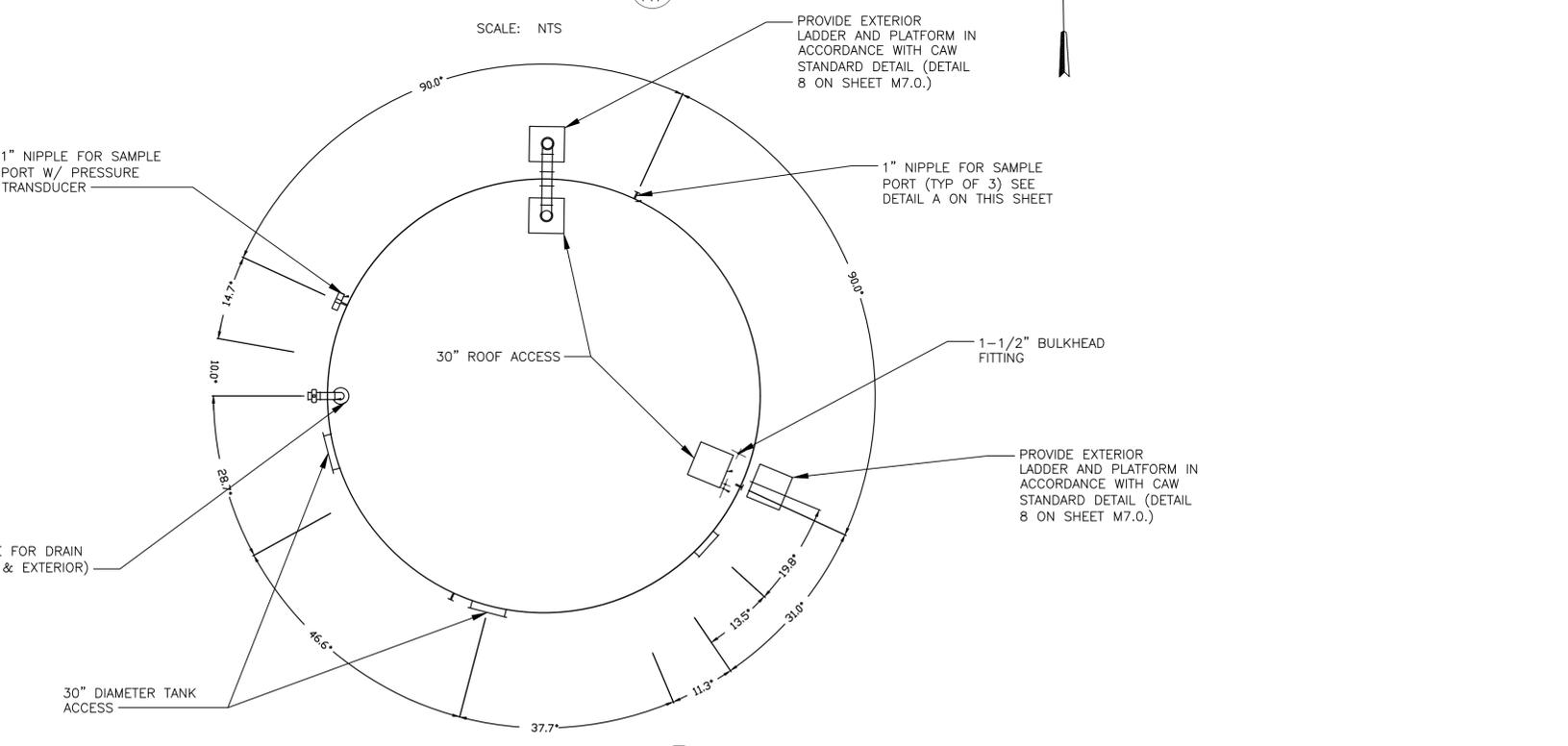
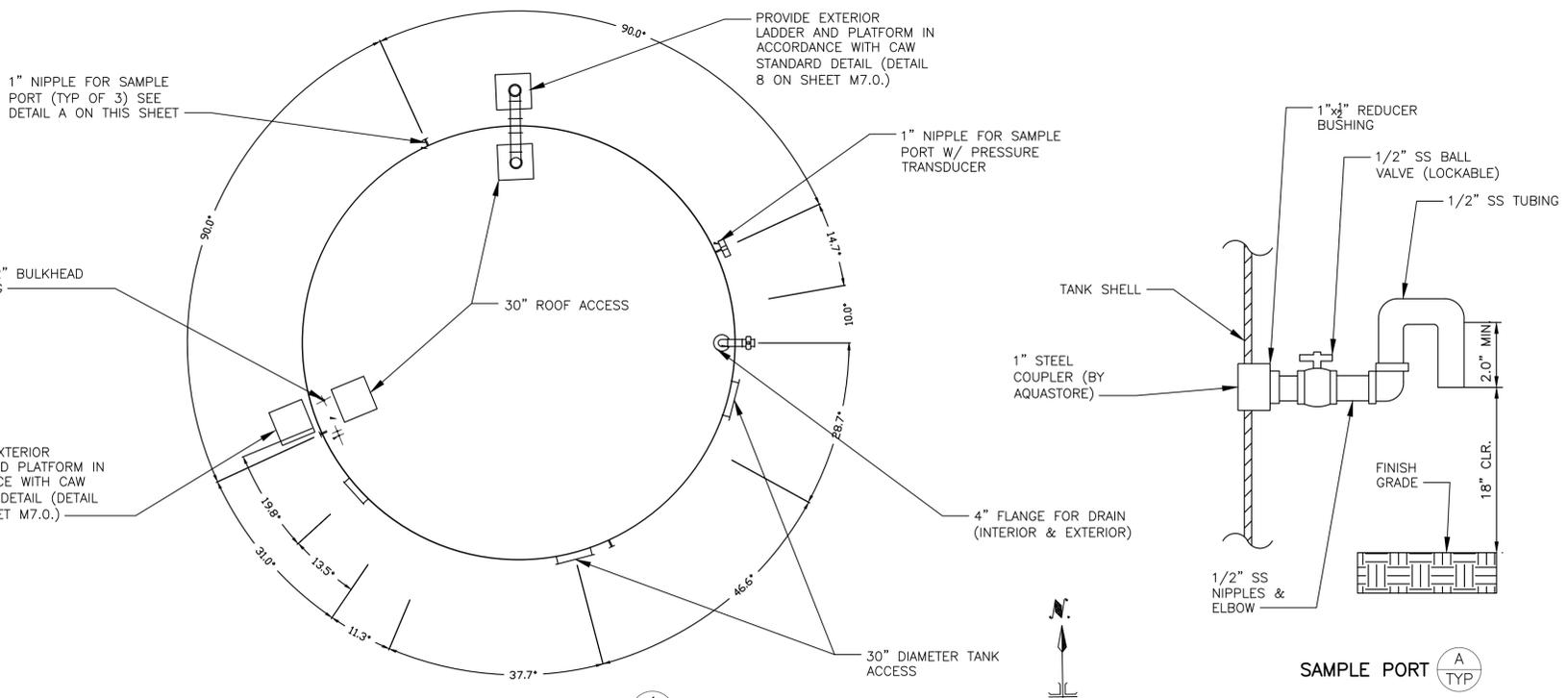
Disclaimer:
THIS DOCUMENT IS PRELIMINARY AND NOT APPROVED FOR CONSTRUCTION. The document herein is based on design assumptions and/or information received pertinent in developing a preliminary tank foundation. Information may not reflect actual site parameters and conditions. When available, information from a geotechnical report may be utilized. Efforts are made to produce a suitable preliminary foundation design, however, when finalized, the design may vary on the approved submittal release. Upon the release of a detailed CST submittal approved for construction, this PRELIMINARY document shall be considered null and void. CST assumes no liability and disclaims any action that may result from the use of this PRELIMINARY document.



Foundation Design per ACI 318-14	Seismic Site Class: D (Ss): 1.274g (S1): 0.475g (SDs): 0.849g (SD1): 0.897g (Ie): 1.25 TL: 8	TANK DESIGN	AWWA D103-19
Concrete Compressive Strength = 4,000 PSI		WIND DESIGN	IBC 2018/2021 w ASCE 7-16
QTY. SHEETS PER RING: 16		WIND SPEED (MPH)	120
SOIL BEARING 1,750 PSF		RISK CATEGORY	III
SEISMIC DESIGN CODE/ZONE IBC 2018/2021/AWWA D103-19 / N.A		EXPOSURE FACTOR	C

E:\AQUA\FND9

NOTE: DETAIL PROVIDED DOES NOT REFLECT CENTER SUMP TO BE PROVIDED IN EACH TANK AS SHOWN ON THE MECHANICAL DRAWINGS. TANK MANUFACTURER SHALL INCLUDE CENTER SUMP IN FOUNDATION SUBMITTAL SHOP DRAWINGS. DETAIL ALSO DOES NOT SPECIFY ANCHORAGE REQUIREMENT. ANCHORAGE REQUIREMENTS SHALL BE DETERMINED BY THE TANK MANUFACTURER AND SHALL MEET SEISMIC REQUIREMENT FOR THE BIRP SITE. SEE SPECIFICATION SECTION 13212.



TANK FOUNDATION DETAIL 3 TYP
SCALE: NTS



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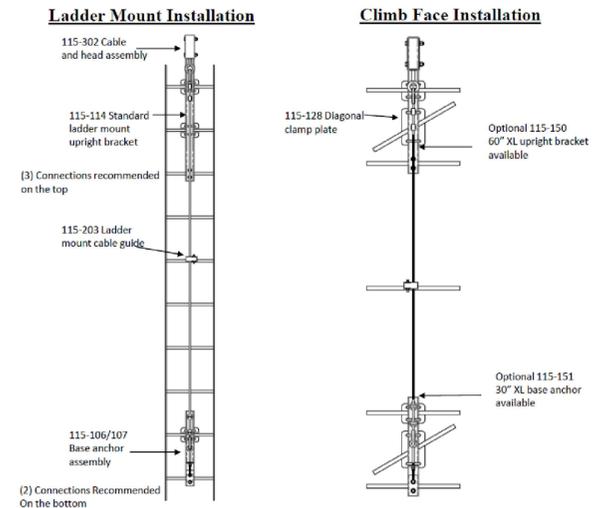
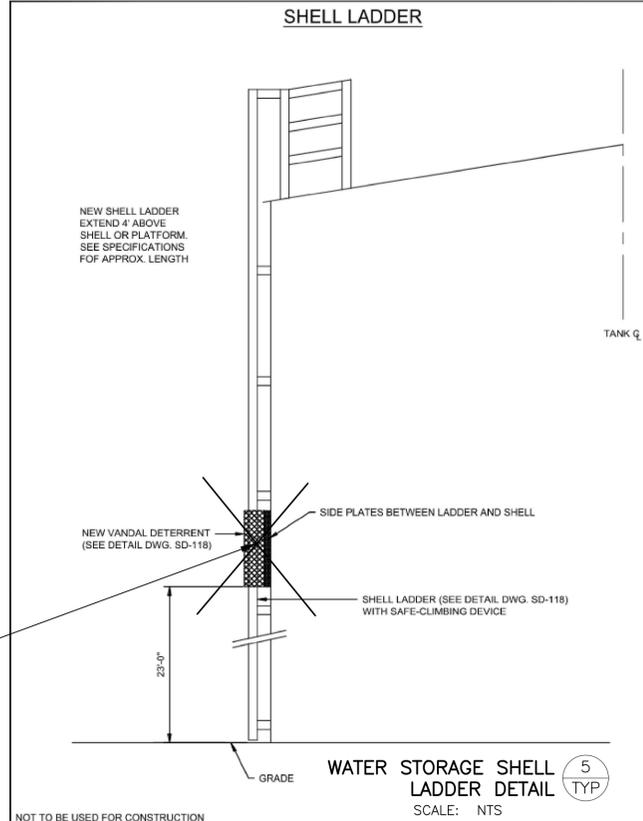
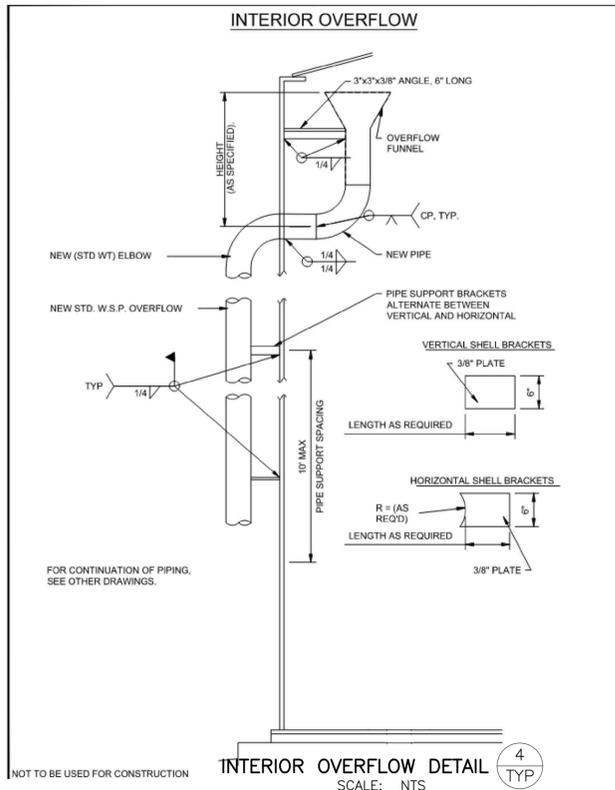
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PROJECT XXXXXX-XXXX

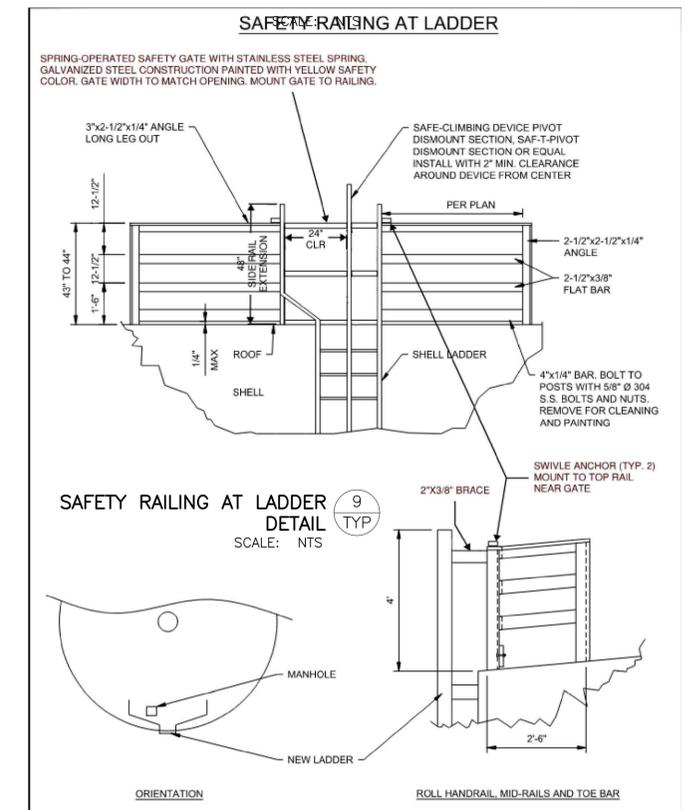
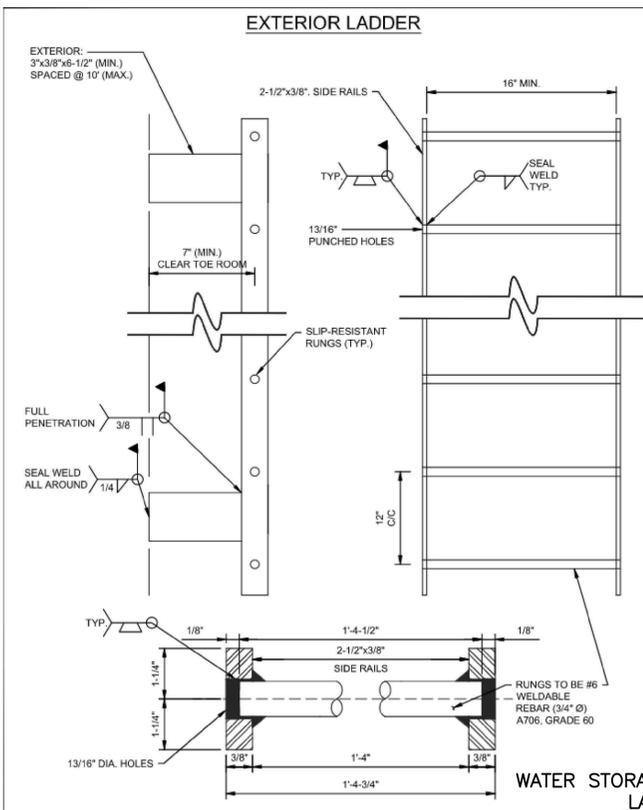
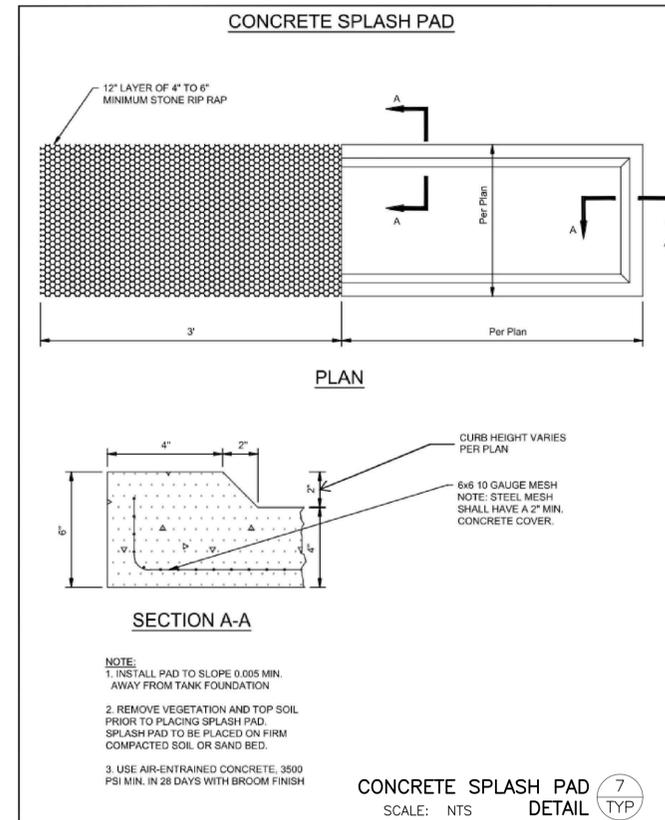
BIRP BACKWASH DESIGN
MECHANICAL
TANK DETAILS I
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE AS NOTED
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M6.0



- NOTE:
1. PROVIDE LADDER CLIMBING SAFETY DEVICE. SAFE CLIMB SYSTEM SHALL BE MANUFACTURED BY SAF-T-CLIMB, TUF-TUG PRODUCTS OR APPROVED EQUAL. SUBMIT FOR APPROVAL.
 2. EXAMPLE INSTALLATION IS SHOWN. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION DETAILS.

LADDER CLIMBING SAFETY DEVICE DETAIL (6) TYP



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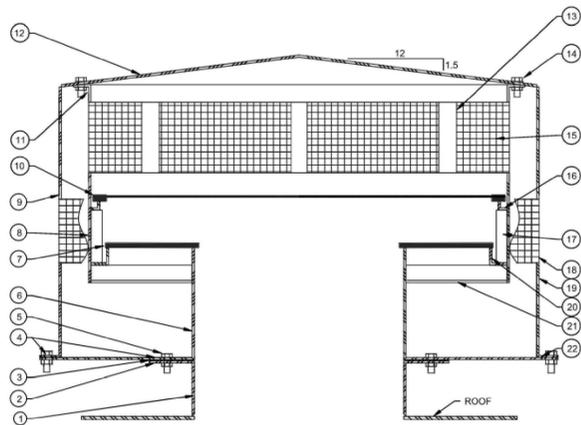
DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
MECHANICAL
TANK DETAILS II
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE AS NOTED
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M7.0

**CLOG RESISTANT ALUMINUM ROOF VENT
24 INCH DIAMETER**



NOTE: INSTALL VENT ASSEMBLY PLUMB ± 1/8" IN 12"

**24 INCH DIAMETER ALUMINUM VENT MATERIAL
SPECIFICATION FOR FIGURE 1**

- STEEL PLATE ROLLED TO 24-1/2 IN. O.D. X 6 IN. HIGH (MIN.) X 1/4 IN. TK. MUST PROJECT 4 IN. ABOVE ROOF (INSTALL PLUMB)
- STEEL PLATE 34 IN. O.D. X 1/4 IN. X 24 IN. I.D. (MUST BE INSTALLED LEVEL) BOLT CIRCLE: (8) 7/16 IN. DIA. HOLES @ 15-1/8 IN. RAD.
- RUBBER GASKET 34 IN. O.D. X 3/8 IN. X 24-1/4 IN. I.D. BOLT CIRCLE: (8) 7/16 IN. DIA. HOLES @ 15-1/8 IN. RAD.
- ALUMINUM PLATE 58 IN. O.D. X 3/16 IN. X 24 IN. I.D. EQUIPPED W/ (4) OPENINGS COVERED BY 3/4 IN. X 1/2 IN. FLATTENED EXPANDED ALUMINUM. OPENING SIZE: 625 IN. X 1.75 IN. (FIG. 2)
- (8) INNER, 20 OUTER: 304 S.S. BOLTS W/ H. NUTS & (2) FLAT WASHERS PER BOLT. 3/8 IN. DIA. X 1-1/2 IN. LONG. BOLT CIRCLES: (8) 7/16 IN. DIA. HOLES @ 15-1/8 IN. RAD. & (20) 7/16 IN. DIA. HOLES @ 28-1/4 IN. RAD.
- ALUMINUM PLATE ROLLED TO 24 IN. I.D. X 3/16 IN. X 12-1/2 IN. LONG (ROUND ONE EDGE)
- LINEAR HIGH DENSITY POLY-ETHYLENE (HDPE) VACUUM PALLET 45 IN. O.D. X 23 IN. I.D. X 1/2 IN. TK
- ALUMINUM PLATE ROLLED TO 48 IN. O.D. X 12-1/2 IN. HIGH X 1/8 IN. TK
- ALUMINUM PLATE ROLLED TO 54 IN. O.D. X 12 IN. HIGH X 1/8 IN. TK
- PRESSURE PALLET, REFER TO FIG. 3
- ALUMINUM 2 IN. X 2 IN. X 3/16 IN., ANGLE ROLLED TO 47-3/4 IN. I.D. LEG OUT W/ (4) EVENLY SPACED 9/16 IN. DIA. HOLES (REFER TO FIG. 4)
- ALUMINUM CONE ROOF PLATE 54 IN. DIA. X 1/8 IN. TK (MAY SUBSTITUTE PRESSED PLATE OR FLANGED AND DISHED HEAD)
- (6) ALUMINUM BAR 2 IN. X 3/16 IN. X 8 IN. LONG (REFER TO FIG. 6)
- (4) 304 S.S. BOLTS 1/2 IN. DIA. X 1-1/2 IN. LONG, WITH (1) FLAT WASHER, (1) LOCK WASHER, AND (1) NUT PER BOLT (REFER TO FIG. 4) MAY SUBSTITUTE 1 IN. Ø X 1/2 IN. THICK BAR STOCK, DRILLED AND TAPPED, AND WELDED TO ANGLE FOR NUT AND LOCK WASHER
- 3/4 IN. X 1/2 IN. FLATTENED EXPANDED ALUMINUM (OPENING SIZE: 625 IN. X 1.75 IN.) FORMED TO 48 IN. I.D. X 11 IN. HIGH
- ALUMINUM ANGLE 1 IN. X 1 IN. X 3/16 IN. ROLLED TO 45-3/4 IN. I.D. LEG OUT W/ (8) EVENLY SPACED 3/16 IN. DIA. HOLES LOCATED MIDWAY ON THE HORIZONTAL LEG
- (6) ALUMINUM BAR 6 IN. X 1-1/4 IN. X 1/8 IN.
- 3/4 IN. X 1/2 IN. FLATTENED EXPANDED ALUMINUM (OPENING SIZE: 625 IN. X 1.75 IN.) FORMED TO 54 IN. I.D. X 9 IN. HIGH SUPPORTED BY (6) EVENLY SPACED ALUMINUM BARS, 2 IN. X 3/16 IN. X 6 IN. LONG
- ALUMINUM PLATE ROLLED TO 54 IN. O.D. X 13 IN. HIGH X 1/8 IN. TK SECTION OF VERTICAL SHIELD
- ALUMINUM ANGLE 2 IN. X 2 IN. X 3/16 IN. ROLLED TO 43-3/4 IN. I.D. LEG OUT W/ (8) EVENLY SPACED 3/16 IN. DIA. HOLES LOCATED MIDWAY ON THE HORIZONTAL LEG
- (6) ALUMINUM ANGLE 2 IN. X 2 IN. X 3/16 IN. X 11-5/8 IN. LONG, ORIENTED LEG-DOWN 22° - ALUMINUM PLATE 58 IN. O.D. X 3/16 IN. X 54 IN. I.D. TO PROVIDE 2 IN. WIDE LIP FOR BOLTING

OPERATING INSTRUCTIONS:

- ANNUALLY INSPECT AND CLEAN OUT THE VENT INTERIOR.
- MORE FREQUENT INSPECTION AND CLEANING MAY BE REQUIRED IF UNUSUALLY SEVERE DUST CONDITIONS EXIST.
- SEVERE ICING COULD CAUSE FREEZING OF THE PALLETS RENDERING THE PALLETS INOPERATIVE. MORE FREQUENT INSPECTIONS ARE REQUIRED DURING FREEZING CONDITIONS. THE VENT AND PALLETS SHOULD BE THAWED IF NECESSARY.
- THE PALLETS AND INTERIOR SURFACES OF THE VENT SHOULD NOT BE PAINTED. IF THE EXTERIOR SURFACES ARE TO BE PAINTED, TIC RECOMMENDS THESE SURFACES BE HAND-ROUGHENED WITH SAND PAPER AND SOLVENT WASHED PRIOR TO COATING. A PRIMER ACCEPTABLE FOR THIS TYPE OF SURFACE SHOULD BE USED.
- THE VACUUM AND PRESSURE-RELIEF PALLETS SHOULD BE REMOVED DURING CLEANING AND PAINTING OF THE TANK TO PREVENT THEM FROM CLOGGING. THE OWNER'S REPRESENTATIVE SHOULD VERIFY THE PROPER RE-INSTALLATION OF THE PALLETS PRIOR TO PLACING THE TANK BACK INTO SERVICE.

NOTES:

- ALL STEEL ITEMS TO BE MADE FROM A36 OR A283 GRADES A, B OR C STEEL UNLESS OTHERWISE SPECIFIED.
- ALL ALUMINUM ITEMS TO BE MADE FROM GRADE 3003-H14 OR H16 FORMABLE, UNLESS OTHERWISE SPECIFIED.
- ALL DIMENSIONS TO ± 1/8 IN. TOLERANCE EXCEPT BOLT HOLE DIAMETERS TO ± 1/32 IN. TOLERANCE.

WELD SPECIFICATIONS - 24 INCH DIAMETER VENT

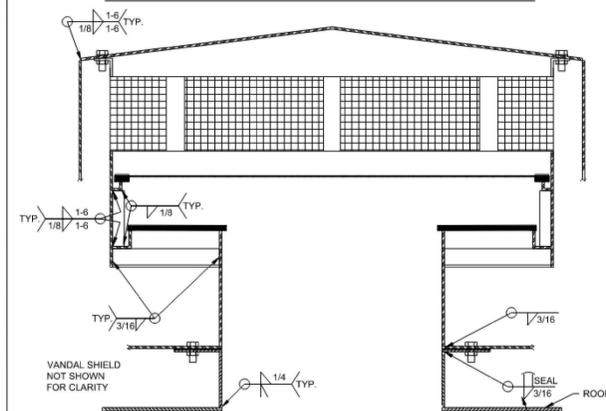


FIGURE 5

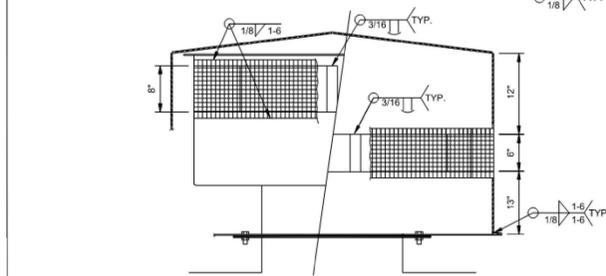


FIGURE 6

NOT TO BE USED FOR CONSTRUCTION

PRESSURE PALLET - 24 INCH DIAMETER VENT

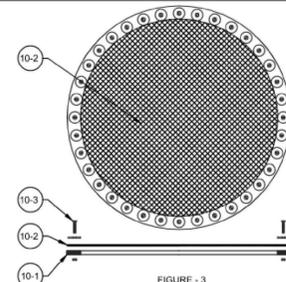


FIGURE - 3

- 10-1 - HDPE RING 47" O.D. x 43" I.D. x 1/2" TK BOLT CIRCLE: (36) 1/4" DIA. HOLES EVENLY SPACED @ RAD. = 22-1/2"
- 10-2 - 1/4" X 1/4" TYPE 316 STAINLESS STEEL MESH 48" DIA. (0.018 - 316 S.S. SCREEN) BOLT CIRCLE: (36) 1/4" DIA. HOLES EVENLY SPACED @ RAD. = 22-1/2"
- 10-3 - (36) NO. 12 PAN HEAD 316 S.S. MACHINE SCREWS WITH NUTS AND FENDER WASHERS, 1-1/2" LONG

VENT COVER CONNECTION

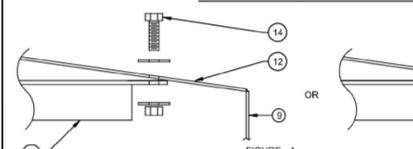
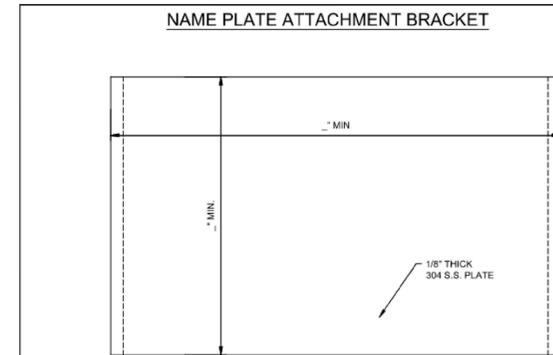


FIGURE - 4

- 9 - ALUMINUM PLATE ROLLED TO 54" O.D. x 12" HIGH x 1/8" TK
- 11 - ALUMINUM 2" x 2" x 3/16", ANGLE ROLLED TO 47-3/4" I.D. LEG OUT WITH (4) EVENLY SPACED 9/16" DIA. HOLES
- 12 - ALUMINUM CONE ROOF PLATE 54" DIA. x 1/8" TK (MAY SUBSTITUTE PRESSED PLATE OR FLANGED AND DISHED HEAD)
- 14 - (4) 304 S.S. BOLTS 1/2" DIA. x 1-1/2" LONG WITH (1) FLAT WASHER, (1) LOCK WASHER, AND (1) NUT PER BOLT (REFER TO FIG. 4) MAY SUBSTITUTE 1" Ø X 1/2" THICK BAR STOCK, DRILLED AND TAPPED, AND WELDED TO ANGLE FOR NUT AND LOCK WASHER.

PRESSURE PALLET - 24 INCH DIAMETER VENT DETAIL (11) TYP
SCALE: NTS

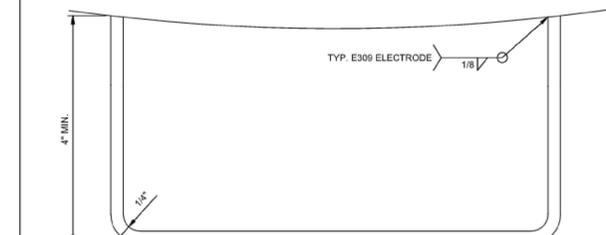


- NOTE:
- MOUNT NAME PLATE TO BRACKET WITH NO. 12 STOVE BOLTS (304 S.S.)
 - PROTECT NAME PLATE FROM DAMAGE DURING CLEANING.
 - PROTECT NAME PLATE FROM APPLICATION OF COATING ON EXPOSED SURFACE.

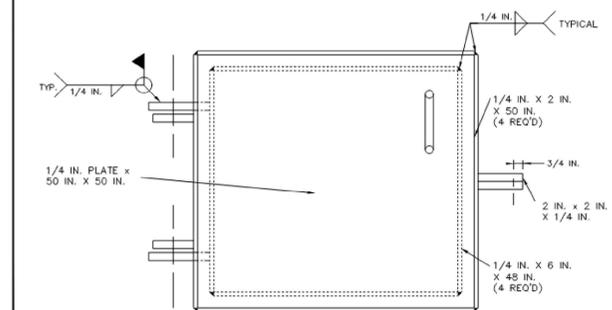
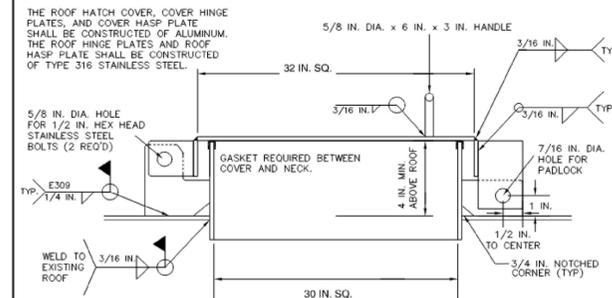
- NOTE:
- DRILL HOLES FOR ATTACHMENT OF NAME PLATE TO BRACKET PRIOR TO CLEANING.
 - PROTECT NAME PLATE FROM DAMAGE DURING CLEANING.
 - PROTECT NAME PLATE FROM APPLICATION OF COATING ON EXPOSED SURFACE.

NOT TO BE USED FOR CONSTRUCTION

NAMEPLATE ATTACHMENT BRACKET DETAIL (13) TYP
SCALE: NTS



30 INCH SQUARE ROOF HATCH

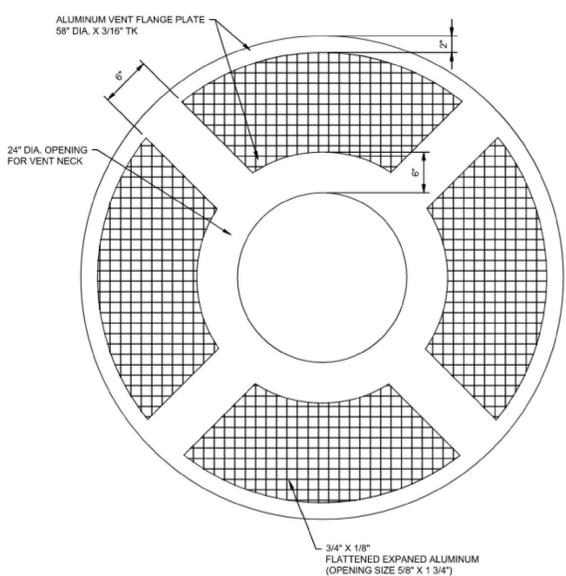


COVER MUST OPEN FULLY AND LAY ON ROOF

SQUARE ROOF HATCH DETAIL (12) TYP
SCALE: NTS

NOTE: HATCH SHALL BE DESIGNED BY TANK MANUFACTURER IN ACCORDANCE WITH THIS STANDARD. THE HATCH MUST BE DESIGNED TO PREVENT WATER AND INSECTS/ANIMALS FROM ENTERING THE TANK.

CLOG RESISTANT ALUMINUM ROOF VENT 24 INCH DIAMETER



CLOG RESISTANT ALUMINUM ROOF VENT (10) TYP

SCALE: NTS



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NO. C 83580 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PL BUILDING B, SUITE B200
CARMEL, CA 93923

CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE

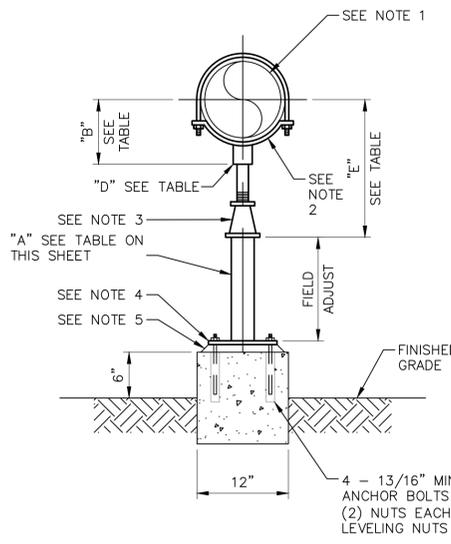
DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
MECHANICAL
TANK DETAILS III
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

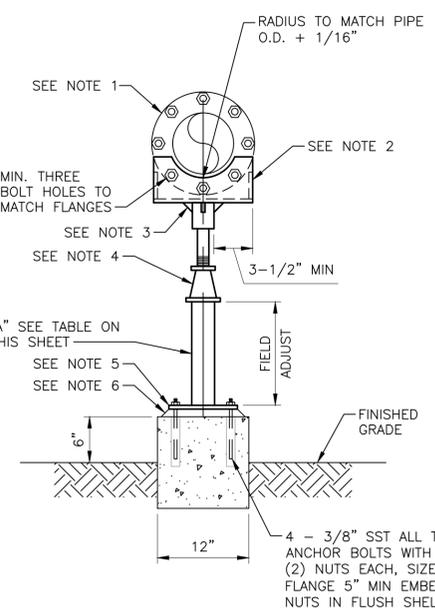
CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE AS NOTED
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	XXXXXX-XXXX-M8.0

PIPE SIZE	ADJUSTABLE PIPE SADDLE SUPPORT TABLE					
	A	B	C (STEEL PLATE)	D	E	
					MIN.	MAX.
2 1/2"	2 1/2"	3 1/2"	9"	1 1/2"	8"	13"
3"	2 1/2"	3 3/4"	9"	1 1/2"	8 1/4"	13 1/4"
3 1/2"	2 1/2"	4"	9"	1 1/2"	8 1/2"	13 1/2"
4"	3"	4 1/4"	9"	2 1/2"	9 1/4"	14"
5"	3"	4 7/8"	9"	2 1/2"	10"	14 3/4"
6"	3"	5 1/2"	9"	2 1/2"	10 1/2"	15 1/4"
8"	3"	6 7/8"	9"	2 1/2"	11 3/4"	16 1/2"
10"	3"	8 1/2"	9"	2 1/2"	13 1/2"	18 1/4"
12"	3"	9 15/16"	9"	2 1/2"	15"	19 3/4"
16"	6"	12 5/16"	12"	2 1/2"	18"	20"

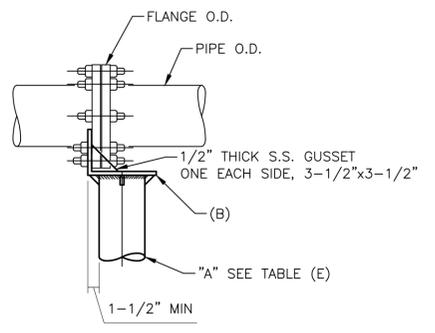


U-BOLT PIPE SUPPORT ON GRADE
SCALE: NTS
14A TYP

- NOTES FOR U-BOLT PIPE SUPPORTS:
- PIPE DIAMETER, SEE MECHANICAL PLANS.
 - PIPE SADDLE SUPPORT W/U-BOLT, GRINNELL FIG 259 OR EQUAL.
 - ADJUSTABLE PIPE SUPPORT, GRINNELL FIG 264 OR EQUAL.
 - 1/2" x 9" x 9" STEEL PLATE.
 - 1" NON-SHRINK LEVELING GROUT, AS REQUIRED.

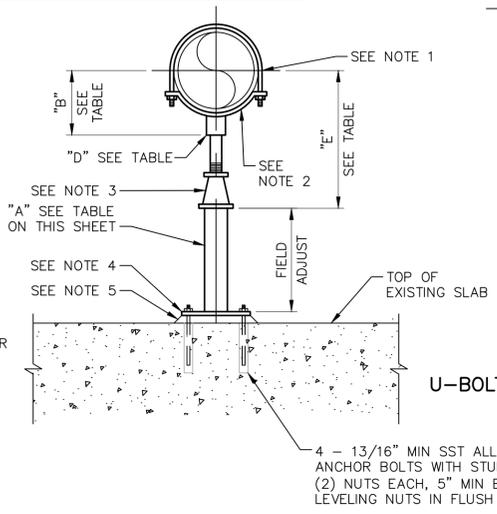


FLANGED PIPE SUPPORT ON GRADE
SCALE: NTS
15A TYP

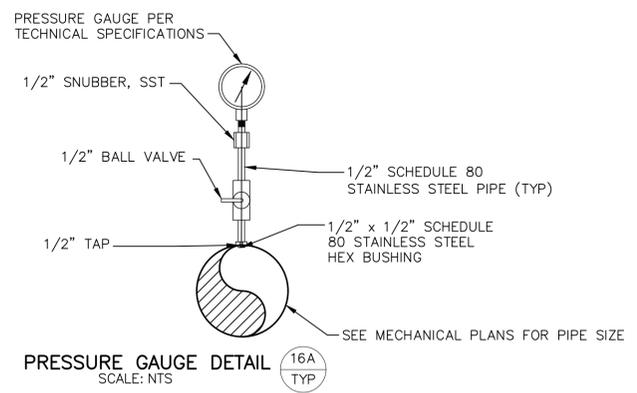


FLANGED PIPE SUPPORT ON SLAB
SCALE: NTS
15B TYP

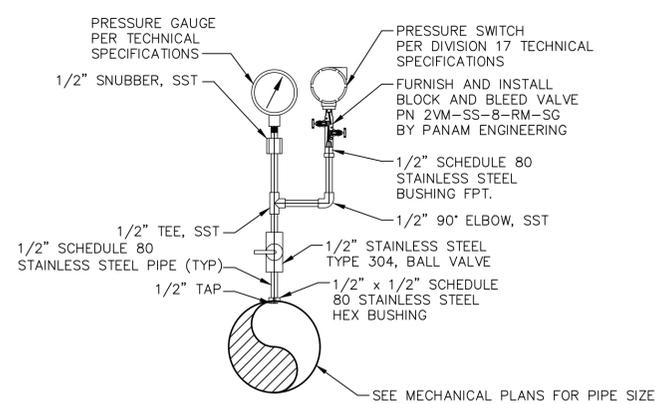
- NOTES FOR FLANGED PIPE SUPPORTS:
- PIPE FLANGE, SEE MECHANICAL PLANS.
 - 1/2" STEEL PLATE.
 - 4 STEEL GUSSET PLATES EQUALLY SPACED AT 1-1/4" x 1-1/4" x 1/2" THICK.
 - ADJUSTABLE PIPE SUPPORT, GRINNELL FIG 264 OR EQUAL.
 - 1/2" x 9" x 9" STEEL PLATE.
 - 1" NON-SHRINK NON-METALLIC LEVELING GROUT, AS REQUIRED.



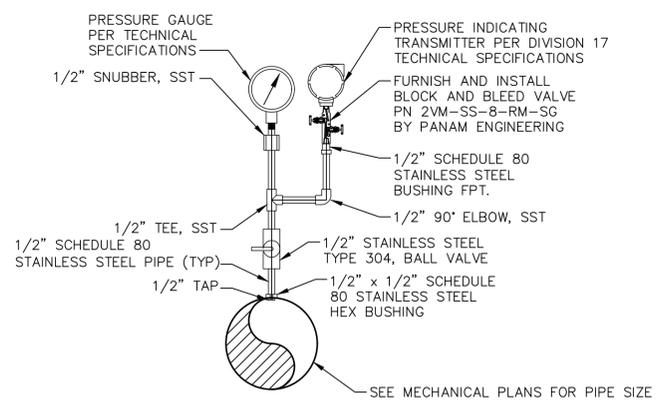
U-BOLT PIPE SUPPORT ON SLAB
SCALE: NTS
14B TYP



PRESSURE GAUGE DETAIL
SCALE: NTS
16A TYP



PRESSURE SWITCH AND GAUGE DETAIL
SCALE: NTS
16B TYP



PRESSURE INDICATING TRANSMITTER AND GAUGE DETAIL
SCALE: NTS
16C TYP

- NOTES:
- ALL GAUGES SHALL BE DUAL SCALE. SCALES ON THE GAUGE FACE SHALL BE MARKED IN PSIG AND FEET OF WATER (FOR POSITIVE READINGS) OR INCHES OF MERCURY (FOR VACUUM READINGS).



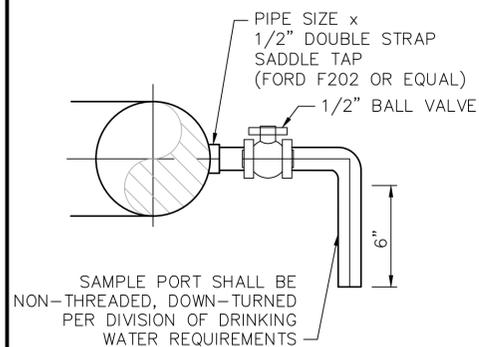
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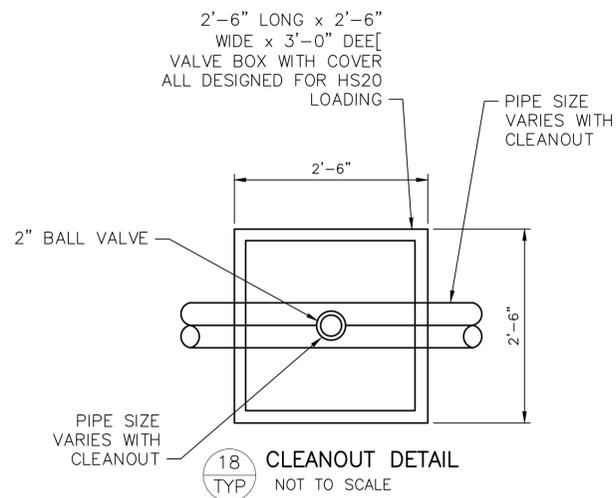
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TERESA A. VALENTINE
C 83580
Exp. 3-31-27
CIVIL
STATE OF CALIFORNIA
CA LICENSED PROFESSIONAL ENGINEER
NO. C 83580 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PL BUILDING B, SUITE B200
CARMEL, CA 93923
DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE
DATE OCTOBER 2025
PROJECT XXXXXX-XXXX

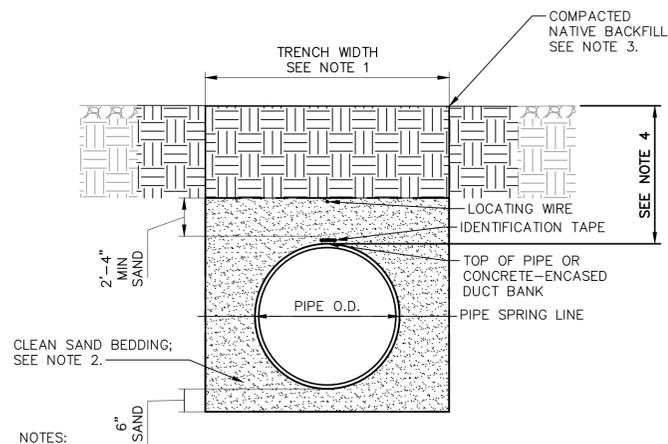
BIRP BACKWASH DESIGN
MECHANICAL
DETAILS I
9210 CARMEL VALLEY ROAD CARMEL CA, 93923
CALIFORNIA AMERICAN WATER CO.
COASTAL DIVISION
90% SUBMITTAL
USE APPROVED DRAWINGS ONLY
FOR CONSTRUCTION PURPOSES
USE DIMENSIONS ONLY
SCALE AS NOTED
XXXXXX-XXXX-M9.0



SAMPLE PORT DETAIL (17 TYP)
SCALE: NTS



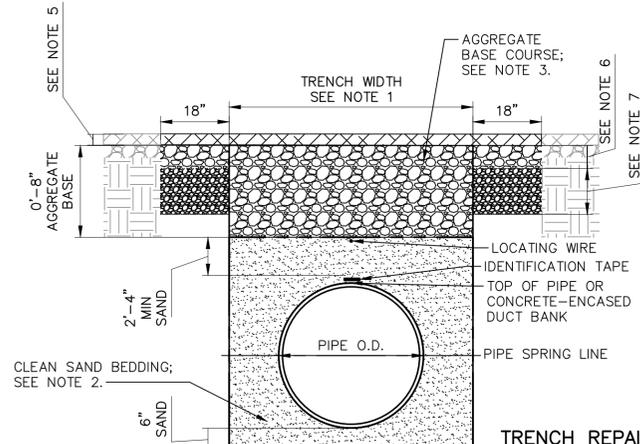
CLEANOUT DETAIL (18 TYP)
NOT TO SCALE



UNPAVED PIPE TRENCH DETAIL (20A TYP)
NOT TO SCALE

- NOTES:
1. MINIMUM TRENCH WIDTH TO BE 12" LARGER THAN OUTER DIAMETER (O.D.) OF PIPE UP TO 16" PIPE O.D. ALL OTHER SIZES ABOVE 16" O.D. SHALL BE 18" LARGER THAN THE O.D. OF PIPE.
 2. PLACE CLEAN SAND IN A 6" THICK BED BELOW THE PIPE AND REFILL TRENCH WITH CLEAN SAND TO MINIMUM HEIGHT OF 2- TO 4-INCHES ABOVE THE TOP OF THE PIPE. SEE TECHNICAL SPECIFICATION 02210.
 3. PROVIDE 3-FOOT MINIMUM COVER FOR ALL BURIED PIPES.

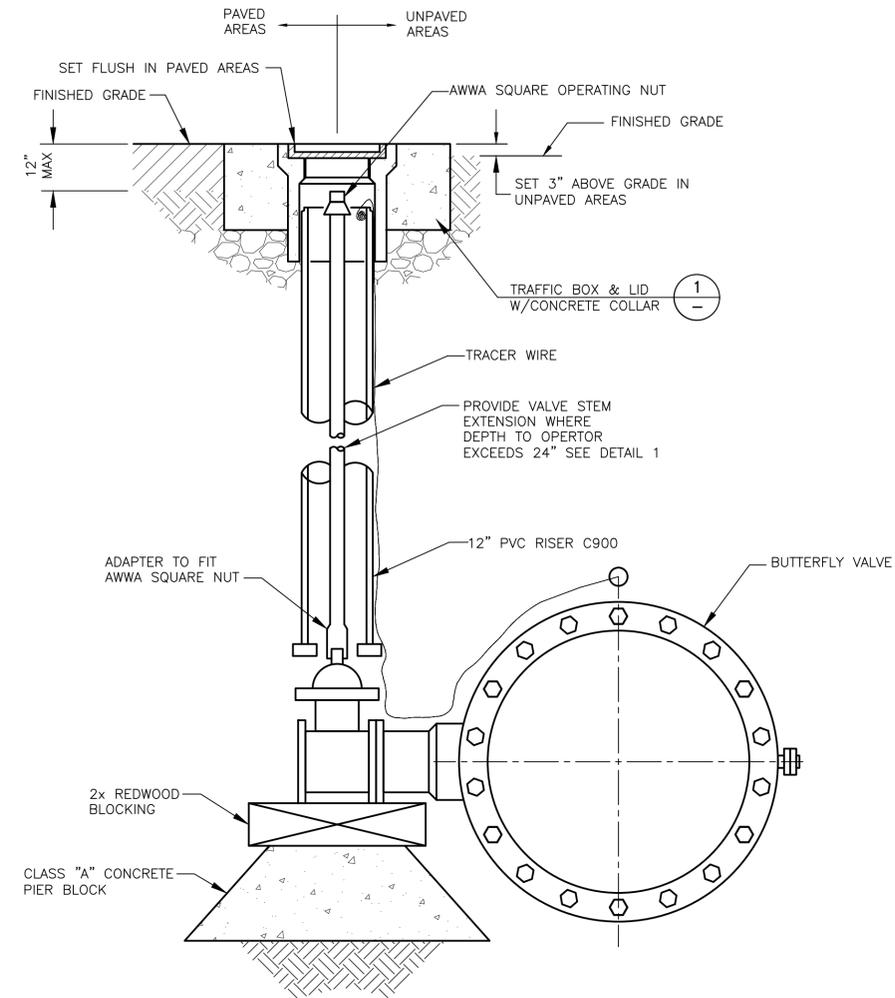
5. MAXIMUM LIFTS:
- | | |
|--|-------|
| MECHANICAL COMPACTION | |
| HYDROHAMMER | 3.00' |
| (CAUTION SHOULD BE EXERCISED IN USING HYDROHAMMER WHEN THE COVER OVER THE PIPE IS LESS THAN 4.0'.) | |
| VIBRATORY | 2.00' |
| ROLLING STOCK | 1.00' |
| HAND TAMPER | 0.33' |
| HYDRAULIC DENSIFICATION | |
| (ONLY WHEN SPECIFIED BY INSPECTOR) | |
| FLOODING AND PUDDLING | 7.00' |
| JETTING UNDER PRESSURE | 7.00' |
| NOTE: BEDDING MUST BE FREE DRAINING IF THE FILL IS NOT. | |



TRENCH REPAIR WITHIN EXISTING PAVED ROADWAYS DETAIL (20B TYP)
NOT TO SCALE

- NOTES:
1. MINIMUM TRENCH WIDTH TO BE 12" LARGER THAN OUTER DIAMETER (O.D.) OF PIPE UP TO 16" PIPE O.D. ALL OTHER SIZES ABOVE 16" O.D. SHALL BE 18" LARGER THAN THE O.D. OF PIPE.
 2. PLACE CLEAN SAND IN A 6" THICK BED BELOW THE PIPE AND REFILL TRENCH WITH CLEAN SAND TO MINIMUM HEIGHT OF 2- TO 4-INCHES ABOVE THE TOP OF THE PIPE. SEE TECHNICAL SPECIFICATION 02210.
 3. AGGREGATE BASE COURSE MATERIAL SHALL BE CLASS 2, 3/4" MAXIMUM AGGREGATE BASE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 26 OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
 4. PROVIDE 3-FOOT MINIMUM COVER FOR ALL BURIED PIPES.
 5. REPAIR AREA TO BE SAW CUT 18" BEYOND TRENCH EXCAVATION ON BOTH SIDES. REPLACE ASPHALT PAVEMENT 1" GREATER THAN THICKNESS OF EXISTING (MINIMUM THICKNESS OF 3").
 6. AGGREGATE BASE TO MATCH EXISTING - REPLACE ONLY WITHIN TRENCH EXCAVATION UNLESS SPECIFIED BY INSPECTOR (MINIMUM OF 6" THICK, CLASS 2, 95% COMPACTION).
 7. AGGREGATE SUB-GRADE TO BE COMPACTED TO 95% RELATIVE DENSITY, 8" MINIMUM AT A MOISTURE CONTENT OF 1 TO 3% OVER THE OPTIMUM MOISTURE CONTENT FOR THE SOIL.

5. MAXIMUM LIFTS:
- | | |
|--|-------|
| MECHANICAL COMPACTION | |
| HYDROHAMMER | 3.00' |
| (CAUTION SHOULD BE EXERCISED IN USING HYDROHAMMER WHEN THE COVER OVER THE PIPE IS LESS THAN 4.0'.) | |
| VIBRATORY | 2.00' |
| ROLLING STOCK | 1.00' |
| HAND TAMPER | 0.33' |
| HYDRAULIC DENSIFICATION | |
| (ONLY WHEN SPECIFIED BY INSPECTOR) | |
| FLOODING AND PUDDLING | 7.00' |
| JETTING UNDER PRESSURE | 7.00' |
| NOTE: BEDDING MUST BE FREE DRAINING IF THE FILL IS NOT. | |



TYPICAL BELOW GRADE BUTTERFLY VALVE INSTALLATION, DETAIL (19 TYP)
NOT TO SCALE

NOTES:

1. PROVIDE PROTECTIVE COATING TO EXTERIOR SURFACE OF VALVE BODY. WRAP WITH WAX TAPE WRAPPING SYSTEM.
2. INSTALL 2-IN BYPASS LINE AROUND EACH BVF.
 - a. USE 2-IN AWWA RESILIENT WEDGE GATE VALVE INSTALLED PER DETAIL 1.
 - b. USE STAINLESS STEEL THREADED OUTLET TAPPING SLEEVE ON DI PIPE. USE HDPE IPS MOLDED BRANCH SADDLE, PRESSURE CLASS 200 AWWA COMPLIANT ON HDPE PIPE (REQUIRES SPECIAL HEATERS AND EQUIPMENT TO INSTALL). LOCATE SADDLES MIN 1-FT FROM BVF. INSTALL 2-IN CORP STOP ON SERVICE SADDLES.
 - c. INSTALL 2-IN COPPER (TYPE K) PIPE WITH BRASS COMPRESSION FITTINGS FOR BYPASSES. COMPRESSION FITTING SHALL BE REPUTABLE MANUFACTURER (CLOW OR EQUIVALENT).



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NO. C 83580 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
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CALIFORNIA AMERICAN WATER

DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE

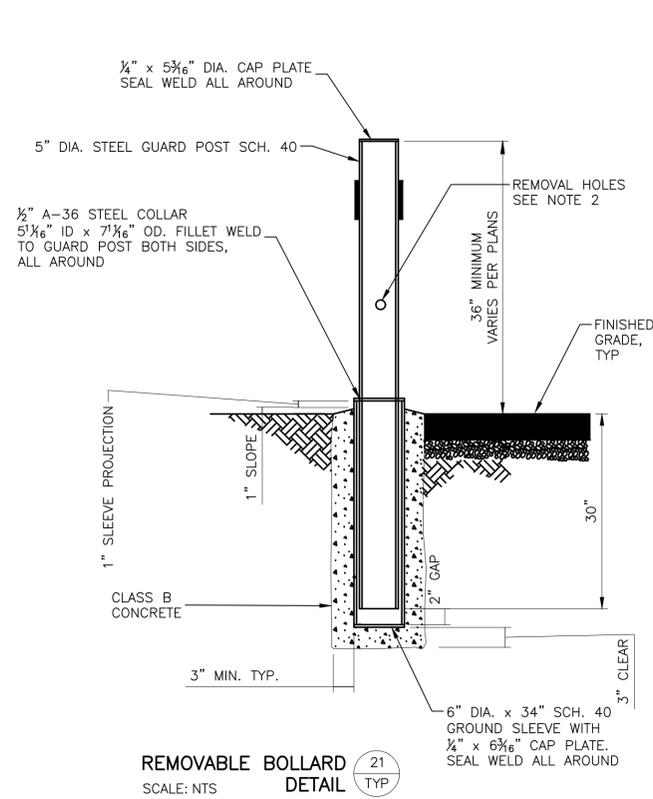
DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

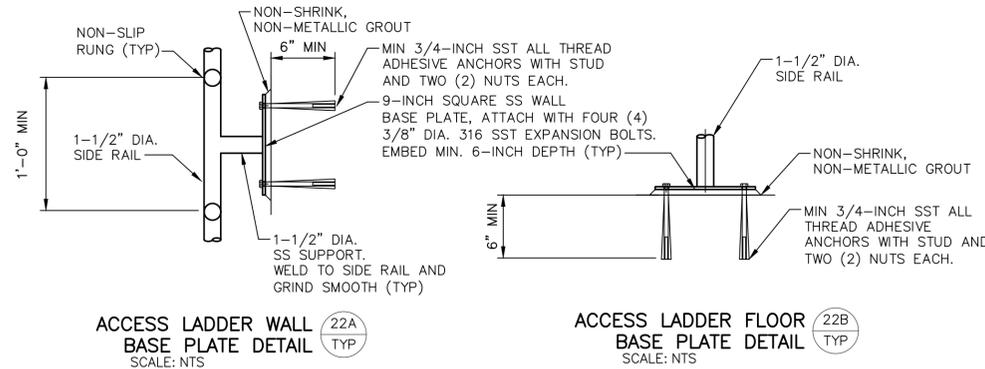
BIRP BACKWASH DESIGN MECHANICAL DETAILS II

9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	USE DIMENSIONS ONLY SCALE AS NOTED
	90% SUBMITTAL		M10.0

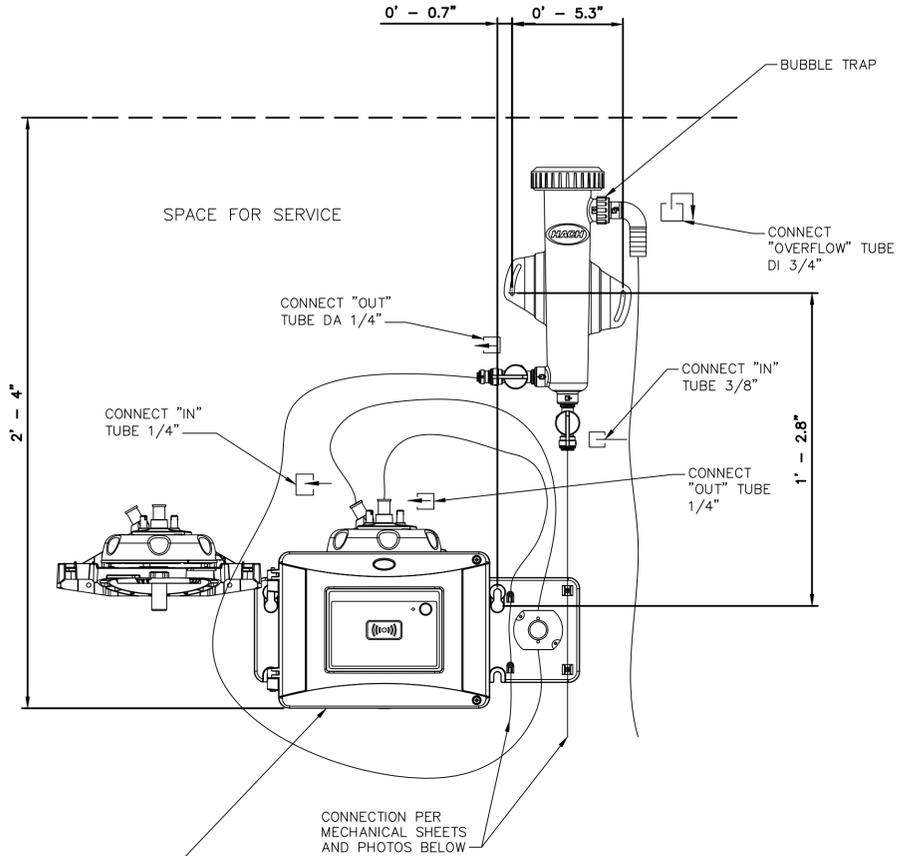


REMOVABLE BOLLARD DETAIL (21) TYP SCALE: NTS



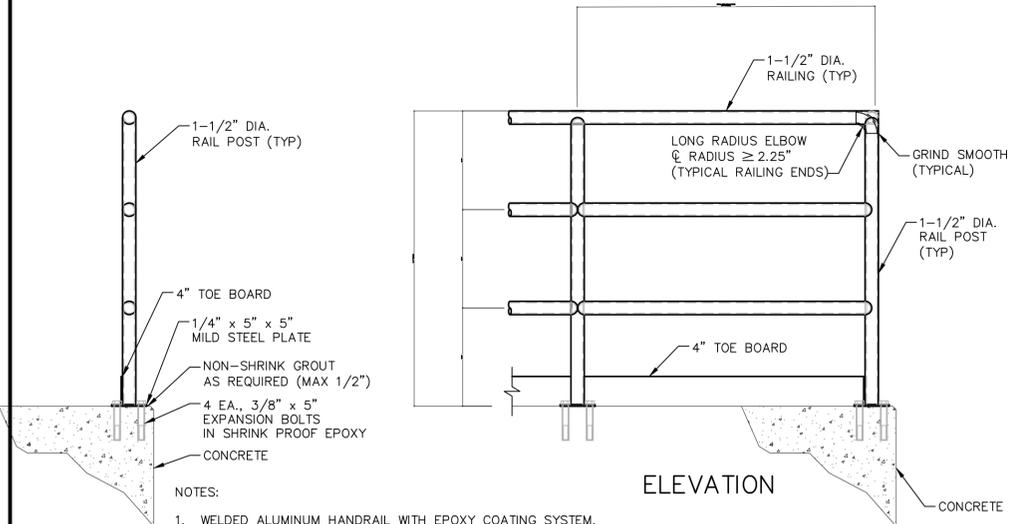
ACCESS LADDER WALL BASE PLATE DETAIL (22A) TYP SCALE: NTS
ACCESS LADDER FLOOR BASE PLATE DETAIL (22B) TYP SCALE: NTS

- NOTES:
- BOLLARDS SHALL HAVE A HEIGHT OF 3 FEET OR BE EQUAL TO THE HEIGHT OF THE BACK SCREEN WALL OF BIN ENCLOSURES. POSTS SHALL BE PLACED A MINIMUM OF 4" FROM THE WALL.
 - REMOVABLE POSTS SHALL HAVE 1" DIA. HOLES DRILLED THROUGH AT A DISTANCE 1/3 THE OVERALL POST LENGTH FROM TOP.
 - REMOVABLE POST - GRIND SMOOTH ALL SHARP EDGES PRIOR TO GALVANIZATION. GALVANIZE PER ASTM A54 AFTER FABRICATION.

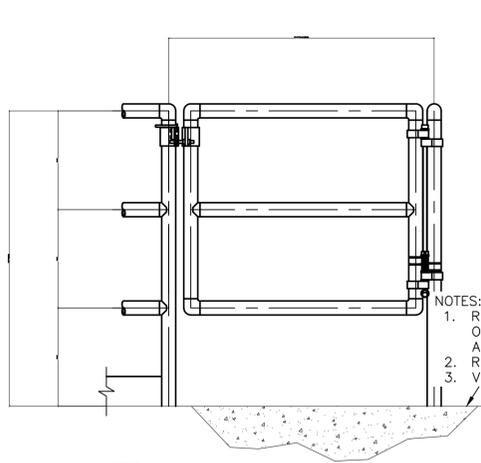


- NOTES:
- TURBIDITY ANALYZER SHALL BE INSTALLED AND TUBING ROUTED TO ANALYZER IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
 - SEE DIVISION 17 SPECIFICATIONS FOR TURBIDITY ANALYZER SPECIFICATIONS.

TURBIDIMETER DETAIL (23) TYP SCALE: NONE



VAULT SAFETY RAIL DETAIL (24) TYP SCALE: NTS



- NOTES:
- WELDED ALUMINUM HANDRAIL WITH EPOXY COATING SYSTEM.
 - RAILINGS SHALL BE 1 1/2" SCHEDULE 40 ALUMINUM PIPE ALLOY SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 05522. POST SHALL BE 1 1/2" SCHEDULE 80 ALUMINUM PIPE OF THE SAME ALLOY. POST SPACING SHALL BE A MAXIMUM OF 6'-0".
 - ALL ANCHORS AND FASTENERS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 05522.
 - REFER TO MOST CURRENT OSHA RAILING STANDARDS AND DIMENSIONS.

FACTORY/INDUSTRIAL SELF CLOSING GATE DETAIL (25) TYP SCALE: NTS



REVISIONS	REVISIONS
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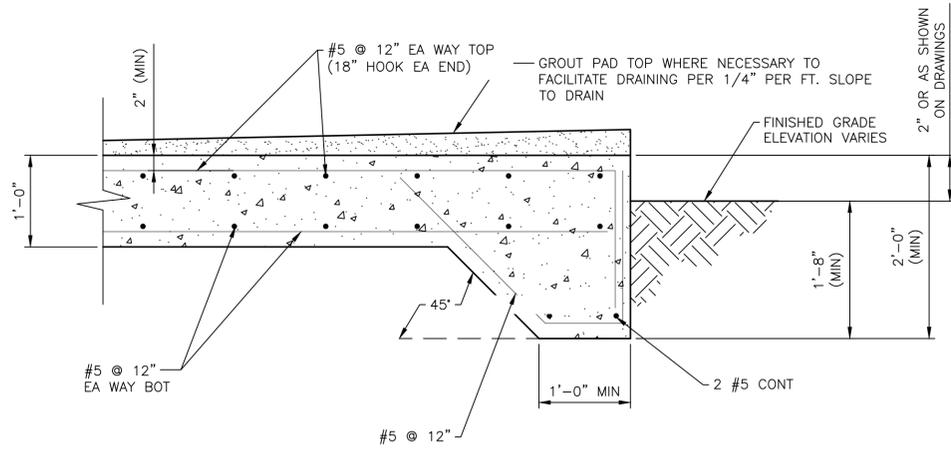
200 Clock Tower Place Building B, Suite B200
Carmel, CA 93923
Phone: (831) 200-9093 Fax: ---
Website: <http://www.valentineengineers.com>



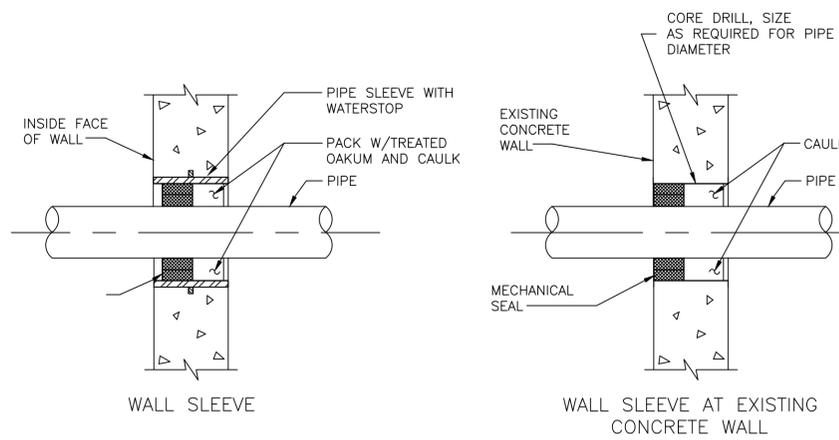
VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE, SUITE B200
CARMEL, CA 93923
DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE
DATE OCTOBER 2025
PROJECT -----

BIRP BACKWASH DESIGN MECHANICAL DETAILS III
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE AS NOTED
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	M11.0

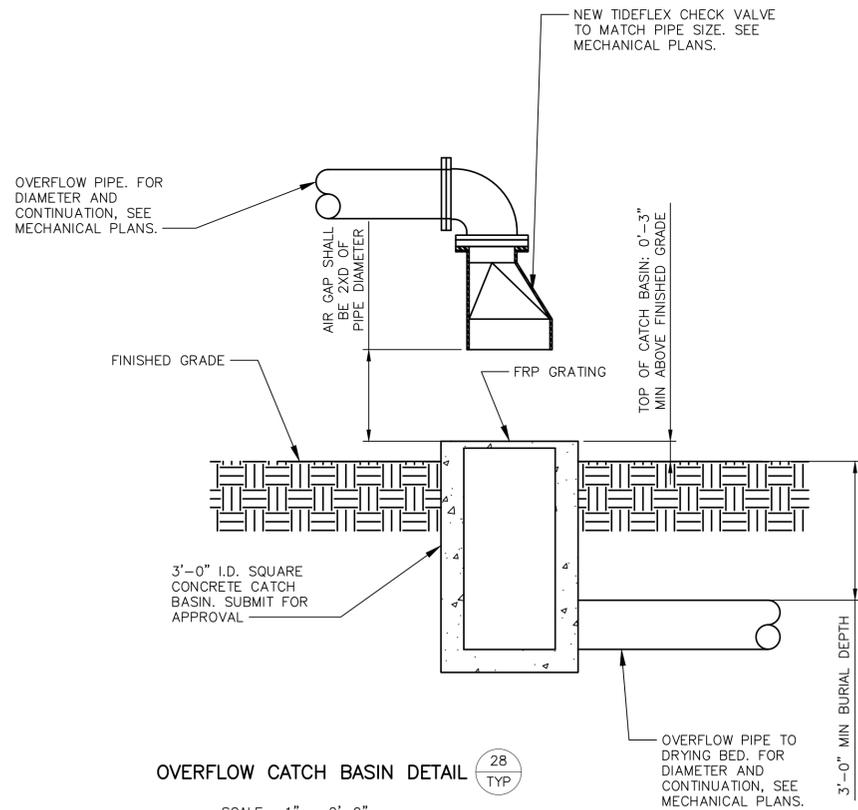


CONCRETE EQUIPMENT PAD DETAIL (26) TYP
SCALE: NTS

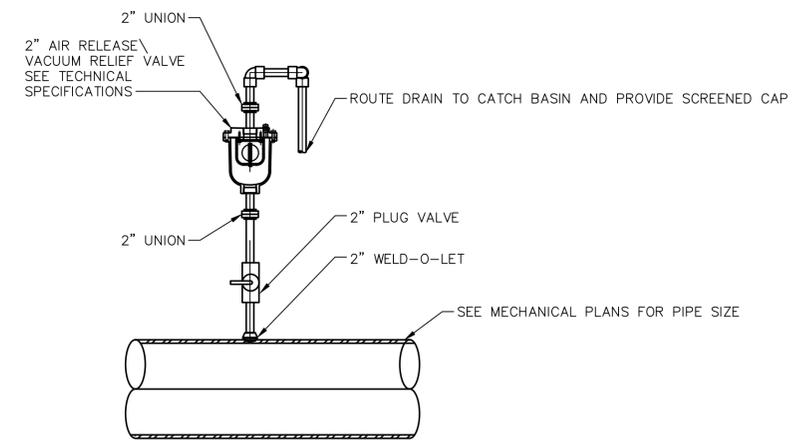


TYPICAL WALL SLEEVE DETAIL (27) TYP
SCALE: NTS

NOTES:
(*) INDICATES DIMENSIONS, DISTANCES, COORDINATES OR ELEVATIONS TO BE SURVEYED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING ANY OF THE WORK.
(**) INDICATES DIMENSIONS OR ELEVATIONS TO BE DETERMINED BASED UPON EQUIPMENT MANUFACTURER SELECTED.



OVERFLOW CATCH BASIN DETAIL (28) TYP
SCALE: 1" = 2'-0"

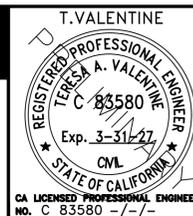


2" AIR RELEASE/VACUUM RELIEF VALVE DETAIL (29) TYP
SCALE: NTS



REVISIONS		REVISIONS	
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△		△	

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CARMEL, CA 93923
CALIFORNIA AMERICAN WATER
DRAWN BY D. BRODERICK
PROJECT ENG'R S. TERRELL/T. VALENTINE
DATE OCTOBER 2025
PROJECT -----

BIRP BACKWASH DESIGN MECHANICAL DETAILS IV 9210 CARMEL VALLEY ROAD CARMEL CA, 93923		
CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE AS NOTED
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	M12.0

STRUCTURAL SHEET INDEX

SHEET NO.	SHEET NAME
S1.1	STRUCTURAL NOTE SHEET
S1.2	TYPICAL STRUCTURAL DETAILS
S2.1	SFAT PUMP SKID AND VAULT - FOUNDATION PLAN AND SECTION
S2.2	SFAT PUMP SKID AND VAULT - STRUCTURAL DETAILS
S3.1	SLUDGE HOLDING TANK - FLOOR AND FOUNDATION PLAN
S3.2	SLUDGE HOLDING TANK - SECTION AND DETAILS
S4.1	DECANT PUMP STATION - FOUNDATION PLAN AND DETAILS

GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.
- NOTES AND DETAILS ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES.
- THE DETAILS ON THESE DRAWINGS SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY SHOWN OTHERWISE. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED, DETAILS OF A CHARACTER SIMILAR TO THOSE SHOWN SHALL BE USED, SUBJECT TO REVIEW.
- FOR OPENINGS NOT SHOWN AND/OR DETAILED ON THE STRUCTURAL DRAWINGS AND WHICH PENETRATE STRUCTURAL ELEMENTS, OBTAIN APPROVAL FROM THE ENGINEER BEFORE PROCEEDING WITH WORK.
- IT IS THE INTENTION OF THESE DRAWINGS TO PROVIDE FOR THE FOLLOWING CONTINUITIES:
 - ALL ROOF AND FLOOR STRUTS SHALL BE CONTINUOUSLY CONNECTED FOR THE LENGTH OF THE ROOF OR FLOOR SYSTEM.
 - ALL WALL BRACING AND/OR SHEAR PANELS SHALL BE CONNECTED TO THE ROOF AND/OR FLOOR STRUTS, IF DETAILS REQUIRED TO EFFECT THESE CONTINUITIES ARE NOT EVIDENT ON THE DRAWINGS THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR CLARIFICATION.
- FRAME OPENINGS AND SUPPORT MISCELLANEOUS EQUIPMENT AS DETAILED ON THE DRAWINGS. WHERE NO DETAILS ARE PROVIDED, OBTAIN APPROVAL FROM THE ENGINEER BEFORE PROCEEDING WITH WORK.
- IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FRAMEWORK, ETC. AS REQUIRED TO COMPLETE THE INSTALLATION IN ACCORDANCE WITH THESE DRAWINGS AND PROJECT SPECIFICATIONS.
- THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
- CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
- DESIGN DATA:

GOVERNING CODE.....2021 INTERNATIONAL BUILDING CODE (I.B.C.)

DESIGN LOADS:

ROOF LIVE LOAD20 PSF (REDUCIBLE)

FLOOR LIVE LOADN/A

RISK CATEGORYIV

WIND LOAD115 MPH ULTIMATE (3-SEC GUST), EXP. C

INTERNAL PRESSURE COEFFICIENT $C_{pi} = +0.18$

SEISMIC LOADDESIGN CATEGORY D, $R=2.0$, $I_e = 1.5$, SITE CLASS D

$S_s = 0.264$, $S_1 = 0.082$, $S_{D1} = 0.280$, $S_{D2} = 0.131$, $C_e=0.210$

SPECIAL INSPECTION NOTES

- SPECIAL INSPECTIONS REQUIRED BY THIS CODE ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISE OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATOR PRACTICES BY AN APPROVED INSPECTION AGENCY.
- INSPECTORS SHALL SUBMIT THEIR REPORTS DIRECTLY TO THE ENFORCEMENT AGENCY WITH COPIES TO THE ARCHITECT, STRUCTURAL ENGINEER, GENERAL CONTRACTOR AND OWNER.
- APPROVAL BY THE INSPECTOR DOES NOT MEAN APPROVAL OF FAILURE TO COMPLY WITH THE PLANS OR SPECIFICATIONS. ANY WORK TO BE DONE OR ANY MATTER RELATIVE THERETO THAT IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE ARCHITECT FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
- IN ACCORDANCE WITH 2021 I.B.C. SECTIONS 110 AND 1704.2, THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR WHO SHALL PROVIDE SPECIAL INSPECTION DURING CONSTRUCTION ON THE FOLLOWING TYPES OF WORK:
 - CONCRETE: PER CBC SECTION 1705.3 AND TABLE 1705.3 WITH EXCEPTIONS. THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION: ALL CONCRETE EXCEPT: SLAB-ON-GRADES, SIDEWALKS AND DRIVEWAYS.
 - STEEL CONSTRUCTION: SPECIAL INSPECTIONS FOR STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360. SPECIAL INSPECTION FOR SEISMIC RESISTANCE SHALL BE IN ACCORDANCE WITH AISC 341 AND SHALL COMPLY WITH SECTION 1705.2. PROVIDE INSPECTION PER CBC SECTION 1704.2.5 FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. THESE INSPECTIONS SHALL BE AT CONTRACTOR'S EXPENSE IN THE FABRICATOR IS NOT AN APPROVED FABRICATOR PER SECTION 1704.2.5.2.
 - WELDING: WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1. THE BASIS FOR WELDING INSPECTOR QUALIFICATIONS SHALL BE AWS D1.1. PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC TABLES N5.4-1 THROUGH TABLE N5.4-3.
 - GRADING, EXCAVATION AND FILLING: PER CBC SECTION 1705.6. SEE CIVIL DRAWINGS AND SPECIFICATION DIVISION 31.
 - EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHORS: INSTALLATION TO VERIFY INSTALLATION IN ACCORDANCE WITH APPLICABLE ICC REPORTS NOTED ON NOTE SHEET OR DETAILS.
 - HEADED CONCRETE SHEAR CONNECTORS: INSPECTED AND TESTED PER AMERICAN WELDING SOCIETY CODE AWS D1.1.

CONCRETE NOTES

- THE QUALITY, DESIGN AND PLACEMENT OF CONCRETE SHALL BE IN ACCORDANCE WITH THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE (C.B.C.), EXCEPT ITEMS NOT SPECIFICALLY COVERED THEREIN SHALL ALSO CONFORM TO ACI 318, LATEST EDITION, MAXIMUM SLUMP SHALL BE 5 INCHES.
- UNLESS NOTED OTHERWISE, ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH IN 28 DAYS AS FOLLOWS:

FOOTINGS, STEMWALLS & PIERS4000 PSI

SLABS ON GRADE4000 PSI
- MATERIALS USED IN THE CONCRETE MIX SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

AGGREGATE (NORMAL-WEIGHT CONCRETE, 1-1/2" MAX) ASTM C-33

PORTLAND CEMENT (TYPE II, U.N.O.) ASTM C-150

ADMIXTURES NOT ALLOWED W/O APPROVAL

WATER POTABLE
- READY-MIXED CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C-94 OR C-685.
- ALL EXPOSED INTERIOR CONCRETE FLOORS ARE TO RECEIVE A STEEL TROWELED FINISH.
- UNLESS NOTED OTHERWISE, ALL EXPOSED EXTERIOR CONCRETE SLABS ARE TO RECEIVE A MEDIUM BROOM FINISH.
- FORMS FOR PERMANENTLY EXPOSED SURFACES SHALL PRODUCE A SMOOTH, EVEN, LEVEL FINISH WITHOUT FINIS. DESIGN OF FORM WORK SHALL TAKE INTO CONSIDERATION THE REQUIREMENTS OF ACI 318-19 SECTION 26.11.2.1.
- UNLESS NOTED OTHERWISE, ALL EXPOSED EDGES OF CONCRETE SURFACES SHALL RECEIVE A 3/4" MINIMUM CHAMFER OR A 1/2" MINIMUM TOOLED RADIUS & THE TOP OF ALL EXPOSED FOOTINGS, PIERS AND COLUMNS SHALL RECEIVE A SMOOTH TROWELED FINISH.
- ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE THOROUGHLY WORKED AROUND REINFORCEMENT, ANCHOR BOLTS, OTHER EMBEDDED ITEMS AND INTO THE CORNERS OF FORMS. ANY "HONEYCOMB" CONCRETE AND/OR ROCK POCKETS SHALL BE REMOVED AND REPLACED WITH SOUND CONCRETE.
- ALL CONCRETE FLATWORK SHALL BE WET CURED BY MIST CURING, BY MOISTURE-RETAINING CURING, OR BY COMBINATIONS THEREOF IN ACCORDANCE WITH ACI 301 PROCEDURES. KEEP CONTINUOUSLY MOIST FOR NOT LESS THAN 7 DAYS AFTER THE FINISHING OPERATION IS COMPLETE.
- ALTERNATELY, A CURING COMPOUND MEETING ASTM C-309 TYPE 1, CLASS B AND AASHTO 148, TYPE 1 SPECIFICATIONS AND STATE OF CALIFORNIA AIR REGULATION BOARD SOLVENT EMISSIONS STANDARDS MAY BE USED SUCH AS "EUCLID" SUPER DIAMOND CLEAR VOX.
- REINFORCING STEEL SHALL BE BILLET STEEL CONFORMING TO ASTM A615/A615M-96A AS FOLLOWS, UNLESS NOTED OTHERWISE:

#4 (13 MM) AND SMALLERGRADE 40 (GRADE 300)

#5 (16 MM) AND LARGERGRADE 60 (GRADE 420)
- FABRICATING DETAILS SHALL CONFORM TO ACI 315, "ACI DETAILING MANUAL" AND CRSI "MANUAL OF STANDARD PRACTICE".
- SPLICE LENGTHS OF REINFORCING BARS SHALL COMPLY WITH THE REQUIREMENTS OF ACI 318. REFER TO DETAILS ON THESE PLANS.
- ALL WELDING OF REINFORCING STEEL SHALL BE WITH LOW HYDROGEN ELECTRODES UNLESS OTHERWISE NOTED. WELDING OF REINFORCING ALLOWED ONLY WHERE DETAILED ON THE DRAWINGS AND SHALL BE IN ACCORDANCE WITH SPECIFICATIONS PER ACI 318-19 SECTION 26.6.4.1 AND 25.5.7.2.
- ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- ALL VERTICAL REINFORCING BARS AT WALLS, STEMWALLS, PEDESTALS, ETC. SHALL HAVE A STANDARD ACI 90° OR 180° HOOK INTO THE FOUNDATION BELOW WITH EMBEDMENT REQUIRED BY THE BUILDING CODE. ALSO SEE DETAILS, THESE PLANS.
- UNLESS OTHERWISE NOTED, ALL REINFORCING SHALL HAVE A MINIMUM CONCRETE COVER AS FOLLOWS:

SURFACES POURED AGAINST EARTH3 INCHES

FORMED SURFACES EXPOSED TO GROUND OR WEATHER:

#5 AND SMALLER1 1/2" INCHES

#6 AND LARGER2 INCHES

FORMED CONCRETE NOT EXPOSED TO GROUND OR WEATHER3/4" INCH

BEAMS, JOISTS & GIRDERS1 1/2" INCHES

COLUMNS1 1/2" INCHES
- WHERE GROUT IS SPECIFIED ON THE DRAWINGS USE A HIGH STRENGTH, NON SHRINK, NON-METALLIC GROUT. USE MASTERBUILDERS "MASTERFLOW 713 GROUT" OR APPROVED SUBSTITUTE.
- REFER TO BOTH ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION AND SPACING OF ALL PLUMBING FIXTURES.
- NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE WALLS OR SLAB UNLESS SPECIFICALLY DETAILED.

FOUNDATION NOTES

- OVER-EXCAVATION, ENGINEERED FILL AND RECOMPACTION SHALL MEET REQUIREMENTS OF GEOTECHNICAL EVALUATION REPORT LISTED BELOW.
- ANY EXISTING FILL AT THE BUILDING PAD SHALL MEET THE 90% COMPACTION REQUIREMENTS. ALL ORGANIC MATERIAL, RUBBLE OR OTHER DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SITE.
- NOMINAL TOP OF FLOOR SLAB ELEVATION = DATUM +0'. 0" UNLESS NOTED OTHERWISE.
- ALL SPREAD OR CONTINUOUS BEARING WALL FOOTINGS SHALL BE FOUNDED A MINIMUM DEPTH OF 12 INCHES BELOW LOWEST ADJACENT FIRM NATURAL SUBGRADE OR COMPACTED FILL UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
- CONSTRUCTION OR CONTROL JOINTS (C.J.) ARE TO BE PROVIDED AT INTERIOR NON-BEARING PARTITIONS AND AT HIGH OR LOW POINTS OF FLOOR SLOPES TO BREAK FLOOR INTO WORKING AREAS NOT LARGER THAN 100 SQUARE FEET.
- PROVIDE A MINIMUM SEPARATION OF 8" BETWEEN UNTREATED WOOD AND EARTH OR 3" BETWEEN UNTREATED WOOD AND CONCRETE OR ASPHALTIC PAVING.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATION AND EXTENT OF EXTERIOR WALKWAYS.
- SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF NON-BEARING PARTITIONS.
- FOUNDATION DESIGN IS BASED ON GEOTECHNICAL EVALUATION REPORT BY CERTERRA WESTERN TECHNOLOGIES, PROJECT NO. 29-225051-0, DATED 7-7-2025.

FOUND. PRESSURE: 2000 PSF (2' FTG DEPTH BELOW FIN. GRADE)

3000 PSF (3' FTG DEPTH BELOW FIN. GRADE)

4000 PSF (4' FTG DEPTH BELOW FIN. GRADE)

ALLOWABLE COEFFICIENT OF FRICTION: 0.35 (SHALLOW FOUNDATIONS)

0.40 (EARTH RETAINING STRUCTURES)

PASSIVE PRESSURE: 225 PSF/FT (SHALLOW WALL FTGS)

LATERAL ACTIVE EARTH PRESSURE: 35 PSF/FT (COMPACTED SITE SOILS)



REVISIONS	REVISIONS
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DRAWN BY: T.C.
PROJECT ENGR: J.A.

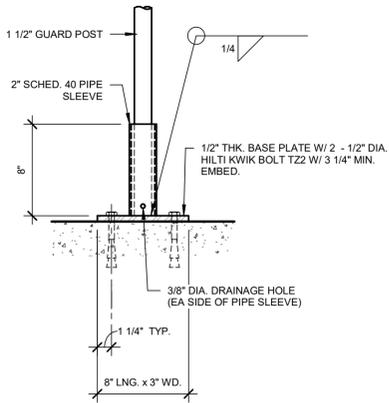
DATE: OCTOBER 2025

PROJECT: XXXXXX-XXXX

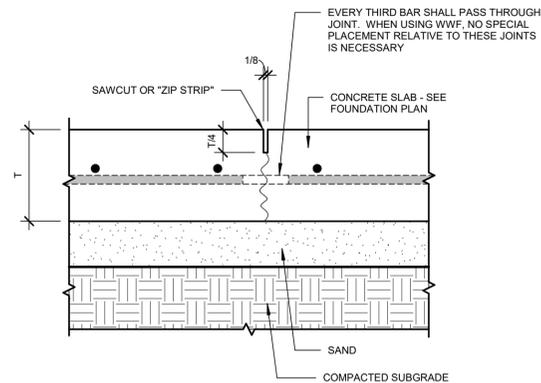
BIRP BACKWASH DESIGN
STRUCTURAL
STRUCTURAL NOTE SHEET
9210 CARMEL VALLEY ROAD CARMEL, CA 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSION ONLY SCALE AS NOTED
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	S1.1

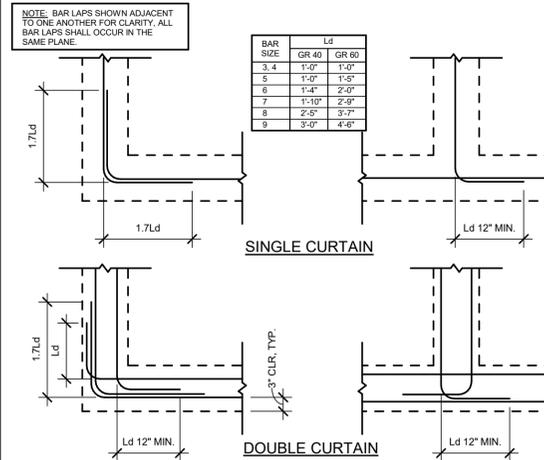
LANE PROJECT NO. 23311



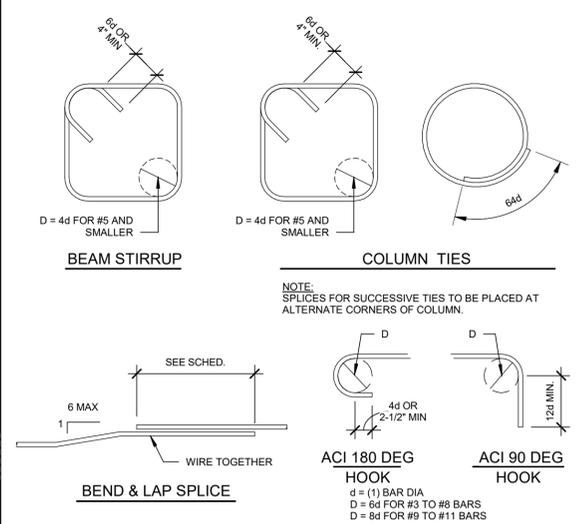
REMOVEABLE GUARD POST BASE PLATE 41



CONTROL JOINT NO SCALE 31



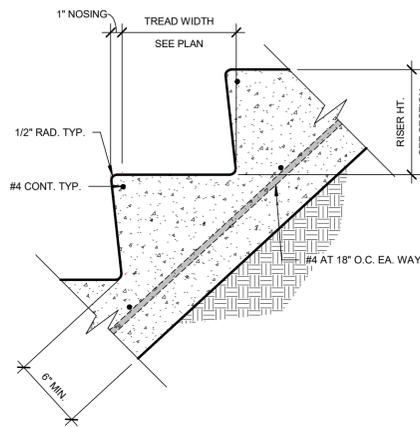
FOUNDATION CORNERS NO SCALE 21



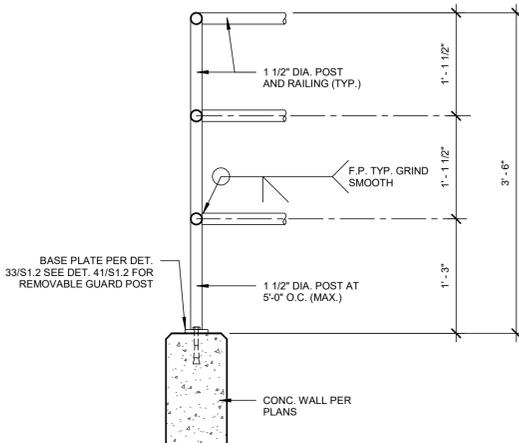
CLASS B SPLICE SCHEDULE

BAR SIZE	CONCRETE f _c IN PSI							
	2,500		3,000		4,000		5,000	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	31"	24"	28"	22"	24"	19"	22"	17"
#4	41"	32"	37"	29"	32"	25"	29"	22"
#5	52"	40"	47"	36"	40"	31"	36"	28"
#6	61"	47"	56"	43"	48"	37"	43"	33"
#7	89"	69"	81"	63"	70"	54"	63"	49"
#8	102"	79"	93"	72"	80"	62"	72"	55"
#9	115"	89"	105"	81"	91"	70"	81"	63"
#10	129"	100"	118"	91"	102"	79"	91"	70"
#11	144"	111"	131"	101"	113"	87"	101"	78"

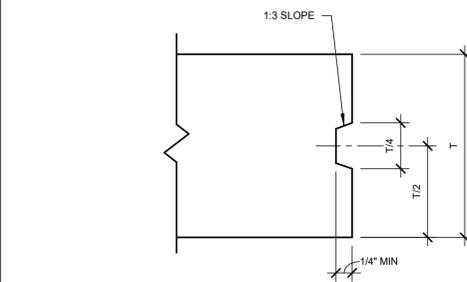
- NOTES:
 1. INCREASE LAP LENGTHS 30% FOR LIGHT-WEIGHT CONCRETE.
 2. FOR EPOXY-COATED BARS OR WIRES WITH COVER LESS THAN 3db OR CLEAR SPACING LESS THAN 6db, INCREASE LAP LENGTH 50%. FOR ALL OTHER EPOXY-COATED BARS OR WIRES, INCREASE LAP LENGTH 20%.
 3. TOP BARS ARE HORIZONTAL BARS PLACED WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW THEM.
 4. LAP LENGTHS MAY BE USED WITH GRADE 40 [300KPA] OR 60 [420KPA].
 5. REF: ACI 318-11, CHAPTER 12.



CONCRETE STAIRS NO SCALE 42

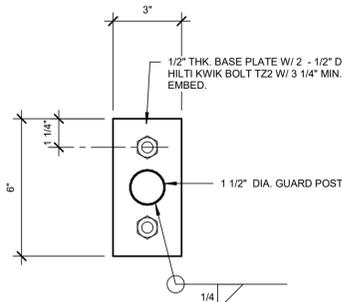


GUARD RAIL DETAIL NO SCALE 32

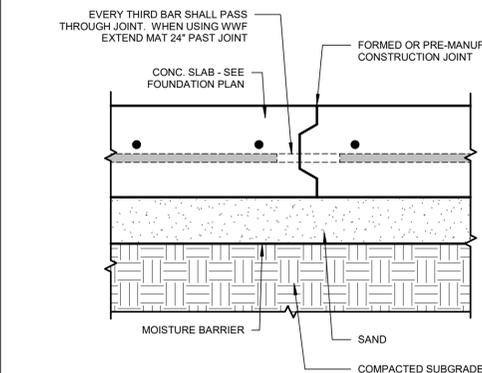


TYP. FORMED KEY JOINT NO SCALE 22

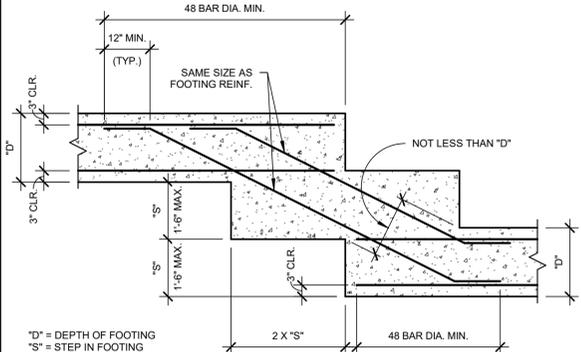
CONCRETE REINF. BAR SPLICES NO SCALE 12



GUARD POST BASE PLATE 33



CONSTRUCTION JOINT NO SCALE 23



TYPICAL STEP FOOTING NO SCALE 13



REVISIONS		REVISIONS	
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 979 North Blackstone Street
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 559.688.5263
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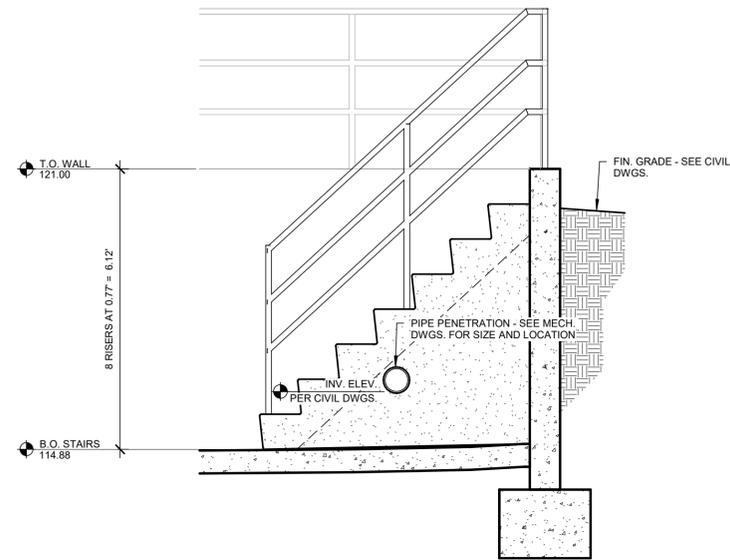
DRAWN BY: T.C.
 PROJECT ENGR: J.A.
 DATE: OCTOBER 2025
 PROJECT: XXXXXX-XXXX

BIRP BACKWASH DESIGN
 STRUCTURAL
 TYPICAL STRUCTURAL DETAILS
 9210 CARMEL VALLEY ROAD CARMEL, CA 93923

CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
 USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES 90% SUBMITTAL
 USE DIMENSION ONLY SCALE AS NOTED

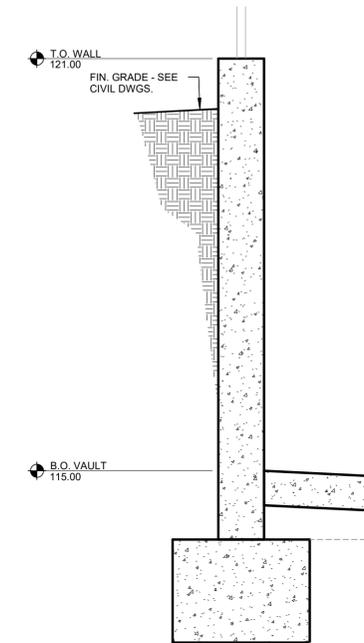
S1.2

LANE PROJECT NO. 23311



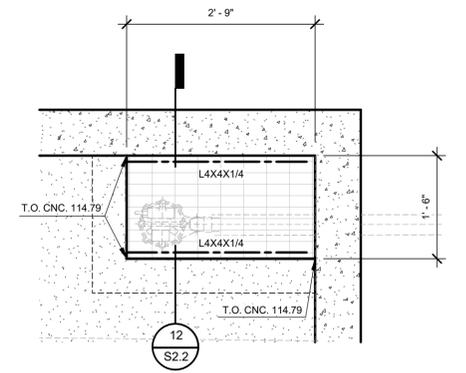
STAIR SECTION

1/2" = 1'-0" 32



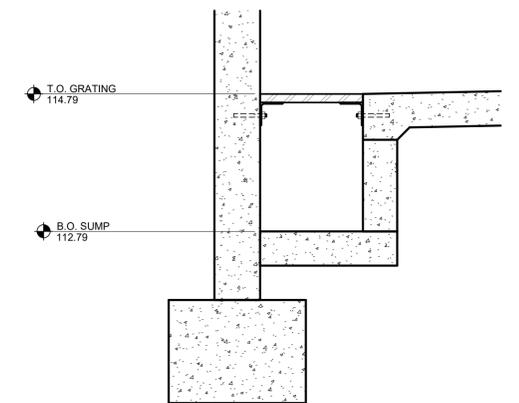
WALL SECTION

3/4" = 1'-0" 22



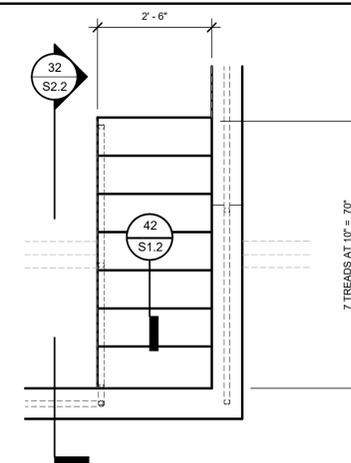
PLAN AT SUMP PIT

3/4" = 1'-0" 11



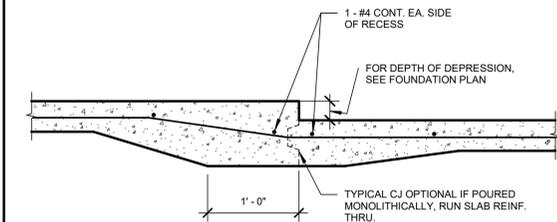
SECTION AT SUMP PIT

3/4" = 1'-0" 12



PLAN AT STAIRS

1/2" = 1'-0" 23



TYPICAL DEPRESSED SLAB

NO SCALE 13



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DRAWN BY: T.C.
PROJECT ENGR: J.A.

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
STRUCTURAL
SFAT PUMP SKID AND VAULT - STRUCTURAL DETAILS
9210 CARMEL VALLEY ROAD CARMEL, CA 93923

CALIFORNIA AMERICAN WATER CO.

COASTAL DIVISION

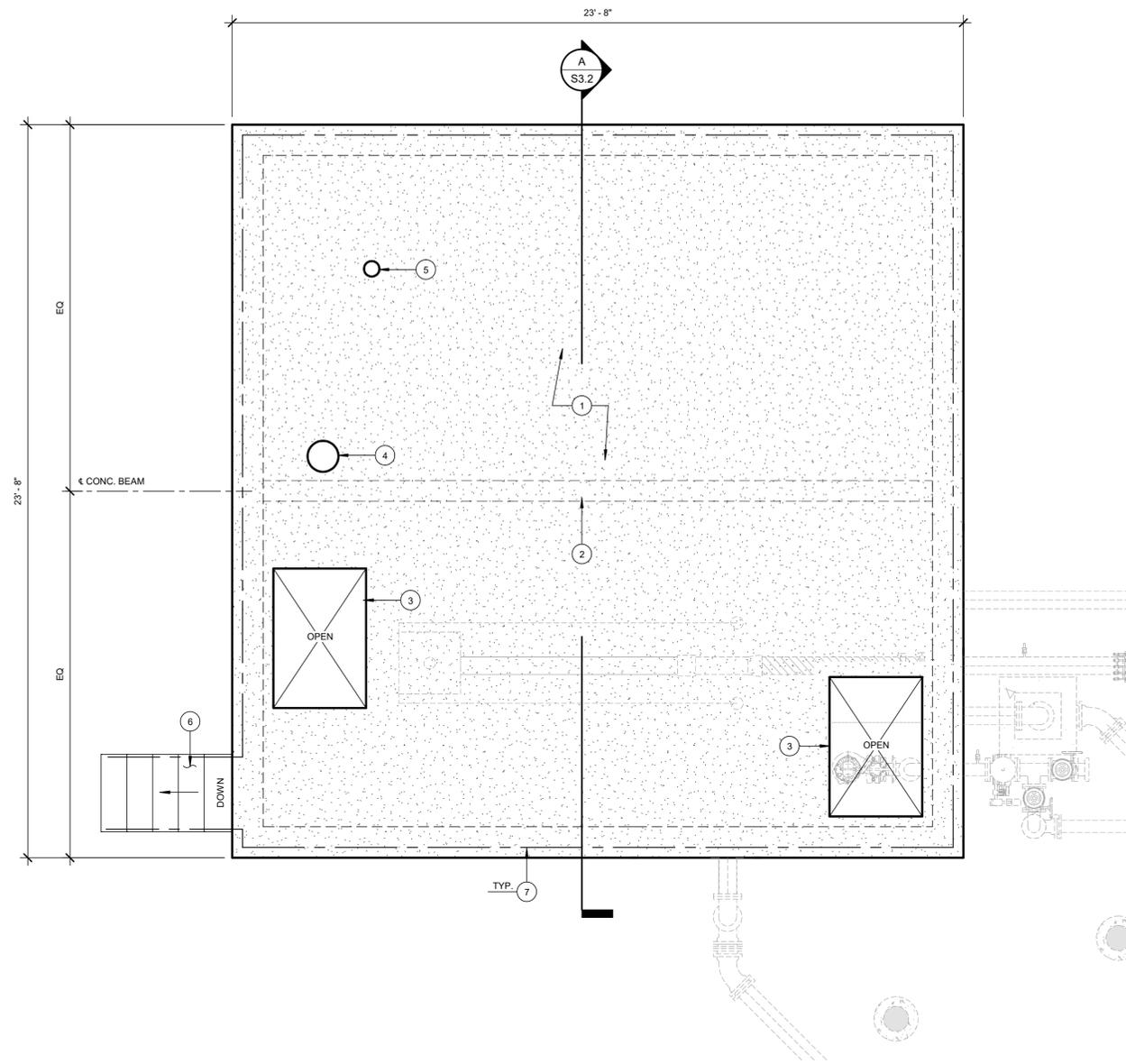
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90% SUBMITTAL

S2.2

LANE PROJECT NO. 23311

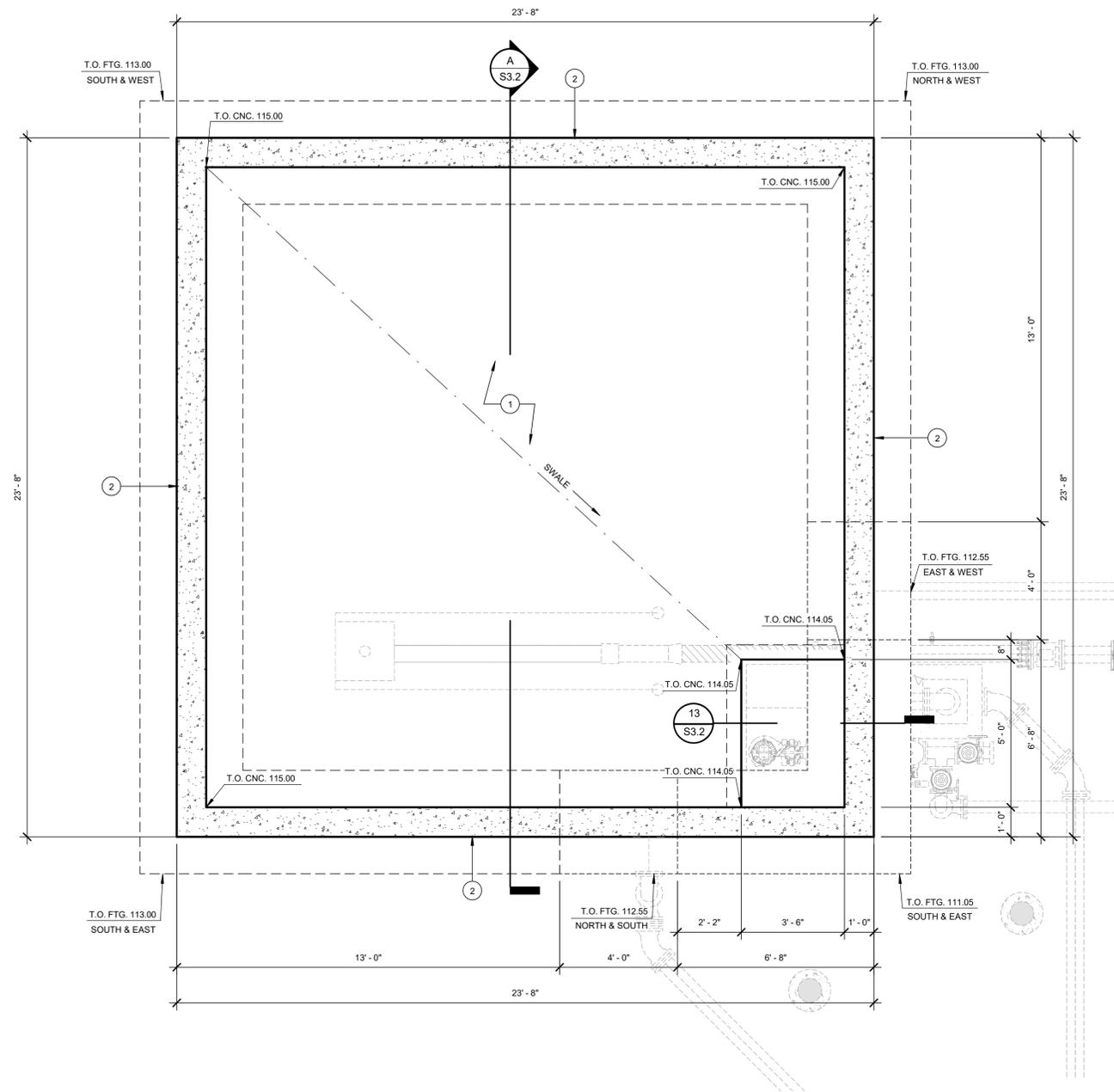


FLOOR PLAN

3/8" = 1'-0"

CONSTRUCTION KEYNOTES

MARK	DESCRIPTION
1	8" THK. CONC. SLAB W/ ??
2	8" WD. x 12" DEEP CONC. BEAM W/ ??
3	FRAMED OPENING FOR ACCESS HATCH - SEE MECH. DWGS FOR LOCATION (VERIFY CLEAR OPENING REQUIREMENTS W/ ACCESS HATCH MANUF.)
4	12" DIA. OPENING ROOF VENT PER MECH. DWGS. (VERIFY LOCATION AND CLEAR OPENING REQUIREMENTS W/ MECH. DWGS.)
5	LEVEL INDICATOR (VERIFY LOCATION AND CLEAR OPENING REQUIREMENTS W/ MECH. AND ELEC. DWGS.)
6	CONCRETE STAIRS PER DETAIL 33/S3.2
7	GUARD RAIL ATOP CONCRETE WALL PER DETAIL 32/S1.2



FOUNDATION PLAN

3/8" = 1'-0"

CONSTRUCTION KEYNOTES

MARK	DESCRIPTION
1	6" THK. SLOPED CONCRETE SLAB W/ #4 AT 18" O.C. EA. WAY
2	12" THK. CONC. WALL W/ ??



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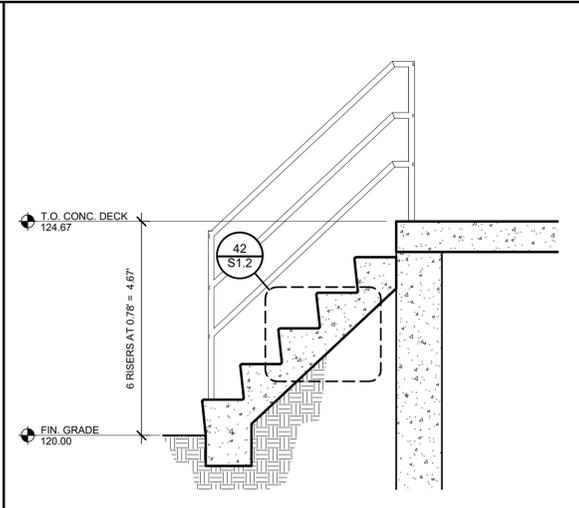
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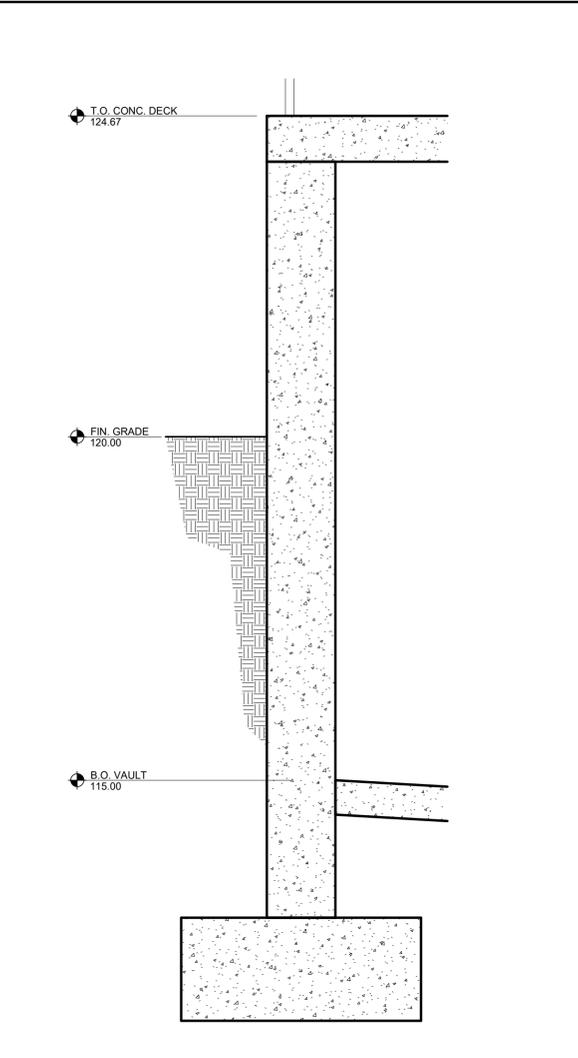
BIRP BACKWASH DESIGN
STRUCTURAL
SLUDGE HOLDING TANK - FLOOR AND FOUNDATION PLAN
9210 CARMEL VALLEY ROAD CARMEL, CA 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSION ONLY SCALE AS NOTED
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	S3.1

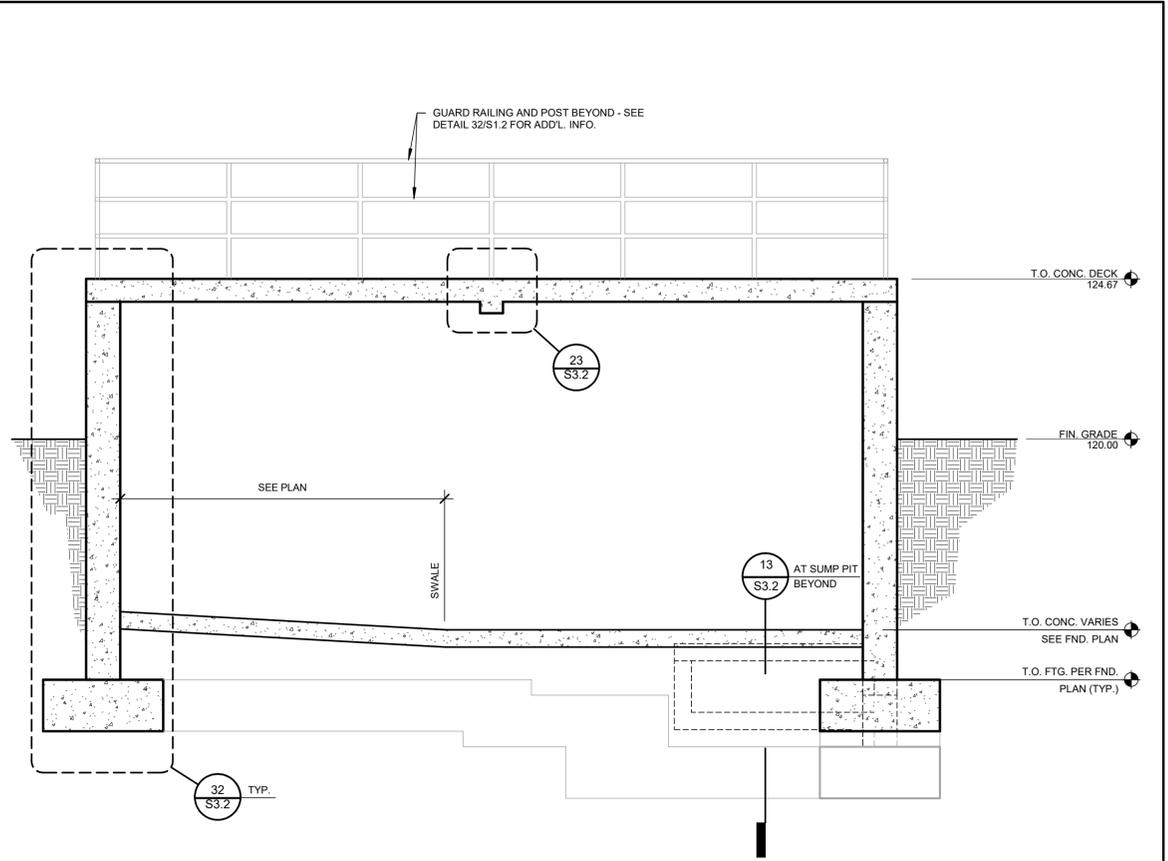
LANE PROJECT NO. 23311



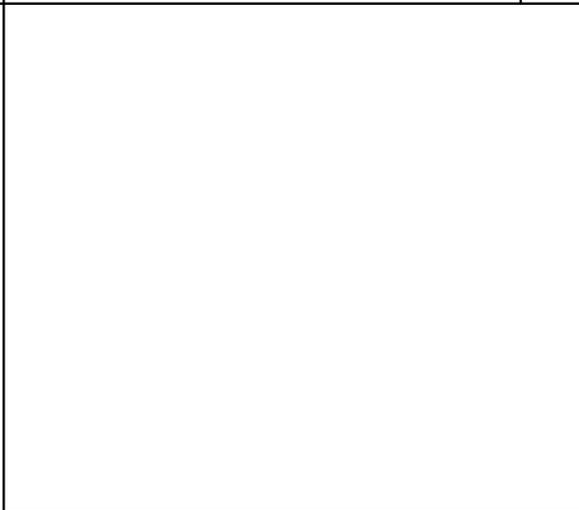
SECTION AT STAIRS 1/2" = 1'-0" 41



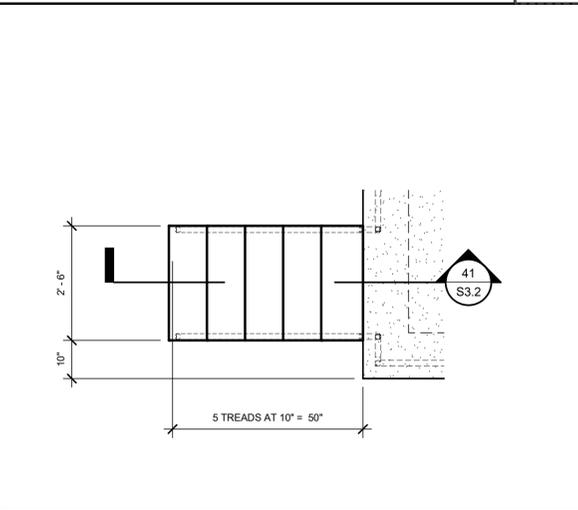
WALL SECTION 3/4" = 1'-0" 32



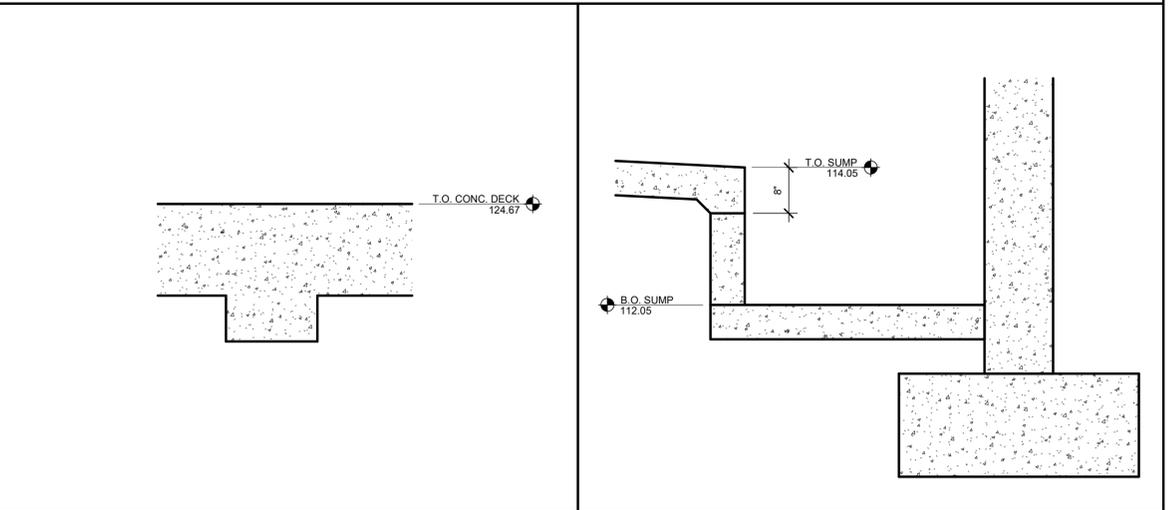
SECTION A 3/8" = 1'-0"



PLAN AT STAIRS 1/2" = 1'-0" 33



SECTION AT CONC. BEAM 1 1/2" = 1'-0" 23



SECTION AT SUMP PIT 3/4" = 1'-0" 13

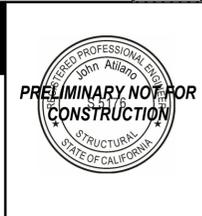


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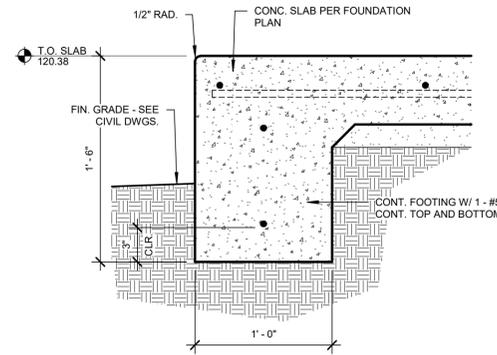
DATE: OCTOBER 2025

PROJECT: XXXXXX-XXXX

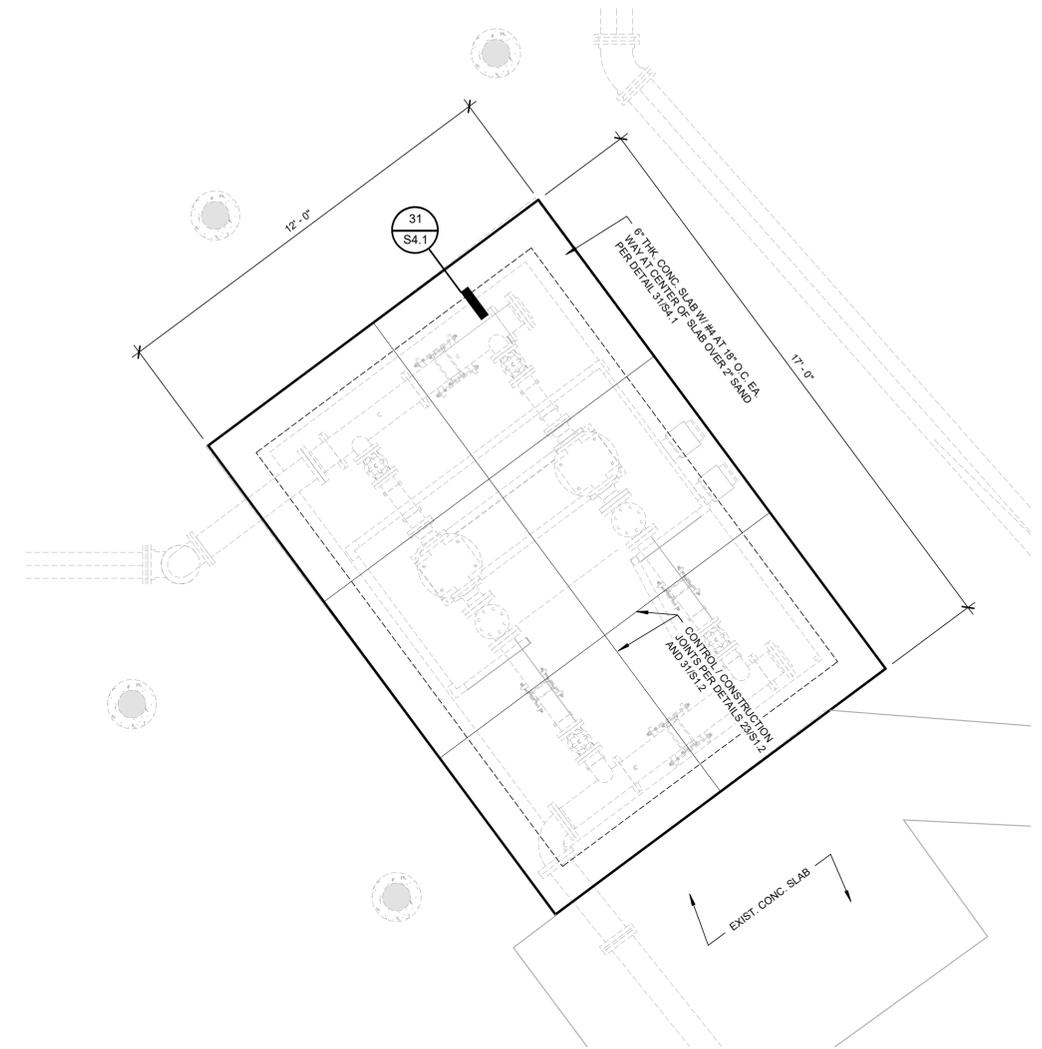
BIRP BACKWASH DESIGN
STRUCTURAL
SLUDGE HOLDING TANK - SECTION AND DETAILS
9210 CARMEL VALLEY ROAD CARMEL, CA 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSION ONLY SCALE AS NOTED
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	S3.2

LANE PROJECT NO. 23311



EDGE OF SLAB 1 1/2" = 1'-0" 31



FOUNDATION PLAN

3/8" = 1'-0"



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PROJECT ENGR: J.A.

DATE OCTOBER 2025

PROJECT XXXXXX-XXXX

BIRP BACKWASH DESIGN
STRUCTURAL
DECANT PUMP STATION - FOUNDATION PLAN AND DETAILS
9210 CARMEL VALLEY ROAD CARMEL, CA 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSION ONLY SCALE AS NOTED
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	90% SUBMITTAL	S4.1

LANE PROJECT NO. 23311

MONTEREY DISTRICT BEGONIA IRON REMOVAL PLANT BACKWASH WASTE DESIGN ELECTRICAL

GENERAL ELECTRICAL NOTES

1. ELECTRICAL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (2020), FEDERAL, STATE (2022 CALIFORNIA ELECTRICAL CODE) AND LOCAL JURISDICTION CODES.
2. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION.
3. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL EXISTING UTILITIES AND AVOIDING DAMAGE TO SAME. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UTILITIES CAUSED AS A RESULT OF HIS WORK. CALL 1-800-227-2600 FOR BLUE STAKES. IRRIGATION LINES LESS THAN 2" WILL NOT BE MARKED AND SHALL BE REPAIRED IN KIND BY THE CONTRACTOR.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING WALKS, WALLS, DRIVES, CURBS, ETC. DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
6. PROPER PROTECTION OF THE CONSTRUCTION AREA FOR SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COVER ALL TRENCHES AT THE END OF EACH WORK DAY. BARRICADES SHALL BE INSTALLED AS DIRECTED BY THE OWNER OR THE PROJECT INSPECTOR. THE SITE AND ALL WORK SHALL CONFORM TO OSHA REQUIREMENTS.
7. ALL EXISTING LANDSCAPE, HARDSCAPE AND SPRINKLER SYSTEMS DAMAGED OR DISTURBED DURING THE CONSTRUCTION OF THIS PROJECT BY THE CONTRACTOR SHALL BE REPLACED IN KIND.
8. CONTRACTOR SHALL PAY FOR PERMITS AND INSPECTIONS AS MAY BE REQUIRED AND PROVIDE A CERTIFICATE OF INSPECTION TO THE OWNER.
9. PROTECT ALL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, AND LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
10. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION.
11. IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND/OR CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED AND SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND ALL O & M MANUALS.
12. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, BURIED 24" MINIMUM BELOW FINISHED GRADE, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS.
13. PROVIDE RMC OR IMC FOR INDOOR AND OUTDOOR FOR ABOVE GROUND CONDUIT. WHERE METALLIC CONDUITS COME IN CONTACT WITH DIRT, THEY SHALL BE HALF LAP WRAPPED WITH SCOTCH 50 TAPE TO 12" AFG. FITTINGS SHALL BE STEEL, THREADED TYPE WITH INSULATED THROATS. SECURELY ATTACH ALL SURFACE MOUNTED CONDUIT EVERY 10 FEET AND WITHIN 3 FEET OF EACH JUNCTION BOX, PER NEC ARTICLE 344.30. USE PVC COATED RMC OR IN CORROSIVE ENVIRONMENTS. EMT IS NOT ALLOWED ON THIS PROJECT.
14. MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS.
15. ALL FEEDERS AND BRANCH CIRCUIT WIRE SHALL BE COPPER TYPE: XHHW-2 (75 DEGREE C). MINIMUM SIZE SHALL BE #12 AWG, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN DETAILS. ALL WIRING SHALL BE IN CONDUIT.
16. A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR (BOND) SHALL BE INSTALLED WITHIN EACH RACEWAY PER NEC CODE.
17. WHEN A PANEL IS SUPPLIED BY A FEEDER OR BRANCH CIRCUIT, ANY INSTALLED GROUNDED CONDUCTOR SHALL NOT BE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR (GEC) OR TO THE GROUNDING ELECTRODE(S) PER NEC ARTICLE 250.32(B).
18. BOND ALL ENCLOSURES PER NEC ARTICLE 250.96.
19. CONTRACTOR SHALL PLAN AND INSTALL WORK IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.
20. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, ETC. NECESSARY FOR A COMPLETE AND WORKABLE ELECTRICAL SYSTEM WHETHER OR NOT THESE ITEMS ARE SPECIFICALLY NOTED ON THESE DRAWINGS. INCIDENTAL ITEMS NOT INDICATED ON THE DRAWINGS, NOR MENTIONED IN SPECIFICATIONS THAT CAN BE LEGITIMATELY AND REASONABLY INFERRED TO BELONG TO THE WORK DESCRIBED OR BE NECESSARY IN GOOD PRACTICE TO PROVIDE A COMPLETE SYSTEM, SHALL BE FURNISHED AND INSTALLED AS THOUGH ITEMIZED HERE IN EVERY DETAIL.
21. CONTRACTOR IS RESPONSIBLE FOR AND SHALL PROVIDE ALL LABOR, MATERIAL, TRENCHING, CONDUIT, TRANSFORMER PAD AND OTHER REQUIRED EQUIPMENT PER UTILITY COMPANY PLANS AND SPECIFICATIONS NECESSARY FOR A COMPLETE UNDERGROUND CONDUIT SYSTEM FROM THE UTILITY POINT OF SERVICE TO THE UTILITY CO. TRANSFORMER AND FROM THE UTILITY CO. TRANSFORMER TO THE ELECTRICAL SERVICE ENTRANCE SECTION.
22. ALL TRENCHING, CONDUITS, ETC. SHALL BE ROUTED AND INSTALLED IN SUCH A MANNER THAT WILL NOT DAMAGE EXISTING FACILITIES. SHOULD DAMAGE OCCUR, IT WILL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR DAMAGE TO THE SATISFACTION OF THE OWNER OR INSPECTOR.
23. ALL CONDUIT RUNS SHOWN ON THIS PLAN ARE SCHEMATIC IN NATURE. THE CONTRACTOR SHALL MAKE SURE THAT ALL CONDUIT, ETC. FALLS WITHIN THE CONSTRUCTION AREA/RIGHT OF WAY. (THIS INCLUDES MAINTAINING ALL REQUIRED CLEARANCES.)
24. WHEN CROSSING PATHWAYS OR SIDEWALKS, CONTRACTOR SHALL BORE UNDER EXISTING CONCRETE WALKS AND SAWCUT ASPHALT WALKS. ASPHALT WALKS SHALL BE REPLACED IN KIND.
25. CONTRACTOR SHALL GUARANTEE WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS, USUAL WEAR EXPECTED, AND SHOULD ANY SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR ACCEPTANCE OF THE PROJECT BY THE OWNER, THE CONTRACTOR SHALL REPAIR AND/OR

REPLACE ANY DEFECTIVE ITEMS AND DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO THE OWNER.

26. CONTRACTOR SHALL IDENTIFY SERVICE ENTRANCE SECTION MAIN SERVICE DISCONNECT(S) WITH 3/32-INCH THICK LAMINATED PHENOLIC TYPE NAMEPLATES WITH 1/4-INCH MINIMUM HEIGHT LETTERS. NAMEPLATE TO BE BLACK MATTE FINISH SURFACE WITH WHITE LETTER ENGRAVING. ATTACH NAMEPLATE TO THE OUTSIDE PANEL FACE WITH TWO STAINLESS STEEL SELF-TAPPING SCREWS. NAMEPLATE SHALL READ "SERVICE DISCONNECT" PER NEC ARTICLE 230.70(B).
27. ALL CIRCUITS SHALL BE LEGIBLY IDENTIFIED AT THE PANEL, JUNCTION BOXES AND AT ALL EQUIPMENT IN A PERMANENT MANNER (I.E. ETCHED PLATES, CONDUCTOR TAG, PERMANENT MARKER, ETC.). THE LABELING SHALL INCLUDE PANEL CIRCUIT NUMBER, "TO" AND "FROM" IDENTIFICATION, AND MARKED "SPARE" WHERE APPLICABLE.
28. CONTRACTOR SHALL TEST ELECTRICAL SYSTEM FOR SHORT CIRCUITS AND MEGGER TEST FEEDERS AND BRANCH CIRCUIT WIRING. CONTRACTOR SHALL INSURE LOW IMPEDANCE GROUND PATH SYSTEM.
29. CONTRACTOR SHALL PERFORM HIGH POTENTIAL (HIPOT) TESTING WHEN REQUIRED BY LOCAL JURISDICTION OR OWNER.
30. CONTRACTOR SHALL PROVIDE A GROUND-FAULT COORDINATION STUDY AND PERFORM RECOMMENDED SETTINGS ON OVERCURRENT PROTECTION DEVICES, AS NEEDED OR WHEN REQUIRED BY LOCAL JURISDICTION OR OWNER. PROVIDE LABELS ON EQUIPMENT INDICATING SETTINGS.
31. CONTRACTOR SHALL PROVIDE AN ARC-FLASH STUDY WHEN REQUIRED BY LOCAL JURISDICTION OR OWNER. PROVIDE ALL APPLICABLE LABELS ON EQUIPMENT AFTER STUDY IS COMPLETED.
32. ALL CONDUIT AND J-BOXES SHOWN SHALL BE CONCEALED WHEN POSSIBLE. WHEN NOT POSSIBLE, CONDUIT AND J-BOXES MAY BE SURFACE MOUNTED WITH PERMISSION OF THE OWNER OR OWNER'S REPRESENTATIVE.
33. CONTRACTOR SHALL COORDINATE ALL EQUIPMENT CONNECTIONS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. PROVIDE ADDITIONAL FUSED DISCONNECT SWITCHES AND CONTROLS IF OVERCURRENT PROTECTION OR CONTROLS IS NOT INTEGRAL WITH UNITS.
34. ALL EQUIPMENT SHALL BE FUSE SIZED PER MANUFACTURES RECOMMENDATIONS AND U.L. APPROVAL.
35. ELECTRICAL DEVICES, DISCONNECT SWITCHES, ETC., SHALL BE SUPPORTED INDEPENDENT OF AND ISOLATED FROM EQUIPMENT VIBRATIONS.
36. FULL LOAD AMPS (FLA) SIZES, AS NOTED IN THESE DRAWINGS, ARE BASED ON SPECIFIED EQUIPMENT DATA. CONTRACTOR SHALL VERIFY NAMEPLATE FLA OF EQUIPMENT SUPPLIED AND COORDINATE ACCORDINGLY PER EQUIPMENT SUPPLIERS RECOMMENDATIONS.
37. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE NEMA-3R OR NEMA-4 ENCLOSURES.
38. CONDUITS OR RACEWAYS ROUTED FROM INDOORS TO OUTDOORS OR AS DESCRIBED IN NEC 300.7(A), SHALL BE SEALED WITH A PLIABLE SEALING COMPOUND AT A CONDUIT BODY OR AT A JUNCTION BOX BEFORE THE CONDUIT ENTERS THE COLDER ENVIRONMENT.
39. CONDUITS OR RACEWAYS INSTALLED IN AREAS WHERE ELEVATION CHANGES MAY CAUSE WATER OR MOISTURE TO ENTER THE ELECTRICAL EQUIPMENT THROUGH THE CONDUIT SHALL BE SEALED WITH A HERMETIC CONDUIT SEAL AT BOTH ENDS OF THE CONDUIT OR RACEWAY.
40. INSTALL FIRE SEALS IN ALL CONDUITS PENETRATING THE FIRE WALL TO MAINTAIN THE FIRE RESISTANCE RATING OF THE WALL, AS REQUIRED BY NEC 300.21.
41. ALL POLE LIGHTS SHALL BE PROVIDED WITH A TWO POLE FUSE HOLDER BUSSMANN #HEX OR A SINGLE POLE FUSE HOLDER BUSSMANN #HEB OR EQUAL FOR INLINE FUSING, PROVIDE 5A FUSING IN FUSEHOLDER.
42. PRIOR TO POURING THE POLE BASES OR COVERING ANY ELECTRICAL CONDUITS, CONTACT THE INSPECTION DEPARTMENT 24 HOURS IN ADVANCE FOR APPROVAL.
43. MATERIALS SHALL BE NEW AND OF THE BEST QUALITY WITH MANUFACTURER'S NAME PRINTED THEREON. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, UNDERWRITER'S LABORATORY OR OTHER APPLICABLE STANDARDS AND RATED FOR HEAVY DUTY SERVICE.
44. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE. ALL 15 AND 20 AMP, 125 AND 250 VOLT, NONLOCKING RECEPTACLES INSTALLED OUTDOORS SHALL BE LISTED WEATHER-RESISTANT TYPE. ALL WEATHERPROOF WHILE IN-USE RECEPTACLE COVERS SHALL BE METAL.
45. SELECTION OF MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE DRAWINGS AND/OR SPECIFICATIONS. THE USE OF MANUFACTURER'S NAME, MODEL, AND NUMBER IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. CONTRACTOR SHALL SUBMIT TO THE OWNER OR OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL (PRIOR TO ORDERING MATERIALS) COPIES OF EQUIPMENT SHOP DRAWINGS AS FOLLOWS: 1) LIGHT FIXTURES, 2) POLES, 3) POLE BASES, 4) SERVICE ENTRANCE SECTION, 5) ELECTRICAL EQUIPMENT, 6) DISCONNECT SWITCHES, 7) TIME CLOCKS AND OTHER CONTROLS, 8) LIGHTING CONTACTORS AND 9) PULL BOXES. AT THE TIME OF EACH SUBMITTAL, THE CONTRACTOR SHALL DEFINE AND DELINEATE IN WRITING ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS. THE REVIEW WILL BE ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE WORK AND FOR COMPLIANCE WITH THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE REVIEW OF A SPECIFIED ITEM, AS SUCH, WILL NOT INDICATE REVIEW OF THE ASSEMBLY IN WHICH THE ITEM FUNCTIONS. REVIEW BY THE OWNER OR OWNER'S REPRESENTATIVE WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN THE SUBMITTALS NOR FROM HIS RESPONSIBILITY FOR COMPLYING WITH THE CONTRACT DOCUMENTS.
46. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.
47. ALL SPORTS LIGHTING FIXTURES SHALL BE EQUIPPED WITH AN EXTERNAL GLARE SHIELD.
48. ALL FIXTURES AND CROSS ARMS SHALL BE MANUFACTURED AND FACTORY AIMED BY A SINGLE MANUFACTURER.

ELECTRICAL ENGINEER

WRIGHT ENGINEERING CORPORATION
165 EAST CHILTON DRIVE
CHANDLER, AZ 85225
PHONE: (480) 497-5829
CONTACT: JACOB BIELEFELDT
EMAIL: JBIELEFELDT@WRIGHTENGINEERING.US



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W. WILLIAMS

CA LICENSED PROFESSIONAL ENGINEER
NO. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923

CALIFORNIA AMERICAN WATER

DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT

DATE: OCTOBER 2025

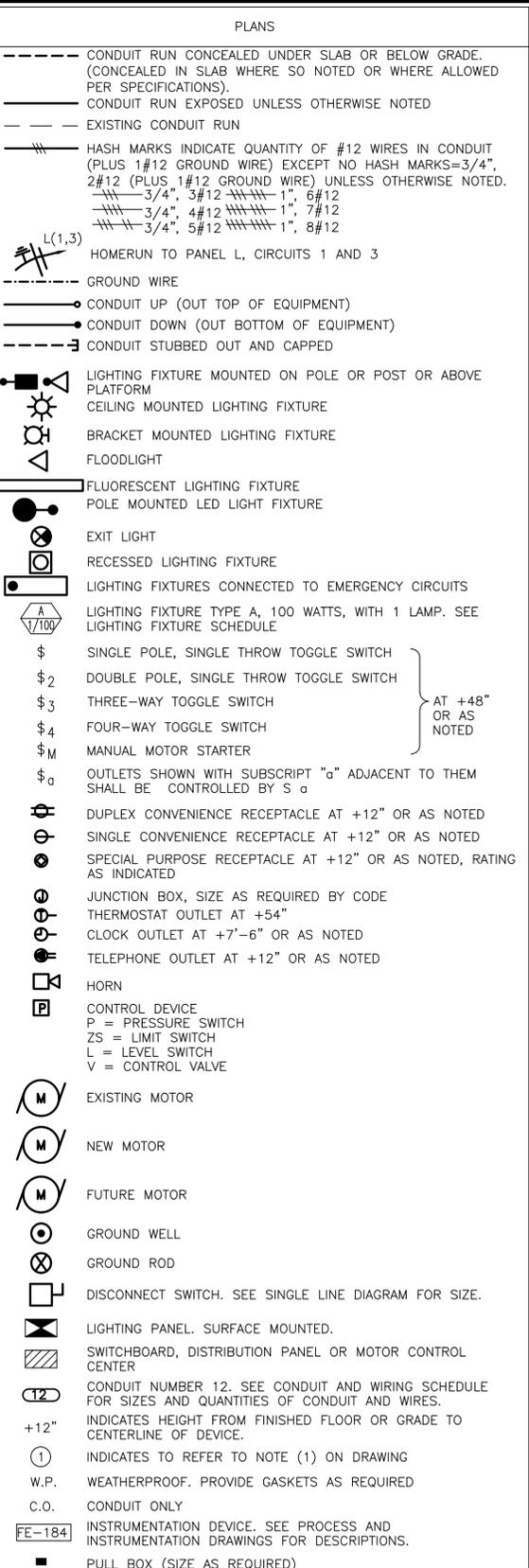
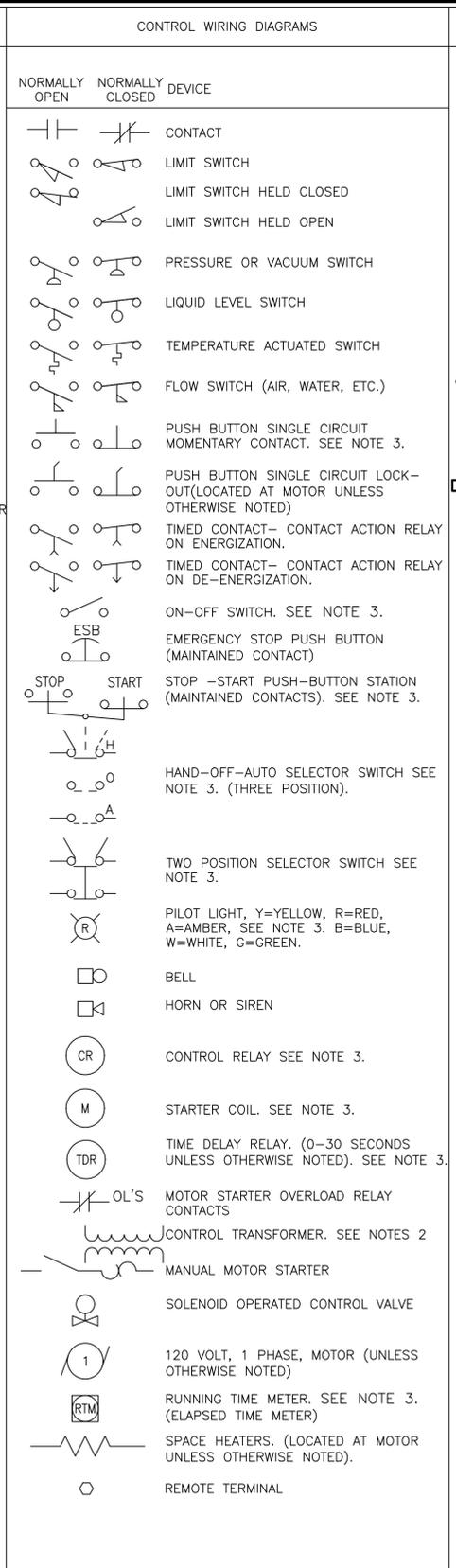
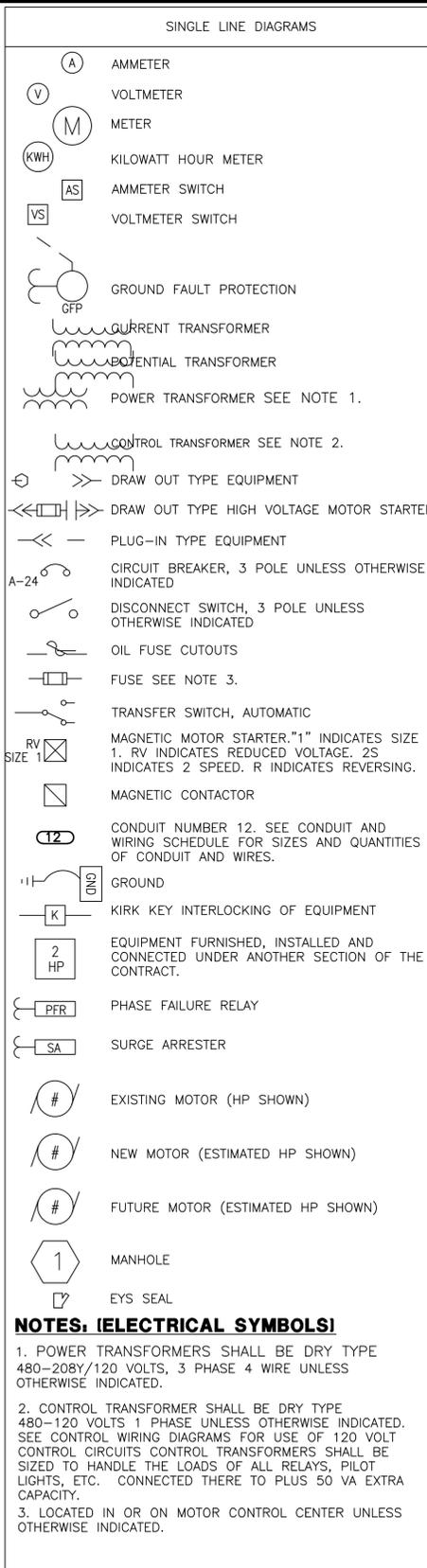
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
COVER SHEET
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E1.1

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ABBREVIATIONS

AMP AMPERE	GND GROUND	N.C. NORMALLY CLOSED
AL ALUMINUM	HP HORSEPOWER	NEC NATIONAL ELECTRICAL CODE
ATS AUTOMATIC TRANSFER SWITCH	HPS HIGH PRESSURE SODIUM	N.O. NORMALLY OPEN
AWG AMERICAN WIRE GAUGE	HZ HERTZ (CYCLES PER SECOND)	NO. NUMBER
BRK BREAKER	IC INTERRUPTING CAPACITY	OL MOTOR OVERLOADS
CAT CATALOG	KV KILOVOLTS	PLC PROGRAMMABLE LOGIC CONTROLLER
CIRC. MIL CIRCULAR MILS (AWG)	LCL LONG CONTINUOUS LOAD	PNL PANEL
C.O. CONDUIT ONLY	LTG LIGHTING MAX MAXIMUM	PR PAIR
CKT CIRCUIT	MCC MOTOR CONTROL CENTER	PFR PHASE FAILURE RELAY
CP CONTROL PANEL	MCP MAIN CONTROL PANEL	PVC POLYVINYL CHLORIDE
DIA DIAMETER	MCM THOUSAND CIRCULAR MIL (AWG)	REC RECEPTACLE
DWG DRAWING	MFR MANUFACTURER	RGS RIGID GALVANIZED STEEL
EA EACH	MIN MINIMUM	SES SERVICE ENTRANCE SECTION
ELECT ELECTRICAL	MIS MISCELLANEOUS	SPECS SPECIFICATIONS
ELEV ELEVATION	MTG MOUNTING	SSS SOLID STATE STARTER
EXIST EXISTING	MV MERCURY VAPOR	TEL TELEPHONE
FLA FULL LOAD AMPS		TDR TIME DELAY RELAY
FUT FUTURE		TTB TELEPHONE TERMINAL BACKBOARD
GFCI GROUND FAULT CIRCUIT INTERRUPTER		TYP TYPICAL
		UCP UNIT CONTROL PANEL
		V VOLTS
		WP WEATHERPROOF
		XFMR TRANSFORMER

NOTES: (ELECTRICAL SYMBOLS)

- POWER TRANSFORMERS SHALL BE DRY TYPE 480-208Y/120 VOLTS, 3 PHASE 4 WIRE UNLESS OTHERWISE INDICATED.
- CONTROL TRANSFORMER SHALL BE DRY TYPE 480-120 VOLTS 1 PHASE UNLESS OTHERWISE INDICATED. SEE CONTROL WIRING DIAGRAMS FOR USE OF 120 VOLT CONTROL CIRCUITS. CONTROL TRANSFORMERS SHALL BE SIZED TO HANDLE THE LOADS OF ALL RELAYS, PILOT LIGHTS, ETC. CONNECTED THERE TO PLUS 50 VA EXTRA CAPACITY.
- LOCATED IN OR ON MOTOR CONTROL CENTER UNLESS OTHERWISE INDICATED.



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W. WILLIAMS

VALENTINE Environmental Engineers, LLC

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VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923

CALIFORNIA AMERICAN WATER

DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT

DATE: OCTOBER 2025

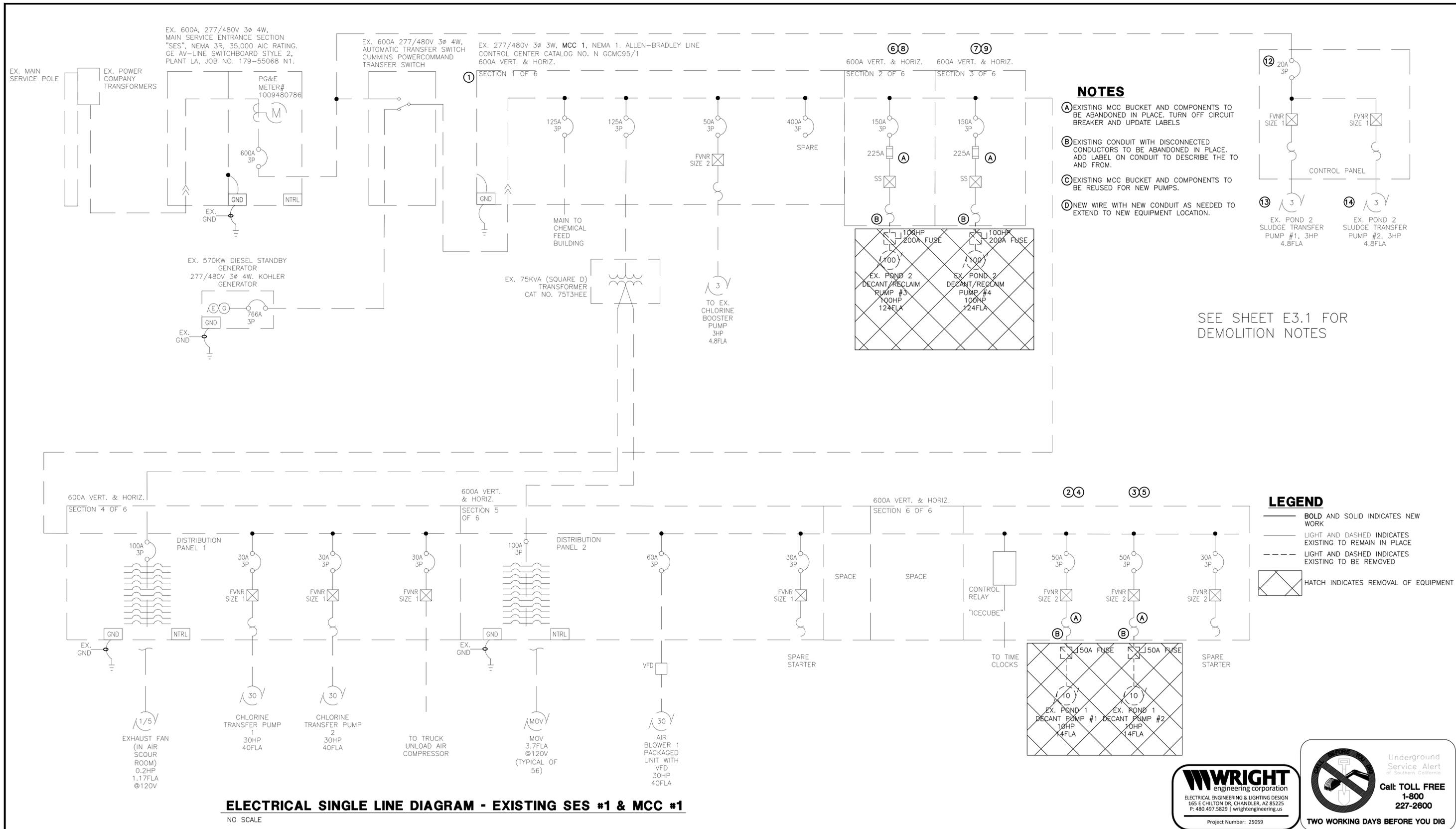
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BIRP BACKWASH SYSTEM DESIGN ELECTRICAL LEGEND AND SYMBOLS
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

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PRELIMINARY	PRELIMINARY	XXXXXX-XXXX-E1.2



ELECTRICAL SINGLE LINE DIAGRAM - EXISTING SES #1 & MCC #1

NO SCALE

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CALIFORNIA AMERICAN WATER

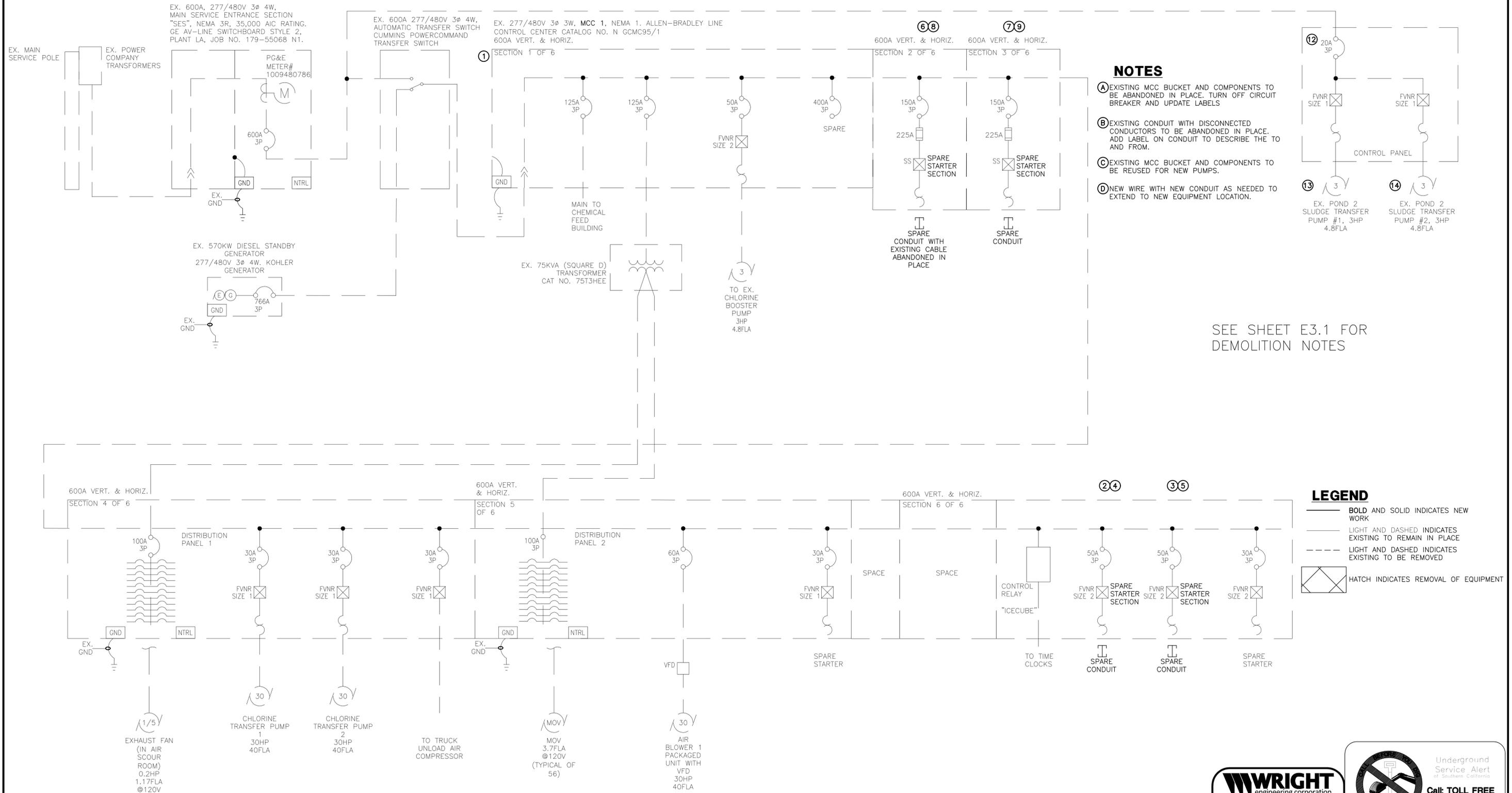
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Website: http://www.valentineengineers.com

W. WILLIAMS
REGISTERED PROFESSIONAL ENGINEER
NO. 45609
DATE: 3/30/22
ELECTRICAL
STATE OF CALIFORNIA
CA LICENSED PROFESSIONAL ENGINEER
NO. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923
CALIFORNIA AMERICAN WATER
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
DEMOLITION SINGLE LINE DIAGRAM I
9210 CARMEL VALLEY ROAD CARMEL CA, 93923
CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
PRELIMINARY
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
USE DIMENSIONS ONLY SCALE NONE
XXXXXX-XXXX-E2.1
E2.1.DWG



ELECTRICAL SINGLE LINE DIAGRAM - EXISTING SES #1 & MCC #1

NO SCALE



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W. WILLIAMS
Professional Engineer
No. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923

California American Water logo

DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT

DATE: OCTOBER 2025

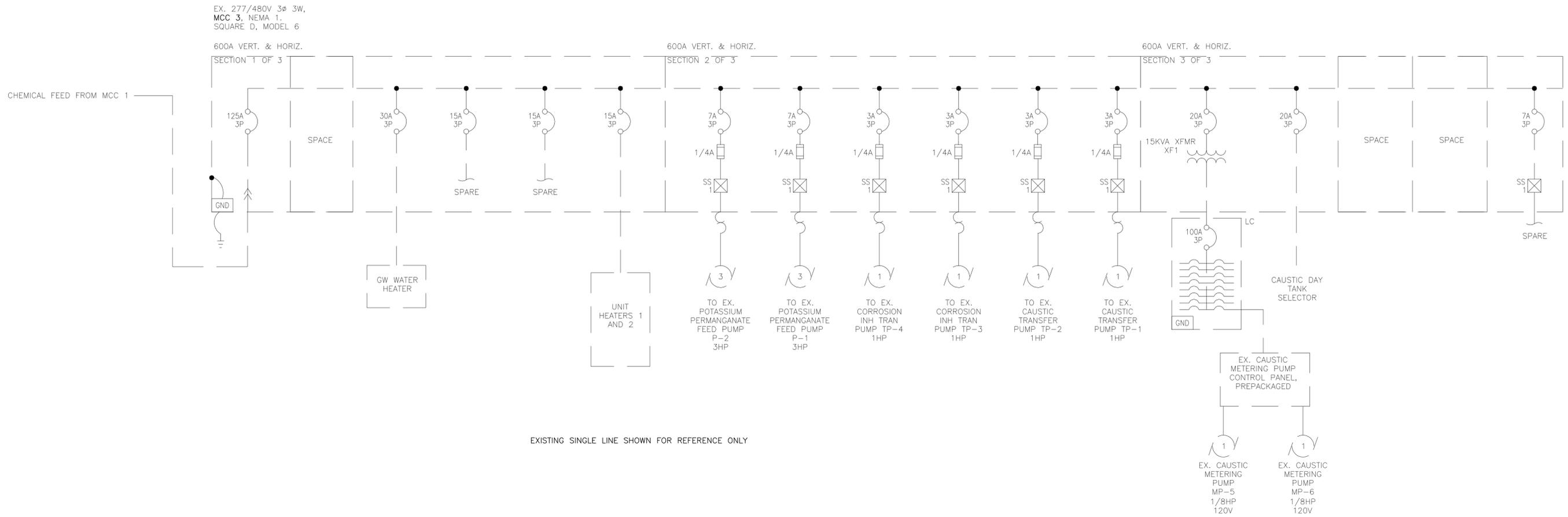
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
PROPOSED SINGLE LINE DIAGRAM II
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E2.2

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EXISTING SINGLE LINE SHOWN FOR REFERENCE ONLY

LEGEND
 BOLD AND SOLID INDICATES NEW WORK
 LIGHT AND DASHED INDICATES EXISTING TO REMAIN IN PLACE
 LIGHT AND DASHED INDICATES EXISTING TO BE REMOVED
 HATCH INDICATES REMOVAL OF EQUIPMENT

ELECTRICAL SINGLE LINE DIAGRAM - EXISTING SES #1 & MCC #2

NO SCALE

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W. WILLIAMS

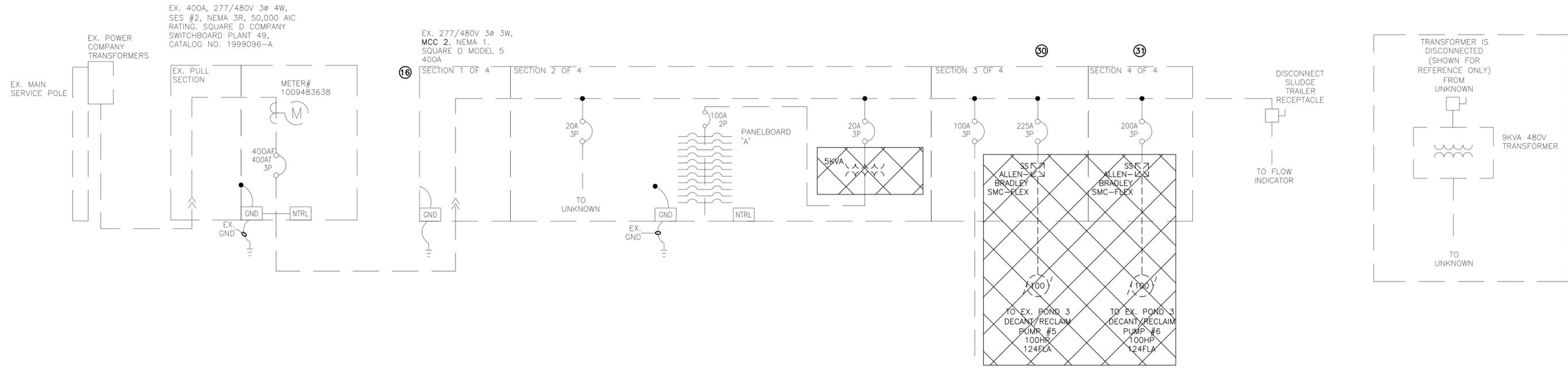
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 CA LICENSED PROFESSIONAL ENGINEER
 NO. C 35943 DATE: -/-/-

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 PROJECT ENG'R: J. BIELEFELDT
 DATE: OCTOBER 2025
 PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
 ELECTRICAL
 EXISTING SINGLE LINE DIAGRAM III
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

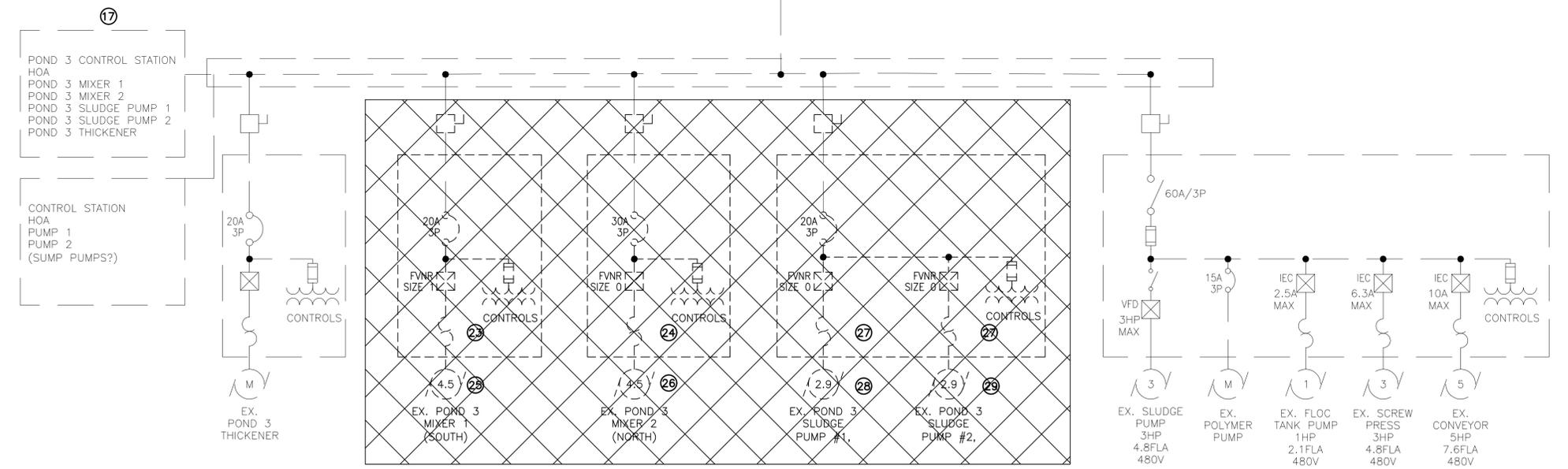
CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E2.3



SEE SHEET E3.1 FOR DEMOLITION NOTES

LEGEND

- BOLD AND SOLID** INDICATES NEW WORK
- LIGHT AND DASHED INDICATES EXISTING TO REMAIN IN PLACE
- LIGHT AND DASHED INDICATES EXISTING TO BE REMOVED
- HATCH INDICATES REMOVAL OF EQUIPMENT



ELECTRICAL SINGLE LINE DIAGRAM - EXISTING SES #2 MCC #2

NO SCALE



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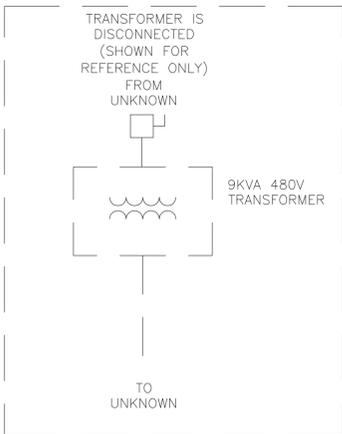
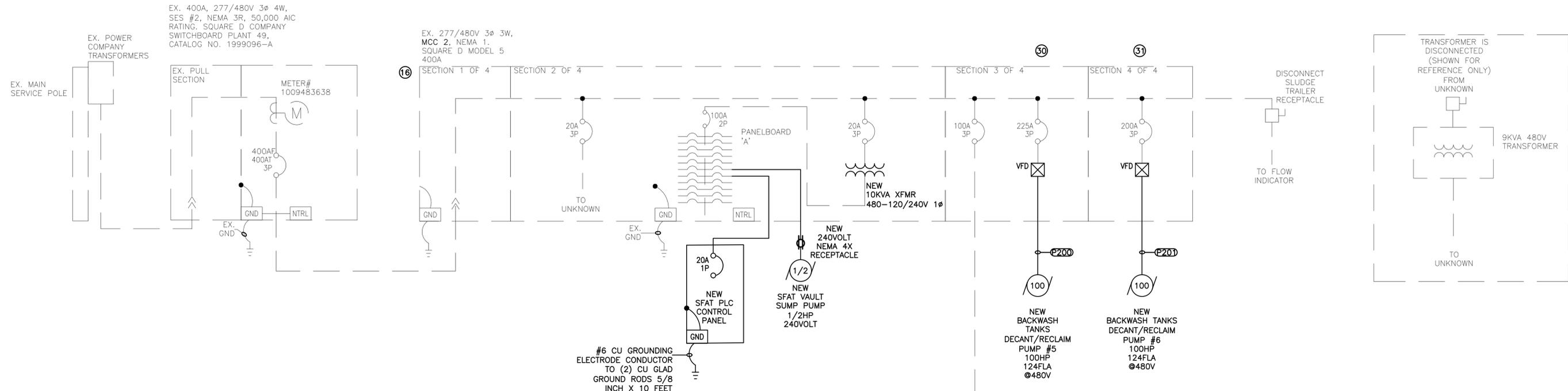
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W. WILLIAMS
REGISTERED PROFESSIONAL ENGINEER
NO. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
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SUITE B200, CARMEL, CA 93923
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

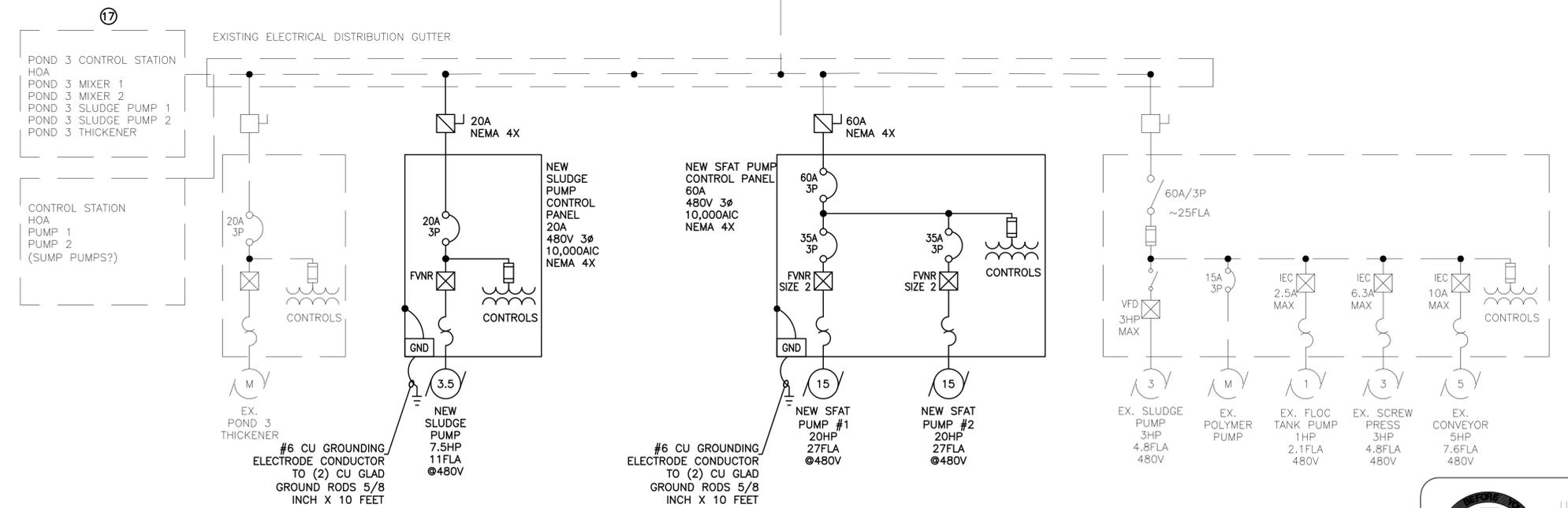
BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
DEMOLITION SINGLE LINE DIAGRAM IV
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E2.4



LEGEND

- BOLD AND SOLID INDICATES NEW WORK
- - - LIGHT AND DASHED INDICATES EXISTING TO REMAIN IN PLACE
- - - LIGHT AND DASHED INDICATES EXISTING TO BE REMOVED
- HATCH INDICATES REMOVAL OF EQUIPMENT



ELECTRICAL SINGLE LINE DIAGRAM - EXISTING SES #2 MCC #2
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	REVISIONS	REVISIONS	<p>200 Clock Tower Place Building B, Suite B200 Carmel, CA 93923 Phone: (831) 200 - 9093 Website: http://www.valentineengineers.com</p>	<p>W. WILLIAMS PRELIMINARY NO. 14560 DATE: 3/30/22 ELECTRICAL ENGINEER STATE OF CALIFORNIA</p>	<p>VALENTINE ENVIRONMENTAL ENGINEERS, LLC 200 CLOCK TOWER PLACE BUILDING B SUITE B200, CARMEL, CA 93923</p>	<p>CALIFORNIA AMERICAN WATER</p>	<p>BIRP BACKWASH SYSTEM DESIGN ELECTRICAL PROPOSED SINGLE LINE DIAGRAM V 9210 CARMEL VALLEY ROAD CARMEL CA, 93923</p>																		
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MCC-1 LOAD CALCULATION SUMMARY			
LOAD DESCRIPTION	øA	øB	øC
MAIN TO CHEMICAL FEED BUILDING	55.2	55.2	55.2
75KVA TRANSFORMER FOR DIST. PANEL'S 1 & 2	45.0	45.0	45.0
CHLORINE BOOSTER PUMP (3HP)	4.8	4.8	4.8
① POND 2 DECANT/RECLAIM PUMP #3 (100HP)	124.0	124.0	124.0
① POND 2 DECANT/RECLAIM PUMP #4 (100HP)	124.0	124.0	124.0
CHLORINE TRANSFER PUMP 1 (30HP)	40.0	40.0	40.0
CHLORINE TRANSFER PUMP 2 (30HP)	40.0	40.0	40.0
TRUCK UNLOAD AIR COMPRESSOR	7.6	7.6	7.6
NEW AIR BLOWER 1 (30HP)	40.0	40.0	40.0
TIME CLOCKS	5.0	5.0	5.0
① POND 1 DECANT PUMP 1 (10HP)	14.0	14.0	14.0
① POND 1 DECANT PUMP 2 (10HP)	14.0	14.0	14.0
POND 2 SLUDGE PUMP #1 (3HP)	4.8	4.8	4.8
POND 2 SLUDGE PUMP #2 (3HP)	4.8	4.8	4.8
25% OF LARGEST LOAD	31.0	31.0	31.0
+TOTAL AMPS / ø	554.2	554.2	554.2

277/480V 3ø 4W + EXISTING LOAD CALCULATED/ASSUMED FROM AS-BUILT INFORMATION PROVIDED.

MCC-2 FEED BUILDING MCC LOAD CALCULATION SUMMARY			
LOAD DESCRIPTION	øA	øB	øC
WATER HEATER	20.0	20.0	20.0
UNIT HEATERS	5.0	5.0	5.0
POTASSIUM PERMANGANATE FEED PUMP P-2 (3HP)	4.8	4.8	4.8
POTASSIUM PERMANGANATE FEED PUMP P-1 (3HP)	4.8	4.8	4.8
CORROSION INH TRAN PUMP TP-4 (1HP)	2.1	2.1	2.1
CORROSION INH TRAN PUMP TP-3 (1HP)	2.1	2.1	2.1
CAUSTIC TRANSFER PUMP TP-2 (1HP)	2.1	2.1	2.1
CAUSTIC TRANSFER PUMP TP-1 (1HP)	2.1	2.1	2.1
15KVA TRANSFORMER FOR PANEL A	10.0	10.0	10.0
CAUSTIC DAY TANK SELECTOR	1.0	1.0	1.0
25% OF LARGEST LOAD	1.2	1.2	1.2
+TOTAL AMPS / ø	55.2	55.2	55.2

277/480V 3ø 4W + EXISTING LOAD CALCULATED/ASSUMED FROM AS-BUILT INFORMATION PROVIDED.

SES 1

NO SCALE

**GENERATOR
LOAD CALCULATION SUMMARY**

SES-1	609.4	609.4	609.4
SES-3	312.0	312.0	312.0
++GENERATOR KW	921.4	921.4	921.4

++ IT IS ASSUMED THERE ARE EXISTING CONTROLS TO PREVENT AN OVERLOAD TO THE GENERATOR. THE MINIMAL ADDITIONAL LOAD SHOULD NOT IMPACT THE GENERATOR.

PANEL NAME: LC		120/208V, 3ø, 4W					100A MAIN BREAKER			
LOCATION: MCC 2 (SES 1) (CHEM BUILDING)		TYPE: PLUG-IN					MCC MTD., NEMA 1			
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	Cø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	20/1	DUST COLLECTOR FAN F-2						RTU	20/1	2
3	20/1	HW CIRC PUMP P-3						FIRE ALARM PANEL	20/1	4
5	20/1	HW CIRC PUMP P-4						LIGHTING	20/1	6
7	20/1	SPARE						EXTERNAL LIGHTING	20/1	8
9	20/1	ZINC DAYTANK/ZINC DAY SUMP						CAUSTIC TANK PROBES	20/1	10
11	20/1	MOTORIZED VALVES						FEEDER/HOPPER	20/1	12
13	20/1	4 LEAK DETECTION						METERING PUMP MP-3	20/1	14
15	20/1	ZINC DAY RECEPTACLES						POTASSIUM MIXER	20/1	16
17	20/1	RECEPTACLES						METERING PUMP MP-4	20/1	18
19	20/1	BULK TANK RECEPTACLES						SPARE	20/1	20
21	20/1	HEAT TRACE						FAN F-1	20/1	22
23	20/1	INJECTION VAULT RECEPTACLES						HEAT TRACE RECEPTACLE	20/1	24
25	20/1	SPARE						EXT. POLE LTS	20/1	26
27	20/1	SPARING MAG METER						EXT POLE	20/1	28
29	20/1	SPARE						HEAT TRACE MP2	20/1	30
31	100/							CAUSTIC MP5 & MP6	20/1	32
33	/	MAIN						BUSSED SPACE		34
35	3							BUSSED SPACE		36
CODE TOTAL VA/ø								*INDICATES LOAD @ 125%		
CODE TOTAL AMPS/ø								10,000 AIC BREAKERS		

PANEL NAME: DIST PANEL 1		120/208V, 3ø, 4W					100A MAIN BREAKER			
LOCATION: MCC 1 (SES 1)		TYPE: PLUG-IN					MCC MTD., NEMA 1			
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	Cø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	15/1	OUTSIDE LIGHTS FILTERS 1-6						P-RLT CONTROL PANEL	20/1	2
3	15/1	OUTSIDE LIGHTS RECEPTACLE						OUTLETS ELECTRIC RM	20/1	4
5	30/1	FILTER VALVES 13-15						L-0-R LTS	20/1	6
7	20/1	RIO#3						FILTER VALVES 16-18	20/1	8
9	20/1	GFI BREAKER (LAB OUTLET)						L-0 HEATER	20/	10
11	15/1	CHLORINE RM LIGHTS						ELECTRIC GALLEY LAB ANALYZER POWER STRIP	/2	12
13	15/1	CL2 ROOM OUTLETS						FRAD	15/1	16
15	20/1	FEED ROOM FAN						BULK STORAGE VALVES	20/1	18
17	20/1	FAN LIGHT						CAUSTIC PUMP	15/1	20
19	20/1	CHLORINE RM FAN						SPARE	15/1	22
21	30/1	FILTER VALVES 4-6						DECANT PLUG	15/1	24
23	30/1	FILTER VALES 1-3						RIO #2	20/1	26
25	30/1	FILTER VALVES 10-12						LCP #1	15/1	28
27	30/1	FILTER VALVES 7-9						RIO #1 (SMALL FILTERS)	20/1	30
29	30/1	RIO #4/LCP #2 POND 1+2 FEED PUMPS						ELECTRICAL ROOM HEATER	20/1	32
31	15/1	SPARE						ELECTRICAL ROOM HEATER	20/1	34
33	15/1	COMP ROOM LIGHTS						ELECTRICAL ROOM HEATER	20/1	36
35	15/1	DECANT PLUG						100A MAIN BREAKER	100/	38
37	20/1	BUSSED SPACE						/	/	40
39	20/1	BUSSED SPACE						/3	/3	42
41	20/1	BUSSED SPACE						*INDICATES LOAD @ 125%		
CODE TOTAL VA/ø								10,000 AIC BREAKERS		
CODE TOTAL AMPS/ø										

PANEL NAME: DIST PANEL 2		120/208V, 3ø, 4W					100A MAIN MLO			
LOCATION: MCC 1 (SES 1)		TYPE: PLUG-IN					MCC MTD., NEMA 1			
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	Cø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	15/1	MOV FILTERS 7-9	1332					DECANT 1 + 2 TIMERS	15/1	2
3	15/1	MOV FILTERS 10-12	1332						15/1	4
5	15/1	MOV FILTERS 13-15	1332						15/1	6
7	15/1	MOV FILTERS 16-18	1332						30/1	8
9	20/1	SPARE						SECURITY CABINET	20/1	10
11	20/1							SECURITY CUBE	20/1	12
13	20/1								20/1	14
15	20/1								20/1	16
17	30/1								20/1	18
19	15/1								20/	20
21	20/1								/2	22
23	20/								30/	24
25	/2								/2	26
27	30/								50/	28
29	/2								/2	30
CODE TOTAL VA/ø								*INDICATES LOAD @ 125%		
CODE TOTAL AMPS/ø								10,000 AIC BREAKERS		

CONSTRUCTION NOTES

- ① EXISTING LOAD TO BE REMOVED AND DISPOSED OF PROPERLY.

LEGEND

- BOLD AND SOLID** INDICATES NEW WORK
- LIGHT AND DASHED** INDICATES EXISTING TO REMAIN IN PLACE
- LIGHT AND DASHED** INDICATES EXISTING TO BE REMOVED
- HATCH** INDICATES REMOVAL OF EQUIPMENT

+CALCULATED LOAD FROM AS-BUILTS.



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W. WILLIAMS
CALIFORNIA PROFESSIONAL ENGINEER
NO. 41460
DATE: 3/30/27

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
LOAD TABLES I
9210 CARMEL VALLEY ROAD CARMEL CA, 93923
CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
PRELIMINARY
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
USE DIMENSIONS ONLY SCALE NONE
XXXXXX-XXXX-E2.6

WRIGHT engineering corporation
ELECTRICAL ENGINEERING & LIGHTING DESIGN
165 E CHILTON DR, CHANDLER, AZ 85225
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Project Number: 25059

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SERVICE ENTRANCE SECTION LOAD CALCULATION SUMMARY			
LOAD DESCRIPTION	øA	øB	øC
MAIN TO CHEMICAL FEED BUILDING	55.2	55.2	55.2
75KVA TRANSFORMER FOR DIST. PANEL'S 1 & 2	45.0	45.0	45.0
CHLORINE BOOSTER PUMP (3HP)	4.8	4.8	4.8
CHLORINE TRANSFER PUMP 1 (30HP)	40.0	40.0	40.0
CHLORINE TRANSFER PUMP 2 (30HP)	40.0	40.0	40.0
TRUCK UNLOAD AIR COMPRESSOR	7.6	7.6	7.6
NEW AIR BLOWER 1 (30HP)	40.0	40.0	40.0
TIME CLOCKS	5.0	5.0	5.0
POND 2 SLUDGE PUMP #1 (3HP)	4.8	4.8	4.8
POND 2 SLUDGE PUMP #2 (3HP)	4.8	4.8	4.8
25% OF LARGEST LOAD	31.0	31.0	31.0
+TOTAL AMPS / ø	278.2	278.2	278.2

277/480V 3ø 4W + EXISTING LOAD CALCULATED/ASSUMED FROM AS-BUILT INFORMATION PROVIDED.

GENERATOR LOAD CALCULATION SUMMARY			
SES-1	333.4	333.4	333.4
SES-3	312.0	312.0	312.0
++GENERATOR KW	645.4	645.4	645.4

++ IT IS ASSUMED THERE ARE EXISTING CONTROLS TO PREVENT AN OVERLOAD TO THE GENERATOR. THE MINIMAL ADDITIONAL LOAD SHOULD NOT IMPACT THE GENERATOR.

MCC-2 FEED BUILDING MCC LOAD CALCULATION SUMMARY			
LOAD DESCRIPTION	øA	øB	øC
WATER HEATER	20.0	20.0	20.0
UNIT HEATERS	5.0	5.0	5.0
POTASSIUM PERMANGANATE FEED PUMP P-2 (3HP)	4.8	4.8	4.8
POTASSIUM PERMANGANATE FEED PUMP P-1 (3HP)	4.8	4.8	4.8
CORROSION INH TRAN PUMP TP-4 (1HP)	2.1	2.1	2.1
CORROSION INH TRAN PUMP TP-3 (1HP)	2.1	2.1	2.1
CAUSTIC TRANSFER PUMP TP-2 (1HP)	2.1	2.1	2.1
CAUSTIC TRANSFER PUMP TP-1 (1HP)	2.1	2.1	2.1
15KVA TRANSFORMER FOR PANEL A	10.0	10.0	10.0
CAUSTIC DAY TANK SELECTOR	1.0	1.0	1.0
25% OF LARGEST LOAD	1.2	1.2	1.2
+TOTAL AMPS / ø	55.2	55.2	55.2

277/480V 3ø 4W + EXISTING LOAD CALCULATED/ASSUMED FROM AS-BUILT INFORMATION PROVIDED.

SES 1

NO SCALE

PANEL NAME: LC		120/208V, 3ø, 4W					100A MAIN BREAKER			
LOCATION: MCC 2 (SES 1) (CHEM BUILDING)		TYPE: PLUG-IN					MCC MTD., NEMA 1			
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	Cø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	20/1	DUST COLLECTOR FAN F-2						RTU	20/1	2
3	20/1	HW CIRC PUMP P-3						FIRE ALARM PANEL	20/1	4
5	20/1	HW CIRC PUMP P-4						LIGHTING	20/1	6
7	20/1	SPARE						EXTERNAL LIGHTING	20/1	8
9	20/1	ZINC DAYTANK/ZINC DAY SUMP						CAUSTIC TANK PROBES	20/1	10
11	20/1	MOTORIZED VALVES						FEEDER/HOPPER	20/1	12
13	20/1	4 LEAK DETECTION						METERING PUMP MP-3	20/1	14
15	20/1	ZINC DAY RECEPTACLES						POTASSIUM MIXER	20/1	16
17	20/1	RECEPTACLES						METERING PUMP MP-4	20/1	18
19	20/1	BULK TANK RECEPTACLES						SPARE	20/1	20
21	20/1	HEAT TRACE						FAN F-1	20/1	22
23	20/1	INJECTION VAULT RECEPTACLES						HEAT TRACE RECEPTACLE	20/1	24
25	20/1	SPARE						EXT. POLE LTS	20/1	26
27	20/1	SPARING MAG METER						EXT POLE	20/1	28
29	20/1	SPARE						HEAT TRACE MP2	20/1	30
31	100/							CAUSTIC MP5 & MP6	20/1	32
33	/	MAIN						BUSSED SPACE		34
35	3							BUSSED SPACE		36
CODE TOTAL VA/ø								*INDICATES LOAD @ 125%		
CODE TOTAL AMPS/ø								10,000 AIC BREAKERS		

PANEL NAME: DIST PANEL 1		120/208V, 3ø, 4W					100A MAIN BREAKER			
LOCATION: MCC 1 (SES 1)		TYPE: PLUG-IN					MCC MTD., NEMA 1			
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	Cø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	15/1	OUTSIDE LIGHTS FILTERS 1-6						P-RLT CONTROL PANEL	20/1	2
3	15/1	OUTSIDE LIGHTS RECEPTACLE						OUTLETS ELECTRIC RM	20/1	4
5	30/1	FILTER VALVES 13-15						L-0-R LTS	20/1	6
7	20/1	RIO#3						FILTER VALVES 16-18	20/1	8
9	20/1	GFI BREAKER (LAB OUTLET)						L-0 HEATER	20/	10
11	15/1	CHLORINE RM LIGHTS						ELECTRIC GALLEY LAB ANALYZER POWER STRIP	/2	12
13	15/1	CL2 ROOM OUTLETS						FRAD	15/1	16
15	20/1	FEED ROOM FAN						BULK STORAGE VALVES	20/1	18
17	20/1	FAN LIGHT						CAUSTIC PUMP	15/1	20
19	20/1	CHLORINE RM FAN						SPARE	15/1	22
21	30/1	FILTER VALVES 4-6						DECANT PLUG	15/1	24
23	30/1	FILTER VALES 1-3						RIO #2	20/1	26
25	30/1	FILTER VALVES 10-12						LCP #1	15/1	28
27	30/1	FILTER VALVES 7-9						RIO #1 (SMALL FILTERS)	20/1	30
29	30/1	RIO #4/LCP #2 POND 1+2 FEED PUMPS						ELECTRICAL ROOM HEATER	20/1	32
31	15/1	SPARE						ELECTRICAL ROOM HEATER	20/1	34
33	15/1	COMP ROOM LIGHTS						ELECTRICAL ROOM HEATER	20/1	36
35	15/1	DECANT PLUG							100/	38
37	20/1	BUSSED SPACE							/	40
39	20/1	BUSSED SPACE						100A MAIN BREAKER	/	40
41	20/1	BUSSED SPACE							/3	42
CODE TOTAL VA/ø								*INDICATES LOAD @ 125%		
CODE TOTAL AMPS/ø								10,000 AIC BREAKERS		

PANEL NAME: DIST PANEL 2		120/208V, 3ø, 4W					100A MAIN MLO			
LOCATION: MCC 1 (SES 1)		TYPE: PLUG-IN					MCC MTD., NEMA 1			
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	Cø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	15/1	MOV FILTERS 7-9	1332					DECANT 1 + 2 TIMERS	15/1	2
3	15/1	MOV FILTERS 10-12	1332						15/1	4
5	15/1	MOV FILTERS 13-15	1332						15/1	6
7	15/1	MOV FILTERS 16-18	1332						30/1	8
9	20/1	SPARE						SECURITY CABINET	20/1	10
11	20/1							SECURITY CUBE	20/1	12
13	20/1								20/1	14
15	20/1								20/1	16
17	30/1								20/1	18
19	15/1								20/	20
21	20/1								/2	22
23	20/								30/	24
25	/2								/2	26
27	30/								50/	28
29	/2								/2	30
CODE TOTAL VA/ø								*INDICATES LOAD @ 125%		
CODE TOTAL AMPS/ø								10,000 AIC BREAKERS		

LEGEND

- SOLID LINE** BOLD AND SOLID INDICATES NEW WORK
- DASHED LINE** LIGHT AND DASHED INDICATES EXISTING TO REMAIN IN PLACE
- DOTTED LINE** LIGHT AND DASHED INDICATES EXISTING TO BE REMOVED
- HATCH** HATCH INDICATES REMOVAL OF EQUIPMENT

+CALCULATED LOAD FROM AS-BUILTS.



REVISIONS	REVISIONS
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△	△
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W. WILLIAMS
CALIFORNIA PROFESSIONAL ENGINEER
NO. 14660
DATE: 3/30/27

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
LOAD TABLES II
9210 CARMEL VALLEY ROAD CARMEL CA, 93923
CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
PRELIMINARY
USE DIMENSIONS ONLY SCALE NONE
XXXXXX-XXXX-E2.7

SES-2 FEED BUILDING MCC (400A) LOAD CALCULATION SUMMARY			
LOAD DESCRIPTION	øA	øB	øC
20A/3P BREAKER (LOAD UNKNOWN)	20.0	20.0	20.0
5KVA TRANSFORMER	5.4	3.6	0.0
100A FEEDER	61.1	61.1	59.1
① POND 3 RECLAIM PUMP #5 (100HP)	124.0	124.0	124.0
① POND 3 RECLAIM PUMP #6 (100HP)	124.0	124.0	124.0
25% OF LARGEST LOAD	31.0	31.0	31.0
+TOTAL AMPS / ø	365.5	363.7	358.1

SES-2 FEED BUILDING MCC (400A) LOAD CALCULATION SUMMARY			
LOAD DESCRIPTION	øA	øB	øC
20A/3P BREAKER (LOAD UNKNOWN)	16.0	16.0	16.0
5KVA TRANSFORMER	8.4	5.7	0.0
100A FEEDER	85.6	85.6	83.6
② NEW POND 3 RECLAIM PUMP #5 (100HP)	124.0	124.0	124.0
② NEW POND 3 RECLAIM PUMP #6 (100HP)	124.0	124.0	124.0
25% OF LARGEST LOAD	31.0	31.0	31.0
+TOTAL AMPS / ø	389.0	386.3	378.6

100A FEEDER MCC2 LOAD CALCULATION SUMMARY			
LOAD DESCRIPTION	øA	øB	øC
POND 3 THICKENER (HP?)	7.6	7.6	7.6
① POND 3 MIXER #1 SOUTH (5HP)	7.6	7.6	7.6
① POND 3 MIXER #2 NORTH (5HP)	7.6	7.6	7.6
① POND 3 SLUDGE PUMP #1 (3HP)	4.8	4.8	4.8
① POND 3 SLUDGE PUMP #3 (3HP)	4.8	4.8	4.8
SCREW PRESS SLUDGE PUMP (3HP)	4.8	4.8	4.8
SCREW PRESS POLYMER PUMP (HP?)	7.6	7.6	7.6
SCREW PRESS (3HP)	4.8	4.8	4.8
SCREW PRESS CONVEYOR (5HP)	7.6	7.6	7.6
CONTROL	2.0	2.0	0.0
25% OF LARGEST LOAD	1.9	1.9	1.9
+TOTAL AMPS / ø	61.1	61.1	59.1

100A FEEDER MCC2 LOAD CALCULATION SUMMARY			
LOAD DESCRIPTION	øA	øB	øC
POND 3 THICKENER (HP?)	7.6	7.6	7.6
② NEW SLUDGE PUMP (3.5HP)	4.0	4.0	4.0
② NEW SFAT PUMP #1 (15HP)	21.0	21.0	21.0
② NEW SFAT PUMP #2 (15HP)	21.0	21.0	21.0
SCREW PRESS SLUDGE PUMP (3HP)	4.8	4.8	4.8
SCREW PRESS POLYMER PUMP (HP?)	7.6	7.6	7.6
SCREW PRESS (3HP)	4.8	4.8	4.8
SCREW PRESS CONVEYOR (5HP)	7.6	7.6	7.6
CONTROL	2.0	2.0	0.0
25% OF LARGEST LOAD	5.3	5.3	5.3
+TOTAL AMPS / ø	85.6	85.6	83.6

PANEL NAME: A			120/240V, 1ø, 3W				100A MAIN BKR		
LOCATION: MCC 1 (SES 2)			TYPE: PLUG-IN				MCC MTD., NEMA 1		
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	20/1	SUMP PUMP	1260	1260					2
3	20/1	SPARE							4
5		BUSSED SPACE							6
7		BUSSED SPACE					BUSSED SPACE		8
9		BUSSED SPACE					BUSSED SPACE		10
11		BUSSED SPACE			200	200	FLOW METER	20/1	12
13		BUSSED SPACE					SPARE	20/1	14
15		BUSSED SPACE					SPARE	20/1	16
17		BUSSED SPACE	240			240	UTILITY PLUG	20/1	18
19		BUSSED SPACE			800	800	LIGHTS	20/1	20
21	100/	100A MAIN BREAKER							
23	/2								
CODE TOTAL VA/ø			1500	800	*INDICATES LOAD @ 125%				
CODE TOTAL AMPS/ø			12.5	6.7	10,000 AIC BREAKERS				

PANEL NAME: A			120/240V, 1ø, 3W				100A MAIN BKR		
LOCATION: MCC 1 (SES 2)			TYPE: PLUG-IN				MCC MTD., NEMA 1		
CKT NO.	BKR SIZE	DESCRIPTION	LOAD	Aø	Bø	LOAD	DESCRIPTION	BKR SIZE	CKT NO.
1	20/1	SUMP PUMP	1260	1848		588	NEW SFAT VAULT SUMP PUMP	20/	2
3	20/1	SPARE				588		/2	4
5		BUSSED SPACE		240		240	NEW SFAT PLC CONTROL PANEL	20/1	6
7		BUSSED SPACE					BUSSED SPACE		8
9		BUSSED SPACE					BUSSED SPACE		10
11		BUSSED SPACE			200	200	FLOW METER	20/1	12
13		BUSSED SPACE					SPARE	20/1	14
15		BUSSED SPACE					SPARE	20/1	16
17		BUSSED SPACE	240			240	UTILITY PLUG	20/1	18
19		BUSSED SPACE			800	800	LIGHTS	20/1	20
21	100/	100A MAIN BREAKER							
23	/2								
CODE TOTAL VA/ø			2328	1588	*INDICATES LOAD @ 125%				
CODE TOTAL AMPS/ø			19.4	13.2	10,000 AIC BREAKERS				

CONSTRUCTION NOTES

- ① EXISTING LOAD TO BE REMOVED AND DISPOSED OF PROPERLY.
- ② NEW LOAD PER PLANS. NEW CIRCUIT BREAKERS TO MATCH MANUFACTURER AND TYPE OF EXISTING.

LEGEND

- BOLD AND SOLID INDICATES NEW WORK
- LIGHT AND DASHED INDICATES EXISTING TO REMAIN IN PLACE
- LIGHT AND DASHED INDICATES EXISTING TO BE REMOVED
- HATCH INDICATES REMOVAL OF EQUIPMENT

+CALCULATED LOAD FROM AS-BUILTS.



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Underground
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of Southern California
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227-2600

Project Number: 25059

TWO WORKING DAYS BEFORE YOU DIG

SES 2

NO SCALE

	REVISIONS	REVISIONS	 <p>200 Clock Tower Place Building B, Suite B200 Carmel, CA 93923 Phone: (831) 200 - 9093 Website: http://www.valentineengineers.com</p>	 <p>W. WILLIAMS CALIFORNIA AMERICAN WATER</p>	<p>VALENTINE ENVIRONMENTAL ENGINEERS, LLC 200 CLOCK TOWER PLACE BUILDING B SUITE B200, CARMEL, CA 93923</p>	<p>BIRP BACKWASH SYSTEM DESIGN ELECTRICAL LOAD TABLES III 9210 CARMEL VALLEY ROAD CARMEL CA, 93923</p>		
	△	△				DATE OCTOBER 2025	CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION
				DRAWN BY: C. KASTER PROJECT ENG'R: J. BIELEFELDT		USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES		
				PROJECT XXXXXX-XXXX		PRELIMINARY		

CONDUIT AND WIRE SCHEDULE FOR CONTROL

CONDUIT		WIRE			FROM	TO	REMARKS
NO.	SIZE	POWER	GROUND	CONTROL			
C100	1.5"		#14	CABLE	EXISTING MAIN PLC	SFAT PLC CONTROL PANEL	INSPECT EXISTING PLC AND DETERMINE TYPE OF CABLE NEEDED FOR INTERFACE
BACKWASH TANKS DECANT/RECLAIM PUMPS							
C200	1.5"		#14	(28) #14	SLUDGE PUMP CONTROL PANEL	EX. MCC 2	
C201	1.5"		#14	(6) #14	EX. MCC 2	J-BOX	BACKWASH TANKS DECANT/RECLAIM PUMP #5 OVER TEMP AND MOISTURE SENSORS, PRESSURE SWITCH
				(6) #14			BACKWASH TANKS DECANT/RECLAIM PUMP #6 OVER TEMP AND MOISTURE SENSORS, PRESSURE SWITCH
C202	3/4"		#14	(4) #14	J-BOX		BACKWASH TANKS DECANT/RECLAIM PUMP #5 OVER TEMP AND MOISTURE SENSORS
C203	3/4"		#14	(4) #14	J-BOX		BACKWASH TANKS DECANT/RECLAIM PUMP #5 PRESSURE SWITCH
C204	3/4"		#14	(2) #14	J-BOX		BACKWASH TANKS DECANT/RECLAIM PUMP #6 OVER TEMP AND MOISTURE SENSORS
C205	3/4"		#14	(2) #14	J-BOX		BACKWASH TANKS DECANT/RECLAIM PUMP #6 PRESSURE SWITCH
SLUDGE TANK							
C300	1.5"		#14	(12) #14	SFAT PLC CONTROL PANEL	SLUDGE PUMP MOTOR CONTROL PANEL	
C301	1.5"		#14	(4) #14	SLUDGE PUMP MOTOR CONTROL PANEL	SLUDGE PUMP MOTOR OVER TEMP AND MOISTURE SENSORS	
C302	1"		#14	(1)#16 TWISTED SHIELDED PAIR	SFAT PLC CONTROL PANEL	SLUDGE TANK LEVEL TRANSDUCER	
C303	1"		#14	(1)#16 TWISTED SHIELDED PAIR & (2) #14	SFAT PLC CONTROL PANEL	SLUDGE TANK FLOW METER	
C304	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	SLUDGE TANK MOTORIZED VALVE 1	
SFAT VAULT							
C400	1.5"		#14	(24) #14	SFAT PLC CONTROL PANEL	SFAT MOTOR CONTROL PANEL	
C401	1.5"		#14	(4) #14	SFAT MOTOR CONTROL PANEL 1	SFAT PUMP 1 MOTOR OVER TEMP AND MOISTURE SENSORS	
C402	1.5"		#14	(4) #14	SFAT MOTOR CONTROL PANEL 2	SFAT PUMP 2 MOTOR OVER TEMP AND MOISTURE SENSORS	
C403	1"		#14	(1)#16 TWISTED SHIELDED PAIR & (2) #14	SFAT PLC CONTROL PANEL	SFAT FLOW METER	
C404	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	SFAT MOTORIZED VALVE 1	
C405	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	SFAT MOTORIZED VALVE 2	
C406	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	SFAT MOTORIZED VALVE 3	
C407	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	SFAT MOTORIZED VALVE 4	
C408	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	SFAT MOTORIZED VALVE 5	
C409	3/4"		#14	(2) #14	SFAT PLC CONTROL PANEL	SUMP PUMP FLOAT	
WBW TANKS							
C500	3/4"			(1)#16 TWISTED SHIELDED PAIR	SFAT PLC CONTROL PANEL	WBW TANK 1 LEVEL TRANSDUCER	
C501	1"		#14	(1)#16 TWISTED SHIELDED PAIR & (2) #14	SFAT PLC CONTROL PANEL	WBW TANK 1 FLOW METER	
C502	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	WBW TANK 1 MOTORIZED VALVE 1	
C503	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	WBW TANK 1 MOTORIZED VALVE 2	
C504	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	WBW TANK 1 MOTORIZED VALVE 3	
C510	3/4"			(1)#16 TWISTED SHIELDED PAIR	SFAT PLC CONTROL PANEL	WBW TANK 2 LEVEL TRANSDUCER	
C511	1"		#14	(1)#16 TWISTED SHIELDED PAIR & (2) #14	SFAT PLC CONTROL PANEL	WBW TANK 2 FLOW METER	
C512	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	WBW TANK 2 MOTORIZED VALVE 1	
C513	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	WBW TANK 2 MOTORIZED VALVE 2	
C514	3/4"		#14	(8) #14	SFAT PLC CONTROL PANEL	WBW TANK 2 MOTORIZED VALVE 3	

CONDUIT AND WIRE SCHEDULE FOR POWER

CONDUIT		WIRE		FROM	TO	REMARKS
NO.	SIZE	POWER	GROUND			
P200	2"	(3) #2/0	#4	EXISTING MCC 2	BACKWASH TANKS DECANT/RECLAIM PUMP #5	
P201	2"	(3) #2/0	#4	EXISTING MCC 2	BACKWASH TANKS DECANT/RECLAIM PUMP #6	
P300	1"	(3) #12	#12	EXISTING MCC 2	SLUDGE PUMP CONTROL PANEL	VIA EXISTING ELECTRICAL DISTRIBUTION GUTTER AND DISCONENCT
P301	1"	(3) #12	#12	SLUDGE PUMP CONTROL PANEL	SLUDGE PUMP	
P400	1"	(3) #6	#10	EXISTING MCC 2	SFAT PUMP CONTROL PANEL	VIA EXISTING ELECTRICAL DISTRIBUTION GUTTER AND DISCONENCT
P401	1"	(3) #12	#12	SFAT PUMP CONTROL PANEL	SFAT PUMP #1	
P402	1"	(3) #12	#12	SFAT PUMP CONTROL PANEL	SFAT PUMP #1	
P410	1"	(2) #12	#12	EXISTING PANEL A IN MCC 2	SFAT VAULT SUMP PUMP	
P411	1"	(2) #12	#12	EXISTING PANEL A IN MCC 2	SFAT PLC CONTROL PANEL	



REVISIONS	REVISIONS
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W. WILLIAMS
CALIFORNIA PROFESSIONAL ENGINEER
No. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
CONDUIT & WIRE TABLES
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
	PRELIMINARY	XXXXXX-XXXX-E2.9



DEMOLITION OVERALL SITE PLAN

1"=20'-0"

DEMOLITION NOTES

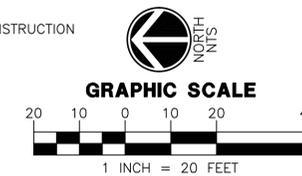
- ① EX. 600 AMP, 277/480V, 3Ø, 4W, MOTOR CONTROL CENTER 1 TO REMAIN, SEE SINGLE LINE ON SE2.1. FOR ELEVATION VIEWS SEE DETAIL 1 ON SHEET 4.1.
- ② EX. DECANT PUMP #1 LOCAL DISCONNECT FOR POND 1 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 1 ON SHEET 4.2.
- ③ EX. DECANT PUMP #2 LOCAL DISCONNECT FOR POND 1 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 1 ON SHEET 4.2.
- ④ EX. 10HP DECANT PUMP #1 FOR POND 1 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ⑤ EX. 10HP DECANT PUMP #2 FOR POND 1 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ⑥ EX. DECANT/RECLAIM PUMP #3 LOCAL DISCONNECT FOR POND 2 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 2 ON SHEET 4.2.
- ⑦ EX. DECANT/RECLAIM PUMP #4 LOCAL DISCONNECT FOR POND 2 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 2 ON SHEET 4.2.
- ⑧ EX. 100HP DECANT/RECLAIM PUMP #3 FOR POND 2 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ⑨ EX. 100HP DECANT/RECLAIM PUMP #4 FOR POND 2 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ⑩ EX. SPARLING TIGERMAG FLOW METER DECANT PUMP #3 FOR POND 2 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 2 ON SHEET 4.2.
- ⑪ EX. SPARLING TIGERMAG FLOW METER DECANT PUMP #4 FOR POND 2 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 2 ON SHEET 4.2.
- ⑫ EX. SLUDGE TRANSFER PUMP CONTROL PANEL FOR POND 2 TO REMAIN. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 3 ON SHEET 4.2.

- ⑬ EX. 3HP SLUDGE TRANSFER PUMP #1 FOR POND 2 TO REMAIN. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ⑭ EX. 3HP SLUDGE TRANSFER PUMP #2 FOR POND 2 TO REMAIN. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ⑮ EX. SPARLING TIGERMAG FLOW METER FOR POND 2 TO REMAIN. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 4 ON SHEET 4.2.
- ⑯ EX. 400 AMP, 277/480V, 3Ø, 4W, MOTOR CONTROL CENTER 2 TO REMAIN, SEE SINGLE LINE ON SE2.1. FOR ELEVATION VIEWS SEE DETAIL 2 ON SHEET 4.1.
- ⑰ EX. EXISTING POND 3 CONTROL STATION FEEDS MIXER #1, MIXER #2, SLUDGE PUMP #1, SLUDGE PUMP #2, AND SLUDGE THICKENER THAT WILL BE REMOVED. THIS CONTROL STATION IS NO LONGER REQUIRED OTHER THAN TO POWER AND CONTROL THICKENER. REPLACE WITH NEW MOTOR STARTER FOR THICKENER. MATCH EXISTING EQUIPMENT AND CONTROL LOGIC FOR SLUDGE THICKENER. CONTRACTOR TO VERIFY EQUIPMENT THAT WILL REMAIN PRIOR TO ANY WORK. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 2 ON SHEET 4.3.
- ⑱ EX. 480V THICKENER MAIN DISCONNECT FOR POND 3 TO REMAIN. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 1 ON SHEET 4.3.
- ⑲ EX. 30A 480V THICKENER DISCONNECT FOR POND 3 TO REMAIN. FOR ELEVATION VIEWS SEE DETAIL 1 ON SHEET 4.3.
- ⑳ EX. 30A 480V MIXER #1 DISCONNECT FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 1 ON SHEET 4.3.
- ㉑ EX. 30A 480V MIXER #2 DISCONNECT FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 1 ON SHEET 4.3.
- ㉒ EX. 100A 480V SLUDGE PRESS DISCONNECT FOR POND 3 TO REMAIN. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 1 ON SHEET 4.3.
- ㉓ EX. 4.5HP MIXER #1 CONTROL PANEL FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 5 ON SHEET 4.3.
- ㉔ EX. 4.5HP MIXER #2 CONTROL PANEL FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 3 ON SHEET 4.3.

- ㉕ EX. 4.5HP MIXER #1 FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ㉖ EX. 4.5HP MIXER #2 FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ㉗ EX. SLUDGE PUMP CONTROL PANEL FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 4 ON SHEET 4.3.
- ㉘ EX. 2.9HP SLUDGE PUMP #1 FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ㉙ EX. 2.9HP SLUDGE PUMP #2 FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ㉚ EX. 100HP DECANT/RECLAIM PUMP #1 FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 1 ON SHEET 4.4.
- ㉛ EX. 100HP DECANT/RECLAIM PUMP #2 FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 1 ON SHEET 4.4.
- ㉜ EX. HYDRORANGER LEVEL INDICATING TRANSMITTER FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1. FOR ELEVATION VIEWS SEE DETAIL 2 ON SHEET 4.3.
- ㉝ EX. SPARLING TIGERMAG FLOW METER FOR POND 3 TO REMAIN. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ㉞ EX. 208V SLUDGE TRAILER RECEPTAL AND DISCONNECT FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ㉟ EX. FLOW METER FOR SLUDGE PUMPS FOR POND 3 TO BE REMOVED AND DISPOSED OF PROPERLY. SEE SINGLE LINE DIAGRAM ON SHEET E2.1.
- ㊱ EX. UNDERGROUND CONCRETE PULL BOX, SHOWN FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM EXACT LOCATION.

DEMOLITION LEGEND

- EX. CONTROL PANEL, SEE CONSTRUCTION NOTES FOR VOLTAGE AND AMPS. REMOVE WHEN NOTED.
- EX. PULL BOX
- EX. 120V GFCI RECEPTACLE
- EX. UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- EX. ABOVE-GROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- A-1 CIRCUIT NUMBER
- WIRE & CONDUIT TAG, SEE WIRE & CONDUIT TABLE
- EX. PUMP, SEE CONSTRUCTION NOTES FOR HP. REMOVE WHEN NOTED.
- EX. DISCONNECT, SEE CONSTRUCTION NOTES. REMOVE WHEN NOTED.
- EX. ABOVE GROUND PULL BOX, SEE CONSTRUCTION NOTES. REMOVE WHEN NOTED.



WRIGHT
engineering corporation
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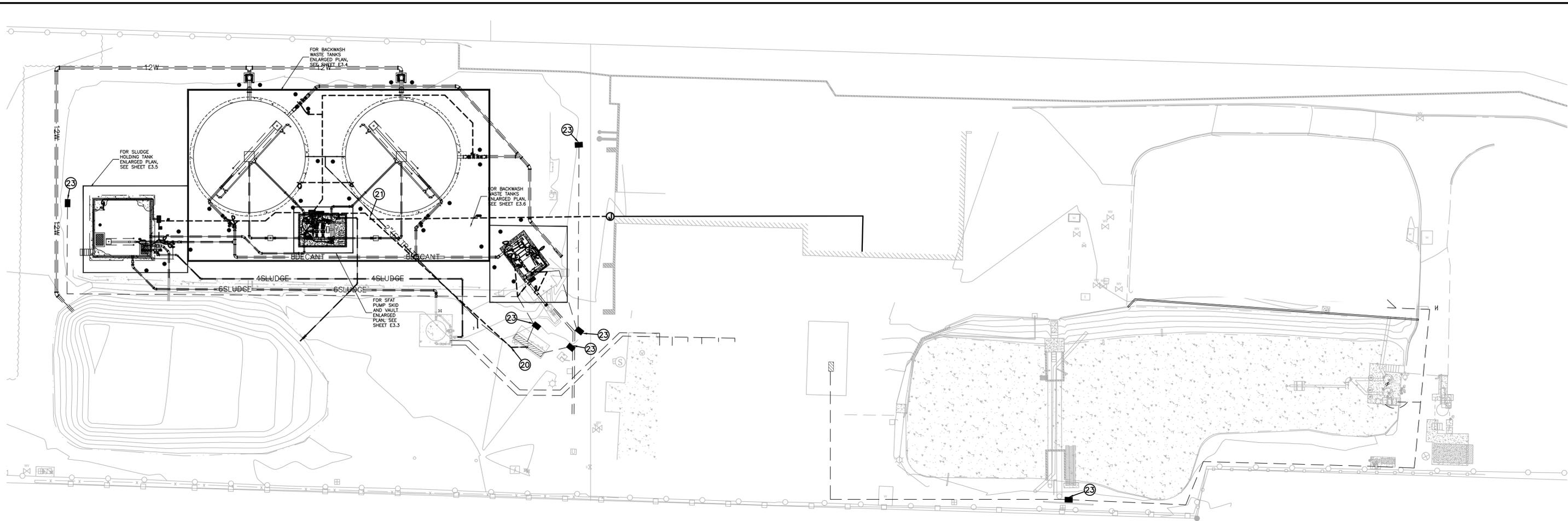
VALENTINE
Environmental Engineers, LLC
200 Clock Tower Place Building B, Suite B200
Carmel, CA 93923
Phone: (831) 200-9093
Website: <http://www.valentineengineers.com>

W. WILLIAMS
REGISTERED PROFESSIONAL ENGINEER
PROJECT NO. 14660R
DATE: 3/30/22
CALIFORNIA
ELECTRICAL ENGINEERING
STATE OF CALIFORNIA
CA LICENSED PROFESSIONAL ENGINEER
NO. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923
CALIFORNIA AMERICAN WATER
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
DEMOLITION OVERALL SITE PLAN
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1" = 20'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E3.1



PROPOSED OVERALL SITE PLAN

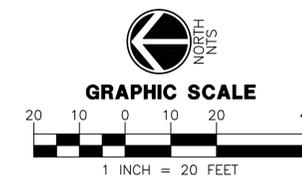
1"=20'-0"

PROPOSED LEGEND

- NEW CONTROL PANEL, SEE CONSTRUCTION NOTES FOR VOLTAGE AND AMPS.
- NEW PULL BOX
- NEW 120V GFCI RECEPTACLE
- EX. UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- NEW UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- NEW ABOVE-GROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- A-1 CIRCUIT NUMBER
- WIRE & CONDUIT TAG, SEE WIRE & CONDUIT TABLE
- NEW DISCONNECT, SEE CONSTRUCTION NOTES.
- NEW ABOVE GROUND PULL BOX, SEE CONSTRUCTION NOTES.
- NEW JUNCTION BOX.

PROPOSED NOTES

- 1 EX. 400 AMP, 277/480V, 3 ϕ , 4W, MOTOR CONTROL CENTER 2, SEE SINGLE LINE ON SE2.1.
- 2 NEW SLUDGE TANK CONTROL PANEL, SEE SINGLE LINE ON SE2.1.
- 3 NEW 3.5HP SLUDGE PUMP, SEE SINGLE LINE ON SE2.1.
- 4 NEW SFAT CONTROL PANEL & PLC, SEE SINGLE LINE ON SE2.1. SEE SHEET E4.9 FOR INSTALLATION DETAILS.
- 5 NEW SFAT PUMP #1 MOTOR CONTROL PANEL/STARTER, SEE SINGLE LINE ON SE2.1.
- 6 NEW SFAT PUMP #2 MOTOR CONTROL PANEL/STARTER, SEE SINGLE LINE ON SE2.1.
- 7 NEW 15HP SFAT PUMP #1, SEE SINGLE LINE ON SE2.1.
- 8 NEW 15HP SFAT PUMP #2, SEE SINGLE LINE ON SE2.1.
- 9 NEW 0.6HP SFAT VAULT SUMP PUMP, SEE SINGLE LINE ON SE2.1.
- 10 NEW SFAT PRESSURE INDICATING TRANSMITTER, SEE SINGLE LINE ON SE2.1.
- 11 NEW DECANT PUMP STATION CONTROL PANEL, SEE SINGLE LINE ON SE2.1.
- 12 NEW 100HP DECANT PUMP #5, SEE SINGLE LINE ON SE2.1.
- 13 NEW 100HP DECANT PUMP #6, SEE SINGLE LINE ON SE2.1.
- 14 NEW DECANT PUMP STATION LOW SUCTION PRESSURE SWITCH, SEE SINGLE LINE ON SE2.1.
- 15 NEW DECANT PUMP STATION HIGH DISCHARGE PRESSURE SWITCH PRESSURE SWITCH, SEE SINGLE LINE ON SE2.1.
- 16 NEW DECANT PUMP STATION NOISE ENCLOSURE EXHAUST FAN, SEE SINGLE LINE ON SE2.1.
- 17 NEW FLOW METER, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
- 18 NEW LEVEL INDICATING TRANSMITTER, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
- 19 NEW MOTORIZED VALVE, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
- 20 CONTRACTOR MAY INTERCEPT AND REUSE EXISTING CONDUIT AS IT ENTERS THE MCC. INSTALL NEW PULL BOXES (SEPARATE CONTROL AND POWER PULL BOXES) FOR TRANSITION FROM EXISTING CONDUIT TO NEW CONDUIT. ALL NEW EQUIPMENT SHALL HAVE NEW CONDUIT AND NEW WIRE.
- 21 NEW PULL BOX.
- 22 CONTRACTOR TO FIELD LOCATE, DIG DOWN AND INTERCEPT EXISTING CONDUIT.
- 23 EX. UNDERGROUND CONCRETE PULL BOX, SHOWN FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM EXACT LOCATION.
- 24 NEW TURBIDITY ANALYZER. MAKE ALL ELECTRICAL CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM.



WRIGHT
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ELECTRICAL ENGINEERING & LIGHTING DESIGN
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P: 480.497.5829 | wrightengineering.us
Project Number: 25059

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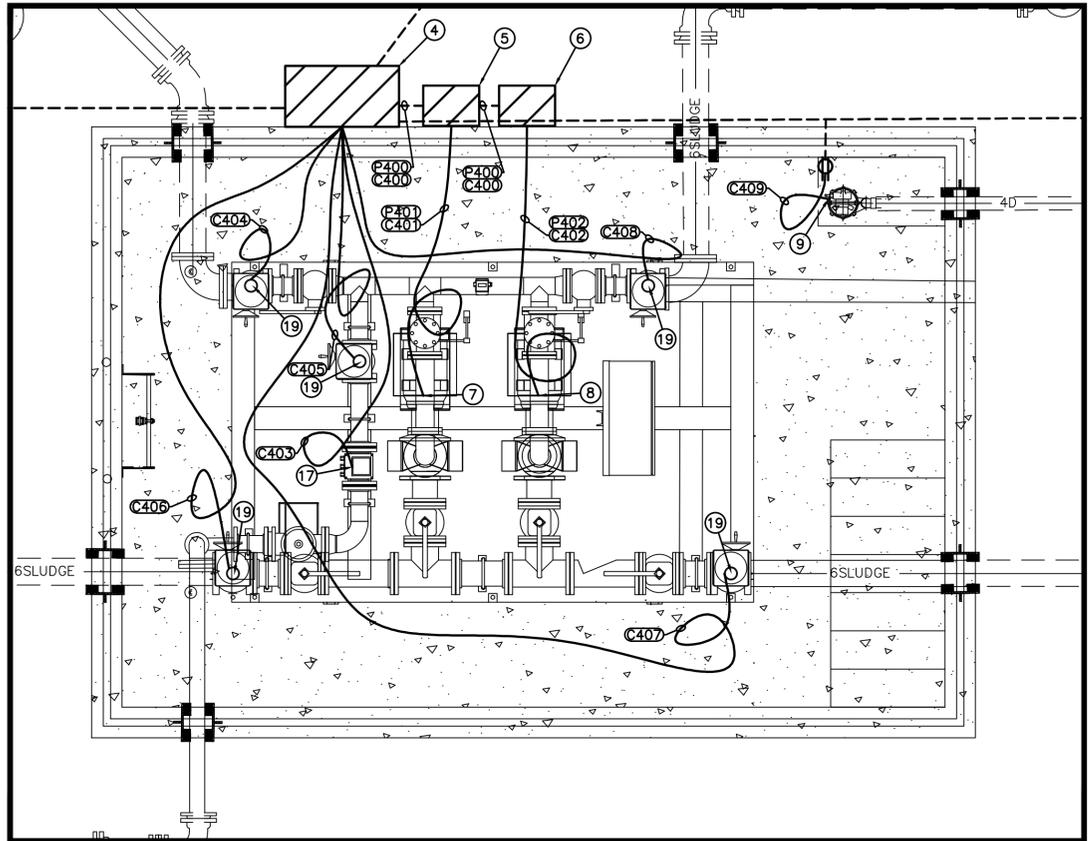
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VALENTINE
Environmental Engineers, LLC
200 Clock Tower Place Building B, Suite B200
Carmel, CA 93923
Phone: (831) 200 - 9093
Website: <http://www.valentineengineers.com>

W. WILLIAMS
REGISTERED PROFESSIONAL ENGINEER
PROJECT NO. 14660R
DATE: 9/30/22
CALIFORNIA
ELECTRICAL
CONSTRUCTION
STATE OF CALIFORNIA
CA LICENSED PROFESSIONAL ENGINEER
NO. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923
CALIFORNIA AMERICAN WATER
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
PROPOSED OVERALL SITE PLAN
9210 CARMEL VALLEY ROAD CARMEL CA, 93923
CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
PRELIMINARY
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
USE DIMENSIONS ONLY SCALE 1" = 20'-0"
XXXXXX-XXXX-E3.2



PROPOSED LEGEND

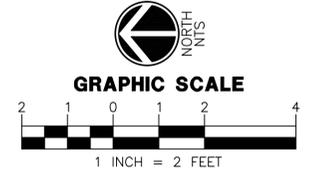
- ▨ NEW CONTROL PANEL, SEE CONSTRUCTION NOTES FOR VOLTAGE AND AMPS.
- NEW PULL BOX
- ⊕ NEW 120V GFCI RECEPTACLE
- - - EX. UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- - - NEW UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- - - NEW ABOVE-GROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- A-1 CIRCUIT NUMBER
- ①② WIRE & CONDUIT TAG, SEE WIRE & CONDUIT TABLE
- NEW DISCONNECT, SEE CONSTRUCTION NOTES.
- ⊕ NEW ABOVE GROUND PULL BOX, SEE CONSTRUCTION NOTES.
- ⊕ NEW JUNCTION BOX.

PROPOSED NOTES

- ① EX. 400 AMP, 277/480V, 3Ø, 4W, MOTOR CONTROL CENTER 2, SEE SINGLE LINE ON SE2.1.
- ② NEW SLUDGE TANK CONTROL PANEL, SEE SINGLE LINE ON SE2.1.
- ③ NEW 3.5HP SLUDGE PUMP, SEE SINGLE LINE ON SE2.1.
- ④ NEW SFAT CONTROL PANEL & PLC, SEE SINGLE LINE ON SE2.1. SEE SHEET E4.9 FOR INSTALLATION DETAILS.
- ⑤ NEW SFAT PUMP #1 MOTOR CONTROL PANEL/STARTER, SEE SINGLE LINE ON SE2.1.
- ⑥ NEW SFAT PUMP #2 MOTOR CONTROL PANEL/STARTER, SEE SINGLE LINE ON SE2.1.
- ⑦ NEW 15HP SFAT PUMP #1, SEE SINGLE LINE ON SE2.1.
- ⑧ NEW 15HP SFAT PUMP #2, SEE SINGLE LINE ON SE2.1.
- ⑨ NEW 0.6HP SFAT VAULT SUMP PUMP, SEE SINGLE LINE ON SE2.1.
- ⑩ NEW SFAT PRESSURE INDICATING TRANSMITTER, SEE SINGLE LINE ON SE2.1.
- ⑪ NEW DECANT PUMP STATION CONTROL PANEL, SEE SINGLE LINE ON SE2.1.
- ⑫ NEW 100HP DECANT PUMP #5, SEE SINGLE LINE ON SE2.1.
- ⑬ NEW 100HP DECANT PUMP #6, SEE SINGLE LINE ON SE2.1.
- ⑭ NEW DECANT PUMP STATION LOW SUCTION PRESSURE SWITCH, SEE SINGLE LINE ON SE2.1.
- ⑮ NEW DECANT PUMP STATION HIGH DISCHARGE PRESSURE SWITCH PRESSURE SWITCH, SEE SINGLE LINE ON SE2.1.
- ⑯ NEW DECANT PUMP STATION NOISE ENCLOSURE EXHAUST FAN, SEE SINGLE LINE ON SE2.1.
- ⑰ NEW FLOW METER, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
- ⑱ NEW LEVEL INDICATING TRANSMITTER, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
- ⑲ NEW MOTORIZED VALVE, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
- ⑳ CONTRACTOR MAY INTERCEPT AND REUSE EXISTING CONDUIT AS IT ENTERS THE MCC. INSTALL NEW PULL BOXES (SEPARATE CONTROL AND POWER PULL BOXES) FOR TRANSITION FROM EXISTING CONDUIT TO NEW CONDUIT. ALL NEW EQUIPMENT SHALL HAVE NEW CONDUIT AND NEW WIRE.
- ㉑ NEW PULL BOX.
- ㉒ CONTRACTOR TO FIELD LOCATE, DIG DOWN AND INTERCEPT EXISTING CONDUIT.
- ㉓ EX. UNDERGROUND CONCRETE PULL BOX, SHOWN FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM EXACT LOCATION.
- ㉔ NEW TURBIDITY ANALYZER. MAKE ALL ELECTRICAL CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM.

PROPOSED SFAT SKID AND VAULT

1"=2'-0"



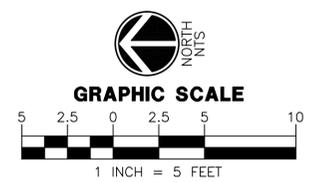
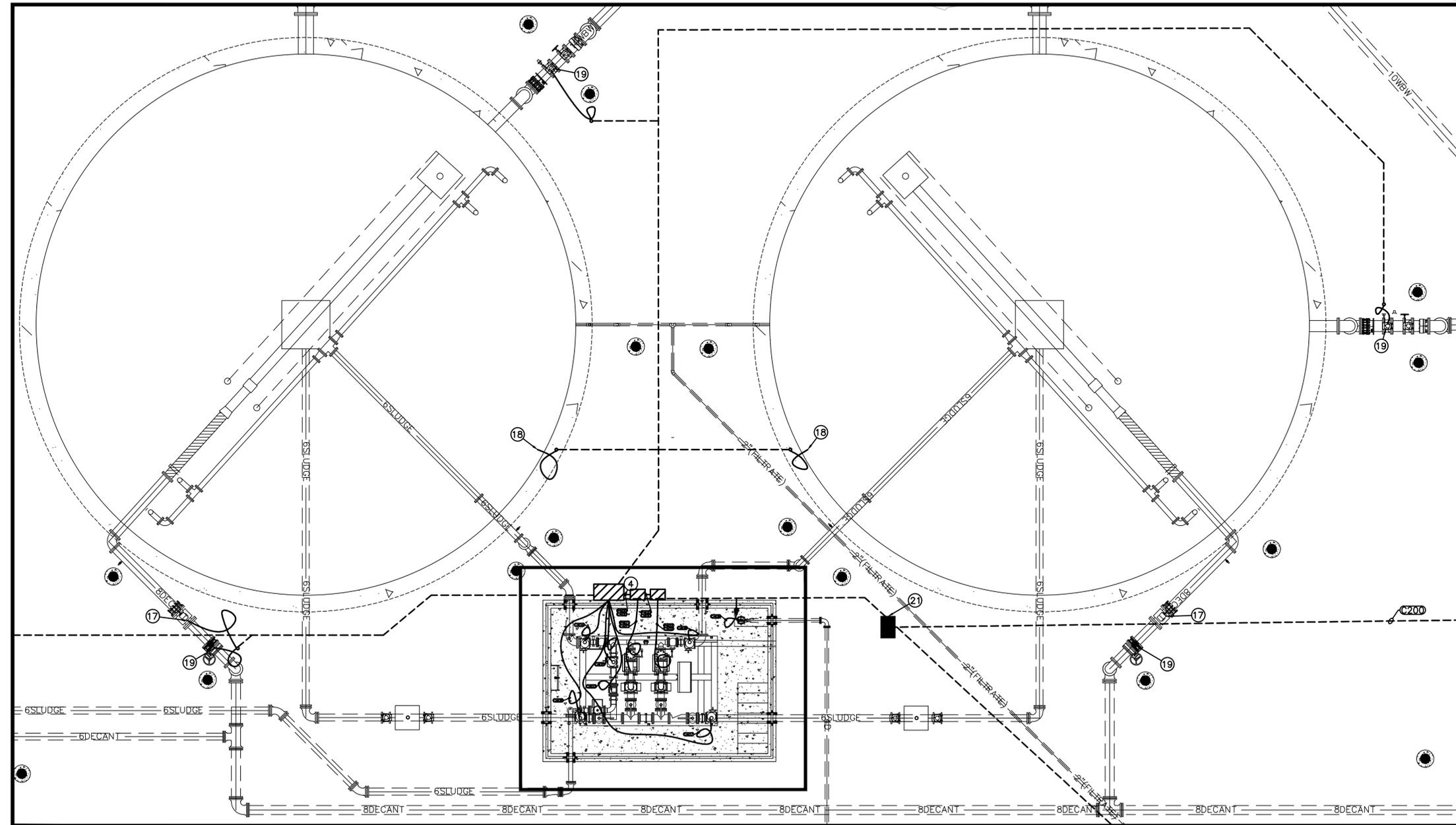
	REVISIONS	REVISIONS	 200 Clock Tower Place Building B, Suite B200 Carmel, CA 93923 Phone: (831) 200 - 9093 Website: http://www.valentineengineers.com		VALENTINE ENVIRONMENTAL ENGINEERS, LLC 200 CLOCK TOWER PLACE BUILDING B SUITE B200, CARMEL, CA 93923 	BIRP BACKWASH SYSTEM DESIGN ELECTRICAL SFAT PUMP SKID AND VAULT ENLARGED PLAN 9210 CARMEL VALLEY ROAD CARMEL CA, 93923		
	△ △ △ △ △	△ △ △ △ △			DRAWN BY C. KASTER PROJECT ENG'R J. BIELEFELDT DATE OCTOBER 2025 PROJECT XXXXXX-XXXX	CALIFORNIA AMERICAN WATER CO. USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	COASTAL DIVISION PRELIMINARY	USE DIMENSIONS ONLY SCALE 1" = 2'-0" XXXXXX-XXXX-E3.3

PROPOSED LEGEND

- NEW CONTROL PANEL, SEE CONSTRUCTION NOTES FOR VOLTAGE AND AMPS.
- NEW PULL BOX
- ⊕ NEW 120V GFCI RECEPTACLE
- - - EX. UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- - - NEW UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- - - NEW ABOVE-GROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- A-1 CIRCUIT NUMBER
- ① WIRE & CONDUIT TAG, SEE WIRE & CONDUIT TABLE
- NEW DISCONNECT, SEE CONSTRUCTION NOTES.
- ⊕ NEW ABOVE GROUND PULL BOX, SEE CONSTRUCTION NOTES.
- Ⓞ NEW JUNCTION BOX.

PROPOSED NOTES

- ① EX. 400 AMP, 277/480V, 3Ø, 4W, MOTOR CONTROL CENTER 2, SEE SINGLE LINE ON SE2.1.
- ② NEW SLUDGE TANK CONTROL PANEL, SEE SINGLE LINE ON SE2.1.
- ③ NEW 3.5HP SLUDGE PUMP, SEE SINGLE LINE ON SE2.1.
- ④ NEW SFAT CONTROL PANEL & PLC, SEE SINGLE LINE ON SE2.1. SEE SHEET E4.9 FOR INSTALLATION DETAILS.
- ⑤ NEW SFAT PUMP #1 MOTOR CONTROL PANEL/STARTER, SEE SINGLE LINE ON SE2.1.
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- ⑦ NEW 15HP SFAT PUMP #1, SEE SINGLE LINE ON SE2.1.
- ⑧ NEW 15HP SFAT PUMP #2, SEE SINGLE LINE ON SE2.1.
- ⑨ NEW 0.6HP SFAT VAULT SUMP PUMP, SEE SINGLE LINE ON SE2.1.
- ⑩ NEW SFAT PRESSURE INDICATING TRANSMITTER, SEE SINGLE LINE ON SE2.1.
- ⑪ NEW DECANT PUMP STATION CONTROL PANEL, SEE SINGLE LINE ON SE2.1.
- ⑫ NEW 100HP DECANT PUMP #5, SEE SINGLE LINE ON SE2.1.
- ⑬ NEW 100HP DECANT PUMP #6, SEE SINGLE LINE ON SE2.1.
- ⑭ NEW DECANT PUMP STATION LOW SUCTION PRESSURE SWITCH, SEE SINGLE LINE ON SE2.1.
- ⑮ NEW DECANT PUMP STATION HIGH DISCHARGE PRESSURE SWITCH PRESSURE SWITCH, SEE SINGLE LINE ON SE2.1.
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- ⑰ NEW FLOW METER, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
- ⑱ NEW LEVEL INDICATING TRANSMITTER, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
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Project Number: 25059

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PROPOSED BACKWASH WASTE TANKS

1"=5'-0"

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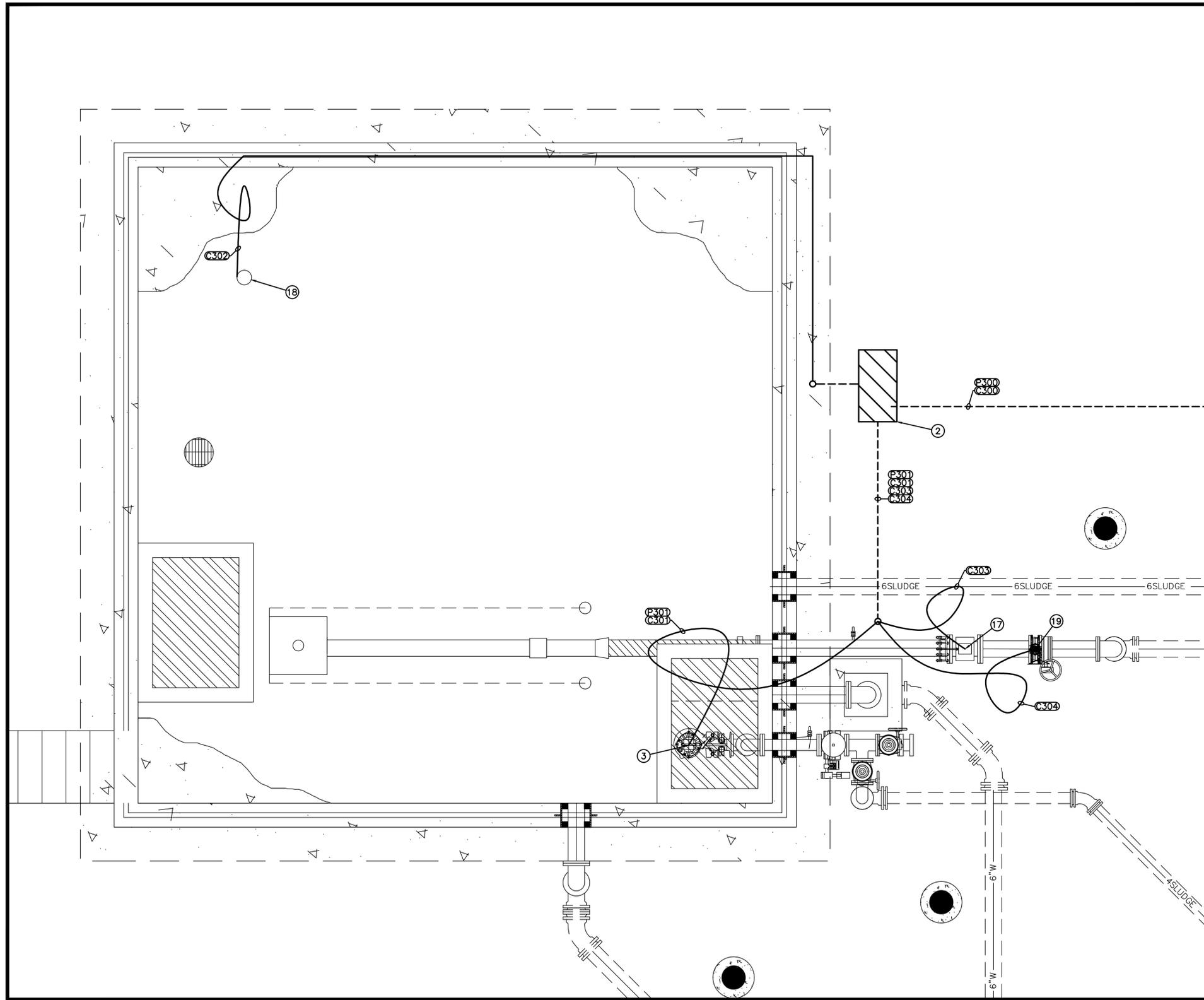
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REGISTERED PROFESSIONAL ENGINEER
PROJECT T. WILLIAMS
PRELIMINARY
DATE: 10/2025
CA LICENSED PROFESSIONAL ENGINEER
NO. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
BACKWASH WASTE TANKS ENLARGED PLAN
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1" = 5'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E3.4

CALIFORNIA AMERICAN WATER

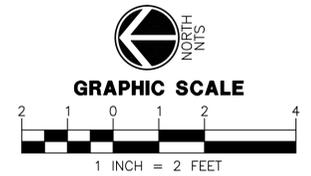


PROPOSED NOTES

- ① EX. 400 AMP, 277/480V, 3Ø, 4W, MOTOR CONTROL CENTER 2, SEE SINGLE LINE ON SE2.1.
- ② NEW SLUDGE TANK CONTROL PANEL, SEE SINGLE LINE ON SE2.1.
- ③ NEW 3.5HP SLUDGE PUMP, SEE SINGLE LINE ON SE2.1.
- ④ NEW SFAT CONTROL PANEL & PLC, SEE SINGLE LINE ON SE2.1. SEE SHEET E4.9 FOR INSTALLATION DETAILS.
- ⑤ NEW SFAT PUMP #1 MOTOR CONTROL PANEL/STARTER, SEE SINGLE LINE ON SE2.1.
- ⑥ NEW SFAT PUMP #2 MOTOR CONTROL PANEL/STARTER, SEE SINGLE LINE ON SE2.1.
- ⑦ NEW 15HP SFAT PUMP #1, SEE SINGLE LINE ON SE2.1.
- ⑧ NEW 15HP SFAT PUMP #2, SEE SINGLE LINE ON SE2.1.
- ⑨ NEW 0.6HP SFAT VAULT SUMP PUMP, SEE SINGLE LINE ON SE2.1.
- ⑩ NEW SFAT PRESSURE INDICATING TRANSMITTER, SEE SINGLE LINE ON SE2.1.
- ⑪ NEW DECANT PUMP STATION CONTROL PANEL, SEE SINGLE LINE ON SE2.1.
- ⑫ NEW 100HP DECANT PUMP #5, SEE SINGLE LINE ON SE2.1.
- ⑬ NEW 100HP DECANT PUMP #6, SEE SINGLE LINE ON SE2.1.
- ⑭ NEW DECANT PUMP STATION LOW SUCTION PRESSURE SWITCH, SEE SINGLE LINE ON SE2.1.
- ⑮ NEW DECANT PUMP STATION HIGH DISCHARGE PRESSURE SWITCH PRESSURE SWITCH, SEE SINGLE LINE ON SE2.1.
- ⑯ NEW DECANT PUMP STATION NOISE ENCLOSURE EXHAUST FAN, SEE SINGLE LINE ON SE2.1.
- ⑰ NEW FLOW METER, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
- ⑱ NEW LEVEL INDICATING TRANSMITTER, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
- ⑲ NEW MOTORIZED VALVE, SEE SINGLE LINE ON SE2.1. SEE DETAIL 1 ON E4.6.
- ⑳ CONTRACTOR MAY INTERCEPT AND REUSE EXISTING CONDUIT AS IT ENTERS THE MCC. INSTALL NEW PULL BOXES (SEPARATE CONTROL AND POWER PULL BOXES) FOR TRANSITION FROM EXISTING CONDUIT TO NEW CONDUIT. ALL NEW EQUIPMENT SHALL HAVE NEW CONDUIT AND NEW WIRE.
- ㉑ NEW PULL BOX.
- ㉒ CONTRACTOR TO FIELD LOCATE, DIG DOWN AND INTERCEPT EXISTING CONDUIT.
- ㉓ EX. UNDERGROUND CONCRETE PULL BOX, SHOWN FOR REFERENCE ONLY. CONTRACTOR TO CONFIRM EXACT LOCATION.
- ㉔ NEW TURBIDITY ANALYZER. MAKE ALL ELECTRICAL CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM.

PROPOSED LEGEND

- ▨ NEW CONTROL PANEL, SEE CONSTRUCTION NOTES FOR VOLTAGE AND AMPS.
- NEW PULL BOX
- ⊕ NEW 120V GFCI RECEPTACLE
- - - EX. UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- - - NEW UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- - - NEW ABOVE-GROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- A-1 CIRCUIT NUMBER
- Ⓢ WIRE & CONDUIT TAG, SEE WIRE & CONDUIT TABLE
- Ⓢ NEW DISCONNECT, SEE CONSTRUCTION NOTES.
- Ⓢ NEW ABOVE GROUND PULL BOX, SEE CONSTRUCTION NOTES.
- Ⓢ NEW JUNCTION BOX.



PROPOSED SLUDGE HOLDING TANK

1"=2'-0"



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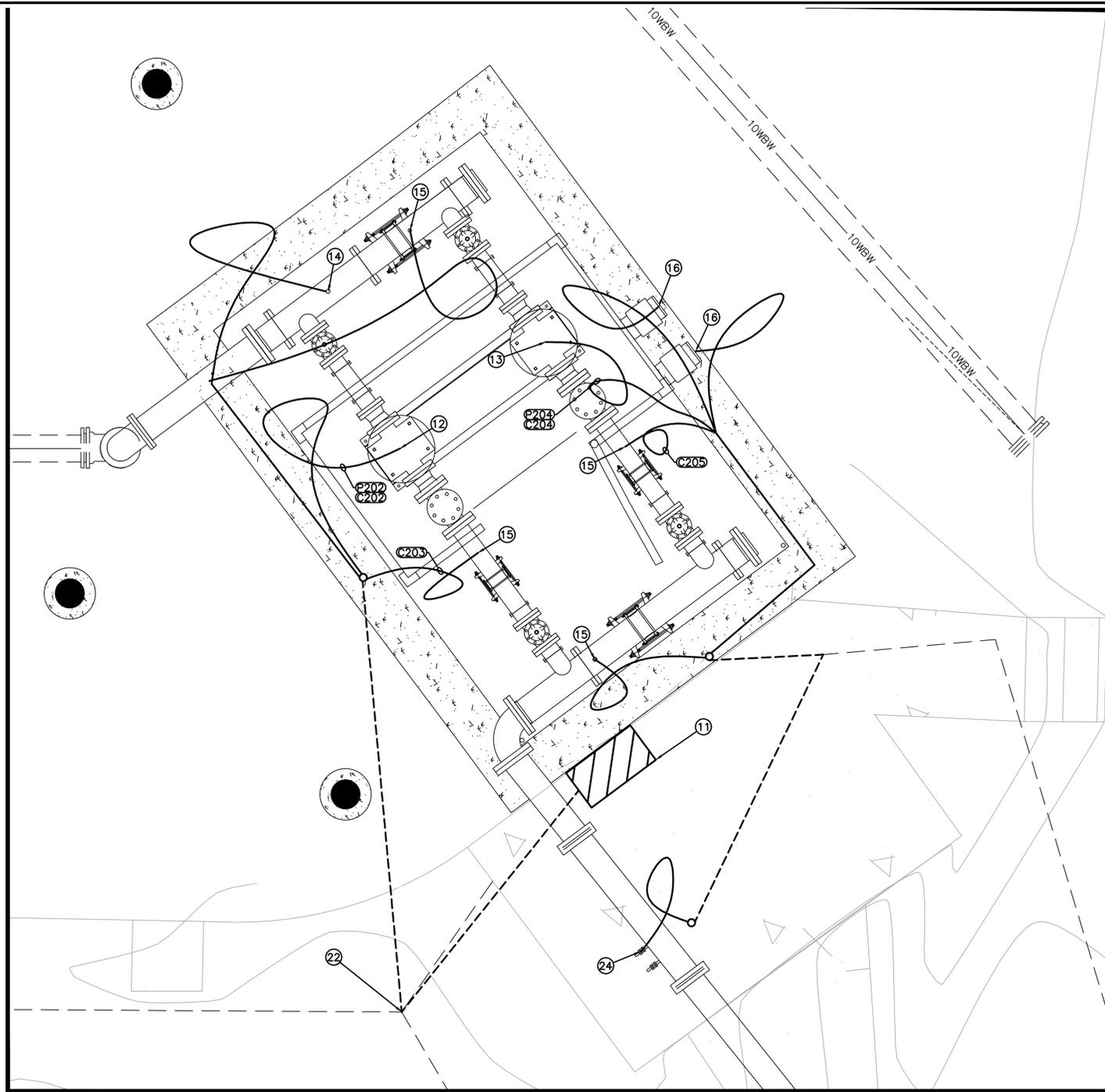
VALENTINE
Environmental Engineers, LLC
200 Clock Tower Place Building B, Suite B200
Carmel, CA 93923
Phone: (831) 200 - 9093
Website: <http://www.valentineengineers.com>

W. WILLIAMS
CALIFORNIA PROFESSIONAL ENGINEER
NO. C 35943 DATE: -/-/-

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SUITE B200, CARMEL, CA 93923
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
SLUDGE HOLDING TANK ENLARGED PLAN
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1" = 2'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E3.5



PROPOSED DECANT PUMP STATION

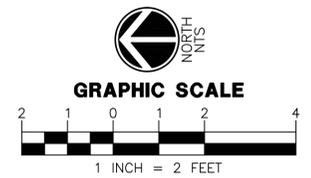
1"=2'-0"

PROPOSED NOTES

- ① EX. 400 AMP, 277/480V, 3Ø, 4W, MOTOR CONTROL CENTER 2, SEE SINGLE LINE ON SE2.1.
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- ㉔ NEW TURBIDITY ANALYZER. MAKE ALL ELECTRICAL CONNECTIONS FOR A COMPLETE AND OPERATIONAL SYSTEM.

PROPOSED LEGEND

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- NEW PULL BOX
- ⊕ NEW 120V GFCI RECEPTACLE
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- - - NEW UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- - - NEW ABOVE-GROUND CONDUIT SHOWN FOR REFERENCE ONLY, CONFIRM EXACT LOCATION.
- A-1 CIRCUIT NUMBER
- Ⓜ WIRE & CONDUIT TAG, SEE WIRE & CONDUIT TABLE
- NEW DISCONNECT, SEE CONSTRUCTION NOTES.
- Ⓜ NEW ABOVE GROUND PULL BOX, SEE CONSTRUCTION NOTES.
- ⊕ NEW JUNCTION BOX.



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SUITE B200, CARMEL, CA 93923

CALIFORNIA AMERICAN WATER

DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT

DATE: OCTOBER 2025

PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
DECANT PUMP STATION ENLARGED PLAN
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE 1" = 2'-0"
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E3.6



1 MCC-1 ELECTRICAL ELEVATION VIEW

NO SCALE



2 MCC-2 ELECTRICAL ELEVATION VIEW

NO SCALE



3 POND 1 & 2 SLUDGE DISCONNECT

NO SCALE



EXISTING STARTER FOR 100HP DECANT/RECLAIM PUMP. REUSE FOR NEW DECANT PUMP.

4 POND 3 DECANT PUMP STARTER (TYP.)

NO SCALE

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ELECTRICAL ENGINEERING & LIGHTING DESIGN
165 E CHILTON DR, CHANDLER, AZ 85225
P: 480.497.5829 | wrightengineering.us

Project Number: 25059

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DATE: OCTOBER 2025

PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
ELECTRICAL DEMOLITION DETAILS I
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E4.1



1 POND 1 DECANT PUMP DISCONNECTS & FLOW METERS
NO SCALE



2 POND 2 DECANT/RECLAIM PUMP DISCONNECTS
NO SCALE



3 POND 2 SLUDGE TRANSFER PUMPS CONTROL PANEL
NO SCALE



4 POND 2 SLUDGE TRANSFER PUMPS FLOW METER
NO SCALE



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CALIFORNIA AMERICAN WATER

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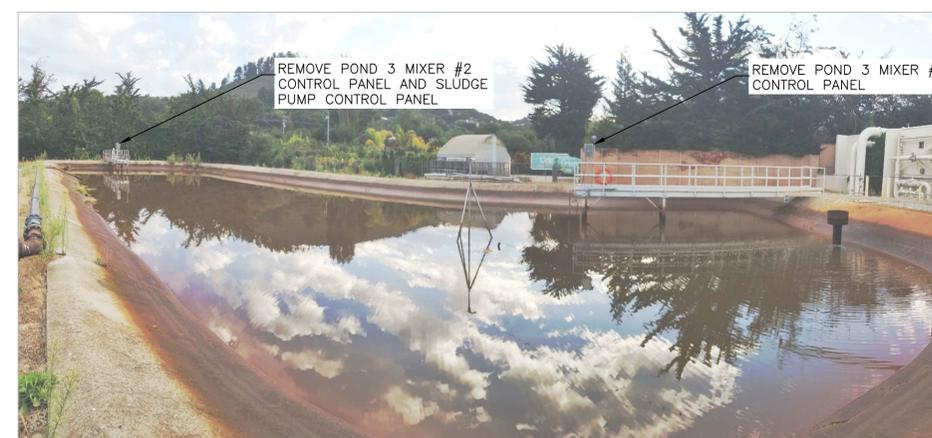
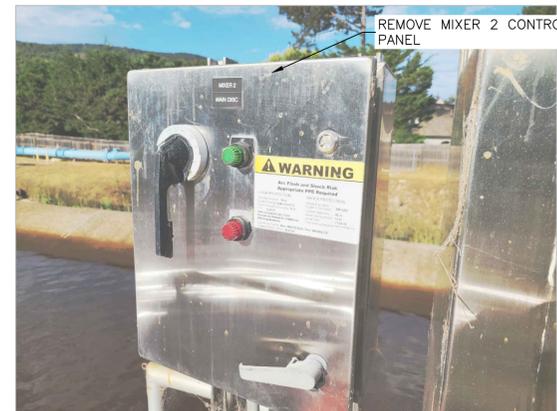
BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
ELECTRICAL DEMOLITION DETAILS II
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E4.2



1 POND 3 CONTROL STATION OVERVIEW
NO SCALE

2 POND 3 CONTROL STATION OPENED
NO SCALE



3 POND 3 MIXER #2
NO SCALE

4 POND 3 SLUDGE PUMP CONTROL PANEL OPEN
NO SCALE

5 POND 3 SLUDGE PUMP CONTROL PANEL OPEN
NO SCALE

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engineering corporation
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P: 480.497.5829 | wrightengineering.us
Project Number: 25059

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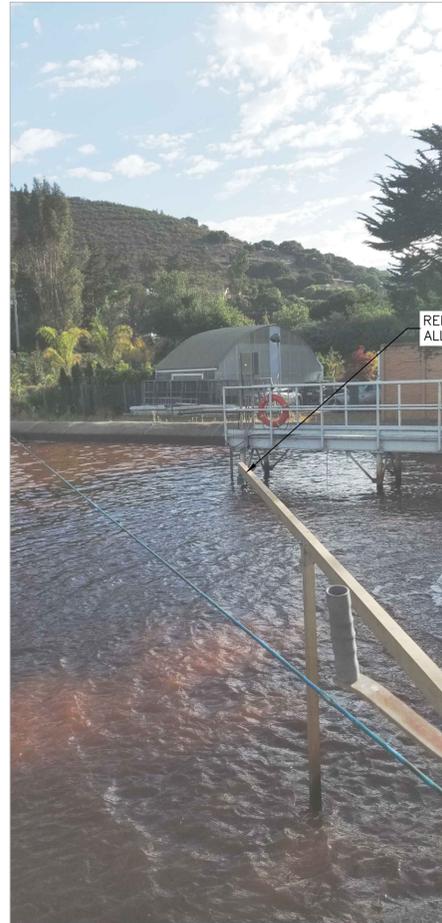
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DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
ELECTRICAL DEMOLITION DETAILS III
9210 CARMEL VALLEY ROAD CARMEL CA, 93923
CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
PRELIMINARY
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
USE DIMENSIONS ONLY SCALE: NONE
XXXXXX-XXXX-E4.3



REMOVE AND DISPOSE OF ALL ELECTRICAL EQUIPMENT

REMOVE AND DISPOSE OF ALL ELECTRICAL EQUIPMENT



REMOVE AND DISPOSE OF ALL ELECTRICAL EQUIPMENT



REMOVE HYDRORANGER

1 POND 3 DECANT/RECLAIM WELLS #1 AND #2

NO SCALE

2 POND 3 HYDRORANGER LEVEL INDICATING TRANSMITTER

NO SCALE

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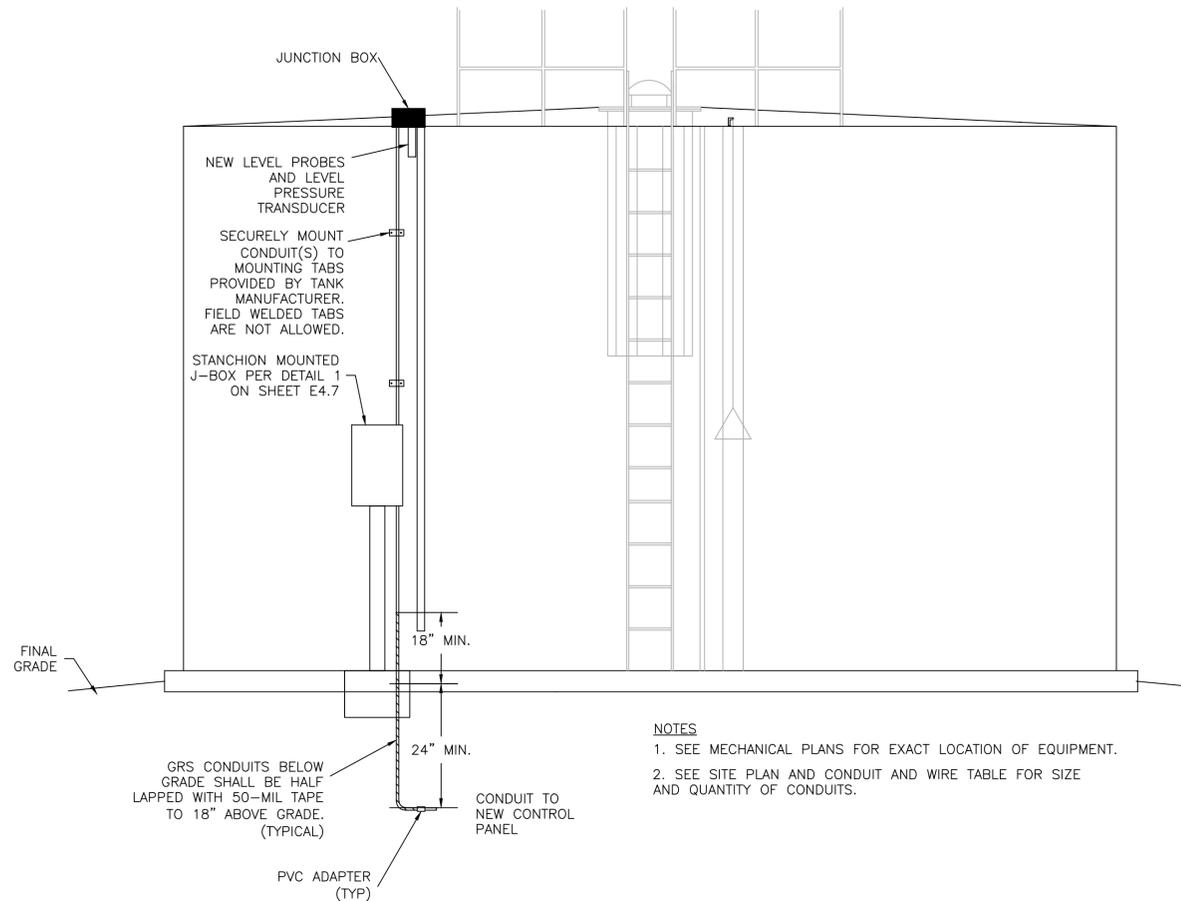
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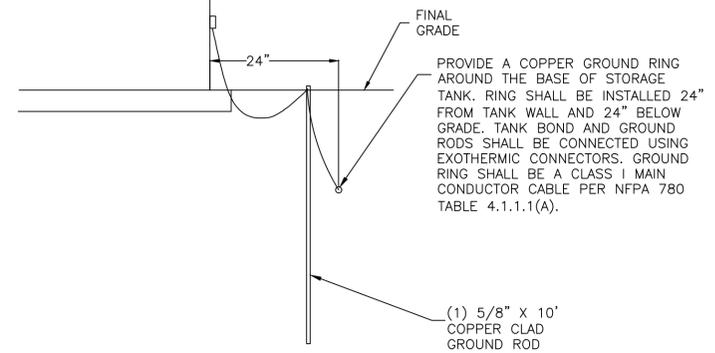
VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923
CALIFORNIA AMERICAN WATER
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
ELECTRICAL DEMOLITION DETAILS IV
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-E4.4



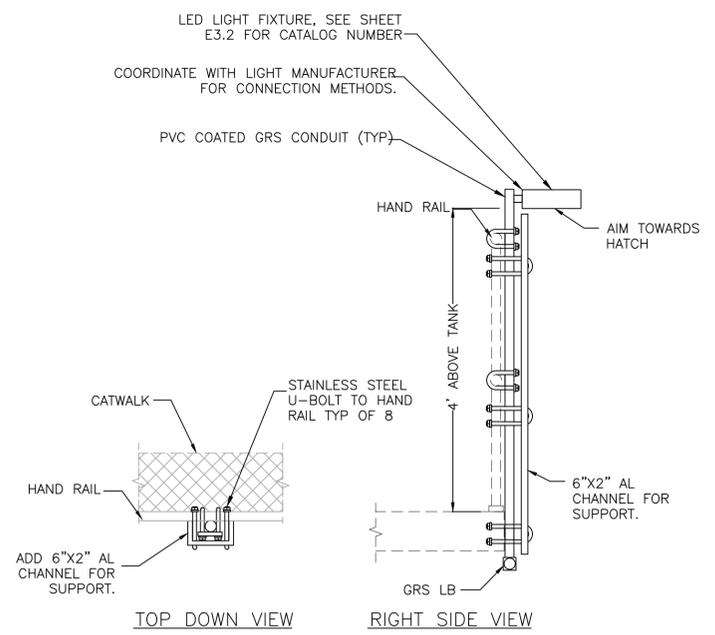
SPECIAL NOTE
 TANK SHALL BE DESIGNED AND INSTALLED PER REQUIREMENTS OF NFPA 780 CHAPTER 4. FOR LIGHTNING PROTECTION.
 TABS SHALL BE PROVIDED BY MANUFACTURER FOR GROUND RING ATTACHMENT.



1 WATER TANK ELEVATION ELECTRICAL DETAIL
 NO SCALE

NOTES
 1. SEE MECHANICAL PLANS FOR EXACT LOCATION OF EQUIPMENT.
 2. SEE SITE PLAN AND CONDUIT AND WIRE TABLE FOR SIZE AND QUANTITY OF CONDUITS.

2 STORAGE TANK GROUND/LIGHTNING PROTECTION DETAIL
 NO SCALE



3 STORAGE TANK LIGHTNING DETAIL
 NO SCALE

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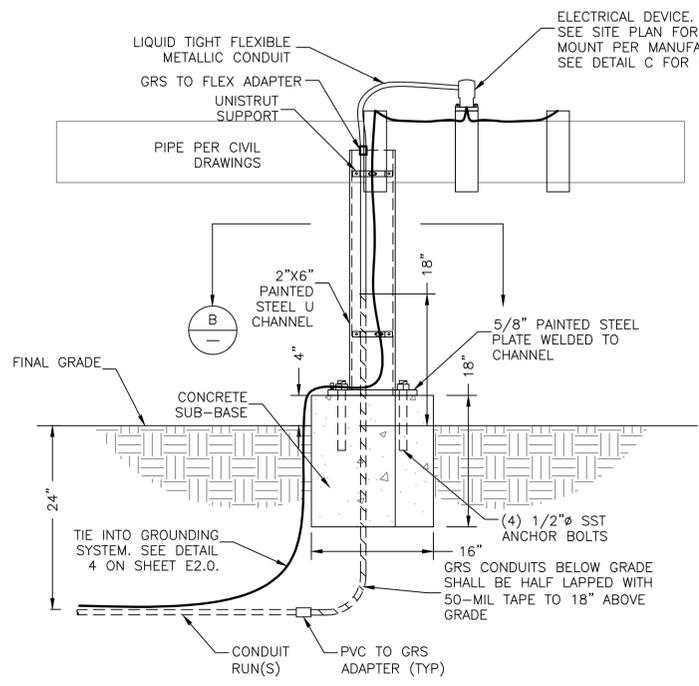
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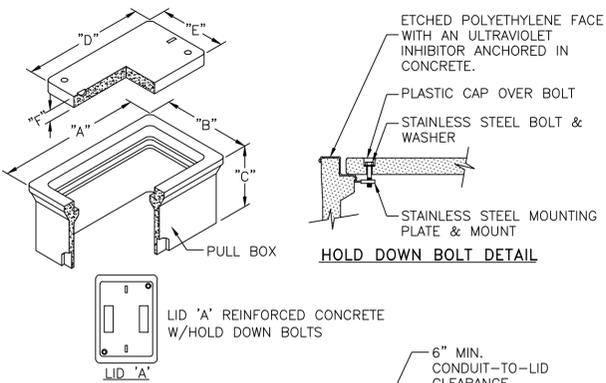
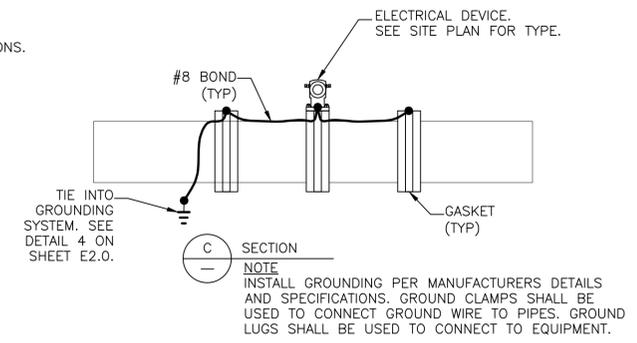
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BIRP BACKWASH SYSTEM DESIGN
 ELECTRICAL
 ELECTRICAL DETAILS I
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923
 CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
 PRELIMINARY
 USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
 USE DIMENSIONS ONLY SCALE: NONE
 XXXXXX-XXXX-E4.5

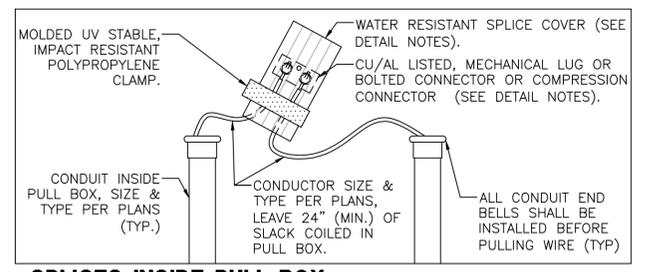
ELECTRICAL DEVICE.
SEE SITE PLAN FOR TYPE.
MOUNT PER MANUFACTURERS SPECIFICATIONS.
SEE DETAIL C FOR GROUNDING.
PROVIDE STAINLESS STEEL OR ALUMINUM SHADE
COVER 12 INCHES ABOVE INSTRUMENT, INCLUDE
SUN FABRIC.



1 ELECTRICAL EQUIPMENT DETAIL
NO SCALE



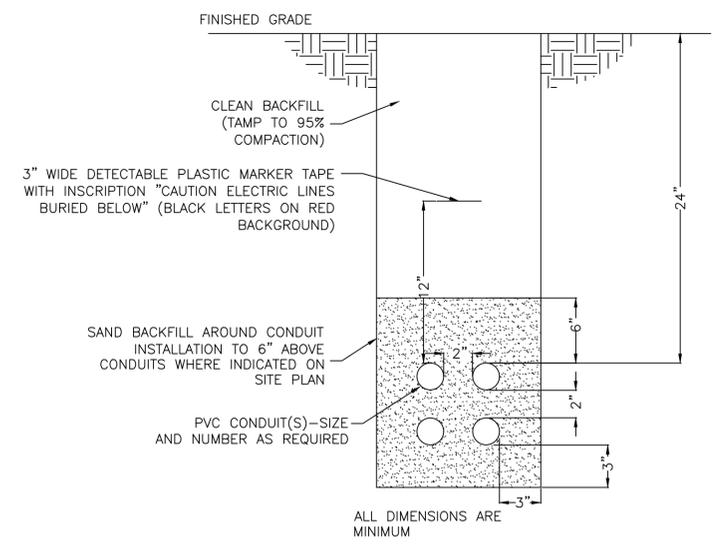
2 PULL BOX INSTALLATION
NO SCALE



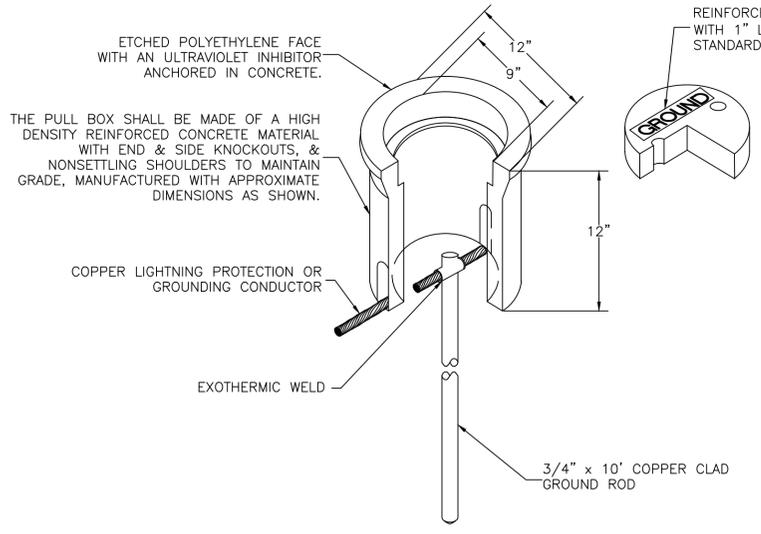
SPLICES INSIDE PULL BOX

- DETAIL NOTES:**
1. THE PULL BOX SHALL BE MADE OF A HIGH DENSITY REINFORCED CONCRETE MATERIAL WITH END & SIDE KNOCKOUTS, & NON-SETTLING SHOULDERS TO MAINTAIN GRADE, MANUFACTURED WITH APPROXIMATE DIMENSIONS AS SHOWN.
 2. STEEL REINFORCEMENT SHALL BE AS REGULARLY USED IN STANDARD PRODUCTS OF THE RESPECTIVE MANUFACTURER.
 3. COVER LETTERING SHALL BE 1" LETTERS CAST IN STANDARD MARKINGS: "ELECTRIC" OR "HIGH VOLTAGE" OR "COMMUNICATIONS". AS REQUIRED.
 4. THE PULL BOX SHALL HAVE AN ETCHED POLYETHYLENE FACE WITH AN ULTRAVIOLET INHIBITOR ANCHORED IN CONCRETE.
 5. ALL CABLE & CONDUCTOR SPLICES MADE USING CU/AL LISTED, MECHANICAL LUG OR BOLTED CONNECTOR OR COMPRESSION CONNECTOR, (TYCO ELECTRONICS, NSI INDUSTRIES, ILS CO OR APPROVED EQUAL), CONNECTION TO BE INSULATED & MADE WATER RESISTANT WITH TYCO ELECTRONICS GELCAP-SL, NSI INDUSTRIES ESSLK-2/0 OR 3M SCOTCHCAST SPLICE KIT 85 SERIES.

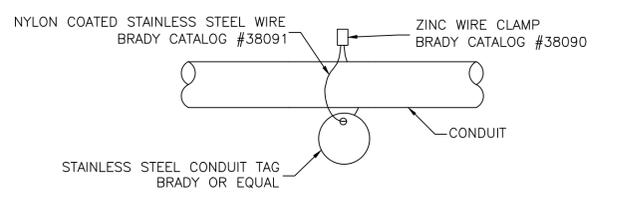
DATA TABLE						
PULLBOX TYPE	PULLBOX LENGTH	PULLBOX WIDTH	PULLBOX HEIGHT	LID LENGTH	LID WIDTH	LID HEIGHT
	"A"	"B"	"C"	"D"	"E"	"F"
#3-1/2	19-3/4"	14-1/4"	12"	15-1/2"	10"	1-3/4"
#5	25-1/8"	15-5/8"	12"	20-3/4"	10-5/8"	2"
#7	35"	22"	12"	30-1/2"	17-1/2"	2"
#9	40-1/2"	28-1/4"	18"	35-1/2"	24"	3"



3 CONDUIT DUCT BANK INSTALLATION DETAIL
NO SCALE TRENCH 2



4 GROUND ROD INSTALLATION DETAIL
NO SCALE



5 CONDUIT MARKING DETAIL
N.T.S.

NOTE:
1) THIS CONDUIT DUCT BANK DETAIL SHALL BE REFERENCED FOR ALL UNDER GROUND CONDUIT INSTALLATIONS.

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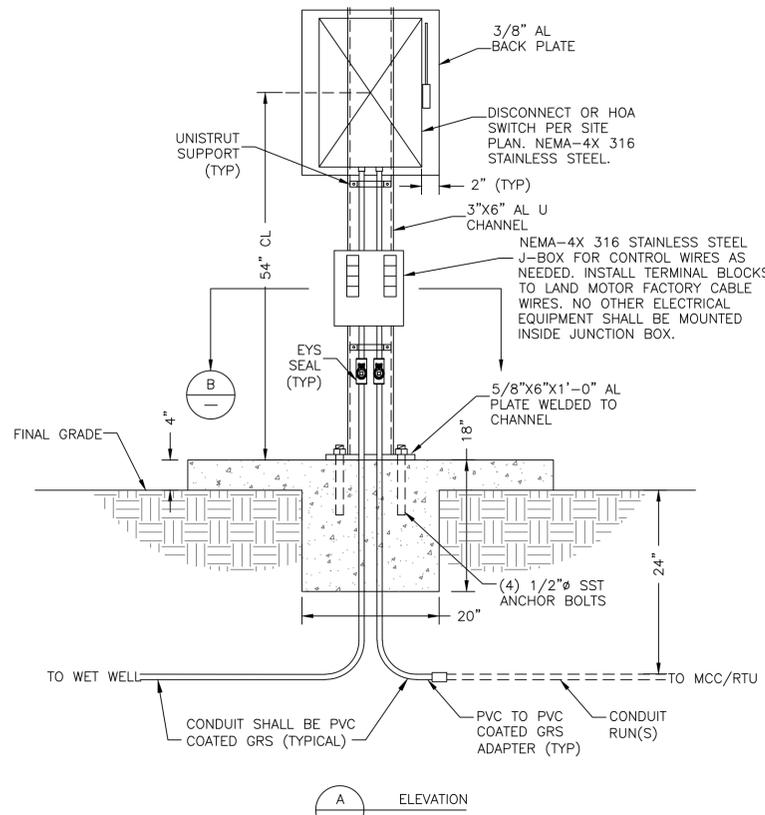
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W. WILLIAMS
REGISTERED PROFESSIONAL ENGINEER
NO. C 35943 DATE: -/-/-
CALIFORNIA PROFESSIONAL ENGINEER
NO. E 14660
DATE: 9/30/27
ELECTRICAL ENGINEERING
STATE OF CALIFORNIA

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923
DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

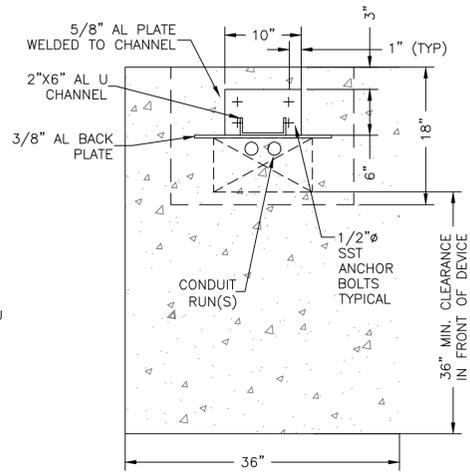
BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
ELECTRICAL DETAILS II
9210 CARMEL VALLEY ROAD CARMEL CA, 93923
CALIFORNIA AMERICAN WATER CO.
COASTAL DIVISION
PRELIMINARY
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
USE DIMENSIONS ONLY SCALE: NONE
XXXXXX-XXXX-E4.6



A ELEVATION

NOTES:

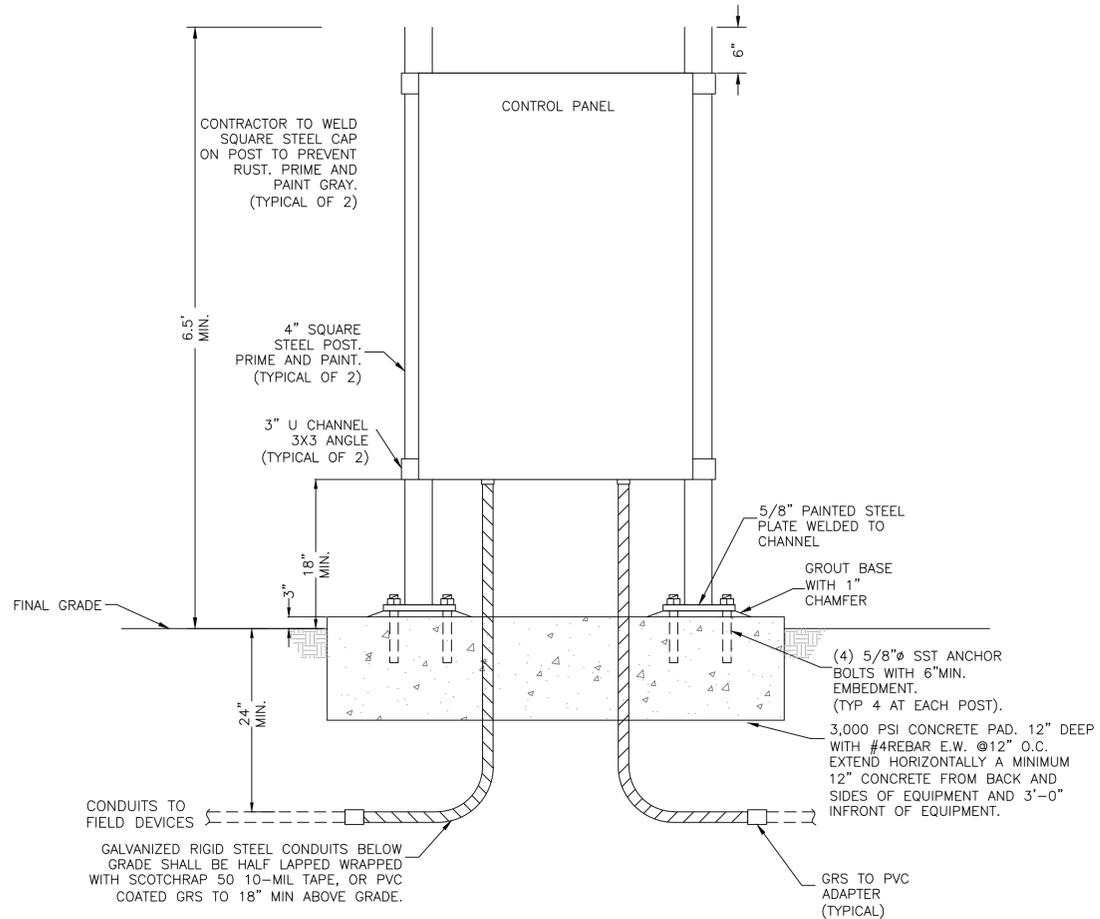
- 1) A 36" MIN. CLEARANCE SHALL BE MAINTAINED IN FRONT OF ALL DISCONNECTS AND/OR TRANSMITTERS.
- 2) ALL EXPOSED CONDUITS SHALL PVC COATED GALVANIZED RIGID STEEL TO BELOW GRADE PAST 90° BEND TO PVC/GRS ADAPTER UNLESS OTHERWISE NOTED ON PLANS.
- 3) ALL DISCONNECTS SHALL BE NEMA-4X STAINLESS STEEL UNLESS OTHERWISE NOTED ON PLANS.



B SECTION

1 DISCONNECT DETAIL

NO SCALE



FINAL GRADE

CONDUITS TO FIELD DEVICES
GALVANIZED RIGID STEEL CONDUITS BELOW GRADE SHALL BE HALF LAPPED WRAPPED WITH SCOTCHRAP 50 10-MIL TAPE, OR PVC COATED GRS TO 18" MIN ABOVE GRADE.

(4) 5/8" SST ANCHOR BOLTS WITH 6" MIN. EMBEDMENT. (TYP 4 AT EACH POST).

3,000 PSI CONCRETE PAD. 12" DEEP WITH #4REBAR E.W. @12" O.C. EXTEND HORIZONTALLY A MINIMUM 12" CONCRETE FROM BACK AND SIDES OF EQUIPMENT AND 3'-0" IN FRONT OF EQUIPMENT.

GRS TO PVC ADAPTER (TYPICAL)

2 CONTROL PANEL ELEVATION DETAIL

NO SCALE



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DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT

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PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
ELECTRICAL DETAILS III
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.

COASTAL DIVISION

USE DIMENSIONS ONLY
SCALE: NONE

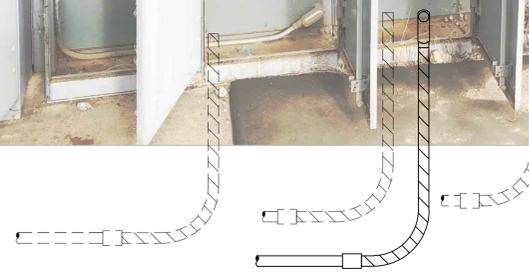
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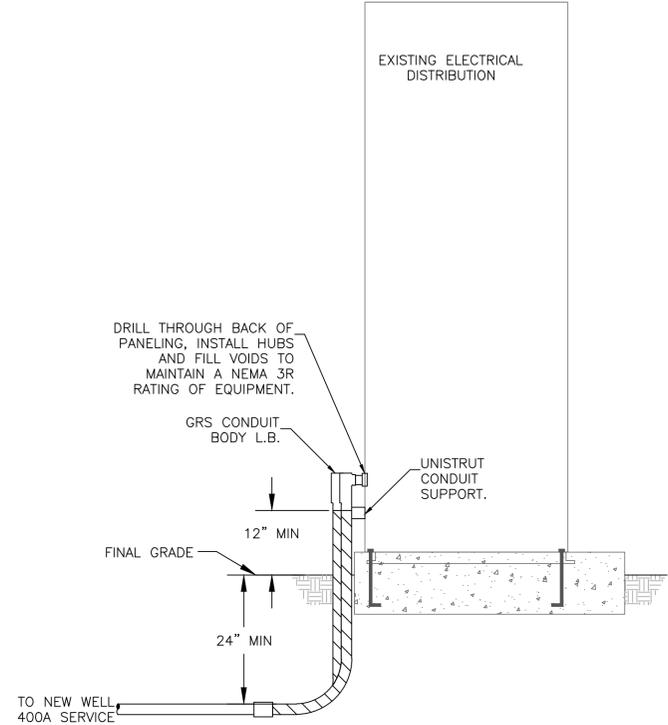
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E4.7.DWG





1 MCC-2 PROPOSED ELECTRICAL ELEVATION VIEW
NO SCALE



2 MCC-2 PROPOSED CONDUIT INSTALLATION DETAIL
NO SCALE



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PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
ELECTRICAL DETAILS IV
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1 MAIN PLC
NO SCALE



2 GALLERY
NO SCALE



3 GALLERY BUILDING EXTERIOR
NO SCALE

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PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
ELECTRICAL
ELECTRICAL DETAILS V
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
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MONTEREY DISTRICT BEGONIA IRON REMOVAL PLANT BACKWASH WASTE DESIGN PROCESS AND INSTRUMENTATION DIAGRAM

P&ID LEGEND

INSTRUMENT INDICATION

INSTRUMENT TYPE

 FIRST LETTER(S)
 SUCCEEDING LETTERS

INSTRUMENT LOCATION CODE

 FIELD MOUNTED INSTRUMENT
 REAR-OF-PANEL MOUNTED INSTRUMENT
 PANEL MOUNTED INSTRUMENT

SPECIAL CASES

 ILLUMINATED HAND SWITCH
 FUNCTION SYMBOL ON AND OFF EVENT LIGHTS
 OPEN AND CLOSE POSITION SWITCHES
 STOP-START HAND SWITCH. MOMENTARY CONTACT SWITCHES (CONTROLLED DEVICE WILL NOT RESTART ON RETURN OF POWER AFTER POWER FAILURE).
 OFF-ON HAND SWITCH. MAINTAIN CONTACT SWITCHES (CONTROLLED DEVICE WILL RESTART ON RETURN OF POWER AFTER POWER FAILURE).

H = HAND
H-H = HIGH-HIGH
HOA = HAND-OFF-AUTO
HOAR = HAND-OFF-AUTO-REMOTE
HOR = HAND-OFF-REMOTE
L = LOW
L-L = LOW-LOW
LOS = LOCK-OFF-STOP
MC = MOTORIZED VALVE CONTROL
OL = OVERLOAD
OO = ON-OFF
RS = RESET
SP = SET POINT
SS = START/STOP
SSR = SET START TIMER
SST = SET STOP TIMER
VFD = VARIABLE FREQUENCY DRIVE
GF = GENERAL FAIL
SC = SPEED CONTROL
ETM = ELAPSE TIME METER
SSS = SOLID STATE STARTER

EQUIPMENT SYMBOLS

	MOTOR (DRIVE)		FLOW METER
	PUMP		CONDUCTIVITY LEVEL PROBE
	METERING PUMP		LEVEL SWITCH
	BLOWER		ULTRASONIC LEVEL SENSOR
	MOTORIZED VALVE(S)		SUBMERSIBLE PRESSURE TRANSDUCER
	SOLENOID OPERATED VALVE		

SIGNAL SYMBOLS

--- ELECTRICAL SIGNAL (SEE DIAGRAM FOR TYPE.)
-.-.- ETHERNET OR RADIO COMMUNICATION (SEE DIAGRAM FOR TYPE.)
△ ANALOG SIGNAL
▲ DISCRETE SIGNAL
^ DIRECTION OF SIGNAL
■ TERMINAL
◇ INTERLOCK KEY OPERATION VIA LOGIC OR HARDWARE

INTERLOCK KEY

I# - EQUIPMENT DESCRIPTION-INSTRUMENT DESCRIPTION-CONTROL DESCRIPTION

LETTER SYMBOLS

LETTER	FIRST LETTER(S)		SUCCEEDING LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (*)		ALARM		
B	BURNER FLAME				
C	CONDUCTIVITY			CONTROL	
D	DENSITY (S.G.)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO			
G	GAUGE		GLASS	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE		CONTROL STATION		
L	LEVEL		LIGHT		LOW
M	MOTION OR MOISTURE				MIDDLE
N	STROKE				NORMAL
O	LOOP VEH. DETECTOR		ORIFICE		
P	PRESSURE (OR VACUUM)		POINT (TEST CONNECTION)		
Q	QUALITY OR EVENT		INTEGRATE		
R	RATION		RECORD OF PRINT	RESET	
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (*)		MULTIFUNCTION (#)		
V	TURBIDITY			VALVE	
W	WEIGHT OR FORCE		WELL		
X	PARTICLE COUNT				
Y	USER DEFINED		LIGHT SOURCE	RELAY OR COMPUTE (*)	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

* WHEN USED EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL.

PROCESS SYMBOLS

PROCESS FLOW
— A — A — AIR FEED LINE
— C — C — CHEMICAL FEED LINE
 SEE SHEET I101 FOR CONTINUATION
 EQUIPMENT IDENTIFICATION

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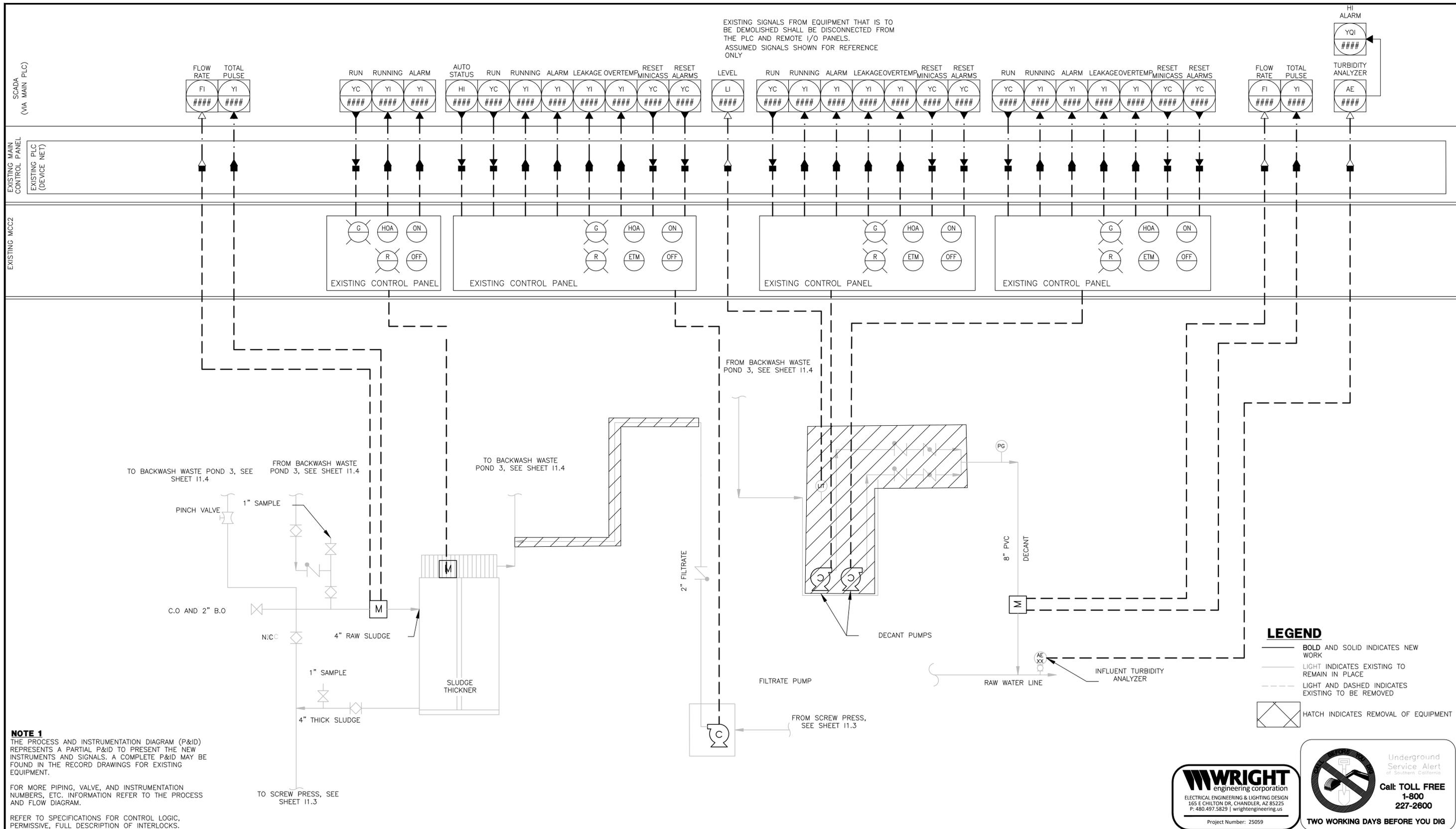
W. WILLIAMS

CA LICENSED PROFESSIONAL ENGINEER
NO. C 35943 DATE: -/-/-

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200 CLOCK TOWER PLACE BUILDING B
SUITE B200, CARMEL, CA 93923

DRAWN BY: C. KASTER
PROJECT ENG'R: J. BIELEFELDT
DATE: OCTOBER 2025
PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
INSTRUMENTATION
P&ID COVER SHEET
9210 CARMEL VALLEY ROAD CARMEL CA, 93923
CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
PRELIMINARY
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
USE DIMENSIONS ONLY SCALE: NONE
XXXXXX-XXXX-I1.1



EXISTING SIGNALS FROM EQUIPMENT THAT IS TO BE DEMOLISHED SHALL BE DISCONNECTED FROM THE PLC AND REMOTE I/O PANELS. ASSUMED SIGNALS SHOWN FOR REFERENCE ONLY

NOTE 1
 THE PROCESS AND INSTRUMENTATION DIAGRAM (P&ID) REPRESENTS A PARTIAL P&ID TO PRESENT THE NEW INSTRUMENTS AND SIGNALS. A COMPLETE P&ID MAY BE FOUND IN THE RECORD DRAWINGS FOR EXISTING EQUIPMENT.
 FOR MORE PIPING, VALVE, AND INSTRUMENTATION NUMBERS, ETC. INFORMATION REFER TO THE PROCESS AND FLOW DIAGRAM.
 REFER TO SPECIFICATIONS FOR CONTROL LOGIC, PERMISSIVE, FULL DESCRIPTION OF INTERLOCKS.

LEGEND
 BOLD AND SOLID INDICATES NEW WORK
 LIGHT INDICATES EXISTING TO REMAIN IN PLACE
 LIGHT AND DASHED INDICATES EXISTING TO BE REMOVED
 HATCH INDICATES REMOVAL OF EQUIPMENT



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 CALIFORNIA AMERICAN WATER
 DRAWN BY: C. KASTER
 PROJECT ENG'R: J. BIELEFELDT
 DATE: OCTOBER 2025
 PROJECT: XXXXXX-XXXX

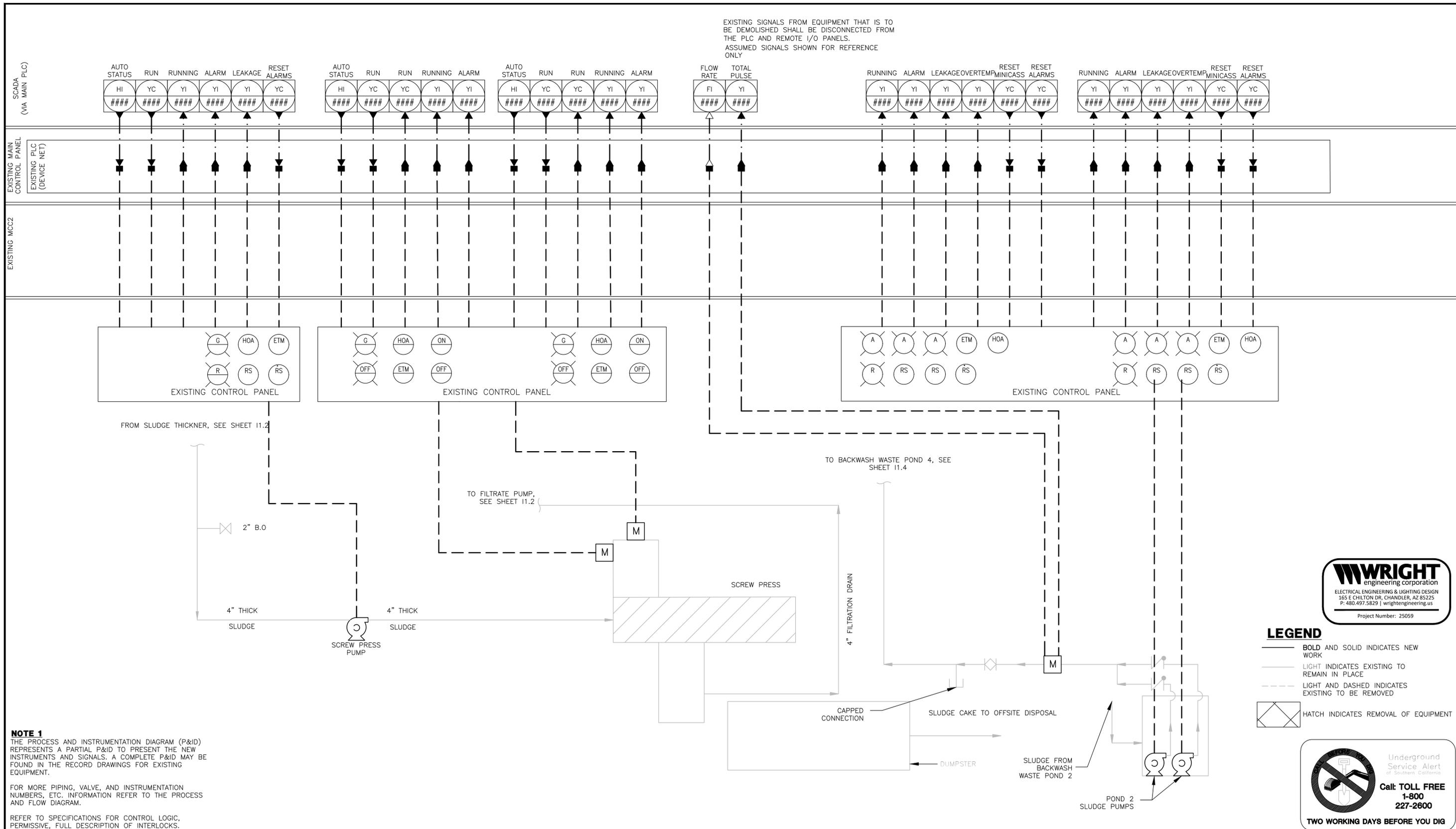
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 EXISTING FLOW PROCESS I
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LEGEND
 BOLD AND SOLID INDICATES NEW WORK
 LIGHT SOLID INDICATES EXISTING TO REMAIN IN PLACE
 LIGHT AND DASHED INDICATES EXISTING TO BE REMOVED
 HATCH INDICATES REMOVAL OF EQUIPMENT



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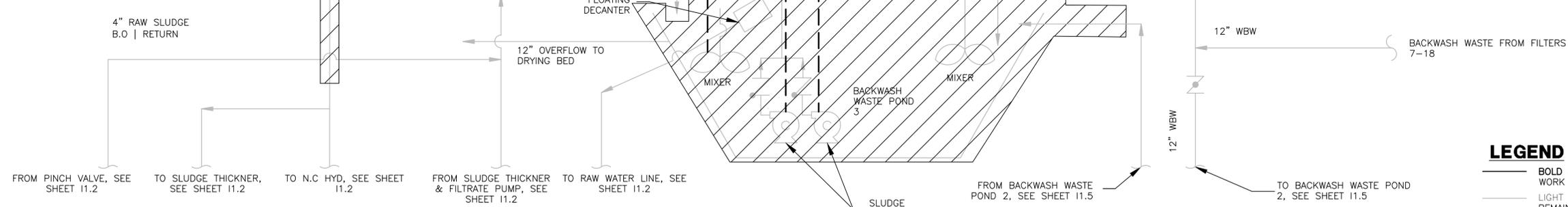
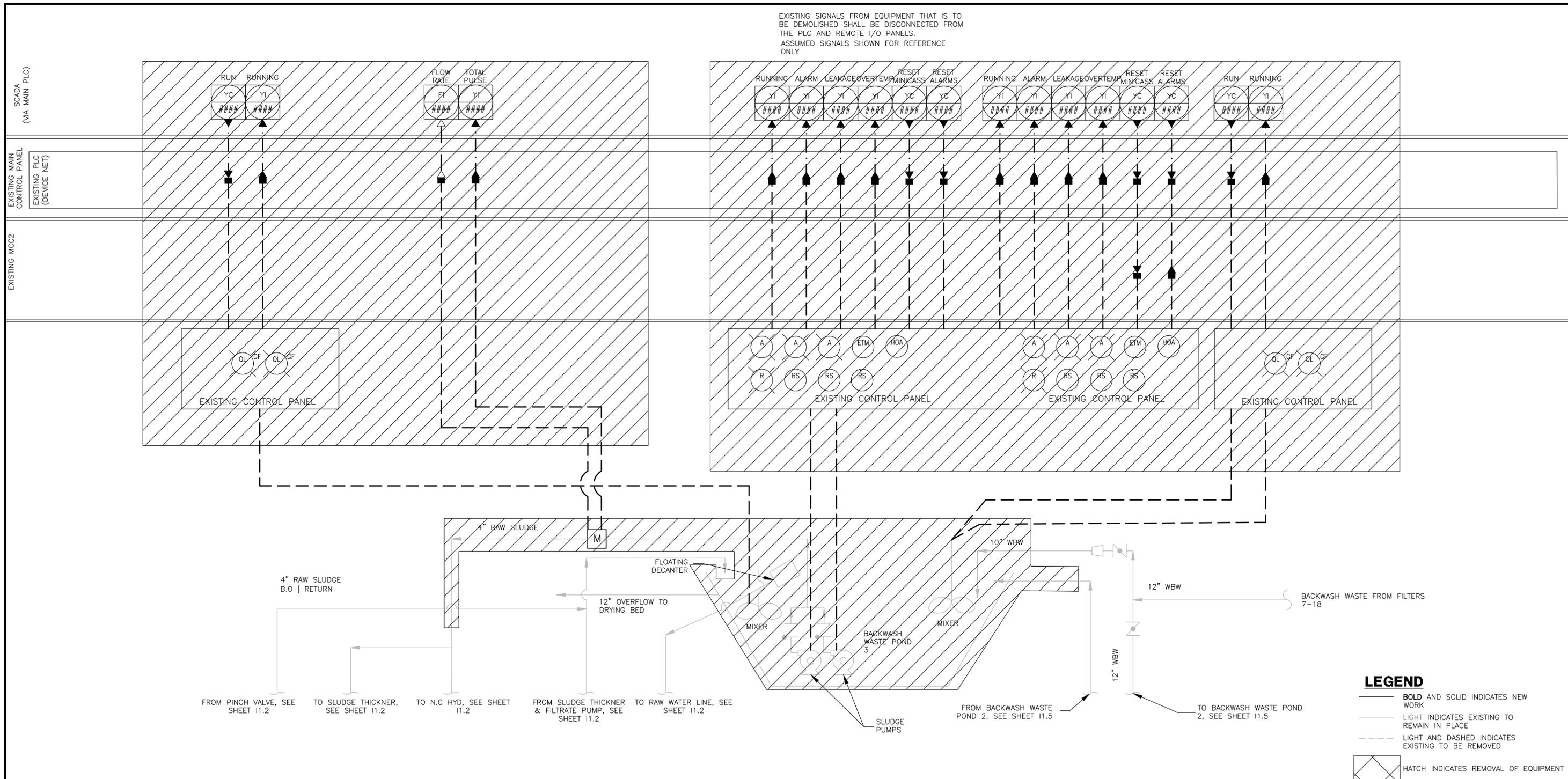
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 CA LICENSED PROFESSIONAL ENGINEER
 NO. C 35943 DATE: -/-/-

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 200 CLOCK TOWER PLACE BUILDING B
 SUITE B200, CARMEL, CA 93923
 CALIFORNIA AMERICAN WATER
 DRAWN BY: C. KASTER
 PROJECT ENG'R: J. BIELEFELDT
 DATE: OCTOBER 2025
 PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
 INSTRUMENTATION
 EXISTING FLOW PROCESS II
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-11.3

EXISTING SIGNALS FROM EQUIPMENT THAT IS TO BE DEMOLISHED SHALL BE DISCONNECTED FROM THE PLC AND REMOTE I/O PANELS.
ASSUMED SIGNALS SHOWN FOR REFERENCE ONLY



LEGEND

- BOLD AND SOLID** INDICATES NEW WORK
- LIGHT** INDICATES EXISTING TO REMAIN IN PLACE
- LIGHT AND DASHED** INDICATES EXISTING TO BE REMOVED
- HATCH** INDICATES REMOVAL OF EQUIPMENT

NOTE 1
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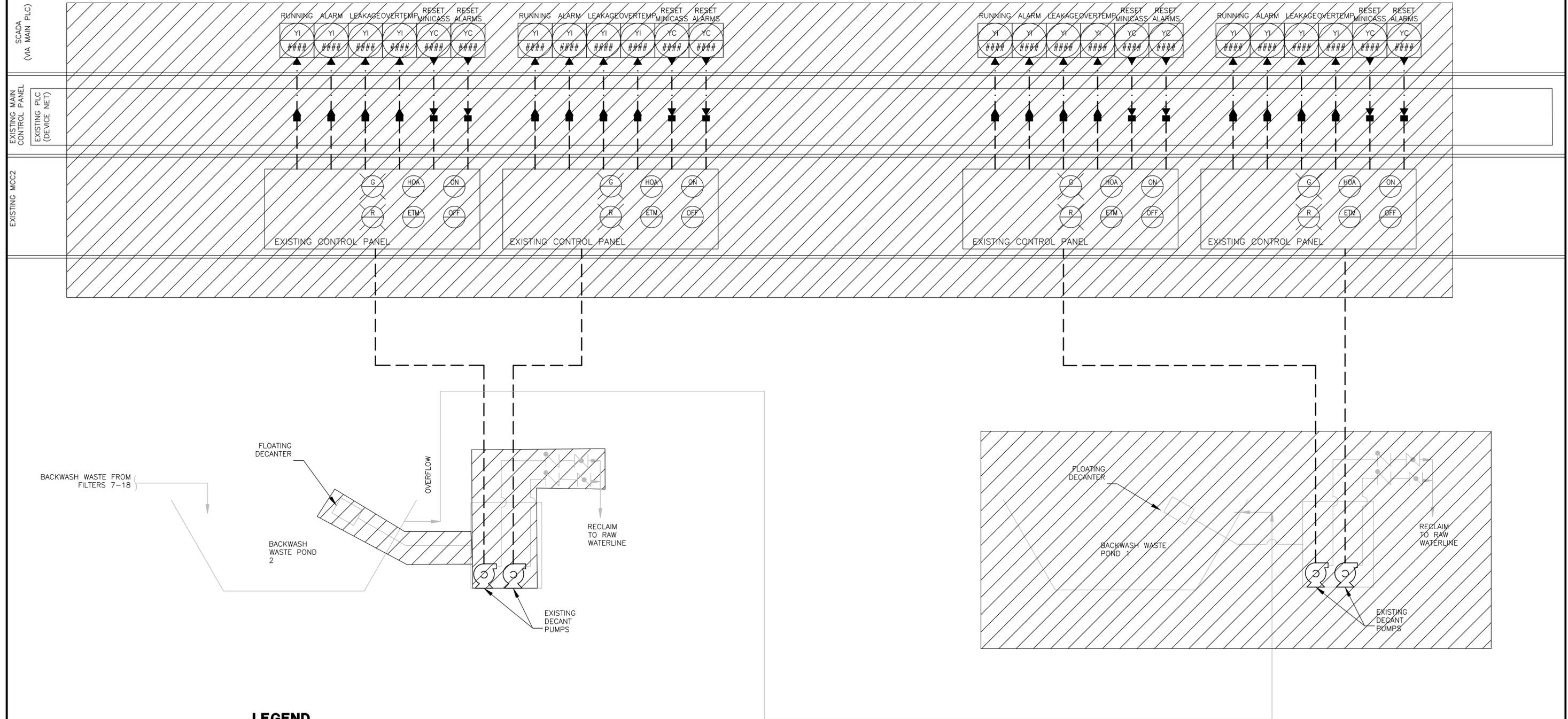
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	△	△				DRAWN BY: C. KASTER PROJECT ENG'R: J. BIELEFELDT	DATE: OCTOBER 2025	CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
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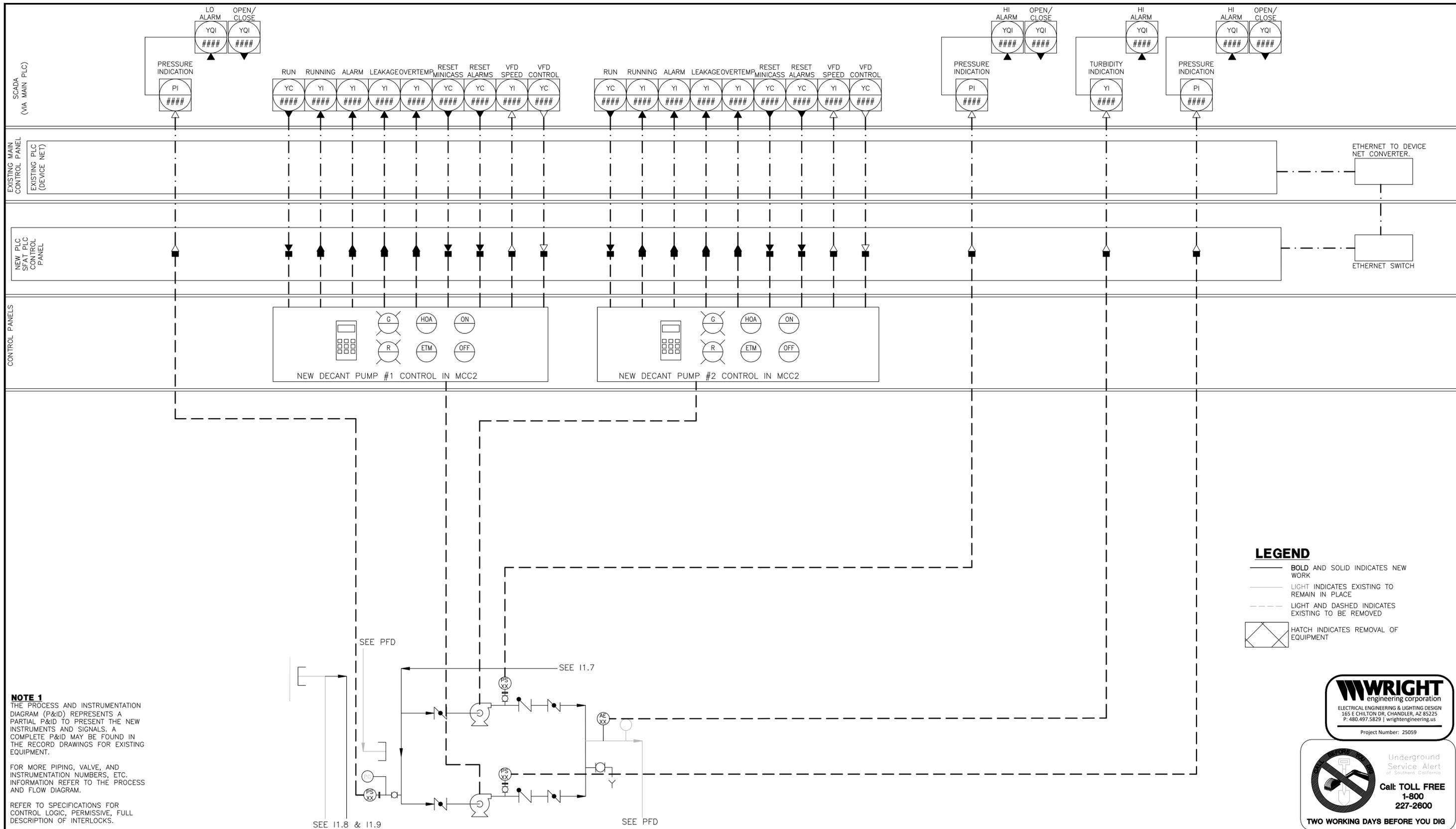
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PROJECT ENG'R: J. BIELEFELDT

DATE: OCTOBER 2025

PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
INSTRUMENTATION
EXISTING DEMOLITION FLOW PROCESS II
9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-11.5



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 LIGHT INDICATES EXISTING TO REMAIN IN PLACE
 LIGHT AND DASHED INDICATES EXISTING TO BE REMOVED
 HATCH INDICATES REMOVAL OF EQUIPMENT



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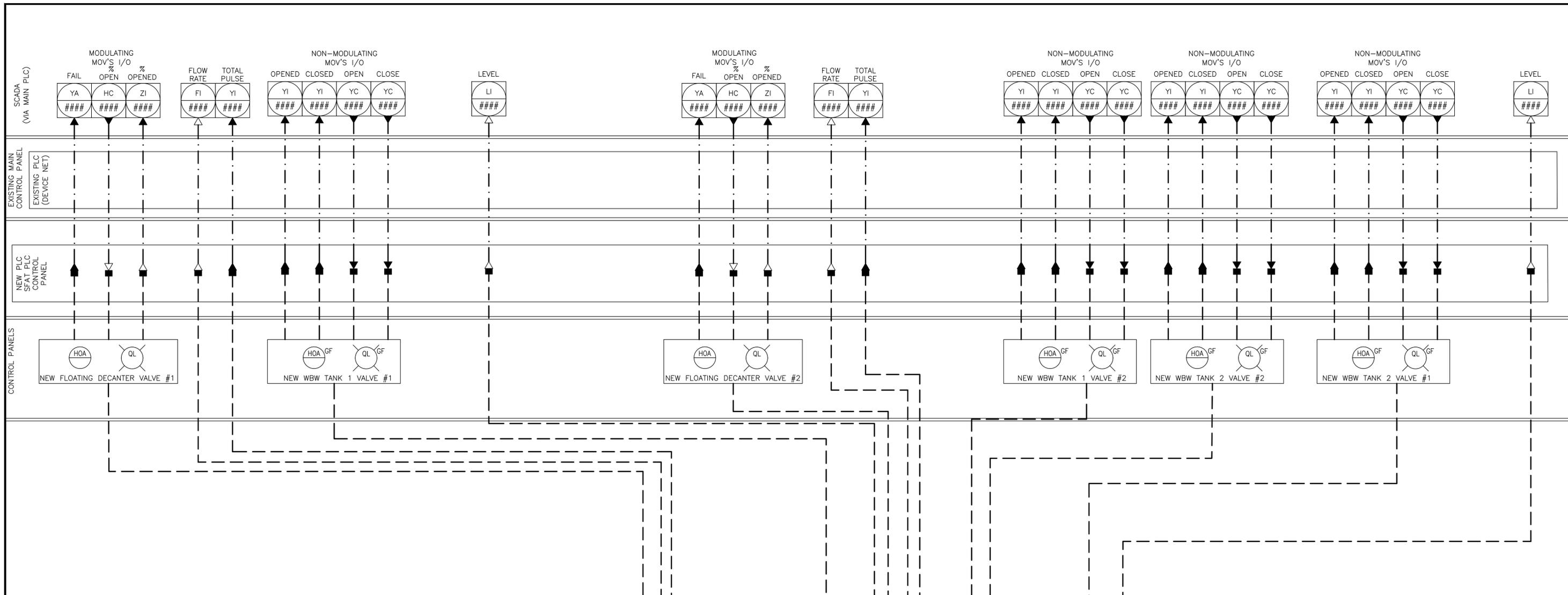
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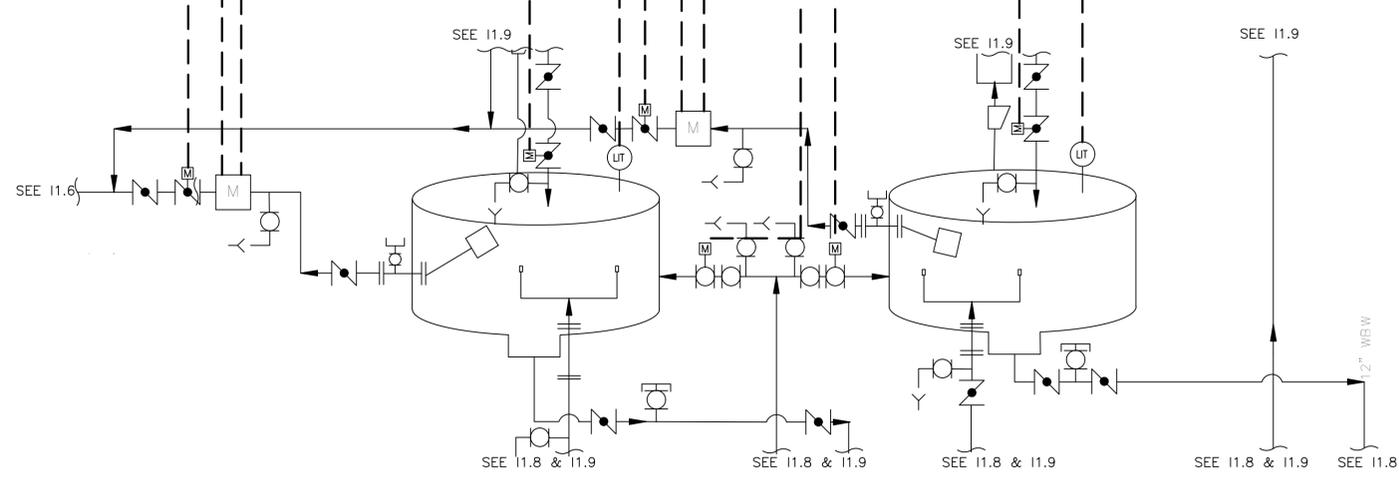
W. WILLIAMS
 PRELIMINARY
 CA LICENSED PROFESSIONAL ENGINEER
 NO. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
 200 CLOCK TOWER PLACE BUILDING B
 SUITE B200, CARMEL, CA 93923
 CALIFORNIA AMERICAN WATER
 DRAWN BY: C. KASTER
 PROJECT ENG'R: J. BIELEFELDT
 DATE: OCTOBER 2025
 PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
 INSTRUMENTATION
 PROPOSED PROCESS FLOW I
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923
 CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
 PRELIMINARY
 USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES
 USE DIMENSIONS ONLY SCALE: NONE
 XXXXXX-XXXX-11.6



NOTE 1
 THE PROCESS AND INSTRUMENTATION DIAGRAM (P&ID) REPRESENTS A PARTIAL P&ID TO PRESENT THE NEW INSTRUMENTS AND SIGNALS. A COMPLETE P&ID MAY BE FOUND IN THE RECORD DRAWINGS FOR EXISTING EQUIPMENT.
 FOR MORE PIPING, VALVE, AND INSTRUMENTATION NUMBERS, ETC. INFORMATION REFER TO THE PROCESS AND FLOW DIAGRAM.
 REFER TO SPECIFICATIONS FOR CONTROL LOGIC, PERMISSIVE, FULL DESCRIPTION OF INTERLOCKS.



LEGEND

- BOLD AND SOLID** INDICATES NEW WORK
- LIGHT** INDICATES EXISTING TO REMAIN IN PLACE
- LIGHT AND DASHED** INDICATES EXISTING TO BE REMOVED
- HATCH** INDICATES REMOVAL OF EQUIPMENT

WRIGHT
 engineering corporation
 ELECTRICAL ENGINEERING & LIGHTING DESIGN
 165 E CHILTON DR, CHANDLER, AZ 85225
 P: 480.497.5829 | wrightengineering.us
 Project Number: 25059

Underground Service Alert
 of Southern California
 Call: TOLL FREE 1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

CALIFORNIA AMERICAN WATER

REVISIONS	REVISIONS
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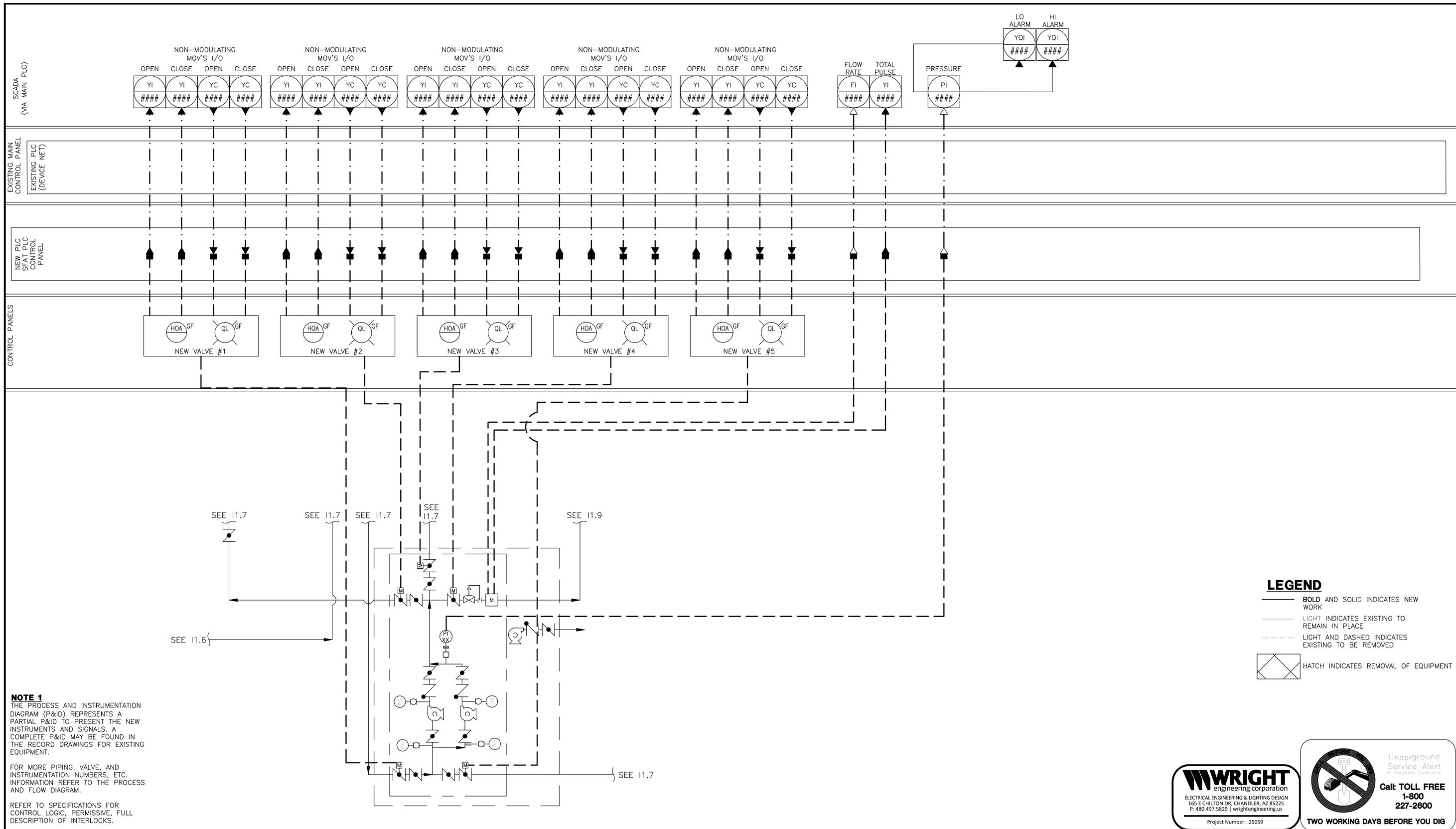
VALENTINE
 Environmental Engineers, LLC
 200 Clock Tower Place Building B, Suite B200
 Carmel, CA 93923
 Phone: (831) 200-9093
 Website: http://www.valentineengineers.com

W. WILLIAMS
 REGISTERED PROFESSIONAL ENGINEER
 PROJECT NO. 25059
 DATE: 10/27/25
 CA LICENSED PROFESSIONAL ENGINEER
 NO. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
 200 CLOCK TOWER PLACE BUILDING B
 SUITE B200, CARMEL, CA 93923
CALIFORNIA AMERICAN WATER
 DRAWN BY: C. KASTER
 PROJECT ENG'R: J. BIELEFELDT
 DATE: OCTOBER 2025
 PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
 INSTRUMENTATION
 PROPOSED PROCESS FLOW II
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES	PRELIMINARY	XXXXXX-XXXX-11.7



LEGEND

- BOLD AND SOLID** INDICATES NEW WORK
- LIGHT** INDICATES EXISTING TO REMAIN IN PLACE
- LIGHT AND DASHED** INDICATES EXISTING TO BE REMOVED
- HATCH** INDICATES REMOVAL OF EQUIPMENT

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 REFER TO SPECIFICATIONS FOR CONTROL LOGIC, PERMISSIVE, FULL DESCRIPTION OF INTERLOCKS.



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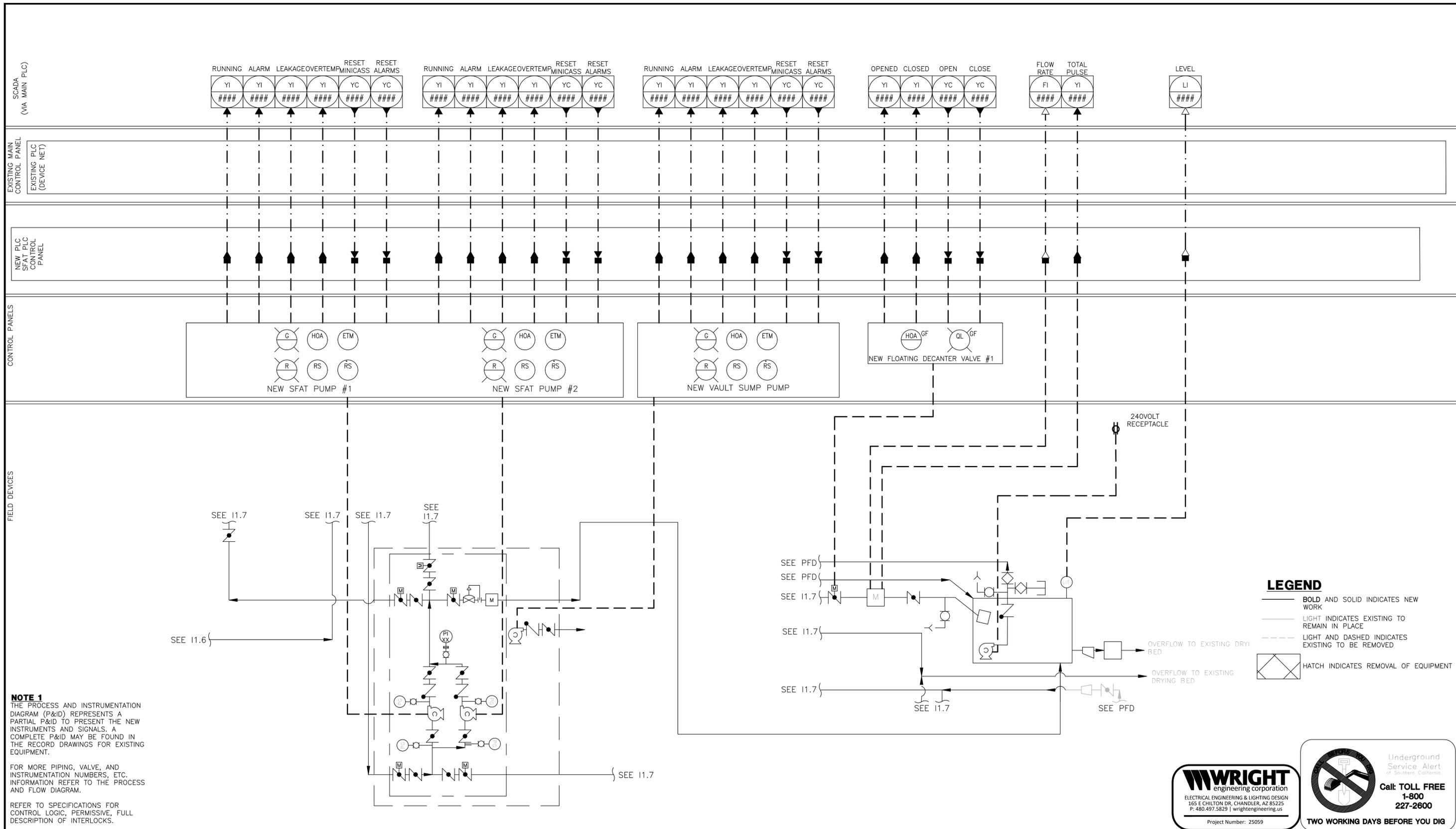
VALENTINE
 Environmental Engineers, LLC
 200 Clock Tower Place Building B, Suite B200
 Carmel, CA 93923
 Phone: (831) 200 - 9093
 Website: <http://www.valentineengineers.com>

W. WILLIAMS
 CA LICENSED PROFESSIONAL ENGINEER
 NO. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
 200 CLOCK TOWER PLACE BUILDING B
 SUITE B200, CARMEL, CA 93923
 CALIFORNIA AMERICAN WATER
 DRAWN BY: C. KASTER
 PROJECT ENG'R: J. BIELEFELDT
 DATE: OCTOBER 2025
 PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
 INSTRUMENTATION
 PROPOSED PROCESS FLOW III
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923

CALIFORNIA AMERICAN WATER CO.	COASTAL DIVISION	USE DIMENSIONS ONLY SCALE: NONE
	PRELIMINARY	XXXXXX-XXXX-11.8



NOTE 1
 THE PROCESS AND INSTRUMENTATION DIAGRAM (P&ID) REPRESENTS A PARTIAL P&ID TO PRESENT THE NEW INSTRUMENTS AND SIGNALS. A COMPLETE P&ID MAY BE FOUND IN THE RECORD DRAWINGS FOR EXISTING EQUIPMENT.
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LEGEND
 BOLD AND SOLID INDICATES NEW WORK
 LIGHT INDICATES EXISTING TO REMAIN IN PLACE
 LIGHT AND DASHED INDICATES EXISTING TO BE REMOVED
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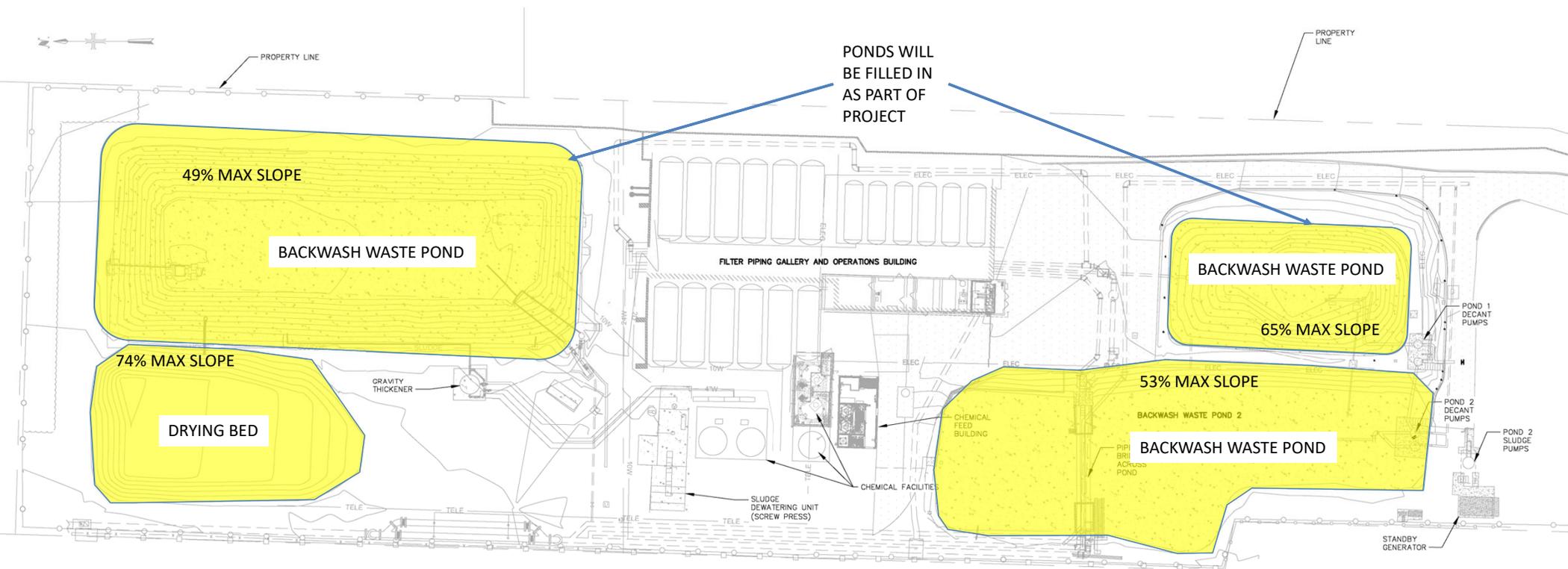
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VALENTINE
 Environmental Engineers, LLC
 200 Clock Tower Place Building B, Suite B200
 Carmel, CA 93923
 Phone: (831) 200 - 9093
 Website: http://www.valentineengineers.com

W. WILLIAMS
 REGISTERED PROFESSIONAL ENGINEER
 PROJECT NO. 11.9
 DATE: 10/2025
 CA LICENSED PROFESSIONAL ENGINEER
 NO. C 35943 DATE: -/-/-

VALENTINE ENVIRONMENTAL ENGINEERS, LLC
 200 CLOCK TOWER PLACE BUILDING B
 SUITE B200, CARMEL, CA 93923
 CALIFORNIA AMERICAN WATER
 DRAWN BY: C. KASTER
 PROJECT ENG'R: J. BIELEFELDT
 DATE: OCTOBER 2025
 PROJECT: XXXXXX-XXXX

BIRP BACKWASH SYSTEM DESIGN
 INSTRUMENTATION
 PROPOSED PROCESS FLOW IV
 9210 CARMEL VALLEY ROAD CARMEL CA, 93923
 CALIFORNIA AMERICAN WATER CO. COASTAL DIVISION
 PRELIMINARY
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 XXXXXX-XXXX-11.9



Slope Plan – Begonia Iron Removal Plant

MEMORANDUM

To: Jade Mason (Project Planner)
Monterey County

From: Samantha Terrell, PE
Teresa Valentine, PE
Valentine Environmental Engineers, LLC

RE: PLN250272 BIRP Backwash – Stream Setback

Date: November 5, 2025

This memorandum is in response to the application checklist, which states the following.

X	<p>Stream Setback Plan / Floodplain Report – a stream setback plan, with cross-sections, prepared by a licensed land surveyor or civil engineer, showing that the proposed development is setback at least 200 feet from the watercourse "top of the bank", as defined in Monterey County Code Chapter 16.16. If the setback requirement cannot be met, the applicant shall submit a report, with supporting data and calculations, prepared by a licensed geologist or civil engineer, certifying that the development is compliant with Monterey County Code Chapter 16.16. If the project is within the Carmel Valley River floodplain, it shall also include information necessary to demonstrate consistency with the regulations for land use in the Carmel Valley Flood Plain, Monterey County Code section 21.64.130. The report shall information necessary to demonstrate:</p> <ul style="list-style-type: none"> •The proposed development will not significantly reduce the capacity of existing rivers or watercourses or otherwise adversely affect any other properties by increasing stream velocities or depths, or diverting the flow; •The proposed new development will be safe from flow related erosion and will not cause flow related erosion hazards or otherwise aggravate flow related erosion hazards; and •If the channel is proposed to be altered, that the flood carrying capacity of the altered or relocated portion of the river or watercourse is maintained <p>Required: within the riparian corridor, within two 200 feet of the river bank, or within a floodplain.</p>
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The “Rivers and Waterbodies” County GIS layer was reviewed, which is assumed to represent approximate top of bank Carmel River limits. As shown within the attached figure, the proposed project is located between 370 and 500 feet from the top of the river bank of the Carmel River, but is located within the 100-year floodplain of the Carmel River. The proposed development consists of the installation of above ground water storage tanks and associated water infrastructure, consistent with existing operations of the proposed project site. The proposed development will not reduce the capacity of existing rivers or watercourses or otherwise adversely affect any other

properties by increasing stream velocities or depths, or diverting flow. Additionally, the proposed development will be safe from flow related erosion and will not cause flow related erosion hazards or otherwise aggravate flow related erosion hazards. The proposed project has been designed so that all structures and utilities shall be located and constructed so as to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into the flood waters.



Carmel River (as plotted in Monterey County GIS "Rivers and Waterbodies" - Oct 2025)

Distances from Carmel River
a > 370 feet
b > 500 feet

Construction Management Plan

Project Description

Project scope of work includes equipping the Begonia Iron Removal Plant (BIRP) with an enclosed tank backwash waste system to replace the existing backwash waste pond system. The project will involve removing/filling two of the existing ponds and adding two new backwash waste storage tanks, a sludge holding tank and installing decanting equipment and decant pump station, sludge fluidizing and transfer equipment in a concrete vault and piping to facilitate the backwash waste operations. The Owner for this project is California American Water (CalAm).

Site Management

Covenant Technical Solutions (CTS) will be the onsite contractor responsible for the construction of the new facilities, including direct construction, material procurement, and oversight of specialized subcontractors. CTS will have onsite supervision throughout the project period, and will coordinate all activities with CalAm to minimize operational and public disruptions.

In order to minimize project timeframe and public inconvenience, the project Team will execute early out packages for long lead time items, allowing for a more condensed construction schedule.

Key Personnel:

Personnel	Company	Contact	Email
Owner Representative- Scott Ottmar	California American Water	831-737-5505	Scott.ottmar@amwater.com
Engineer of Record- Teresa Valentine, P.E.	Valentine Engineers	480-283-8991	tvalentine@valentineengineers.com
VP Operations/Project Manager- Sean Summers	Covenant Technical Solutions, Inc.	415-350-3219	ssummers@covenanttechnical.com
Superintendent- Francisco Rodriguez	Covenant Technical Solutions, Inc.	702-217-4615	frodriguez@covenanttechnical.com
Foreman- Danny Andrade	Covenant Technical Solutions, Inc.	831-676-1475	dandrade@covenanttechnical.com

Construction Management Plan

Project Operations

Excavations	Backfill and Compaction
On and offsite material hauling	Setting/Maintaining BMP's
Aerial Lifting heavy Equipment	Concrete Placement
Pipe positioning	Cutting and Grinding
Minor Traffic Control	Working Around Existing Utilities
Shoring	Electrical
Lockout/tag out	Pressure Testing

Anticipated Project Equipment

Equipment	Activity
305 Excavator	Trenching, Pipe Installation, misc site work
325 Excavator	Settling Pond Earthwork, Structure Excavation
D6 Dozer	Settling Pond Earthwork
CP44 Compactor	Settling Pond Earthwork
420 Backhoe	Pipe Install, above grade equipment install
Foreman Trucks (2500 Diesel)	All Activities

Note: All equipment utilized onsite will be Tier 4 emissions compliant

Anticipated Vehicle/ Truck Trips per day:

During the course of construction, standard vehicle trips per day will be minimized to approximately 2 foreman truck trips (2500 Diesel) and onsite equipment use, with 2 ten-wheeler trucks hauling material for trench/excavation activities once per week. Trenching and excavation for structure activities are anticipated for roughly 3 months of the schedule.

Outside of the trenching activities minimal ten-wheeler truck trips are anticipated, with work confined to the project site.

During earthwork operations for backfilling of existing ponds, approximately 12 ten-wheeler trucks will be used per day to import 4,125CY of structural backfill material. This would be performed over roughly 12 days of work for filling of pond 1 and 3 in.

Construction Management Plan

Site Work Hours:

Monday through Friday, 8am-5pm

Anticipated Project Schedule

Please see attached overview schedule for the project in Exhibit D. Start of Construction is anticipated in January of 2026, with Completion in April of 2027.

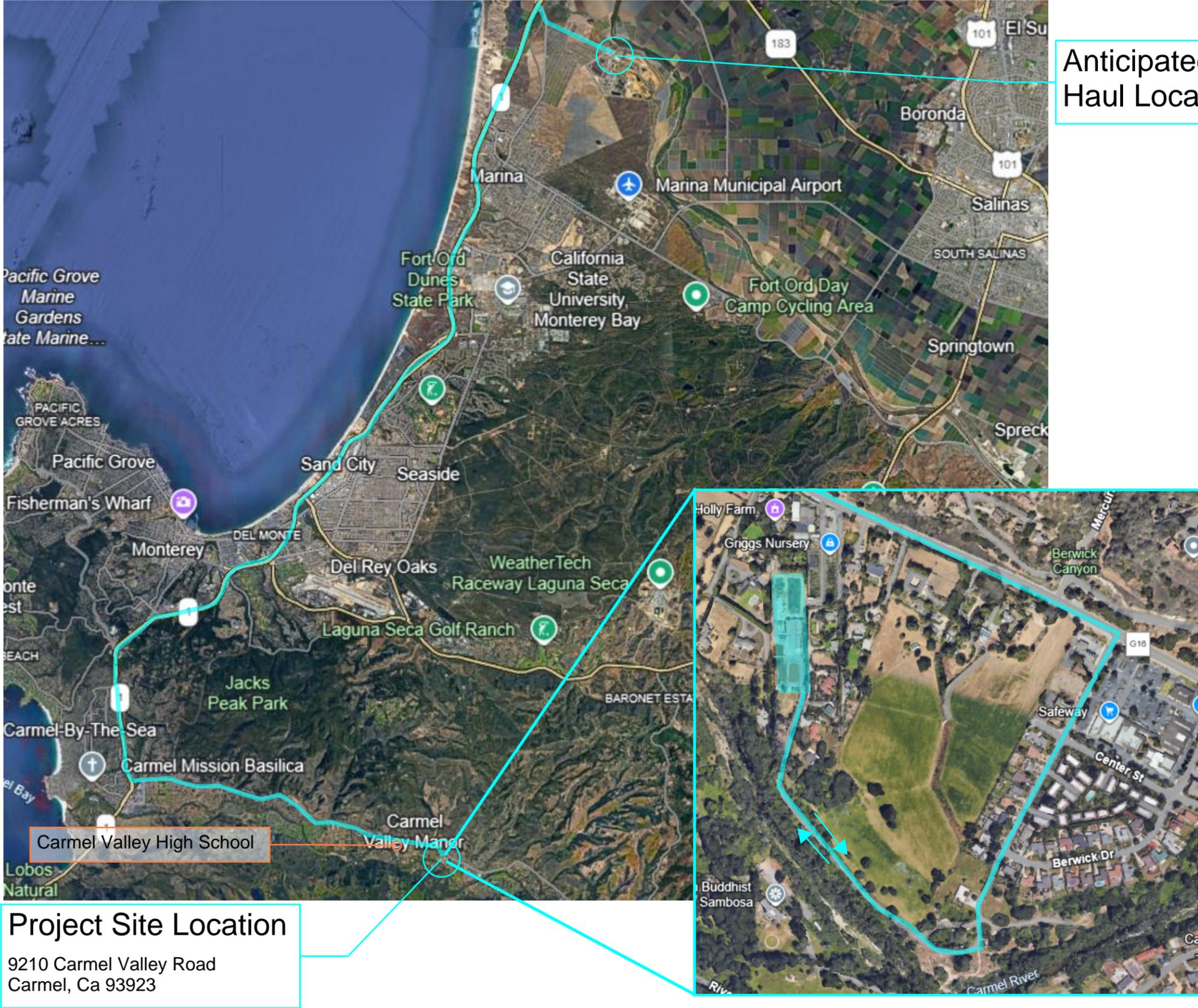
Site Details

Please see attached Exhibits for Location Map (Exhibit A), Haul Route and Sensitive Receptors (Exhibit B), and project stockpiles and parking (Exhibit C).

Exhibit A Project Location Map



Exhibit B Haul Route and Sensitive Receptors



Anticipated Material Haul Location

Carmel Valley High School

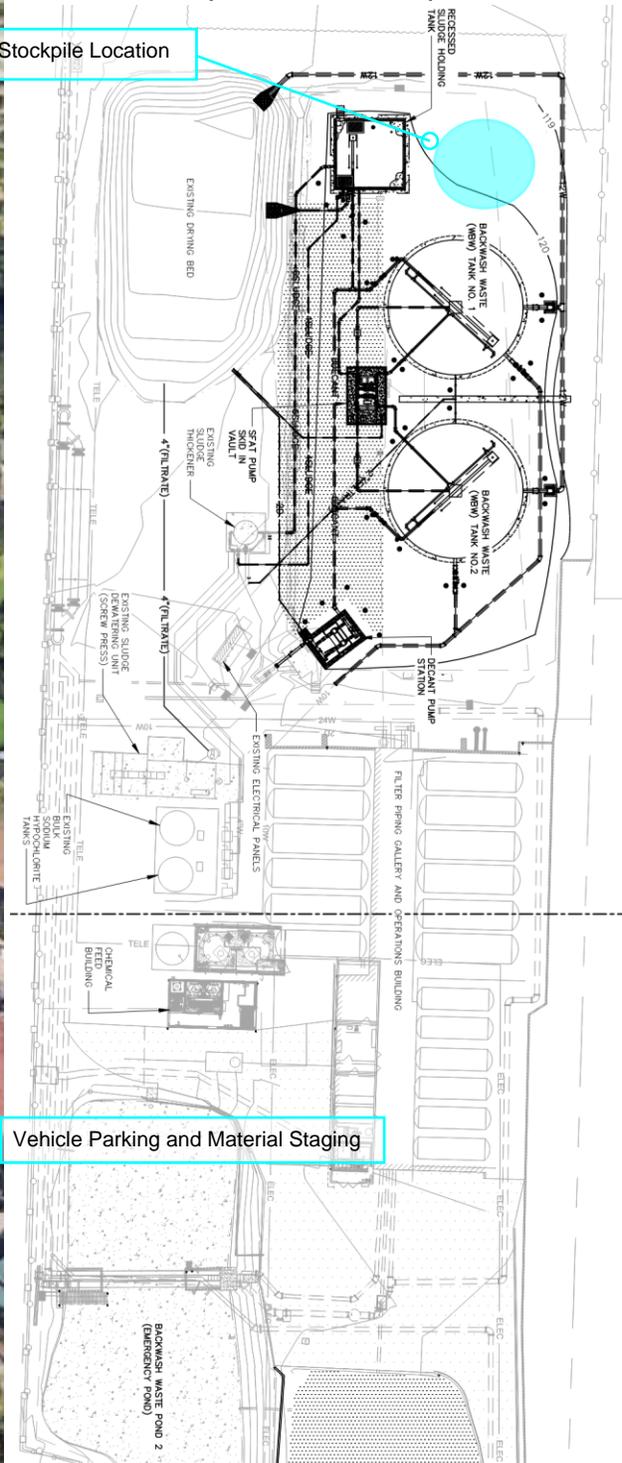
Project Site Location
9210 Carmel Valley Road
Carmel, Ca 93923

Exhibit C Parking and Stockpile Locations

Existing Condition Map



Improvements Map



Designated Stockpile Location

Vehicle Parking and Material Staging

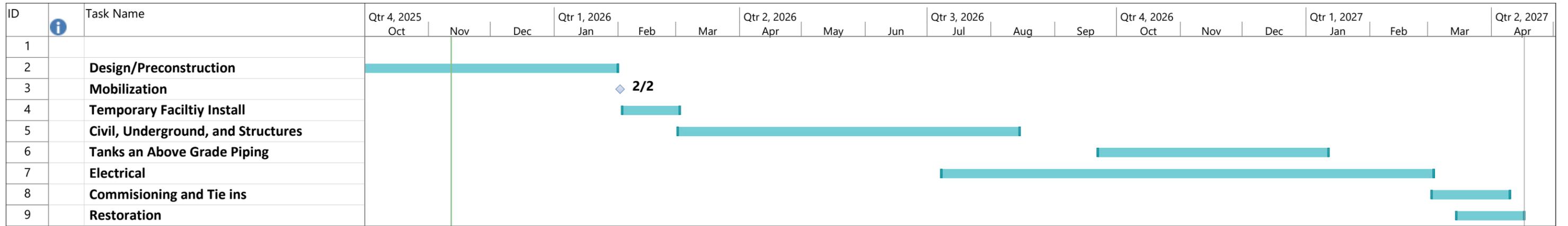


Exhibit D High Level Project Schedule

Project: High Level Schedule Date: Wed 11/12/25	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone			